

South Gloucestershire Council

Air Quality Action Plan: Kingswood and Staple Hill

March 2012



Executive Summary

This Air Quality Action Plan (AQAP) sets out South Gloucestershire Council's approach for improving air quality in areas where air quality issues have been identified. The Action Plan has been developed in recognition of the legal requirement on the Council to work towards the air quality objectives under Part IV of the Environment Act 1995.

Clean air is essential to a good quality of life. The pollutant this report is concerned with is nitrogen dioxide. Nitrogen dioxide is associated with adverse effects on human health. Reducing any potential health effects, thereby protecting the health of local residents are the primary reason for work to improve air quality.

Why has this Air Quality Action Plan been produced?

South Gloucestershire Council has a duty to manage and monitor air quality across its district. Monitoring of air quality, in particular nitrogen dioxide, has shown that the annual mean objective for nitrogen dioxide has been exceeded in three areas. As a result, the Council declared the following three air quality management areas in April 2010:

- Staple Hill at the Broad Street (A4175), High Street (B4465), Victoria Street and Soundwell Road (A4017) crossroads
- Kingswood along Regent Street (A420)
- Cribbs Causeway adjacent to the M5 Roundabout at Junction 17

Following declaration of the air quality management areas (AQMA's), the Council must develop an Air Quality Action Plan (AQAP) setting out local measures it intends to take in pursuit of the air quality objectives. A Further Assessment of air quality within the AQMA's must also be carried out.

This Action Plan sets out local measures aimed at improving air quality within the Kingswood and Staple Hill Air Quality Management Areas (AQMA's). While three AQMA's were declared, the Action Plan focuses on Kingswood and Staple Hill because monitoring carried out for the further assessment of the Cribbs Causeway AQMA showed concentrations were below the annual mean objective for nitrogen dioxide. Monitoring is ongoing to assess whether further work for the AQMA is required.

The Further Assessment confirmed that there were continued exceedences of the annual mean nitrogen dioxide objective inside and also outside the Kingswood and Staple Hill AQMA boundaries declared in 2010. It is therefore, proposed to extend these AQMA's. Following formal approval by the Council, the necessary legal orders will be made to declare the extended AQMA's. This is anticipated in Spring 2012. The Action Plan takes into account the proposed extensions to these AQMA's.

The source of pollution contributing to the exceedences has been identified by source apportionment so the Action Plan can be appropriately targeted. Road traffic contributes between 55 - 75% of the total nitrogen dioxide concentrations in Kingswood and Staple Hill.

Air Quality Action Plan

A large number of potential actions, which could improve air quality have been discussed and analysed as part of the process of producing the AQAP. Nitrogen dioxide is a traffic related pollutant and as such, the measures considered relate to travel and transport. Consequently, the key aims of the proposed measures are to reduce overall traffic volumes, congestion and idling traffic within the Kingswood and Staple Hill AQMAs.

The AQAP includes actions which are categorised as short, medium and longer term. For Kingswood, short-term actions include a travel plan for the Kingswood Civic Centre, a parking review which looks at parking issues with the aim of reducing congestion and a promotion looking at more efficient use of taxi ranks and bus stops to encourage drivers to switch off engines when stationary. Medium term actions include travel planning for schools and Kingswood town centre, a review of bus timing points to reduce the number of buses idling at them and cycling infrastructure/promotion to encourage change in travel behaviour. Longer term aspirations include introducing a car club to reduce levels of car ownership and restricting traffic turning onto the A420 so the free flow of traffic is maintained.

For Staple Hill, short-term actions include working in partnership with bus operators to address air quality issues, a review of the Council fleet vehicles to ensure the lowest emission vehicles are in use and a promotion looking at more efficient use of taxi ranks and bus stops to encourage drivers to switch off engines when stationary. Medium term actions include travel planning for schools and Staple Hill town centre, relocating the bus stops on Soundwell Road to aid the free flow of traffic through the crossroads and a parking review which looks at parking issues with the aim of reducing congestion. Longer term aspirations include a review of delivery bays to reduce congestion from parked vehicles, restricting traffic turning at the A4017 junction to aid free flowing traffic and reclassifying the strategic route therefore reducing strategic traffic and overall traffic volumes.

Consultation on the draft Action Plan and Further Assessment outcomes was carried out between 7th September and 2nd November 2011 with relevant stakeholders, including local residents, Councillors, neighbouring authorities and local business groups. Comments received during the consultation have been considered and the Action Plan revised accordingly. Following formal approval by the Council, the Action Plan will be implemented from April 2012.

Progress on the Action Plan implementation will be reported on an annual basis, along with results from the ongoing monitoring within the AQMAs.

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1. Introduction

South Gloucestershire Council has a statutory duty to manage and monitor air quality across its district. Monitoring of air quality, in particular the pollutant nitrogen dioxide, has shown that the annual mean objective for nitrogen dioxide ($40\mu\text{g}/\text{m}^3$) has been exceeded. As a result, the Council declared the following three air quality management areas in April 2010:

- Staple Hill at the Broad Street (A4175), High Street (B4465), Victoria Street and Soundwell Road (A4017) crossroads
- Kingswood along Regent Street (A420)
- Cribbs Causeway adjacent to the M5 Roundabout at Junction 17

This Air Quality Action Plan has been developed in recognition of the legal requirement on the Council to work towards the air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part.

1.1 Air Quality and Health

Health effects are the primary reason for work to improve air quality. Poor air quality leads to poor health. There are short-term effects on, for example, the respiratory system and long-term exposure can have more serious impacts, including permanent reductions in lung function. Air pollution has been linked to the worsening of asthma, chronic bronchitis, heart and circulatory disease and cancer.

The Government's current UK Air Quality Strategy¹ published in 2007, estimates that that air pollution reduces the life expectancy by around 7- 8 months averaged across the whole UK population with estimated annual health costs of up to £20 billion. In 2005, up to 35,000 people in the UK died prematurely as a result of exposure to air pollution. The House of Commons Environmental Audit Committee Report on Air Quality (March 2010) also cited that new evidence on the longer-term impacts shows greater gains in life expectancy could be achieved by tackling air quality than are currently being realised by efforts to eliminate road deaths and passive smoking combined.

1.2 The Air Pollutant of Concern

Nitrogen dioxide (NO_2) is the main air pollutant of concern in South Gloucestershire. It mainly arises from road traffic emissions. Nitrogen dioxide is associated with adverse effects on human health. At high levels, nitrogen dioxide causes inflammation of the airways. Long-term exposure may affect lung function and respiratory symptoms. Nitrogen dioxide also enhances the response to allergens in sensitive individuals (Defra, 2007).

1.3 Why has this AQAP been produced?

Following declaration of the air quality management areas (AQMAs), the Council must develop an air quality action plan (AQAP) setting out local measures it intends to take in pursuit of the objectives. A Further Assessment of air quality within the AQMAs must also be carried out. This includes the identification of the pollution

¹ Defra (2007) Air Quality Strategy for England, Scotland, Wales and Northern Ireland

sources contributing to the exceedences (source apportionment), which can inform the action plan. Consultation on the draft Action Plan and Further Assessment outcomes was carried out between 7th September and 2nd November 2011. The consultation responses were considered in the production of the finalised Action Plan.

1.4 What is the aim of this Action Plan?

The aim of the AQAP is to describe the actions that the Council will take to pursue improved air quality in the three areas. Action planning is considered to be the most important part of the Local Air Quality Management Process, playing a key role in helping the UK Government deliver the air quality objectives and the EU limit values.

The AQAP is expected to include the following:

- quantification of the source contributions to the predicted exceedences of the objectives, to allow the action plan measures to be effectively targeted;
- evidence that all available options have been considered taking into account cost-effectiveness and feasibility;
- how the local authority will use its powers and also work in conjunction with other organisations in pursuit of the air quality objectives;
- timescales over which the local authority and any other organisations and agencies propose to implement measures within the action plan;
- where possible, quantification of the expected impacts of the proposed measures and, where appropriate, an indication as to whether the measures will be sufficient to meet the air quality objectives; and
- how the local authority intends to monitor and evaluate the effectiveness of the action plan.

1.5 Status of this Report

This report is the finalised Air Quality Action Plan for the Kingswood and Staple Hill Air Quality Management Areas. It sets out the local measures aimed at delivering improvements in air quality in these areas. The lifespan of the Action Plan is dependent on the future levels of nitrogen dioxide. An Action Plan Progress Report will be produced yearly to provide an update on progress with implementing the planned measures. The Council has a duty to keep the Action Plan up to date so the Action Plan may be revised from time to time and the relevant consultation carried out.

Although this is the finalised AQAP, we expect this to be an evolving plan and therefore comments on the plan are always welcomed. Please visit www.southglos.gov.uk/airquality for further details and contact information.

2. Background

2.1 Description of the Local Authority Area

South Gloucestershire lies to the north and east of the city of Bristol with the River Severn forming the western boundary. The area is a diverse mix of urban and rural areas, including major residential, industrial and commercial developments. The road network within the district contains the major junction of the M4 & M5 motorways. Main line intercity passenger rail services are available from Bristol Parkway Station in Stoke Gifford.

The population of South Gloucestershire is 264,800 (ONS 2010 estimate). 60% of the population live in the built-up areas immediately adjoining Bristol, namely Filton, Patchway, Bradley Stoke, Kingswood, Downend, Staple Hill and Hanham; 19% live in the towns of Yate, Chipping Sodbury and Thornbury and the remaining 20% live in the more rural areas of South Gloucestershire. The population has grown by over 20% in the past 20 years, making it one of the fastest growing areas in the country and the population is projected to rise, meaning that managing future development is a key challenge.

Kingswood is one of the urban areas in South Gloucestershire, bordering the city of Bristol to the west. It is located on both sides of the A420 (Two Mile Hill Road/ Regent Street/ High Street) which is a major arterial route in and out of Bristol and links to the A4174 Ring Road to the east of the town centre. It consists of a mix of residential and business properties with Kings Chase Shopping Centre at the heart of the town centre on the northern side of Regent Street. There is a one way traffic system around the centre of Kingswood to help traffic flow. The area suffers from traffic congestion, particularly at peak times. The taller buildings along much of Regent Street create a “street canyon” (where the building heights are generally greater than the width of the road) which prevents pollutants from easily dispersing.

Staple Hill is another urban area of South Gloucestershire situated to the north of Kingswood on the eastern edge of Bristol. The centre of Staple Hill is dissected by the A4017 (Victoria Street and Soundwell Road) running north/south respectively and the A4175 (Broad Street) and the B4465 (High Street) running east/west respectively. It is primarily a residential area with retail shops and businesses with its main shopping area located around the crossroads where the roads intersect. The crossroads is a busy intersection controlled by traffic lights which, at peak times experiences traffic congestion. The “street canyon” created by the taller buildings on Soundwell Road at its junction with the crossroads prevents pollutants from easily dispersing.

2.2 Air Quality Management Areas (Declared in 2010)

The annual air quality Progress Report 2007² identified potential exceedences of the annual mean objective for nitrogen dioxide in the following three areas:

- Staple Hill at the Broad Street (A4175), High Street (B4465), Victoria Street and Soundwell Road (A4017) crossroads
- Kingswood along Regent Street (A420)

² South Gloucestershire Council. Air Quality Progress Report 2007

- Cribbs Causeway adjacent to the M5 Roundabout at Junction 17

A Detailed Assessment of the three areas commenced in April 2007 and was completed in September 2008. The assessment report³ concluded that Air Quality Management Areas (AQMA) should be declared at all three locations. Following consultation in the autumn of 2009, the AQMA were subsequently declared by legal order in April 2010. Maps of these AQMA are included in Appendix A.

The Kingswood AQMA (2010) incorporates Regent Street (A420) from the junction with Two Mile Hill Road across to the junction with South Road and extends to the junction with High Street and includes any properties that lie within the outlined boundary. The majority of properties within the AQMA are commercial, but with residential properties on the first floor of some properties.

The Staple Hill AQMA (2010) incorporates the Broad Street (A4175), High Street (B4465), Victoria Street and Soundwell Road (A4017) crossroads. The AQMA extends along Broad Street to the junction with Seymour Road, along Soundwell Road to the road linking with Seymour Road and for distances of approximately 200m along High Street and approximately 170m along Victoria Street from the centre of the crossroads. The area includes any properties that lie within the outlined boundary. The majority of the properties within the AQMA along High Street and Broad Street are commercial, but with residential properties on the first floor of some properties. Properties along Victoria Street and Soundwell Road are mostly residential on the ground and first floor.

The Cribbs Causeway AQMA (2010) encompasses a single property on Blackhorse Hill, Easter Compton, adjacent to the M5 Junction 17 roundabout at Cribbs Causeway.

³ South Gloucestershire Council. Detailed Assessment Report 2008

3. Legislation and Policy Context

3.1 Local Air Quality Management and Legislation

Part IV of the Environment Act 1995 established the system of local air quality management (LAQM) which commenced in 1997. Since then, local authorities have been required to review and assess air quality in their area against national air quality objectives. These objectives are set out in the UK Air Quality Strategy. The first UK Air Quality Strategy was published in 1997 and has been subsequently updated in 2000, 2002 and most recently in 2007. The aim of the Strategy is to “set out air quality objectives and policy options to further improve air quality from today into the long term”. It recognises that action at national, regional and local level may be needed, depending on the scale and nature of the air quality problem.

The air quality objectives are given a statutory basis in the Air Quality (England) Regulations 2000⁴, as amended by the Air Quality (England) (Amendment) Regulations 2002⁵. The objectives reflect limit values for pollutants set in European (EU) legislation. There are clear guidelines⁶ setting out that air quality objectives only apply where there is relevant exposure i.e. where people will be exposed to the pollutants for the appropriate period of time.

The relevant objective for the purpose of this Action Plan is the annual mean nitrogen dioxide objective. This objective is 40µg/m³ and concentrations should not exceed this over the averaging period of one calendar year. Relevant exposure for this objective is considered mainly to be at the building facades of residential properties, schools and hospitals.

If it is identified during the review and assessment process that an air quality objective has not been, or is not likely to be met, then an air quality management area must be declared. Following the declaration of the AQMA, a Further Assessment of existing and likely future air quality must be carried out and an Action Plan must be developed setting out local measures to be implemented in pursuit of the air quality objectives.

3.2 Sub Regional: West of England Joint Local Transport Plan 3

The Joint Local Transport Plan 3 (JLTP3)⁷ was produced by the four West of England Councils. It was published in March 2011 following approval by the four Councils and covers the period from 2011 to 2026.

The JLTP3 is based around five key goals:

- Reduce carbon emissions;
- Support economic growth;
- Promote accessibility;
- Contribute to better safety, security and health;

⁴ DETR. The Air Quality Regulations, The Stationery Office 2000

⁵ Defra. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland: Addendum, The Stationery Office 2002

⁶ Defra Local Air Quality Management Technical Guidance LAQM.TG(09) 2009

⁷ West of England Partnership, Joint Local Transport Plan 3 2011

- Improve quality of life and a healthy natural environment.

The third Joint Local Transport Plan for the four West of England authorities has been published and was formally adopted by SGC in December 2010. Air quality forms one element of one of the strategic goals on safety, health and security identifying a clear aim to improve air quality in the AQMAs in Bath, Bristol, Cribbs Causeway, Kingswood, Keynsham and Staple Hill and ensure air quality in other areas remains better than the national standards. Section 8 sets out a high level strategy where the aims of the JLTP3 can contribute to delivering improvements in air quality.

3.3 Local Policy: South Gloucestershire Council Plan 2008-2011

This report relates to the Council Plan 2008 – 2011⁸ under the following themes:

- Valuing the Environment - Council Plan Priority 24: Resource Use, Pollution & Waste. This states that the Council will “Monitor air quality and take steps to control pollution levels and keep them below nationally recognised standards” (Action 67).
- Managing Future Development – Council Plan Priority 16: Travel and Accessibility. This states the Council’s aim is “To deliver improvements to the transport system that tackle congestion, minimise air and noise pollution, reduce high carbon travel, enhance travel choice (particularly for public transport, cycling and walking)”.

While the current Council Plan runs to 2011, a new plan will be developed to take forward the Council’s strategy of achieving excellence for residents and their communities.

3.4 Local Policy: Core Strategy/SGC Adopted Local Plan

The policies for the South Gloucestershire area are currently set out in the South Gloucestershire Local Plan⁹, the Minerals and Waste Local Plan and the Joint Waste Core Strategy. Some of the policies in the two Local Plans are no longer extant.

Within the Local Plan there are currently policies in relation to Environmental Pollution. The Local Plan objectives in respect of environmental and public protection are:

- To seek to ensure that development does not cause unacceptable environmental pollution, and is not itself at risk.
- To ensure that new development does not cause a safety hazard or increase the risk of flooding and is not itself at risk.
- To encourage energy generation from alternative renewable resources.

More specifically Policy EP1 states that: Development will not be permitted which would unacceptably harm the environment, or the health, safety and amenity of users of the site or surrounding land, as a result of pollution to water, air or soil, or through noise, vibration, light, heat or radiation. Additionally, development will not be

⁸ South Gloucestershire Council. Council Plan 2008-2011 and Community Strategy 2008

⁹ South Gloucestershire Council. Local Plan 2006

permitted where users of it would be unacceptably affected by reason of proximity to existing land uses.

The Local Plan also states that proposals for development will need to have regard to relevant guidance, as well as the current annual air quality report and any declared AQMAs, to ensure that development minimises any adverse effects on air quality, or contributes positively to improvements in air quality.

In future following adoption, the policies within the Core Strategy will supersede Policy EP1 of the South Gloucestershire Local Plan.

Issues of air quality align broadly with the Core Strategy's overarching and cross-cutting objectives; to deliver sustainable communities, and improving health and well-being. In addition, Key Issues 7 (Managing the Environment and Heritage) and 8 (Improving Health and Wellbeing) show the importance attached to air quality by the Core Strategy. This is further emphasised through Policy CS9, which expects new development to protect land, air and aqueous environments, buildings and people from pollution of all types.

Air quality impact assessments are requested as part of the planning process where appropriate. Being proactive within the planning process should ensure that any deterioration in air quality is kept to a minimum.

3.5 Local Policy: SGC Climate Change Strategy

The South Gloucestershire Climate Change Strategy¹⁰ sets out the Council's commitment and action plan for reducing carbon dioxide emissions from homes, transport, commerce and industry, as well as for increasing generation of renewable energy, and adapting to climate change. The Climate Change Strategy was first adopted in 2006, with a Review of Progress and Revised Action Plan being adopted by the council in December 2008. The Strategy sets out how the council and partners will:

- Incorporate climate change considerations into the decision-making and business planning of the council, including joint working with other agencies;
- Reduce energy use and use energy more efficiently;
- Increase the generation of energy from renewable sources;
- Reduce emissions from waste;
- Enable a shift towards more sustainable lifestyles and development;
- Assess the likely impacts of climate change and implement appropriate adaptation measures.

A further review of the South Gloucestershire Climate Change Strategy Action Plan is in progress. The aim is to update it, bring it in line with the Government's current targets, and to ensure that the actions required to deliver the Strategy are embedded within the mainstream functions of the Council and partner organisations.

¹⁰ South Gloucestershire Council. Climate Change Strategy and Action Plan 2006

4. Further Assessment of Air Quality

Following the declaration of the air quality management areas, a Further Assessment is required to confirm the conclusions of the Detailed Assessment, i.e. that the exceedences are valid and to provide information on what sources are contributing to the exceedences. The latter is known as source apportionment and assists in the development of the Action Plan, as measures can be targeted at the most predominant sources. The outcomes of source apportionment can be seen in Chapter 5.

The Further Assessment Report¹¹ on air quality in each of the AQMAs was completed on behalf of South Gloucestershire Council by Air Quality Consultants (AQC).

The assessment considered 2010 monitoring data (annual mean nitrogen dioxide concentrations) from the extensive network of diffusion tube sites located in and around the three AQMAs. Air quality dispersion modelling software (ADMS Roads) was used to predict 2011 annual mean concentrations of nitrogen dioxide in the Kingswood and Staple Hill AQMA study areas. Detailed data including traffic flows, detailed fleet composition, vehicle speeds, and meteorological data were used for the modelling.

In the modelling, locations representing worst-case relevant exposure i.e. residential were selected along the roads within the Kingswood and Staple Hill study areas. These are known as receptor locations. Annual mean nitrogen dioxide concentrations were then predicted at these receptor locations. The receptor locations identified as exceeding the objective were used for source apportionment. Concentrations were also predicted at each property façade to determine the extent of the exceedence area.

4.1 Outcomes of the Further Assessment

The 2010 monitoring data showed that annual mean nitrogen dioxide concentrations were above the objective at locations of relevant exposure both inside and outside of the current Kingswood and Staple Hill AQMA boundaries. The modelling carried out also predicted that the annual mean nitrogen dioxide objective would be exceeded at receptor locations inside and outside of both these AQMAs declared in 2010.

For the Cribbs Causeway AQMA, monitoring at the façade of the single residential property (i.e. at the worst case location within the AQMA) indicated that annual mean nitrogen dioxide concentrations were well below the objective in 2010. Consequently, there was no need to undertake detailed dispersion modelling or source apportionment. The monitoring results for 2011 will be reviewed and if they remain below the objective, then it would be appropriate to revoke the AQMA. In light of this, it is proposed to wait for the outcome of the monitoring in 2011 before progressing any further with work for this area. This will be reported in the annual air quality review and assessment report for 2012 (Updating and Screening Assessment).

¹¹ South Gloucestershire Council. Further Assessment Report 2011

4.2 Proposed Extension to the Kingswood AQMA

Following the Further Assessment conclusions, it is proposed to extend the Kingswood AQMA to include, as a minimum, the area to the west along Two Mile Hill Road to the South Gloucestershire/ Bristol unitary boundary, to the east along High Street to the junction of Poplar Terrace/Lansdown View and to the south along Hanham Road (up to and including The Folly).

The map in Figure 4.1 shows the proposed extended AQMA boundary (shown in green) in relation to the AQMA boundary declared in 2010 (shown in red).

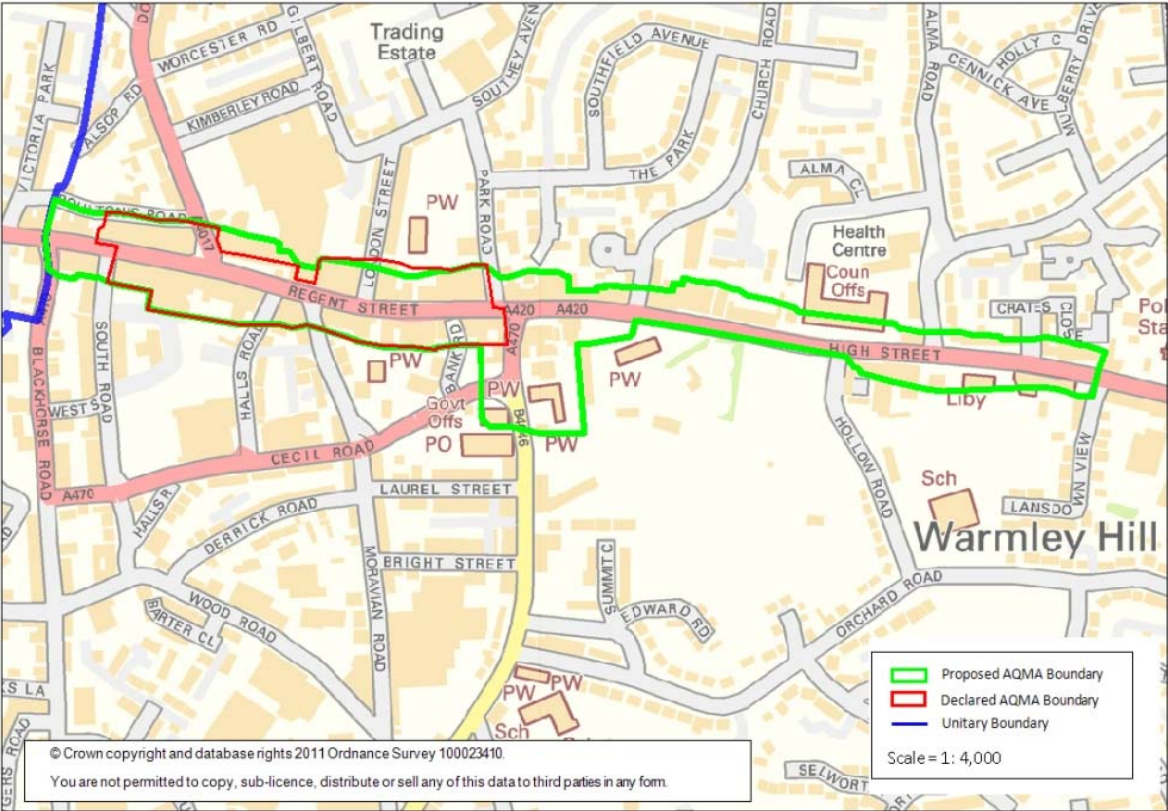


Figure 4.1: Proposed Extension of the Kingswood AQMA

4.3 Proposed Extension to the Staple Hill AQMA

Following the outcome of the Further Assessment, it is proposed to extend the Staple Hill AQMA to include locations where exceedences have been predicted alongside Broad Street (to the junction of York Road), High Street (up to and including no's 40 and 49), Soundwell Road (up to and including no's 16a and 47) and Victoria Street (to the junction of Clarence Road).

The map in Figure 4.2 shows the proposed extended AQMA boundary (shown in green) in relation to the AQMA boundary declared in 2010 (shown in red).

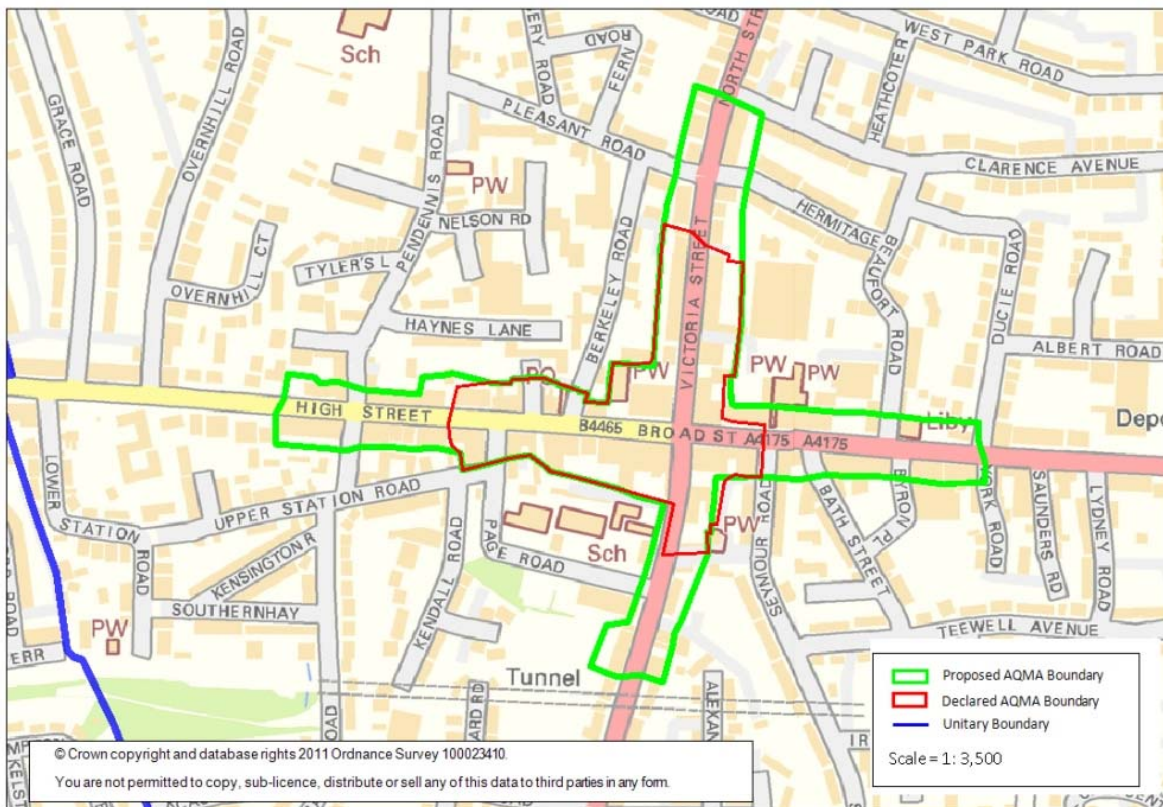


Figure 4.2: Proposed Extension of the Staple Hill AQMA

Consultation on the proposed extensions to the Kingswood and Staple Hill AQMAs and the proposal to revoke the Cribbs Causeway AQMA (should 2011 monitoring indicate that it is longer required) was carried out simultaneously with consultation on the draft Action Plan. The outcomes of the consultation are discussed in Chapter 7.

5. Source Apportionment in the AQMAs

In order to develop an appropriate Action Plan, the sources contributing to the objective exceedences within the Kingswood and Staple Hill AQMAs need to be identified. The Action Plan measures can then be targeted at the predominant sources of nitrogen dioxide within the AQMA.

Source apportionment was carried out by using air quality dispersion modelling software (ADMS Roads). The detailed data obtained from the traffic counts on the numbers of different types of vehicles travelling through the AQMAs, when inputted into the model, allowed the emissions from each vehicle class to be individually calculated. The following vehicle categories were included in the source apportionment:

- Ambient Background (Bkgd);
- Motorcycle (MCL);
- Cars;
- Light Goods Vehicles (LGV);
- Bus;
- Heavy Goods Vehicles (HGV);

In the modelling, specific receptors were selected at locations representing worst-case residential exposure along the roads in the Kingswood and Staple Hill AQMA study areas. Annual mean nitrogen dioxide concentrations for 2011 were predicted at these specific receptor locations. Only the receptor locations identified as exceeding the objective were used for source apportionment.

5.1 Kingswood

Six worst-case receptor locations were identified as exceeding the annual mean nitrogen dioxide objective. Receptors 1 and 5 were discounted for source apportionment purposes as the predicted concentrations did not exceed the objective. A map of the receptor locations is shown in Figure 5.1.

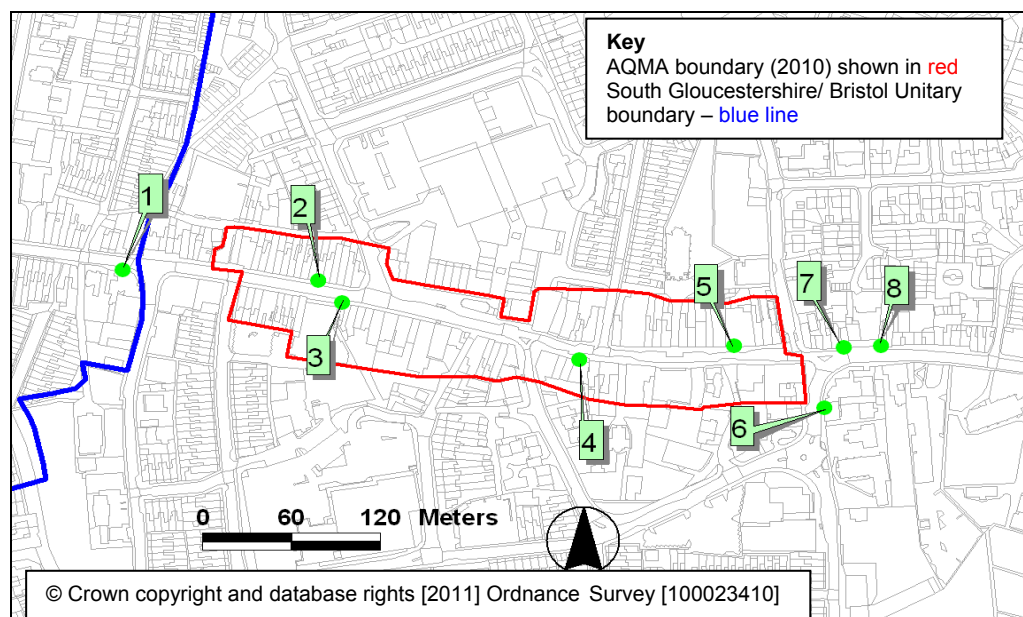


Figure 5.1: Specific Receptor Locations in the Kingswood Study Area

Source apportionment carried out at these six locations provides an overview of source contributions. Figure 5.2 shows the source apportionment results.

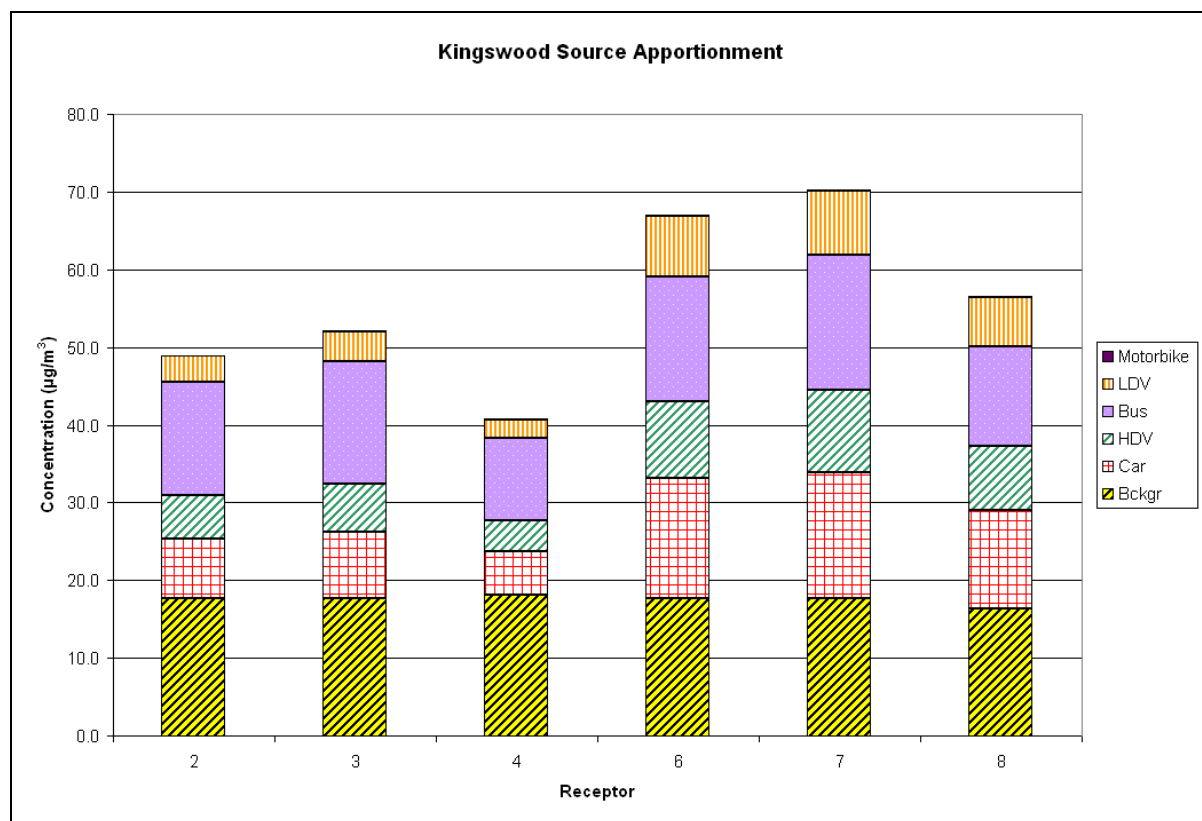


Figure 5.2: Relative Contribution of Each Source Type to the Total Predicted Annual Mean Nitrogen Dioxide Concentration ($\mu\text{g}/\text{m}^3$) at Receptor Locations in Kingswood

The most significant component at all receptors is the ambient background concentration. Ambient background is the level of pollution that would normally exist in any given area before the influence of any additional sources of pollution. Consequently, it is not a component the Council is able to influence.

Buses contribute the next most significant component. Emissions from all road sources except buses are significantly lower at receptors 2, 3 and 4 than those predicted at receptors 6, 7 and 8. This is predominantly due to one way traffic flows, on Regent Street. Receptors 6, 7 and 8 are affected by two-way traffic, whereas receptors 2, 3 and 4 only experiences general traffic eastbound, with buses, taxis, motorcycles and bicycles in the westbound direction.

Overall, road traffic contributes between 55.4 and 74.8% to the predicted total nitrogen dioxide concentrations within the Kingswood study area.

5.2 Staple Hill

Source apportionment undertaken at four receptor locations identified as exceeding the objective provides an overview of source contributions. A map of the receptor locations is shown in Figure 5.3.

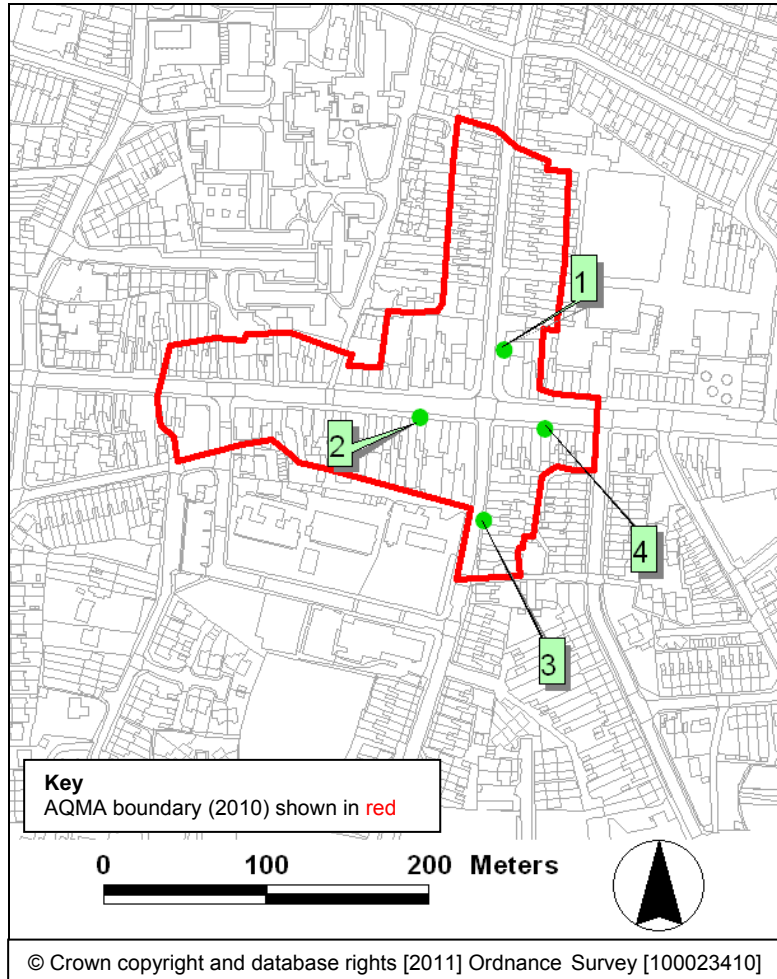


Figure 5.3: Specific Receptor Locations in the Staple Hill Study Area

Source apportionment results are shown in Figure 5.4. As for Kingswood, the most significant component at all receptors is the ambient background concentration. The next most significant portion at receptors 1, 2 and 3 is from cars, followed by buses. At receptor 4, cars and buses contribute an equal portion. In most cases, emissions from cars and buses together are the main local contributors to the overall concentration.

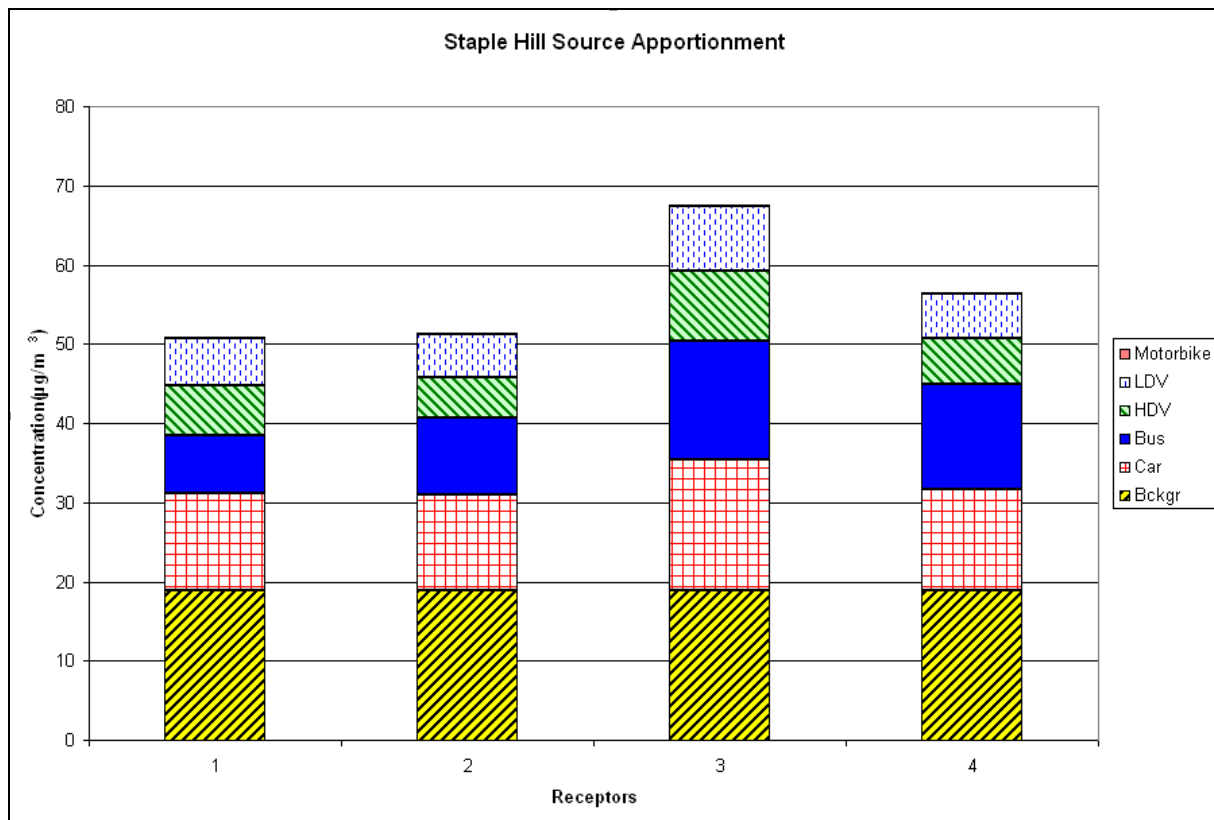


Figure 5.4: Relative Contribution of Each Source Type to the Total Predicted Annual Mean Nitrogen Dioxide Concentration ($\mu\text{g}/\text{m}^3$) at Receptor Locations in Staple Hill

Overall, road traffic contributes between 62.9 and 72.1% to the predicted total nitrogen dioxide concentrations within the Staple Hill study area.

5.3 Overall Conclusions from Source Apportionment

Source apportionment of the local traffic emissions shows ambient background concentrations contribute the largest proportion to the overall concentration, followed by, in the majority of cases, emissions from cars and buses on the local roads. In a number of cases, emissions from heavy duty vehicles (HDVs) also contribute a significant proportion to the overall concentration. This highlights the importance of keeping all sources under consideration when contemplating measures to include within the action plan.

6. The Development of the Air Quality Action Plan

6.1 Introduction

This section describes, in detail, the process followed in developing the Air Quality Action Plan including appraisal and assessment. The Action Plan needs to demonstrate the following:

- show that a variety of options have been considered;
- quantify the source apportionment to allow refining of actions and assessment;
- assessment of options to allow key actions to be taken forward;
- clear timescales for implementation; and
- a plan for monitoring and evaluating the effectiveness of the plan.

In order to correctly govern the development of the Action Plan and ensure support was available where needed, a Project Board was established involving senior members of staff from the Community Services and Planning, Transportation and Strategic Environment (PTSE) Departments who have vested interest in the project. A core Project Team was also created to undertake the development of the Action Plan which involved key members of staff from the Transport Strategy Team and Environmental Services.

This AQAP covers the two proposed extensions to the Kingswood and Staple Hill AQMAs and will deliver wider benefits at both locations.

6.2 Actions List

A series of workshops took place to develop and refine the list of possible actions. The first of these, held in September 2010, identified a list of highways options for each AQMA. These were schemes which were either already in existence, in the capital programme/task register or aspirational. These were considered by a team of technical highways officers with input into cost, whether funding was available and timescale.

A second workshop was then held in March 2011 to undertake the same exercise for Smarter Choices, including providing an assessment of the air quality impact of the actions as well as wider benefits and dis-benefits for the AQMA. The highways actions for each AQMA were also revisited.

Consideration was given on each action to the following:

- What is the Air Quality Impact of the action?
- Does the action have benefits/dis-benefits wider than Air Quality?
- What are the likely costs associated with the action?
- Has a funding source for the action been identified?
- Over what timescale the action would be implemented?

The full lists of actions considered are contained in Appendices B and C. These lists are initial ideas borne out of the workshops and previous public consultations for the AQMAs originally declared in 2010.

6.3 Actions Appraisal

A workshop was held in June 2011 with technical experts from PTSE to refine the actions and score each in light of the work done by the consultants on the source apportionment. This scoring was in order to help determine the actions which should be included in the AQAP. A scoring system was devised to allow the various actions to be rated and compared. This took the form of the following categories:

- **Air quality impact**
 - This is a targeted assessment based on the results of the source apportionment work. Therefore a scheme based on improving traffic flows would score a higher air quality score than a scheme based around HGVs because the main source of the air quality problem comes from cars and buses.
 - Scores of high, medium or low with high earning the most points and low earning the least points.
- **Other impacts**
 - Other impacts assesses whether the action has any benefits or dis-benefits wider than the air quality impact for example improved road safety being a benefit but potentially displacing traffic to other routes being a dis-benefit.
 - Where dis-benefits outweighed benefits, this earned a negative score.
 - Where benefits outweighed dis-benefits, this earned a positive score.
 - Where the impact was roughly neutral, this earned no score.
- **Cost**
 - The estimated cost of the action includes provision for infrastructure works as well as feasibility, however with any of the actions further investigation and cost refinement would be done as part of the development of the scheme. The costs are only designed to be indicative.
 - Very high (>£10 million) earned the lowest score.
 - High (£1 to £10 million).
 - Medium (£100,000 to £1 million).
 - Low (£10,000 to £100,000).
 - Very low (<£10,000) earned the highest score.
- **Funding identified**
 - Secured (such as through the Capital Programme) earns the highest score.
 - If a source has been identified (for example, it may be on the task register which could mean inclusion into the Capital Programme in future years) but not officially secured, this earns a medium score.
 - No funding (identified or secured) earns the lowest score.
- **Timescale**
 - The timescales have been set at short, medium and long term aspirations with short earning the most points and long term aspirations earning the least.

Further work was then done by the project team to produce a formula which best assessed each scheme. This assessment is intended to assist in the prioritisation of future work associated with the actions. The formula applied is:

Cumulative Impact x Overall Deliverability = Total Score

Where Cumulative Impact is the sum of air quality impact and other impacts and Overall Deliverability is the product of cost multiplied by funding by timescale.

The appraisal of the actions is included at Appendix D.

6.4 Proposed Action Plan Measures

Following the assessment process, the actions were then sorted in descending order of points for each AQMA and a “traffic light” system applied to them. The proposed colour coding is as follows:

- Green actions are those which either have funding committed or funding could be identified in the short-term and can be delivered easily.
- Yellow actions are those where no funding has been identified and would take slightly longer to deliver.
- Orange actions are those which are longer term aspirational.
- A further set of actions were discounted on the basis of deliverability and practicality. These are shown as red on the appraisal of actions included at Appendix D.

The green, yellow and orange proposed actions formed the basis for the consultation on the draft Action Plan.

7. Consultation

7.1 The Consultation Process

A joint consultation on the Further Assessment and Air Quality Action Plan took place between 7th September and 2nd November 2011. Consultation leaflets designed specifically for each area were sent to Kingswood and Staple Hill residents/occupiers at addresses within the currently declared air quality management areas (AQMAs), the proposed extensions to these areas and within 100 metres of the proposed extensions to the AQMAs. A total of 1053 leaflets were sent out in Kingswood and 1365 in Staple Hill. Copies of the consultation leaflets for the Kingswood and Staple Hill AQMAs are contained in Appendix E.

Four consultation events were held in the Kingswood and Staple Hill Libraries. These events were publicised in the consultation leaflets and were manned by a Transport Policy Officer and an Air Quality Officer. A total of 11 people visited the events in Kingswood Library held on 14th September and 12th October, 14 people visited the Staple Hill events held on 13th September and 18th October. Officers dealt with a range of queries at the events and noted comments, which were considered along with the other consultation responses received.

Large banner stands were displayed in both libraries and in the Kingswood One Stop Shop throughout the consultation period to publicise the consultation. Copies of the draft Air Quality Action Plan and Further Assessment of air quality in the AQMAs, along with large maps of the proposed extensions to the Kingswood and Staple Hill AQMAs and additional copies of the consultation leaflets were also available. The consultation information was also published on the Council website.

In addition to local residents, the following statutory consultees were also consulted:

- The Secretary of State - Department for Environment, Food and Rural Affairs (Defra)
- Local Members of Parliament
- Neighbouring local authorities including Bristol City Council
- Environment Agency
- South West Regional Development Agency
- Highways Agency
- Other public bodies (such as NHS South Gloucestershire, West of England Partnership)
- Environment Partnership

Also consulted were public bodies representing local residents and business interests including:

- Kingswood Business Association
- Staple Hill Chamber of Trade
- Bus and taxi operators
- Kingswood Priority Neighbourhood Lead Group
- Staple Hill and Kingswood Safer and Stronger Community Groups
- Staple Hill Regeneration Partnership
- Chase Area Forum

All local Councillors were notified of the consultation and invited to comment. Relevant teams within the Council, including Spatial Planning, Major Sites, Development Control and Sustainability were also consulted.

7.2 Consultation Results

From the consultation leaflets issued, a summary of the responses shows that the response rate was 3.5% for Kingswood and 5.5% for Staple Hill. These rates are considered reasonable and provide a robust sample for analysis.

7.3 Analysis of Kingswood Responses

Out of those who responded in Kingswood, 76% were either very concerned or concerned about air quality as shown in the figure below.

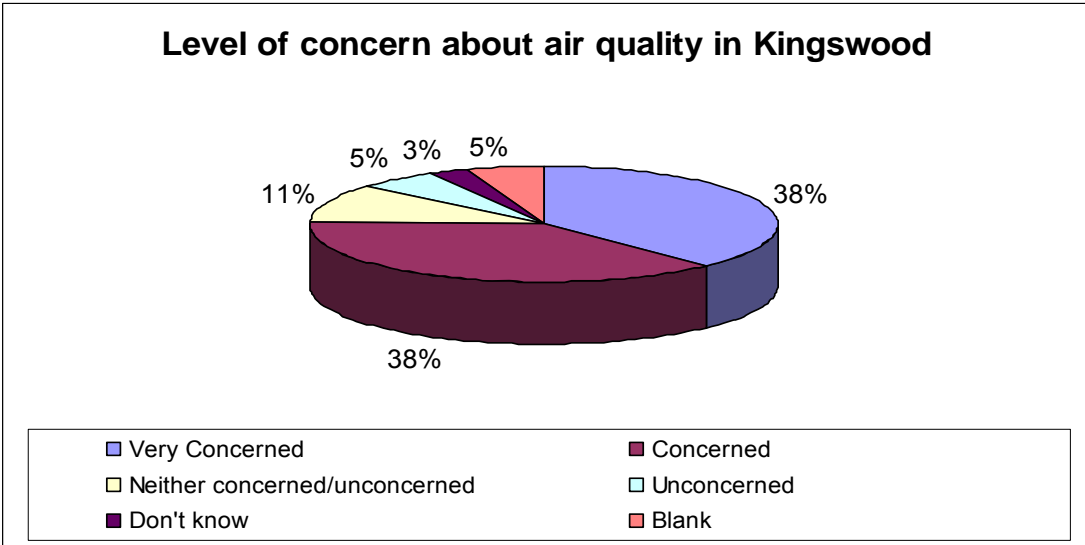


Figure 7.1: Level of Concern about Air Quality in Kingswood

The majority of respondents (92%) either lived in the proposed extended AQMA or lived nearby, with 8% working in the proposed extended AQMA.

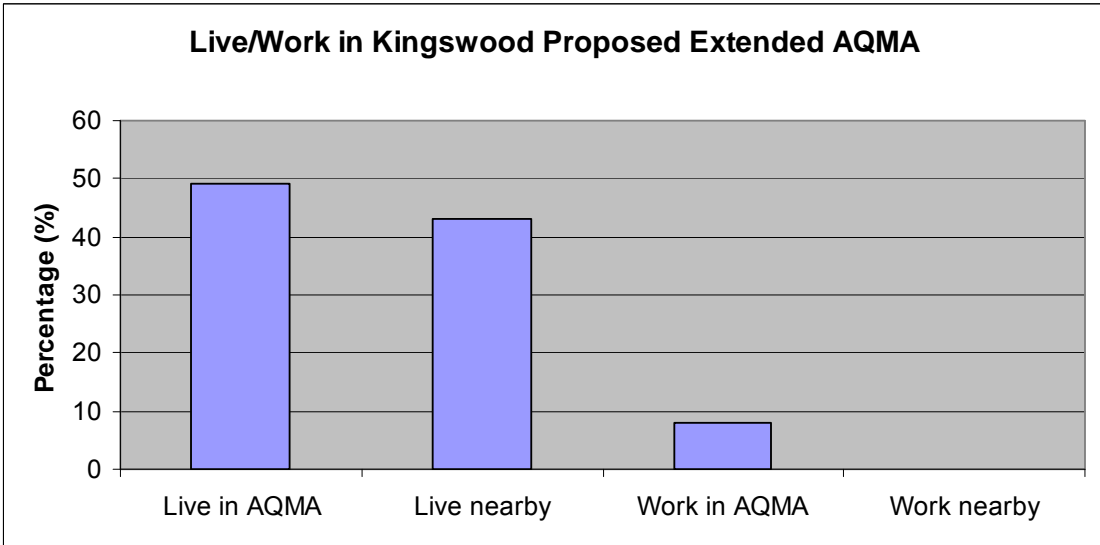


Figure 7.2: Live/work in Kingswood Proposed Extended AQMA

The preferred **short term** actions for Kingswood were equally Action 5: Review of Council fleet to ensure lowest emission vehicles (24%) and Action 6: Promotion of more efficient use of taxi ranks and bus stops (24%).

The percentage preferences for the other actions in decreasing order were:

- Action 3: Ensure air quality is a priority in the development of transport schemes (16%)
- Action 2: Parking Review (11%)
- Action 4: Bus Partnership (11%)
- Action 1: Travel plan for Kingswood Council Offices (5%)

The percentage of respondents that did not indicate a preferred action is shown as “Blank” in the figure below.

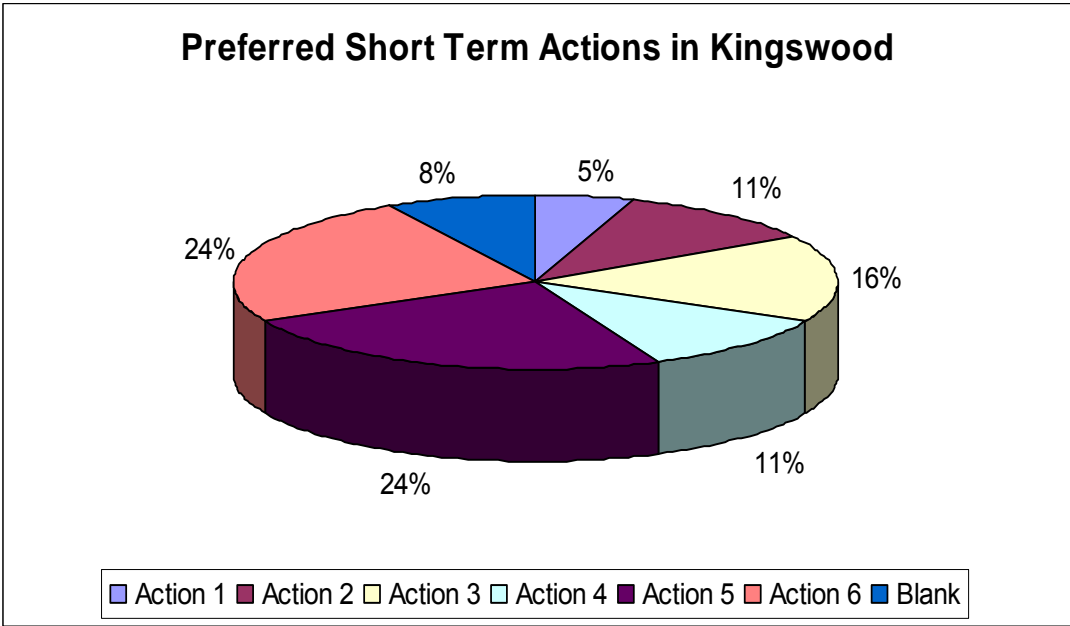


Figure 7.3: Preferred Short Term Actions in Kingswood

The preferred **medium term** actions were Action 3: Review bus terminals and timing points (35%) followed by Action 5: Cycling infrastructure (24%). The other preferences in decreasing order were:

- Action 1: School travel planning (14%)
- Action 2: Travel planning for Kingswood town centre (14%)
- Action 4: Smarter choices promotions/roadshows (8%)

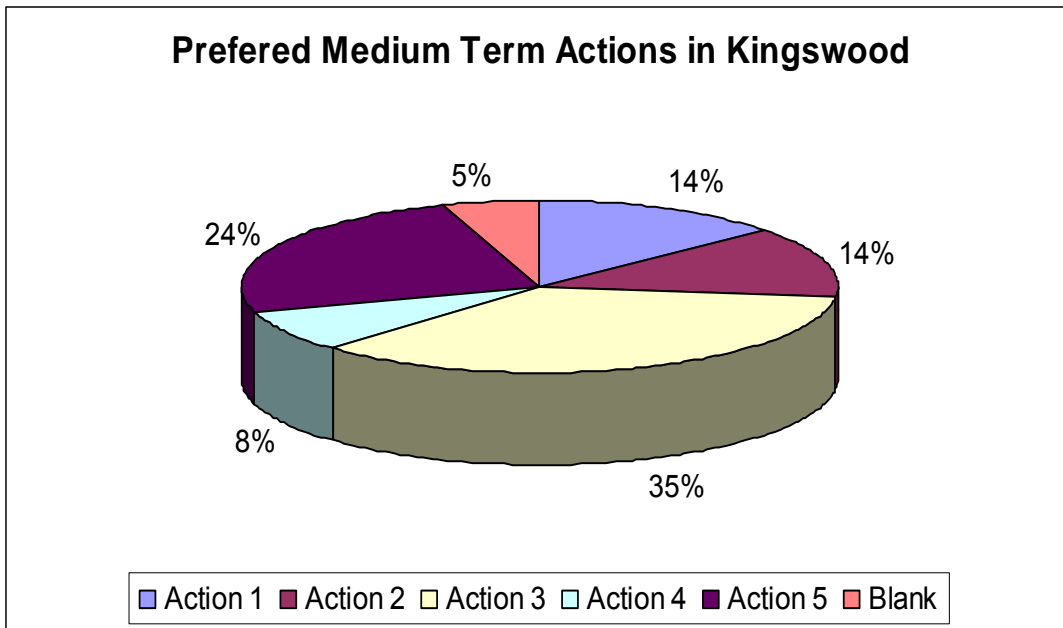


Figure 7.4: Preferred Medium Actions in Kingswood

The preferred **long term** aspirations for Kingswood were Action 4: Review traffic signals numbers and operations (30%) and Action 3: Restrict traffic turning movements onto A420 (27%). Other long term actions in decreasing order of preference were:

- Action 7: Reclassify strategic routes and signing strategy (16%)
- Action 1: Eco Stars fleet recognition scheme (8%)
- Action 5: Review of delivery bays (5%)
- Action 2: Car club (3%)
- Action 6: Controlled deliveries (3%)
- Action 8: Taxi ranks (3%)

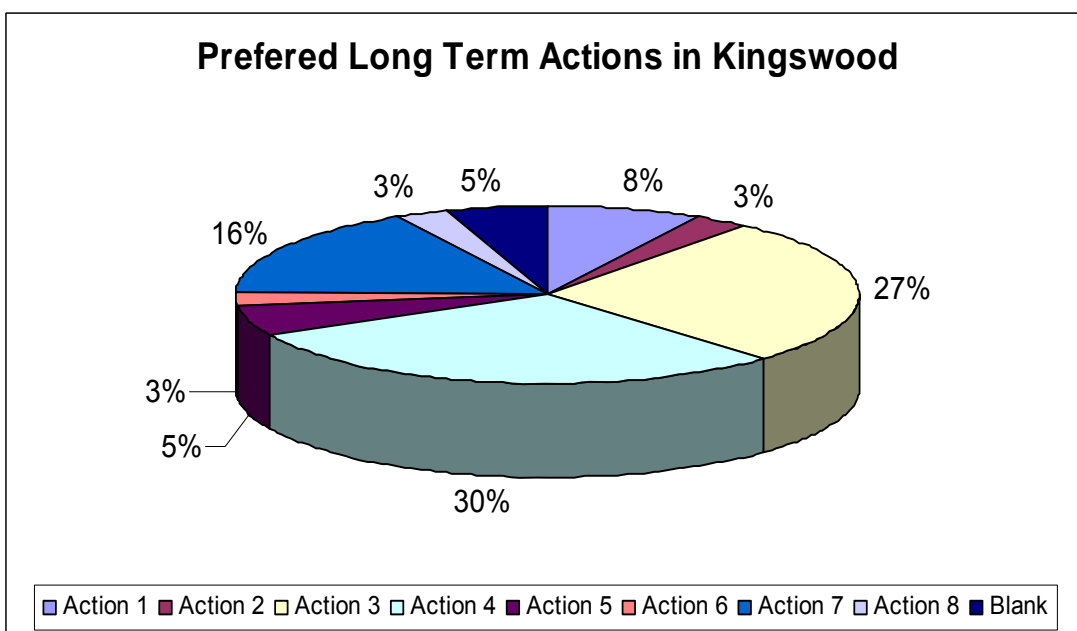


Figure 7.5: Preferred Long Term Actions in Kingswood

7.4 Analysis of Staple Hill Responses

Of those who responded in Staple Hill, 75% were either very concerned or concerned about air quality as shown in the figure below.

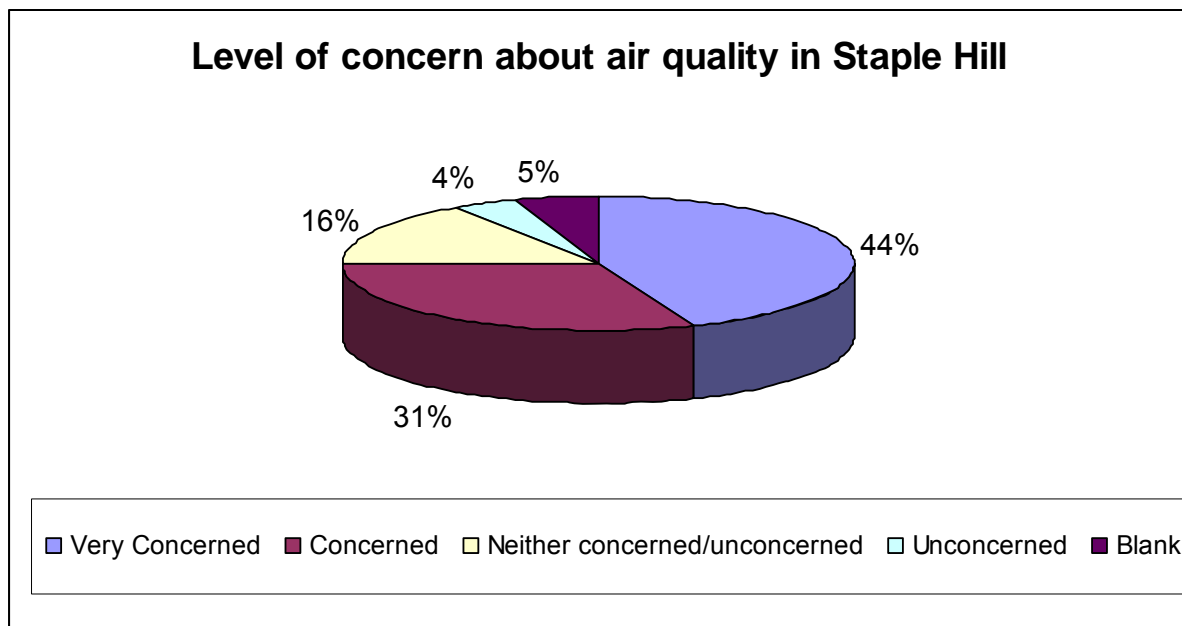


Figure 7.6: Level of Concern about Air Quality in Staple Hill

The majority of respondents (81%) either lived in the proposed extended AQMA or lived nearby. 8% of respondents both lived and worked in the proposed extended AQMA.

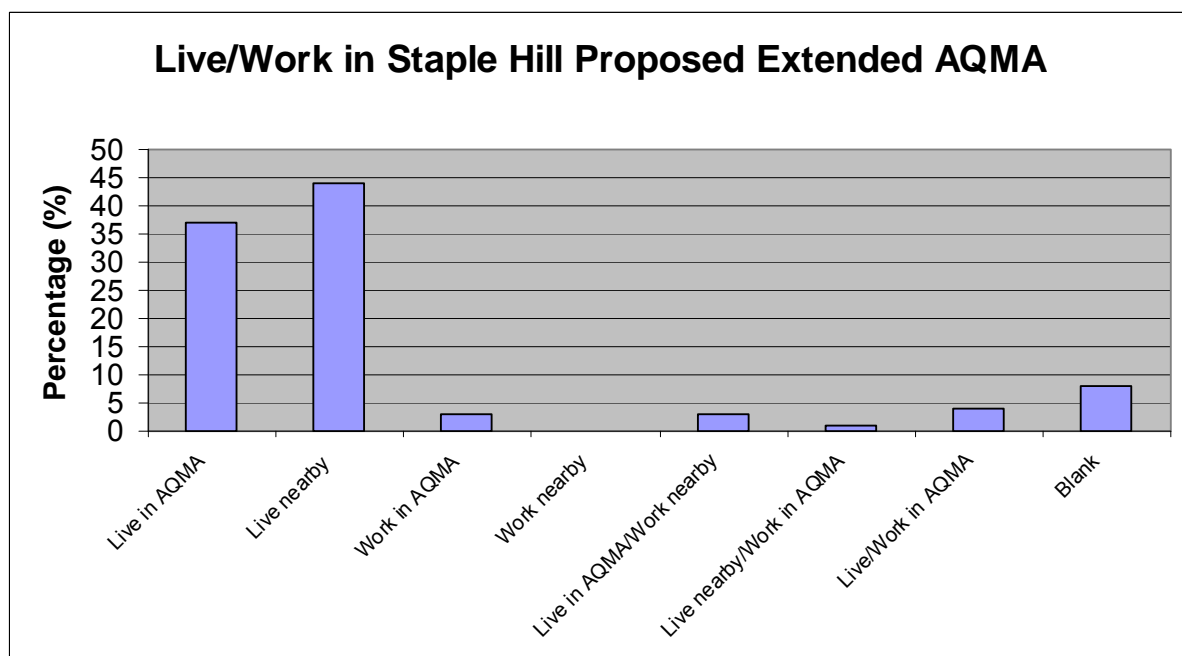


Figure 7.7: Live/Work in Staple Hill Proposed Extended AQMA or Nearby

The preferred short term action for Staple Hill was Action 1: Ensure air quality is a priority in the development of transport schemes (35%). This was followed by Action 4: Promotion of more efficient use of taxi ranks and bus stops (25%) and Action 2:

Bus Partnership (24%). The percentage preference for the remaining Action (Action 3: Review of Council fleet to ensure lowest emission vehicles) was 11%.

It was requested on the Consultation Feedback Form that one preferred action was selected. However some respondents chose more than one action, which is shown as “Multi” (multiple actions chosen) in the figure below.

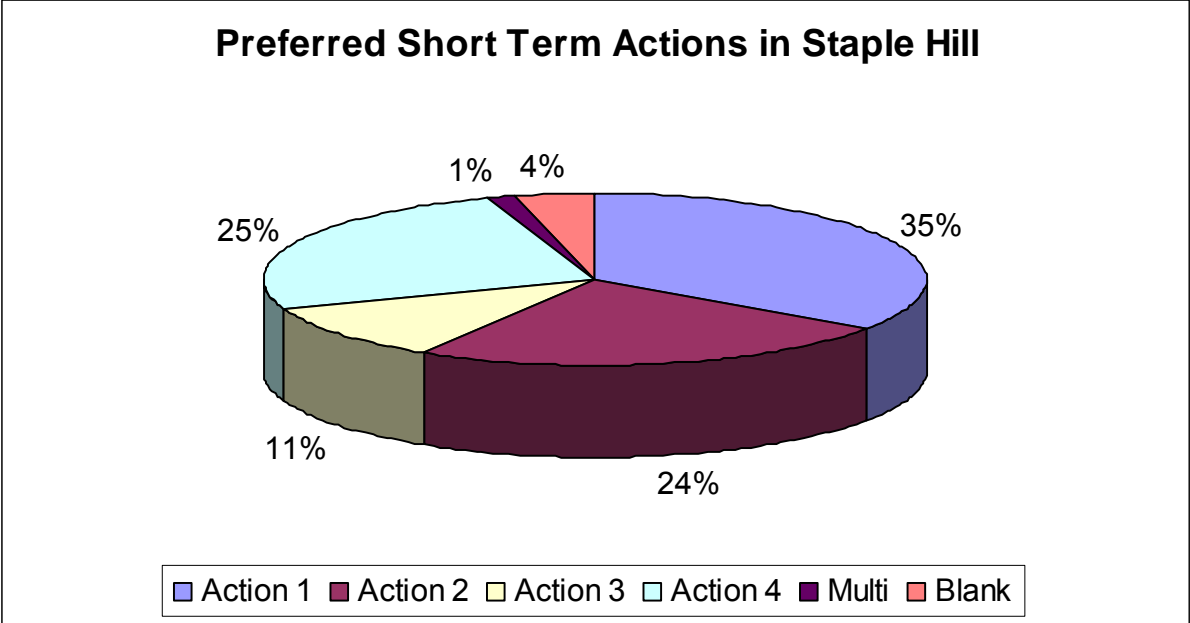


Figure 7.8: Preferred Short Term Actions in Staple Hill

For the proposed **medium term** actions in Staple Hill, Action 3: Relocation of bus stops on Soundwell Road (44%) was the clear preference. The other preferences in decreasing order were:

- Action 1: School travel planning (16%)
- Action 2: Travel planning for Staple Hill town centre (15%)
- Action 4: Parking review (11%)
- Action 5: Smarter choices promotions/roadshows (4%)
- Action 6: Cycling infrastructure (4%)

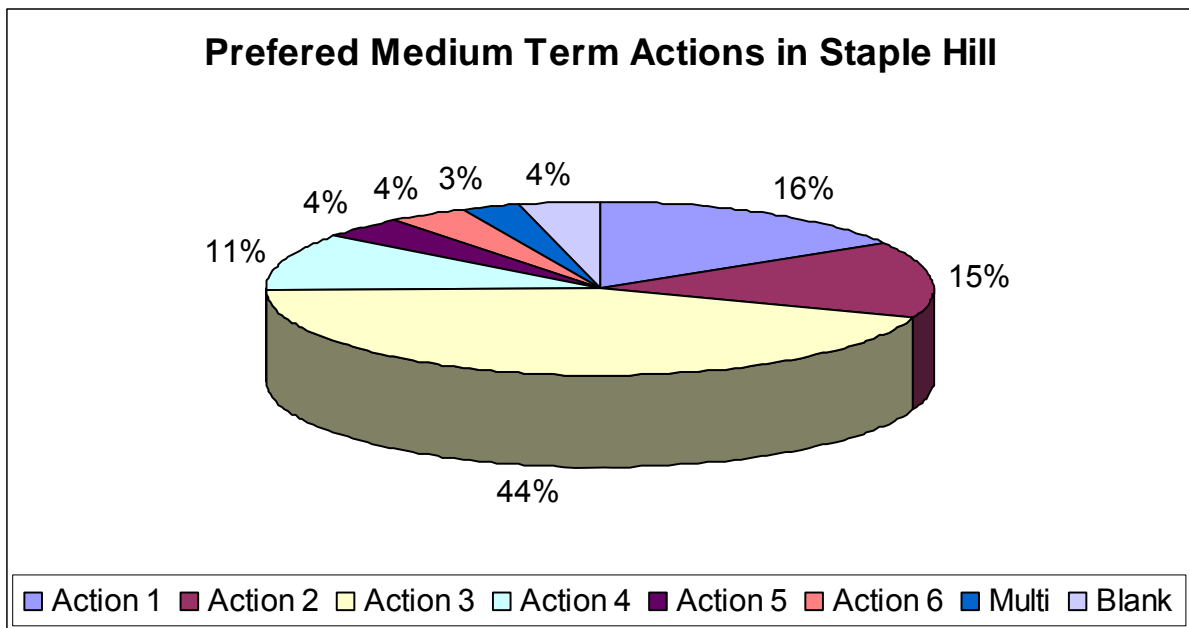


Figure 7.9: Preferred Medium Term Actions for Staple Hill

The preferred **long term** aspirations for Staple Hill Action 3: Review traffic signal numbers and operations (27%), followed by Action 7: Reclassify strategic routes and signing strategy (17%) and Action 6: Controlled Deliveries (16%). Other long term actions in decreasing order of preference were:

- Action 1: Eco Stars fleet recognition scheme (11%)
- Action 5: Restrict traffic turning movements at A4017 junction (11%)
- Action 4: Review of delivery bays (9%)
- Action 2: Car Club (4%)

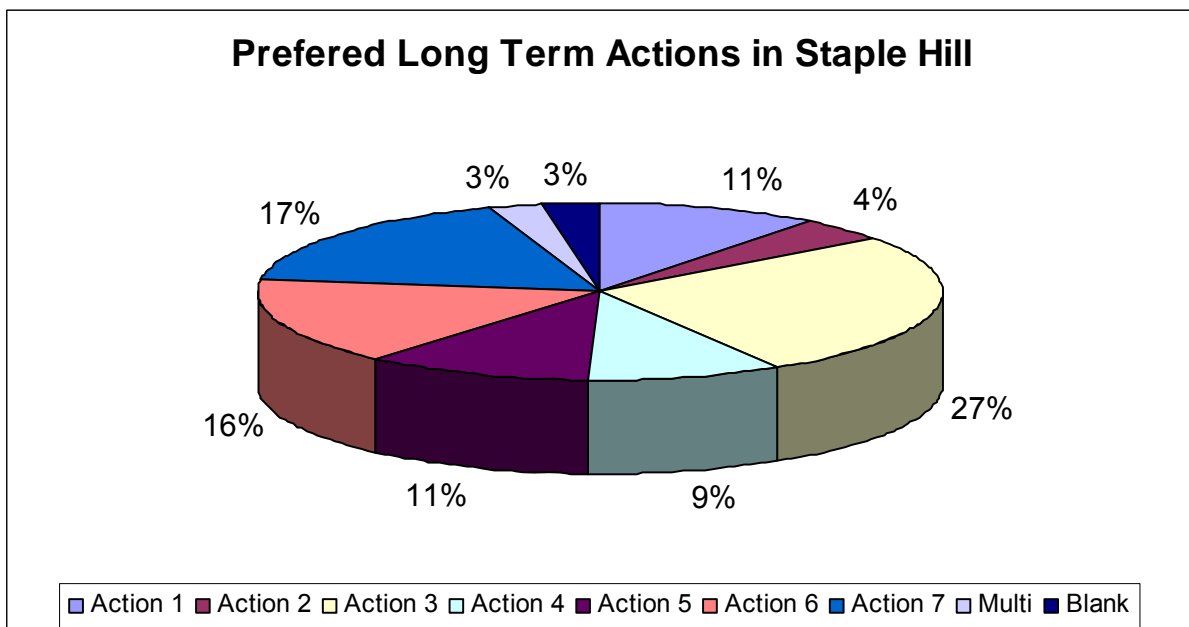


Figure 7.10: Preferred Long Term Actions in Staple Hill

A response was also received from Defra which is included at Appendix F. The comments contained in the appraisal report have informed this finalised Action Plan.

7.5 Consultation on Further Assessment Outcomes

The consultation also sought comments on the proposals to extend the Kingswood and Staple Hill AQMAs. The majority of those who commented on the proposed AQMA extensions were in favour of the extended areas. A few alternative suggestions were made to extend the areas further but these suggestions were not supported by the monitoring and modelling evidence available. Therefore, no changes are proposed to the extensions as a result of the consultation. The extended AQMAs will need to be formally approved by the Council. Then the necessary legal orders will be made to declare the extended AQMAs.

A separate consultation was carried out for the Cribbs Causeway AQMA on the outcomes of the Further Assessment. This consultation also ended on 2nd November. The results show that the proposal to revoke the AQMA (should 2011 monitoring indicate that it is no longer required) is generally supported by the respondents.

7.6 Effect on the Action Plan Actions

Feedback from the consultation, in particular comments and suggested actions received, have been collated and included at Appendix G. These have been assessed in terms of whether the response was a comment or an action and where deemed to be related to an action, action has been taken by an officer to address the response. This has resulted in two new actions created for both Kingswood and Staple Hill as follows:

- KS4 and SS2: Ensuring adequate landscaping is considered within planning applications and any urban design work; and
- KS5 and SS3: Promotion of the VOSA Smoky Vehicles Hotline.

The comments have also resulted in one action; Controlled deliveries, which appears for both Kingswood (KL6) and Staple Hill (SL6) being amended to reflect collections as well as deliveries. The new and amended actions have been included and assessed as part of the actions appraisal process and a revised version is included at Appendix H.

The preferences for the different actions indicated during the consultation will direct the implementation of the Action Plan, though this is dependent on funding being identified for each of the preferred actions.

The revised Action Plan, following consultation, for each AQMA is included in Chapter 8.

8. Action Plan

8.1 Kingswood AQMA

As described in Chapter 6, the Action Plan consists of a series of actions for each AQMA which are split into short and medium actions and then longer term aspirations. Short term actions are those shaded green, medium term actions yellow and longer term aspirations are orange. Table 8.1 displays the action plan for the Kingswood AQMA.

In terms of targets, for each action it has been stated how the action will be measured however as each action is progressed a specific target can be developed. It is anticipated that the majority of actions will require some feasibility work to progress the actions. For each of the actions responsibility has been identified as this will help to focus progress in taking actions forward.

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
KS1	Travel Plan for Kingswood Civic Centre	<p>Put in place a travel plan which will encourage sustainable travel and reduce car usage at the Kingswood Civic Centre.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Car park management policy • Encourage car sharing • Enhance walking and cycling facilities • Reduce solo car 	<p>Measured by</p> <ul style="list-style-type: none"> • reduction in solo occupancy vehicles • increased cycling levels • increased walking levels 	2011/12	SGC	<ul style="list-style-type: none"> • Positive impact • Very low costs • Funding identified • Short term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>driving</p> <ul style="list-style-type: none"> • Increase numbers of cyclists 				
KS2	Parking Review	<p>Review of parking issues within the air quality management area.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Examine where parking issues are, particularly those which cause congestion • Consultation with residents and shopkeepers 	<p>Measured by:</p> <ul style="list-style-type: none"> • Road safety benefits • Reduced congestion 	2012/13	SGC	<ul style="list-style-type: none"> • Positive impact – currently being undertaken • Low costs • Funding identified – 2 year capital programme • Short term timescale
KS3	Ensure Air Quality is a priority in development of transport schemes.	<p>Introducing air quality considerations into capital programme development.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Consult Environmental Protection Team on schemes that may impact on AQMAs • Include as extra 	<p>Measured by number of actions taken forward within Capital Programme</p>	Ongoing	SGC	<ul style="list-style-type: none"> • Positive impact • Very low costs • Funding identified • Short term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>consideration within task register</p> <ul style="list-style-type: none"> • Ensure Area Forums are aware of Air Quality issues 				
KS4	Bus Partnership	<p>Work with operators to address air quality issues through partnership working.</p> <p>Sub Actions: To be developed with operators if required</p>	Measured by number of buses replaced for lower emission vehicles	2012/13	SGC in partnership with bus operators	<ul style="list-style-type: none"> • Very positive impact • Wider benefits such as noise reduction • Funding not identified • Short term timescale
KS5	Review of Council Fleet to ensure lowest emission vehicles	<p>Set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Audit of all current vehicles and emissions levels • Develop standards for vehicles 	Measured by reduction in vehicle emissions	By 2016	SGC	<ul style="list-style-type: none"> • Low impact • Medium costs • Funding identified • Medium term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<ul style="list-style-type: none"> Programme of replacement where necessary 				
KS6	Promotion of more efficient use of taxi ranks and bus stops	<p>Programme to encourage drivers to switch off engines when stationary within air quality management area.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> Audit of current activity Signage Liaison with bus operators and taxi operators 	Measured by number of bus/taxi operators signed up to programme	2012/13	SGC in liaison with taxi operators and bus operators	<ul style="list-style-type: none"> Low impact Very low costs Funding not identified Short term timescale
KS7	Ensure adequate landscaping is considered within new planning applications and urban designs.	<p>Encourage the planting of trees and plants through the planning process.</p> <p>Sub Actions:</p> <p>Liaise with development control teams to ensure landscaping is considered.</p>	Measured by the number of new trees planted.	Ongoing	SGC	<ul style="list-style-type: none"> Medium impact Very low costs Funding identified Short term timescale
KS8	Promotion of VOSA Smoky Vehicle	Promote the VOSA Smoky Vehicle Hotline	Measured by number of	Ongoing	SGC	<ul style="list-style-type: none"> Medium impact

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
	Hotline.	to encourage vehicles to be reported. Sub Actions: Liaise with VOSA re supply of number of reported vehicles	vehicles reported to VOSA (if data available)			<ul style="list-style-type: none"> • Very low costs • Funding identified • Short term timescale
KM1	School travel planning	Ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site. Sub Actions: <ul style="list-style-type: none"> • Travel surveys/interviews • Options planning to identify best sustainable travel incentives • Roadshows to promote messages 	Measured by reduction in number of cars arriving at the site.	By 2016	SGC in conjunction with local schools	<ul style="list-style-type: none"> • Positive impact • Low costs • Medium term timescale • Funding not identified
KM2	Travel planning for Kingswood Town Centre	Plan to encourage more sustainable travel to Kingswood Town Centre both for residents and workers. Sub Actions:	Measured by increased: <ul style="list-style-type: none"> • Cycling levels • Bus patronage • Walking levels 	By 2016	SGC in conjunction with Kingswood Business Association	<ul style="list-style-type: none"> • Positive impact • Low costs • Medium term timescale • Funding not identified

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<ul style="list-style-type: none"> • Undertake travel surveys or interviews to ascertain modes of travel particularly to the shops. • Focus will be on deliveries and visitors where parking. • Options planning to identify best sustainable travel incentives 				
KM3	Review bus terminals and timing points	<p>Undertake a review of the bus stops within the AQMA to reduce number of buses idling at them.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Audit of current activity • Liaison with bus operators • Programme to amend services 	Measured by reduction in number of buses idling at bus stops.	By 2016	SGC in conjunction with bus operators	<ul style="list-style-type: none"> • Very positive impact • Low costs • Medium term timescale • Funding not identified
KM4	Smarter Choices promotions/roadshows	Undertake promotion of sustainable travel in	Measured by increased:	2012/13	SGC	<ul style="list-style-type: none"> • Low impact • Low costs

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>particular around the shopping area by holding roadshows and events where residents and workers can talk to representatives.</p> <p>Sub Actions: Develop promotional materials & design events/roadshows</p>	<ul style="list-style-type: none"> • Cycling levels • Bus patronage • Walking levels <p>Also measure by number of proactive events</p>			<ul style="list-style-type: none"> • Funding not identified • Longer term timescale
KM5	Cycling infrastructure	<p>Review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, improved on carriageway cycle provision, cycle parking and facilities where appropriate.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Audit of current provision and facilities • Options planning 	Measured by increases in numbers of cyclists.	By 2016	SGC	<ul style="list-style-type: none"> • Low impact • Benefits do not necessarily outweigh dis-benefits • Medium costs • Medium term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
KL1	ECO Stars Fleet Recognition Scheme	<p>Introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to businesses within South Gloucestershire.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Establish target audience • Promotion to hauliers and bus operators 	Measured by membership numbers.	2016 onwards	SGC	<ul style="list-style-type: none"> • Positive impact • Very low costs • Long term aspiration • No funding identified
KL2	Car club	<p>Establish a car club with the objective to reduce car ownership levels.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Work with Bristol City Council to see if Bristol car club can be expanded • Establish locations for cars • Promotion of car club to residents and workers in Kingswood 	Measured by car club membership.	2016 onwards	SGC	<ul style="list-style-type: none"> • Positive impact • Low costs • Long term aspiration • Funding not identified

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
KL3	Restrict traffic turning movements onto A420	<p>By restricting traffic turning onto A420 the free flow of traffic is maintained and therefore not idling which improves emissions.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Establish which are critical junctions in terms of congestion • Commission modelling to understand the implications of restricting traffic at junctions • Consultation with Bristol City Council 	Measured by reduction in volume of traffic travelling towards and along A420.	2016 onwards	SGC	<ul style="list-style-type: none"> • Positive impact • Low costs • Long term aspiration • Funding not identified
KL4	Review traffic signal numbers and operations	<p>Review implications of traffic signals and signal timings to improve traffic flows on the A420.</p> <p>Sub Action:</p> <ul style="list-style-type: none"> • Review current operations 	Measured by improved traffic speeds and reduced congestion.	2016 onwards	SGC	<ul style="list-style-type: none"> • Low impact • Benefits do not necessarily outweigh dis-benefits • Long term aspiration • Funding not

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<ul style="list-style-type: none"> Establish where congestion occurs Consult road safety officers to ensure any scheme is not detrimental 				identified
KL5	Review of delivery bays	<p>Review the designated delivery bays to reduce congestion where possible.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> Assess in terms of location, size, accessibility and time limits Liaison with shopkeepers 	<p>Measured by</p> <ul style="list-style-type: none"> number of reported issues with delivery bays reduced congestion 	2016 onwards	SGC	<ul style="list-style-type: none"> Positive impact Medium costs Funding not identified Long term aspiration
KL6	Controlled deliveries/collections	<p>Restrict deliveries/collections (e.g. waste collections) to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> Investigate 	<p>Measured by</p> <p>number of delivery & collection agreements made with businesses</p>	2016 onwards	SGC	<ul style="list-style-type: none"> Positive impact Benefits do not necessarily outweigh dis-benefits Long term aspiration Funding not identified

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		feasibility of including waste collections <ul style="list-style-type: none"> • Liaison with shopkeepers • Review to understand current delivery schedules • Liaison internally with waste collection 				
KL7	Reclassify strategic routes and signing strategy	By reclassifying the routes it would reroute strategic traffic and therefore reduce the traffic volumes. Sub Actions: <ul style="list-style-type: none"> • Undertake roadside surveys to understand strategic traffic vs. local traffic • Examine alternative routes • Commission modelling to look at impact of relocating strategic routes 	Measured by reduction in traffic volumes on and travelling towards A420.	2016 onwards	SGC	<ul style="list-style-type: none"> • Positive impact • Medium costs • Funding not identified • Long term aspiration

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
KL8	Taxi Ranks	<p>Undertake review of operations by taxi's within the air quality management area.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Audit of current operations • Options planning • Liaison with taxi operators 	Measured by production of review report	2016 onwards	SGC in conjunction with taxi operators	<ul style="list-style-type: none"> • Positive impact • Very low costs • Funding not identified • Long term aspiration

Table 8.1: Action Plan for Kingswood AQMA

8.2 Staple Hill AQMA

As described in Chapter 6, the Action Plan consists of a series of actions for each AQMA which are split into short and medium actions and then longer term aspirations. Short term actions are those shaded green, medium term actions yellow and longer term aspirations are orange. Table 8.2 displays the action plan for the Kingswood AQMA.

In terms of targets, for each action it has been stated how the action will be measured however as each action is progressed a specific target can be developed. It is anticipated that the majority of actions will require some feasibility work to progress the actions. For each of the actions responsibility has been identified as this will help to focus progress in taking actions forward.

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
SS1	Ensure Air Quality is a priority in development of transport schemes	<p>Introducing air quality considerations into capital programme development.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Consult Environmental Protection Team on schemes that may impact on AQMAs • Include as extra consideration within task register • Ensure Area Forums are aware of Air Quality issues 	Measured by number of actions taken forward within Capital Programme	Ongoing	SGC	<ul style="list-style-type: none"> • Positive impact • Very low costs • Funding identified • Short term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
SS2	Bus Partnership	<p>Work with operators to address air quality issues through partnership working.</p> <p>Sub Actions: To be developed with operators if required</p>	Measured by number of buses replaced for lower emission vehicles.	2012/13	SGC in partnership with bus operators	<ul style="list-style-type: none"> • Very positive impact • Wider benefits such as noise reduction • Funding not identified • Short term timescale
SS3	Review of Council Fleet to ensure lowest emission vehicles	<p>Set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Audit of all current vehicles and emissions levels • Develop standards for vehicles • Programme of replacement where necessary 	Measured by reduction in vehicle emissions.	By 2016	SGC	<ul style="list-style-type: none"> • Low impact • Medium costs • Funding identified • Medium term timescale
SS4	Promotion of more efficient use of taxi	Education of drivers to switch off engines.	Measured by number of bus/taxi	2012/13	SGC in liaison with taxi	<ul style="list-style-type: none"> • Low impact • Very low

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
	ranks and bus stops	Sub Actions: <ul style="list-style-type: none"> • Audit of current activity • Signage • Liaison with bus operators and taxi operators 	operators signed up to programme		operators and bus operators	costs <ul style="list-style-type: none"> • Funding not identified • Short term timescale
SS5	Ensure adequate landscaping is considered within new planning applications and urban designs.	Encourage the planting of trees and plants through the planning process. Sub Actions: <ul style="list-style-type: none"> • Liaise with development control teams to ensure landscaping is considered. 	Measured by the number of new trees planted.	Ongoing	SGC	<ul style="list-style-type: none"> • Medium impact • Very low costs • Funding identified • Short term timescale
SS6	Promotion of VOSA Smoky Vehicle Hotline.	Promote the VOSA Smoky Vehicle Hotline to encourage older vehicles to be reported. Sub Actions: Liaise with VOSA re supply of number of reported vehicles	Measured by number of vehicles reported to VOSA (if data available)	Ongoing	SGC	<ul style="list-style-type: none"> • Medium impact • Very low costs • Funding identified • Short term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
SM1	School travel planning	<p>Ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Travel surveys/interviews • Options planning to identify best sustainable travel incentives • Roadshows to promote messages 	Measured by reduction in number of cars arriving at the site.	By 2016		<ul style="list-style-type: none"> • Positive impact • Low costs • Medium term timescale • Funding not identified
SM2	Travel planning for Staple Hill Town Centre	<p>Undertake travel surveys or interviews to ascertain modes of travel particularly to the shops/workplaces. Focus will be on deliveries and visitors where parking.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Undertake travel surveys or 	<p>Measured by increased:</p> <ul style="list-style-type: none"> • Cycling levels • Bus patronage • Walking levels 	By 2016	SGC in conjunction with Staple Hill Chamber of Trade	<ul style="list-style-type: none"> • Positive impact • Low costs • Medium term timescale • Funding not identified

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>interviews to ascertain modes of travel particularly to the shops.</p> <ul style="list-style-type: none"> • Focus will be on deliveries and visitors where parking. • Options planning to identify best sustainable travel incentives. 				
SM3	Relocation of bus stops on Soundwell Road	<p>Relocating the bus stops to more suitable positions where they do not completely stop the flow of traffic in both directions.</p> <p>Sub Actions: Produce feasibility report</p>	Measured by relocation of bus stop	By 2016		<ul style="list-style-type: none"> • Positive impact • Low costs • Funding not identified • Medium term timescale
SM4	Parking Review	<p>Review of parking issues within the air quality management area.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Examine where 	<p>Measured by:</p> <ul style="list-style-type: none"> • Road safety benefits • Reduced congestion 	By 2016		<ul style="list-style-type: none"> • Positive impact • Low costs • Funding not identified • Medium term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>parking issues are, particularly those which cause congestion</p> <ul style="list-style-type: none"> • Consultation with residents, workers and shopkeepers 				
SM5	Smarter Choices promotions/roadshows	<p>Undertake promotion of sustainable travel in particular around the shopping areas with residents and workers by holding roadshows and events where people can talk to representatives.</p> <p>Sub Actions: Develop promotional materials & design events/roadshows</p>	<p>Measured by increases in number of:</p> <ul style="list-style-type: none"> • Cyclists • Bus patronage <p>Also measure by number of proactive events</p>	2012/13		<ul style="list-style-type: none"> • Low impact • Low costs • Funding not identified • Longer term timescale
SM6	Cycling infrastructure	<p>Review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, improved on carriageway cycle facilities, cycle parking</p>	<p>Measured by increases in numbers of cyclists.</p>	By 2016		<ul style="list-style-type: none"> • Low impact • Benefits do not necessarily outweigh dis-benefits • Medium costs • Medium term timescale

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		and facilities where appropriate. Sub Actions: <ul style="list-style-type: none"> • Audit of current provision and facilities • Options planning 				
SL1	ECO Stars Fleet Recognition Scheme	Introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to businesses within South Gloucestershire. Sub Actions: <ul style="list-style-type: none"> • Establish target audience • Promotion to hauliers and bus operators 	Measured by membership numbers.	2016 onwards		<ul style="list-style-type: none"> • Positive impact • Very low costs • Long term aspiration • No funding identified
SL2	Car club	Establish a car club with the objective to reduce car ownership levels. Sub Actions: <ul style="list-style-type: none"> • Work with Bristol 	Measured by car club membership.	2016 onwards		<ul style="list-style-type: none"> • Positive impact • Low costs • Long term aspiration • Funding not identified

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>City Council to see if Bristol car club can be expanded</p> <ul style="list-style-type: none"> • Establish locations for cars • Promotion of car club to residents and workers in Staple Hill 				
SL3	Review traffic signal numbers and operations	<p>Review implications of traffic signals and signal timings to improve traffic flows through Staple Hill.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Review current operations • Establish where congestion occurs • Consult road safety officers to ensure any scheme is not detrimental 	Measured by improved traffic speeds.	2016 onwards		<ul style="list-style-type: none"> • Low impact • Benefits do not necessarily outweigh dis-benefits • Long term aspiration • Funding not identified
SL4	Review of delivery bays	Review the designated delivery bays to reduce congestion where possible.	<p>Measured by</p> <ul style="list-style-type: none"> • number of reported issues with 	2016 onwards		<ul style="list-style-type: none"> • Positive impact • Medium costs • Funding not

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		Sub Actions: <ul style="list-style-type: none"> Assess in terms of location, size, accessibility and time limits Liaison with shopkeepers 	delivery bays <ul style="list-style-type: none"> Reduced congestion 			identified <ul style="list-style-type: none"> Long term aspiration
SL5	Restrict traffic turning movements at A4017 junction.	By restricting traffic turning at A4017, the free flow of traffic is maintained and therefore not idling which improves emissions. Sub Actions: <ul style="list-style-type: none"> Establish which arms of the main crossroads is the most critical Commission modelling to understand the implications of restricting turning traffic 	Measured by reduction in traffic volumes at A4017 junction.	2016 onwards		<ul style="list-style-type: none"> Positive impact Low costs Long term aspiration Funding not identified
SL6	Controlled deliveries/collections	Restrict deliveries/collections (e.g. waste	Measured by number of delivery & collection	2016 onwards		<ul style="list-style-type: none"> Positive impact Benefits do

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		<p>collections) to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Investigate feasibility of including waste collections • Liaison with shopkeepers • Review to understand current delivery schedules • Liaison internally with waste collection 	agreements made with businesses			<p>not necessarily outweigh dis-benefits</p> <ul style="list-style-type: none"> • Long term aspiration • Funding not identified
SL7	Reclassify strategic routes and signing strategy	<p>By reclassifying the routes it would reroute strategic traffic and therefore reduce the traffic volumes.</p> <p>Sub Actions:</p> <ul style="list-style-type: none"> • Undertake roadside surveys to understand 	Measured by reduction in traffic volumes on and travelling towards A4017.	2016 onwards		<ul style="list-style-type: none"> • Positive impact • Medium costs • Funding not identified • Long term aspiration

Action Number	Title	Description of Scheme	Target	Target Date	Responsibility	Rank
		strategic traffic vs. local traffic <ul style="list-style-type: none"> • Examine alternative routes • Commission modelling to look at impact of relocating strategic routes 				

Table 8.2: Action Plan for Staple Hill AQMA

8.3 Defra Funding: Air Quality Grants

Defra currently operate an Air Quality Grant Programme to support Councils in fulfilling their statutory duties for local air quality management (LAQM). There is an opportunity to apply for additional funding to implement measures contained within the action plan. Defra have indicated that programme priorities are local authorities who have declared AQMAs particularly for NO₂. South Gloucestershire Council are eligible to bid for a grant because the AQMAs were declared prior to 31st March 2011. Defra have indicated that funding will be considered for the following types of work:

- Feasibility studies;
- Research to facilitate implementation of actions;
- Projects that contribute to reduction in emissions and/or concentrations of nitrogen dioxide; and
- Projects aimed at improving air quality through influencing travel behaviour and promoting sustainable modes of travel.

8.4 Financing/Funding

Whilst there is no direct funding provided for the actions listed in the AQAP from an air quality point of view, some schemes have or could be allocated funding through existing funding streams. One such funding stream is the Councils Capital Programme which identifies the approved annual investment in the highway network by the Council, based on the Joint Local Transport Plan priorities. It includes the LTP Integrated Transport and LTP Maintenance Block funding grant from Department for Transport. Further funding is also available from development schemes as a Section 106 contribution. The Council continues to seek alternative funding sources where possible.

It must be taken into consideration that the Action Plan has been developed at a time of local authority budget reductions as well as the significant uncertainties around government funding availability for transport and air quality schemes. Ultimately, the delivery of this Action Plan is dependent on adequate levels of resourcing, both for capital costs and staffing.

8.5 Implementation and Monitoring

To implement the Action Plan measures, South Gloucestershire Council will involve and work jointly with all relevant partners and stakeholders. Officers will continue to meet as measures are implemented, both to ensure implementation progresses and to amend the Action Plan in future, if necessary.

The implementation and effectiveness of the AQAP will be carefully monitored through the monitoring of nitrogen dioxide concentrations at relevant locations within the Kingswood and Staple Hill AQMAs. In addition, other surrogate indicators such as traffic flows and proportions of different categories of vehicles will be incorporated.

Progress on the implementation of the Action Plan will be reported in an annual progress report. Air quality monitoring will continue on an ongoing basis both within the AQMAs and across South Gloucestershire as a whole. The progress report will include both monitoring results as well as other related information on specific

actions, such as the number of school travel plans implemented or potential reductions in traffic.

It is worth noting that the requirement on local authorities is to work in pursuit of the objectives. It is recognised that local authorities may not have sufficient control over all of the sources which could potentially give rise to the breach.

The Action Plan will be integrated into the third Joint Local Transport Plan for the four West of England authorities, which covers the period 2011 - 2026. This should provide a systematic way to join up air quality management and transport planning and bring about air quality improvements.

8.6 Expected Impact of the Air Quality Action Plan

At this stage, it has not been possible to equate actions with improvements in air quality as many of the medium term and longer term aspirations will require more feasibility work to fully develop the action before any implementation can begin. As part of the feasibility work, an assessment would be made as to whether the air quality objectives would be delivered through implementation of the action. Likely reductions in pollutant concentrations as the feasibility work progresses will be also be considered.

9. Summary and Conclusions

South Gloucestershire Council declared the following three air quality management areas in April 2010:

- Staple Hill at the Broad Street (A4175), High Street (B4465), Victoria Street and Soundwell Road (A4017) crossroads
- Kingswood along Regent Street (A420)
- Cribbs Causeway adjacent to the M5 Roundabout at Junction 17

Following the declaration of the AQMAs, this Action Plan has been developed for the Kingswood and Staple Hill areas in recognition of the legal requirement on the Council to work towards the air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part.

The Further Assessment carried out by the Council concluded that the Kingswood and Staple Hill AQMAs should be extended. The Action Plan covers the proposed extensions of the AQMAs. For the Cribbs Causeway AQMA, the monitoring showed that the levels of nitrogen dioxide were below the objective. The monitoring results for 2011 will be reviewed and if they remain below the objective, then the AQMA can be revoked. In light of this, it is proposed to wait for the outcome of the monitoring before progressing any further with work for this area.

Source apportionment undertaken for the further assessment identified the sources of pollution contributing to the exceedences to allow the Action Plan to be appropriately targeted. Road traffic contributes between 55 - 75% of the total nitrogen dioxide concentrations in Kingswood and Staple Hill.

This Air Quality Action Plan sets out a series of actions on which consultation was carried out. These measures have been refined, prioritised and categorised into those which can be implemented in the short term, and those which need further work and require longer term timescales.

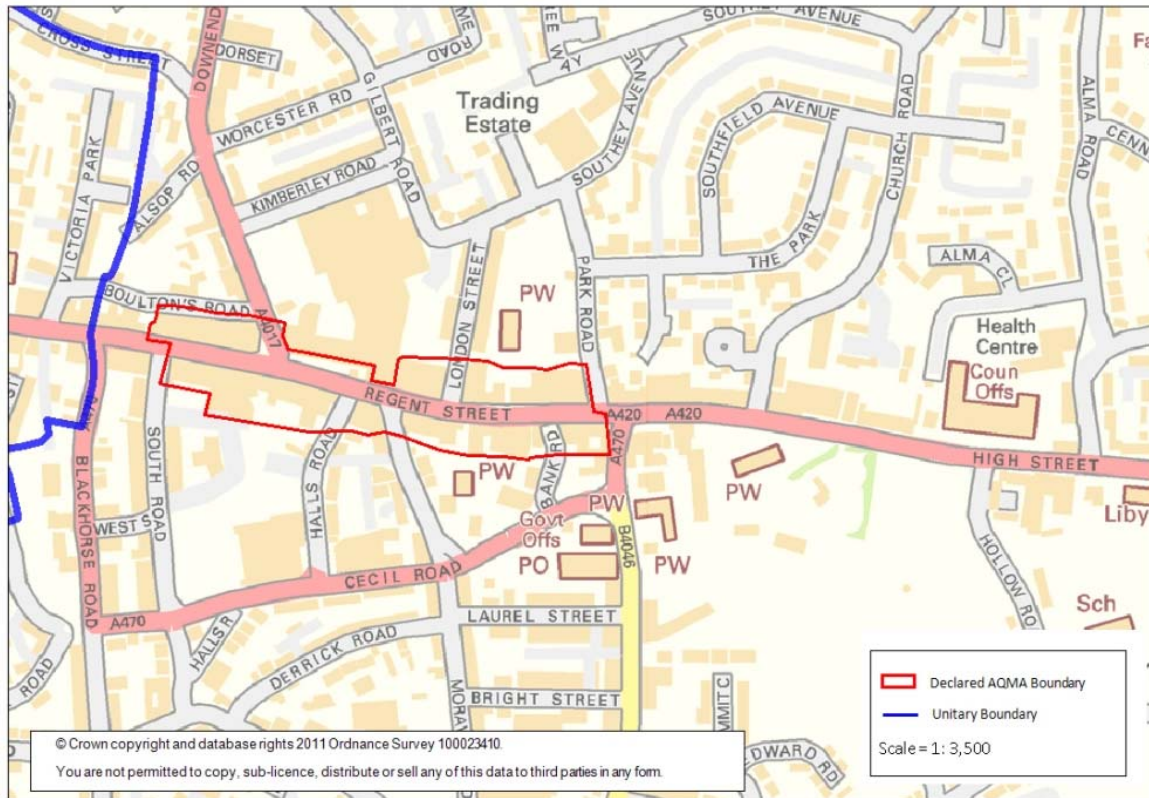
The measures highlighted in this Action Plan should reduce concentrations of nitrogen dioxide within the AQMAs although it is too early to say exactly what impact they will have on improving air quality. The Council will continue to monitor air quality within and around the AQMAs and the results will be made available through annual review and assessment reports. Implementation of the Action Plan will be reported in an annual progress report incorporated into the annual air quality review and assessment report.

10. Glossary

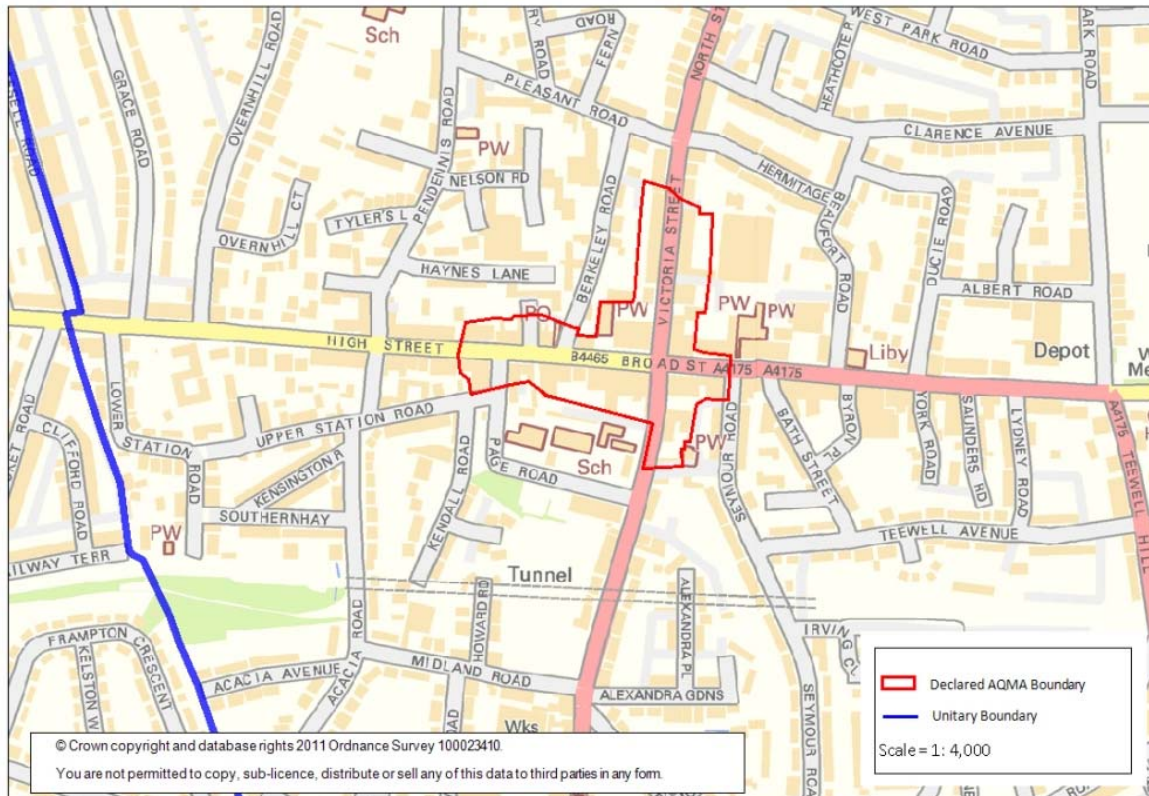
AQMA	Air Quality Management Area
AQAP	Air Quality Action Plan
DEFRA	Department of Environment, Food and Rural Affairs
HDVs	Heavy Duty Vehicles (Buses and HGVs greater than 3.5 tonnes)
HGVs	Heavy Goods Vehicles
JLTP3	Joint Local Transport Plan 3 (West of England Authorities)
LDVs	Light Duty Vehicles (cars and LGVs less than 3.5 tonnes)
LGVs	Light Goods Vehicles
NO₂	Nitrogen dioxide
PM₁₀	Particulate Matter (particle size not greater than 10µm)
SGC	South Gloucestershire Council
Street Canyon	A relatively narrow street where the height of the buildings on both sides is greater than the width of the road
µm	Micrometre
µg	Microgram (a millionth of a gram)
µg/m³	Micrograms per cubic metre (the unit for describing the concentration of air pollutants in the atmosphere)
VOSA	Vehicle & Operator Services Agency

11. Appendix A: Maps of Air Quality Management Areas

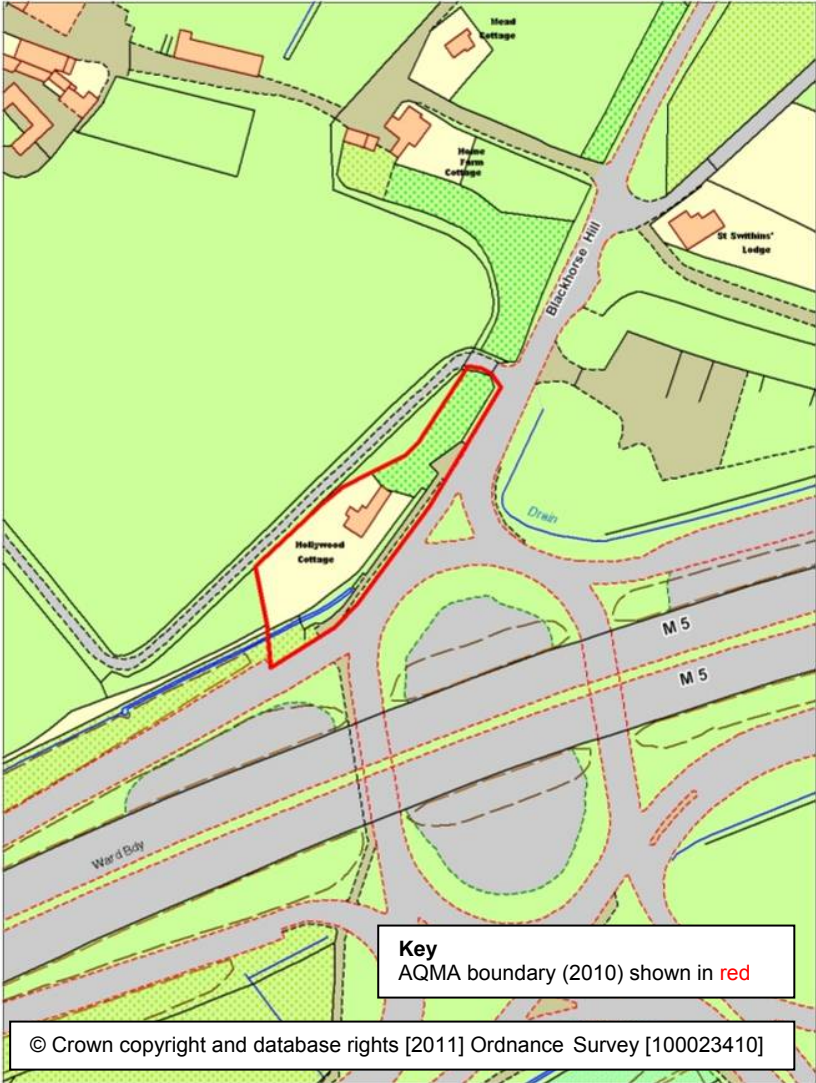
Kingswood AQMA declared 2010



Staple Hill AQMA declared 2010



Cribbs Causeway AQMA declared 2010



12. Appendix B: Initial Actions List (Highways Schemes)

Highways Options- Kingswood

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low) (low = <100k)	Timescales (short 1-2 yrs, Medium 2-5yrs, Long 5+ yrs)
Parking Control / Enforcement	M	Safety. Better traffic flow Bus punctuality	Trade impact	3	L	S
Review of delivery bays	M	Trade Better traffic flow Bus punctuality	Loss of on-street parking	2	L	S
Review deliveries between Moravian Road and Hanham Road - could this be considered for the length of Regent St?	M	Traffic flow Bus punctuality	Trader dislike	2	L	S
Queue relocation using signals approaching the AQMA, without disadvantaging the buses on the showcase corridor	H	Traffic flow in High Street & bus punctuality	Queues relocate to adjoining roads	2	L	S
Signal operation changes for vehicles & pedestrians	H	Traffic and bus flow	Road safety (pedestrians) – not pedestrian friendly	2	L	S
Introduce MOVA & lining signals	M	Traffic and bus flow	-	1	L	S
Review bus terminals & timing points						

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability <i>Score 1 to 3</i> <i>1 – Acceptable</i> <i>2 – Neutral</i> <i>3- Unacceptable</i>	Cost (high, medium, low) (low = <100k)	Timescales (short 1-2 yrs, Medium 2-5yrs, Long 5+ yrs)
Taxi Rank – queues on the pavement outside Chasers						
Idling at bus stops & tax rank	M		Difficult to enforce	1	L	S
Restrict traffic flows southbound to increase green time for traffic coming out of Bristol	H	Traffic flow eastbound and pedestrian & cycle safety	Traffic flow southbound transfers to other roads (road safety)	2.5	M	M
Traffic Management Review (waiting restriction review currently being delivered)					L	S
From the consultation: problem = idling traffic in Regent St to allow traffic emerging from Park Road that wishes to go down Hanham Rd. A suggestion was made to extend the traffic island to ensure traffic from Park Rd can only go down the A420.						
Home Zone treatment						
Cycling Infrastructure	M	Health		1	L	S
Low Emission Zone	H		Resistance from hauliers			

Highways Options– Staple Hill

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – <i>Acceptable</i> 2 – <i>Neutral</i> 3- <i>Unacceptable</i>	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5yrs, Long 5+ yrs)
Relocation of bus terminus on Soundwell Road						
Install MOVA at crossroad junction	H	Traffic and bus flow		1	L	S (this year)
Queue relocation	H	Traffic flow better in AQMA	Queuing elsewhere	2	L	S
Traffic Management Review (waiting restrictions) including change to parking towards the square to parallel parking	M	Traffic flow	Loss of parking - impact on trade	2.5	L	S
Introduce a ban of right turn manoeuvres at crossroad junction(s)	H	Traffic flow	Effect on bus routes and displaced traffic	2.5	L	S
Re-classify Victoria Street/Soundwell Road	L	Relocate strategic traffic	Loss of funding	2	L	M
Cycling Infrastructure	M	Health. Reduced traffic	-	1	L	S

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability <i>Score 1 to 3</i> <i>1 – Acceptable</i> <i>2 – Neutral</i> <i>3- Unacceptable</i>	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5yrs, Long 5+ yrs)
Introduce time restrictions for deliveries	M	Traffic flow. Environment	Resistance from traders / hauliers	2	L	S
Parking control/enforcement						
Low Emission Zone	H		Resistance from Hauliers			

13. Appendix C: Initial Actions List (Smarter Choices Schemes)

Smarter Choices & Public Transport Options- Kingswood

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
'Switch off' signs for buses at stops & for taxis at taxi rank & delivery vehicles	Low Reduced emissions from idling vehicles will help improve AQ	Reduced noise, quieter environment without idling vehicles		1	Low Medium with enforcement	Short
Cycling City Smarter Choices <ul style="list-style-type: none"> Ongoing promotion of cycling Including roadshows for awareness raising 	Low Increased cycling will help improve AQ	Improved fitness levels and health Improved travel choices Reduced congestion		1	Low compared with other proposals Medium if new cycle routes	Short or Medium (if new routes)
School Travel Planning + John Cabot Academy <ul style="list-style-type: none"> Travel survey/interviews Options planning to identify best sustainable travel incentives Explore staggered start/finish times to reduce concentrated bursts of traffic. 	Low/Medium Encourages mode shift away from SOV through education, training, incentives & some infrastructure	Road Safety, fitness & wellbeing.	May lose focus on improving Kingswood Town Centre Air Quality.	1	Low compared with other proposals	Short
Extend Travel Planning to Kingswood Town Centre <ul style="list-style-type: none"> Travel survey/interviews Focus on deliveries, visitors where parking 	Low/Medium Encourages mode shift away from SOV through education,	Road Safety, fitness & wellbeing.	Potential economic impact on retailers as travel restrictions may discourage visitors.	1	Low compared with other proposals	Short/ Medium

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
<ul style="list-style-type: none"> Free hopper bus? (Kingswood Shopping Centre/ supermarket/ Businesses) 	training, incentives & some infrastructure					
Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme	Medium Encourages road transport operators to invest in and improve their fleet environmental performance, including maximising potential carbon savings	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps to address the negative reputation of bus/goods vehicles.	Potential cost to Fleet operators?	2	Low compared with other proposals	Medium
Controlled Deliveries <ul style="list-style-type: none"> Restrict deliveries times to off peak hours Freight consolidation - use of Avonmouth Freight Consolidation Centre or too distant? Strategic Freight road? Consider electric vehicles for deliveries 	Medium/ High Controlling/ reducing number of deliveries could improve AQ	<ul style="list-style-type: none"> Deliveries when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery vehicles not contributing to any peak hour congestion. Freight consolidation - reduced no. of vehicles into area so less congestion, 	May limit availability of goods.	1	Low compared with other proposals	Medium

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
		reduced emissions & if use electric vehicles, further reduced emissions.				
Traffic Free Town Centre or traffic restrictions	High No traffic would resolve AQ issue	No congestion in Town centre	Increased congestion on diversions around Town Centre Traders disadvantaged, no passing trade	3	Medium	Medium/Long
Bus Partnership <ul style="list-style-type: none"> Clarify dates when have to introduce in higher Euro Standards -bring forward? Use of hybrid vehicles Showcase Bus routes – impact 	Medium Reduced emissions will help improve AQ	Noise reductions as quieter buses are travelling through the “channelled” town centre.		1	Medium	Medium/Long
Low Emission Zone (LEZ)	High Reduced emissions will help improve AQ	Reduced congestion		2	High	Long
Taxi Rank Usage (tie in with Idling) <ul style="list-style-type: none"> Limit no. of taxis at the rank(compromising bus stop) 	Low Reduced emissions will help improve AQ	Reduced congestion	Dis-benefit to customers as they may have to wait longer for a taxi.	2	Low	Short

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
Examine own Council Fleet (set example/reduce emissions e.g. Waste Collection vehicles/ community transport upgraded to low emission) Particularly those on routes which pass through Kingswood Town Centre.	Low Reduced emissions will help improve AQ			1	Low	Short/ Medium
Travel plan for Kingswood Civic centre • Encourage car sharing and sustainable transport as travel to work options.	Low/Medium Encourages mode shift away from SOV through education, training, incentives & some infrastructure	Road Safety, fitness & wellbeing. Reduces congestion.	Staff locations may mean that no reductions in staff travelling through Kingswood Town Centre occur as a result on implementing the Travel Plan.	1	Low compared with other proposals	Short (as to be in place when reopens?)

Smarter Choices & Public Transport Options– Staple Hill

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
Cycle City Smarter Choices <ul style="list-style-type: none"> Identify new cycle routes Include roadshows for awareness raising 	Low Increased cycling will help improve AQ	Improved fitness levels and health Improved travel choices Reduced congestion		1	Low compared with other proposals Medium if new cycle routes	Short or Medium (if new routes)
School Travel Plans (NB: Staple Hill Primary School relocating – clarify timescale. Subsequent redevelopment of site?) <ul style="list-style-type: none"> Travel survey/interviews Options planning to identify best sustainable travel incentives Explore staggered start/finish times to reduce concentrated bursts of traffic. 	Low/Medium Encourages mode shift away from SOV through education, training, incentives & some infrastructure	Road Safety, fitness & wellbeing. Reduces congestion	May lose focus on improving Staple Hill Air Quality	1	Low compared with other proposals	Short
Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme	Medium Encourages road transport operators to invest in and improve their fleet environmental performance,	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps to address the negative reputation of	Potential cost to fleet operators?	2	Low compared with other proposals	Medium

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
	including maximising potential carbon savings	bus/goods vehicles.				
Controlled Deliveries <ul style="list-style-type: none"> Restrict deliveries times to off peak hours Freight consolidation - use of Avonmouth Freight Consolidation Centre or too distant? Consider electric vehicles for deliveries 	Medium/ High Controlling/ reducing number of deliveries could improve AQ	<ul style="list-style-type: none"> Deliveries when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery vehicles not contributing to any peak hour congestion. Freight consolidation - reduced no. of vehicles into area so less congestion, reduced emissions & if use electric vehicles, further reduced emissions. 	May restrict availability of goods to customers.	1	Low compared with other proposals	Medium
Examine own Council Fleet (set example/reduce emissions e.g. Waste Collection vehicles, community transport upgraded to low emission) particularly those which travel on routes through Staple Hill	Low Reduced emissions will help improve AQ			1	Low	Short/ Medium
Relocation of Bus Stop on Soundwell Road	Low Reduced	Reduced congestion, improved traffic flow	Passengers may to walk further to	2	Low	Short

Action	AQ Impact (high, medium, low)	Non-air quality benefits	Non air quality dis-benefits	Political/Public Perceptions/Acceptability Score 1 to 3 1 – Acceptable 2 – Neutral 3- Unacceptable	Cost (high, medium, low)	Timescales (short 1-2 yrs, Medium 2-5 yrs, Long 5+ yrs)
	emissions will help improve AQ		bus stop			
Travel Plan for Staple Hill Centre (work with Staple Hill Regeneration Partnership)	Low/Medium Encourages mode shift away from SOV through education, training, incentives & some infrastructure	Road Safety, fitness & wellbeing. Reduces congestion		1	Low compared with other proposals	Short
Low Emission Zone (LEZ)	High Reduced emissions will help improve AQ	Reduced congestion		2	High	Long
'Switch off' signs for buses at stops & for taxis at taxi rank & delivery vehicles	Low Reduced emissions from idling vehicles will help improve AQ	Reduced noise, quieter environment without idling vehicles		1	Low Medium with enforcement	Short
Bus Partnership <ul style="list-style-type: none"> Clarify dates when have to introduce in higher Euro Standards -bring forward? Use of hybrid vehicles Showcase Bus routes – impact 	Medium Reduced emissions will help improve AQ			1	Medium	Medium/Long

14. Appendix D: Actions Appraisals

Kingswood - Actions Appraisal

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
		(high = 5, medium = 3, low = 1)			(Large dis-benefits = -2, unlikely to be feasible = -1, neutral = 0, feasible = 1, large benefits = 2)	AQ Impact + Other Impact (cumulative total)	(very high = 1, high = 2, medium = 3, low = 4, very low = 5)	(Secured = 5, Identified = 3, None = 1)	(Short =5, Medium = 3, Long =1)	Cost x Funding x Timescale	Overall Impact x Overall Deliverability
KS1	Travel plan for Kingswood Civic centre - Encourage car sharing and sustainable transport as travel to work options.	3	Road Safety, fitness & wellbeing. Reduces congestion.	Staff locations may mean that no reductions in staff travelling through Kingswood Town Centre occur as a result on implementing the Travel Plan.	1	4	5	5	5	125	500
KS2	Parking Review - review of parking issues within the air quality management area.	3	Road safety benefits. Improved accessibility for vehicular	Reduced parking for local residents.	1	4	4	5	5	100	400

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
			traffic								
KS3	Ensure Air Quality is a priority in development of transport schemes.	3	Increased assessment priority for schemes in the capital programme development.	Schemes may be discounted on other priorities which may be excellent for air quality reduction.	2	5	5	3	5	75	375
KS4	Bus Partnership - work with operators to address air quality issues through partnership working	5	Noise reductions as quieter buses are travelling through the "channelled" town centre.		1	6	3	1	5	15	90
KS5	Review of Council Fleet to ensure lowest emission vehicles - set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.	1			1	2	3	5	3	45	90

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KS6	Promotion of more efficient usage of taxi ranks and bus stops - programme to encourage drivers to switch off engines when stationary within air quality management area.	1	Reduced noise, quieter environment without idling vehicles		1	2	5	1	5	25	50
KM1	School Travel Planning - ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site.	3	Road Safety, fitness & wellbeing.	May lose focus on improving Kingswood Town Centre Air Quality.	1	4	4	1	3	12	48
KM2	Travel Planning for Kingswood Town Centre - undertake travel surveys or interviews to ascertain modes of travel particularly to the shops. Focus will be on deliveries and visitors where parking.	3	Road Safety, fitness & wellbeing.	Potential economic impact on retailers as travel restrictions may discourage visitors.	1	4	4	1	3	12	48
KM3	Review bus terminals & timing points - undertake a review of the bus stops within the AQMA to reduce number of buses idling at them.	3	Free flowing traffic along A420	Adverse comments from bus companies. May affect area relocated to.	2	5	3	1	3	9	45

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KM4	Smarter Choices promotions/roadshows - undertake promotion of sustainable travel in particular around the shopping area by holding roadshows and events where people can talk to representatives.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion.		1	2	4	1	5	20	40
KM5	Cycling Infrastructure - review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion	Modal shift is not significant enough to make a difference to the volume of cars.	0	1	3	3	3	27	27
KL1	Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme - introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to business within South Gloucestershire.	3	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps	Potential cost to Fleet operators?	1	4	5	1	1	5	20

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
			to address the negative reputation of bus/goods vehicles.								
KL2	Establish car club in local area/wider South Gloucestershire - to reduce car ownership levels.	3	reduces the car ownership levels without reducing people's access to a car	cars in local area may not have been travelling through the particular junction so may not be cause of the problem.	1	4	4	1	1	4	16
KL3	Restrict traffic turning movements onto A420 - by restricting traffic turning onto A420 the free flow of traffic is maintained and therefore not idling which improves emissions.	3	Improved traffic flow on A420 within AQMA zone. Road safety benefits. Non-motorised traffic benefits due to less restrictions	Relocate traffic problems to diversion route. Access issues for local residents. Make north-south movements through Kingswood more difficult.	1	4	4	1	1	4	16

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KL4	Review Traffic Signal Numbers and operations - review implications of traffic signals and signal timings to improve traffic flows on the A420.	1	Better Journey times on A420	Extra waiting times for pedestrians to cross the roads which may cause road safety concerns. Delays for side road traffic.	0	1	3	1	5	15	15
KL5	Review of delivery bays - review the designated delivery bays in terms of location, size, accessibility and time limits within the AQMA to reduce congestion where possible.	3	Trade. Bus punctuality. Improved traffic flows. Improve access to delivery bays.	Loss of on-street parking. May be removal of pedestrian facilities. Trader dislike.	1	4	3	1	1	3	12
KL6	Controlled Deliveries - Restrict deliveries times to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.	3	Deliveries when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery vehicles not contributing to any peak hour congestion. Freight consolidation	May limit availability of goods.	0	3	4	1	1	4	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
			- reduced no. of vehicles into area so less congestion, reduced emissions & if use electric vehicles, further reduced emissions.								
KL7	Re-classify strategic routes and signing strategy - by reclassifying the routes it would reroute strategic traffic and therefore reduce traffic volumes.	3	Relocate strategic traffic	Reduction of funding for highway maintenance.	1	4	3	1	1	3	12
KL8	Taxi ranks - undertake review of operations by taxi's within the air quality management area.	3	Better environment	May be adverse comments/PR from taxi groups companies.	1	4	5	1	1	5	20
KN1	Traffic Free Town Centre or traffic restrictions - restrict traffic to Kingswood town centre at certain times.	5	No congestion in Town centre	Increased congestion on diversions around Town Centre. Traders disadvantage, no passing trade	-1	4	3	1	1	3	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KN2	Low Emission Zone - restrict types of vehicles which enter the AQMA.	3	May control number of vehicles as well as type.	Resistance from Hauliers and bus companies? Retailers may suffer if it is difficult for delivery vehicles to get through. Cost of new bus introduction may result in loss of service.	0	3	2	1	1	2	6
KN3	Queue relocation - by relocating queuing traffic outside the AQMA, emissions from idling traffic will reduce.	5	Improved traffic flow on A420 within AQMA zone	Queues relocate to adjoining roads. Major disadvantages to bus showcase corridor eastbound.	-2	3	2	1	1	2	6
KN4	Complete pedestrianisation of Kingswood Town Centre - make the whole of Regent Street traffic free.	5	Road safety benefits.	Relocate traffic problems to diversion route. Reduced disability access.	-2	3	2	1	1	2	6

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KN5	Shared space treatment - reducing vehicle movement by removing the boundaries between footways and carriageways so all space is available for all.	3	Potential road safety benefits. Potential reduction of through traffic. Potential benefits for vulnerable road users.	May inadvertently reduce numbers of vehicles by prohibiting speed. Difficult to enforce low speeds.	-1	2	2	1	1	2	4

Staple Hill - Actions Assessment

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
		(high = 5, medium = 3, low = 1)		dis-benefits	(Large dis-benefits = -2, unlikely to be feasible = -1, neutral = 0, feasible = 1, large benefits = 2)	AQ Impact + Other Impact (cumulative total)	(very high = 1, high = 2, medium = 3, low = 4, very low = 5)	(Secured = 5, Identified = 3, None = 1)	(Short = 5, Medium = 3, Long = 1)	Cost x Funding x Timescale	Overall Impact x Overall Deliverability
SS1	Ensure Air Quality is a priority in development of transport schemes.	3	Increased assessment priority for schemes in the capital programme development.	Schemes may be discounted on other priorities which may be excellent for air quality reduction.	2	5	5	3	5	75	375
SS2	Bus Partnership - work with operators to address air quality issues through partnership working	5			1	6	3	1	5	15	90

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SS3	Review of Council Fleet to ensure lowest emission vehicles - set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.	1			1	2	3	5	3	45	90
SS4	Promotion of more efficient usage of taxi ranks and bus stops - programme to encourage drivers to switch off engines when stationary within air quality management area.	1	Reduced noise, quieter environment without idling vehicles		1	2	5	1	5	25	50
SM1	School Travel Planning - ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site.	3	Road Safety, fitness & wellbeing. Reduces congestion.	May lose focus on improving Staple Hill Air Quality	1	4	4	1	3	12	48

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SM2	Travel Plan for Staple Hill Centre - undertake travel surveys or interviews to ascertain modes of travel particularly to the shops. Focus will be on deliveries and visitors where parking.	3	Road Safety, fitness & wellbeing. Reduces congestion		1	4	4	1	3	12	48
SM3	Relocation of bus stops on Soundwell Road - relocating the bus stops to more suitable positions where they do not completely stop the flow of traffic in both directions.	3	Reduces congestion. Road safety benefits with traffic not having to make difficult overtaking manoeuvres.	Lose on-street parking spaces.	1	4	4	1	3	12	48
SM4	Parking Review - review of parking issues within the AQMA.	3	Road safety benefits. Improved accessibility for vehicular traffic	Reduced parking for local residents.	1	4	4	1	3	12	48
SM4	Smarter Choices promotions/roadshows - undertake promotion of sustainable travel in particular around the shopping area by holding roadshows and events where people can talk to representatives.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion.		1	2	4	1	5	20	40

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SM6	Cycling Infrastructure - review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion	Modal shift is not significant enough to make a difference to the volume of cars.	0	1	3	3	3	27	27
SL1	Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme - introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to business within South Gloucestershire.	3	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps to address the negative reputation of bus/goods vehicles.	Potential cost to fleet operators?	1	4	5	1	1	5	20
SL2	Establish car club in local area/wider South Gloucestershire - to reduce car ownership levels.	3	reduces the car ownership levels without reducing people's	cars in local area may not have been travelling through the particular	1	4	4	1	1	4	16

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
			access to a car	junction so may not be cause of the problem.							
SL3	Review Traffic Signal Numbers and operations - review implications of traffic signals and signal timings to improve traffic flows through Staple Hill.	1	Better Journey times through Staple Hill	Extra waiting times for pedestrians to cross the roads which may cause road safety concerns. Delays for side road traffic.	0	1	3	1	5	15	15
SL4	Review of delivery bays - review the designated delivery bays in terms of location, size, accessibility and time limits within the AQMA to reduce congestion where possible.	3	Trade. Bus punctuality. Improved traffic flows. Improve access to delivery bays.	Loss of on-street parking. May be removal of pedestrian facilities. Trader dislike.	1	4	3	1	1	3	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SL5	Restrict traffic turning movements at A4017 junction - by restricting traffic turning at A4017 the free flow of traffic is maintained and therefore not idling which improves emissions.	3	Improved traffic flows, possible road safety benefits. Pedestrian benefits at crossroads	Relocate traffic problems to diversion route. Access issues for local residents. Make north-south movements through Staple Hill more difficult.	0	3	4	1	1	4	12
SL6	Controlled Deliveries - Restrict deliveries times to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.	3	Deliveries when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery vehicles not contributing to any peak hour congestion. Freight consolidation - reduced no. of vehicles into area so less congestion,	May restrict availability of goods to customers.	0	3	4	1	1	4	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
			reduced emissions & if use electric vehicles, further reduced emissions.								
SL7	Re-classify strategic routes and signing strategy - by reclassifying the routes it would reroute strategic traffic and therefore reduce traffic volumes.	3	Relocate strategic traffic	Reduction of funding for highway maintenance.	1	4	3	1	1	3	12
SN1	Low Emission Zone - restrict types of vehicles which enter the AQMA.	3	May control number of vehicles as well as type.	Resistance from Hauliers and bus companies? Retailers may suffer if it is difficult for delivery vehicles to get through. Cost of new bus introduction may result in loss of service.	0	3	2	1	1	2	6

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SN2	Shared space treatment - reducing vehicle movement by removing the boundaries between footways and carriageways so all space is available for all.	3	Potential road safety benefits. Potential reduction of through traffic. Potential benefits for vulnerable road users.	May inadvertently reduce numbers of vehicles by prohibiting speed. Difficult to enforce low speeds.	-1	2	2	1	1	2	4

15. Appendix E: Consultation Leaflets

Have your say

We would like to hear what you think about our proposals.

There are a few ways you can tell us:

1. Complete this form and return it to us free of charge in the envelope provided, or take it to your local library or One Stop Shop
2. Visit our exhibition on Wednesday 14th September or Wednesday 12th October at the Kingswood library from 3pm to 6.30pm and discuss your views with an officer
3. Visit our website and online consultation at www.southglos.gov.uk/airquality
4. Write to us at the address on the front or email transportpolicy@southglos.gov.uk

The closing date for comments is Wednesday 2nd November 2011.

Your views on air quality and our proposed extension of the air quality management area

Q1 How concerned are you about air quality in your area? (Please tick one)

- Very concerned Concerned Neither concerned nor unconcerned
 Unconcerned Don't know

Q2 Do you have any comments on the proposed extension of the air quality management area?

About our proposed action plan

While we would like to carry out all our proposed actions, our budget is limited. We would welcome your thoughts on how our resources would be best spent to improve air quality in your area. Please choose from the actions in the middle section of this leaflet.

Q3 Which of our proposed **short term actions** would you prefer?

(Please tick one) 1 2 3 4 5 6

Q4 Which of our proposed **medium term actions** would you prefer?

(Please tick one) 1 2 3 4 5

Q5 Which of our proposed **long term actions** would you prefer?

(Please tick one) 1 2 3 4 5 6 7 8

Q6 Further comments about our proposed actions or any comments about air quality in general:

Your details

Q1 Do you live/work in the proposed air quality management area? (tick any that apply)

- Live in the AQMA Live nearby Work in the AQMA Work nearby

Q2 Your post code BS

Q3 Your contact details *If you'd like to be kept informed about the results of our consultation, please ensure you provide your details.*

name address

email telephone

Data protection: Any personal information that you have supplied will be held by South Gloucestershire Council in accordance with the Data Protection Act. This information will be used as part of this exercise only and will not be passed onto any other organisation.

Our plans to improve air quality in Kingswood

Good air quality is essential for our health, quality of life and the environment. As your local authority, we have a duty to monitor and manage air quality within the district. If we identify an area where levels of pollution exceed national targets, we have to declare an 'Air Quality Management Area' (AQMA) and produce an action plan of how we could improve the air quality in that area.

Air quality monitoring along Regent Street (A420) in Kingswood found levels of nitrogen dioxide that exceeded the Government target and it was declared an air quality management area in 2010.

What have we done so far?

Since declaring the air quality management area in 2010, we have carried out a further assessment of air quality. As a result we are now proposing to extend the air quality management area. The map shows the originally declared air quality management area boundary in red and the proposed extended boundary in green.

We have also put together a draft action plan which sets out how we plan to reduce the levels of pollution in Kingswood to below the national target. We have produced this leaflet to tell you all about our proposals.

We would welcome your comments on our action plan proposals and the proposed extension of the air quality management area.



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Steve Evans, Director of Community Services and Acting Director of Planning, Transportation and Strategic Environment
South Gloucestershire Council, PO Box 2061, South Gloucestershire BS35 9BP



Air quality action plan proposals

How do we measure air quality?

Air quality is an indicator of the levels of pollution in the atmosphere. Air pollution can come from a variety of sources, including transport and industry. The Council monitors levels of pollution across the district, particularly nitrogen dioxide (NO₂), as this is the main pollutant of concern. The main source of nitrogen dioxide is traffic emissions.

Why we are sending you this leaflet?

We want to consult with you on the proposed changes to the air quality management area and our action plan, which includes a range of measures/actions we think will make a difference to air quality in the Kingswood air quality management area. Your views are important to us and will help to shape the priorities of the plan.

What are our proposals?

Our proposals are set out in the middle of this leaflet. They are all traffic related – to tackle the source of the pollution. We have considered lots of different options that might help to cut pollution in Kingswood, including some of the ideas you suggested during our last consultation about the original air quality management area boundary. We have also considered and discounted other options because they are not practical or are unfortunately very expensive. If you're interested, you can see full details of these options on our website: www.southglos.gov.uk/airquality

Timescale: **Short term**
Costs: **Low to medium**
Funding: **Under investigation**

Proposed Action

- 1 **Travel plan for Kingswood council offices**
Put in place a travel plan to encourage sustainable travel and reduce car usage at the Kingswood council offices
- 2 **Parking review**
Review of parking issues within the air quality management area
- 3 **Ensure air quality is a priority in the development of transport schemes**
Give air quality considerations more priority in the council's programme for transport schemes
- 4 **Bus partnership**
Work with bus operators to tackle air quality issues through partnership working
- 5 **Review of council fleet to ensure lowest emission vehicles**
Set an example to other organisations by making sure that our vehicles/community transport are efficient vehicles with low emissions
- 6 **Promotion of more efficient use of taxi ranks and bus stops**
Programme to encourage drivers to switch off engines when they are waiting at taxi ranks and bus stops within the air quality management area

Timescale: **Medium term**
Costs: **Medium**
Funding: **Not identified at present**

Proposed Action

- 1 **School travel planning**
Ensure all schools local to the air quality management area have travel plans in place to reduce car journeys to and from each site
- 2 **Travel planning for Kingswood town centre**
Undertake travel surveys or interviews to discover how people travel – particularly to the shops.
- 3 **Review bus terminals and timing points**
Undertake a review of the bus stops within the air quality management area to reduce the number of buses waiting at bus stops for too long with their engines running
- 4 **Smarter choices promotional/roadshows**
Promote travel that's more sustainable – in particular around the shopping area – by holding roadshows and events where people can talk to advisers and find out more about their travel options
- 5 **Cycling infrastructure**
Review what's available for cyclists in the area and try to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate

Timescale: **Long term aspirations** (if taken forward, we would expect to carry out the usual consultation procedures for these proposals)
Costs: **High**
Funding: **Not identified at present**

Proposed Action

- 1 **ECO Stars' fleet recognition scheme**
Introduce award scheme for efficient and cleaner fleet vehicles both within the council and promote to businesses within South Gloucestershire
- 2 **Car club**
Establish a car club to try to reduce car ownership levels
- 3 **Restrict traffic turning movements onto A420**
By restricting traffic turning onto A420 we could improve the free flow of traffic. This would reduce traffic emissions
- 4 **Review traffic signal numbers and operations**
Review the way that traffic signals and the timing of lights works to try to improve traffic flows on the A420.
- 5 **Review of delivery bays**
Review the location, size, accessibility and time limits of the designated delivery bays within the air quality management area to reduce congestion where possible.
- 6 **Controlled deliveries**
Restrict deliveries to off peak hours and explore use of a 'freight consolidation centre' with electric vehicles for delivery
- 7 **Reclassify strategic routes and signing strategy**
For example, by changing the route from an 'A' road to a 'B' road, through traffic would be re-routed away from the air quality management area
- 8 **Taxi ranks**
Undertake review of operations by taxis within the air quality management area

Reduce levels of nitrogen dioxide (NO₂) & Improve air quality

Change the way we travel

Reduce congestion and keep traffic moving

How can you have your say? What do you think about our draft proposals in this leaflet? Do you have any of your own ideas about how we could improve air quality? We want to hear your views. Please fill in our feedback form and return it to us before Wednesday 2nd November.

What happens next?

Any comments you send us will be considered once the consultation has ended. The action plan and the air quality management area boundary will then be finalised and approved. The revised air quality management area boundary will be declared by legal order and, along with the action plan, published on our website. We will report our progress on this every year.

Where can I find out more?

There is more information about air quality on our website. You can also read the full draft action plan and further assessment reports and see a bigger copy of the map on the website: www.southglos.gov.uk/airquality. A copy of these documents will also be available in the Kingswood library and One Stop Shop during the consultation period. You can also visit our exhibition at the Kingswood library on Wednesday 14th September or Wednesday 12th October between 3pm and 6.30pm and discuss your views with one of our officers.

This information can be made available in other languages, in large print, Braille or on audio tape.

Please phone 01454 889008 if you need any of these or any other help to access Council services.

Have your say

We would like to hear what you think about our proposals.

- There are a few ways you can tell us:
1. Complete this form and return it to us free of charge in the envelope provided, or take it to your local library or One Stop Shop
 2. Visit our exhibition on Tuesday 13th September or Tuesday 18th October at the Staple Hill library from 3pm to 6.30pm and discuss your views with an officer
 3. Visit our website and online consultation at www.southglos.gov.uk/airquality
 4. Write to us at the address on the front or email transportpolicy@southglos.gov.uk
- The closing date for comments is Wednesday 2nd November 2011.

Your views on air quality and our proposed extension of the air quality management area

Q1 How concerned are you about air quality in your area? (Please tick one)

Very concerned Concerned Neither concerned nor unconcerned
 Unconcerned Don't know

Q2 Do you have any comments on the proposed extension of the air quality management area?

About our proposed action plan
 While we would like to carry out all our proposed actions, our budget is limited. We would welcome your thoughts on how our resources would be best spent to improve air quality in your area. Please choose from the actions in the middle section of this leaflet.

Q3 Which of our proposed short term actions would you prefer?
 (Please tick one) 1 2 3 4

Q4 Which of our proposed medium term actions would you prefer?
 (Please tick one) 1 2 3 4 5 6

Q5 Which of our proposed long term actions would you prefer?
 (Please tick one) 1 2 3 4 5 6 7

Q6 Further comments about our proposed actions or any comments about air quality in general:

Your details

Q1 Do you live/work in the proposed air quality management area? (tick any that apply)

Live in the AQMA Live nearby Work in the AQMA Work nearby

Q2 Your post code BS _____

Q3 Your contact details *If you'd like to be kept informed about the results of our consultation, please ensure you provide your details.*

name _____ address _____
 email _____ telephone _____

Data protection: Any personal information that you have supplied will be held by South Gloucestershire Council in accordance with the Data Protection Act. The information will be used as part of this exercise only and will not be passed onto any other organisation.

Our plans to improve air quality in Staple Hill

Good air quality is essential for our health, quality of life and the environment. As your local authority, we have a duty to monitor and manage air quality within the district. If we identify an area where levels of pollution exceed national targets, we have to declare an 'Air Quality Management Area' (AQMA) and produce an action plan of how we could improve the air quality in that area.

Air quality monitoring in Staple Hill town centre at the Broad Street/High Street/Soundwell Road and Victoria Street crossroads found levels of nitrogen dioxide that exceeded the Government target and it was declared an air quality management area in 2010.

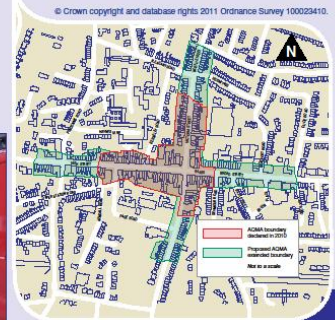


What have we done so far?

Since declaring the air quality management area in 2010, we have carried out a further assessment of air quality. As a result we are now proposing to extend the air quality management area. The map shows the originally declared air quality management area boundary in red and the proposed extended boundary in green.

We have also put together a draft action plan which sets out how we plan to reduce the levels of pollution in Staple Hill to below the national target. We have produced this leaflet to tell you all about our proposals.

We would welcome your comments on our action plan proposals and the proposed extension of the air quality management area.



Steve Evans, Director of Community Services and Acting Director of Planning, Transportation and Strategic Environment
 South Gloucestershire Council, PO Box 2061, South Gloucestershire BS35 9BP



Air quality action plan proposals

How do we measure air quality?
 Air quality is an indicator of the levels of pollution in the atmosphere. Air pollution can come from a variety of sources, including transport and industry. The Council monitors levels of pollution across the district, particularly nitrogen dioxide (NO₂), as this is the main pollutant of concern. The main source of nitrogen dioxide is traffic emissions.

Why are we sending you this leaflet?
 We want to consult with you on the proposed changes to the air quality management area and our action plan, which includes a range of measures/actions we think will make a difference to air quality in the Staple Hill air quality management area. Your views are important to us and will help shape the priorities of the plan.

What are our proposals?
 Our proposals are set out in the middle of this leaflet. They are all traffic related – to tackle the source of the pollution. We have considered lots of different options that might help to cut pollution in Staple Hill, including some of the ideas you suggested during our last consultation about the original air quality management area boundary. We have also considered and discounted other options because they are not practical or are unfortunately very expensive. If you're interested, you can see full details of these options on our website: www.southglos.gov.uk/airquality

Timescale: **Short term**
 Costs: **Low to medium**
 Funding: **Under investigation**

Proposed Action	
1	Ensure air quality is a priority in the development of transport schemes Give air quality considerations more priority in the council's programme for transport schemes
2	Bus partnership Work with bus operators to tackle air quality issues through partnership working
3	Review of council fleet to ensure lowest emission vehicles Set an example to other organisations by making sure that our vehicles/community transport are efficient vehicles with low emissions
4	Promotion of more efficient use of taxi ranks and bus stops Programme to encourage drivers to switch off engines when they are waiting at taxi ranks and bus stops within the air quality management area

Timescale: **Medium term**
 Costs: **Medium**
 Funding: **Not identified at present**

Proposed Action	
1	School travel planning Ensure all schools local to the air quality management area have travel plans in place to reduce car journeys to and from each site
2	Travel planning for Staple Hill Town Centre Undertake travel surveys or interviews to discover how people travel – particularly to the shops.
3	Relocation of bus stops on Soundwell Road Relocating the bus stops to more suitable positions where they do not completely stop the flow of traffic in both directions
4	Parking Review Review of parking issues within the air quality management area
5	Smarter Choices promotions/roadshows Promote travel that's more sustainable – in particular around the shopping area - by holding roadshows and events where people can talk to advisors and find out more about their travel options
6	Cycling infrastructure Review what's available for cyclists in the area and try to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate

Timescale: **Long term aspirations** (if taken forward, we would expect to carry out the usual consultation procedures for these proposals)
 Costs: **High**
 Funding: **Not identified at present**

Proposed Action	
1	'ECO Stars' fleet recognition scheme Introduce award scheme for efficient and cleaner fleet vehicles both within the council and promote to businesses within South Gloucestershire
2	Car club Establish a car club to try to reduce car ownership levels
3	Restrict traffic turning movements onto A420 Review the way that traffic signals and the timing of lights works to try to improve traffic flows through Staple Hill
4	Review of delivery bays Review the location, size, accessibility and time limits of the designated delivery bays within the air quality management area to reduce congestion where possible.
5	Restrict traffic turning movements at A4017 junction By restricting traffic turning at the A4017 we could improve the flow of traffic. This would reduce traffic emissions
6	Controlled deliveries Restrict deliveries to off peak hours and explore use of a 'night consolidation centre' with electric vehicles for delivery
7	Reclassify strategic routes and signing strategy For example, by changing the route from an 'A' road to a 'B' road, through traffic would be re-routed away from the air quality management area

How can you have your say?
 What do you think about our draft proposals in this leaflet? Do you have any of your own ideas about how we could improve air quality? We want to hear your views. Please fill in our feedback form and return it to us before Wednesday 2nd November.

What happens next?
 Any comments you send us will be considered once the consultation has ended. The action plan and the air quality management area boundary will then be finalised and approved. The revised air quality management area boundary will be declared by legal order, and along with the action plan, published on our website. We will report our progress on this every year.

Where can I find out more?
 There is more information about air quality on our website. You can also read the full draft action plan and further assessment reports and see a bigger copy of the map on the website: www.southglos.gov.uk/airquality. A copy of these documents will also be available in and the Staple Hill library during the consultation period. You can also visit our exhibition at the Staple Hill library on Tuesday 13th September or Tuesday 18th October between 3pm and 6.30pm and discuss your views with one of our officers.

This information can be made available in other languages, in large print, Braille or on audio tape.
 Please phone 01454 888008 if you need any of these or any other help to access Council services.

Reduce levels of nitrogen dioxide (NO₂) & Improve air quality

Change the way we travel

Reduce congestion and keep traffic moving

16. Appendix F: Defra Response

Action Plan Appraisal Report

This Appraisal Report covers the Air Quality Action Plan report submitted by South Gloucestershire Council. The Action Plan sets out information on air quality obtained by the Council as part of the Local Air Quality Management process required under the Environment Act 1995 and subsequent Regulations. It is a draft Action Plan for the Kingswood and Staple Hill AQMAs.

The overall plan is clear, concise and generally follows the guidance outlined in LAQM PG(09). The plan provides comprehensive background to the review and assessment work undertaken by the Council including the findings of the source apportionment exercise undertaken in the further assessment.

A list of actions has been developed for the each of the Kingswood and Staple Hill AQMAs. Some actions are broader in scope and are therefore included in both action lists. The actions have been ranked using a number of criteria – including air quality impact and cost – and have subsequently been classified according to a traffic light system, whereby green actions are those which either have funding committed or funding could be identified in the short-term and can be delivered easily; Yellow actions are those where no funding has been identified and would take slightly longer to deliver; and Orange actions are those which are longer term aspirational.

Nineteen actions are identified for Kingswood, of which six are 'green' actions to be implemented in the short term. One of these, a measure to develop bus partnerships, has been judged to have a high impact on air quality.

Seventeen actions are identified for Staple Hill, of which four are 'green' actions to be implemented in the short term. As for the Kingswood AQMA, One of these, the measure to develop bus partnerships has been judged to have a high impact on air quality in the Staple Hill AQMA.

The Council is advised to take consideration of the further commentary in the finalisation of its action plan.

Commentary

1. The assessment of measures using a traffic light system to highlight the short term, medium term and longer term priorities is useful, however it would be useful for each of the measures included in the Plan to give more detail on the planned implementation timescale, in terms of the target month and year, where this is known. As the detail of the longer term measures develops it may be useful to outline the sub-actions needed to work towards implementation and set timescales

for these. As the outcomes of the shorter term measures become known (particularly parking review or bus operator engagement tasks) then the related sub-actions – which are the activities that could have an impact on air quality – should be incorporated into the Plan.

2. The tables presenting the measures to be implemented in each AQMA do not include details of the authorities or organisations that will be responsible for implementing the measures, and this has not been included in the appraisal of measures detailed in the Appendix. The Council should identify the responsible organisations in each case, as this will help to focus progress in taking actions forwards and in identifying funding.
3. We acknowledge the issues raised by The Council in terms of securing funding for the measures and the implications this has in terms of delivery of the Plan. In light of this, we ask that the Council should include updated information about funding sources in the final Plan, and subsequently through the annual progress reporting.
4. The Plan states that, in addition to monitoring concentrations of NO₂, other indicators such as traffic flows and proportions of different categories of vehicles will be monitored. It would be useful for the Council to state the indicators that will be used to monitor each measure, to ensure that relevant data are collected from the outset. The Council is also encouraged to set targets for these indicators.
5. The Plan states that “At this stage, it has not been possible to equate actions with improvements in air quality as many of the medium term and longer term aspirations will require more feasibility work to fully develop the action before any implementation can begin. As part of the feasibility work, an assessment would be made as to whether the air quality objectives would be delivered through implementation of the action.” We encourage the Council to continue to consider the likely reductions in pollutant concentrations as the feasibility work progresses, and report on this in their annual progress reporting.
6. We note that this is a consultation draft and ask that the final plan include information on the consultation process and the outcomes of this process.

This commentary is not designed to deal with every aspect of the Action Plan. It highlights a number of issues that should help the local authority in maintaining the objectives of its Action Plan, namely the improvement of air quality within the AQMA.

17. Appendix G: Consultation Response Analysis

Kingswood Consultation Responses

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
2	No - a good plan, busy pedestrian area choked in fumes	FA	C				No action required
3	It's worth it, if it makes any appreciable difference!	FA	C				No action required
7	It is a really good idea.	FA	C				No action required
11	It would help people like me who suffer chest problems mainly asthma.	FA	C				No action required
20	A good idea	FA	C				No action required
25	No	FA	C				No action required
35	if you do you would give us the "fit" air quality for us?	FA	C				No action required
37	There has been an unprecedented and alarming proliferation of house building in Kingswood in recent years, inevitably contributing to the increasing nitrogen dioxide problem.	FA	C				No action required
GC7	I live in AQMA and do not think it's necessary to make any changes, waste of money. (Additional comments removed as	FA	C				No action required.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	outside the scope of the consultation)						
GC9	We welcome the proposed extension to the AQMA. However we are disappointed to read/infer that since part of the area was declared an AQMA in 2010 no real action has been taken to address air quality other than a further survey which is now resulting in a proposed extension.	FA	C				Following the AQMA declaration in 2010, we have developed the action plan to improve air quality in Kingswood.
KE1	(BCC resident). Shops in Kingswood, concerned about air quality particularly in younger children/grandchildren.	FA	C				Explained over BCC boundary we have no jurisdiction but work with BCC to address AQ & transport issues jointly.
33	It needs to be a wider area.	FA	A				There is no current monitoring or modelling evidence that would justify extending the AQMA any further. If future work identifies any further exceedences, then the AQMA boundary can be revised.
4	Whatever we think people with cars will want to use them and need places to park	AQAP	C				No action required

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
5	Some good ideas but may just be pushing problem "further down the road" with the schools/cars plan.	AQAP	C				No action required
9	I am sure you will do your best with the limited money.	AQAP	C				No action required
12	Applaud idea to manage traffic route, there is various congestion with parked vehicles which in places only allows one car through.	AQAP	C				No action required
13	I support the plans, I have ticked as I think the traffic and noise on the High Street is very bad.	AQAP	C				No action required
16	If I can help I will. Thank you for what you do, keep it up. We all need fresh air to live happy and healthy. God bless.	AQAP	C				No action required
21	Yes - I am concerned it will cause more difficulties for me to park on my own drive. It already so difficult because of traffic. Plus we rely on buses for my daughters travel back from college.	AQAP	C				No action required
7	I think these are really good SMART targets, they just need to be put into action within a fairly short time.	AQAP	C				No action required
8	I think flow of traffic needs improving as it always backs up at Regent Street	AQAP	C				No action required
10	Reduced parking in Kingswood Health Centre will not make staff or patients stop using their cars, they just park on Holly Hill Road and Shortwood View causing dangerous traffic problems.	AQAP	C				No action required

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
16	Make it fun. Something that is refreshing, engaging and enjoyable for all types of people to flow along.	AQAP	C				No action required
25	No	AQAP	C				No action required
31	Generally I have no issue with the air quality. However, I hope there aren't proposals to force more cars down Scott Road, which is a residential Street. There are already too many cars using this road because of the disastrous one way system.	AQAP	C				No action required
36	Walk to Kingswood shopping centre most days. Very aware of exhaust fumes in vehicles waiting at traffic lights.	AQAP	C				No action required
38	Forget ECO stars Fleet Recognition Scheme, can't afford to give away.	AQAP	C				No action required.
38	Car club - you are trying to stop us from driving.	AQAP	C				No action required.
38	The traffic lights could change quicker	AQAP	C	KL5	/	/	Include comment on Action Brief for action development.
38	Review of delivery bays - they are ok as they are.	AQAP	C				No action required.
38	Controlled deliveries - I'll go along with that	AQAP	C				No action required.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
38	Reclassify strategic routes and signing strategy - Don't make problems	AQAP	C				No action required.
38	Taxi ranks - let them carry on the way they are	AQAP	C				No action required.
GC4	Should the Council promote low emission vehicles?	AQAP	C	KS5	/	/	Include on Action Brief for action development - Low emission vehicles – the Council currently promotes use of these internally so our pool cars are low emissions and procurement of new vehicles ensures they conform to Euro standards. We also work in partnership with the bus companies and refuse vehicle companies and promote use of low emission vehicles to them.
GC8	d) A new Sainsburys store next to the library, as well as destroying two local businesses, is going to do nothing for your air quality project.	AQAP	C				Air quality impact assessments requested as part of the planning process where appropriate.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
GC8	e) The narrow carriageway through Kingswood is an obstacle to emergency traffic. An ambulance with flashing lights took over three minutes to negotiate it tonight (4/11/11).	AQAP	C				No action required.
40	I have read them but none really look as if they will work. Kingswood main road is very congested. Makes it very hard for Police, Ambulances & Fire to get through. Whoever decided to turn the road into what it is should think again.	AQAP	C				No action required.
GC6	Bristol City Council have the following comments on your draft action plan and further assessment. BCC works with SGC on air quality and transport through the JLTP. Strategic actions to improve air quality and transport on the transport corridors that BCC and SCG share have already been implemented, for example GBBN and cycling city. Officers in BCC and SCG regularly communicate on air quality and transport issues and co - ordinate plans to improve both. We don't monitor close to the boundary with SGC on the A420 but we have a diffusion tube just inside our AQMA on the roadside which is just compliant with the NO2 air quality objective. As you'll be aware, we routinely review our monitoring network to ensure that the AQMA boundary is correct, and that our action plan is focussed on relevant areas. In the light of your recent declaration of an AQMA in this area and the continuing	AQAP	C				No action required. Work with Bristol City Council when developing actions.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	stable or upwards trends in annual mean NO2, I'm happy to revisit monitoring on this corridor, and of course always willing to discuss the co-ordination of air quality and transport improvement measures.						
GC9	We welcome that an Action Plan is now being put forward. However, we do have a number of comments on it;	AQAP	C				No action required.
GC9	The 'Parking Review' is already on-going for different reasons, so it is a little misleading to give the impression that the 2 years' worth of funding for it has been identified because of air quality issues.	AQAP	C	KS2			No action required. Although action is already on-going it is an action which will deliver air quality benefits which is why it has been included as an action.
GC9	Any improved working with bus companies is to be welcomed, although we are sceptical as to how well it will work – given the tendency for First Group to do their own thing.	AQAP	C	KS4			No action required.
GC9	We welcome any attempt to encourage bus and taxi drivers to turn their engines off.	AQAP	C	KS6			No action required.
GC9	The travel survey of how individuals travel to the town centre is probably one of the most significant pieces of work you can do, but do not restrict it to shoppers and deliveries. We think you will find a significant number of town centre workers who drive and then park close to the town centre in side streets. These extra vehicles add to local parking problems which cause those seeking a parking	AQAP	C	KM2			Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	spot to have to drive around more. More congestion. More pollution.						
GC9	A review of traffic signals would be very welcomed. It has been suggested to us by residents that one cause of bottlenecks on Regent Street is too many lights and a lack of synchronisation.	AQAP	C	KL4	/	/	Include on Action Brief for action development.
GC9	A review of delivery bays is also welcomed, although it was our impression this was being done as part of the parking review. We have certainly raised this with Highways officers as long ago as February 2010.	AQAP	C	KL5	/	/	Pass to relevant team for inclusion within parking review.
GC9	A striking omission from the Action Plan is ANY mention of working with Bristol City Council. The boundary with BCC is the left-hand edge of the proposed AQMA extension and it would be crazy to work on air quality in isolation from Bristol. Air and traffic movements do not stop at council boundaries! We mentioned above the review of traffic signals and when we queried with SGC officers whether they worked with BCC officers on this sort of thing, they confirmed they did, but that any review of Regent Street / Two Mile Hill Road would have to wait until BCC resurfaced their part of the road. I seem to remember there being an issue about sensors in the road being damaged.	AQAP	C				More reference will be made to working with BCC within the action plan (e.g. see section 8.5 – reference to integration with JLTP3).
KE2	(Local resident) Queried costs, more specifically cost of consultation rather than cost of schemes. Asked whether	AQAP	C				Explained that breakdown of how council tax money

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	cost of consultation would be set out in Council Tax leaflet.						spent is not likely to go down to that level of detail.
KE2	(Local resident) Has a bus pass and uses buses but only Wessex as they are more helpful and courteous than First.	AQAP	C				No action required
KE3	(Works in KW, lives out of area). Queried about planning application for Sainsburys next door to the library.	AQAP	C				Air quality impact assessments requested as part of the planning process where appropriate.
KE3	(Works in KW but lives out of area). Is a cyclist but not confident about cycling down A420.	AQAP	C				Explained may be eligible for cycle training scheme run by LA's.
KE4	(Local resident) No major concerns.	AQAP	C				No action required
KE5	Drivers use Moravian Road as a cut through even though buses/taxi's only.	AQAP	C				No action required.
KE5	People park on Hollow Road and get bus into town (pseudo park and ride).	AQAP	C				No action required.
KE6	(Local resident) Thinks we're doing a "grand job".	AQAP	C				No action required
KE6	Mentioned speeds varying through Regent St and High Street, low through Regent St then increase past Civic Centre then brake for speed camera.	AQAP	C				No action required.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
KE7 (2)	(Local residents) Both have to drive to work out of area (Stroud & Bristol City Centre) but at the weekends they don't use cars, only buses and walking. She suffers from Asthma and recognises air quality worse in Bristol CC. Wanted to understand a bit more about the proposals.	AQAP	C				No action required
KE7	School traffic blocking the road, lollipop lady on corner of Alma Road then the crossing which causes stop start traffic.	AQAP	C	KM1			Include on Action Brief for action development.
KE8	(Local resident though his side of the Street is in BCC area). He has completed & returned a consultation leaflet but he wanted to say more on his ideas. He has read the reports left in the library. He doesn't think that any of the action plan options suggested will do much.	AQAP	C				No action required
1	You seem to have missed the obvious solution: tackled illegal parking and improve traffic flow at traffic lights by the British Legion	AQAP	A	KS2	/	/	Pass to Highways Team for inclusion within review.
10	The stupid decision to stop traffic turning left when leaving car park in Halls Road forcing it to travel through Regent Street for those travelling towards Warmley, which is causing more pollution in Regent Street	AQAP	A	KL4	/	/	Include on Action Brief for action development.
31	Only the mention of parking review. I hope this will not impact on the residential parking, as we struggle to park as it is because of the permit system only allowing 1 permit per household.	AQAP	A	KS2	/	/	Pass to Highways Team for inclusion within review.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
38	I don't think the quality of the air is bad, the only time it gets bad is when they are tarmacking the road or roofs. Get a big hoover and put it at one end of Regent Street and suck all the air into the hoover once a day. That will do it. There comes a time when you say time is up to call it a day no more please.	AQAP	A	No	Yes	No	No action required - not a practical suggestion.
2	Regent St is too narrow and fumes collect when cars idle when waiting at all the traffic lights/ped crossings. Change the traffic light sequence or ban through lorries	AQAP	A	KL5 and KN2	/	/	KL5 - Include on Action Brief for action development. KN2 - action was discounted during actions appraisal stage so won't be investigated further.
3	There are 5 sets of lights in a very short distance and I feel that the clock tower set could be taken out which would maybe help the flow of traffic whilst not inconveniencing pedestrians too much.	AQAP	A	KL5	/	/	Include on Action Brief for action development.
4	Would really like the old Kingswood layout back. Note all the empty shops! You are killing Kingswood off.	AQAP	A	No	Yes	No	No action required - investment has been put into the Kingswood layout to provide road safety benefit.
9	I thought trees helped pollution? Perhaps some new ones could be planted. I also get more noise since they have gone. (trees removed from outside Parklands)	AQAP	A	No	Yes	Yes	Include as new action - Ensure adequate landscaping is considered within new planning

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
							applications and urban designs. (New Action KS7)
12	Section through High Street could be made traffic free zone given access around. Cycle lane would also encourage use without hazard.	AQAP	A	KN1 and KM5	/	/	KN1 - action was discounted during actions appraisal stage so won't be investigated further. KM5 will be included on Action Brief for action development.
13	I think the traffic should be slowed down and cycling routes should be established.	AQAP	A	KM5	/	/	KM5 - comments on cycling will be included on Action Brief for action development.
20	Short of making the High Street traffic free, I can't really see any of your proposals will improve air quality	AQAP	A	KN1	/	/	KN1 - action was discounted during actions appraisal stage so won't be investigated further.
21	Not really an air quality issue, but one of the problems we face is our house and cars are regularly covered in pollen/leaves from the park opposite - I think the trees could be tended to a little more often as the pollen is heavy in the air.	AQAP	A	No	No	No	Pass to Streetcare for action.
22	We need more double lines to stop cars parking on the main roads	AQAP	A	KS2	/	/	Pass to Highways Team for inclusion within review.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
24	I think there should be less traffic lights on Regent Street or that they are synchronised	AQAP	A	KL5	/	/	Include on Action Brief for action development.
30	check older and larger vehicles to ensure exhaust emissions are low or correct	AQAP	A	KS5 and KL2	/	/	Action spans two so will be included on Action Briefs for action development.
33	Perhaps you need to review the Kingswood one way system to reduce congestion.	AQAP	A	KL4, KL5 and KL8	/	/	Action spans three so will be included on Action Briefs for action development.
35	Stop all the cars parking in our road and stop all the cars using it as a rat run. Also the airplanes coming over our houses going to Bristol Airport.	AQAP	A	KS2	/	/	Pass to Highways Team for inclusion within review.
37	Clearly drastic, urgent remedial action is now required to address the excessive and unacceptable nitrogen dioxide levels, such as the introduction of electrically operated 'tram-buses' and prevention of further residential and business properties in Kingswood, especially in the immediate vicinity of the AQMA.	AQAP	A	No	No	No	Any new development would be subject to a planning application. Air quality impact assessments requested as part of the planning process where appropriate.
38	What ever you do costs money that we have not got so keep a low profile on it for 5 years. If you want to do something good put more parking spaces along Regent Street, when you want to pop in a shop for 2 mins and park 1/2 a mile away that's bad, not all of us can walk that far.	AQAP	A	KS2	/	/	Pass to Highways Team for inclusion within review.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
23	<p>Main reason for increase in pollution is not the amount of road traffic, but the constant queuing of stationary traffic. If traffic could be kept moving it would greatly help reduce pollution.</p> <p>The traffic lights at three junctions could be altered to help keep the queuing traffic reduced:</p> <p>1) Blackhorse Road/A420 - add a left turn filter light from Blackhorse Road onto the A420 when there is no traffic travelling west along the A420.</p> <p>2) A420/Hanham Road - add a straight on filter travelling east when there is no traffic from Hanham Road going east.</p> <p>3) A420/Downend Road - add a left turn filter into Downend Road, when no traffic heading west on A420.</p> <p>All above would ease queuing traffic with only minor road works required.</p>	AQAP	A	KL4 and KL6	/	/	Action spans two so will be included on Action Briefs for action development.
38	Build a flyover with lottery money	AQAP	A	No	Yes	No	No action required - not a practical suggestion.
GC4	It would be useful to have a "dirty vehicle hotline" whereby the public could report vehicles with what appeared to have illegal exhaust fumes	AQAP	A	No	Yes	Yes	Include as new action - Promotion of the VOSA Smoky Vehicles Hotline to report HGV's emitting excessive smoke. (New Action KS8)
GC5	Making Regent St one-way was flawed because traffic which is Bristol bound from Downend Rd has a longer distance to travel being forced to turn left and	AQAP	A	KL4	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	negotiate the one-way system. Solution - allow cars to turn right from Downend Rd therefore avoiding the centre of Kingswood.						
GC5	Lack of free flow traffic is problem caused by buses queuing in front of the precinct. Only 2 spaces for east bound buses. Often 3 will be present resulting in a blocked road and build up of traffic. Solution - some buses to stop to the West of the Downend Road junction.	AQAP	A	KS4	/	/	Include on Action Brief for action development.
GC5	Lack of synchronisation with the traffic lights - queries why they are not linked.	AQAP	A	KL4	/	/	Include on Action Brief for action development. Long term action to look at signal operation.
GC8	a) The main cause of congestion at the Western end of Regent St is the Bristol-bound bus stop. When there are two buses unloading in the eastbound direction, another standing in and there is a bus loading at that bus stop, no traffic can flow in either direction. Why not move that bus stop back into Moravian Road where there is room and no traffic (Please increase the bus shelter provision)	AQAP	A	KM3	/	/	Include on Action Brief for action development.
GC8	b) Congestion at the junction with Hanham Rd is caused by the traffic lights (with the double mini roundabout previously at that site, traffic did at least flow. Now it backs up in the rush hour from Warmley to St George) Some improvement might be obtained by a permanent "green arrow" filter from	AQAP	A	KL5	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	Regent St into High St, with, of course, a warning notice for traffic coming from Hanham Rd that traffic is filtering from the left. (A mini roundabout could be reinstated also at the junction of Regent St and Downend Rd)						
GC8	c) It would be more convenient for residents of North Kingswood if we could access the area from the High Street. When traffic comes from the Warmley direction we have to go down Alma Rd onto Syston Way/New Cheltenham Road and back up Church Road. If the one way section at the top of Church St were reversed it would cut out a lot of emissions. (Exit would still be possible via Park Rd)	AQAP	A	KL4	/	/	Include on Action Brief for action development.
GC9	The travel survey of how individuals travel to the town centre is probably one of the most significant pieces of work you can do, but do not restrict it to shoppers and deliveries. We think you will find a significant number of town centre workers who drive and then park close to the town centre in side streets. These extra vehicles add to local parking problems which cause those seeking a parking spot to have to drive around more. More congestion. More pollution.	AQAP	A	KM2	/	/	Include on Action Brief for action development. Include town centre workers within action.
KE5 (3)	(Local residents) Concern about taxi's parking in Moravian Road (and drivers sitting on wall); Park there until spaces in Regent St taxi ranks become available up to 12 at a time. But do turn engines off. Drivers use Moravian Road as a cut	AQAP	A	KL8			Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	through even though buses/taxi's only.						
KE5	Buses not wonderful so people won't choose to get on them. Why do buses go back up Moravian Road rather than round Cecil Road/Blackhorse Road (only no 6 does)? Two bus stops opposite each other.	AQAP	A	KS4			Include on Action Brief for action development.
KE5	Main point was that pedestrianisation of Kingswood Town Centre should have been done when changes were made. It is the best solution.	AQAP	A	KN4			Pedestrianisation KN4 - action was discounted during actions appraisal stage so won't be investigated further.
KE6	Suggestions - bus gates, cameras to enforce offending vehicles (low emission zone type arrangement).	AQAP	A	KN2			KN2 - action was discounted during actions appraisal stage so won't be investigated further.
KE6	Taxis on Friday/Saturday nights queue idling on the footway.	AQAP	A	KS6			Include on Action Brief for action development.
KE7	Commented that buses stop opposite each other which blocks the traffic. Bus services aren't very good for commuting.	AQAP	A	KS4			Include on Action Brief for action development.
KE8	His key idea is to divert traffic northwards away from Regent St along Syston Way, particularly in peak hours. Apparently, there was a plan in the 60's/70's to pedestrianise the KW centre which never happened. Could focus on diverting	AQAP	A	KL7 and KN1			Include on KL7 Action Brief for action development. Pedestrianisation KN4 - action was

Response Number	Comment	Does it relate to FA or AQAP?	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action taken by officers
	strategic traffic heading to the ring road more so than local traffic.						discounted during actions appraisal stage so won't be investigated further.
KE8	Also need to ensure that bus lay-bys are big enough for buses to fully pull into (& that the drivers actually pull in properly) so that they don't stick out and block the traffic.	AQAP	A	KS4			Include on Action Brief for action development.

Staple Hill Consultation Responses

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
3 (SE1)	This is not my concern really	FA	C				No action required
14	I have no objection providing it doesn't turn into a no parking area therefore devaluing my house.	FA	C				No action required
30	Just hope it stays that way	FA	C				No action required
38	A good idea	FA	C				No action required
39	Not sure how it will work out	FA	C				No action required
42	Apart from saying it's a good idea. I live in a block of flats and can see the haze rising from Victoria/North Street in summer from the rush hour.	FA	C				No action required
47	Not at the moment	FA	C				No action required
49	I never even knew there was an AQMA and I have lived on the High Street for 7 years	FA	C				No action required
51	Why do you wish to extend the area when nothing has been done about the air quality in the 2010 boundary?	FA	C				Following the AQMA declaration in 2010, we have developed the action plan to improve air quality in Staple Hill.
58	I welcome the extension	FA	C				
61	Good	FA	C				No action required
64	I think it is a good idea to extend the AQMA	FA	C				No action required
65	The extension of the AQMA can only benefit the health of the residents and is to be encouraged	FA	C				No action required
67	The extension is certainly to the minimum area that must be affected.	FA	C				No action required
72	Good idea	FA	C				No action required

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
73	Not to worry about the extension, main concern is the 2010 one	FA	C				No action required
SE2 (2)	(Local residents) Health concerns (bad catarrh).	FA	C				No action required.
23	Should include all of Broad Street to lights at Page Park	FA	A				Currently there is no monitoring or modelling evidence that would justify extending the AQMA any further along Broad Street. However, if future work identifies further exceedences on Broad St. at Page Park, then the AQMA boundary can be revised to reflect this.
44	It needs to be bigger. Air doesn't stay in one place.	FA	A				There is no current monitoring or modelling evidence that would justify extending the AQMA any further. If future work identifies any further exceedences, then the AQMA boundary can be revised.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
59	It should extend to Downend North Street	FA	A				There is no current monitoring or modelling evidence that would justify extending the AQMA any further. If future work identifies any further exceedences, then the AQMA boundary can be revised.
66 (SE9)	Could it include the area outside the old tram depot? Often during inclement weather buses stand with engine idling. End of route 7.	FA	A				There is no current monitoring or modelling evidence that would justify extending the AQMA any further. There is an action (SS4) included in the Staple Hill Action Plan Action to work with bus operators to encourage them to not to leave their engines idling.
2	The action for public transport is too vague	AQAP	C				No action required
20	I think the moving of bus stops in Soundwell Road is most important for traffic flow.	AQAP	C				No action required
21	Very good but the Marmaris Takeaway and other fast food outlets pollute most of the high street with their cooking odours. Outlet chimneys must be made higher or filters cleaned.	AQAP	C				Pass onto Environmental Protection to investigate.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
26	Can't believe you are thinking of wasting even more money by short term or medium term, we need a lasting solution.	AQAP	C				No action required
46	The worst time is school pick up time, parents parking in residents spaces, lots of congestion, slow moving traffic at this time.	AQAP	C	SM1			Include comment on Action Brief for action development.
54	I am very concerned, for I suffer from COPD. Air quality does affect my condition.	AQAP	C				No action required
56	Working with the buses and taxis will hopefully help reduce and improve the air quality	AQAP	C				No action required
68	No as long as actions do not impact the (rare) thriving shopping centre of Staple Hill.	AQAP	C				No action required
73	I have to wash the walls and windowsills down daily because of the black dust and also concerned because we breathe it in. It's very bad.	AQAP	C				No action required
7	It's a pity local residents were not consulted about longer hours new landlord of red lion got for music on Saturdays and the sing-along merchant at ATS.	AQAP	C				Pass comment to Licensing to investigate.
21	Fast food outlet odours are a big concern and cause more pollution than traffic.	AQAP	C				No action required
22	No but a road sweeper would be lovely.	AQAP	C				Pass to Streetcare for action.
32	Good luck	AQAP	C				No action required

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
37	Why do disabled badge holders park on double yellow lines? They are there for a reason, this often holds up traffic flow particularly on Seymour Road/Broad Street	AQAP	C	SM4	/	/	Include comment on Action Brief for action development.
44	None of these are satisfactory solutions. Less traffic on North/Victoria Street = less air pollution and easier to cross the road (See leaflet for detailed comments on each scheme)	AQAP	C	SL7	/	/	Include comment on Action Brief for action development.
45	Emissions from factories etc	AQAP	C				No action required
46	I feel the council should be spending their/our money elsewhere, whilst the budgets are being cut. Air quality is currently the least of our worries.	AQAP	C				No action required
49	I would not like to see traffic restrictions on the hill, this just forces people to use other roads for movement, which just pushes the problems elsewhere.	AQAP	C	SM4	/	/	Include comment on Action Brief for action development.
50	Remember the elderly who depend on their vehicles to visit the shopping area e.g. may have difficulties in walking long distances or carrying heavy items.	AQAP	C	SM4	/	/	Include comment on Action Brief for action development.
51	Needs action not talk - most proposals above do not require large expenditure	AQAP	C				No action required
57	On Q3, I would also tick Option 3, particularly as it should be easy to deliver	AQAP	C				No action required
58	The local bus services I previously relied on have been recently scrapped so I am now driving every day. It seems ridiculous that this scheme continues but public transport options are being reduced.	AQAP	C				No action required

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
65	I had to move from Victoria Street because my breathing was so poor. Action urgently needed	AQAP	C				No action required
44	Bus partnership, Council fleet, taxis - what % of total emissions come from these compared to level of cars and lorries in area?	AQAP	C	SS2, SS3 and SS4	/	/	No action required. Cars = 23.8% average contribution Buses = 19.8% average contribution HGV (Heavy Goods Vehicles) = 11.5% average contribution LGV (Light Goods Vehicles) = 11% average contribution
44	No taxi ranks in Staple Hill	AQAP	C	SS4	/	/	Include on Action Brief for action development.
44	Travel planning for Staple Hill Town Centre - old and poor walk	AQAP	C	SM2	/	/	No action required
44	Relocation of bus stops - buses are not that frequent	AQAP	C	SM3	/	/	Include on Action Brief for action development - investigate frequency of bus services.
44	Smarter Choices promotions/roadshows - Tesco's car park	AQAP	C	SM5	/	/	Include on Action Brief for action development.
44	Cycling infrastructure - minimal impact	AQAP	C	SM6	/	/	No action required
44	Car club - impractical for families	AQAP	C	SL2	/	/	Include on Action Brief for action development.
44	Restrict turning movements at A4017 - unintended consequences on Hermitage Road, already a rat run	AQAP	C	SL5	/	/	Include on Action Brief for action development to ensure not

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
							detrimental to Hermitage Road.
66 (SE9)	I feel the main cause is the Soundwell Road end. Bus stops nearly opposite and being one man operated. Last Friday a Bath bus was stopped 4 minutes while it was debated as to whether a lady could take her trolley on one of the smaller buses. All that time a large articulated high-van-trailer was making sure fumes etc were stagnant. I was there!	AQAP	C				No action required.
GC1	Concerned that restricting turning traffic at crossroads will result in traffic using other routes.	AQAP	C				No action required.
GC4	Should the Council promote low emission vehicles?	AQAP	C	SS3	/	/	Include on Action Brief for action development - Low emission vehicles – the Council currently promotes use of these internally so our pool cars are low emissions and procurement of new vehicles ensures they conform to Euro standards. We also work in partnership with the bus companies and refuse vehicle companies and

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
							promote use of low emission vehicles to them.
GC6	<p>Bristol City Council have the following comments on your draft action plan and further assessment. BCC works with SGC on air quality and transport through the JLTP.</p> <p>Strategic actions to improve air quality and transport on the transport corridors that BCC and SCG share have already been implemented, for example GBBN and cycling city. Officers in BCC and SCG regularly communicate on air quality and transport issues and co-ordinate plans to improve both.</p> <p>We don't monitor close to the boundary with SGC on the A420 but we have a diffusion tube just inside our AQMA on the roadside which is just compliant with the NO2 air quality objective. As you'll be aware, we routinely review our monitoring network to ensure that the AQMA boundary is correct, and that our action plan is focussed on relevant areas. In the light of your recent declaration of an AQMA in this area and the continuing stable or upwards trends in annual mean NO2, I'm happy to revisit monitoring on this corridor, and of course always willing to discuss the co-ordination of air quality and transport improvement measures.</p>	AQAP	C				No action required. Work with Bristol City Council when developing actions.
SE2	Concerns about queuing traffic	AQAP	C				No action required.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
SE3	(Local resident lived in area for 34 years). Somewhat angry and concerned about the cost of consultation. Couldn't understand why we were bothering.	AQAP	C				No action required.
SE3	Also mentioned Bath St Garage to be turned into 14 flats with no parking - pp granted.	AQAP	C				Air quality impact assessments requested as part of the planning process where appropriate.
SE4 (3)	(Local residents). General interest in consultation. No particular concerns.	AQAP	C				No action required.
SE5	(Local resident within AQMA). Didn't think any of the plan would work. Also said he wouldn't drive through Kingswood as the traffic system puts him off.	AQAP	C				No action required.
SE6	(Local resident) Interested in air quality and concerned about queuing traffic, where the buses stop.	AQAP	C				No action required.
SE8	(Local resident) Still driving until recently and gave up under protest. Understood that air quality issue was traffic related.	AQAP	C				No action required.
19	Plant more trees	AQAP	A	No	Yes	Yes	Include as new action - Ensure adequate landscaping is considered within new planning applications and urban designs. (New Action SS5)
43	Age of buses being used e.g. Old diesel engines pumping out black smoke	AQAP	A	SS2	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
45	Yes, have a one way from main Street into Victoria Street via Downend to stop tailbacks	AQAP	A	SL5	/	/	Include on Action Brief for action development.
62	Pedestrianise, better signage for existing car parks, abolish parking spaces on Broad Street between the Portcullis and Acacia Road Junction	AQAP	A	SN2 and SM4	/	/	SN2 - shared space/pedestrianising action was discounted during actions appraisal stage so won't be investigated further. SM4 - Include comments regarding parking on Action Brief for action development.
2	Create competition in bus providers (not just First Group). Sort out public transport in Bristol. It's rubbish and lets Bristol down nationally compared to other UK cities	AQAP	A	SS2	/	/	Include on Action Brief for action development.
3 (SE1)	To block traffic on main road through Staple Hill completely	AQAP	A	SL5	/	/	Include on Action Brief for action development.
8	Q3 -4- ensure all vehicles turn off engines in immediate Staple Hill AQMA, make drivers aware, immense vehicle traffic queues at traffic lights in Staple Hill, stop too long at lights pumping pollution out, vehicles stop at traffic lights all the way back to Tesco, traffic lights needing attentions. All four main ways a problem.	AQAP	A	SS4	/	/	Include on Action Brief for action development.
14	Many of the air quality problems could be resolved by working on traffic light timings, this would also reduce the	AQAP	A	SL3	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
	congestion.						
26	No cycle lanes as roads are not wide enough, ban cycles through Staple Hill so that traffic does not build up behind them and flows better.	AQAP	A	SM6	/	/	Although against the action, comments should be noted within this Action Brief.
29	The traffic lights do take a very long time to change. Cars do not need to park on High Street, they have use of three car parks - causes blockages.	AQAP	A	SL3 and SM4	/	/	SL3 - Include comments regarding traffic lights on Action Brief for action development. SM4 - Include comments on parking on Action Brief for action development.
33	Ban all parking on roads within 1 mile of schools during 0800 to 1630 hours	AQAP	A	SM1	/	/	Include on Action Brief for action development.
35	Keep cyclists off foot paths	AQAP	A	SM6	/	/	Include on Action Brief for action development.
38	Put 3&4 together on the medium term options. If these two put together I think these alone would make a big difference to the air quality in the shopping area.	AQAP	A	No	Yes	No	It is not really practical to combine the actions but the preference is noted.
40	Need to improve bus stops at Staple Hill Portcullis both sides. No shelter when wind blows.	AQAP	A	SM3	/	/	Include on Action Brief for action development.
42	I do not drive but maybe the yellow grid painted on the road within the crossroads as per your plan may help with the "snarl ups" and ease congestion	AQAP	A	SL3	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
55	One way System	AQAP	A	SL3, SL5 and SL7	/	/	Action spans three so will be included on Action Briefs for action development.
62	More traffic enforcement e.g. traffic wardens and police. Stop people parking on double yellows and bus stops, blocking traffic flow	AQAP	A	SM4	/	/	Include on Action Brief for action development.
63	Parking in Staple Hill is a really issue often because of parking either side of the road, effectively reduces the useable road to single file especially through High Street especially when buses need to pass	AQAP	A	SM4	/	/	Include on Action Brief for action development.
64	Bus services in the area need improving, particularly on Sundays	AQAP	A	SS2	/	/	Include on Action Brief for action development.
66 (SE9)	Photograph Page 1: From personal objectives over a very long time, the 'keep clear' needs to be a metre nearer the junction. At present traffic from the Downend direction, requiring to turn right find it difficult to make the manoeuvre and gain access behind the shops. All traffic is then stopped.	AQAP	A	SL5	/	/	Include on Action Brief for action development.
67	It is unnecessary to keep the automatic pedestrian pause at the High Street/Broad Street traffic lights during the less busy times of the day.	AQAP	A	SL3	/	/	Include on Action Brief for action development.
68	Re q4 - school travel planning also valuable - what about a school bus scheme as in the USA (Yellow Bus)?	AQAP	A	SM1	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
69	Stop refuse collections during peak traffic times, they hold up traffic hugely.	AQAP	A	SL6	/	/	Amend Action SL6 to include collections and mention refuse collections. Then include on Action Brief for action development. (Follow through to equivalent action in Kingswood)
36	Large lorries are not permitted to travel on Victoria Street and other impacted areas.	AQAP	A	SN1	/	/	Low Emission Zone action was discounted during actions appraisal stage so won't be investigated further.
36	Deliveries to shops must only take place between 6pm and 6am on Staple Hill High Street, not during the day.	AQAP	A	SL6	/	/	Include on Action Brief for action development.
36	Traffic light signals at junction of High Street/Victoria Street adjusted to provide better traffic flow.	AQAP	A	SL3	/	/	Include on Action Brief for action development.
36	Traffic lights at junction of High Street and the Old Mail House Pub (further down the High Street), to not allow turns, which clog the High Street - only straight on down towards Fishponds/up towards High Street Staple Hill.	AQAP	A	SL3	/	/	Include on Action Brief for action development.
36	Sign post alternate routes, other than via already congested roads.	AQAP	A	SL3	/	/	Include on Action Brief for action development.
36	Introduce walk to school trains for all State schools, forcing them to have volunteer helpers, walk local children to school.	AQAP	A	SM1	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
36	Ban parking around school areas for cars, enforce traffic regulations with "spot check" wardens for parking on pavements, blocking access, etc around school areas.	AQAP	A	SM1	/	/	Include on Action Brief for action development.
36	Introduce single larger bus stop on Victoria Street, perhaps near the GP Surgery/Chemist, where there is some space, and remove all other bus stops from Victoria Street.	AQAP	A	SM3	/	/	No action required - it was only the bus stops on Soundwell Road which are considered to cause a significant issue.
36	Introduce "no idling" signs along the road, telling car drivers to switch off when stationary.	AQAP	A	SS4	/	/	Include on Action Brief for action development.
36	Consider working with Bristol City Council on the introduction of a tram system for Bristol and area, that is the only way ultimately car drivers will leave their cars - when there is a reliable, safe and easy to use public transport system - buses are not the whole answer.	AQAP	A	No	Yes	No	Include on Action Brief for action development although may be difficult to achieve as would require significant investment.
44	School Travel Planning - why doesn't the school collect stats on pupils cycling?	AQAP	A	SM1	/	/	Include on Action Brief for action development.
49	Why don't you give anyone who lives on the High Street, and has a car, a badge which enables them to park in the car parks in the area? An unrestricted time limit would ease car parking on the High Street and surrounding streets. At the moment I am only allowed a 2 hour stay, right outside my front door, I can't use the car parks for the same reason, so I park	AQAP	A	SM4	/	/	Include on Action Brief for action development.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
	outside someone else's house in Pendennis Road. Usually every afternoon onwards and all day Saturday.						
GC1	1) Plant trees to absorb pollution	AQAP	A	No	Yes	Yes	Include as new action - Ensure adequate landscaping is considered within new planning applications and urban designs. (New Action SS5)
GC1	2) Sign put up to remind drivers to turn engines off when stationary	AQAP	A	SS4	/	/	Include on Action Brief for action development.
GC1	3) Introduce pressure sensors in the roads to improve signal timings	AQAP	A	SL3	/	/	Include on Action Brief for action development.
GC1	4) Bring in 20mph limit	AQAP	A	SL7	/	/	Include on Action Brief for action development.
GC1	5) Encourage people to cycle	AQAP	A	SM6	/	/	Include on Action Brief for action development.
GC1	6) Reduce cost of bus travel - introduce not for profit, Council funded through route.	AQAP	A	SS2	/	/	Include on Action Brief for action development although may be difficult to achieve as Council already subsidises bus routes.

Response Number	Comment	Does it relate to FA or AQAP	Comment or Action	Is action already included within an Action?	New action to be considered?	Is Action a practical consideration?	Action take by officer
GC4	It would be useful to have a "dirty vehicle hotline" whereby the public could report vehicles with what appeared to have illegal exhaust fumes	AQAP	A	No	Yes	Yes	Include as new action - Promotion of the VOSA Smoky Vehicles Hotline to report HGVs emitting excessive smoke. (New Action SS6)
SE3	Issues were the SITA lorries - used to be one lorry collecting now three.	AQAP	A	SL6			Amend Action SL6 to include collections and mention refuse collections. Then include on Action Brief for action development. (Follow through to equivalent action in Kingswood)
SE3	Tesco car park constantly full all day,	AQAP	A	SM4			Include on Action Brief for action development.
SE3	Public transport not good enough, unreliable and too expensive.	AQAP	A	SS2			Include on Action Brief for action development.
SE5	Only option was to make the crossroads one-way or rethink the turning at crossroads. Noticed queuing traffic has got worse in the five years he's lived there.	AQAP	A	SL5			Include on Action Brief for action development.
SE7 (3)	Commented that buses stick out on Broad Street outside butchers, don't pull in far enough which then stops the traffic. Commented that design for buses in Fishponds stop in the middle of the road and don't block the road. Buses too expensive and unreliable.	AQAP	A	SS2			Include on Action Brief for action development

18. Appendix H: Revised Actions Appraisal

Kingswood – Revised Actions Appraisal

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
		(high = 5, medium = 3, low = 1)			(Large dis-benefits = -2, unlikely to be feasible = -1, neutral = 0, feasible = 1, large benefits = 2)	AQ Impact + Other Impact (cumulative total)	(very high = 1, high = 2, medium = 3, low = 4, very low = 5)	(Secured = 5, Identified = 3, None = 1)	(Short =5, Medium = 3, Long =1)	Cost x Funding x Timescale	Overall Impact x Overall Deliverability
KS1	Travel plan for Kingswood Civic centre - Encourage car sharing and sustainable transport as travel to work options.	3	Road Safety, fitness & wellbeing. Reduces congestion.	Staff locations may mean that no reductions in staff travelling through Kingswood Town Centre occur as a result on implementing the Travel Plan.	1	4	5	5	5	125	500
KS2	Parking Review - review of parking issues within the air quality management area.	3	Road safety benefits. Improved accessibility for vehicular traffic	Reduced parking for local residents.	1	4	4	5	5	100	400

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KS3	Ensure Air Quality is a priority in development of transport schemes.	3	Increased assessment priority for schemes in the capital programme development.	Schemes may be discounted on other priorities which may be excellent for air quality reduction.	2	5	5	3	5	75	375
KS4	Ensure adequate landscaping is considered within new planning applications and urban designs	3	Visual benefits from more trees.		1	4	5	3	5	75	300
KS5	Promotion of VOSA Smoky Vehicles hotline.	3	Health benefits from removing older vehicles.		1	4	5	3	5	75	300
KS6	Bus Partnership - work with operators to address air quality issues through partnership working	5	Noise reduction as quieter buses are travelling through the "channelled" town centre.		1	6	3	1	5	15	90

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KS7	Review of Council Fleet to ensure lowest emission vehicles - set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.	1			1	2	3	5	3	45	90
KS8	Promotion of more efficient usage of taxi ranks and bus stops - programme to encourage drivers to switch off engines when stationary within air quality management area.	1	Reduced noise, quieter environment without idling vehicles		1	2	5	1	5	25	50
KM1	School Travel Planning - ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site.	3	Road Safety, fitness & wellbeing.	May lose focus on improving Kingswood Town Centre Air Quality.	1	4	4	1	3	12	48

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KM2	Travel Planning for Kingswood Town Centre - undertake travel surveys or interviews to ascertain modes of travel particularly to the shops. Focus will be on deliveries and visitors where parking.	3	Road Safety, fitness & wellbeing.	Potential economic impact on retailers as travel restrictions may discourage visitors.	1	4	4	1	3	12	48
KM3	Review bus terminals & timing points - undertake a review of the bus stops within the AQMA to reduce number of buses idling at them.	3	Free flowing traffic along A420	Adverse comments from bus companies. May affect area relocated to.	2	5	3	1	3	9	45
KM4	Smarter Choices promotions/roadshows - undertake promotion of sustainable travel in particular around the shopping area by holding roadshows and events where people can talk to representatives.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion.		1	2	4	1	5	20	40

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KM5	Cycling Infrastructure - review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion	Modal shift is not significant enough to make a difference to the volume of cars.	0	1	3	3	3	27	27
KL1	Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme - introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to business within South Gloucestershire.	3	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps to address the negative reputation of bus/goods vehicles.	Potential cost to Fleet operators?	1	4	5	1	1	5	20
KL2	Establish car club in local area/wider South Glos - to reduce car ownership levels.	3	reduces the car ownership levels without reducing people's access	cars in local area may not have been travelling through the	1	4	4	1	1	4	16

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
			to a car	particular junction so may not be cause of the problem.							
KL3	Restrict traffic turning movements onto A420 - by restricting traffic turning onto A420 the free flow of traffic is maintained and therefore not idling which improves emissions.	3	Improved traffic flow on A420 within AQMA zone. Road safety benefits. Non-motorised traffic benefits due to less restrictions	Relocate traffic problems to diversion route. Access issues for local residents. Make north-south movements through Kingswood more difficult.	1	4	4	1	1	4	16
KL4	Review Traffic Signal Numbers and operations - review implications of traffic signals and signal timings to improve traffic flows on the A420.	1	Better Journey times on A420	Extra waiting times for pedestrians to cross the roads which may cause road safety concerns. Delays for side road traffic.	0	1	3	1	5	15	15

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KL5	Review of delivery bays - review the designated delivery bays in terms of location, size, accessibility and time limits within the AQMA to reduce congestion where possible.	3	Trade. Bus punctuality. Improved traffic flows. Improve access to delivery bays.	Loss of on-street parking. May be removal of pedestrian facilities. Trader dislike.	1	4	3	1	1	3	12
KL6	Controlled Deliveries/collections - Restrict deliveries/collections times to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.	3	Deliveries/collections when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery/collection vehicles not contributing to any peak hour congestion. Freight consolidation - reduced no. of vehicles into area so less congestion, reduced emissions & if use electric vehicles, further reduced emissions.	May limit availability of goods.	0	3	4	1	1	4	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
KL7	Re-classify strategic routes and signing strategy - by reclassifying the routes it would reroute strategic traffic and therefore reduce traffic volumes.	3	Relocate strategic traffic	Reduction of funding for highway maintenance.	1	4	3	1	1	3	12
KL8	Taxi ranks - undertake review of operations by taxi's within the air quality management area.	3	Better environment	May be adverse comments/PR from taxi groups companies.	1	4	5	1	1	5	20
KN1	Traffic Free Town Centre or traffic restrictions - restrict traffic to Kingswood town centre at certain times.	5	No congestion in Town centre	Increased congestion on diversions around Town Centre. Traders disadvantaged , no passing trade	-1	4	3	1	1	3	12
KN2	Low Emission Zone - restrict types of vehicles which enter the AQMA.	3	May control number of vehicles as well as type.	Resistance from Hauliers and bus companies? Retailers may suffer if it is difficult for delivery vehicles to get through. Cost of new bus	0	3	2	1	1	2	6

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall deliverability	Score
				introduction may result in loss of service.							
KN3	Queue relocation - by relocating queuing traffic outside the AQMA, emissions from idling traffic will reduce.	5	Improved traffic flow on A420 within AQMA zone	Queues relocate to adjoining roads. Major disadvantages to bus showcase corridor eastbound.	-2	3	2	1	1	2	6
KN4	Complete pedestrianisation of Kingswood Town Centre - make the whole of Regent Street traffic free.	5	Road safety benefits.	Relocate traffic problems to diversion route. Reduced disability access.	-2	3	2	1	1	2	6
KN5	Shared space treatment - reducing vehicle movement by removing the boundaries between footways and carriageways so all space is available for all.	3	Potential road safety benefits. Potential reduction of through traffic. Potential benefits for vulnerable road users.	May inadvertently reduce numbers of vehicles by prohibiting speed. Difficult to enforce low speeds.	-1	2	2	1	1	2	4

Staple Hill – Revised Actions Appraisal

Action Number	Action	AQ Impact (high = 5, medium = 3, low = 1)	Non-air quality benefits	Non air quality dis-benefits	Other Impact (Large dis-benefits = -2, unlikely to be feasible = -1, neutral = 0, feasible = 1, large benefits = 2)	Overall Impact AQ Impact + Other Impact (cumulative total)	Cost (very high = 1, high = 2, medium = 3, low = 4, very low = 5)	Funding (Secured = 5, Identified = 3, None = 1)	Timescale (Short = 5, Medium = 3, Long = 1)	Overall Deliverability Cost x Funding x Timescale	Score Overall Impact x Overall Deliverability
SS1	Ensure Air Quality is a priority in development of transport schemes.	3	Increased assessment priority for schemes in the capital programme development.	Schemes may be discounted on other priorities which may be excellent for air quality reduction.	2	5	5	3	5	75	375
SS2	Ensure adequate landscaping is considered within new planning applications and urban designs	3	Visual benefits from more trees/plants. Reduced noise as trees can act as a buffer.		1	4	5	3	5	75	300
SS3	Promotion of VOSA Smoky Vehicles hotline.	3	Health benefits from removing older vehicles.		1	4	5	3	5	75	300
SS4	Bus Partnership - work with operators to address air quality issues through partnership working	5			1	6	3	1	5	15	90

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SS5	Review of Council Fleet to ensure lowest emission vehicles - set an example as the authority lead to ensure that vehicles/community transport are efficient vehicles with low emissions.	1			1	2	3	5	3	45	90
SS6	Promotion of more efficient usage of taxi ranks and bus stops - programme to encourage drivers to switch off engines when stationary within air quality management area.	1	Reduced noise, quieter environment without idling vehicles		1	2	5	1	5	25	50
SM1	School Travel Planning - ensure all schools local to the AQMA have travel plans in place to reduce car dependency at each site.	3	Road Safety, fitness & wellbeing. Reduces congestion.	May lose focus on improving Staple Hill Air Quality	1	4	4	1	3	12	48
SM2	Travel Plan for Staple Hill Centre - undertake travel surveys or interviews to ascertain modes of travel particularly to the shops. Focus will be on deliveries and visitors where parking.	3	Road Safety, fitness & wellbeing. Reduces congestion		1	4	4	1	3	12	48

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SM3	Relocation of bus stops on Soundwell Road - relocating the bus stops to more suitable positions where they do not completely stop the flow of traffic in both directions.	3	Reduces congestion. Road safety benefits with traffic not having to make difficult overtaking manoeuvres.	Lose on-street parking spaces.	1	4	4	1	3	12	48
SM4	Parking Review - review of parking issues within the AQMA.	3	Road safety benefits. Improved accessibility for vehicular traffic	Reduced parking for local residents.	1	4	4	1	3	12	48
SM5	Smarter Choices promotions/roadshows - undertake promotion of sustainable travel in particular around the shopping area by holding roadshows and events where people can talk to representatives.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion.		1	2	4	1	5	20	40
SM6	Cycling Infrastructure - review the current cycling provision and seek to improve access by bicycle by introducing more traffic free cycle lanes, cycle parking and facilities where appropriate.	1	Improved fitness levels and health. Improved travel choices. Reduced congestion	Modal shift is not significant enough to make a difference to the volume of cars.	0	1	3	3	3	27	27

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SL1	Eco [Efficient and Cleaner Operations] Stars Fleet Recognition Scheme - introduce award scheme for efficient and cleaner fleet vehicles both in house and promote to business within South Gloucestershire.	3	Provides public recognition for operators who are active in taking steps to improve efficiency, reduce fuel consumption and reduce their impact on local air quality. Helps to address the negative reputation of bus/goods vehicles.	Potential cost to fleet operators?	1	4	5	1	1	5	20
SL2	Establish car club in local area/wider South Glos - to reduce car ownership levels.	3	reduces the car ownership levels without reducing people's access to a car	cars in local area may not have been travelling through the particular junction so may not be cause of the problem.	1	4	4	1	1	4	16
SL3	Review Traffic Signal Numbers and operations - review implications of traffic signals and signal timings to improve traffic flows through Staple Hill.	1	Better Journey times through Staple Hill	Extra waiting times for pedestrians to cross roads which may cause road safety concerns. Delays for side road traffic.	0	1	3	1	5	15	15

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SL4	Review of delivery bays - review the designated delivery bays in terms of location, size, accessibility and time limits within the AQMA to reduce congestion where possible.	3	Trade. Bus punctuality. Improved traffic flows. Improve access to delivery bays.	Loss of on-street parking. May be removal of pedestrian facilities. Trader dislike.	1	4	3	1	1	3	12
SL5	Restrict traffic turning movements at A4017 junction - by restricting traffic turning at A4017 the free flow of traffic is maintained and therefore not idling which improves emissions.	3	Improved traffic flows, possible road safety benefits. Pedestrian benefits at crossroads	Relocate traffic problems to diversion route. Access issues for local residents. Make north-south movements through Staple Hill more difficult.	0	3	4	1	1	4	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SL6	Controlled Deliveries/collections - Restrict deliveries/collections times to off peak hours and explore use of freight consolidation centre with electric vehicles for delivery.	3	Deliveries/collections when less traffic so reduced journey times for delivery vehicles, less emissions. Delivery/collection on vehicles not contributing to any peak hour congestion. Freight consolidation - reduced no. of vehicles into area so less congestion, reduced emissions & if use electric vehicles, further reduced emissions.	May restrict availability of goods to customers.	0	3	4	1	1	4	12
SL7	Re-classify strategic routes and signing strategy - by reclassifying the routes it would reroute strategic traffic and therefore reduce traffic volumes.	3	Relocate strategic traffic	Reduction of funding for highway maintenance.	1	4	3	1	1	3	12

Action Number	Action	AQ Impact	Non-air quality benefits	Non air quality dis-benefits	Other Impact	Overall Impact	Cost	Funding	Timescale	Overall Deliverability	Score
SN1	Low Emission Zone - restrict types of vehicles which enter the AQMA.	3	May control number of vehicles as well as type.	Resistance from Hauliers and bus companies? Retailers may suffer if it is difficult for delivery vehicles to get through. Cost of new bus introduction may result in loss of service.	0	3	2	1	1	2	6
SN2	Shared space treatment - reducing vehicle movement by removing the boundaries between footways and carriageways so all space is available for all.	3	Potential road safety benefits. Potential reduction of through traffic. Potential benefits for vulnerable road users.	May inadvertently reduce numbers of vehicles by prohibiting speed. Difficult to enforce low speeds.	-1	2	2	1	1	2	4