

**Brighton & Hove
City Council**

**ENVIRONMENT, TRANSPORT &
SUSTAINABILITY COMMITTEE**

SUPPORTING DOCUMENTATION

ADDENDUM

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Parking Annual Report 2014-15

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Foreword

It is my pleasure to introduce Brighton & Hove's seventh Parking Annual Report. The report provides an overview of publicly operated parking in the city, highlighting new initiatives and developing trends.

There has been a slight increase in the number of Penalty Charge Notices issued (122,737) compared to last year (117,772) although the numbers still remain at historically low levels. The small increase is largely due to the introduction of new parking schemes.

Partnership working features strongly in this year's report. Parking Services have been working with Sussex Police and East Sussex County Council to tackle Blue Badge misuse by prosecuting persistent offenders. Feedback from Blue Badge holders whose badges have been checked has been very positive. Disabled bays can make a huge difference to the lives of people with severe mobility problems. It's encouraging to read of the innovative enforcement work being carried out by the service to ensure these bays are available for the use of genuine blue badge holders.

Last year's Parking Annual Report covered the introduction of paying for parking by phone. Since then the number of people choosing to pay for their parking by phone in the city has continued to grow from 10% of transactions last year to almost 25% this year. The service has also been expanded with over 150 PayPoint shops citywide also able to take payments for parking in cash at no additional cost. This helps reduced wear and tear on the city's Pay and Display machines many of which are over ten years old and would otherwise need expensive replacement. In light of this and the cost of changing machines to accept a new pound coin the decision was taken to reduce the number of pay and display machines in the city to around 650 on street which should save the city around £250,000 annually. We aim to keep at least one Pay and Display machine in every street, taking public feedback into account when deciding where the remaining machines are located.

Parking Service has also been researching how new technologies could help improve customer experience by providing live information to drivers about which parking spaces in the city are available. This will help both residents and visitors plan their journey and find a space more quickly; reducing the amount of time spent driving around looking for a space which only adds to congestion on our streets.

As in previous years, the report explains how surplus income from parking is spent with most used to provide 46,000 free bus passes for the elderly and disabled as well as a range of other transport and public realm improvement projects.

If you have any questions or comments about our Parking Annual Report please let us know by telephoning our Parking information Centre on 01273 296622, emailing us at parking@brighton-hove.gov.uk or alternatively by posting your comments on our or twitter pages www.twitter.com/bhcc_transport Thank you for taking the time to read our 2014-15 Parking Annual Report.

Cllr Gill Mitchell

Chair of Environment Transport & Sustainability Committee

Chapter 1 - Service overview

Parking controls in Brighton & Hove are essential to keep traffic moving and provide access for residents, businesses and our 8 million annual visitors. Parts of the city are amongst the most densely populated in the country and there is huge demand for parking along the seafront and city centre which must be managed.

The city has a packed and diverse calendar of events many of which require the suspension of hundreds of parking bays in the areas of highest demand. Parking plays a vital role in support of the city's Tourism Strategy and managing the city's gateways which are the first arrival point for all those coming to enjoy all that Brighton & Hove has to offer. Balancing the needs of residents, visitors and businesses is key to sustainable economic growth and success.

In last year's [Parking Annual Report](#) we explained what we are doing to meet our parking policy objectives and how they were being monitored. In addition to the items shown in last year's report the following projects are underway or have been completed which will support our policy objectives to

- **Reduce congestion and keep traffic moving**

Poor compliance with the bus lane on the A259 meant that buses were being delayed at Rottingdean on their journey along the coast to Brighton. The council announced through press releases that it would be enforcing this bus lane. Large signs were also installed in advance of enforcement and warning notices were firstly issued to vehicles observed in the bus lane. Compliance with the bus lane has improved significantly since the introduction of enforcement. On average the city issues around 15 PCNs per day to unauthorised vehicles for being in a bus lane.'

There have been changes to national legislation since last year's report. Penalty Charge Notices can no longer be issued by CCTV to vehicles parking on double yellow lines with a loading ban (usually at junctions or key sections of busy roads). Penalty Charge Notices can similarly no longer be issued by CCTV for parking on a pedestrian zig zag. These contraventions can however still be enforced on foot by Civil Enforcement Officers. We are monitoring whether this change is impacting congestion in our busiest streets. Vehicles parking in bus stops or driving in bus lanes can still be issued with a Penalty Charge Notice by CCTV

Automatic traffic counts monitor flow at key roads throughout the city and cycle counters provide information on the use of the city's cycle lanes. All data is published online for these sites and can be viewed here <http://www.brighton-hove.gov.uk/content/parking-and-travel/travel-transport-and-road-safety/counting-traffic-brighton-and-hove>

- **Provide access safely to those that need it most**

Following feedback from the citywide parking review and blue badge holders we are trialling blue badge bays which can only be used by a particular blue badge holder or 'dedicated blue badge bays'. These will be trialled for blue badge holders with the most severe mobility problems.

We are working with partner organisations including Sussex Police and East Sussex County Council on range of new initiatives to tackle Blue Badge misuse following a successful bid for funding in 2014. We have

raised the profile of this issue over the year, by explaining the impact misuse can have on genuinely disabled drivers. Please see the chapter on Blue Badge enforcement for more information about this initiative.

Controlled parking has an important role to play in ensuring the safety of all road users. Although many factors can influence road traffic collision figures, parking enforcement helps by keeping pedestrian crossings, school keep clears and junctions free of dangerously parked vehicles, which are dealt with as a priority. Overall road traffic safety data for Brighton & Hove shows that between 2008 and 2014 both the numbers of collision incidents and casualties in the city have reduced. Compared to 2013 there were fewer fatalities but an increase in casualties on the city’s streets. Any one collision can result in one or more casualties and the tables below from our Road Safety team show a year by year comparison of both figures.

COLLISIONS

YEAR	FATAL	SERIOUS	SLIGHT	TOTAL
2014	2	146	645	793
2013	3	136	599	738
2012	5	147	637	789
2011	5	159	729	893
2010	7	123	771	901
2009	2	143	748	893

CASUALTIES

YEAR	FATAL	SERIOUS	SLIGHT	TOTAL
2014	2	156	829	987
2013	3	142	763	908
2012	5	155	818	978
2011	6	166	934	1106
2010	8	128	974	1110
2009	2	148	954	1104

More information about road traffic safety can be found here. <http://www.brighton-hove.gov.uk/content/parking-and-travel/travel-transport-and-road-safety/road-collision-and-casualty-data>

- **Deliver excellent customer service**

Parking Services has been working with partner organisations to provide information about free parking spaces in the city. The aim is to reduce congestion caused by drivers looking for spaces. For more information please see the chapter on key developments and technology.

We would like to apologise to our customers for any inconvenience caused due to the Hove Town Hall building works. Opening hours have had to be reduced with the Customer Service Centre opening at 10am to allow

noisy drilling to take place before this time. The building works are part of a project to make better use of council buildings and save public money.

The table below is a summary of the parking operation in Brighton & Hove over the past six years.

Brighton & Hove City Council's parking operation	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
On street parking spaces	23,333	25,039	25,213	27,628	29,143	30,323
Off street parking spaces	2,490	2,490	2,490	2,490	2,490	2,490
Pay & display only bays	903	929	929	1,001	1,028	1,032
Permit only bays	11,696	12,830	12,830	13,189	16,012	16,889
Shared bays (permit and pay & display)	9,127	9,553	9,553	10,006	10,648	10,856
Disabled bays	511	571	571	630	668	699
Other bays	558	618	618	723	744	807
Number of vehicle removed	1,268	1,057	956	1,017	0*	0*
Bays suspended during the year	4,081	4,003	4,089	4,186	5,030	5,349
On street Penalty Charge Notices issued	116,369	109,275	116,097	114,332	117,772	122,737
Items of correspondence received	37,716	35,856	35,284	32,373	35,374	32,034
Resident permits issued (including match day)	20,783	22,583	22,542	25,918	27,432	30,342
Resident Visitor permits issued	319,820	422,583	509,100	463,609	502,300	504,670
Blue Badges on issue	11,978	13,265	12,967	13,472	12,926	12,832

*the council car pound closed in 2013 when the previous on street parking contract ended. Savings arising from this are detailed in last year's Parking Annual Report.

Chapter 2 - Key service developments

In October 2011, the city council made a commitment to review its parking schemes to ensure a fair balance between the needs of residents, business and visitors. The purpose of the review was to improve the way we manage parking and to look at the future of residents parking scheme and whether to consult on new parking schemes or to extend existing schemes. The consultation for the review was carried out in two phases.

- A community engagement phase identifying issues and local concerns - over 40 community group meetings were held.
- A main consultation phase with detailed consultation with stakeholders including ward members and a sample postal consultation of 6000 households city wide to which 1,842 responses were received from residents

An independent scrutiny panel also considered the draft report on the city wide parking review and identified a number of issues to be prioritised. These were published in the final report on the review and a summary was included in last year's Annual Report. An update on progress in key issues raised by the review can be found below.

Permit specific Disabled Persons Parking Places.

Requests were made by individuals and disability groups for a facility for disabled bays reserved for specific blue badge holders. Disabled bays would have a sign plate with a specific permit number related to an individual resident. Other badge holders would be liable to a PCN if they parked in that bay. They could improve access for individual blue badge holders in residential areas where there is parking pressure often coupled with local facilities such as schools and community venues. A report setting out the criteria to be applied for applicants of personalised bays and recommending that they be introduced in the city was approved in October 2013 and can be found here [http://present.brighton-hove.gov.uk/Published/C00000823/M00004788/AI00035617/\\$20130927123656_004519_0018680_ReportTemplateCommittee.docA.ps.pdf](http://present.brighton-hove.gov.uk/Published/C00000823/M00004788/AI00035617/$20130927123656_004519_0018680_ReportTemplateCommittee.docA.ps.pdf)

Technology and Parking- Improving the customer journey

Parking Services has been working with partner organisation Ethos VO to develop a 'future parking platform' as part of a smart city project. The company is working with a number of other Local Authorities and is funded by Innovate UK. The initiative aims to reduce congestion, improve air quality and make it easier for motorists to find an available parking space.

The first phase of the project has been to provide live information from car parks in the city showing which ones are full and which ones have spaces to allow drivers to better plan their journeys using live information. Occupancy data for the following car parks can be viewed online.

Car Park	Current Occupancy	Capacity	Available
London Road	48%	510	267
Regency Square	48%	497	258
The Lanes	79%	350	73
Trafalgar Street	16%	138	116

We hope to make available live information from Norton Road car park and parking availability along Madeira Drive in due course.

The next phase of the project is being considered by councillors and would involve installing parking bay sensors in key parking bays in the city.

Motorcycles

Motorcycles were granted the permanent right to use the bus lanes in Brighton & Hove on the A23 and A259 by the council's [Environment, Transport and Sustainability committee on October 7th 2014](#). A further trial extension of this right will run for 18 months on the Lewes Road A270 north of the Vogue gyratory from December 2015. Central city bus lanes will not be included due to narrow widths and high numbers of pedestrians and cyclists.

In the first six months of 2014 there were 45 motorcycle reported casualties in Brighton & Hove including 0 fatalities, 10 serious injuries and 35 slight injuries. This compares with 8 serious and 22 slight injuries for the same period in 2013.

Registrations of scooters and motorbikes under 500cc have not increased significantly in Brighton & Hove since the start of the recession (Q3 2008). Motorcycles including scooters accounted for just 4% of the city's registered vehicles in the first quarter of 2014.

The Phase 1 area of 20mph showed a drop in motorcycle casualties in the first year of its operation 8 April 2013 to 7 April 2014.

Motorcycle bays are available throughout Brighton & Hove and they are free for all solo motorcycles including secure motorcycle bays. More information can be found [here](#)

Cycle parking places

Demand for cycle parking in the city has increased substantially in recent years. Since 2005 the city council has installed no less than 100 new cycle stands (200 cycle parking spaces) each year in Brighton & Hove.

Following the installation of a secure community cycle store in Shaftesbury Road in 2013, a second store opened on Cobden Road, Hanover, in 2015. This was funded by the council and has been formally handed over to the Hanover Community Association to manage.

Since 2007 the city council has been installing Pedal Cycle Parking Places. This is where cycle stands are placed on the carriageway rather than on footway areas and are increasingly popular with pedestrians and cycle users alike.

Parking and Transport Planning have worked together to consult and install Pedal Cycle Parking Places in new Controlled Parking Zone areas where demand and justification is clear.

In 2014/15 the following cycle parking facilities were installed:

- 16 Pedal Cycle Parking Places, 86 cycle stands (172 cycle parking spaces)
 - 1 community cycle store, (32 cycle parking spaces)
 - 139 individual cycle stands (278 cycle parking spaces)
- All cycle parking installed in 2014/15 was funded from a variety of sources including the Local Transport Plan, Section.106 planning consent and Local Sustainable Transport Funding from the Department for Transport.

Chapter 3 - Pay by phone parking

Why?

Feedback from the Citywide Parking Review (2011) showed that many residents wanted to be able to pay for parking without having to carry coins for the Pay and Display machines. A new service allowing residents to pay for their parking by phone was first introduced in September 2013 and was rolled out across the whole city by July 2014

The service has been popular with over 130,000 residents and visitors using the service in the city. Nearly a quarter of all parking is now paid for by phone or at a PayPoint shop.

With the introduction of a new twelve-sided pound coin in 2017, the cost of updating all the city's 1,119 Pay & Display machines to make them fit for purpose would be substantial. Also many machines are old and would be expensive to replace. In response to this, and the increase in phone parking 600 Pay and Display machines will be taken out of service.

Whilst some Pay & Display machines are being removed, there will be at least one on every street so people have the choice on how they choose to pay. You can also pay for parking from one of over 150 PayPoint outlets across the city.

PayByPhone brings many benefits to residents and visitors of Brighton & Hove:

- It's quick, easy and safe to pay using PayByPhone
- You never need to find change for the Pay & Display machines again
- Once you are registered you can use PayByPhone for all future parking sessions
- You can receive optional text message reminders before your parking ends so you can get back to your vehicle or top up your parking in plenty of time and avoid a penalty
- You can top up your parking session by phone without having to go back to your vehicle
- Account transactions can be viewed online by businesses as well as individual account holders

How?

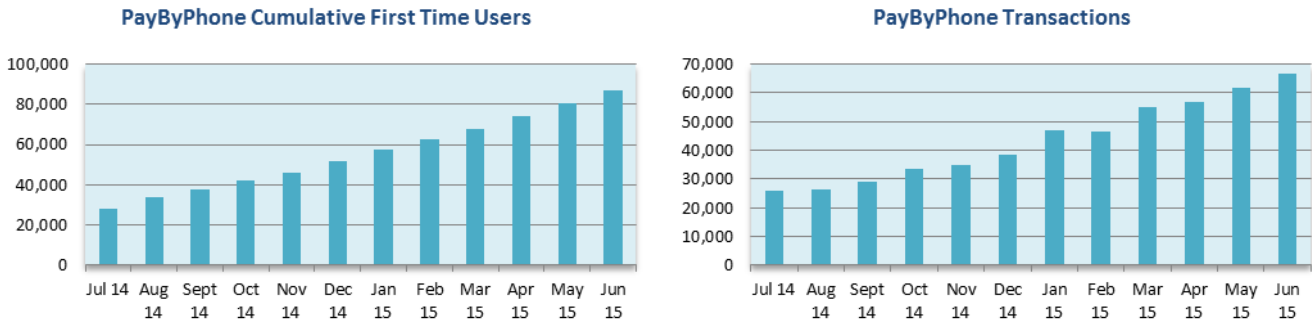
Using PayByPhone is straightforward and you do not need a smartphone to access the service. Either load the mobile website or app, or call the number on the sign and take the following steps:

- Enter the five digit location number that is printed on the PayByPhone sign where you are parked
- Enter how long you want to park for
- Enter the three digit security number from the back of your registered payment card

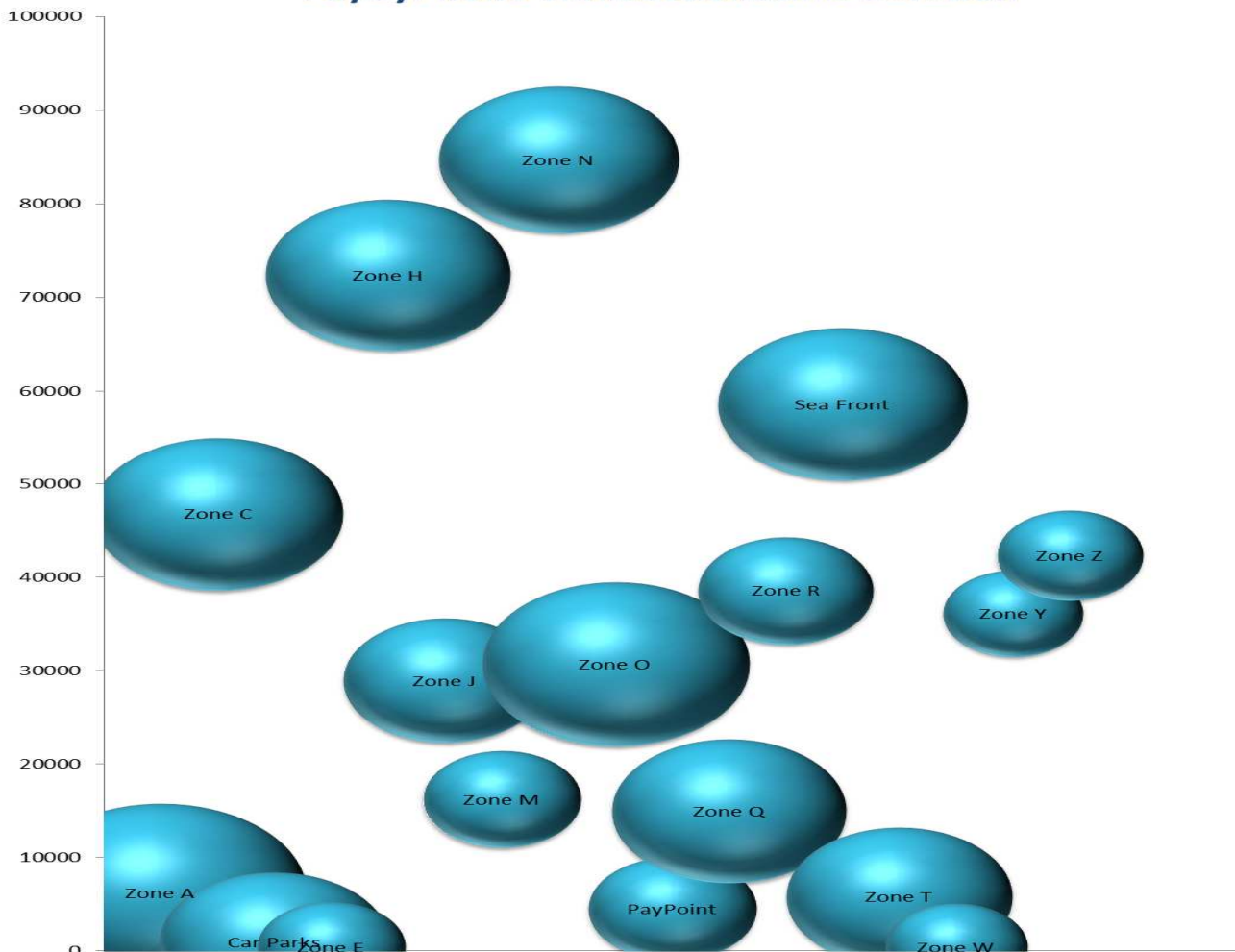
You do not need to display a ticket in your vehicle as Civil Enforcement Officers check vehicle registrations of people who've paid by phone on their handheld devices. You can choose to receive optional text message reminders before your parking ends for 15p.

Data

The graphs on this page show the increasing popularity of PayByPhone. Over 130,000 people have now signed up for PayByPhone and used the service at least once in the city with over 600,000 transactions being made since launch. **Almost a quarter of on street parking is now paid by phone**



PayByPhone Transactions and Duration



This graph shows the amount of transactions for each parking zone since July 2014. The higher up the page the bubble is, the more transactions have taken place by PayByPhone. The size of each bubble represents the average length of stay for each transaction. So the larger the bubble, the longer people have paid to park.

Chapter 4 - New Resident Parking Schemes

New / Upcoming Resident Parking Schemes

Area J Extension - Lewes Road Triangle.

Following consultation with residents and organisations in the Lewes Road Triangle area the Environment, Transport & Sustainability Committee meeting of 7th October 2014 approved the implementation of the scheme and the changes were implemented for an operational start in December 2014.

Bolsover Road (extension to Area R) and Wish park area.

Following consultation with residents and organisations in the Bolsover Road and Wish Park area the Environment, Transport & Sustainability Committee meeting of 7th October 2014 approved the scheme being advertised through a traffic order. No objections were received to the traffic order advertised so the changes were implemented for an operational start on 2nd March 2015.

Area E (Preston park Station North) resident parking scheme.

Following consultation with residents and organisations in the Preston Park Station North area the Environment, Transport and Sustainability Committee meeting on 4th March 2014 approved the implementation of proposals giving priority to parking for residents. The changes which involved a revised Monday to Friday parking scheme were implemented for an operational start on 1st May 2014.

Bakers Bottom area – Area U extension

The results of a consultation with residents and organisations in this area showed that the majority of returned surveys were in favour of an extension of the light touch scheme (Area U) although residents in the Craven Vale area did not want a parking scheme so this area was not taken forward. The Bakers Bottom scheme was advertised through a Traffic order in August 2014 with support, comments and objections being presented to the Environment, Transport & Sustainability Committee on 7th October 2014 with the scheme implemented shortly after.

Surrenden & Fiveways parking scheme proposal.

This area's currently under consultation with the results being presented to the Environment, Transport & Sustainability Committee on 13th October 2015 to discuss the way forward.

Chapter 5 - Permits

In line with our service improvement commitment, we are continuing to improve our web pages and to add on more features. We have also kept the popular 'do it now' facility.

The online facility now includes the following: -

- Resident permits renewal
- Trader's permits renewal
- Business permits renewal
- Requesting a suspension
- Requesting visitor permits
- Applying for Blue Badges using the new national Blue Badge online application form

Resident Permits

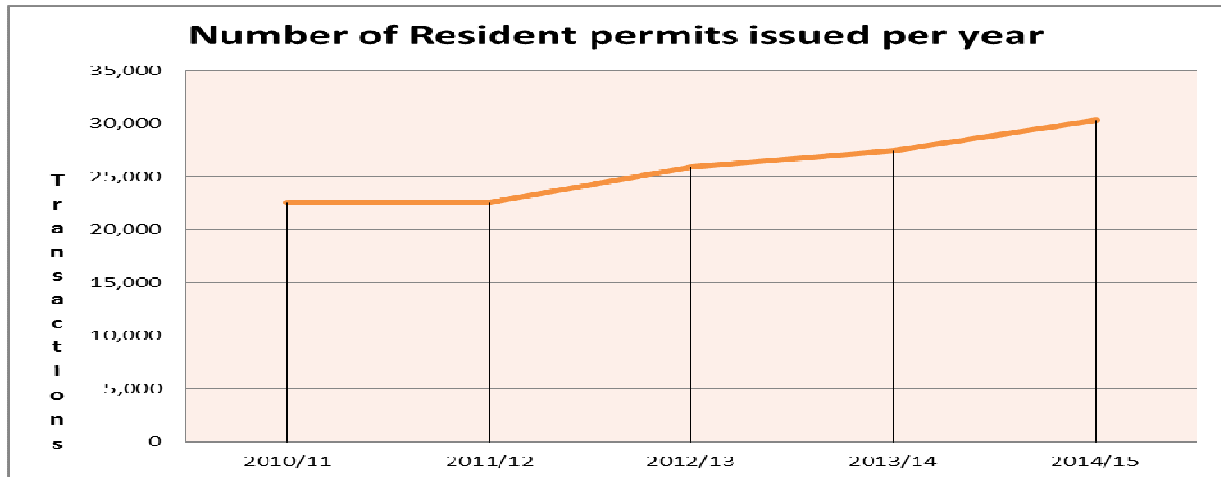
The chart below shows a comparison of the take up of resident permits for every parking area over the last 3 years.

Resident Parking zone and (visitor allowance)		Resident Permits on issue 2012/13	Resident Permits on issue 2013/14	Resident Permits on issue 2014/15	No. of people on waiting list 2012/13	No. of people on waiting list 2013/14	No. of people on waiting list 2014/15	Resident Permits allowed 2014/15
Preston Park*	A (50)	618	607	611	0	0	0	657
Coldean	B (25) +1	986	1166	1267	n/a	n/a	n/a	No limit
St James*	C (50)	1739	1681	1743	0	0	0	1943
Moulsecoomb	D (25)+1	1528	1918	2510	n/a	n/a	n/a	No limit
Preston Park Station (Nth)*	E (50)	n/a	253	202	n/a	n/a	n/a	372
Kemptown*	H (50)	2494	2467	2544	0	0	0	2552
London Road*	J (50)	2301	2262	3852	0	0	0	2811
Brunswick	M(50)	1650	1650	1659	202	193	179	1650
Central Hove	N (50)	4589	4478	4619	67	0	0	4589
Goldsmid	O (50)	2066	2037	2128	0	0	0	2283
Prestonville	Q (50)	1048	1013	1048	0	0	0	1092
Westbourne	R (50)	3527	3384	3572	0	0	0	4077
Hove Park	T (50)	368	340	341	0	0	0	524
St Luke's*	U (50)	279	265	339	0	0	0	411
Westbourne	W (50)	811	756	1009	0	0	0	1069
North Central	Y (25)	1750	1750	1748	211	112	168	1750
South Central	Z (25)	1150	1150	1150	166	89	159	1150
Total	N/A	25918	27177	30342	646	394	506	

*scheme extended in period covered by table

+1 means one transferrable visitor permit valid for all match days

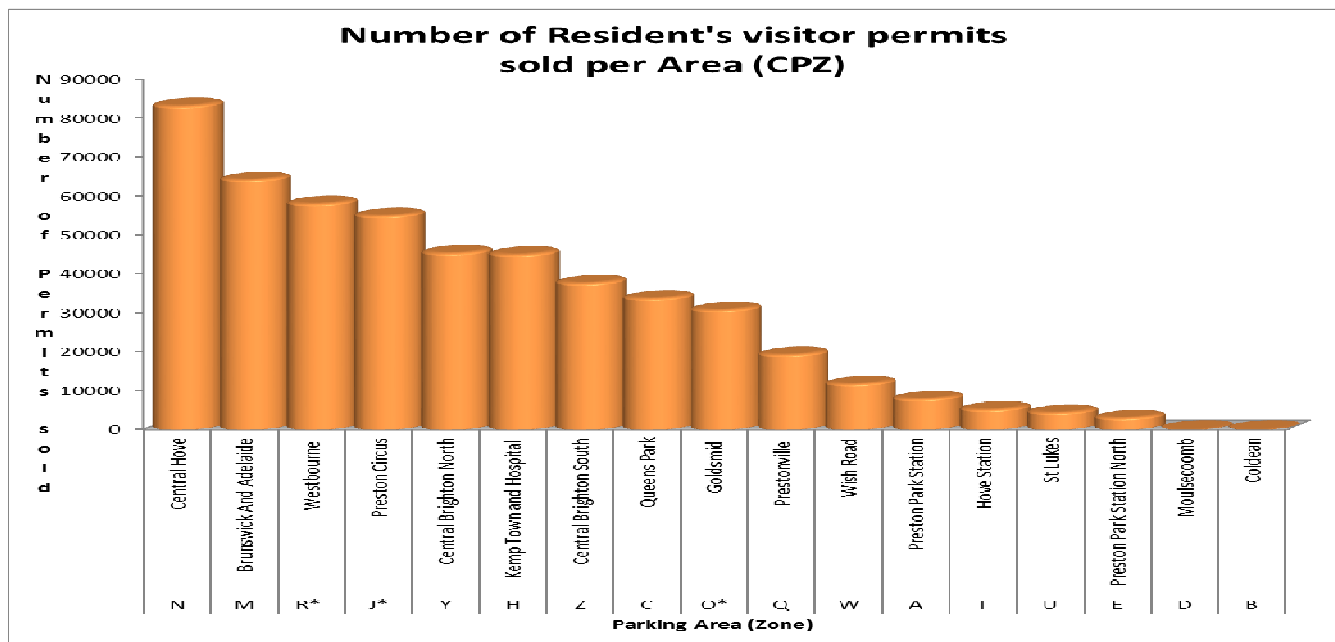
Overall, the number of people on the waiting list fell from 1,260 in 2010/11 by over 65% to 394 in 2013-14. We have observed a reversal of this trend 2014-15 with the number of residents waiting for a permit in areas M, Y, or Z has increasing to 506. Many factors can affect the number of people on the waiting list. The broad downward trend of recent years could be due to less car dependency and greater use of public transport, city car clubs cycling etc. Factors which would increase the waiting list include an increase in the population density in these areas.



The total number of permits issued has been increasing steadily over the last 5 years. In 2014/15, the number of permits issued increased by 10% compared to the previous year due to the extensions to some of the Controlled Parking Zones.

Visitor permits

In the last 5 years, the average number of visitor permits sold yearly has been at approximately 491,000. In 2014/15, there has been a slight increase of 1% of the number of permits sold compared to the previous year. In 2014/15, the majority of visitor permits sold were to residents living in the following areas: -



Preston Park area J had two extensions implemented in 2014/15 the number of visitor permits sold

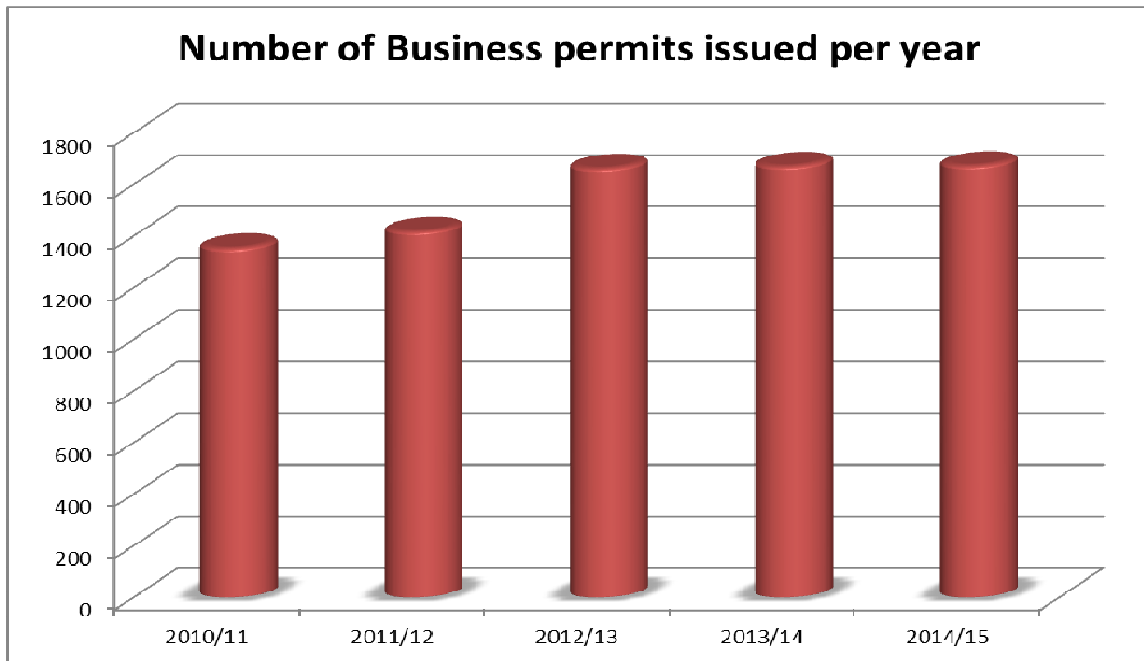
Traders' permits

In the last 5 years, the number of permits issued to Traders has been increasing. Compared to the previous year the number of Traders permits issued increased by 23% in 2014/15.



Business permits

In the last 5 years the average issue rate of Business permits is at 1555 permits per year. Compared to the previous year there has not been a significant change despite an increase in controlled parking areas.

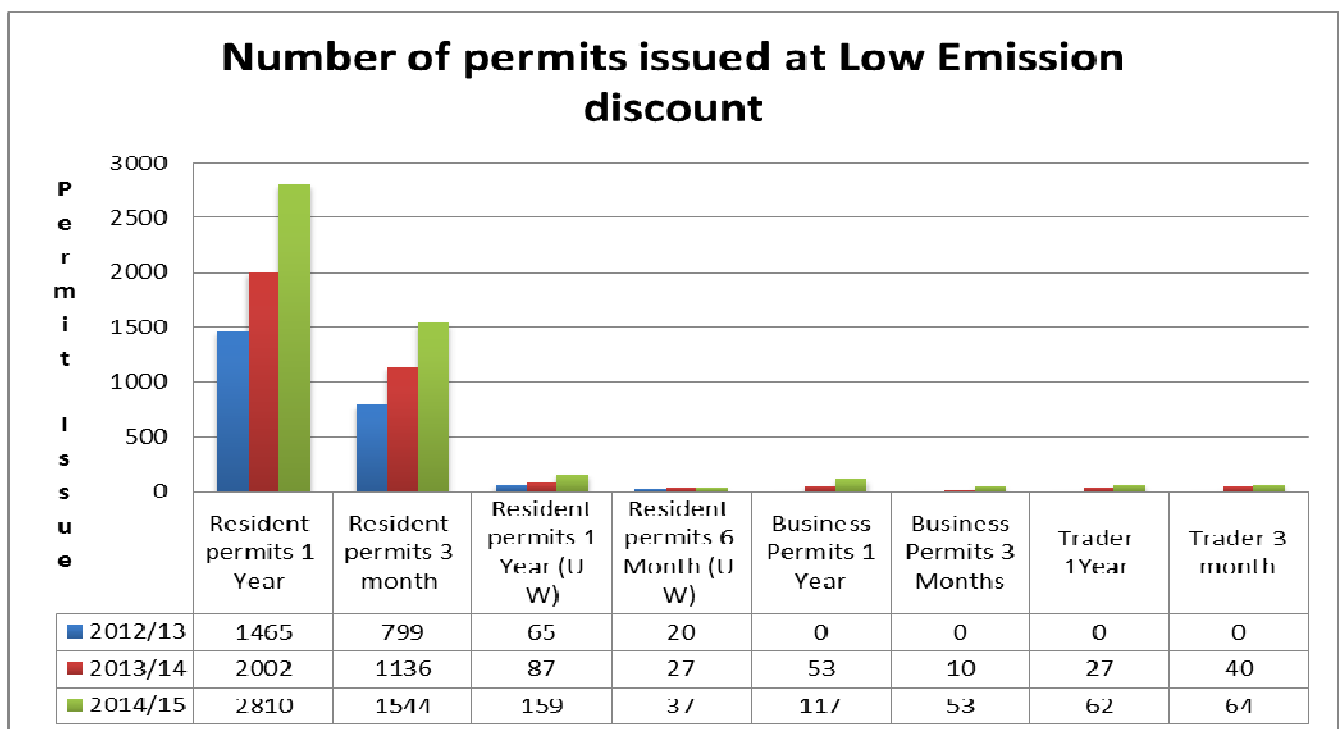


Low emission permits

In 2005, the city council introduced the low emission discount for resident permits, in recognition of the less damaging impact these vehicles have on the environment. To qualify for the Low Emission discount, a vehicle must be registered with the DVLA as being in road tax bands A or B as shown on the vehicle logbook. Based on national statistics at the time the report was written, it was estimated that there were only 70 vehicles in the city that would qualify for the discount.

Number of permit issued at low emission discount per year	2012/13	2013/14	2014/15
Resident permits 1 Year	1465	2002	2810
Resident permits 3 month	799	1136	1544
Resident permits 1 Year (U W)	65	87	159
Resident permits 6 Month (U W)	20	27	37
Business Permits 1 Year	N/A	53	117
Business Permits 3 Months	N/A	10	53
Trader 1Year	N/A	27	62
Trader 3 month	N/A	40	64
Total	2349	3382	4846

By 2013/14, the eligibility for the Low emission discount extended to Traders and Business permit holders. Compared to the previous year, the number of permits issued at the Low Emission discount has increased significantly by 30% with those issued to Business and Traders permit holders at the discount rate also significantly increasing by 63% for Business permits and by 47% for Traders permits compared to the previous year. Of the total permits issued 12% permits were issued at the discount rate, a 2% increase on last year.



Summary of permits issued by type

Permit type on issue	2010/11	2011/12	2012/13	2013/14	2014/15
Business	1353	1417	1662	1670	1672
Car Club	63	74	89	89	112
Carer	132	137	161	201	230
Dispensation	411	443	468	487	557
Doctor	132	130	126	120	124
Electric Vehicle	18	25	45	72	116
Resident (includes match day)	22,583	22,542	25,918	27,432	30,342
Professional Carer	1861	1843	2029	2070	2203
Schools	137	128	148	174	215
Trader*	623	777	1085	1342	1736
Visitor permits sold	476,067	509,100	463,609	502,300	504,670
Hotel permits sold**	37,656	36,087	35,889	35,730	33,042

*The number of trader permits on issue has risen significantly following the abolition of the waiting list

** (Visitor and hotel permits shows actual permits sold, not permits 'on issue')

Parking Permit Review

We are currently reviewing some aspects of parking permits policy and a survey is being carried out to consult permit holders on their views of the permits policy. A survey is being carried out online and at the Parking Information Centre, and once the results are finalised a report will on the findings will be presented to Committee in November 2015.

Chapter 6 - Blue Badge Counter Fraud Initiative

A new approach to tackling blue badge misuse!

The Blue Badge scheme is a national initiative to help disabled people to park close to their destination either as a passenger or driver. There are around 13,000 blue badges issued in Brighton & Hove and the audit commission estimates that 20% of Blue Badges are misused. Nationally this costs £46 million per year.

The Cost of Fraud:-

The primary motivation for undertaking enforcement is to combat Blue Badge Fraud and misuse. This prevents people in genuine need from accessing parking space where they most need it. Abuse of the scheme by those who are not entitled to its concessions can undermine the schemes credibility. This can impact on the mobility of disabled people, who have a genuine requirement and are unable to make use of parking spaces, which are being used illegally. Also, It is not uncommon for badge holders to be accused of fraud when their disability is not 'visible' this can cause further anguish and bring the scheme into further disrepute.

Types of Fraudulent Use:-

Fraudulent Blue Badge Parking can be categorised into two groups.

Misuse of genuine badges - This is when the badge is used when the holder is not present. Many people who fall into this category often believe that what they are doing is not fraudulent.

Abuse of badges - This includes using a counterfeit badge, using a lost or stolen badge and using the badge of a deceased person.

Government Funding:-

Brighton & Hove City Council are piloting a new initiative to tackle the major issue of disabled parking misuse. In 2014 Brighton & Hove together with East Sussex and Sussex Police were awarded £183,000 of government funding provided by the Department for Communities and Local Government to help tackle this misuse. The funding has enabled us to employ dedicated Blue Badge Investigators and arrange action days called Operation Bluebird, with Sussex Police, and East Sussex County Council. Working together we can improve detection and share intelligence. The last action day resulted in successfully prosecuting seven motorists who received fines up to £600.00. Both councils are providing additional funding of £30,000 for this enforcement project.

Community Resolution Order:-

Working alongside Sussex Police, NSL, our enforcement contractor and East Sussex County Council; Brighton & Hove have become one of the first authorities in the country to offer the option of a Community Resolution Order for some first time offenders. Prior to December 2014 our standard response to identified cases of misuse was to issue warning notices with very few prosecutions. This new process is different to prosecution as it works outside the judicial system. Once blue badge misuse has been identified the badge will be retained and the registered keeper will be invited to attend a Community Resolution event facilitated by the Police. A video is shown at the event explaining the impact misuse has on disabled people. This event will often make the offender understand this is not a victimless crime. There are also many occasions when misuse is simply down to a misunderstanding or lack of awareness on the part of the badge holder.

It has been found the Community Resolution Orders are more effective deterrent compared to Warning Notices. This is because a Police record made and a repeat offence would result in automatic prosecution. Since December 2014, in Brighton & Hove we have retained 90 Blue badges, agreed 38 Community Resolution Orders, issued 22 Warning Notices and made 15 successful prosecutions with fines up to £600 to £2,450.

Blue Badge Amnesty:-

Alongside this BHCC recently held a two week Blue Badge amnesty. This gave motorists the opportunity to hand in illegally used badges without prosecution. A total of 36 blue badges were handed in as part of the amnesty.

Public Response: -

We conducted a survey asking Blue Badge Holder what they thought the way the scheme is enforced. Our surveys have shown that awareness of the initiative is very high (78%) and support for the initiative is even higher at (97%).

Blue Badge misuse can be reported in the following ways:

By email: Bluebadge.fraud@brighton-hove.gov.uk

By completing our online report form on the blue badge pages of our website or in writing to,

Blue Badge Department

Parking Information Centre

Hove Town Hall

Norton Road

BN3 3BQ

By telephone: 01273 296270

Summary of Blue Badge Prosecutions in 2014-15

Month	Prosecutions	Community Resolution	Warning Letter BB Holder	Warning Letter to Driver or No Further Action	Awaiting Completion	Total	BB Retained
January	4	21	4	13	0	42	33
February	4	9	1	5	1	20	15
March	2	8	3	7	1	21	14
April	3	6	4	2	1	16	11
May	6	7	5	10	1	29	22
June	6	2	1	11	6	26	48
July	1	0	7	9	16	33	18
August	0	0	1	2	9	12	4
Total	26	53	26	59	35	199	165

In June 31 Blue Badges were also handed in as part of the Blue Badge amnesty

Street parking enforcement

NSL our enforcement contractor is working on a number of service initiatives including;

- Tackling persistent evaders by improving communication between the Civil Enforcement Officers and bailiffs
- Trial of electric bicycles
- "World Host -Customer Service Training for all Civil Enforcement Officers to coincide with the Rugby World Cup
- Review of Civil Enforcement Officer equipment options
- Blue Badge misuse and abuse enforcement initiative
- Brighton Station Gateway marshalling to ease congestion during major roadworks

Partnership Working

NSL works in partnership with many organisations in the city for event management and to discuss specific problems or issues on request. These include:

- Local Action Groups focusing on parking enforcement
- The Brighton Festival
- The Brighton Marathon
- Kemp Town Carnival Association
- Federation of Disabled
- Sussex Police
- Major events such as party conferences
- Problem parking around schools
- Blue Badge misuse / Joint project with Sussex Police and East Sussex

Our work with partner organisations to tackle problem parking was recognised at the British Parking Awards 2014 when Brighton & Hove City Council, jointly with NSL and Sussex Police were shortlisted as finalists for the 'Partnership Award'.

Working together for safer roads

The council's parking team works alongside our colleagues in the council's road safety team and the police and together we work to improve road safety

School enforcement patrol

Both council officers in parking and officers in NSL, the council's parking contractor, work with the council's road safety team to try to improve road safety at schools during opening and closing times

We have a school enforcement patrol which is attended by civil enforcement officers. The school enforcement patrol is there to ensure that the school keep clear lines and restrictions are clear of traffic. Civil enforcement officers attend schools where we have received reports of unsafe parking. The officers who attend at opening and closing time also hand out leaflets and booklets to raise awareness of the school keep clear markings and

safer parking. It is unusual that a penalty charge notice is issued, normally vehicles are moved on or do not stop.

Joint Action Days

The Council, NSL, and the Police work together on joint action days to raise awareness of road safety and parking restrictions and where necessary take enforcement action. The action days show there is a commitment by all parties to improve safety

Piers the Meerkat

Piers the Meerkat is the city's road safety mascot and is part of the "Share the road, share the responsibility campaign" to raise awareness about road safety. Parking and road safety have been discussing working on joint visits with the mascot and Civil enforcement officers. We are trying to find new and effective ways of helping schools experiencing parking problems, promote safer parking and deter the small minority of driver who park inconsiderately putting the safety of pupils at risk

School travel plan

The road safety team work with schools on school travel plans and to encourage families to choose safer, more active and sustainable travel options. They also aim to reduce road traffic, ease congestion and reduce carbon emissions on routes to schools

Council officers in parking keep in regular contact with the council's road safety team so we can discuss how we can work together to improve our services

The school travel teams priorities are:

- to encourage families to choose safer, more active and sustainable travel options as an alternative to driving;
- to reduce road traffic, ease congestion and reduce carbon emissions, especially on routes to schools;
- to contribute towards the immediate and long-term health and well-being of children and young people;
- to provide guidance and support to schools which, through updating their School Travel Plan, are actively promoting walking and cycling to school,
 - allocating of Road Safety resources, for example, cycle, scooter and child pedestrian training to those schools which, through their School Travel Plan (STP) surveys, and associated targets, have highlighted a need for training etc. within their plan

Biker Safety Nights

These are run jointly by the council and the police as part of the Sussex Safer Roads Partnership. We have worked with our colleagues to allow the use of our parking bays for the biker safety nights on Marine Parade. By suspending the bays from their normal use there is places for the motorcycles to park and this allows the events to attract a large number of people and therefore raise awareness of road safety

Events

Our contractor has extensive experience of managing the enforcement of the wide range of events hosted in the city annually. Planning for these events often takes place many months in advances and which attract an

estimated 8 million visitors annually. Planning is key to large events, which require areas of the city to be cleared of parked cars so that the event can take place, as well as an enforcement plan covering nearby areas to ensure emergency vehicle access if needed.

In 2014 /15 Brighton hosted a number of events such as the Brighton Marathon and half marathons, The London to Brighton Bike Ride, Pride, and the Labour Political Party conference. The Parking Team works closely with event organisers and the enforcement contractor NSL to ensure the efficient and smooth running of the event. An events listing is published on the Council's website.

Bay Suspensions:

In 2014-15, 1648 parking suspensions were processed by NSL and the Council and a total 4,596 bays were suspended; NSL place suspension signs in advance to facilitate these suspensions. Bays were suspended for various reasons including household removals, skips, and building works. Parking Suspensions are crucial for the smooth running of many major events in the City. Brighton Marathon suspended 103 bays across the city to allow a clear passageway for runners. Pride suspended 75 bays to allow the parade to pass safely through the City. From small suspensions for removals to large event suspensions, the parking team works closely alongside NSL to ensure everything runs as smoothly as possible for the applicant.

Brighton & Hove - a Film Friendly City!

Brighton & Hove is to be officially designated a Film Friendly City in recognition of the growing importance of the city as a film and television location, and Centre for creative talent and film related businesses. The Film Friendly Charter sends out a clear message to the film and TV industry that it is easy and straightforward to film in Brighton & Hove – so helping to attract crews to film here, bringing money into the local economy and supporting local jobs. Filming is important to the local economy and the city council plays an important role, helping to encourage and facilitate filming here, and working with partners and local businesses to help develop all aspects of the film related industry in the city.

From www.FilmCityBrighton.org

Parking Services have been involved with Film City to gain a better understanding of what film crews need from parking. We have produced a fact sheet along with the Outdoor Events team, which highlights parking options in the city and places of interest.

Parking Services have also supported Brighton & Hove Film Friendly City by liaising with film crews and production companies such as BBC with their latest police procedural drama Cuffs regarding the suspension of parking bays and parking enforcement. In 2014/15 we received a total of 21 requests for 159 parking bay suspensions with the majority of those requests made during the summer.

Penalty Charge Notice statistics 2012 to 2015

	2012-13			2013-2014			2014-2015		
	Off Street	On Street	Total Penalty Charge Notices	Off Street	On Street	Total Penalty Charge Notices	Off Street	On Street	Total Penalty Charge Notices
Number Of higher level PCN	179	78,077	78,256	234	83,008	83,242	193	91,824	92,017
Number of lower level PCN	2,990	33,086	36,076	2,543	31,987	34,530	2,305	35,783	38,088
Total number of PCNs issued	3,169	111,163	114,332	2,777	114,995	117,772	2,498	127,607	130,105
Number of PCNs paid	2,371	79,136	81,507	1,820	78,438	80,258	2,990	82,948	85,938
Number of PCNs paid at discount	1,675	65,578	67,253	1,482	64,543	66,025	2,474	68,540	71,014
Number of PCNs against which a representation was made (including Transfer of liability)	983	31,390	32,373	893	34,242	35,135	665	31,369	32,034
Number of PCNs cancelled as a result of representation or informal challenge	784	13,469	14,253	659	15,626	16,285	560	16,080	16,640
No of PCNs written off for other reasons	52	1,991	2,043	25	2,487	2,512	49	2,517	2,566

Life of a CEO: Antony Weir

How long have you been working as a Civil Enforcement Officer?

I have worked in parking enforcement for 14 years now, and been a Senior Civil Enforcement officer for around 11 years.

Describe what would be your typical working day.

I start the day with briefings, I will usually go on patrol with a CEO or go out deployed on a scooter to enforce and respond to incidents. I will generally patrol a set area, stopping to enforce parking restrictions along the way. I also get called to respond to complaints of illegal parking across the city. I have to respond to incidents where CEO's require a senior to deal with a public query or aggressive member of the public. I have to issue PCN to vehicles parked in contravention and also be there to support the CEO's.

What is the most memorable thing that has happened to you since you have been at the job?

Way back in around 2003 I chased a man that had mugged an old lady in Palmeira Avenue Hove. Myself and another CEO followed the male stopping him from getting in taxis and buses and directing police to the scene. While this was happening a third CEO dealt with the victim who had received a broken arm and ankle. We were able to direct Police to the location of the lady's hand bag which the man had thrown away. The man received 8 years in prison as he was also convicted of another vicious mugging.

As your time as a CEO, have you had to deal with any difficult or challenging situations?

A few years ago I witnessed an incident with a man collapsed at the side of the road. I pulled over to give assistance. He was in some distress. A member of the public was on the phone to the emergency services and as I arrived on scene a doctor also arrived. I helped the doctor as best as I could. Medics arrived on scene so I took a step back. At this point the man had a cardiac arrest. I assisted police keeping the public back as the medics and the doctor worked on the man for some 30 minutes before taking him away in an ambulance. I never found out what happened to the man but I was left very shaken up by the incident.

What are the most common queries you receive from the public?

Where can I park?

Where is Choccy Woccy Doo Dah?

Can I park here?

Where can I park for free?

Historically, there has always been some negative attitude towards the role of a Civil Enforcement Officer and parking enforcement in general; over the years, do you feel this perception from the media and public has changed?

There is still a negative attitude from some members of the public, but on the whole I would say it has improved slightly.

So do CEOs receive bonuses for issuing PCNs? No.

Chapter 8 - Bus lane enforcement

Bus Lane enforcement has been taking place for the last 7 years along the North Street / Western Road corridor and has successfully improved compliance, improving journey times for bus and taxi passengers. Enforcement is by means of an attended system of networked fixed CCTV cameras we share with Sussex Police. The civil enforcement of bus-lane contraventions is regulated and we have permission from the Department for Transport for some of these cameras to become 'approved devices' for the purpose of bus lane enforcement.

In October 2013 with the success of improved compliance in existing enforcement areas and with funding secured to expand the bus lane network we proposed to extend CCTV bus lane enforcement. Agreement was given by the Environment Transport and Sustainability Committee to the extension of CCTV enforcement to all of the city's legally enforceable bus lanes. Without enforcement some 'opportunistic' drivers may decide to use the bus lanes on key transport routes in sufficient numbers to affect public transport journey times. This in turn could reduce the expected benefits from investment in the bus lane network. Encouraging greater use of sustainable transport through ensuring that bus lanes are only used by authorised vehicles and this in turn should lead to an improvement in air quality with benefits for public health.

In the autumn of 2014 Brighton & Hove City Council procured a new digital Traffic Enforcement System. One of the cameras was installed at an existing enforcement site and the other camera was installed east of the Rottingdean traffic lights on the A259. The A259 bus lane gives priority to buses, taxis, cyclists and motorbikes and the decision to site the camera here was taken carefully to tackle the growing problem of cars and vans driving in the bus lane.

As soon as the camera system was certified by the Department for Transport and approved for bus lane enforcement we issued a press release to explain to unauthorised motorists using the A259 bus lane that they may receive a Penalty Charge Notice if they continue to contravene the bus lane regulations. We planned to issue warning notices to vehicles seen in the bus lane for the first week followed by full enforcement. 485 warning notices were issued between 24.03.15 – 31.03.15 and full enforcement commenced on 07.04.15.

Bus Lane Enforcement in the city forms part of a wide ranging programme of measures to improve the reliability and punctuality of public transport and provide extra space for cyclists. This in turn encourages more people to switch from the car to other forms of transport, reducing congestion and air pollution. The number of people travelling by bus in the city has more than doubled in recent years and compliance with the bus lanes in the city is generally good which shows the effectiveness of CCTV enforcement.

We have a team of council officers who use our network of CCTV cameras to enforce bus lanes in the city which helps to keep the city moving. Enforcement also adds to environmental objectives by promoting and encouraging greater use of public transport as a more sustainable alternative to private car use and assists the council in meeting strategic objective such as improving air quality and reducing vehicle emissions as set out in the Corporate Plan, the Sustainable Community Strategy and the Local Transport Plan.

On average around 15 Penalty Charge Notices are issued per day for being in a bus lane

Bus lane enforcement summary by month

Brighton & Hove bus lane appeals

Year	Appeals	PCNs	Rate of appeal per PCN	Not Contested by council	Allowed by Adjudicator	Total allowed incl. not contested by council	Refused by Adjudicator including out of time and withdrawn by appellant	Consent Order	Awaiting decision incl. other decided
2013-14	8	4,676	0.17%	3	1	4	4	0	0
2014-15	19	5,542	0.34%	10	5	15	4	0	0

Bus Lane Enforcement Penalty Charge Notices issued					
	2010-11	2011-12	2012-13	2013-14	2014-15
April	424	413	743	210	636
May	543	507	605	251	367
June	670	697	304	261	639
July	915	962	160	371	558
August	690	860	87	320	554
September	758	976	40	258	483
October	822	1039	73	227	415
November	669	629	134	169	391
December	522	860	177	491	264
January	648	735	163	886	282
February	614	723	192	498	319
March	689	910	214	703	634
TOTAL	7964	9311	2892	4645	5,542

Chapter 9 - Challenges representation and appeals

Online appeals and payments

We are now responding to the majority of online appeals via email making the service faster and more convenient, as well as reducing the cost of making an appeal and of providing the service.

Online appeals have increased in popularity with the majority of representations now being sent in via this route. By sending our responses to informal representations via email which decreases back office processing costs of stationery and postage. We also request that evidence is sent via email for a quicker response

	Historic Years				Last 6 months					
Payment Channel Summary	Jul 11	Jul 12	Jul 13	Jul 14	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15
Web %	37	42	49	56	59	57	58	58	58	58
IVR %	27	26	30	27	27	26	28	28	27	26
Postal %	15	12	10	8	6	6	6	5	7	7
Other (PIC etc.) %	21	20	11	7	9	10	8	9	9	10
Highest web take up was in February 15: 59%										

	Historic Years				Last 6 months					
Correspondence Channel Summary	Jul 11	Jul 12	Jul 13	Jul 14	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15
Web %	32	47	48	55	59	60	63	62	56	54
Postal %	68	53	52	45	41	40	37	38	44	46
Highest web take up was in April 15: 63%										

Brighton & Hove City Council is a pilot authority for the introduction of a national online facility to make appeals to the adjudicator. This has made the process of transferring information simpler for both the driver and the council. The new facility went live on October 2014.

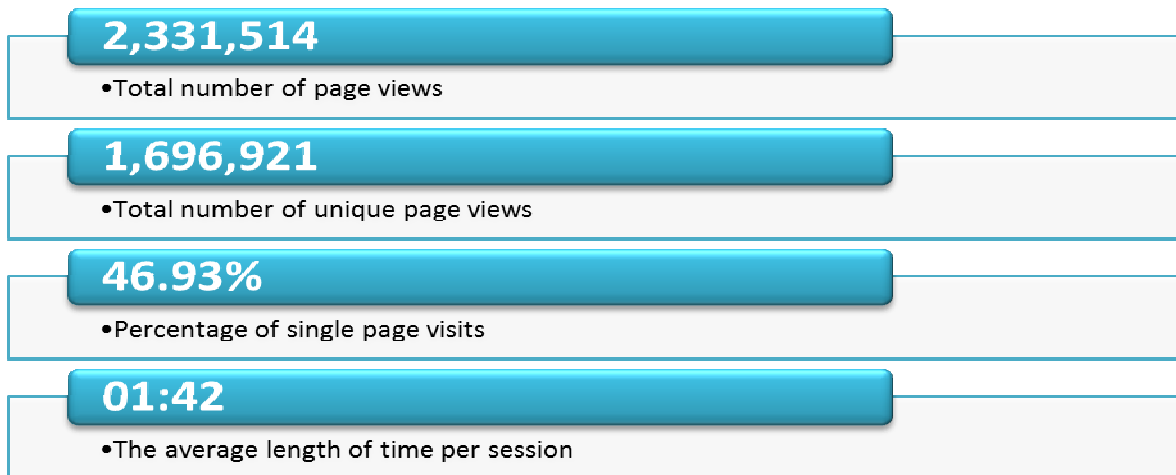
Appeals against parking Penalty Charge Notices to the adjudicator

Local Authority	Appeals	PCNs issued	Rate of appeal per PCN	Not contested by council	Allowed by adjudicator	Total allowed including not contested by council	Refused by Adjudicator including out of time and withdrawn	Awaiting decision incl. Other decided
All councils Apr 13 – Mar 14 Latest info.	20,226	4,490,178	0.35%	4,701 30%	3,964 25%	8,665 56%	6,704 43%	126 1%
Brighton & Hove Apr 08 – Mar 09	811	129,837	0.62%	245 30%	292 36%	537 66%	254 31%	20 2%
Brighton & Hove Apr 09 – Mar 10	671	116,369	0.58%	162 24%	217 32%	379 56%	288 43%	4 1%
Brighton & Hove Apr 10 – Mar 11	722	109,275	0.66%	127 18%	216 30%	343 48%	336 47%	4 1%
Brighton & Hove Apr 11 – Mar 12	646	116,097	0.56%	121 19%	217 34%	338 52%	279 43%	29 4%
Brighton & Hove Apr 12 – Mar 13	538	114,332	0.47%	105 20%	156 19%	261 49%	264 49%	12 2%
Brighton & Hove Apr 13 – Mar 14	507	117,772	0.43%	152 30%	111 22%	263 52%	235 46%	8 2%
Brighton & Hove Apr 14 – Mar 15	465	122,737	0.36%	127 27%	161 34%	288 61%	177 39%	9* (including consent decisions)

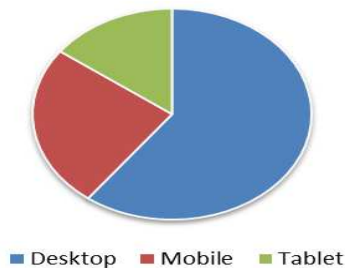
Chapter 10 - Keeping in touch

Website Analysis

One of the ways we continually improve how customers can access information is by analysing how our website is used. Below are some statistics on the use of the Council's parking website over the past year.



How people access the website



The average number of page views each day

6,388

Top searched for terms on the Parking Website

1. Parking zone
2. Penalty charge notice
3. Suspension
4. Park & ride
5. Visitor parking permits
6. Parking permit
7. Opening hours
8. Garages
9. Blue badges
10. Change of vehicle
11. Appeal parking ticket
12. Christmas parking
13. Disabled parking
14. Parking office
15. Online payment
16. Pay parking fine
17. Motorcycle parking
18. Sunday parking
19. Trade permit
20. Electric car charging

Over the past year we have been looking at different ways we can connect with our customers, to make it easier to get in touch, access information and feedback views.

Social Media

BHCC Transport / Parking use Social Media as a way to engage with the public and to provide up to date information regarding transport projects, new schemes and links to our 24 hour on-line services. We also use twitter as a platform to raise awareness for road safety campaigns, such a promoting safer routes to school and to encourage sustainability within transport, for example, by encouraging local walking and cycle routes.

Our feed can provide a forum for various transport groups, residents and visitors to air their views and engage in a number of parking related topics, some of the most popular topics seem to be new parking schemes and parking fees in the City, which are also published on our website.

In addition to this our BHCC Live Traffic feed is fast becoming a popular way of informing the public with live network faults, delays and road closures.

Information Videos

As well as using social media and updating our website so that it is easy for phone and tablets users we have created information videos. We have produced three in house videos and one in joint partnership with Sussex Police and East Sussex County Council about blue badge misuse which can be found [here](#)

The filming and editing involved our own staff using their own equipment; iPads, Smart phones and laptops. The three videos where filmed, edited and voiced by our staff, using our own equipment. The videos have subtitles on them to ensure they can be understood by people with hearing difficulties. There were no external costs to making these three films.

The first film was to promote [Regency Square car park](#) and the surrounding area. The film used both live action and still photography and aimed to show that the car park had been renovated, won a park mark award and was next to the seafront and close to the attractions and main shopping area

We have also produced a film to promote the [Lanes Car Park](#) and the local attractions to it and a [how to guide for using visitor permits](#)

Our three in house videos can be seen both on the parking pages of the council website and on the councils YouTube account. We plan to upload a video shortly which will show how to use PayByPhone

Parking and the press

Parking is an issue which affects everyone, whether they own a car or not. The council issues press releases about important decisions to be taken by Committee that will affect residents, visitors and businesses either in a small area of the city or citywide. A list of links to press releases about parking is provided below.

Surrenden and Fiveways parking consultation

<http://www.brighton-hove.gov.uk/content/press-release/surrenden-and-fiveways-residents-parking>

Parking Permit Survey

<http://www.brighton-hove.gov.uk/content/press-release/take-part-parking-permit-survey>

East Street traffic-free at weekends

<http://www.brighton-hove.gov.uk/content/press-release/east-street-traffic-free-weekends>

Two week Blue Badge amnesty announced

<http://www.brighton-hove.gov.uk/content/press-release/council-offers-two-week-blue-badge-amnesty>

Cashless parking options

<http://www.brighton-hove.gov.uk/content/press-release/cashless-parking-options-suit-everyone>

Motorists fined after blue badge crackdown

<http://www.brighton-hove.gov.uk/content/press-release/motorists-fined-following-blue-badge-crackdown>

Council wins bid to improve transport network

<http://www.brighton-hove.gov.uk/content/press-release/council-wins-high-tech-bid-improve-transport-network>

Register now for phone parking as machines are going

<http://www.brighton-hove.gov.uk/content/press-release/register-now-phone-parking-machines-are-going>

Consultation on parking in new developments

<http://www.brighton-hove.gov.uk/content/press-release/consultation-parking-new-developments>

100 vehicle milestone for city's car club

<http://www.brighton-hove.gov.uk/content/press-release/100-vehicle-milestone-citys-car-share-club>

Council wins funding to tackle Blue Badge misuse

<http://www.brighton-hove.gov.uk/content/press-release/council-wins-funding-tackle-blue-badge-fraud>

Lewes Road Triangle parking scheme

<http://www.brighton-hove.gov.uk/content/press-release/parking-zone-extended-december>

Chapter 11 - Signs & Lines maintenance

The Parking Infrastructure team deals with the maintenance and installation of new street signage within controlled parking zones as well as the maintenance of existing parking signs outside of the controlled parking zone. This generally comes from requests / comments from members of the public and through observations / checks made by CEOs and officers. New signage was also erected on all the existing advisory disabled bays within the South Portslade ward as well as signage for all new installed disabled bays within the Special Parking Area. (SPA)

As well as this there has been significant general lining maintenance including remarking of yellow lines, amendments and installation to various parking restrictions, installation of disabled bays and white return lines. Again this generally comes from requests / comments from members of the public and through observations / checks made by CEOs and officers. A planned lining maintenance project was also undertaken which refreshed and checked any lining needing maintenance within Area Q (Prestonville) and a part of Area C (Queens Park).

Parking Infrastructure spend was just under £494,000 for lining and signing maintenance/ works and Traffic Regulation Order costs this year.

The breakdown for this was as follows:

Type of work	2010-11	2011-12	2012-13	2013-14	2014-15
Signing	£245,288	£207,762	£178,493	£197,310	£239,032
Lining	£177,563	£259,241	£221,741	£207,910	£241,532
Traffic regulation Orders	£35,761	£25,416	£36,387	£33,380	£13,250
Total	458,612	£492,419	£437,027	£438,600	£493,814

Chapter 12 - Off street car parks

Brighton & Hove City Council operates half of the public car parks across the city, ranging from modern secure facilities to surface sites. Four of these, The Lanes, Regency Square, Trafalgar Street and London Road have been awarded the 'Park Mark' safer parking award with all car parks having energy efficient lighting and enhanced safety and security features. Trafalgar Street and Regency Square also have electric vehicle charging points.

The Lanes car park is ideally situated if you want to go shopping, enjoy the beach, see the Royal Pavilion or visit other local attractions. Regency Square, located just north of the West Pier and ideally situated for the new i360 project and has a new junction which improves vehicle and pedestrian access and provides easier and safer access to the seafront. Trafalgar Street car park is close to Brighton's North Laine area, which contains shops, cafes, bars and entertainment venues. It's also near to the city's Jubilee Library. London Road car park is perfectly situated for accessing the shops on London Road. It's also close to the New England Quarter development, the North Laines and the Duke of York's Picture house. The remainder of the council car parks are single storey or surface sites, using Pay & Display or pay by Phone as a means of payment. This provides a range of council operated and managed car parks in various locations in the city, all with a consistent 'feel' and customer experience.

Brighton & Hove City Council Car Parks Summary

Brighton				
Site	No. Spaces	Card payments	Park Mark	CCTV
Lanes	360	√	√	√
Regency Square	508	√	√	√
Trafalgar Street	355	√	√	√
London Road	526	√	√	√
Carlton Hill	52	√	x	x
Oxford Court	36	x	x	x
Black Rock	58	x	x	x
Rottingdean Marine Cliffs	77	x	x	x
Rottingdean West Street	65	x	x	x
Hove				
Norton Road	290	√	x	√
King Alfred	120	x	x	x

Off street parking financial information

	Net income 2013-14	Net income 2014-15	Income 2013-14	Income 2014-15	Expenditure 2013-14	Expenditure 2014-15
Carlton Hill Car Park	115,977	125,663	167,964	175,438	51,986	49,775
High Street Car Park	14,287	18,568	60,129	68,810	45,842	50,241
London Road Car Park	448,069	339,962	754,537	762,306	306,468	422,344
Oxford Court Car Park	48,451	47,293	70,290	72,035	21,839	24,741
Regency Square Car Park	218,182	316,836	1,008,426	1,102,621	790,244	785,784
The Lanes Car Park	562,707	555,817	1,579,809	1,535,232	1,017,102	979,414
Trafalgar Street Car Park	344,369	356,565	1,087,210	1,062,760	742,841	706,195
Other Off-Street Parking	527,785	523,848	614,899	616,808	87,113	92,959
Total	2,279,829	2,284,555	5,343,268	5,396,012	3,063,438	3,111,456
Leased car parks	285,937	249,694	436,001	391,536	150,063	141,842

Note: The expenditure figures include direct costs incurred at each car park plus an apportionment of centralised costs

Note: * The High Street Car Park figures shown are after a contribution has been made to the councils Housing Revenue Account

Chapter 13 - Freedom of Information

The Freedom of Information Act 2000 (FOI) came fully into force in January 2005. There has been a significant increase in the number of Freedom of Information request received by the parking team, which have almost doubled in number over the past few years. The council must respond to all Freedom of Information requests within 20 working days of receiving the request. We are only required to respond with information that we hold, we do not have to create or analyse information.

All responses to freedom of information requests are published online and can be found at <https://foi.brighton-hove.gov.uk/requests>. The table below shows the total number of FOI request received by Parking in 2014/15 compared with previous years.

Month	Total number of FOI requests received 2010-11	Total number of FOI requests received 2011-12	Total number of FOI requests received 2012-13	Total number of FOI requests received 2013-14	Total number of FOI requests received 2014-15
April	2		5	4	8
May	9	3	8	13	10
June	3	4	0	18	11
July	1	2	5	21	4
August	2	6	4	23	2
September	2	2	1	15	7
October	4	6	3	21	2
November	5	3	5	12	3
December	0	5	4	7	0
January	5	4	10	23	3
February	4	8	5	20	0
March	1	6	3	12	1
Total	38	4	53	74	51

Brighton & Hove City Council now publishes all Freedom of information requests and responses online. These can be found at <https://foi.brighton-hove.gov.uk/requests> by searching for 'parking'

Chapter 14 - Financial Information

Detailed Income and expenditure for the on street parking account

Income by source	£ 2009-10	£ 2010-11	£ 2011-12	£ 2012-13	£ 2013-14	£ 2014-15
On street parking charges	8,305,464	9,011,212	9,220,144	8,917,232	9,185,951	*8,439,569
Permit income	3,764,444	4,028,584	4,482,426	5,020,657	5,727,231	6,197,869
Penalty Charge Notices (inclusive of bad debt provision)	3,968,402	3,697,823	4,315,078	4,374,603	3,658,701	**2,052,477
Blue badge application fees	16,427	15,699	12,342	49,260	61,340	56,836
Total	16,054,737	16,753,317	18,029,990	18,361,752	18,633,223	16,746,751

Direct cost of Civil Parking Enforcement	£ 2009-10	£ 2010-11	£ 2011-12	£ 2012-13	£ 2013-14	£ 2014-15
Enforcement	3,588,029	3,587,194	3,459,669	3,502,230	3,282,153	3,190,050
Admin, appeals, debt recovery & maintenance	3,175,184	3,351,491	3,329,736	2,400,730	2,359,015	3,019,787
Scheme review / new schemes	776,610	892,716	939,709	814,352	865,846	849,639
Capital charges	1,119,727	1,355,570	773,718	698,089	647,814	518,215
Total	8,659,550	9,186,971	8,502,832	7,415,401	7,154,828	7,577,691
Surplus after direct Costs	7,395,187	7,566,346	9,527,158	10,946,351	11,478,395	9,169,059

Surplus after direct costs is used to contribute towards spending in follow areas of Transport and Highways

Funding for other transport and highways related projects supported by CPE income	£ 2014-15	£ 2013-14	£ 2012-13	£ 2011-12	£ 2010-11	£ 2009-10
Supported bus services	1,200,302	1,159,434	1,150,250	1,155,562	1,160,123	1,229,650
Other Public transport services	203,325	256,571	319,611	373,866	360,724	360,788
Concessionary fares	10,542,672	10,217,230	9,797,801	***9,277,361	6,765,578	6,804,527
Capital investment borrowing costs	2,914,638	3,029,319	3,155,540	3,382,755	3,327,000	3,264,169
	14,860,936	14,662,554	14,423,203	14,189,543	11,613,425	11,659,134

* 2014-15 figure includes approx. £1.261m for an impairment provision due to amounts owed by the councils previous cash-in-transit provider at the time it went into administration. This was reported to Policy and Resources Committee in July 2014 and the full report can be found [here](#)

** change in methodology for calculating the provision relating to Penalty Charge Notice required an increased impairment provision of £1.425m in 2014-15.

*** change to the government funding formula

In 2014-15 the Civil Parking Enforcement surplus was £9,169,059 compared to £11,478,395 the previous year

The surplus contributes towards the part funding of:

Bus subsidies: Various bus routes are subsidised throughout the city. For further information see <http://www.brighton-hove.gov.uk/index.cfm?request=c1000802&showTranslator=true#bodyText1>
http://bit.ly/public_transport_news

Concessionary Bus Fares: Most of the Civil Parking Enforcement surplus is spent on providing free bus passes for the elderly and disabled. The central government funding formula for free bus passes changed in April 2011 which resulted in the cost rising to over £10.5m. For more information about how to apply for a concessionary bus pass please see <http://www.brighton-hove.gov.uk/index.cfm?request=c1132722> www.brighton-hove.gov.uk/eligibleforapass

Local Transport Plan Costs:

The Local Transport Plan since 2011-12 has been 100% grant funded from the Department for Transport, so there are no borrowing costs included in relation to the Local Transport Plan for this year. The borrowings costs of £2,914,638 relate to previous years Local Transport Plan schemes since 2001.

Each year a report is presented to the Environment Transport and Sustainability Meeting to agree how funds will be allocated to deliver the Local Transport Plan capital programme for the following year.

Some of the projects include: -

- Quality Bus Partnership Initiative
- Walking facilities (dropped kerbs & tactile)
- Cycle parking
- A23 Sustainable Transport Corridor
- Cycle Route signing
- Travel Plans for Schools
- Pedestrian priority Ship St/Old town
- Traffic control improvements
- Brighton station gateway project
- Walking network improvements
- Cycle route Old Shoreham Road
- Pedestrian wayfinding and signing project
- Electric vehicle charging points (Local Transport Plan)
- Cycle priority
- New Road/Church Street junction and crossing
- Electric vehicles
- Chatham Place rail bridge support
- Bear Road retaining wall
- Dyke Road Drive retaining wall
- Marine Parade retaining wall
- Footways maintenance 2011-12
- Highways Maintenance 2010-12
- Elm Grove – Local Transport Plan
- Queens Park –Local Transport Plan

Appendix 1 – Parking charges for off-street and other areas operated by Brighton & Hove

PARKING FEES AND CHARGES			
	2013-14	2014-15	2015-16
	£	£	£
Car Parking			
The Lanes			
1 hour	1.00	1.00	2.00
2 hours	5.00	5.00	5.00
4 hours	13.00	13.00	13.00
9 hours	20.00	20.00	20.00
24 hours / lost ticket	23.00	23.00	23.00
Weekend - 1 hour	4.00	4.00	4.00
Weekend - 2 hours	8.00	8.00	8.00
Weekend - 4 hours	15.00	15.00	15.00
Weekend - 9 hours	20.00	20.00	20.00
Weekend - 24 hours / lost ticket	25.00	25.00	25.00
Evenings 18:00 – 24:00	4.50	4.50	4.50
Night 24:00 – 11:00	N/A	5.00	5.00
Annual season ticket	2,500.00	2,500.00	2,500.00
Residents permit waiting list 16:00 - 11:00 Mon-Fri (Zone Z only)	1,500.00	1,500.00	1,500.00
London Road			
1 hour	1.00	1.00	1.00
2 hours	3.00	3.00	3.20
4 hours	5.00	5.00	5.20
9 hours	8.00	8.00	8.40
24 hours / lost ticket	15.00	15.00	15.60
Saturday - 1 hour	N/A	2.00	2.00
Saturday - 2 hours	N/A	4.00	4.20
Saturday - 4 hours	N/A	6.00	6.20
Saturday - 9 hours	N/A	8.00	8.40
Saturday - 24 hours / lost ticket	N/A	17.50	18.20
Evenings 18:00 – 24:00	4.50	4.50	4.50
Night 24:00 – 11:00	N/A	5.00	5.00
Annual season ticket	1,000.00	1,000.00	1,040.00
Annual season ticket - reduced rate	750.00	750.00	780.00
Weekly	50.00	51.50	53.60
Residents permit waiting list 16:00 - 11:00 Mon-Fri (Zone Y only)	400.00	400.00	416.00
Regency Square			
1 hour	1.00	1.00	2.00
2 hours	5.00	5.00	4.00
4 hours	12.00	12.00	7.00
9 hours	17.00	17.00	11.00
24 hours / lost ticket	20.00	20.00	16.00
Evenings 18:00 – 24:00	4.50	4.50	4.50
Night 24.00 - 11:00	N/A	5.00	5.00
Quarterly season ticket	650.00	650.00	300.00
Annual season ticket	2,000.00	2,000.00	1,000.00
Residents permit waiting list 16:00 -11:00 Mon-Fri (Zone M only)	750.00	750.00	750.00

Weekly	N/A	N/A	60.00
Commercial season ticket annual	N/A	N/A	1,200.00

Trafalgar Street

1 hour	1.00	1.00	2.00
2 hours	3.50	3.50	4.00
4 hours	6.00	6.00	7.00
6 hours	8.00	8.00	9.00
9 hours	10.00	10.00	11.00
24 hours / lost ticket	15.00	15.50	16.00
Weekend - 1 hour	2.00	2.00	2.50
Weekend - 2 hours	4.00	4.00	4.50
Weekend - 4 hours	6.00	6.00	7.50
Weekend - 6 hours	9.00	9.00	9.50
Weekend - 9 hours	11.00	11.50	12.00
Weekend - 24 hours / lost ticket	17.50	17.50	17.50
Evenings 18:00 – 24:00	4.50	4.50	4.50
Night 24:00 - 11:00	N/A	5.50	5.50
Quarterly season ticket	1,000.00	1,000.00	400.00
Annual season ticket	2,000.00	2,000.00	1,200.00
Residents permit waiting list 16:00 - 11:00 Mon-Fri (Zone Y only)	800.00	800.00	750.00

Carlton Hill

2 hours	4.00	4.00	4.20
4 hours	8.00	8.00	8.40
9 hours	10.00	10.50	11.00
24 hours	17.50	17.50	18.20
Quarterly season ticket	750.00	750.00	780.00

High Street

2 hours	4.00	4.00	4.20
4 hours	8.00	8.00	8.40
9 hours	10.00	10.00	11.00
24 hours	17.50	17.50	18.20
Quarterly season ticket	750.00	750.00	780.00
Annual season ticket	2,000.00	2,000.00	2,080.00

Oxford Court

2 hours	4.00	4.00	4.20
4 hours	8.00	8.00	8.40
9 hours	10.00	10.50	11.00
24 hours	17.50	17.50	18.20
Quarterly season ticket	750.00	750.00	780.00

Norton Road

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
5 hours	4.00	4.00	4.20
9 hours	4.50	4.50	4.60
12 hours	5.00	5.00	5.20
Annual season ticket	750.00	750.00	780.00

King Alfred

1 hour	1.50	1.50	1.60
2 hours	2.00	2.00	2.00
3 hours	2.50	2.50	2.60
4 hours	3.00	3.00	3.20

Rottingdean West Street

1 hour	1.00	1.00	1.00
2 hours	1.50	1.50	1.60
3 hours	2.50	2.50	2.60

Rottingdean Marine Cliffs

1 hour	1.00	1.00	1.00
2 hours	1.50	1.50	1.60
11 hours	2.50	2.50	2.60
Quarterly season ticket	50.00	50.00	52.00

Haddington Street

1 hour	1.50	1.50	1.60
2 hours	2.00	2.00	2.00
3 hours	2.50	2.50	2.60

Black Rock

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
3 hours	3.00	3.00	3.20
4 hours	4.00	4.00	4.20
9 hours	5.00	5.00	5.20

Madeira Drive Coach Park

4 hours	N/A	8.00	8.40
8 hours	15.00	15.00	15.60

On-Street (Pay & Display)

High Zone

Zone Y - Central Brighton North

1 hour	3.50	3.50	3.60
2 hours	6.00	6.00	6.20
4 hours	10.00	10.50	10.40

Zone Z - Central Brighton South

1 hour	3.50	3.50	3.60
2 hours	6.00	6.00	6.20
4 hours	10.00	10.50	10.40

Seafront Inner - Marine Drive west of Madeira Lift (1 Mar - 31 Oct)

1 hour	3.00	3.00	3.20
2 hours	5.00	5.00	5.20
4 hours	10.00	10.00	10.40
11 hours	15.00	15.00	15.60

Seafront Inner - Marine Parade west of Burlington Street

1 hour	3.00	3.00	3.20
2 hours	5.00	5.00	5.20
4 hours	10.00	10.00	10.40
11 hours	15.00	15.00	15.60

Seafront Inner - King's Road

1 hour	3.00	3.00	3.20
2 hours	5.00	5.00	5.20
4 hours	10.00	10.00	10.40
11 hours	15.00	15.00	15.60

Medium Zone

Seafront Inner - Kingsway east of Fourth Avenue

1 hour	2.00	2.00	2.00
2 hours	4.00	4.00	4.20
4 hours	6.00	6.00	6.20
11 hours	10.00	10.00	10.40

Zone Y - Central Brighton North Cheapside & The Level

1 hour	2.00	2.00	2.00
2 hours	4.00	4.00	4.20
4 hours	6.00	6.00	6.20

Seafront Inner - New Steine

1 hour	2.00	2.00	2.00
2 hours	4.00	4.00	4.20
4 hours	6.00	6.00	6.20
11 hours	10.00	10.00	10.40

Low Zone

Seafront Outer - Kingsway west of Hove Street

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Seafront Outer - Madeira Drive east of Madeira Lift

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	4.00	4.00	4.20
11 hours	7.00	7.00	7.20

Seafront Inner - Madeira Drive west of Madeira Lift (1 Nov - 28/29 Feb)

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	4.00	4.00	4.20
11 hours	7.00	7.00	7.20

Rottingdean High Street

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00

4 hours	3.00	3.00	3.20
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Zone A - Preston Park Station

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone C - Queen's Park

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone E - Preston Park Station North

1 hour	N/A	1.00	1.00
2 hours	N/A	2.00	2.00
4 hours	N/A	3.00	3.20
11 hours	N/A	5.00	5.20

Zone H - Kemp Town

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone J - London Road Station

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone M - Brunswick

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone N - Central Hove

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone O - Goldsmith

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone Q - Prestonville

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00

4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone R - Westbourne

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Zone T - Hove Station Area

1 hour	1.00	1.00	1.00
2 hours	2.00	2.00	2.00
4 hours	3.00	3.00	3.20
11 hours	5.00	5.00	5.20

Permits

Residents Permits

1 year (full scheme)	120.00	120.00	125.00
3 months (full scheme)	40.00	40.00	41.50
1 year (light touch)	90.00	90.00	95.00
6 months (light touch)	55.00	55.00	57.00
1 year (full scheme) - low emission	60.00	60.00	62.50
3 months (full scheme) - low emission	20.00	20.00	20.75
1 year (light touch) - low emission	45.00	45.00	47.50
6 months (light touch) - low emission	27.50	27.50	28.50
Resident zone change (admin fee)	10.00	10.00	10.00
Refunded permit (admin fee)	10.00	10.00	10.00
Resident change of vehicle (admin fee)	10.00	10.00	10.00
Replacement resident permit (admin fee)	10.00	10.00	10.00
Blue Badge resident permit	10.00	10.00	10.00
Blue Badge resident permit (light touch)	10.00	10.00	10.00

Visitors Permits

Full scheme - per permit	2.60	2.60	2.80
Light touch- per permit	1.60	1.60	1.60

Hotel Permits

Area C (24 hours)	7.50	7.50	7.80
Area N (1 day)	3.00	3.00	3.20

Traders Permits

1 year	600.00	600.00	624.00
3 months	160.00	160.00	166.40
1 year - low emission	300.00	300.00	312.00
3 months - low emission	80.00	80.00	83.20
Refunded permit (admin fee)	10.00	10.00	10.00
Change of vehicle permit (admin fee)	10.00	10.00	10.00
Replacement traders permit (admin fee)	10.00	10.00	10.00

Business Permits

1 year	300.00	300.00	312.00
3 months	85.00	85.00	88.40

1 year - low emission	150.00	150.00	156.00
3 months - low emission	42.50	42.50	44.20
Business zone change (admin fee)	10.00	10.00	10.00
Refunded permit (admin fee)	10.00	10.00	10.00
Change of vehicle permit (admin fee)	10.00	10.00	10.00
Replacement business permit (admin fee)	10.00	10.00	10.00
School Permits			
1 year	120.00	120.00	125.00
3 months	40.00	40.00	41.50
Doctors Permits (per bay)			
	85.00	90.00	93.60
Electric Vehicle Permit			
	25.00	25.00	26.00
Carers Permit (not professional)			
	0.00	0.00	0.00
Suspensions			
Suspensions (1st 8 weeks)	40.00	40.00	40.00
Suspensions (Over 8 weeks)	20.00	20.00	20.00
Blue Badge (3 years)			
	10.00	10.00	10.00
Car Club (1 year)			
	20.00	20.00	20.80
Waivers (1 day)			
	10.00	10.00	10.00
Professional Carers (1 year)			
	25.00	25.00	26.00
Dispensations (1 year)			
	30.00	30.00	31.20

CONTRAVENTION CODES

On street - Penalty Charge Parking contraventions			
Code	Description	Notes	
1	Parked in restricted street during prescribed hours		5 mins
2	Parked or loading/unloading in a restricted street where waiting and loading/unloading restrictions are in force		Instant

12	Parked in a residents' or shared use parking place without clearly	This code relates only to resident or shared use bays.	5 mins
	displaying either a permit, voucher, or pay and display ticket for	This code is used where the driver has made no attempt	
	that place	to park correctly and is either displaying nothing, or something	
		that could never have been valid for that parking place, e.g.	
		a permit for a different zone, no permit or P&D ticket that has been expired for more than 24 hours	
14	Parked in an electric vehicles' charging place during restricted		5 mins
	hours without charging		

16	Parked in a permit space without displaying a valid permit	Not for use in resident or shared use bays. Applies in permit	5 mins
		bays designated for specific users such as businesses,	
		ambulance, car club and doctors bays	
18	Using a vehicle in a parking place in connection with the sale or offering or exposing for sale of goods when prohibited	This is not used	
20	Parked in a loading gap marked by a yellow line	This is not used	
21	Parked in a suspended bay/space or part of a bay/space		Instant
23	Parked in a parking place or area not designated for that class of	This depends on the tax class of the vehicle and applies where	5 mins
	vehicle	a vehicle of a different tax class uses a bay, e.g. a car parked in	

		a motorcycle bay or a coach bay, a coach parked in a motorcycle	
		bay. The bay has to be designated for a specific class of vehicle	
		(not a type of vehicle, like a permit bay)and any vehicle of that class can	
		park there, e.g. any coach can park in a coach bay, any motorcycle can	
		park in a motorcycle bay - no permit is needed	
25	Parked in a loading place or area not designated for that class	On street loading bays	5 for cars
	of vehicle		10 for commercial
26	Vehicle parked more than 50 cm from the edge of the carriageway	Double Parking	5 mins
	and not within a designated parking place		

27	Parked adjacent to a dropped footway	If DYL then issue and remove unless blue badge holder in which case	5 mins
		issue and relocate - Issue as a 01	
		If no yellow lines - providing a complaint from the resident then issue and	
		and remove on code 27	
40	Parked in a designated disabled persons' parking place without	If a vehicle is seen parked in a disabled parking bay not displaying a	Instant
	clearly displaying a valid disabled persons badge	valid Disabled Blue Badge, or displaying a badge the incorrect way	

		this could lead to a PCN being issued and the vehicle being relocated	
41	Parked in a parking place designated for police vehicles		Instant
45	Parked in a taxi rank		
46	Stopped where prohibited (on a red route clearway)	This is not used	
47	Stopped on a restricted bus stop/stand		Instant
48	Stopped in a restricted area outside a school		Instant
49	Parked wholly or partly on a cycle track		Instant
55	A commercial vehicle parked in a restricted street in contravention of the overnight Waiting Ban	This is not used	
56	Parked in contravention of a commercial vehicle waiting restriction	This is not used (no overnight waiting restriction)	
57	Parked in contravention of a coach ban	This is not used (no overnight waiting restriction)	
61	A heavy commercial vehicle wholly or partly parked on a footway, verge or land between two carriageways		5 mins
62	Parked with one or more wheels on any part of an urban road		5 mins

	other than a carriageway (footway parking)		
99	Stopped on a pedestrian crossing and/or crossing area marked by zig zags		Instant
	On street - Lower level penalty charge parking contraventions		
Code	Description	Notes	
4	Parked in a meter bay when penalty time is indicated	This is not used	
5	Parked after the expiry of paid for time	Parked after the expiry time of the initial paid for ticket from the pay and	10 mins
		display machine. If pay and display ticket has a time of 13.00 a PCN	
		can be issued at 13.10	
6	Parked without clearly displaying a valid pay and display ticket	If a pay and display ticket has been purchased from the machine, but has	5 mins

		not been placed in the vehicle clear to see. Also if no pay and display	
		ticket is purchased, therefore parking with no payment.	
7	Parked with payment made to extend the stay beyond initial time	Meter feeding' In pay and display bays after the initial payment to park	5 mins
		has been made, then purchasing a further pay and display ticket to extend	
		the time to park without moving the vehicle	
		Providing the time in the bay has not been exceeded then we should issue	
8	Parked at an out of order meter during controlled hours	This is not used	

9	Parked displaying multiple pay and display tickets where prohibited	This is not used	
10	Parked without clearly displaying two valid pay and display tickets when required	This is not used	
11	Parked without payment of the parking charge	This is not used	
15	Parked in a residents' parking space without clearly displaying a valid residents' parking permit.	Not for use in England	
19	Parked in a residents' or shared use parking place displaying an invalid permit, an invalid voucher or an invalid pay and display ticket	As for a code 12, this is only for use in resident or shared use bays. It is used where the driver has made some attempt to park correctly and is displaying something which could have been valid or was valid at some	5 mins

		time for that bay, for example, a resident permit that has expired	
		(depending on what grace period is given for expired permits, e.g. 7 days),	
		or a pay and display ticket that has expired by less than 24 hours, or an	
		incorrectly completed voucher.	
22	Re parked in the same parking place or zone within one hour of leaving	On time limited bays (e.g. 3 hour max stay no return 1hour) if the vehicle	Instant
		is parked in the same set of bays even if the vehicle has left and returned	

		1 hour would have had to lapse.	
24	Not parked correctly within the marking on the bay or space	If a vehicle is parked not fully within the markings of the bay as marked on	Instant
		the highway. (One third of the vehicle has to be overhanging the bay	
		markings or one third of the connecting bay is obstructed)	
30	Parked for longer than permitted	If there is a time limit to the bay (e.g.2 hours no return in 1 hour) and the	10 mins
		vehicle is seen parked for longer than the allowable time then a PCN will	

		be issued	
35	Parked in a disc parking place without clearly displaying a valid disc	This is not used	
36	Parked in a disc parking place for longer than permitted	This is not used	
63	Parked with engine running where prohibited	This is not used	
Off street - Penalty Charge Parking contraventions			
Code	Description	Notes	
80	Exceeded the max Stay - For example Haddington St where the max stay is 3 hours	Lower PCN	Instant
81	In restricted area - Parked in a restricted area of the car park not designated as a parking bay	Higher PCN	Instant
82	Overstaying P&D ticket- Parked after expiry time	Lower PCN	10 mins
83	No valid P&D ticket	Lower PCN	5 mins
84	Additional payment made to extend the parking from the first time purchased	Lower PCN	Instant
85	In permit section - parked in permit bay without clearly displaying a valid permit	Higher PCN	Instant
86	Parked beyond the bay markings (outside the marking of the bay)	Higher PCN	Instant
87	Parked in a Disabled Persons parking space without clearly displaying a valid disabled persons badge	Higher PCN	Instant
89	height/weight limit	This is not used	

91	Wrong class of vehicle	Higher PCN	Instant
92	Causing an obstruction -i.e. on ramp or blocking exit points	Higher PCN	Instant

Appendix 3 - Code of Practice for Postal Penalty Charge Notices

CCTV Parking Enforcement

To be undertaken in all locations visible to the static cameras located in North Street / Western Road, London Road, Lewes Road, Oxford Street (34J ONLY)

CCTV monitoring officers will be BTEC qualified in data protection and all relevant legislation and follow the Code of Practice for CCTV enforcement.

CCTV devices will be approved for parking enforcement by the Vehicle Certification Agency through submission of a technical file prior to enforcement and therefore be 'approved devices' in accordance with the legislation.

Only the following parking contraventions may be enforced by the CCTV cameras

Contravention 47 – Parked on a restricted bus stop/stand.

For all contraventions CCTV monitoring officers will

- Zoom in for close up of vehicle
- Pan out for context shot
- Operator to make notes of any activity carried out by the driver

Regulation ten 'Postal' PCNs issued on foot

Regulation ten PCNs will only be issued by Civil Enforcement Officers following relevant training.

They may be issued for the following contravention codes

Contravention 02 - Parked or loading/unloading in a restricted street where waiting and loading/unloading restrictions are in force.

Contravention 40 – Parked in a designated disabled person's parking place without displaying a valid disabled person's badge

Contravention 45 - Parked in a taxi rank

Contravention 47 – Parked on a restricted bus stop/stand.

Contravention 48 – Parked in a restricted area outside a school

Contravention 49 – Parked wholly or partially on a cycle track

Contravention 99 - Stopped on a pedestrian crossing and/or area marked by zigzags

Comprehensive pocket book notes will be taken. Good quality photos are required for the contravention to be proved.

Regulation ten PCNs will be spot checked to establish whether sufficient evidence has been gathered for a PCN to be issued. Following enquiries with DVLA PCNs will be issued in accordance with statutory timescales and on notices specifically designed for regulation ten PCNs.

Glossary of Terms

Bikehangar – on-carriageway secure, sheltered cycle parking facility for 6 bicycles TRO specifies use for pedal cycles only, this is the first Bikehangar facility in the city and is managed by a constituted community group.

Bus Lane

Priority lanes for buses, coaches and taxis (and cyclists in some instances).

Bus Lane Enforcement

A bus lane is restricted to buses and is used to speed up the bus service and aide in them running on time. In Brighton & Hove taxis and bicycles can also use bus lanes. The central bus lanes are enforced by the local authority. The police still enforce those outside of central Brighton.

Challenge

An objection made against a Penalty Charge Notice before a Notice to Owner is issued.

Cancellations

A Penalty Charge Notice is cancelled when we believe that it would be unjust to pursue the case of when there is an applicable exemption.

Civil Enforcement Officer – CEO

This is the name given to officers who used to be known as Parking Attendants. They must be employed by the council or through a specialist contractor. In Brighton & Hove they are employed through NSL (formerly NCP).

Civil Parking Enforcement – CPE

This is the name given to the enforcement of parking regulations by Civil Enforcement Officers (CEO) under the Traffic Management Act 2004.

Contravention

Failure of the motorist to comply with traffic or parking regulations as set by local Traffic Regulation Orders (TRO).

Controlled Parking Zone - CPZ

An area where parking is restricted during specified times. This ensures that the needs of all motorists are catered for within the city. Signs are placed at entry points throughout the zone and where the restrictions differ to those on entry. There is no requirement to sign double yellow lines however single yellow lines will be signed.

Decriminalised

This means that it is not illegal to park in contravention of parking regulations. Enforcement of regulations within a Special Parking Area and is the sole responsibility of the Local Authority and not the police. Parking is a civil offence rather than a criminal offence. Unpaid charges are pursued through debt collection agencies and not through the courts.

Decriminalised Parking Enforcement –DPE

This is the name given to the enforcement of parking regulations by Civil Enforcement Officers (CEO) under the Road Traffic Act 1991.

Department for Transport – DfT

This is the Government department responsible for the English transport network and transport matters in Scotland, Wales and Northern Ireland which are not devolved. The department is run by the Secretary Of State for Transport.

Differential Parking Penalties

This is the name for the different levels of charges implemented by the Traffic Management Act 2004. Higher level contraventions are £70 and lower levels are set at £50. The different charges reflect the seriousness of the offence.

Fixed Penalty Notice - FPN

These were introduced in Great Britain in the 1950s to deal with minor parking offences. These can only be issued by the police.

Local Transport Plan – LTP

These are an important part of transport planning within England. We are required to prepare them as plans for the future and present them to the Department for Transport.

Motorcycles

Powered two-wheelers

Motorcycle casualties

Motorcyclists

NO

Nitrogen Oxide

NO2

Nitrogen Dioxide

Notice to Owner – NtO

This is a statutory notice that is served by the authority to the registered keeper of the vehicle that was issued with the Penalty Charge Notice (PENALTY CHARGE NOTICE (PCN)). This will be served when a PENALTY CHARGE NOTICE (PCN) is unpaid for 28 days. When the registered keeper, or the person the council believed to be the keeper of the vehicle, receives this they can either;

- make a payment of the full charge
- make representation (an appeal)

NSL – formerly National Car Parks (NCP)

NSL are Brighton & Hove's parking enforcement service provider working under contract.

Off-street parking

These are facilities provided through car parks.

On-street parking

These are facilities provided on the kerbside such as pay and display or permit parking.

Pedal Cycle Parking Place (PCPP) – on-carriageway public cycle parking facility usually for a minimum of 10 bicycles (5 stands). TRO specifies use for pedal cycles only, CEOs can enforce against any illegitimate use.

Penalty Charge Notice – (PCN)

This is issued to a vehicle that is believed to be parked in contravention of the local Traffic Regulation Order.

Registered Keeper

The person who is deemed to be legally responsible for the payment of a PCN. These details are obtained from the Driver and Vehicle Licensing Agency (DVLA)

Representation

This is a challenge against the PCN after the Notice to Owner is issued.

Scooters

Powered two-wheelers

Special Parking Area - SPA

An area where on-street parking is subject to Civil Parking Enforcement (CPE). Local Authorities will enforce the regulations through Civil Enforcement Officers.

Traffic Management Act 2004 – TMA

This act was passed by UK government in 2004. This law details street works and parking regulations. The act has been implemented since 31st March 2008.

Traffic Penalty Tribunal –TPT

The Traffic Penalty Tribunal decides appeals against parking penalties issued by Civil Enforcement Authorities in England (outside London) and Wales and against bus lane penalties issued by Civil Enforcement Authorities in England (outside London). The Traffic Penalty Tribunal is the final stage of appeal for motorists or vehicle owners against a penalty issued by a council in England (outside London) and Wales.

Traffic Regulation Order – TRO

This is the statutory legal document necessary to support any enforceable traffic or highway measures.

City Sustainability Action Plan

Introduction

This Action Plan presents a broad set of actions and initiatives that support sustainability and that are being delivered by the council, city partners and individuals across the city. Individually these actions represent the breadth of ambition and activity in the city and collectively they inform a plan that supports the broader sustainability goals of the council and city, and forms the sustainability framework for the wider Biosphere region.

Using the One Planet framework, this Action Plan provides a comprehensive approach for supporting the city's priorities. The One Planet approach aims to create a future where it's easy, attractive and affordable for all of us to lead happy and healthy lives, using a fair share of the earth's resources. In the Plan, this is translated into actions that deliver across ten One Planet Principles of sustainability.

Zero carbon

Making buildings more energy efficient and delivering all energy with renewable technologies

Zero waste

Reducing waste arisings, reusing where possible, and ultimately sending zero waste to landfill

Sustainable transport

Encouraging low carbon modes of transport to reduce emissions, reducing the need to travel

Sustainable materials

Using sustainable products that have a low embodied energy

Local and sustainable food

Choosing low impact, local, seasonal and organic diets and reducing food waste

Sustainable water

Using water more efficiently in buildings and in the products we buy; tackling local flooding and water course pollution

Land use and wildlife

Protecting and expanding old habitats and creating new space for wildlife

Culture and community

Supporting stronger communities, sustainable events and greater participation in the arts

Equity and local economy

Inclusive, empowering workplaces with equitable pay; support for local communities and fair trade

Health and happiness

Encouraging active, sociable, meaningful lives to promote good health and well being

This structure provides a simple way to plan, deliver, communicate and mainstream sustainability in the city. Shared ownership of the different sections of the Plan with various contributing authors from across the city, provides a basis for greater collaboration between the council and city partners. As well as stretching council ambitions and supporting ways of delivering services better, it also recognises and supports projects that are community led, that provide a valuable contribution to supporting city targets and that may not be delivered as effectively through council efforts alone. In so doing, it recognises the role and contributions of the wider community and supports entrepreneurs, local initiatives and enterprise, community groups and action on the ground. It nurtures better and more innovative ways of working, supporting partnerships and setting ambitious goals for creating a healthy and vibrant city, a growing economy and stronger, more sustainable communities.

The Action Plan is coordinated by the council's International & Sustainability Team. Working closely with individual authors and with support from the council's Performance Team, progress will be

monitored every six months and performance will be measured annually. Regular updates will be reported to the Biosphere Board for its consideration. This robust monitoring process will help to ensure we are meeting our targets and delivering on our commitments.

Finally, we would like to acknowledge the support of all those who have contributed to the production of this Action Plan. The content is a demonstration of the ongoing hard work and commitment of our many colleagues and partners across the city, without whom the many successes and achievements towards supporting the city's sustainability goals, would not have been possible.

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Foreword

Since the launch of the Brighton & Hove Sustainability Action Plan in 2013 there have been some exciting accomplishments for the city. The Brighton & Lewes Downs Biosphere Region has been recognised by UNESCO as a world class environment; Brighton & Hove has been the only city to receive Silver Sustainable Food Cities award in recognition of the work that has been delivered towards a healthy and sustainable food system across all sectors of the city; and we are also on the UK map as a Living Wage City with 229 companies having joined the campaign since its launch in 2012. The city is a hub for innovative entrepreneurship in sustainability and the Action Plan aims to recognise and support this creativity.

Brighton & Hove faces significant pressures over the coming years. The council, together with partners in the city, has identified key priority areas to focus work and to enable us to meet these challenges. They include: a strong, sustainable economy; healthy and resilient communities; and a sustainable infrastructure that protects and promotes nature, communities and the city's economy. In this revised City Sustainability Action Plan we have set ambitious targets to effectively support these priority areas for the city and will be regularly monitoring work progress to ensure we are on track to achieve these goals.

This Action Plan will form part of the wider Biosphere delivery plan and it will be supported by the Biosphere Board, a partnership that will oversee aspiring sustainability progress for the city and for the greater Biosphere region.

Given the challenges we face and the opportunities on the horizon, this Plan sets out a wide range of new measures that stretch our ambition in all areas of activity. It is a platform for securing new investment and grant funding, improving service provision and for engaging and supporting communities by setting out a vision for the city's sustainable future.

Gill Mitchell
Chair
Environment, Transport and Sustainability Committee
Brighton & Hove City Council

Acknowledgements

Special thanks to all those who contributed to this Plan:

Brighton & Hove Food Partnership

Brighton & Hove City Council

- Asset & Sustainability Team
- Building Services Team
- Communities Equality & Third Sector Team
- Corporate Procurement Team
- Economic Development Team
- Education Capital Strategy Team
- Energy & Water Team
- Environmental Protection Team
- Housing Sustainability Team
- International & Sustainability Team
- Music & Arts Team
- Planning Policy Team
- Public Health Commissioning Team
- Public Health Intelligence Team
- Occupational Health Team
- Royal Pavilion & Museums
- Strategy, Parks Projects and Park Rangers Teams, Cityclean and Cityparks
- Street Lighting Team
- Transport Policy & Strategy

Cat Fletcher, Reuse Consultant

Damian Tow, Eco Technology Show

Environment Agency

Zero Carbon

The Zero Carbon action plan focuses on radical carbon reductions and improved energy efficiency in existing buildings, zero carbon new build and renewable energy generation.

This work is being delivered by the council's Property & Design, Housing, Street Lighting and Planning Policy teams.

High level objectives – where we want to get to

Vision

- Energy efficiency and Low and Zero Carbon technology is promoted in new buildings and all existing buildings, where practically and economically feasible.
- The energy hierarchy (demand reduction, energy efficiency, renewable energy) is applied to all areas of energy consumption.
- Continue to set annual 4% reduction target via council carbon budgets.
- Buildings over which the council has direct influence will be energy efficient.
- The council target is that Local Authority buildings are net zero carbon by 2025.

New Build

- New council buildings and refurbishments will be designed to minimise energy demand by using a sustainable design checklist.

Renewables

- On-site renewable energy technologies will be encouraged in new build and on existing buildings. Encourage the proportion of renewable energy generation across the city and associated with development. This will be in line with guidelines for hierarchy of energy provision options in the Air Quality Action Plan.
- Council electricity supply will be sourced from genuine renewable sources.

Energy Efficiency

- Replacement programme to install energy efficient lanterns across the city, to deliver carbon reduction of 5% in 2015-16 against 2014-15 usage.
- For the wider city, an overview of progress against carbon reduction targets needs to be developed and from this a City CO₂ Reduction Plan created to achieve net zero carbon.
- Under the aegis of the City CO₂ Reduction Plan develop a portfolio of projects covering the following areas:
 - Low and zero carbon energy generation.
 - New buildings.
 - Existing buildings.
 - District Heating.
 - Community energy.
- The Housing Revenue Account's rolling capital works programmes includes projects such as over-cladding flat blocks from low and medium to high-rise. This can include window replacement and new insulated flat roofs. Around 700 homes have been improved in this way in recent years with hundreds more to follow.
- Support schools in making their buildings more energy efficient.
- Funding mechanisms such as the Green Deal or similar, and Energy Company Obligations (ECO) will be promoted to help finance measures for existing buildings.
- Enable residents to avoid fuel poverty through sourcing affordable energy.

- We aim to reduce CO₂ emissions by supporting projects across the city that help individuals, organisations, local community groups and companies adopt a trajectory towards zero carbon.
- Brighton & Hove City Council, as a trusted 'third party', runs communications and community engagement programmes to groups, individuals and businesses across the city, to promote carbon reduction initiatives.
- Reducing wasted energy in council premises will be the responsibility of all staff.

Funding

- We will explore funding streams as they become available at national and European levels.

Where we are now

- Fuel poverty is higher than the South East average and rising.
- Emissions are higher in homes (57%) than industry and commercial buildings in the city (43%).
- City housing is older than the national picture with 66% built before 1945 compared to 43% in England as a whole. Many have solid walls so are harder to treat. Percentage of homes is high: 62% compared to 71% for England. Private rented sector is higher at 28% compared to 15.3% in England and Wales.
- Following the Comprehensive Spending Review in 2010, funding for private sector housing renewal ended. A grants and assistance programme was maintained for two years through carry-over of funding and borrowing. However, due to the lack of funding, all energy efficiency grants have been suspended since 2013. Energy Efficiency grant programmes are hoped to replace these.
- The annual Eco Open House event aims to inspire the uptake of energy efficiency measures by opening up houses that demonstrate best practice in the area.
- A Low Carbon Essentials programme using European funding has delivered a series of workshops to small and medium sized businesses in the city.
- Sussex Police, the University of Brighton and the Sussex Community NHS Trust and social housing providers run carbon management programmes.
- Successful community energy companies operate in the city. Brighton Energy Co-operative runs three community solar systems in the Brighton and Hove area, generating a total of 550 kWp. Brighton and Hove Energy Services Co (BHESCO) brings together people in Brighton and Hove to bulk buy energy and save money on their fuel bills, while profits are used to install energy efficient measures and renewable energy micro-generation in customer's properties. Communities Matter works on fuel poverty and carbon reduction projects and engagement.
- Brighton & Hove City Council's Carbon footprint in 2013/14 was 33,838 tonnes CO₂ compared with our 2012/13 footprint of 35,170 tonnes CO₂ representing an overall annual reduction of 3.9% against our corporate target of an annual 4% reduction. Although when applying degree day analysis to gas and oil data, this results in a 5% reduction in CO₂ between 2011/12 and 2012/13 and an increase of 2.3% between 2012/13 and 2013/14, an overall reduction of 2.8% across these financial years.
- The Housing Revenue Account's capital works programme has delivered 300 Solar PV installations to houses and Sheltered Housing schemes, with around 50 more to be complete in summer 2015. Solar thermal is incorporated into communal boiler replacements where feasible. Community energy is also being investigated.
- Brighton & Hove Environmental Education Programme (BHee) continues to provide support to schools in behaviour change and awareness raising programmes.
- Good practice energy efficient design standards and low and zero technologies applied to new build and refurbishments.
- Flexible working programme underway to reduce energy consumption in main council offices.

- Top quartile SAP (energy) rating across council housing stock and successful annual energy efficiency programmes, including solar PV on 30 homes. Successful community energy saving partnerships schemes.
- Coordinating cross sector forums to facilitate progress on projects to reduce carbon, for specific energy stakeholders in the city and the wider region: Environmental Managers' Forum (Green Growth Platform and Sustainable Business Partnership); Sussex + District Heating Forum (GGP); EU funded through Green Growth Platform.
- Investment in street lighting to enable energy efficiency

What we're going to do

What?	How?	How will we fund this?	When?
Green Deal (or similar) and Energy Company Obligations (ECO) will be promoted to help finance measures for existing buildings	As a member of the Your Energy Sussex partnership, council will work with delivery partner to promote a Green Deal (or similar) offer and ECO funded measures in the city.	From existing budgets. Led by Housing.	Ongoing
Enable residents to avoid fuel poverty through sourcing affordable energy	Promote city and Sussex wide energy buying club to enable householders to collectively switch to get better prices for electricity and gas and potentially secure energy efficiency and renewable investment.	Externally funded and delivered by Community Energy South, BHESCO.	2015-16
	SHINE project: support for council tenants and leaseholders through energy saving advice and installation of small energy efficiency measures.	EU Interreg 2-Seas funding	2015-18
	Support to city households vulnerable to fuel poverty and the negative health impacts of cold homes, including home energy advice visits, emergency grants, financial health checks, training to front-line workers, information and advice, coordinating a 'single point of contact' in the city. Delivered by a city-wide partnership, coordinated by Brighton & Hove Citizens' Advice Bureau.	Funding bid to British Gas Energy Trust; decision September 2015.	October – December 2016
Community engagement programmes to groups, individuals and businesses across the city, to promote carbon reduction initiatives	Raising awareness and promoting uptake of Green Deal (or similar) and ECO via private landlord groups and letting agents in liaison with strategic housing partnership, plus area-based community campaigns and peer to peer work.	From existing budgets. Led by Sustainable Housing Team.	Ongoing
	Expand and improve Eco Open Houses events to support householders to reduce carbon emissions across the city. Annual event to be delivered and a visitor support programme.	DECC funding obtained for 2015 event. EU Interreg funding sought for 2016-20. Led by Eco Open Houses team; Low	Annual delivery

What?	How?	How will we fund this?	When?
		Carbon Trust; Brighton Permaculture Trust; Planning Policy Team	
Sustainable behaviour change	Develop and deliver a staff led internal behaviour change campaign for council staff.	Funded from existing budgets	March 2017
	Deliver the Environmental Education Programme in Brighton & Hove schools.	Budget allocated	October 2014 - October 2017
	Local energy consumption and supply awareness, using Minecraft with schools in Biosphere area.	Biosphere Programme Manager; seeking grant funding	Ongoing from September 2016
Identify wasted energy through the use of Automated Meter Reading and invoice data	Complete the AMR programme and ongoing management. Monitor and analyse AMR data to identify trends/spikes and patterns of unusual consumption and act on findings in all areas – initially focussing on alterations to Building Management System settings. Roll out web-reporting software to budget holders and building managers and develop and deliver a communications plan encouraging the use of this software as well as delivering workshops.	From existing budgets	Ongoing
Completion of the Sustainability Checklist for all large building projects	To be applied to all projects (via the Architecture & Design Team) over the value of £500,000 and used as an aide-memoire to design decisions.	From existing budgets	Ongoing
Deliver Carbon reductions via the Modernisation of the Council programme	As part of Phase 3 Workstyles programme redesign Hove Town Hall to be energy efficient. More efficient use of office space leading to the closure of redundant buildings.	From existing budgets	Late 2016
Deliver carbon reduction via Planned Maintenance Programmes	School, Adult Social Care and Civic planned maintenance to include the following projects: <ul style="list-style-type: none"> oil to gas conversion boiler replacements improved insulation LED lighting 	Planned Maintenance Budget – prioritised each year. Sustainable Schools project dependent on securing	Ongoing - annually

What?	How?	How will we fund this?	When?
		Interreg 2-Seas funding October 2015.	
Develop council building energy efficiency and renewable plans	Complete an insulation programme for selected Corporate Landlord buildings.	From existing budgets	December 2016
	Complete scoping work for remaining Corporate Landlord Buildings with certain future - with a focus on lighting initially.	No allocated budget for projects.	March 2016
	Work with schools to encourage uptake of the Schools Energy Efficiency Loans Scheme.	Schools reluctant to take a loan.	Ongoing
	Scope, design and deliver PV systems for Hove Town Hall, Saltdean and St Andrew's School Extensions projects.	Corporate – borrowing. Schools – PV fund available in 15/16	2015-16
Deliver carbon reduction of 5% in 2015-16 against 2014-15 usage with street lighting LED replacement programme	Continue to install energy efficient lanterns as part of our replacement programme	£300,000 LTP funding for the year 2015-16	2015-16
	To undertake an Invest to Save business case to inform the future of the service. This will include information on future carbon reduction in the city	To be funded from existing budgets.	To be completed by December 2015 for Committee approval early 2016
Continue to upgrade the thermal efficiency of council housing dwellings through insulation schemes	Continue to deliver Housing Revenue Account's rolling capital works programmes, including projects such as over-cladding flat blocks from low and medium to high-rise, window replacement and new insulated flat roofs.	Housing Revenue Account capital works programme. Led by Asset & Sustainability Team	Rolling three year programme
Continue to install renewable energy within council housing stock	Deliver 50 more Solar PV installations to houses and Sheltered Housing schemes and incorporate solar thermal into communal boiler replacements where feasible.	Housing Revenue Account capital works programme. Led by Asset Sustainability Team.	Completed summer 2015
Investigate potential for development of district heat networks for the city to supply affordable heat to residents and low carbon heat to	Develop feasibility studies for potential projects: <ul style="list-style-type: none"> • Eastern Road (October 2015) • Hove Station (October 2015) • Shoreham Harbour (November 2015) • Toads Hole Valley (December 2016) 	Funding obtained for feasibility studies from DECC Heat Networks Delivery Unit.	2016

What?	How?	How will we fund this?	When?
businesses and other sectors			
	Progress to next stages where practical feasibility and viability is demonstrated.	Funding mechanisms for next steps will be identified in study outputs.	2016
Facilitate delivery of high standards of new build development in the city	Continue to work with developers on delivery of low and zero carbon development through the Planning system where Planning Authority is given power to do so; and an early review of <i>City Plan Part 1</i> . Review <i>City Renewable and Sustainable Energy Study</i> to inform <i>City Plan Part 2</i> .	From Local Development Framework budget and further external funding to be sought. This work is led by Planning Policy.	By end 2016

Medium and long term actions

- Efficient use of space by exploring further co-location and reduction in property and land assets.
- Investigation of renewable generation options for council buildings and land.
- Continuation of energy efficient improvements in new and existing buildings.
- Investigate and evaluate potential for using council buildings and council housing stock in district heating networks, as per the recommendations from the City Energy Study.
- Build on feasibility study for Anaerobic Digestion plant linked to city food waste collection plans and develop as a Business Plan.
- Deliver feasibility studies and robust business case for District Heat networks at two sites in the city.

Zero Waste City

- By 2020, the OECD estimates we could be generating 45% more waste than we did in 1995.
- The vision for Brighton & Hove is of a city that uses resources efficiently, minimises waste levels close to zero, and ultimately sends no waste to landfill. The city follows the hierarchy of 'reduce, re-use, recycle'.

Where we want to get to

- Promote reuse and recycling to high value uses, including closed loop recycling.
- By 2025, 70% of domestic waste by weight will be recycled or composted. The target is that residual waste will reduce by 10% per household by 2025.
- By 2020, no more than 2% of all waste (domestic, commercial or construction) by weight will be sent to landfill – the rest is reused, recycled, composted or burned for energy recovery.
- Develop the infrastructure to enable recycling of commercial waste to achieve a trajectory towards zero waste by 2025.

The above targets were adopted in the 2012 Waste Management Strategy which will be reviewed and updated in light of the councils reducing budget and service changes since the original Strategy was adopted.

Where we are now

- Residual waste (the non-recycled ‘black bag’ collection) per household reduced from 629kg to 596kg over the last five years. It increased slightly to an estimated 612kg in 2014/15.
- 25.46% of household waste was recycled or composted in 2014/15, down slightly on the previous year (25.8% in 2013/14) (vs average of 43% in England).
- 69% of household waste was diverted to energy recovery in 2014/15.
- Provisional figures indicate that 3.83% of household waste was sent to landfill in 2014/15, an improvement on 8.2% the year before.
- Built comprehensive waste infrastructure to divert waste from landfill – Materials Recovery Facility (Hollingdean); an ‘In-Vessel’ composting facility (Whitesmith); Energy Recovery Facility (Newhaven).
- Ongoing work to reduce food waste with the Food Partnership.
- Over 1,000 households take part in community composting at over 30 locations in the city.
- Brighton Paper Round is now operating a food waste collection service with 70 businesses signed up so far and collecting 20 tonnes per month.
- Introduced communal recycling to high density city centre properties.
- The council will be trialling commercial waste collections and assessing feasibility of a larger scale service.
- The city is estimated to have above average rates of recycling for commercial waste and for construction and demolition waste.
- Effective planning policies are in place for construction and demolition waste, to promote re-use, recycling and waste reduction, and to promote sustainable design.

What we’re going to do

What?	How?	How will we fund this?	When?
Increasing reuse	Open further re-use facility at Brighton Household Waste and Recycling Centre subject to feasibility.	This work will be led by Veolia and funded from within the existing budget contract.	2015
	Promote re-use charities and partners, e.g. working with Universities.		
Increasing recycling rates	Improve quality of recycling service and levels of customer satisfaction to encourage more residents to recycle.	To be funded within existing revenue budgets	By 2020/21, Brighton & Hove will be recycling or composting 50% (target subject to review) domestic waste, 50% of construction and demolition waste and 70% commercial and industrial waste.

What?	How?	How will we fund this?	When?
	Incentive-based engagement campaign to increase recycling areas across the city, working with the community and voluntary sector where appropriate.	Scheme funded by savings resulting from increased recycling.	Launch in 2015
	Improve Brighton Household Waste Recycling Service (HWRS) to encourage greater segregation of waste and increase recycling.	Capital funds allocated	March 2016
Increase composting rates	Encourage community composting schemes for food and garden waste.	Funded from within council budgets	2015
	Food Partnership and council campaign to promote subsidised home composters and digesters		
Support services for commercial and other waste producers	Launch council commercial refuse collection in 2015 and recycling collection in 2016.	Led by the council and self-funded.	2015-16
Promote waste minimisation and prevention (see also Local and Sustainable Food and Sustainable Materials)	Support the food waste reduction campaign by the Brighton & Hove Food Partnership and the council.	This work will be led by Brighton & Hove Food Partnership from existing council budgets.	2015
	Complete the FoodWISE project to test approaches to recycling food waste at outdoor events on council land	ERDF European funded and staff time. Led by International & Sustainability Team.	Completed September 2015

Medium and long term actions

- Review Waste Management Strategy and targets for waste minimisation, reuse and recycling.
- Update action/delivery plan informed by the Strategy.

Zero Waste Council

Reducing waste and reusing where possible, with the goal of sending zero waste to landfill.

This follows a vision of efficient use of resources, reducing waste levels close to zero, and ultimately to send no waste to landfill. The work is led by Brighton & Hove City Council Property & Design.

Where we want to get to

- Waste reduction programme to be implemented:

- The principles of reduce-reuse-recycle are implemented across the organisation and all staff take responsibility for this.
- 75% recycling rate on internal operations within three years of setting an accurate baseline.
- Over 90% of waste by weight generated by council construction and demolition work will be reclaimed or recycled.

Where we are now

- Corporate waste contract includes the collection of most waste streams including: paper, cardboard, plastic bottles, glass, and hazardous waste.
- Food waste collection pilot successfully working across several schools in the city.
- All non-recyclable waste from council buildings is transferred to the Energy Recovery Facility in Newhaven – the council is sending zero waste to landfill.
- Under the council’s Strategic Construction Partnership led by Property & Design, all projects have a Smart Waste plan with calculated site specific waste analysis data.
- A corporate waste baseline has been set and collection weights are being monitored.
- Waste recycling in all council construction projects currently measured and independently verified.

What we’re going to do

What?	How?	How will we fund this?	When
Achieve 75% recycling rate on internal operations within three years of setting an accurate baseline.	Monitor total waste arising, recycling rates and levels of re-use.	None	November 2016
	Develop and deliver a staff led behaviour change campaign for council staff.	From allocated budgets	March 2017
	Increase visibility of recycling facilities and improve distribution and signage of collection containers in council buildings to increase recycling rates.	Possibly in the region of £5,000	November 2016
Implement a waste reduction programme using baseline data and set annual waste reduction targets.	Identify how much waste is currently produced in all council buildings and schools with data from newly installed weighing equipment on vehicles.	Managed by existing staff resources	2015-16
	Embed waste minimisation requirements in the re-tendered Commercial Waste and Recycling Contract.	Managed by existing staff resources	01 May 2016
	Continue the promotion and use of WARPit to increase the amount of waste re-used and monitoring and reporting on kg of goods diverted.	Funded from existing budget	Ongoing
	Rolling out food waste collection as part of council contract: measuring amount of food waste collected and weighing it and tracking our general waste data to ensure that it is decreasing.	Funded from existing budget	Ongoing

What?	How?	How will we fund this?	When
Achieve 95% recycling of construction waste in all projects via the Construction Partnership	Best practice standards in waste minimisation during construction will be promoted and employed. Apply Reuse - Deconstruct - Demolish hierarchy for all construction waste.	Managed by existing staff resources	Ongoing

Medium and long term actions

- A new commercial waste and recycling contract in place.

Sustainable Transport

Under the Sustainable Transport principle we commit to 'Encouraging low carbon modes of transport to reduce emissions, reducing the need to travel'.

This commitment for reducing carbon emissions is embedded in the council's Local Transport Plan, referred to as LTP4, the council's Transport Strategy for the city.

The Connected City's Transport Vision has become the vision of the LTP, in line with the council's Corporate Plan which states that 'the city's vision is the council's vision'. The Transport Vision will therefore be the basis on which the city's wider goals and objectives for transport and travel will be promoted and achieved by the council.

This work is led by Brighton & Hove City Council's Transport Policy and Strategy Group.

Where we want to get to

- The Vision of The Connected City's Transport Partnership is **Promoting and providing sustainable travel**:
 - *'We want to continue to develop an integrated and accessible transport system that is well-maintained and enables people to travel around and access services as safely and freely as possible, while minimising damage to the environment and contributing to making our city a safer, cleaner, quieter, healthier and more attractive place.'*
- The LTP4 includes seven high-level, overarching goals that Transport is expected to help contribute towards meeting. One of these goals is to 'Reduce Carbon Emissions' and a commitment to produce a **Transport Carbon Reduction Plan [TCRP]**. The TCRP will include an indication of the overall emissions contribution transport is expected to make towards meeting targets and the most effective means to deliver reductions and therefore help meet the city's carbon reduction objectives for Transport, as set out in LTP4.
- Within the LTP4, the carbon reduction goal is explained more specifically as being to 'Reduce transport emissions that affect climate change and our local environment'. In order to help achieve the carbon reduction goal, four specific transport objectives have been defined within the LTP, which are:
 - Reduce the need to travel for some journeys and activities.
 - Provide information and choices for people to enable them to travel more sustainably on a regular basis.
 - Promote and enable greater use of zero- and low-emission forms of transport.
 - Use new technology to maximise reduction of carbon emissions.

These new objectives are therefore now the main focus for reducing carbon emissions within this action plan.

Where we are now

Reduce travel time

- The council's City Plan – Part 1 Submission land-use planning strategy is focused on locating development that significantly increases movement or provides much needed affordable housing close to existing transport corridors and services, and/or interchanges.
- As the local Highway Authority, the council will continue to seek to promote and secure appropriate measures and infrastructure through the planning process, in line with Policy CP9 (Sustainable Transport) of the council's City Plan – Part 1 Submission.
- Opportunities to improve local centres of activity which can provide daily access to food and other products for local communities, such as shopping areas, will be assessed in order to increase the use of sustainable transport or active travel for some short journeys.

Promote and support sustainable travel

- Continuation of Travel Planning to support behaviour change.
- Working with residents, partners and stakeholders on established Personalised, School, Workplace and Residential Travel Plans will continue, and will help to deliver new initiatives and secure new Plans, where appropriate. The primary focus of such Plans is to identify and explore sustainable travel alternatives to using cars for certain journeys.
- Promotion of sustainable travel choices through the JourneyOn website and associated campaigns, promotions, events, activities and initiatives will continue.

Promote and enable greater use of zero- and low-emission forms of transport.

- New and improved, safer walking and cycling routes to schools and the South Downs National Park have been developed within the city.
- Increased use of electric vehicle charging points within the city has been achieved and additional funding secured for Rapid Charging Points, in partnership with the EV SouthEast Consortium (now known as 'Energise').
- Working with partners, the council will be involved in the further development and delivery of the Active Travel Strategy for the Greater Brighton City Region.
- A new £1.5 million, 500 space cycle hub has been launched at Brighton Station.
- An additional £1.5 million worth of funding has been secured for a BikeShare scheme within the city and £765,000 worth of cycle-rail funding for a cycle hub at Hove Station and improved cycle parking facilities at three train stations (Portslade, London Road and Moulsecoomb) and a cycle hub at Portslade Station.

Use new technology to maximise reduction of carbon emissions

- An additional £1.8 million worth of funding has been secured for a package of 'Intelligent Transport Systems' [ITS] measures and infrastructure to reduce congestion and delays on, and improve the efficiency of, the main routes into and out of the city. Measures include optimised traffic signals, variable message signs, cameras and the use of Bluetooth devices.
- Exploring and developing opportunities with public transport operators for smart-ticketing to increase the attractiveness of this form of transport for some people.
- Securing additional funding from the Clean Vehicle Technology Fund to reduce and/or improve emissions from taxis and buses.
- Encouraging the use of City Car Club vehicles to reduce dependence on privately-owned vehicles.
- Supporting the roll-out of greater access to broadband within the city in order to maximise opportunities to access transport information and ticketing via the internet.

What we're going to do

What?	How?	How will we fund this?	When?
Reduce the need to travel for some journeys and activities	Continue to work with Planning colleagues and developers to achieve high levels of sustainable transport provision within new development proposals.	Funded from council revenue (primarily staff time)	Ongoing
	Undertake audit and review of amount and quality of access, transport facilities and services, and travel information in local shopping areas in order to identify priorities for investment in transport measures.		
	Advise on, and influence, the development and design of Major Projects within the city, such as The Waterfront, King Alfred and Preston Barracks sites, and New Homes for Neighbourhoods.		
Support more regular sustainable travel choices	Develop a Technology and Travel Information Strategy.	Funded from council revenue (primarily staff time) and some LTP capital to support the delivery of measures.	Ongoing
	Continue to work with residents and partners on the development of Travel Plans and deliver new initiatives and secure new Plans, where appropriate.		
	Work with the i360 company to create an exemplar source of sustainable travel and journey information for a new, major attraction.		
	Explore the opportunity to extend the ESCC operation of 'Wheels to Work' into the city.		
Promote and enable greater use of zero- and low-emission forms of transport	Review existing provision and opportunities to upgrade and expand electric vehicle charging points within the city, and encourage and enable greater up-take and use of Ultra Low Emission Vehicles.	Funded from council revenue (primarily staff time and ongoing maintenance) and LTP capital funding to install infrastructure.	Ongoing
	Develop and secure approval for the Business Case for the BikeShare project and procure an operator.		
	Increase the accessibility of certain corridors in order to overcome barriers to movement and increase safety.		
Use new technology to maximise reduction of carbon emissions	Secure approval of the ITS Business Case and begin installation of measures along key corridors.	Funded from council revenue (primarily staff time) and LTP	Ongoing
	Develop a Technology and Travel Information Strategy (see above).		

What?	How?	How will we fund this?	When?
	Develop and facilitate smart-ticketing initiatives for public transport with operators.	capital funding to install infrastructure.	
	Assess progress and success of introduction of clean vehicle technology on taxis and buses.		

Medium and long term actions

- Continue to develop priorities and deliver projects and programmes which reduce carbon emissions, in line with the commitments set out in The Connected City, the Corporate Plan and the LTP4, and secure improvements through the Planning process which comply with Policy CP9, and other relevant policies, of the City Plan.
- Work with colleagues to ensure that low-carbon forms of transport and travel can support and help deliver the objectives of other EDH and council plans and strategies.
- Continue to identify, seek and secure additional funding opportunities to develop and deliver low-carbon forms of transport and travel.
- Continue to participate in, and strengthen, existing partnerships, and establish new ones, to deliver low-carbon forms of transport and travel, and reduce the need to travel.
- Work with partners to ensure that the principles of this Sustainable Transport SAP are integrated into the emerging priorities and investment programmes of the Greater Brighton City Region, where appropriate.

Sustainable Materials City

Creating infrastructure and technical support to accelerate reuse in the city.

Focusing on the use of renewable or waste resources with low embodied energy and, wherever possible, sourced locally. This applies to construction and consumer goods.

This work is led by Cat Fletcher.

Where we want to get to

- Accelerate reuse in the city to improve our waste recycling rates.
- Establish a permanent city reuse depot. This will be the first multi-sector reuse depot in the country and position Brighton & Hove as a national centre of excellence for circular economy.
- Develop a tool to track reuse rates in the city.
- Raise engagement and awareness, embedding reuse culture in the local community.
- Community engagement through events including Citywide Garage Sale; Brighton Fashion Week; and Café Conversations.

Where we are now

- The Waste House is a ground-breaking waste prevention project of international significance. It has won 10 awards including the prestigious Regional and Sustainability Awards from RIBA (Royal Institute of British Architects). It is also shortlisted for the renowned Sterling Prize. First year of data will be out this summer; technologies and methodologies are being monitored for effectiveness.

- Redistribution hubs: pop-up reuse depots have been set up around the city, e.g. at Prestamex House, Circus Street, preventing over 250 tonnes entering the waste stream in 2014-15.
- WARPit: the council introduced WARPit furniture and resources reuse scheme and employed a Reuse Manager to manage the clearance of civic buildings for the Workstyles relocation project. 138 tonnes of waste was handled by the reuse manager at a cost of £180 per tonne. This represented a saving of £12,000 to the council on disposal costs which rises to a saving of £35,000 if we include associated costs such as transport. As most of the surplus items were donated to community groups this has shown how the council can prevent waste by collaborating with the community sector.
- Local reuse social enterprises such as Emmaus, the Repair Café and makers' projects are booming and numbers are expanding in the city.
- Citywide Garage Sale, one of three UK pilots, is due to run in September 2015. The corporate sector will be actively involved alongside community groups and local residents. Participants' activity is mapped and feedback collected for measurement purposes. The event has been imported by garagesaletrail.com.au whose event in Bondi Beach, the same size as Brighton & Hove, turned over more than AU\$ 35 million last year. The event is funded by Big Lottery and WRAP.
- "Build Green" City College workshops for local tradespeople training in sustainable building practices. Opportunity to be reignited with remaining EU funding.

What we're going to do

What?	How?	How will we fund this?	When?
Creating reuse infrastructure, knowledge and skills	Establish a permanent reuse centre in the city.	Crowdfunded; Freegle funded.	2015-16
	Citywide Garage Sale; reuse levels will be tracked.	Awards for All lottery funding; WRAP	Completed September 2015
	Piloting WEEE reuse project, enabling reuse and refurbishment of unwanted electronic devices by data clearance, assessment of options for owners. Reuse levels will be tracked.	WRAP; BHCC Community Grants; Partly self-funded.	2015 ongoing
	Sustainability events throughout Brighton Fashion Week.	Brighton Fashion Week funding (external sources)	September-October 2015
	Various citywide community awareness raising events including Lantern Fair, The Level Festival, Café Conversations.	BHCC funded; Various external sources	2015 - 16
Enable monitoring and assessment of reuse rates	Create a tool to monitor and measure reuse in the city.	WRAP; University of Northampton	2015 - 16

Medium and long term actions

- Identify and establish appropriate remanufacture facilities.

- Identify opportunities for embedding sustainable materials and reuse into public and private procurement policy.

Sustainable Materials Council

Our focus:

- The use of renewable or waste resources with low embodied energy and, wherever possible, sourced locally. This applies to construction and consumer goods.
- The environmental impact of goods and services procured, through a robust strategy and involving guidance, promotion and case studies for staff, suppliers and partners.

This work is led by the council's Procurement Team working closely with purchasers and suppliers, and reported through the council's Organisational Health Report.

High level objectives – where we want to get to

The council is continuing to embed the principles of sustainability throughout its procurement activities through balanced consideration of the social, ethical, environmental and economic impacts of the products and services that it buys. In order to deliver on this commitment, Brighton & Hove City Council will:

- Ensure that the organisation as a whole takes responsibility for what it procures:
 - Promote weighted and scored sustainability criteria to council clients and incorporate these where ever possible within procurement exercises.
 - Reduce paper usage by driving e-procurement practice, endeavouring to operate paperless council procurement exercises.
 - Ensure that our operations, service delivery and the products we buy actively work towards achieving carbon reduction targets.
 - Reduce the amount of waste created by encouraging reuse and recycling, the use of recycled products and products derived from reclaimed materials.
 - Develop more sustainable transport within the city, by ensuring that the vehicles we buy and use in the course of delivering our services have minimal impact on the environment, consider their emissions, the use of alternative fuels and the whole life cost of the vehicle.
 - Only buy sustainable and efficient products and materials, selecting those which have a minimal effect on the environment over their whole life.
 - Buy goods from fair, ethical and sustainable sources when local products are not available, where appropriate.
- Continually communicate to suppliers the importance of sustainability considerations through the design of contracts and their management and by embedding sustainable principles throughout the procurement process.
- Develop a supply chain that maximises opportunities for community benefit and economic gain and reduces inequality and financial exclusion within the city.
 - Encourage suppliers to take steps to make supply chain opportunities accessible to local SMEs and third sector organisations.

Where we are now

- Effective procurement and contract management is helping to deliver value for money and meet the council priorities on sustainability. The council has revised its Sustainable Procurement Policy and highlighted sustainability as one of the six key themes in its Procurement Strategy. This is helping to support council staff to make responsible purchasing decisions. Through the council's procurement procedures, it encourages tendering organisations to provide details of their sustainability and equalities programmes including asking for their environmental policy and details of environmental management programmes.

- Where appropriate, procurers throughout the council are attributing greater weight to sustainability and environment related questions during the tendering process and are thus requiring a greater level of consideration from prospective suppliers.

What we're going to do

What?	How?	How will we fund this?	When?
Responsible corporate procurement	<u>Stationery Contract</u> Ensure improvements in letting of new pan-Sussex Corporate Stationery contract: <ul style="list-style-type: none"> • All recycled paper products on core list to have minimum 75% content of recycled pulp. • 100% of paper products to originate from sustainable sources (not from temperate rainforest or monoculture plantations). 	Funded from existing budgets	Ongoing. Final draft of specification underway, with targets to be included, subject to approval by committee.
	<u>Stationery consumption</u> <ul style="list-style-type: none"> • Increase use of 100% recycled paper to 70% • Reducing frequency of delivery of stationery orders Consumption statistics collected quarterly and reported to identify target non-compliance	Funded from existing budgets	Completed September 2015
	<u>E-procurement</u> Increase use of e-tendering platform across the council, resulting in reduced paper use and improved efficiency.	Funded from existing budgets	Ongoing roll out of procurement training
	<u>Minimum Food Standards</u> Promote compliance with Minimum Food Standards in all contracts which contain a catering element.	Funded from existing budgets	Ongoing
	<u>Fleet</u> Undertake a review of existing and future fleet contracts, to explore potential sustainability improvements.	Funded from existing budgets	Completed June 2015

What?	How?	How will we fund this?	When?
SME Engagement	Improve engagement with SMEs including an update and potential training event on incoming changes to EU Procurement Regulations.	Funded from existing budgets	Ongoing. Event to be discussed and arrangements made by March 2015 following update release from Cabinet Office due end of 2014.
	Overhaul procurement documentation to make tendering process less onerous for smaller suppliers.	Funded from existing budgets	April 2015-March 2017; reviewed 6 monthly

Medium and long term actions

- Continue to apply the principles of the Sustainable Procurement Policy and approach all procurements with a view to include sustainability related criteria and targets where applicable. The monitoring of the inclusion of sustainability criteria along with the weighting attributed to these will be ongoing and collated by Corporate Procurement.

Local and Sustainable Food

The city's commitment to taking a systematic approach to achieving a healthy, sustainable and fair food system is set out in its Food Strategy *Spade to Spoon: Digging Deeper* (2012) agreed by Brighton & Hove City Council and adopted by the Local Strategic Partnership.

This work is led by Brighton & Hove Food Partnership (BHFP) and by Planning and Public Protection in the council.

Where we want to get to

- People in the city eat a healthier and more sustainable diet.
- Public organisations have healthy, ethical and environmentally responsible food procurement policies and practices.
- Waste generated by the food system is reduced, redistributed, re-used and recycled.
- More food consumed in the city is grown, produced and processed locally using methods that protect biodiversity and respect environmental limits.
- The city has a vibrant, sustainable food economy of thriving local businesses, local products and employment opportunities.

Where we are now – the challenges

- 50,000 adults are obese or morbidly obese estimated in 2010 to cost the NHS in Brighton & Hove £78.1 million. 14,000 2-19 year olds are overweight; this is likely to increase to 16,400 by 2020.
- The number of food banks in the city has increased from three in 2012 to 14 in 2015. The City Tracker survey in 2014 shows 23% of respondents reporting that they were concerned that they would not have enough money in the next year to cover basic living costs (including food)
- 35% of what households in the city throw away is food waste; this is higher than the national average of 33%. Wasted food represents 3% of the UK's domestic greenhouse gas emissions, equivalent to those created by 7 million cars each year.¹ The city has a food services industry of

¹ The Water and Carbon Footprint of Household Food Waste in the UK - by WRAP and WWF (2011)

over 400 cafes and restaurants. The UK hospitality sector produces 600,000 tonnes of food waste each year.²

- The city has 4,400 hectares of farmland but very little produce from this comes into the city.

Achievements since the plan was agreed in 2013

- In April 2015 Brighton & Hove was awarded the Silver Sustainable Food Cities award in recognition of progress towards a healthy and sustainable food system across all sectors and all agendas. Silver is the highest standard awarded, and Brighton and Hove was the first and so far only city in the UK to achieve this.
- In 2014/15 Brighton & Hove Food Partnership (BHFP) engaged with over 5500 people through workshops, one to ones, groups and communications to support residents with healthy and sustainable diets.
- The 2014 national statistics from the National Child Measurement Programme (NCMP) show child obesity is down again this year in the city. Among local authorities with complete data, Brighton & Hove ranks second in the South East this year for the percentage of children classified as having a healthy weight, at both ages. This good news and evidence that the partnership approach to preventing and reducing childhood obesity is working, however weight is still a significant health issue for adults and children in the city.
- In 2014 the council adopted Minimum Buying Standards for all its catering contracts, including schools. These include standards for fish, meat, seasonal produce and fair-trade products. Four contracts worth over £75,000 a year are now achieving this standard including the recently awarded Bronze to the Brighton Centre.
- All Primary and Special Schools now serve meals to the Silver Food for Life Catering Mark standard. A successful pilot of food waste collections for 10 schools was delivered. Learning from this has informed the next round of commissioning for the school's waste contract.
- The council's Policy and Resource Committee agreed to work with the Food Partnership to develop a food poverty action plan for the city in 2015.
- Three years funding of £500,000 has been secured from the Big Lottery Reaching Communities Fund for Sharing the Harvest project to engage vulnerable adults in the city's 70 community food growing projects.
- An Allotment Strategy has been agreed setting out how the city will deliver enjoyable, inclusive, sustainable and affordable allotments.
- Business support events have been delivered by the council, BHFP and Brighton & Hove Chamber of Commerce designed at giving local businesses in the food and drink sector skills to grow and develop.

What we're going to do

What?	How?	How will we fund this?	When?
People in the city eat a healthier and more sustainable diet	Deliver <i>Sharing the Harvest</i> project helping vulnerable adults engage in community food growing for health and wellbeing.	Big Lottery Reaching Communities	2014 – 2017. 100 adults participate per year
	Hold a food poverty round table. Develop a food poverty action plan - aim is to reduce the impact of food poverty on the health and wellbeing of local people, and mitigate against the likely impact on future health and social care budgets of doing	BHFP funded by Esmée Fairbairn Foundation	Round table July 2015; action plan agreed November 2015

² The composition of waste disposed of by the UK Hospitality Industry. (2011)
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What?	How?	How will we fund this?	When?
	nothing about this issue.		
	Develop and implement Brighton & Hove Strategy and Action Plan: <i>A city that can cook 2015-2025</i> , to ensure residents can and do cook.	BHFP, current funds and must attract further.	Baseline evaluation questions agreed with University of Brighton July 2015. Strategy to be agreed by BHFP Board by December 2015.
	Deliver skills sessions to communities in the city to promote and inspire people to choose healthy and sustainable food.	BHFP, Albion in the Community (funding from Public Health)	Agreed plan 2015 - 2017 includes work with schools, healthy weight work and cookery.
	Work with fast food takeaways to encourage healthier cooking techniques.	Public Health, Food Safety Team	New post to deliver 2015 - 16
	Develop <i>Healthy Choice Award Gold</i> combining sustainability criteria with health	BHFP (funding Public Health)	Roll out in early years settings July 2015 on.
Procurement	Promote Minimum Buying Standards for council catering contracts under £75,000 per annum.	BHCC Cost neutral	Ongoing
	Work to help develop a healthy and sustainability hospital Food and Drink Policy.	Brighton and Sussex University Hospitals NHS Trust; BHFP	April 2015 to March 2016
	Hold regular city-wide forum to bring together public and private caterers to share good practice and information	BHFP funded by Esmée Fairbairn Foundation	At least two more meetings by the end of 2015
Waste	Deliver <i>Love Food Hate Waste</i> campaign to reduce food waste and increase home and community composting. Aim to reach 1200 households. Hold ' Feeding the 5000 ' event with the aim of reaching over 5,000 people.	Cityclean; BHFP	2015 - 2016
Food production	Publish availability of council owned land suitable for food growing.	Property & Design	Ongoing
	Progress with project on farmland to inspire and educate people around food production.	Property & Design, Planning	2015-16
	Implement Allotment Strategy action plan.	Brighton & Hove City Council and Allotments Federation	Ongoing
	Implement with schools the <i>National School Food Plan</i> : in curricular and school activities: <ul style="list-style-type: none"> access to food growing in grounds; cookery classes; training for supervisors and kitchen staff to help children make healthier choices; 	School Meals Team funding for training for Midday Supervisor kitchen staff. Public health in schools funding.	By 2015-17 all schools to have food growing and/or cookery groups 2 x Midday Supervisor training. All schools to have

What?	How?	How will we fund this?	When?
	<ul style="list-style-type: none"> cookery and healthy eating workshops. 		Public Health profiles and, if relevant, plans to address food issues.
	<p>Increase food growing projects in the city:</p> <ol style="list-style-type: none"> at least one new food growing project on council housing land e.g. Bevendean; plant two community orchards per year (over five trees) one new demo garden in central location; progress plans to reinstate food growing at Stanmer Walled Garden; support community food projects to be resilient and sustainable. 	<ol style="list-style-type: none"> Within existing budgets. Brighton Permaculture Trust. Food Partnership funding; council space. Heritage Lottery Funding; Food Partnership (funding tbc) 	2014 - 2016
Local Food Economy	Work with Open Market CIC to ensure a thriving and sustainable market.	Cost neutral. Economic Development and Major Projects Teams	Ongoing
	Create suppliers database in partnership with East Sussex County Council and share with caterers.	Funded by BHFP, East Sussex County Council and Esmée Fairbairn	Completed July 2015
	Develop local food promotional campaign aimed at tourists and conference visitors as 'Eco Tourism' offer linked to Biosphere.	Biosphere Board, Visit Brighton.	2015-17
	Provide business support to food sector SMEs (food manufacture, processing, retail, hospitality) through Ride the Wave.	Economic Development Team and Brighton & Hove Chamber of Commerce.	Two ' <i>Meet the Buyer</i> ' workshops delivered summer 2015.

Medium and long term actions

- Locally caught fish is sustainably caught and much is sold in the city reducing the need to import fish from elsewhere.
- Achieve Food for Life Gold Standard in the School Meals service – following work to close the gap to achieve the living wage for catering staff.
- Facilities for food waste collections will be available at all buildings in the city with catering outlets.
- Food production is delivered on the majority of land identified as suitable by the mapping work undertaken.
- Put food at the heart of Stanmer Park as part of its regeneration and develop Stanmer as a beacon farm to inspire and educate.

Sustainable Water City

Supporting reduced water demand, improving water quality and reducing flood risk. This work is led by the Environment Agency.

Where we want to get to

Reducing flood risk

- Reduce flood risk to homes vulnerable to surface water flooding.
- Slow water entering the drainage network to reduce flooding.
- Reduce flood risk to sites at risk from groundwater flooding.
 - Manage the coastline to protect properties from tidal flooding.
 - Have best practice approach to water drainage and storm water in refurbishments and new builds.
- Interreg 2-Seas funding is being sought for the Climate Resilient Coastal Landscapes project which seeks to improve the city's preparedness to deal with climate change; raise awareness of climate change and adaptation to flooding in communities; improve regularly-occurring types of landscape in the city such as concrete-dominated streetscapes and empty/underused grassed areas.

Improving water quality:

- Reduce urban pollution sources of drainage networks, watercourses and the sea.
- Improve groundwater quality and quantity which is a requirement of the Water Framework Directive.
- We will reduce our impact on sea water quality and maintain recreation and local fisheries.

Reduce water demand:

- Reduce water demand in new housing and current housing. Increase re-use of water.
- Reduce demand from business.

Where we are now

- Climate Change Adaptation Scrutiny Panel provided clear recommendations for how city needs to adapt and prepare for severe weather events including flooding and drought. Solutions include measures to reduce flooding, create habitat and restore our rivers to a more natural state, all of which will help to reduce flood risk and improve water quality as well as providing important habitat for wildlife.
- BHCC Downland groundwater project initiated with funding from Defra WFD funds, aims to reduce fertilizer application by council tenant farmers. A reduction in Nitrate, Potassium and Phosphates will improve the quality of the groundwater in the area.
- Environment Agency is working in partnership with the Sussex Inshore Fisheries and Conservation Authority (IFCA), Sussex Wildlife Trust and others to develop a better and shared understanding of the habitats, species and pressures on the Sussex coastal water body. The project will create a habitat map for the Sussex coastal water body, which will be far more accurate and detailed than anything else that currently exists. Knowing what habitats are where is vital to direct management to where it's most needed.

What we're going to do

What?	How?	How will we fund this?	When?
Reducing Flood Risk	Creating alleviation channels in the Pavilion area for flood risk management.	£270,000 funds from Defra. Work led by	2016

What?	How?	How will we fund this?	When?
		Sustainable Transport Team in partnership with the Environment Agency.	
	Work with Brighton Marina to ensure up-to-date climate change information is incorporated into developments beyond 2030.	Contributions from developers. Work led by Brighton Marina and the council.	2030 and beyond
	Maintain appropriate sea defences. Use the coastal habitat project maps to target appropriate management of habitats in line with sustaining sea defences. http://www.environment-agency.gov.uk/research/planning/140252.aspx	BHCC Environment Agency Inshore Fisheries & Conservation Authorities (IFCA). £80,000 already secured over last two years from EA Defra funds for IFCA project.	Ongoing
	Flooding and green infrastructure pilot project in Portslade. Two SuDS 'rain gardens' schemes to be created as practical pilot projects, based on Natural England funded scoping project 2014-15.	£20,000 Environment Agency funding pending. Project managed by Biosphere Programme Manager and Flood Risk Management Officer.	2015-16
	VIBES Blue Infrastructure proposal. 1st stage bid decision awaited end of September 2015 for 2016. Proposed research, policy development, practical improvement projects ('rain gardens'), and engagement work.	£820,000 provisional from EU Interreg VA Channel of which 31% match-funded by the council. Led by Devon County Council; project managed by Biosphere Programme Manager.	April 2016 - April 2019
	Two pilot projects will aim to make local urban landscapes more resilient to flooding by developing and testing integrated, multidisciplinary water management measures that take landscape characteristics into account (drainage, movement, biodiversity, food resources, recreation, support local businesses).	Dependent on securing Interreg 2-Seas funding	January 2016 - December 2019
Work with partners to deliver on the water quality and quantity requirements of the EU Water	Work with businesses and other stakeholders to prevent pollution. Ensure sewerage connections are effective.	Work led by the council and Southern Water. External funding sought.	2015 - 2020
	CHAMP partnership project to improve groundwater quality through better catchment management.	£420,000 fully funded based on partnership approval.	September 2015 - March

What?	How?	How will we fund this?	When?
Framework Directive		Led by Southern Water in collaboration with National Park Authority, Environment Agency, Biosphere and other partners.	2019
	Work with planning authorities and developers to include Sustainable Urban Drainage schemes, innovative design, innovative materials and create more green roofs, to reduce run off in the light of climate change affecting weather patterns Work with businesses and other stakeholders to prevent pollution.	Environment Agency; Natural England; Wildlife Trust; RSPB; Rivers Trusts; Southern Water.	2015-2016
	Work closely with Southern Water to ensure pollution events are kept to a minimum. Carry out visits to give pollution prevention guidance and advice to business.	Led by Environment Agency; Natural England; Wildlife Trust; RSPB; Rivers Trusts; Southern Water. Work with partners to identify options for delivering the WFD.	2015 - 2020
	Continue to sample bathing water and advise on best practice for improving bathing waters with the view to achieving blue flag status. http://www.blueflag.org/	BHCC Environment Agency Inshore Fisheries & Conservation Authorities (IFCA). Sampling costs borne by the EA.	2015 - 2020
	Aim to become 'water neutral' and promote water neutrality in new developments.	Funded by DEFRA	Ongoing
	Local water cycle awareness, using animation and Minecraft with schools. For roll out to schools in Biosphere area.	Schools to buy in the service individually. £225 per half day session. Work led by Biosphere Programme Manager.	Ongoing

Medium and long term actions

- Maintain appropriate sea defences in response to coastal studies and sea level rise.

- Work with businesses and other stakeholders to prevent pollution (ongoing) and ensure sewerage connections are effective.
- Deliver catchment management actions identified in the relevant [Catchment Management plans](#).

Sustainable Water Council

Our focus is more efficient water use, in buildings and in the products we buy. This supports healthy land use as well as avoiding pollution and flooding.

Where we want to get to

- Efficient water use across council buildings and schools:
 - The council will set an accurate water consumption baseline for its water meters.
 - Reduction and better management of water leaks.
- Protect water quality for the city through improved management procedures of the City Downland Estate.

Where we are now

- Early identification of water leakage across the council portfolio due to Automatic Meter Reading (AMR).
- Better billing data through active management.
- Engagement with farmers on inputs to arable farmland.

What we're going to do

What?	How?	Financial Implications	When?
Identify wasted water (leaks and spikes) through the use of Automated Meter Reading and invoice data	Complete the AMR programme and ongoing management.	Budget allocated	December 2015
	Monitor and analyse AMR data to identify trends/spikes and patterns of unusual consumption and act on findings in all areas – initially focussing on alterations to Building Management System settings.	Within current resources	Ongoing
	Roll out web-reporting software to budget holders and building managers and develop and deliver a communications plan encouraging the use of this software as well as delivering workshops.	Within current resources	Ongoing
Sustainable behaviour change	Develop and deliver a staff led behaviour change campaign for council staff.	From existing budgets	March 2017
	Deliver Environmental Education Programme in schools.	Budget allocated	October 2014 - October 2017
Collaborate with Southern Water to delivery Water	Develop and deliver a water efficiency programme of projects that deliver water reduction measures in key sectors across	Managed within current resources and	2015 - 2017

What?	How?	Financial Implications	When?
Efficiency programme	the city.	Southern Water funding	
Completion of the Sustainability Checklist for all large building projects	Architecture & Design Team will apply this to all projects over the value of £500,000 and used as an aide-memoire for design decisions.	None – project specific	Ongoing
Monitor inputs on arable farm land	Via Smiths Gore, monitor inputs on arable land to ensure compliance with the City Downland Estate Policy.	None	Ongoing
	Monitor tenancy agreements to ensure mitigation in place for surface water run-off.	None given	Ongoing

Medium and long term actions

- Explore opportunities arising from the deregulation of the water industry from 2017.

Land Use and Wildlife

This section focuses on protecting and increasing biodiversity and biological productivity, and supporting beautiful landscapes while protecting ecosystem services. The work is led by Cityparks.

In June 2014 the Brighton & Lewes Downs Biosphere was formally designated by UNESCO providing international recognition for our environment. Biosphere will form the umbrella framework to pursue improvements in land use and wildlife across the Biosphere area. It will also be the driver for environmental education, research and engagement with residents and visitors to the Biosphere and promote sustainable recreation and tourism in the area.

Where we want to get to

- To extend further the high quality landscape and diversity of the Downs into the city, breaking the traditional distinction between urban and rural in terms of biodiversity value.
- An overall increase in biodiversity, as well as supporting beautiful landscapes.
- Locally significant species are protected, and a planting and selection process benefits local wildlife.
- Deliver Local Biodiversity Action Plan (LBAP) that clearly sets out how the important habitats and species in the city will be conserved and this is supported and regularly monitored.
- Using Biosphere designation, effectively engage, enthuse, signpost and educate residents, schools and visitors about the environment.
- Encourage sustainable recreation, tourism and sustainable land use under the Biosphere umbrella.

Where we are now

- Brighton and Lewes Downs Biosphere was officially designated by UNESCO in June 2014.
- A Transition Board, chaired by the Assistant Chief Executive of Brighton & Hove, has been established to oversee delivery of the Brighton & Lewes Downs Biosphere. The Board consists of senior representatives from public, private and third sectors. The new structure has secured buy-in from key partners to drive the project forward.

- We have a second SSSI ‘Brighton to Newhaven Cliffs’ which is designated for its geological interest but also contains important areas of chalk grassland.
- Both Castle Hill and the Cliffs are rated as being in “favourable condition” which means that the land is being adequately conserved for their special qualities.
- We have five Local Nature Reserves spanning 1.1% of land within the city boundary and three more proposed, covering a further 7.1% of the city.
- We have seven Green Flag parks in the city, which have been recognised for their environmental standards and the service they provide for their communities.
- We have 62 Local Wildlife Sites across the city which are important in a local context and have significant nature conservation value.
- We have a Local Biodiversity Action Plan which sets out our programme for conserving biodiversity and was adopted in February 2013.
- A number of important conservation and ancient chalk Downland areas in the city are grazed with sheep to improve the open space for both wildlife and people.
- Rangers, nature conservation volunteer groups and Friends of Groups all work very closely to improve the management of our countryside and parks.
- Three year Access to Nature project has been completed which has encouraged people from all backgrounds to understand, access and enjoy our natural environment.
- Award-winning ‘Supplementary Planning Document’ on Nature, Conservation and Development, giving practical advice on how to include nature conservation into new development proposals.
- Secured Higher Level Stewardship (HLS) funding for improved management of many chalk grassland areas.
- Most of the city’s urban green space is within the South Downs Way Ahead Nature Improvement Area, one of 12 pilot NIAs across England where landscape scale nature conservation improvements are being targeted.
- Nature Improvement Area Funding (NIA) has been completed and helped to establish new species-rich grassland across areas of the city’s green space.
- New schools environmental education contract for 2014-17 awarded to the Sussex Wildlife Trust and Resource Futures.

What we’re going to do

What?	How?	How will we fund this?	When?
Develop Open Spaces Strategy	Work on developing an Open Spaces Strategy is underway. The strategy will inform future management and maintenance of the city’s parks and open spaces with a focus on enhancing biodiversity.	Funded from existing staffing resources	Strategy to be adopted in 2017
	The Stanmer Estate is a key heritage landscape for the city; it is the city’s only country park and a critical link to the South Downs National Park. The Estate is on the Historic England At Risk Register. A Master Plan is being developed for the Estate and an application for funding to HLF being produced.	Stage 1 HLF application successful releasing resource to produce final HLF application by February 2017.	HLF application to be submitted February 2017
Increase biodiversity	Implementation of the Local Biodiversity Action Plan: identifies the most important	Internal and Higher Level	Ongoing

What?	How?	How will we fund this?	When?
and stewardship of landscapes	local habitats and species, assesses their nature conservation status and sets out the actions needed to ensure they achieve favourable conservation status. This plan supports collaboration, utilising local groups to monitor species and habitats.	Stewardship funding. Led by Cityparks.	
	Restoration of species-rich, semi-natural grassland. Improved maintenance for target features (ancient monument) and successional areas and scrub. New orchard and potential to reopen some of the old allotments.	Funded from existing budgets. Led by Cityparks with various Community and Friends of Groups	March 2021
	Improve the cities chalk grassland and increase the biodiversity value of other green spaces, within and around the urban area, principally through grazing and management of scrub control.	Funded from existing council budgets; Higher Level Stewardship fund; and Nature Improvement Area fund. Led by Cityparks.	March 2021
	Replace water-intensive planting with wildflowers and herbaceous shrubs, to encourage wildlife and become more resistant to drought in parks and green spaces in the city.	Funded from existing budgets. Ongoing savings. Led by Cityparks.	Ongoing
	Work with Kew to collect seed from our best chalk grassland sites to feed into the millennium seed bank as well as provide seed and plug plants to establish new wildflower sites within the city centre.	NIA funding. Led by Cityparks.	Ongoing
Education and Awareness raising	Deliver Environmental Education Programme in Brighton & Hove schools.	Budget allocated	October 2014 to October 2017

Medium and long term actions

- Development and implementation of detailed Biosphere delivery plan covering the whole city region.
- Development of new Open Spaces Strategy to inform future management of parks and open spaces in the city.
- Promote the effective provision of biodiversity, wildlife features and open space opportunities within new development schemes in the urban area and to set out a schedule of specified projects towards which developer contributions/Community Infrastructure Levy could be directed.
- Expand allotment provision to support sustainable food growing in the city.
- Refresh and implementation of the City Downland Policy to increase sustainable land management including conservation of habitats and species on the council farmland estate.

- Assess green infrastructure and ecosystem services provision to inform priorities for improvements.
- Pursue funding to continue Nature Improvement Area (NIA) work.
- Create a sustainable, self-sustaining estate at Stanmer Park which links the city to the National Park.

Culture and Community

- We aim to nurture a culture of sustainability, community and a sense of place which builds on local cultural heritage to foster a sense of identity and connectedness.
- The plan for the council's own objectives and programmes relating to culture and community are overseen by the Assistant Chief Executive's Department and monitored through the Organisational Health Report.
- At the heart of achieving our sustainability objectives are empowered and knowledgeable communities.

Where we want to get to

- We want our city to become known across the UK and the world as a sustainable destination, recognising its unique offer as a UNESCO Biosphere and its position on the doorstep of the UK's youngest National Park on the beautiful South Downs.
- To deliver Our Future City, a transformation programme in Brighton and Hove that seeks to enhance the city's long term future over the next 10 years through the development of all children and young people's creative talent. The programme takes the form of a dialogue involving children and young people to discuss and inform our city's future in the education, health, cultural and creative industry sectors.
- We continue to promote pride in our city's culture and strive for high levels of sustainability at our community events by maintaining our certification to ISO20121, the international standard for sustainable events.
- We will work with major cultural partners and other venues to support the development of Environmental Management Systems and sustainable practice across the city.
- The plans for the revitalisation for the Royal Pavilion Estate include improvements to the environmental sustainability of the historic sites including energy reduction initiatives.
- The city has a good track record and expertise in producing sustainable events and we are working to improve sharing of good practice, information and resources amongst event producers.
- The council's Communities and Third Sector Policy proposes the establishment of a policy framework for co-ordinated third sector commissioning, to enable collaborative working with partners, pooling budgets and investing in the sector more effectively.
- The council has a number of in-house and commissioned services that support and engage with residents, communities and partners. We are currently reviewing and revising these to ensure we are doing this in the most effective way. The council is developing a programme that aims to support and enable it to work more collaboratively with residents, communities and other partners so we can develop and deliver more services 'with them' rather than 'to them'. This work will be developed and implemented over the next two years and will fit alongside the council Administration's commitment to working with communities and neighbourhoods.

Where we are now

- All major venues and destinations owned or managed by the council have Sustainability Action Plans or a robust Environmental Management System. This includes Brighton Centre, Royal Pavilion & Museums and The Dome. The plans focus on energy use, lighting, materials, water consumption and recycling.

- The Keep, which opened in 2013, is an archive centre that is an excellent model of sustainability and has created much better access for the public to historic materials.
- The city's council-run venue, the Brighton Centre, works with event organisers to help them improve the sustainability of their events, and there has been significant investment in the venue to reduce energy use, water use and increase recycling. The city's Jubilee Library is an award winning environmental building. Both could be trailblazers for planning and building sustainable venues and making existing ones as sustainable as possible.
- Outdoor events are a major part of the city's cultural offer to residents and visitors. Through its Sustainable Events Programme, the council works in partnership with organisers and promoters of events at council venues and at events on outdoor land owned by the council, encouraging and supporting them to make the most sustainable choices for their events meaning less waste, more local and sustainable food, using local suppliers and more people travelling by public transport.
- The city is internationally recognised for its arts and cultural offer and the crucial role the sector plays in driving the city's economy, identity and way of life. Creative entrepreneurs and artistic practitioners forge networks with each other and with organisations to develop innovative ways of working and create solutions. These networks reach out way beyond the city, nationally and internationally helping to disseminate good practice on a much larger scale than the city's compact size would suggest.
- Successful completion of Phase One of the Our Future City programme, a six-month conversation across the city that seeks to improve the lives and life-chances of children and young people through cultural engagement and creative skills.
- Community involvement and participation are central to designing and delivering cultural activities across the city. All Brighton & Hove engagement initiatives and programmes are developed in consultation with various community and participant groups. This ethos underpins all of the programmes, proposed and under development.
- Residents, community groups and voluntary organisations are active in supporting thriving neighbourhoods and communities across the city.

What we're going to do

What?	How?	How will we fund this?	When?
Development of Environmental Management System within the council	Develop the city's Sustainable Events Programme and maintain certification to the ISO 20121 events standard as well as maintaining the ISO 14001 Environmental Management Systems certification.	No additional cost - existing commitment on EMS (annual audit £1,200 pa). Led by Brighton Centre; Outdoor Events Team; International & Sustainability Team	Ongoing and regularly reviewed. Externally audited annually in October
Development of Sustainable Events Programme	Encourage event organisers to sign up to the Sustainable Event Commitment for outdoor events and conferences.	Managed by existing staffing resources. Led by Brighton	Ongoing

What?	How?	How will we fund this?	When?
		Centre; Outdoor Events Team; International & Sustainability Team	
	Ensure that council owned venues run by third parties have Sustainability Action Plans or Environmental Management Systems in place. Include this as a requirement of management contracts of these venues as they come up for renewal or retender.	Funded from existing budgets. Led by Culture, Procurement and International & Sustainability Teams	Ongoing
Support Environmental Management Systems and sustainable practice across the city	Support the Dome Estate and Amex Community Stadium in achieving more sustainable event practices by working towards ISO 20121	From Amex Community Stadium and Dome Estate budgets	Until March 2016
Community engagement, awareness raising and empowerment	Deliver phase 2 of Our Future City programme.	Arts Council England funding applied for	September 2015 to September 2018
	Deliver a programme of exhibitions on environmental issues, measuring impact and levels of awareness-raising in visitors.	Arts Council England Major Partner Museums and from existing budgets	Until May 2016
	A review of council engagement to provide a coordinated approach and style to fit with new ways of working.	Funded from existing budgets. Led by Communities Equality & Third Sector Team.	Until March 2017
	Through a commissioning process, modernise in-house community development, capacity building and community engagement work.		Until April 2020
	A staff development programme to ensure staff have the right skills to work with communities.		Until March 2017
	Implementation of a communities and council communication and information campaign to support community empowerment.		Until March 2017
	Review the Community Engagement Framework.		Until March 2016
	Develop a programme of volunteering to empower communities and enable public services to collaborate effectively to deliver city targets.		Until March 2018

Medium and long term actions

- Make Brighton & Hove a leader for sustainable events known for the sustainability credentials of its venues and attracting ethical and environmentally minded events from the UK and abroad.
- Development of a Biosphere brand based on the 'natural identity' of the area to create an information resource on the local environment.
- We will use the recommendations from the Fairness Commission 2016-17 to inform how we continue to work with communities in the city.

Equity and Local Economy

Creating an economy that supports equity and diverse local employment.

Where we want to get to

- To increase the number of businesses paying the Living Wage; to support and lead the development of a city campaign at a regional level which sees all Local Authority and District Council partners also adopting the Living Wage, and also promoting the benefits to business in Adur, Worthing, Lewes and Mid Sussex. To support positive public facing information about businesses who have adopted the Living Wage.
- We will implement a community banking framework which provides accessible small scale (and, into the future, medium scale) finance to communities, third sector organisations and small businesses. Applications based on a business case of sustainable social return on investment / supporting priority sustainable communities agendas.
- To support broad based entrepreneurial behaviour of citizens and residents through generic and targeted; and, where possible, free support services available to all. Where possible to create a level playing field; including incubation and low-rent or temporary spaces which cater for the identified level of start-up demand in the city (currently unmet). For shared SME spaces to be self-governing and adopt Community Interest Company, charitable or equivalent status, and be self-promoting.
- Explore, at an executive level, if equity and market-driven wage growth can be co-supportive and deliver fair wages; and, if so, how we can support this within planning directives.
- To promote and offer continuous personal development and improved access to employment for residents and key client groups, offering relevant support to bridge skills gaps for individuals, and via publicly available labour market information; and effective joint working with relevant partner organisations and the business community.
- To correctly identify strategic and micro-incentive barriers holding back the growth of key industries and associated occupations which can drive local value capture, and sustained market-led wage growth.
- To acknowledge health as a driver and constituent element of equity, and promote the benefits of a local food economy through support for enterprises and community groups involved in healthy food production and distribution initiatives. To support food banks in the city using Social Return on Investment (SROI) rationale, and community banking models. To achieve the UK's first 'gold standard' accreditation as a sustainable food city.

Where we are now

- The council has led by adopting the Living Wage for all employees. Over 200 employers have joined the council, and over 2,000 employees have had their wages raised (2014 review). The annual economic impact of the Living Wage has been calculated at up to £3.5 million, which in disposable income multiplier terms is enough to support up to 100 jobs in the area.
- The council has worked with the East Sussex Credit Union to establish 'Moneyworks'. The service includes funding for the credit union to provide community banking facilities such as loans, savings, e-cards and jam jar accounts as well as money advice and education.

- The Economic Development Team has commissioned a range of support workshops and services including: Ride the Wave in conjunction with the Chamber of Commerce; working with the LEP to deliver a grants programme of £1.79 million to support expanding SMEs who are creating employment; working to secure a City Deal with a focus on growth and innovation spaces and the refurbishment of New England House as a strategic incubation space. Worked with the University of Brighton and other key partners to establish the Green Growth Platform, currently supporting over 200 green entrepreneurs.
- The council has given focus to key strategic sectors in the Economic Strategy which, in turn, informs city and corporate priorities (and potentially planning decisions).
- The council and key partners have exceeded the City Employment and Skills Plan target of creating 6,000 new jobs over four years to 2014, and continue to prioritise key groups at risk of labour market exclusion (young people; those with no or low skills). The CESP is currently being refreshed to reflect changing conditions in the labour market.
- Employment land protections for existing sites and appropriate move on spaces for strategic key sectors have been prioritised in the Economic Strategy, and through planning directives.
- Sector specific workshops for food have been commissioned as part of the Ride the Wave series of business support workshops.

What we are going to do

What?	How?	£	When
Living Wage	Working with the Brighton & Hove Chamber of Commerce to further promote the Living Wage with particular focus in 2015-16 on encouraging employers in the Care Sector.	£5,000 contribution from existing council budget	2015-16
Entrepreneurial Behaviour	To work with partners in The Coast to Capital LEP area to develop a bid to help fund business support activities, including barriers to growth for successful new businesses.	Match funding from existing council budget	December 2015
Employment, Skills and Fair Wages	Support for better quality and higher paid jobs will be the focus of the emerging City Employment and Skills Plan 2015-20.	Funded from existing budgets	2015-20
Supporting financial inclusion	Implement a community banking framework to provide accessible small scale (and into the future medium scale) finance to communities, third sector organisations and small businesses.	Funded from existing budgets and by Department of Work and Pensions. Led by Communities Equality & Third Sector Team.	Until March 2017

Medium and long term actions

- To work towards greater devolution over powers that can support economic growth and equity agendas in the city.
- To galvanise and engage the local business community around equity issues in the city.

- To develop more robust governance structures around new and emergent geographies of economic development and regeneration.
- To develop strategic and sustainable long-term solutions to housing and transport issues in the city and city region (through some combination of the above).

Health and Happiness City

The council, partner organisations, communities and residents work together to support people to achieve and maintain a healthy life and to reduce health inequalities across the city.

This section includes areas of work overseen by the Health and Wellbeing Board. Since April 2013, local authorities have taken the lead for improving the health of their local communities.

Where we want to get to

- Brighton & Hove will make the most of community assets in order to improve health and wellbeing.
- Local services will be designed with physical and mental wellbeing in mind and local people will be involved in shaping wellbeing.
- Key outcome indicators include:
 - **Differences in life expectancies:** Improve inequalities between communities across the city through greater improvements in more disadvantaged communities.
 - **Emotional wellbeing:** Improved self-reported wellbeing
 - **Promote active living:** A greater proportion of physically active adults and fewer physically inactive adults; the proportion of children and young people using active travel as their main method of travelling to and from school.
 - **Age Friendly City:** To ensure our physical and social environment promotes healthy and active ageing and a good quality of life for older residents.
 - **Reducing fuel poverty and excess winter deaths:** Increase the number of residents supported through fuel poverty initiatives and impact of interventions on individuals' ability to keep warm and well during cold weather.
 - **Improve health and wellbeing through the workplace:** Number of workplaces who are engaged in supporting employees in improving their health and wellbeing.
- Create a healthy environment by avoiding dose and exposure to pollutants prejudicial to human health most especially nitrogen dioxide (NO₂) and fine particulate (PM2.5)
- Deliver the council's Air Quality Action Plan to improve prevailing air quality where people live and spend time in order to comply with nitrogen dioxide legal limits in the designated Air Quality Management Area.

Where we are now

- The public health outcomes framework includes four self-reported wellbeing indicators. The most recent results (2012/13) for Brighton & Hove show no significant difference from the national average in the proportion of residents with low scores for life satisfaction, happiness and valuing their activities. However, a significantly higher proportion report higher scores for anxiety. Rates of mental illness are higher than the national average, both for common disorders such as anxiety and depression and severe mental illnesses.
- The local City Tracker survey shows a high level of satisfaction with Brighton and Hove as a place to live.
- The Health and Wellbeing Strategy for Brighton and Hove has five key priorities: Emotional Health and Wellbeing (including Mental Health), dementia, smoking, healthy weight and nutrition, and cancer and cancer screening.

- The Brighton & Hove Happiness and Mental Wellbeing Strategy action plan has 21 aims including promotion of the “five ways to wellbeing”: connect; be active; take notice; keep learning; give. A network of local champions is working to raise issues relevant to mental wellbeing in their own spheres of work.
- Brighton & Hove City Council is a member of WHO Global and UK Network of Age Friendly Cities and is working towards making the city age friendly.
- Supporting external businesses to promote health and wellbeing, e.g. workplace NHS Health Checks were promoted until April 2015.
- The Public Health Outcomes Framework indicator for increasing use of outdoor space for exercise/health reasons reports that from March 2013 to April 2014 Brighton & Hove came into the best/highest quintile in England for the proportion of residents utilising outdoor space for health/exercise reasons. The Health Counts Survey 2012 found that residents from more deprived areas were less likely to use parks and open spaces (46% of sample) despite having relatively good access to green and open spaces in East Brighton.
- The council and Public Health are co-producing an action plan in response to the NICE guidelines (March 2015) on “Excess winter deaths and morbidity and the health risks of cold homes.” The proposed action plan will be presented to the Health and Wellbeing Board.
- The Green Bus Fund targeted CO₂ emissions by enabling the purchase of 13 diesel electric hybrid buses in 2012. More recently in 2014 the Clean Bus Transport Fund successfully reduced emissions of oxides of nitrogen from local bus fleets by retrofitting 70 double decker buses with exhaust abatement equipment to reduce oxides of nitrogen including NO and NO₂; as a result of feedback this fund has been extended to focus on taxis. This work by the council’s Environmental Protection Team helped deliver the bus Low Emission Zone in January 2015.
- The Environmental Protection Team and the Sussex Air Quality Partnership have delivered a successful pilot Air Alert and Heat/Cold Alert service to target vulnerable residents with information and advice.

What we’re going to do

What?	How?	How will we fund this?	When?
Promote active living	Deliver a programme to increase active living (including activities such as Active for Life, Healthwalks, Take Part)	Within existing budgets. Led by the council in partnership with providers	Ongoing 2015-17
	Increase Healthy Weight in Reception and Year 6 Primary School children.	Led by Public Health within existing budgets	Ongoing 2015-17
Improve health and wellbeing in the workplace	Promote the Workplace Wellbeing Charter to businesses, with advice and support to achieve charter status.	Led by Health Promotion Specialist within existing budgets	Ongoing 2015-17
Creating a healthy environment	Deliver the council’s Air Quality Action Plan.	Within existing budgets	2015-16

What?	How?	How will we fund this?	When?
Increasing use of outdoor space for exercise/health reasons	Mental wellbeing pilot initiative with South Downs National Park	£5,000 with matched funding from SDNPA Led by SCDA, SDNPA and the council.	2015-16
	Support several Mental Health Innovation Fund initiatives which target the use of outdoor space to promote mental health	Led by Public Health Specialist within existing budgets	Completed by 31 December 2015; impact evaluation spring 2016.
Reduce fuel poverty and excess winter mortality and morbidity within the city	Continue annual Brighton & Hove Warm Homes Healthy People Programme during winter months.	Funded from council Public Health budget	Runs November - March annually
	Warmth for Wellbeing project, providing holistic advice and support sessions to at risk patients at two GP Practices.	Pilot phase within existing budgets	Pilot completed September 2015 Evaluation to be completed November 2015
Creating a healthy environment	Aim to reduce the number of dwellings in areas that exceed nitrogen dioxide limits.	Managed within existing staff resources This work is led by the Environmental Protection Team	Ongoing 2015-17
	Undertaking Environmental Impact Assessments and commenting on pre-application planning decisions, prioritising impacts on the Air Quality Impact Areas. Work with Planning to mitigate the impacts of roadside residential location		
	Clean Vehicle Transport Fund for taxis: working towards retrofitting exhausts on mini-bus taxis/wheelchair accessible vehicles. Project scope includes track emission testing to test the efficiency of the project.	Department for Transport funded Work led by Environmental Protection Team	2015-16

Medium term actions

- Improve infrastructure for active travel and explore funding opportunities for low emission vehicles: buses, taxis, waste fleet and construction traffic.

Health and Happiness Council

This work is led by the Human Resources and Organisational Development Team, in partnership with internal teams and partners within the local and national community to create a sustainable and happy workforce.

Where we want to get to

- Create a healthy workforce.
- The council aims to keep staff fit at work.
- Improve health and wellbeing through the workplace.
- Reduce sickness absence through proactive, preventive measures.
- Staff say colleagues display our values and behaviours in the way they work with citizens, clients and each other.

Where we are now

- Staff wellbeing continues to be monitored through the annual staff survey. Results are discussed through focus groups/action planning to inform service business plans with agreed actions to address specific issues and embed cultural change.
- Delivery of attendance management training over the last year. 'Actions for Improvement' has been incorporated into Our People Data absence management information reports. Data is analysed and actions for improvement are identified at corporate and directorate level. This highlights the importance of management role and responsibilities in managing attendance and early intervention.
- Year one of our culture change strategy, Living Our Values Every Day, has been delivered. 74% of staff in our 2014 staff survey fed-back that they strongly agreed or agreed that our values were being lived by colleagues and managers.

What we're going to do

What?	How?	How will we fund this?	When?
Work in partnership with public health to improve the health and wellbeing of council staff	Continue to monitor staff wellbeing through the annual staff survey. Make improvements to staff survey process from lessons learned through feedback from across the organisation i.e. cultural change programme.	Existing budget	By March 2016
	Promote an organisation-wide approach to promoting the emotional health and wellbeing of all employees.		By March 2017
Provide easy access to wellbeing support	Working with internal Communications and Public Health, identify appropriate signposting and support for the wellbeing of staff through a review of council, occupational health and counselling provider information.	Existing budget	By March 2016

What?	How?	How will we fund this?	When?
Implement year 2 attendance management action plan	Provide support and guidance to management in terms of clarifying process. Improve/develop skills required to positively improve and manage attendance; create and communicate toolkits to support the process.	Existing budget	By March 2016
	Benchmarking with other local authorities.		
Implement year 2 of the culture change strategy	Focus on: <ul style="list-style-type: none"> • performance management with consequence • increasing the Organisational Development capability across the organisation 	If required additional funding will be sought from the Modernisation Delivery Board.	By March 2017

Medium and long term actions

- A reduction in sickness, to ensure the council is in the upper quartile of our comparator benchmarking authorities.



Brighton & Hove City Council Air Quality Action Plan

Following revised declaration of Air Quality Management Area(s) 2013

In Fulfillment of Part IV of the Environment Act 1995
Local Air Quality Management



Foreword

The issue of air pollution and the quality of the air that people breathe where they live is one of the city's principal challenges that demands continued action.

The World Health Organisation declared that diesel fumes are carcinogenic and states outdoor air pollution caused 3.7 million premature deaths worldwide in 2012¹. Public Health England has estimated whole population exposure to fine particulate matter across Brighton & Hove contributes 5 to 6% to all causes of annual mortality². More recent research suggests that the impact of Nitrogen Dioxide (NO₂) may also contribute close to 6% of mortality³ with a 33 % overlap with particles. In Brighton & Hove this is a strong influence on 175 deaths brought forward each year.

Invisible airborne pollution in the twenty-first century has been compared with smoking as it shares a strong influence on respiratory health, heart disease, wellbeing and life expectancy⁴. In some cases the influence of smoking and airborne pollution on health can cause cumulative effects which may be hard to distinguish. Evidence of how airborne pollution influences health has become increasingly robust⁵. As funding of public health services becomes much more challenging, prevention and avoidance is preferable to expensive treatment.

Active travel and healthy air quality in an urban environment where many thousands live and work takes on renewed importance. Tackling airborne pollution is a task that involves local authorities, central government, infrastructure planning, motor manufacturers, bus, taxi and haulage firms. Local people play a key part through the consumer choices and actions they take. Brighton & Hove is a dynamic and vibrant city with strong population growth and is the main part of the Sussex coastal conurbation, which also includes Worthing and Littlehampton.

Under part IV of Environment Act 1995⁶ the council has declared an Air Quality Management Area for non-compliance with the nitrogen dioxide legal limit⁷. This triggers a statutory requirement for the Local Authority to produce an Air Quality Action Plan (AQAP) that sets out a series of measures that aim to improve local air quality and comply with legally binding limits for nitrogen dioxide. Since its earliest inception in 2006 the Air Quality Action Plan has been aligned with successive versions of the Local Transport Plan⁸.

The Parliamentary Audit Committee on Air Quality⁹ has requested more action at a local level across the UK. In early 2015, Brighton & Hove's Air Quality Action Plan urgently requires new impetus and a set of vigorous measures that are determined to deliver improvement.

The EU and third parties such as Client Earth can take legal action against authorities that continue to exceed the law for outdoor air quality. The Council has mapped in detail which vehicle types contribute to unlawful nitrogen dioxide levels. Such evidence has helped the city win competitive grant funds from the Department for Transport for vehicle retrofits. Best available technologies are being incentivised in order to avoid exposure to harmful pollutants especially nitrogen dioxide and fine particles. Primary focus of this Air Quality

Action Plan is to eliminate nitrogen dioxide concentrations above limit values where people live. Policies to prioritise air quality will be justified by a detailed evidence based approach that can help attract further funding for implementing exemplar measures and strategies. Ambient and tailpipe monitoring can also be used to demonstrate improvements where this is achieved.

Executive Summary

Brighton & Hove City Council (BHCC) declared two Air Quality Management Areas (AQMAs) for unlawful exceedance of nitrogen dioxide on 30 August 2013. Both areas are entirely within the bounds of the unitary authority and predominately relate to local sources of pollution.

The city has had an Air Quality Management Area (AQMA) since 2004. The larger 2008-AQMA was mostly revoked. The latest declaration under part IV of Environment Act 1995 has triggered the statutory requirement for this Air Quality Action Plan (AQAP). Brighton & Hove's first AQAP was written in 2006 with a second edition and consultation in 2011. Since the earliest stages of Local Air Quality Management (LAQM) regime in the 1990s it has been acknowledged that air pollution in this city is dominated by emissions from road traffic. Over the past decade broader policy, investment and behavioural change has delivered some degree of change in transport and travel. Short urban journeys can be carried out by more sustainable active means such as a combination of walking, cycling and mass use of public transport.

Across Brighton & Hove approximately 6,000 residential dwellings adjacent to 25km of road length are at risk¹⁰ of exceeding the legal limit for nitrogen dioxide. The majority are found adjacent to identified sections of main roads, namely the A23, A2073-A270, A2010, A259 and the B2066 public transport corridor.

The action plan is to target the most polluting traffic emissions that happen in high density retail and residential areas that have limited land and space. The plan builds on a series of advanced measures that have been implemented since the city councils last Air Quality Action Plan. These include one of the UK's first bus Low Emission Zones, retrofits for buses and minibuses and review of taxi licencing policy. For 2015, electromotive infrastructure is in place to reduce reliance on the internal combustion engine for urban transport. The city has one of the busiest cycle lanes in England, the highest use of buses in the UK outside of London and the lowest car ownership in the UK outside of London (38% overall and >60% for the AQMA).

While making evidence based suggestions for improvements in air quality this action plan outlines how principals are interlinked with other areas of policy, most especially health and welfare, climate change, transport and road safety. The new Local Transport Plan 4 seeks to assess various issues and identify where a comprehensive approach could address a number of strategy objectives in the same places. Given that funds for intervention are limited geographical information is presented here to help justify priority locations for improvement. Similar to Defra's flood defence policy the best value for money is to identify residential areas at risk and provide environmental protection where the most people live.

Natural Law and Dedication

Any consensus of natural law relates to human nature (individual and communal) from which we can deduce consenting binding rules and ethical behaviour. The opposite would be to purposefully ignore or avoid a set of principles to the detriment of the populace. Policies must deliver substantial improvement in localised pollution levels in order to comply with credible definitions of sustainability. If not, the problem is passed on to future generations.

This action plan is dedicated to those people that suffer from respiratory illness and poor lung function which can compromise work and social opportunities throughout life.

Acknowledgements

Special thanks to:

Environmental Protection Team at Brighton & Hove City Council for their remit in collecting and changing air monitoring samples throughout the city for many years.

Thanks to Transport and Planning and Departments for their comments on this document.

Paul Nicholls for all his work to set up the Traffic Regulation Order required for Brighton & Hove's bus Low emission zone, which is one of the first of its kind in the UK.

Jon Anderson and colleagues at local engineering firm Ricardo. In 2014 Jon's team carried out some excellent work to better understand real time tailpipe emissions on the number seven bus route that passes through Brighton & Hove's air quality management area. Findings from this work can help quantify the effectiveness of retrofits and new vehicle purchases and how these vehicles perform for emissions in the new Air Quality Management Area and are nationally important.

Martin Harris, Director of the Brighton & Hove bus Company for his collaboration and professional advice on a range of initiatives to explore cleaner, more efficient operation of the 24-hour bus fleet.

Westminster City Council for delivering the UK's first Air Quality Management Area and in many ways taking the lead on advanced air quality action planning.

The London Borough of Walthamstow for all their pioneering work to improve NOx emissions from buses in Putney High Street and their dynamic monitoring evidence that has pushed for change.

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LAQM Glossary

Abbreviation	Explanation
µg/m ³	Concentration in micrograms per cubic meter
AAWT	Annual Average Weekday Traffic
ADMS	Atmospheric Dispersion Model System
AQ	Air Quality (ambient or outdoor)
AQAP	Air Quality Action Plan statutory requirement where an AQMA has been declared
AQMA	Air Quality Management Area declared under the part IV of the Environment Act 1995
AQS	Air Quality Strategy for England and devolved administrations
A-HGV	Articulated Heavy Good Vehicles (see graph labels in the appendix)
ATC	Automatic Traffic Counts
BAM	Beta Attenuation Monitor particulate monitoring method
BHCC	Brighton & Hove City Council unitary authority
BQPA	Bus Quality Partnership Agreements
BREEAM	Building Research Establishment Environment Assessment Methodology
CBTF	Clean Bus Transport Fund (DfT)
CCTV	Close Circuit Television
CEMP	Construction Environment Management Plan
CO ₂	Carbon Dioxide greenhouse gas
CH ₄	Methane greenhouse gas and transport fuel
CIL	Community Infrastructure Levy
CRT	Continuous Regenerating Trap for tailpipe mitigation of particulate
CSH	Code for Sustainable Homes
CVTF	Clean Vehicle Transport Fund (DfT)
DA	Development Areas
DECC	Department for Energy and Climate Change
Defra	Department for Environment Food and Rural Affairs
DfT	Department for Transport
DPF	Diesel Particulate Filter
EFT	Emissions Factor Toolkit
EGR	Exhaust Gas Recirculation
EIA	Environmental Impact Assessment
EPR	Environmental Permitting Regulations
EU	European Union or EC European Commission
Euro	European vehicle tailpipe emissions standards set out for light

Standards	and heavy vehicles
Flywheel	Flywheel regenerative breaking or KERS
GIS	Geographical Information Systems
Greenhouse gas	Gas in the atmosphere that can absorb outgoing radiation
HGV	Heavy Goods Vehicles
IPPC	Integrated Pollution Prevention Permits for industry
JAAP	Joint Area Action Plan that includes development area covering Adur and BHCC
JSNA	Joint Strategic Needs Assessment multidisciplinary health report
KERS	Kinetic Energy Recovery System
LA	Local Authority
LAQM	Local Air Quality Management
LAT	Local Action Team
LDF	Local Development Framework
LDV	Light Duty Vehicle (van or pick up)
LEP	Local Enterprise Partnership
LES	Low Emission Strategy
LEZ	Low Emission Zone
LSTF	Local Sustainable Transport Fund
LTP4	Local Transport Plan 4
mg/m ³	concentration milligrams per cubic meter
MOT	Ministry of Transport test for vehicles since 1991
NB	Northbound Carriageway
N ₂ O	Nitrous Oxide greenhouse gas
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen including NO and NO ₂
NPPF	National Planning Policy Framework
NSIP	National Significant Infrastructure Project
O ₃	Ozone near ground level
OLEV	Office of Low Emission Vehicles
OME	Original Manufacture Equipment (especially vehicles)
PAH	Poly Aromatic Hydrocarbons
PEMS	Portable Emission Monitoring System
PM ₁	Particulate Matter less than one micron or nano-particulate
PM ₁₀	Particulate Matter less than ten microns
PM _{2.5}	Particulate Matter less than two and a half microns
ppb	concentration parts per billion
ppm	concentration parts per million
R-HGV	Rigid Heavy Good Vehicle (more common than articulated)
RHI	Renewable Heat Incentive
ROC	Renewable Obligation Certificates
S106	Section 106 Funding under Town and Country Planning Act 1990
SA	Special Areas
SB	Southbound Carriageway
SAQP	The Sussex Air Quality Partnership sometimes referred to as Sussex Air

SCR	Selective Catalytic Reduction NO _x tailpipe abatement
SCRT	Selective Catalytic Reduction Technology used in conjunction with CRT
TEA	Triethanolamine in water method for NO ₂ diffusion tubes
TEOM	Tapered Element Oscillating Microbalance particulate monitoring method
TG(09)	LAQM Technical Guidance 2009
TRO	Traffic Regulation Order
ULSD	Ultralow Sulphur Diesel (10ppm since Dec-2007)
USA	Updating Screening Assessment air quality report
VED	Vehicle Excise Duty
VOSA	Vehicle Operator Services Agency
WAV	Wheelchair Accessible Vehicles

1 Introduction

Brighton & Hove is a vibrant centre for entertainment with a strong and diverse restaurant scene, an active nightlife economy and a burgeoning digital sector. The city has a successful track record with outdoor event management. Tourism attracts ten million visitors a year. Brighton & Hove's Air Quality Management Area has one of the highest population densities in the UK at close to ten thousand people per square kilometre (km²).

The Universities of Sussex and Brighton continue to grow and invest and develop in the city. Brighton & Hove is the southern pin in coast to capital Local Enterprise Partnership and has eight train stations. Bus use has doubled between 1994 and 2014 and commercial viable routes frequent the retail hub every few minutes.

For centuries coastal Sussex was sparsely populated by small farming and fishing villages. 175 years since the arrival of the railway urban growth has caught up with Britain's principal industrial areas.

The Brighton & Hove - Worthing - Littlehampton conurbation continues to show population growth above the national average.

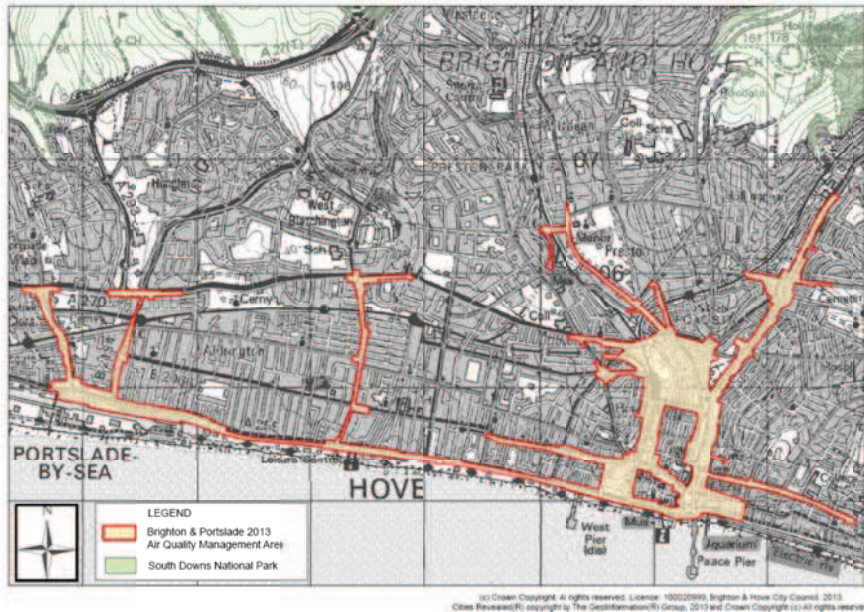
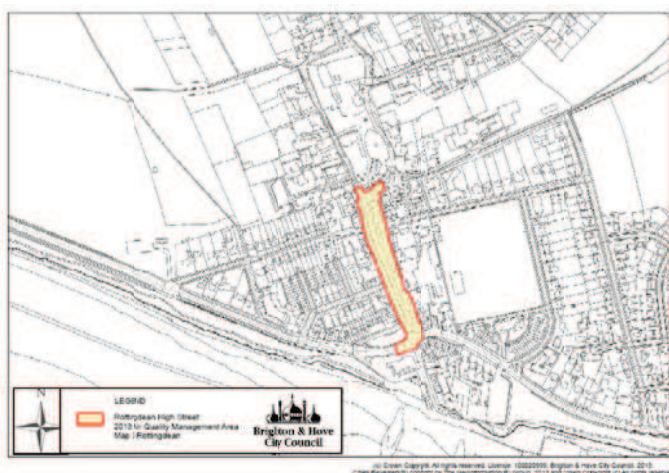
Brighton & Hove is likely to reach 300,000 around or shortly after 2020 and the continuous built-up area will surpass half a million. This new urbanisation has become an increasingly important part of England's economy.

The Greater Brighton City Deal signed with government in 2014 is to unlock £170 million pounds of funds for vital projects across the city region. The aim is create 8,500 local jobs and fulfil the city's potential as a higher performing economy.

Brighton & Hove area makes up part of the South Downs National Park. This is the UK's most recent national park designation (2010). Across the majority of the administrative area, air quality is very good and many families have moved to the Downs and Coast within the Brighton & Lewes Biosphere reserve for a better quality of environment. Since 2000 it has been established beyond any doubt that poor local air quality that exceeds European and English legally binding standards is due to road traffic. Concentrations of Nitrogen Dioxide (NO₂) vary substantially ten metres (thirty feet) back from narrow or busy roads. That said many residential and retail areas reside within a few metres (one to fifteen feet) of confined stopping-starting transport corridors. This is recognised as a serious issue for environmental health, most especially due to respiratory exposure to a mixture of airborne pollutants in gaseous and particulate phases.

1.1 The Air Quality Management Area (AQMA)

The centre of Brighton & Hove, parts of Portslade and Rottingdean are declared as an AQMA under part IV of the Environment Act 1995. The declaration is explicitly for non-compliance with short and long term nitrogen dioxide concentrations set out in the air quality strategy for England. [Figure 1](#) and [Figure 2](#) show the extent of the AQMA declared in 2013.

Figure 1 Brighton & Hove and Portslade Air Quality Management Area**Figure 2 Rottingdean Air Quality Management Area**

The legally binding concentrations set for annual and hourly periods are deemed to be acceptable in terms of what is known about the direct health effects of each pollutant¹¹. The annual average standard that is: $40 \mu\text{g}/\text{m}^3$ (forty micrograms per cubic meter), cannot be exceeded for both NO_2 and PM_{10} . The hourly standard for NO_2 is $200 \mu\text{g}/\text{m}^3$ and cannot be exceeded more than eighteen times in a calendar year. The 24-hour average of $50 \mu\text{g}/\text{m}^3$ PM_{10} (Particulate Matter less than ten microns) cannot be exceeded more than 35 days in the year. While the Local Authority's statutory duties are complied with for PM_{10} standards, further work is required to assess against new $\text{PM}_{2.5}$ objectives (Particulate Matter less than 2.5 microns)¹⁶.

1.1.1 History of Brighton & Hove's Air Quality Action Plan

The city has had an Air Quality Management Area (AQMA) since 2004. The AQMA was most recently modified in August 2013. At that time 75% of the area (700 hectares) was revoked. Improvement in nitrogen dioxide concentrations were recorded by continuous analysers over a decade at Hove Town Hall and for three years at Beaconsfield Road

(north of the railway viaduct). This most recent AQMA¹² declaration under part IV of Environment Act 1995 has triggered statutory requirement for this action plan.

Brighton & Hove's first Air Quality Action Plan was written in 2006 with a second edition available for consultation in 2011. Since the earliest stages of Local Air Quality Management (LAQM 1990s) it has been acknowledged that air pollution in this city is dominated by emissions from road traffic. In recent years central government has praised the LAQM regime for determining where pollutants exceed the standards, but has criticised it for not improving local pollution enough. From the beginning, the Air Quality Action Plan has been linked with the Local Transport Plan (LTP). The AQAP presents results from monitoring and modelling that presents evidence of where nitrogen dioxide is most severe and this can be used to guide transport priorities and projects.

1.1.2 Air Quality Action Plan Progress

Since the last action plan was edited there has been considerable progress in implementation of local measures to improve air quality. The bus low emission zone has been implemented with a Traffic Regulation Condition (TRC) in 2015. Almost one million pounds has been won from the Department for Transport (DfT) for bus and minibus taxi retrofits. Local engineering firm Ricardo has carried out on board testing of local buses to assess real time emission rates along the number 7 bus route. Press and TV have been increasingly interested in the actions the city council is taking to improve local air quality and public awareness of health and environmental issues are on the increase. The revised strategy builds on past LTP initiatives to promote more sustainable travel choices. The new Air Quality Action Plan takes account of new understanding of the local traffic dynamic including tallies and the ratios of bus, freight, taxi, van, diesel car and petrol car traffic. Also considered in detail is the spatial distribution of exhaust pipe emissions relative to confined spaces and ambient concentrations.

2 Health Impacts

Recent research shows that airborne pollution has direct impacts on human health⁵. Poor air quality can reduce quality of life, causing health problems especially in vulnerable people such as neo-natal infants, young children and adults with sedentary lifestyles, the elderly or those with existing conditions. Exposure to pollution during pregnancy can slow lung development and contribute to low birth weight¹³. The evidence shows linkages between dose and exposure to air pollution and effects on circulatory and respiratory health such as COPD (chronic obstructive pulmonary disease), asthma, reduced lung function, bronchitis, pneumonia, hypertension and lung cancer. New research from the University of London suggests nitrogen dioxide has independent health effects from particles and linkages with diabetes, heart disease, stroke and reduced lung growth in children. Professor Frank Kelly, lead scientist on air quality recently said "Breathing and eating keep us alive; we would not eat contaminated food we know is bad for us, why breathe contaminated air that is also bad for us?"¹⁴

Modern sanitation was a major breakthrough for environmental health as it massively reduced the risk of exposure to cholera, typhoid and e-coli. A similar societal shift now needs to happen in urban areas to separate combustion emissions being discharged to

the actual environment where thousands of people, live, sleep, work, and travel. Repeated exposure to very fine microscopic particles that penetrate deep into the respiratory tract and enter the blood stream can cause myriad health problems and serious risk of death.

That said local monitoring shows nitrogen dioxide is now the most plentiful pollutant (harmful to health) in the local environment. Diesel particulate traps can produce extra NO₂. NO₂ emissions can be eight times higher than fine particles. In the ambient roadside environment NO₂ can be many more times concentrated than Particulate Matter (PM_{2.5})¹⁵. Pollution in the gas phase is more likely to ingress into vehicles and buildings where it will be inhaled. Mitigation of particles to the detriment of nitrogen dioxide is not a solution moving forward. Since pollutants in the gas and particulate phases are often emitted from the same sources and mix within urban streets it is this mixture of pollutants that is most likely to impact on health.

International evidence suggests population life expectancy is shorter in areas with higher pollution. The Air Quality management area is a health deprivation hotspot and further details on how this compares with whole city and England averages are given in section 6.

2.1 Health Effects of Nitrogen Dioxide

Nitrogen dioxide is a respiratory irritant associated with both acute (short-term) and chronic (long-term) effects on human health. Repetitive exposure can inhibit lung tissue growth and repair increasing the risk of poor respiratory health later in life. Some of the research evidence suggests chronic exposure can make the respiratory tract more susceptible to disease including allergens. Children under six (especially infants born early) and people with existing respiratory illnesses such as asthma and bronchitis are more vulnerable to repeated inhalation of nitrogen dioxide. Nitrogen Dioxide (NO₂) and Nitric Oxide (NO) are both Oxides of Nitrogen (NO_x). In the atmosphere oxides of nitrogen also lead to the formation of other pollutants such as ground level ozone and nitrates and particulate matter.

All combustion processes in air produce NO_x emissions. Heat during combustion breaks the binary bonds of ambient Oxygen molecules (O₂) releasing energy and allowing freed Oxygen atoms to oxidise plentiful atmospheric Nitrogen. 25 to 55% of NO_x emissions from vehicles are readily formed as nitrogen dioxide prior to discharge from the tailpipe. This exhaust gas is referred to as primary NO₂. The remaining Nitric Oxide will convert to nitrogen dioxide, in the atmosphere mainly as a result of reaction with ozone in the presence of sunlight. It is nitrogen dioxide that is associated with adverse effects upon human health.

In theory NO_x emissions can be mitigated by after-burning devices or recirculation of exhaust gasses.

2.2 The Committee on the Medical Effects of Air Pollutants (COMEAP)

The committee on the Medical Effects of Air Pollutants (COMEAP)⁵ is a group of independent experts that provides guidance to government. COMEAP advises on the health impacts associated with exposure to air pollution such as; shortening of life span,

worsening of respiratory disease (COPD, asthma and bronchitis), acute symptoms (such as wheezing, coughing and respiratory infections) and increased risk of cancers.

2.3 Health Directorate in Local Authorities

Elements of the National Health Service have now transferred to the City Council. This has helped integrate wider determinants of health into City Council planning, reporting and delivery. Public Health Outcome Framework compiled by the Department of Public Health includes an indicator for air quality and local authorities are expected to plot progress moving forward. The framework includes a benchmark tool which compares the fraction of mortality attributed to long term fine particulate exposure for each local authority. The framework suggests that between 5 and 6% of mortality in Brighton & Hove is attributable to long term exposure to PM_{2.5}; a slightly higher level compared with the national average. However the framework is not married up with the findings of Local Air Quality Management regime (LAQM Environment Act 1995) including the detailed mapping of pollutant concentrations over the local authority area.

Over the past two years Brighton & Hove has included a section on air quality in the Joint Strategic Needs Assessment (JSNA, Health and Social Care Act 2012) and the Annual Report of Public Health. The JSNA integrates multidisciplinary working to deliver priorities to improve health and wellbeing outcomes for local communities. The aims are to promote greater inter departmental collaboration between local authority services to help insure depleted resources are targeted where they will achieve the most benefit. The air quality remit within the Environmental Protection Team is now part of the Directorate of Public Health and City Council staff jointly work with those from the NHS.

3 Policy and Legal Framework

3.1 National Strategy

Details of the English Air Quality Strategy (AQS) are set out in the previous local Air Quality Management Report i.e. the 2014 Progress Report¹⁵. The national AQS is partly based on European Directives to control levels harmful to human health. EU Directive 2008/50/EC on ambient air quality simplified and consolidated the previous directives.

The EU air quality directive became English law under Part IV of the Environment Act 1995 which required publication of the AQS and established LAQM. Where the AQS standards for pollutants are not being met the local authority has statutory duty to declare an Air Quality Management Area (AQMA). Eighteen months after declaration of a new AQMA the authority should deliver an Air Quality Action Plan (AQAP) setting out how air quality will be improved especially for the area(s) and pollutant(s) identified.

Air quality standards have been set with regard to the public health impacts of exposure to pollutants. In 2010, annual and hourly objectives for nitrogen dioxide in ambient air became legally binding standards. Since that time, many towns and cities across the UK and Europe continue to exceed the same standard. This action plan presents in detail where nitrogen dioxide compliance is an issue within the local authority area and

apportions contributing emission sources. At the same time the council has a statutory requirement to have a Local Transport Plan (LTP).

A comprehensive set of policy measures is presented for how improvement can be achieved with the aim of compliance with nitrogen dioxide at $< 40 \mu\text{g}/\text{m}^3$ throughout the city as soon as practically possible. Failure to meet the legally binding standard after 2015 could lead to the government / local authority facing legal action from various parties. In that scenario environmental health risk becomes a business and legal risk. It is therefore increasingly important that the local authority does all it can to reduce nitrogen dioxide concentrations that are more than twice the legal standard in some areas. At the same time consideration is given to the levels of fine particulate matter $\text{PM}_{2.5}$ at roadside and at background locations relative to the 2020 objective¹⁶.

3.2 Urban Access Regulations

Historical cities, towns and villages can struggle with liveability, congestion, air polluting traffic noise and accessibility. In the worst case scenario this is not attractive to residents, business or tourists. Local people want to improve the environment where they live. There are many ways to tackle these issues, including reduction in the number of short car journeys, promotion of walking and cycling, public transport priority, car share, car clubs and taxis, best planning practice, low emission vehicles, coordination of traffic light phases and parking charges that are proportional to urban density and demand.

Cities in many countries now charge for vehicles to enter a designated area¹⁷. Low Emission Zones (LEZs) only allow vehicles that pass determined standards into an area and the euro emission standards strive to improve with time¹⁸. Physical restriction schemes limit vehicles by height or weight and where routes have limited load bearing or low bridges avoidance routings are signposted and known to navigations systems and the haulage industry. The key access regulations limit road traffic to short stay loading or access. As example new transport scheme limits vehicle access to Brighton's Old Town¹⁹ and the city has one of the UK's first bus Low Emission Zones²⁰. Locally compliance with air quality standards in an air quality management area is paramount.

3.3 Exhaust Emissions and MOT

The Road Vehicles (Construction and Use) regulations govern the standards to which new motor vehicles must be manufactured, including standards for exhaust emissions and particulate traps. From 2014 MOTs check to see if the Diesel Particulate Filter (DPF) canister is present. This is applicable where the vehicle's original manufacture emission certificate relies on an effectively working filter²¹. It can be an offence to tamper or remove the DPF. A number of companies offer removal of DPF leaving an empty case in situ on the exhaust line. Such illegal actions may have compromised the effectiveness of the London Low Emissions Zone (LEZ) to mitigate fine particulate. That said the government requires a review of its policy in this area because DPF without insulated selective catalytic reduction is likely to be worse for urban emissions for nitrogen dioxide from diesel vehicles.

Vehicle exhaust tests have been included in the MOT since 1991. At that time the Ministry of Transport test was driven by road safety considerations and was nothing to do with air

quality. In practice the simple (not very stringent) test can be passed legally by a garage, but out and about in the real world the vehicle can continue to contribute to pollution (visible or invisible). The Vehicle & Operator Services Agency (VOSA) carries out roadside tests on heavy vehicles and can ban further use of a smoking vehicle until it has been adjusted or repaired. However, only the police have the powers to stop a vehicle on the road if it is producing so much smoke as to be a hazard to other drivers. Historically this power relates to road safety; to insure no fire risk and reasonable visibility for all road users. This power does not directly relate the airborne pollution impact on road users or those living adjacent to the road.

3.4 Vehicle Excise Duty and Fuel Duty

Diesel fuel used for transport has better Miles per Gallon (MPG) and lower carbon dioxide (CO₂) emissions compared to petrol. For this reason it has been actively encouraged by government through company car tax breaks and Vehicle Excise Duty (VED). Due to the sometime discrepancy between forecourt prices of diesel and petrol fuel savings are unlikely to be realised except for the highest mileage vehicles. Diesel vehicles make up the vast majority of high mileage vehicles and therefore the most frequent road users. From 2011 the UK sale of diesel cars outstripped the sale of petrol cars for the first time. Fuel consumption by diesel cars and vans in Brighton & Hove has surpassed that of petrol cars and vans. We estimate that >60% of frequent private car and van usage is diesel; a substantial increase since 2005. On most roads links in the AQMA; HGV, bus and car diesel fuel usage dominates and petrol vehicles are the minority. Emissions of oxides of nitrogen and fine particles from diesel engines have been considerably higher than for an equivalent petrol car. The refining of diesel to extract sulphur from crude oil is an energy intensive process. In reality it has been difficult to quantify the carbon benefits of a modal shift to diesel fuel. MPs have publicly acknowledged that marketing diesel engines as environmentally friendly was the wrong policy and this has not helped local authorities meet their air quality targets¹⁴. This action plan welcomes a review of vehicle excise bandings to take account of oxides of nitrogen as a matter of urgency. This would help and encourage the public to make informed choices when buying vehicles. In the past five years fuel duty for motorists has declined in real time as the cost of rail fares has increased substantially. The action plan recommends that fuel duty is linked more closely with roadside environmental impact and tax breaks and incentives are encouraged for new and efficient petrol and hybrid.

3.5 Euro Six Emission Standard

The EU expects great improvements with NO and NO₂ emissions with the new euro-6 diesel standard that applies to all new vehicles from 2014¹⁶. It is not impossible to produce diesel vehicles with low emissions of oxides of nitrogen. However, since the 1990s ambient monitoring and tailpipe testing have taught us not to expect silver bullets from new euro emission standards. The majority of vehicles on the road are likely to remain pre-euro six diesels well into the 2020s. In some places, emissions from euro five diesels are significant contributors to high levels of ambient nitrogen dioxide. Delivery of truly low NO_x diesel engines and exhausts at 5 mph is likely to be difficult in practice. The challenge arises because many AQMAs have changeable stop, start, traffic environments. These are exactly the places where it is difficult to optimise diesel tailpipe exhaust line temperatures

and the effectiveness of abatement equipment to stop both NO and NO₂. In essence this is the reason why roadside NO₂ levels continue at concentrations above the legal standard (40 µg/m³). NO_x vehicle fleet tailpipe emissions (NO and NO₂) need to reduce by three-quarters in order to see a much more modest reduction in outdoor concentrations of NO₂. Vehicle retrofits have sought to insure optimisation of exhaust pipe temperatures on local drive cycles and it is important that original manufacture equipment has actions in place to do the same.

3.6 Vehicle and Operator Services Agency

Smoky buses, coaches and lorries can be reported to the VOSA (0870 606 0440). Following a complaint the operator is notified and requested to clean up their vehicle. There is currently no mechanism for reporting privately owned cars and vans.

3.7 Parliamentary Audit Committee on Air Quality

A number of times in recent years the House of Commons Parliamentary Audit Committee has met and published reports and updates on air quality in the UK⁹. The reports have included evidence which estimated the number of UK deaths attributed to air pollution at a national level. Local Authorities have been urged to do more to tackle poor air quality in their areas. The Localism Act reflects Government's desire to see a more local focus and responsibility for air quality. This makes sense given that most nitrogen dioxide AQMAs have strong associations with emissions from local transport that are typically linked to one or two transport corridors or a network of connected town centre streets.

3.8 Local and Regional Strategies and Mechanisms

3.8.1 The Local Transport Plan (LTP)

LTP4 (2015) acknowledges that air quality is a strategic issue that can be addressed through investment and behavioural change with cross over to the transport plans of East and West Sussex. This AQAP can reflect the new strategy and assist in identifying and developing possible interventions. Traffic and dispersion modelling can also assist in testing solutions. Existing policy also guides priorities. LTP4 includes a number of high level goals that reflect the broad range of outputs that the government expects local transport to support and deliver when investing capital grant funding. These are:

- Grow the Economy
- Reduce Carbon
- Increase Safety & Security
- Provide Equality, Mobility & Accessibility
- Improve Health & Well-being
- Enhance the Public Realm
- Encourage Respect & Responsibility

The goals are consistent with earlier inceptions of LTP and are supported by more detailed, transport objectives consistent with local strategies that have been reviewed and/or approved by the council. LTP has helped to assist quality bus partnership, better

bus corridors, the green bus fund, smart transport ticketing and improvements to the urban realm for city parks and concourses, pedestrians and cyclists.

Data and statistics such as the city's regularly updated address gazetteer (more recent than the last census) traffic and pedestrian counts and the city's annual Joint Strategic Needs Assessment can help guide priorities. Road traffic emission assessment, dispersion modelling, air monitoring and source apportionment will become key evidence streams moving forward. The AQAP recommends that evidence submitted can help support a mandate for the transport authority to implement intervention measures. In some cases temporary trialled traffic diversions may save time and costs and assist understanding and acceptance of how the AQMA bottlenecks can be eliminated.

Compliance with air quality law is a criterion that is distinguishable from carbon reduction and is more specific than a general health and wellbeing strategy. It is recommended that recent information such as the detailed appraisals presented in this report guide future government transport priorities. We urge the Department for Transport supported by Defra and others to update their overarching transport goals so that air quality assessment and improvement is a paramount requirement for transport schemes in AQMAs.

Where transport schemes seek to alter the primary transport corridor(s) in an AQMA a detailed air quality assessment shall offer guidance to proposed changes with the express aim of reducing concentrations of the declared pollutant. It will not be sufficient to demonstrate no adverse impact. Predicted improvements in severity and extent of pollution will need to be quantified scientifically. Transport schemes are often devised to address a number of inter-related wider issues rather than a single problem. Final decisions can therefore reflect a balancing of outcomes against initial objectives.

3.8.2 The Sussex Air Quality Partnership

The Sussex Air Quality Partnership (SAQP)²² comprises all the Local Authorities in Sussex, The University of Brighton & Hove, the University of Sussex and the Environment Agency. The group can be a forum to discuss the impact of developments across local authority boundaries. Recently the bus company have participated in meeting and discussions about Air Quality Action Plan measures. The group has organised initiatives such as the Sussex Low Emission Strategy, Air Alert a new network of rapid electromotive charging points and the Sussex Air Quality and Emissions Mitigation Guidance²². The future funding of the group is to be decided.

3.8.3 Planning Policy

Air quality is a material consideration for the planning process under the National Planning Policy Framework (NPPF). The Submission City Plan Part One²³ sets out the overall visions and objectives for spatial planning and new development in Brighton & Hove to 2030. The following strategic objectives are relevant to the AQAP:

- SO11 Principles of healthy urban planning and ensures pollution is minimised and actively seek improvements in air quality. The objective aims to provide an integrated, safe and sustainable transport system to improve air quality, reduce congestion, reduce noise and promote active transport

- SO22: Promote and Provide sustainable transport across the city apply the principles of health urban planning... Ensure pollution is minimised and actively seek improvements in water, land and air quality and reduce noise pollution

The City Plan Part 1 identifies a series of Development Areas (DA) and Special Areas (SA), the following are concurrent with the AQMA as follows:

- **DA1 Brighton Centre and Churchill Square Area** – an identified priority for the area is to improve local air quality
- **DA3 Lewes Road Area** – an identified priority for the area is to improve local air quality
- **DA4 New Quarter England and London Road Area** – an identified priority for the area is to improve local air quality
- **DA5 Eastern Road and Edward Street Area** – an identified priority for the area is to improve local air quality
- **DA6 Hove Station Area** - paragraph 3.70 of the supporting text reference air quality issues at the junction of Sackville Road and Old Shoreham Road.
- **DA8 Shoreham Harbour Area** – reference in the relevant area priorities to the need to improve air quality
- **SA1 The Seafrost** – an identified priority in the policy is to improve air quality along A259
- **SA2 Central Brighton** – recognises in the policy the need to improve air quality (see paragraph 2.115 also).
- **SA3 Valley Gardens** – recognises in the strategy the need to improve air quality

The following city wide policies address air quality issues:

- **CP8 Sustainable Buildings** - k) all new development are required to demonstrate how they reduce air, land and water pollution. Policy also encourages higher standards of energy efficiency and reduction in greenhouse gas emissions
- **CP9 Sustainable Transport** - sets out the priorities and measures to manage maintain and improve travel and movement. Paragraph 4.97 recognises that addressing air quality issues caused by road transport is a key priority.
- **CP13 Public Streets and Spaces** - includes a reference to tree planting in the policy although this does not directly reference air quality
- **CP18 Healthy City** - promotes the role of planning in supporting healthier lifestyles and reducing health inequalities and air quality is identified in paragraph 4.196 as a a determinant of health. Health impact assessments or ensuring developments maximise positive impacts on health would require issue of air quality to be addressed by developers.

Policy **SU9 Pollution and Nuisance Control**; the adopted Brighton & Hove Local Plan sets out the detailed development management policy regarding air quality. Development that may be liable to cause pollution and or nuisance to land, air or water will only be permitted where:

- Human health and safety, amenity, and the ecological well-being of the natural and built environment is not put at risk
- It does not reduce the planning authority's ability to meet the Government's air quality targets
- It does not negatively impact upon the existing pollution and nuisance situation

All proposed developments that have a potential to cause pollution and neighbourhood nuisance, will be required to incorporate measures to minimise the pollution and nuisance and may invoke the need for an Environmental Impact Assessment (EIA). Where appropriate, planning conditions will be imposed and / or a planning obligation sought in order to secure the necessary requirements. Planning permission will only be granted for development on a site adjacent to an existing pollution / nuisance generating use and / or within an air quality 'area of exceedance' or potential 'hot spot' where:

- The effect on the proposed development, its occupiers and users will not be detrimental; including where a development may introduce future residence to an area of known poor air quality
- The proposed development will not make the pollution and / or nuisance situation worse and where practicable, helps to alleviate the existing problem(s) by avoiding adverse change

3.8.4 Construction Traffic

In addition to operational impacts of new development an assessment or commentary is required in order to minimise the impact of construction traffic via Construction Environment Management Plans (CEMP). In most cases there are few routing options to and from construction sites or consolidation centres. Avoidance of the AQMA whilst preferable may be unrealistic. Construction traffic must minimise its impacts on residents (emissions, noise and vibration). Agreed route plans must have regard to roadside nitrogen dioxide concentrations where people live; the AQMA roadside dwelling counts in the area exceeding the Air Quality Strategy and the available volumetric spaces listed in this report. In some cases A-roads may not be the best environmental option.

From 2015 major construction sites in or adjacent to the AQMA have building periods ranging from one summer to ten years. In line with the aims of the Considerate Constructor's Scheme (CCS)²⁴ and the office of the low emission vehicles it is recommended that funds are explored for initiatives for lower emission HGV. This could enable cleaner vehicles shuttling to construction sites or consolidation centres potentially implemented via; assisted purchase of new trucks, hybrid, ethanol or vegetable fuel or funded retrofits to at least euro-6 standard.

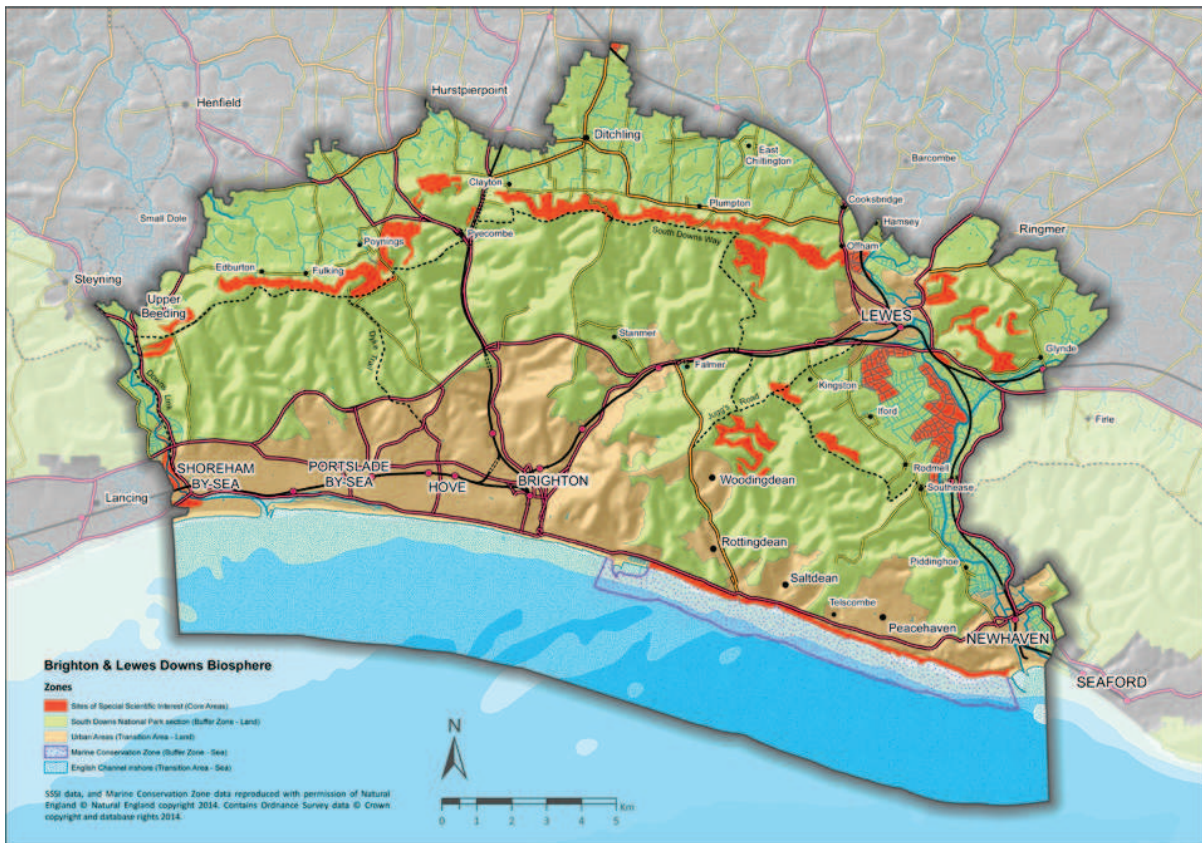
3.8.5 Brighton & Lewes Biosphere and One Planet Concept

Brighton & Hove has been designated a One Planet City²⁵. The city's Sustainability Action Plan received accreditation from sustainable development charity Bioregional for its plans to enable residents to live well within a fairer share of the earth's resources. One planet's ethos encourages low carbon forms of transport to reduce and avoid

emissions and the need to travel for example home working and flexible commuter times.

The Biosphere Reserve is a “green lung” for the city and includes protected habitats for wildlife and for people as part of a work and recreational life balance. The area of the biosphere with its designated natural sites and diverse habitats is presented in Figure 3.

Figure 3 The Brighton and Lewes Biosphere



The Brighton and Lewes Biosphere aims to create a future where it’s easy, attractive and affordable for all of us to lead happy and healthy lives, using a fair share of the earth’s resources with access to open environments and nature for leisure, recreation, physical activity and a space for respite and better mental health.

Brighton & Hove City Council is working towards shaping ‘One Planet Living’ to boost the local economy while becoming more resistant to price hikes in energy, fuel and food, and foster a more equal and healthy city.

The Air Quality Action Plan compliments One Planet Living and shares harmonious objectives for waste reduction, energy efficiency and renewable energy. However statements in the Air Quality Action Plan go further, as follows:

- Low carbon vehicles deployed to the Air Quality Management Area must prioritise ultralow emissions of oxides of nitrogen and fine particulate matter
- Any parking exemption for low carbon-taxed vehicles must consider local emissions of oxides of nitrogen and particulate

- Low emission zones require best available techniques for emission standards for oxides of nitrogen and fine particles
- Anti-idling vehicle policy
- Detailed emission, dispersion modelling and space assessments to determine priorities for emission reduction along identified AQMA transport corridors
- Action plan measures prioritised by transport corridor outlined in section 7.
- The BREEAM code for sustainable homes recommends low NO_x emissions from boilers
- The government has withdrawn the Code for Sustainable Homes (CSH) and will be dealing with some aspects of the code through the Building Regulations
- The Air Quality Action Plan seeks to go further avoiding combustion processes in the AQMA and aims for ultralow NO_x emissions from boilers on new developments
- Commercial solid fuel burning including biomass is not an appropriate solution in high density areas of the city especially the AQMA and the Smoke Control Areas (SCA declared under the Clean Air Act 1968)

3.8.6 By Laws

Some local authorities have adopted specific by-laws to control sources of air pollution and nuisance. However, these can be hard to enforce as surveillance is often difficult and the culprit hard to track down. Often the nuisance has ceased by the time an official can get to the scene. Brighton & Hove has no such duty in place. Oxides of nitrogen emitted by road traffic are invisible and can be odourless.

3.8.7 Fixed Penalty Notices

Where an Air Quality Management Area (AQMA) has been declared, local authorities in England and Wales can apply for powers to carry out roadside emissions testing under the Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002.

Authorised and adequately trained persons can then carry out an emissions test on a vehicle being driven through or about to pass through, an AQMA and if an offence has been committed a fixed penalty of £60 can be issued. A driver can also be required to submit their vehicle to a test and to produce a test certificate. If the fixed penalty is not paid within the given timeframe it can rise to £90. The council has not enforced this regulation to date and would prefer to seek more substantial funds from the department of transport and the office of low emission vehicles to test public service vehicles such as buses, taxis, emergency services, and also retail haulage and construction traffic.

3.8.8 Stationary Idling

Fixed penalty notices of £20 can also be issued by an authorised local authority officer in England, Wales and Scotland to motorists who leave their engines running unnecessarily (e.g. waiting outside school/station), having asked them to switch them off. This rises to £40 if it is not paid within the given timeframe. Engine idling is an offence most especially outside flats and houses in the AQMA. The council would prefer to reasonably ask coach

and taxi drivers to switch off their engines rather than issue a fine. If this continues to be an issue the government may wish to consider a deterrent that is proportional to the offence which can be quite serious in some cases. Reasonable exemptions may have to consider cab heating in the coldest conditions. By their nature, taxi ranks move forward as clients arrive; marshalled ranks could usher clients to the next available taxis so they don't have to keep engines on prior to departure.

4 Evidence

The action plan builds on a series of Defra funded grants that have helped support the council to investigate air quality in its area. The following lines of enquiry provide robust evidence in support of a multidisciplinary series of measures to improve air quality:

- Ambient monitoring at roadside and background locations in and around the AQMA over two decades
- Vehicle emissions analysis using the latest emission factor toolkit to produce a comprehensive emission inventory
- Dispersion modelling and mapping of pollutants
- Source apportionment to determine which vehicle categories contribute most to NO₂ concentrations above legally binding limits
- Portable Emission Monitoring System (PEMS) to determine real tailpipe emission of buses and taxis in the local area

The key areas of focus are to determine:

- The emission rates that lead to higher levels of ambient NO₂ close to roads
- Identify when and where dispersion of vehicle emission is likely to be inhibited
- Establish the number of dwellings that exceed the NO₂ limit value in different streets and transport corridors that are listed under section 6.
- Comment on the severity of NO₂ exceedance and the amount of improvement required to work towards compliance
- Determine a series of measures (current and proposed) that will deliver the required reduction in ambient NO₂

4.1 Traffic Data

The Environmental Protection Team has prepared traffic data for emission and dispersion model assessment. The traffic data total is expressed as Annual Average Weekday Traffic (AAWT 24hr) and is representative of a typical or average weekday. Most assessed locations use results from weight sensitive carriageway counters averaged over a whole calendar year (2011-2013). Where these are not available manual 12-hour counts have been factored to 24-hour equivalent. A summary of the most important road links for the AQMA is given in Table 4.1.

Table 4-1 Traffic Data for Key Road Links through the Air Quality Management Area

Road Link	Mbike	BUS	LGV	All Cars	All HGV	AAWT
Kingsway A259	725	245	4315	32243	730	38258
Old Shoreham Road, Portslade A270	244	318	1578	26476	989	29605
Pavilion Parade A23 2ways	519	2011	1289	24189	961	28969
Marine Drive A259	244	325	6642	20229	694	28134
Preston Road nr Preston Drive A23	94	111	887	23178	789	25059
Lewes Road A2070	250	837	1394	20518	579	23578
Lewes Rd A2073	389	1035	3181	17697	776	23078
Wellington Road A259	161	328	1329	18303	916	21037
Edward Street-Eastern Road C-Road	405	466	1036	14760	333	17000
Hollingdean Road C-Road	75	53	955	15442	321	16846
New England Road A270	208	44	969	14905	287	16413
Beaconsfield Road A23 Southbound	167	149	750	13672	537	15275
Trafalgar Rd B2139	191	280	2200	10910	861	14442
Rottingdean High Street B2123	83	116	814	12943	306	14262
Preston Road A23 Northbound	352	220	681	12332	488	14073
Grand Parade A23 Southbound	224	233	638	11089	463	12647
The Drove-South Road C-Road	235	239	630	10799	421	12324
Queens Road A2010	123	721	811	9346	182	11183
Terminus Road A2010	131	403	650	9689	251	11124
Marlborough Place A23 Northbound	271	1090	612	7234	164	9371
Western Road B2066	215	1233	429	5819	418	8114
Cheapside A270	158	292	383	6063	124	7020
Station Road B2194	57	686	1121	4179	367	6410
North Street B2066	92	2344	982	2289	344	6051
Trafalger Street B2199	37	74	579	1886	21	2597
St James Street B2118	54	347	218	1458	39	2116

For simplicity selected road links and vehicle categories are included. In practice eight vehicle categories have been assessed. The car counts have been sub split into; diesel cars, taxis and petrol cars. The Heavy Goods Vehicles (HGV) have been divided into rigid and articulated trucks. This is important for local air quality assessment as the various vehicle categories have very different emission rates.

National and local data indicates a rapid increase in motor traffic between 1920 and 1939 and again 1950 to a peak around 2007/8. Since that time there is evidence that on some local roads annual average cars movements have shown slight declines.

4.2 Air Monitoring

Details of the air monitoring carried out in Brighton & Hove are set out in previous LAQM reports. Archive and active monitors cover some one hundred sites across the city. Long term data over twenty years is invaluable in helping us to understand the distribution of past and current pollutant concentrations. PM₁₀ monitors show compliance with all standards and monitors now focus on PM_{2.5} due to strong linkages with the new health framework. Nitrogen dioxide results have showed an improvement around the fringe of the current AQMA justifying substantial revocation of the former AQMA in 2013. Stubborn exceedance of nitrogen dioxide continues along identified transport corridors within the currently declared area. Long term monitoring of nitrogen dioxide strongly suggests concentrations have been consistent for several years (2007 to 2013) with the exception of 2010 which had higher concentrations. This was probably because of the coincidence of successive cold winters during January and December of that calendar year. It is normal for a calendar year to have one or zero cold still periods that may influence regional nitrogen dioxide. The annual monitoring results help to verify maps of nitrogen dioxide.

4.3 Spatial Modelling

In support of the council's statutory duties (under LAQM) pollutants have been mapped in and around two separate AQMAs declared in 2013, results of the further review and assessment are integrated into this action plan. Further details on assessment methodologies are given in the last detailed assessment⁷. Automatic Traffic Counts (ATC) has been used to derive emission calculations for 350 local road links from the latest version of the Emission Factor Toolkit²⁶. The emission rates are used to spatially predict pollutant concentrations using the Atmospheric Dispersion Model System ADMS-Urban²⁷. This enables the council to assess air pollution throughout the city and not only where there is monitoring as depicted in [Figure 4](#).

Figure 4 Brighton & Hove Distribution of Nitrogen Dioxide Recent Years



The highest concentrations of pollution over the past decade occur along recognised transport corridors that usually have slow stop-start traffic flow (at <10 kph) and a high proportion of diesel vehicles, combined with restricted volumetric space between building flanking the street. The action plan assesses these distinguished areas in detail. The majority of these linear transport corridors are linked together as one AQMA as opposed to a series of separate pollution hotspots exceeding the nitrogen dioxide standards. Further details, higher resolution maps and explanations of the concentrations are presented in the appendix.

4.4 Roads above NO₂ Limits

Defra's national models of air quality showed good agreement with Brighton & Hove's further assessment of air quality published in 2010 in the sense that both studies stated that for some (but not all routes) through the AQMA, buses were the dominant contributors to ambient nitrogen dioxide. For the purposes of the Air Quality Action Plan (AQAP) the AQMA can be divided up into three distinguished categories as follows:

Transport corridors where nitrogen dioxide exceedance is due to:

- 1) Emissions from buses along public transport corridors
- 2) Emissions from mixed traffic; Heavy Goods Vehicles (HGV), diesel cars, vans and taxis with substantial contributions from buses. This is the case where general traffic road links have scheduled bus routes included
- 3) Emission from general traffic; HGV, diesel cars, vans and taxis. Buses contribute less than a 15% to ambient NO₂. This scenario tends to happen where there are few or no scheduled bus routes and a limited number of coach services frequenting the road link

The contribution to outdoor nitrogen dioxide from different vehicle categories varies considerably within the local AQMA. For this reason it is not very helpful to present mass emissions rates, but instead to distinguish the variable ratios associated with each transport corridor identified in the AQMA. While non-traffic sources do contribute a few micrograms locally, these sources certainly are not enough alone to cause an exceedance of the air quality strategy standards (legally binding limits). Therefore the local action must focus on where local transport emissions occur spatially in order to meet its primary objective to comply with the NO₂ standard as soon as practically possible.

4.5 Interconnected Areas of Air Pollution

This action plan will consider in further detail the following linear areas of NO₂ exceedance:

- **B2066 Both Ways:** Castle Square-East Street-North Street-Lower Dyke Road-Churchill Square-Western Road and Church Road Hove with slope on North Street
- **A2010 Both Ways:** Queens Road-Surrey Street and Terminus Road on to Buckingham Place and Bath Street including slope and hill climb on Terminus Road
- **B2119 One Way Uphill:** Trafalgar Street-Frederick Place
- **A23 Northbound:** Old Steine-Pavilion Parade-Marlborough Place-Gloucester Place-York Place-London Road-Preston Circus-Preston Road

- **A23 Southbound:** Beaconsfield Road-Viaduct Road-Ditchling Road- St Peters Place and Grand Parade
- **A23 both ways:** Adjacent to junction of Preston Road and Preston Drove
- **C Road:** Under the railway: The Drove and Millers Road with slope and hill climb
- **C Road:** Lower Edward Street and Eastern Road near the hospital
- **B2118 One Way Uphill:** St James Street
- **B2123 Both Way in AQMA:** Rottingdean High Street: to Vicarage Lane
- **A270 Both Ways:** New England Road- Chatham Place-Lower Old Shoreham Road- - **A270 Partly One Way Uphill:** New England Street and Cheapside
- **A270 Both Ways:** Lewes Road: Elm Grove Junction to Vogue Gyatory and Lewes Road-Coombe Terrace
- **C- Road Both Ways:** Hollingdean Road: between railway bridge and Lewes Road
- **A2023 Both Ways:** Sackville Road, Hove south of Old Shoreham Road junction
- **B2194 Both Ways:** Boundary Road near Portslade Station level crossing
- **A270 Both Ways:** Old Shoreham Road, Hangleton
- **A259 Both Ways:** Wellington Road and Kingsway, Portslade
- **B2193 Trafalgar Road Both Ways:** Old Shoreham Road to Church Road, Portslade

All areas exceeding the nitrogen dioxide standard are interconnected with the exception of Rottingdean High Street. Since 2013 Rottingdean has been a separate village AQMA in its own right. The tally of UK AQMAs or pollution hotspots should not be taken as an indication of the severity or extent of air pollution. The number of residential dwellings in the zones and the actual concentrations of pollutants recorded in the designated areas vary considerably across the country and locally within Brighton & Hove.

5 Strategy

5.1 Goals

The main aim of the renewed Air Quality Action Plan (AQAP) is to achieve compliance with the 40 µg/m³ level for nitrogen dioxide where people live. Indiscriminate reductions in mass emission rates are not likely to deliver this key goal. A targeted approach will tackle the most polluting ground level sources where road traffic emissions happen within narrow streets where volumetric space and wind flow is restricted amongst the building canopy. Priority transport corridors for intervention are listed summarised in the tables in section 7. Whilst the strategy emphasises the importance of emission from transport, buildings, plant combustion, development control, and education are also considered as non-transport factors in the AQAP.

5.2 Related Policy

The Air Quality Action Plan must be balanced with other council aims and objectives. Most notably these include; transport, business, travel plans, development planning, electricity generation, climate change, and road safety. If the action plan is to be successful it is important that this report identifies where other areas of policy have positive agreement and where there may be potential conflicts of interest. This section

outlines how air quality is a key performance indicator for the city council. For the AQMA reduction in nitrogen dioxide is paramount.

5.2.1 Performance Indicators

The nitrogen dioxide objective became a legally binding standard in 2010. From 2015 for business, legal and health reasons compliance with the limit is urgent. Progressive actions achieved in recent years such as the Low Emission Zone, vehicle retrofits and electromotive infrastructure need to continue. Air quality indicators are now written into the council's key performance indicators which will be scrutinised by management teams, elected members and the chief executive. Since 2012 results from the continuous analysers on North Street and Lewes Road have provided representative data for the cities performance indicators. This evidence has allowed AQMA improvement to be flagged up as one of the city's key performance targets.

5.2.2 Health and Wellbeing Strategy

The joint health and wellbeing strategy is to set out a longer term vision for health²⁸. The Joint Strategic Needs Assessment identifies evidence based priorities and critical needs for the population. Through the Health and Wellbeing Act (2012) reform there are opportunities to improve the health and wellbeing strategy by integrating with the wider determinants of health, especially transport, noise, air quality, housing and education. Implementation sits with expectations to implement improvements at a local level in accordance with the localism bill.

5.2.3 Road Safety

Excellent progress has been made nationally and locally since the 1960s in making Britain's roads much safer with substantial long term reductions in fatalities due to road traffic accidents. In Brighton & Hove, some casualties continue to happen in the city centre and some AQMA streets have relatively high incidence of collisions between vehicles, pedestrians and cyclists.

There is an opportunity for air quality and road safety to be improved in the same places. Accident avoidance is important to keep traffic flowing and fewer incidents will cause less blockages and congestion which helps with emissions avoidance on occasions throughout the year. Road safety has encouraged a number of traffic calming measures and in many places priority is given to pedestrians to help encourage more sustainable modes of travel such as walk to school. The Air Quality Action Plan supports local transport plans to encourage active travel such as walking and cycling. The council's air quality assessments recognise that modern petrol motorbikes have low emissions and a very small contribution to local pollution and are therefore preferred to cars. However, measures to encourage motorbikes may not be favoured for road safety reasons.

The Air Quality Action Plan (AQAP) recommends that wherever possible smooth traffic flow is maintained and not disrupted. This means a strong preference for pedestrian crossings that do not stop traffic, hinder smooth flow or create road blockages. The aim should be to minimise vehicle queue durations that risk delay. The AQAP would like to recommend an increase in walk to work and school and safe road crossings as follows:

- Pedestrian crossing synchronised with traffic lights at junctions where vehicles stop already at red light phases at intersection
- Less preference for road crossings that cause additional stopping of traffic
- Avoid pelican crossings that stop vehicles after the pedestrians have crossed already
- Preference for pavement piers, wider concourses and mid carriageway refuge islands for crossings where this does not compromise bus and HGV passing widths
- Preference for foot bridges and upper concourses above the traffic or subway under roads implemented as part of new development funded infrastructure or used to manage crowds at events for example the Brighton Marathon
- Urban streets and areas that are for pedestrians that are open for deliveries, key bus and taxi services but not general traffic
- Pedestrian concourses that flow seamlessly into public parks and planted areas minimising safety concerns between pedestrians and traffic
- Avoidance of acute speed bumps which disrupt vehicular momentum, cause break suspension and tire wear, revving and acceleration, diminish miles per gallon, and increase emissions

5.2.4 Informal Park and Ride and Air Quality

The submission City Plan Part 1, in policy **CP9 Sustainable Transport** part A.b seeks to promote and facilitate better use of large car parks on the periphery of the city and transfer journeys onto existing and improved bus and rail services through partnership working with public transport providers, businesses/landowners and adjoining authorities. Currently a limited park and ride facility is available at the Withdean Stadium site, which intercepts some of the A23 car traffic before it reaches Brighton & Hove's AQMA. Travelling southbound on the A23 from London and Gatwick, the Brighton & Hove AQMA starts on Preston Road to the south of Withdean Stadium.

The Brighton & Hove Racecourse is used as a park and ride site for events such as those held at the AMEX stadium. During events, the racecourse parking facility is likely to relieve general traffic and bus routes on the Lewes Road corridor which is part of the AQMA up to Natal Road. Withdean (A23), the racecourse, AMEX stadium and University car park sites have the advantage of being outside of the AQMA. Cars parked outside the AQMA could help to reduce the amount of traffic that enters the city centre transport corridors where road space is limited and nitrogen dioxide limits have been exceeded for decades. There are several high capacity bus routes and the railway that connect with Central Brighton & Hove's main terminus. People could leave their car outside the AQMA and cycle or walk the last two miles to the city centre.

5.2.5 Air Quality and Carbon Reduction

The city council has a Climate Change Action Plan²⁹ and there is considerable cross over with the Air Quality Action Plan, especially around general emission reduction policies. The Climate Change Action Plan aims to reduce the city's greenhouse gas emissions from buildings and transport in accordance with the UN Framework Convention on Climate Change. Short wave solar radiation passes through the atmosphere to warm the planet's surface. Outgoing radiation with relatively longer wavelengths is more likely to be

absorbed by greenhouse gases such as Carbon Dioxide (CO₂), methane (CH₄), Nitrous Oxide (N₂O). This man made change to the planet's heat budget is influencing local and global climate, the water vapour carrying capacity of the atmosphere thermal expansion of the oceans and sea level rise. The City Plan and One Planet Living aim to address both local air quality and city carbon emissions.

Carbon reduction strategies are an issue for the northern hemisphere and the atmosphere in its entirety. Carbon emissions contribute from any place where there are releases from fires or controlled combustion processes. A company's greenhouse gas emissions can be offset to a carbon sink such as a forest in any part of the world. Some air pollutants prejudicial to human health travel long distances and can have international impacts. However the health scope discussed in this plan are immediate to the local urban area, identified as junctions transport corridors and individual streets.

The issue of poor air quality for many people is literally on their doorstep. In Brighton & Hove all nitrogen dioxide exceeding the standard happens within nine metres of the road carriageway. The solutions discussed in this action plan are weighted heavily towards high local consequences. This makes the AQAP very relevant and applicable to local and neighbourhood plans.

Carbon dioxide (CO₂), oxides of nitrogen (NO_x) and fine particles (PM_{2.5}) share the same sources and avoiding use of combustion engines will avoid emissions of all three. However, it is important to recognise that for pollutants prejudicial to health, control of proximity, position and height of the emission release is essential. Effective dispersion from a flu or exhaust pipe can substantially minimise ambient concentrations where people spend time and this has consequential health impacts. The scope of this AQAP includes analyses of where NO_x and particulate emissions happen in confined spaces in close proximity to residential dwellings. This resolution is distinctive from a broader carbon reduction strategy. If traffic is required to go further to avoid a bottleneck this may be beneficial for air quality and travel time but could be adverse for fuel consumption depending on the severity of congestion avoided.

5.2.6 Brighton & Hove's Electricity Generation

As stated consistently throughout the Local Air Quality Management (LAQM) processes (since the late 1990s), air pollution in the Brighton & Hove area is dominated by emissions from road traffic. Part of the reason is that unlike most European population centres of a similar size, the conurbation does not have a series of large combustion processes or a heavy manufacturing industry with emissions to air. With the exception of Shoreham Power Station the conurbation does not have major power generation. In fact the region is a net importer of electricity from the international grid with its interconnector across the Channel to France and the Netherlands. This presents a business opportunity for an increase in local clean energy provision to meet new demand from domestic and commercial premises including new developments. A switch in power provision is also important for local transport that is heavily reliant on diesel to move millions of passengers. It continues to be a challenge to provide truly low emission diesels in the slowest urban drive conditions. This is the reason for nitrogen dioxide continuing to exceed the legal limit and the declaration of a renewed AQMA in 2013.

5.2.7 Renewable Energy for Buildings and Transport

The Air Quality Action Plan welcomes thousands of local non combustion renewable micro-generation arrays such as solar panels, heat pump technologies that have no operating emissions to air. The Rampion offshore Sussex windfarm³⁰ is a Nationally Significant Infrastructure Project (NSIP). This will be the largest infrastructure investment in Sussex since the railways. The windfarm will provide cleanly generated electricity to the grid at a location where the future population is projected to increase at a faster rate than the national average. The windfarm will be the first major offshore windfarm in view of a UK city. Local public and private transport and housing will have the opportunity to draw on this new resource. Such an arrangement could dramatically reduce the need for trans-regional electricity transmission and long distance fuel distribution. Ahead of scheduled build of the windfarm electromotive infrastructure including rapid vehicle charging points is now available regionally and locally³¹. The Edgeley Green Power Stations³² is proposed just outside of Brighton & Hove City Council. The number of local electric and hybrid vehicles in use has increased considerably since 2012 and nationally sales have surged in the past year³³.

5.2.8 Policies that Promote Biomass Burning

The following policies can incentivise biomass burning including wood pellets and logs:

- Building Regulations Part L
- Building Environmental Assessment Methods (such as BREEAM, CSH, Homes Quality Mark)
- Renewable Obligation Certificates
- Renewable Heat Incentive RHI³⁴
- Planning policies that encourage micro-generation on development sites
- Brighton & Hove's One Planet Living Target encourages 15% of the city's energy to be generated from renewable technologies by April 2010 page 11)

Wood burning has its place as a renewable source of heat and power. Carbon released to the atmosphere when burned has typically been drawn out of the atmosphere over recent decades making up cellulose as trees grow. This gives biomass burning carbon neutral credentials on human timescales. When burned wood based fuels have lower emissions than some oils and coal. However logs and pellets give off much higher releases of oxides of nitrogen and particulate compared with natural gas. Further information on solid fuel burning in the AQMA is given in section 8.2.

5.2.9 Trees and Planting

Trees should not be seen as an alternative solution to reducing emissions from traffic. Trees, shrubs and greenery woven into the built environment can improve the urban realm and living neighbourhoods and biodiversity. Tree and other planting is required to be incorporated into development schemes in a manner that is integral to their design and will contribute to enhancing the city's green network and the city's Biosphere Reserve objectives (CP13 Public Streets and Spaces in the Submission City Plan part 1, CP10 Biodiversity). Priorities for biodiversity and public realm improvements are indicated in the City Plan Part 1 - Development Area policies and the Nature Conservation and Development SPD provides guidance to ensure the plant species used to create new

nature conservation features are appropriate to Brighton & Hove and Hove, the local context and the development.

Certain species of trees can be effective scavengers of both gaseous and particulate matter. The surface area of shoots and foliage can provide a natural substrate for fine particles to settle out of air and in time wash off in the rain. Flaking bark has the potential to fix atmospheric nitrogen.

Where space is available large spreading trees such as the London Plane³⁵ which can survive the harsh urban environments is a good choice. Branches obstructing highways can be pruned to facilitate free flow of traffic so it should not be necessary to restrict planting choice to the few fastigiated varieties with confined crowns.

Brighton & Hove has many examples of Elm tree varieties (25,000 Elms) and most have bristly leaves which would be effective at capturing fine particulates from the atmosphere. There have been broadcast examples of faster growing species such as Silver Birch placed near to a property alongside a busy street reduced particulates considerably.

The council should investigate the potential for a programme of tree planting along key transport corridors within the AQMA with a variety of hairy leaved trees as studies state they collect airborne particulates and help as a sink to local airborne oxides of nitrogen. An action to take forward is to explore grant opportunities to allow for the introduction of trees to the harshest and busiest parts of the AQMA. The most expensive aspect of this is the re-routing of underground pipes and cables and creating the right size planting pit.

5.3 Action Plan

In addition to related policy areas Section 7 of the air quality action plan identifies priorities for air quality improvement. These locations should be targeted for reductions in NO and NO₂ emissions from road transport most especially those vehicle categories that contribute the most to ambient NO₂ along each transport corridor. This can be achieved through initiatives with alternative fuels, retrofits, optimised emission abatement and performance, hybrid dual fuel options and new vehicle purchases. Funds from the department for transport, the office of low emission vehicles and the European Commission could help to achieve these objectives. Improved flow of traffic can reduce emissions and some areas of the city centre AQMA have restricted access for example open to buses, taxis and loading. In addition in some cases transport schemes and urban real improvements can increase the distance between vehicle exhausts, residences and the building canopy. For much of the year this can improve effective dispersion of emissions and the entrainment of fresher ambient air.

6 Formal Equalities Impact Discussion

An Equalities Impact Assessment supported by a community's insight report accompanies this report. As a key council policy document the Air Quality Action Plan (AQAP) needs to insure that it does not disadvantage any section or group of people. The Air Quality Management Area is cosmopolitan and is more ethnically diverse than both the city and England's averages. Arabic is the second most spoken language amongst those that live in the city. Brighton & Hove has a higher proportion of gay, lesbian and transgender people compared with the UK average. The student population continues to show strong growth and anecdotal evidence suggests many former students originally from elsewhere choose to stay after graduation. People of various ages live in the city as a matter of choice. For many people the "young party lifestyle" continues well into middle age.

Air pollution disproportionately affects vulnerable members of the population. Those with sedentary lifestyles are more prone to heart disease and respiratory illness. Active people with good lung function that participate in regular cardio-vascular exercise are less vulnerable to inhaled pollution. It is often assumed that poor air quality happens in deprived areas however our studies in the local area show a more complex dynamic. Living in a metropolitan entertainment district whilst not for everybody can be a highly desirable choice for adults of various ages. It can be attractive for businesses such as pubs, shops and markets to be located at prime economic sites such as road intersections with access to incoming trade. Poor air quality is constantly detected in the vicinity of road junction and if the buildings are in a bad state of repair, ingress of gaseous pollutants to the indoor environment is more likely. Adjacent to urban streets, housing, maintenance, fenestration and building ventilation can be of a poor standard and may not be fit for purpose. If the urban realm and air quality were better, investment could be attracted and it is likely that care of homes and building standards would improve. Rents and property prices in the city centre and Rottingdean are very high and well above average for the UK and Europe. In Central Brighton & Hove (as with much of London) the economic rent of land in the AQMA is very high. Prime rental sites have economic reasons to be located adjacent to roads and junctions with access to passing trade, transport and entertainment venues. Building enclosure close to stop-start traffic inhibits dispersion of emissions.

Adults can be more at risk to the effects of air pollution if they suffer from other conditions most especially health problems related to smoking and drug use (above the national average in Brighton & Hove³⁶). The body can suffer cumulative affects when trying to cope with other pressures on health and wellbeing such as sexually transmitted diseases, alcohol and loss of sleep due to noise (the council receives approximately 3,000 complaints every year due to neighbourhood noise). In addition, traffic noise is a constant at the same residential locations within the Brighton & Hove AQMA that are effected by air pollution.

In reality, poor air quality impacts on a varied demographic which lives in both public and private sector housing and includes; vulnerable or sick adults, young children, those with sedentary lifestyles the elderly and some in care. Findings of Community Insight study for the Brighton & Hove and Portslade Air Quality Management Area are as follows:

- The area has one of the highest population densities in England i.e. 100 people per hectare: (even though approximately half of the area comprises road carriageway, concourses and traffic gyratory)
- Population of the area is 9,000 with many residential dwellings adjacent to transport corridors including bus and taxi routes
- The AQMA has 34% overcrowded housing a much higher proportion than for the whole City and England
- Net migration into the AQMA with a sharp increase in population to the area from 2012/13
- Excellent public transport links with high visitor numbers and through traffic
- Higher than average property prices and rents
- High percentage of residents of working age and a lower than average proportion of pensioners and children
- People in the AQMA have achieved above average educational attainment and 72.4% of adults are economically active which is above the city average
- 62% of households in the AQMA do not own a car which is exceptional for England
- Lower than average obesity (possibly linked with higher than average active movement, walking and cycling)
- The highest rates of residential turnover are amongst young adults
- Old people and infants are more vulnerable to airborne pollution and are more likely to settle in the AQMA for a number of years and are therefore more likely to be exposed to nitrogen dioxide over longer durations
- Better than average diets (excellent access to food choice)
- Higher incidence of smoking and binge drinking compared to BHCC and England averages
- Higher proportion of deaths due to lung cancer, circulatory disease and stroke compared to BHCC and England averages
- Higher likelihood of hospital admission for all causes including; chronic obstructive pulmonary disease and stroke
- Community Insight shows the AQMA is a health deprivation hotspot
- Male life expectancy two years lower than for the whole city and three years less than the average for England
- Lower proportion of deaths expected for respiratory diseases may relate to young adult population profile in the AQMA
- The AQMA is Ethnically diverse with a higher than average percentage Black and Minority Ethnic (BME) Population

6.1.1 Car Use Differences

The action plan deals with a series of streets that are mostly located in the city centre where private car ownership is one of the lowest in the UK; in the Brighton & Hove AQMA 62% of households do not own a car which is exceptional in England and compares to 38% average for the whole city which is the lowest in the UK outside of London. Some streets are only open to buses, taxis and deliveries and most private cars in the inner area belong to visitors rather than those living in the immediate vicinity. Buses and minibuses are a more efficient way of moving larger numbers of people in a high density area. The AQMA has 100 people per hectare.

In contrast, Rottingdean village AQMA to the East has high private car ownership and car counts from neighbouring Peacehaven (East Sussex) are high in proportion to its population. Portslade has a mixed traffic set including cars from West Sussex and haulage routes that pass from Shoreham Port along Wellington Road and Trafalgar Road inland. The area is relatively industrial compared with the rest of the city. The Air Quality Action Plan assessment reflects the differences between city areas and transport corridors. These distinctions are set out in further details for each key street in the AQMA and described in section 7 with related presentations in the appendix.

7 Addressing Contribution from Road Transport

As mentioned in the introductory sections, the nitrogen dioxide contribution from different vehicle categories (notably buses, heavy good vehicles, taxis, vans and diesel cars) varies considerably between transport corridors. Petrol cars and motorbikes are minority contributors to roadside nitrogen dioxide in the AQMA and are not the main reason for exceedance of the AQS standard. Electrical vehicles have no emissions from a tailpipe. As they do not contribute to nitrogen dioxide their use is promoted as a measure in the Air Quality Action Plan. Active travel options such as walking and cycling as well as helping with regular exercise and wellbeing can help to reduce the number of cars on the road, freeing up central road space for trade for example; builders, deliveries and taxis. The city's population and residential density is increasing and as the economy and construction activity recovers, so will demand for the limited road space near the historical city centre.

Recommendations are being put forward for AQMA transport corridors. In some case measures have been implemented in other cases funded work is ongoing or recommended subject to award of further funds. Further improvement in bus emission performance is required. Traffic flow improvements are needed. In some cases the air quality action plan recommends feasibility studies looking into vehicle restrictions in accordance with vehicle access regulations. The air quality action plan will be considered at the Transport Partnership and the Environment, Transport and Sustainability Committee scheduled for autumn 2015.

7.1 Bus Transport Corridors

7.1.1 B2066 Castle Square-North Street-Lower Dyke Road-Churchill Square-Western Road

Summary of Air Quality investigations for the Designated Transport Corridor B2066 (part of the AQMA) Prior to the bus LEZ and Traffic Regulation Condition (TRC) that started in January 2015:

• Highest Bus counts on the route daily peak	>100 an hour
• Traffic a day along North Street (buses 2450)	6050 a day
• North Street monitored nitrogen dioxide at facade	80 $\mu\text{g}/\text{m}^3$
• North Street monitored nitrogen dioxide pavement (2012 & 2013)	114 $\mu\text{g}/\text{m}^3$
• Background nitrogen dioxide Pavilion Park (~100 metres back)	26 $\mu\text{g}/\text{m}^3$
• Road Length at risk of exceeding nitrogen dioxide standard	2.3 km
• Area at risk of > 36 $\mu\text{g}/\text{m}^3$ NO ₂ annual average	13.6 hectares
• Total address count [Feb 2015] likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	1734
• Residential dwelling count [Feb 2015] likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	834
• Highest PM ₁₀ annual average in recent years	27 $\mu\text{g}/\text{m}^3$
• Distance vehicular emissions to building line	5.3 metres
• Steepest road gradient 100 metres east of Clock Tower Junction	1:14
• Street canyon flanked by five storey buildings: typical width	23 metres
• NO ₂ contribution from buses to the Western Road	Half
• NO ₂ contribution from traffic to the North Street environment:	62% buses
	14% HGV
	9% Taxi
	6% Vans
	6% Diesel Cars
	3% Petrol Cars

On the B2066 Church Road, Hove (same transport corridor west of the bus LEZ) NO₂ contributions from traffic are: 29% buses, 23% HGV, 16% Diesel Cars 13% Taxis, 10% vans, 10% petrol cars. That said, 3km to the west of North Street roadside NO₂ is 50% as concentrated.

Practically all of Brighton & Hove's scheduled bus movements (close to 97%) pass along North Street or Churchill Square which is one of the busiest bus transport corridors in the UK. Bus use in the city has doubled in the past twenty years (to > 45 million per annum)³⁷. More passengers are transported on buses in Brighton & Hove each year than use Gatwick Airport (38 million per annum)³⁸. Per head of population Brighton & Hove has the highest bus usage of anywhere in the UK outside of London. During peak hours 100 high capacity buses (~90 seats each) pass up or down North Street with many of these continuing along Western Road to Church Road, Hove. Almost all of the buses have double decks. LAQM evidence has shown that the North Street pavement to the east of the Clock Tower junction has the highest nitrogen dioxide concentrations in Sussex¹⁵. In contrast, monitoring in Pavilion Park suggests background air quality (100-150 metres from this road) is good and compliant with all standards for nitrogen dioxide. The recorded difference between background and roadside concentrations is unusual and we can say

with a high level of confidence that local emission of oxide of nitrogen dominate along this transport corridor for a distance of 2km. The area of exceeding nitrogen dioxide connects with; Queens Road (north), Pavilion Parade (north east) and St James Street (east). Western Road around Palmeira Square (to the west) is compliant with the nitrogen dioxide standards. Localised hotspots (outside of the bus LEZ) have been monitored and modelled close to Church Road and The Drive junction and also between Church Road, Hove and Sackville Road.

Emission analysis with Defra's toolkit factors and the national atmospheric emissions inventory strongly suggests that oxide of nitrogen emissions along the corridor are dominated by local buses with much smaller contributions from goods vehicles and taxis. It is therefore priority to insure the very best emission standards for the 350 or so frequently circulating public service vehicles that pass along the same route hundreds of times a week.

A number of advanced action plan measures are in progress to reduce NO_x emissions from buses and taxis. Funds won from the department of transport (DfT) have helped to retrofit fifty double deck buses with an additional twenty-five taxi minibuses identified for selective catalytic reduction during 2015. The primary aim of these retrofits is common with that of the action plan i.e. deliver priority reductions in ambient nitrogen dioxide. The B2066 public transport corridor comprised one of the UK's first Low Emission Zones. Further details are given in section 7.4. In addition to setting up the bus LEZ with a Traffic Regulation Condition (TRC), existing initiatives in the North Street corridor include:

- Marshals manage bus flow through the corridor in order to minimise frequency and duration of bus congestion,
- Use of telemetry and CCTV to identify and manage blockages along the public transport corridor
- Engine idling to be kept to less than one minute
- Exhaust lines insulated to allow catalysts to dose with add blue mix more effectively
- Improve east-west flow through the Clock Tower Junction by optimising the phasing of the traffic lights at the key junction
- Encourage the most efficient drive styles in order to minimise fuel consumption and emissions of CO₂, NO, NO₂ and PM_{2.5}
- Phasing out of euro three & four vehicles with exemptions for infrequent services

From 2015 the highest emission buses frequenting the LEZ corridor are likely to be euro-5 (the emissions standard for new buses and trucks since 2008)¹⁸. The council must explore funding opportunities that consider measures that can assess and improve NO_x emission from euro-5 buses given the local routes that the vehicles perform regularly.

The council would like to seek funding to explore the possibility of using telemetry and tracking systems to optimise bus emission performance through the AQMA. In other words the vehicles are primed for low emission performance when entering the most polluted road sections. For the majority of non-hybrid vehicles this would insure optimisation of selective catalytic reduction and good dosing of ad blue solution to reduce NO_x when travelling through the AQMA. For hybrid diesel-electric vehicles it is

recommended the vehicle switches to electrical mode for the most polluted road sections. Another area of research is to develop a methodology to avoid emissions from standing hill starts that we see on North Street.

North Street, Brighton & Hove has similar bus and taxi pollution issues to Oxford Street Westminster and Putney High Street in the London Borough of Walthamstow. Given the levels of nitrogen dioxide where thousands of people live and work every day the City Council would like to designate the corridor as top tier exemplar national priority for air quality improvement.

It needs to be made explicit to the Department of Transport, the Office of Low Emission Vehicles, Defra and the Department of Energy and Climate Change that the B2066 public transport corridor is the very highest priority for reduction of nitrogen dioxide. The council will present evidence supported funding opportunities accordingly. Nitrogen dioxide and PM_{2.5} monitoring results on North Street are reported as key city performance indicators and will be escalated to the chief executive's office.

7.1.2 A23 Northbound Marlborough Place and London Road

Includes parts of Old Steine and continuous along: Pavilion Parade-Marlborough Place-Gloucester Place-York Place-London Road-Preston Circus and Preston Road (south of Preston Park) and a small hotspot close the junction of Preston Road and Preston Drove.

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA) Prior to Valley Gardens Transport Scheme

• Marlborough Place A23 NB total Traffic (buses 1090 a day)	9,400
• Typical monitored nitrogen dioxide at London Road facade	69 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	2.9km
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	13 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	1066
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	651
• NO ₂ contribution from traffic to London Road / Marlborough Pl	46% bus 17% HGV 15% Diesel Cars 10% taxis 6% vans 6% petrol cars

This is the main road from the sea front northbound towards London. Nitrogen dioxide improvement could be achieved by further improvements to bus and taxi emissions and increasing the distance between the building façade and the road carriageway. Tree planting would also help improve the environment in the vicinity of the A23.

Proposed measures for this transport corridor that has been part of the AQMA since 2004:

- Continued improvement in Bus and taxi emissions

- Valley Gardens Transport Scheme
- Explore more stringent standards for taxi licencing and the bus LEZ (most buses that pass through the LEZ also route along the A23)
- Consider HGV routing especially construction traffic from 2015
- Explore funds for HGV retrofits and assisted purchases
- Taxi and motorbikes allowed to use bus lanes, consideration of electric vehicles for an initial incentive period
- Insure low carbon vehicle parking dispensation does not encourage vehicles with emissions of NO_x
- Explore development and other funds for mixed tree planting

7.1.3 A2010 Queens Road-Main Station-Surrey Street-Terminus Road-Buckingham Place and Bath Street

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA):

• Typical traffic counts per day along Queens Road (bus 700)	11,200 a day
• Typical monitored nitrogen dioxide Queens Road facade	56 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	1.5km
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	6.3 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	1022
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	534
• Steepest Road Gradient over 200 metres up Terminus Road	1:14
• NO ₂ contribution from traffic to the Queens Road environment:	32% buses
	21% taxis
	21% HGV
	11% Diesel Cars
	11% vans
	4% petrol cars

Terminus Road -Queens Road run North-South between Brighton & Hove's main station and the Clock Tower junction with North Street (on the way to the sea front). The route (A2010) carries high numbers of buses and taxis mixed with general traffic closely flanked by 19th century buildings. Bus and taxi movements frequent the main railway station to pick up and drop off passengers.

Monitoring of nitrogen dioxide at three locations in the area shows concentrations consistently in excess of 50 µg/m³ during the past decade. The street has a variety of land uses with commercial and residential split 50:50 within this part of the AQMA. Flats and houses without front gardens are located directly on the pavement a few metres from the road carriageway. The road has high footfall and is a key pedestrian connection between the main station and North Street's retail hub. Also part of the A2010 route there is a smaller nitrogen dioxide hotspot around the Seven Dials roundabout that includes Bath Street, Buckingham Place and Dyke Road (immediately to the south of the roundabout).

Widening of pedestrian concourses south of the main station on Queens Road will help to increase the distance between tailpipe emissions and the commercial-residential building line. It will also provide added capacity for pedestrians. That said pavements are not wide enough north of the Clock Tower Junction. There can be a conflict between pedestrians crossing and traffic at the top end of North Road-Queens Road. The private car park at the top of North Road attracts traffic through the corridor which has limited capacity for general traffic. It is recommended that LTP continue to explore ways of reducing general traffic entering the Queens Road corridor as part of a broader strategy. Proposed changes to the light phasing of the Clock Tower junction are likely to restrict the amount of traffic able to pass along the A2010 route. It is recommended that the LEZ is extended to Queens Road and Terminus Road where bus emissions are important and it has been part of the AQMA since 2008. The location of the main station taxi rank is to be decided. If Terminus Road was made one way traffic emissions would be considerably less with a downhill direction.

7.2 Mixed Transport Corridors

7.2.1 A270 (east of A23) Lewes Road: Elm Grove Junction to Vogue Gyratory and Lewes Road-Coombe Terrace

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Total Traffic Count (of which 1050 are buses)	23,000 a day
• Typical monitored nitrogen dioxide at Lewes Road-Elm Grove	68 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding (up to A23)	2km
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	12.6 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	967
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	709
• NO ₂ contribution from traffic to Lewes Road-Elm Grove	29% buses 21% HGV 20% Diesel Cars 14% taxis 11% vans 5% petrol cars

Lewes Road between Natal Road and The Level requires urgent improvement in ambient nitrogen dioxide most especially around the Elm Grove and Vogue Gyratory Junctions. The street has an increasing density of private and student accommodation above typically above retails on the ground floor. Some parts of the section have ground floor living space a few metres from the road carriageway.

- Continued improvement to the bus fleet to reduce real emission of oxides of nitrogen
- Traffic light phasing to allow better flow of traffic along Lewes Road linked with project to improve the flow of buses and cars through the Elm Grove junction
- Taxi and motorbikes allowed to use bus lanes, consideration of electric vehicles initially for an incentive period

- Universities to consider how their parking provision might be able to help reduce the number of journeys made through the AQMA
- Encouraging use of bus and train routes
- Uckfield to Lewes train connection supported by government to target a reduction in car commuting along the Lewes Road corridor into Central Brighton & Hove
- Provide new taxi ranks several metres clear of buildings at the Preston Barracks development site and stipulate that new walls and buildings do not enclose the street or create an new street canyon opposite Coombe Terrace, Lewes Road

7.2.2 A23 Southbound Beaconsfield Road-Viaduct Road-Ditchling Road-St Peters and Grand Parade to Pavilion Parade

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA) Prior to Valley Gardens Transport Scheme

• Total Traffic Counts (southbound only of which HGV ~500)	14,000
• Typical monitored nitrogen dioxide at Viaduct Terrace facade	66 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	2.4km
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO_2 as annual average	12.1 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO_2	1468
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO_2	1017
• NO_2 contribution from traffic to the Grand Parade environment:	28% HGV 22% buses 22% Diesel Cars 13% taxis 9% vans 6% petrol cars

Given the number of dwellings adjacent to the A23 and the importance of both heavy duty vehicles and cars this is the most important AQMA transport corridor for nitrogen dioxide improvement. The main contributors to ambient NO_2 along this transport corridor are heavy goods vehicles with significant contributions from all vehicle categories with the exception of motorbikes and electromotive. The Priority section is: Preston Circus-Viaduct Terrace-Grand Parade Pavilion Parade and Edward Street.

Action suggestions:

- Establish which HGVs are the most frequent along the corridor
- Explore funding for advanced Euro-6 standard or hybrid for frequent HGV using the corridor
- Explore funding for low emission HGV; alternative fuels such as retrofits and new purchases
- Review changes to the Valley Gardens transport scheme to minimise impact of oxides of nitrogen from general traffic, especially the impact of the A23 both ways adjacent to the Grand Parade façade
- Encourage new developments adjacent to Grand Parade to modify the design and layout of development to increase separation distances from sources of air pollution
- Air intakes on new developments from the top and rear of the premises furthest from the A23 road carriageway

7.2.3 A259 Wellington Road to Kingsway

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Total Traffic Counts (HGV 900)	21,000 a day
• Typical monitored nitrogen dioxide Wellington Road facade	49 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	2.85km
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	21.5 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	769
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	509
• NO ₂ contribution from road traffic to Wellington Road :	32% HGV 23% Diesel Cars 16% buses 13% taxis 10% vans 6% petrol cars

General traffic has reduced slightly along the link. Action suggestion: Explore the possibility of an LEZ and real-time testing of HGV. Liaise with the harbour authority to establish which HGV vehicles are frequent users of the A259- B2193 haulage route and explore funding for retrofits.

7.2.4 B2194 Boundary Road Level Crossing to New Church Road Junction

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Bus counts Station Road Portslade	680 a day
• Typical monitored nitrogen dioxide at Boundary Road facade	38 $\mu\text{g}/\text{m}^3$
• Worse case modelled at Whistle Stop Public House	~50 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	1040m
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	5 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	462
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	245
• NO ₂ contribution from road traffic to Boundary Road:	38% buses 25% HGV 13% Diesel Cars 10% taxis 10% vans 5% petrol cars

It is expected that the area will benefit from bus retrofits and stock replacement 2014/15 with new euro-6 and hybrid buses coming on stream during 2015. Action suggestion: Explore the possibility of time sign countdowns for Portslade railway crossing to inform road users how long they have to wait for trains. The measure aims to encourage engines switch off and gives road users the choice to seek alternative routes rather than queuing

and engine idling for ten minutes or more. Also suggest that pedestrian crossings are synchronised with railway crossings barriers in order to minimise congestion and queuing duration. Bus improvements scheduled to substantially reduce NO_x emissions as multiple bus routes circulate along Boundary Road. Seek possibility of electric charging points at the station.

7.2.5 B2193 Trafalgar Road and Church Road, Portslade

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Bus counts	Insignificant
• Typical monitored nitrogen dioxide Trafalgar Road facade	53 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	995m
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	3 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	188
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	148
• Emission from Preston Circus (A23) contribute to lower New England Road	
• NO ₂ contribution from traffic to Trafalgar Road:	36% HGV
	19% Diesel Cars
	17% Buses
	13% Vans
	8% Taxi
	6% Petrol Cars

Look into funding opportunities for an LEZ for HGV. Liaise with the harbour authority to establish which HGV vehicles are frequent users of the A259- B2193 haulage route and explore funding for emission improvements. The Edgley Green power station proposes to fund ambient air monitoring in the area.

7.2.6 B2118 St James Street

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA):

• Bus counts 25 an hour or	350 a day
• Typical monitored nitrogen dioxide at facade	46 µg/m ³
• Road Length likely to exceed nitrogen dioxide exceed standard	460m
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	1.5 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	317
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	181
• Steepest Road Gradient over 100 metres east of the Old Steine	1:20
• Street canyon flanked by four storey buildings typically	11 metres wide
• Emissions from vehicles using the Old Steine (A23) are significant for the west end of St James Street and would continue to contribute if St James Street was restricted to traffic	
• NO ₂ contribution from traffic to the St James Street environment:	29% buses
	21% HGV
	18% Diesel Cars
	14% Taxis
	11% vans
	7% petrol cars

St James Street has relatively low counts of traffic within a confined historical street space (dating back to about 1800). The street canyon or enclosure between opposing four storey buildings is narrow. Population density is especially high. There are hundreds of flats and maisonettes at first and second storey above retail on the ground floor. Defra's emission factor toolkit suggests that emissions from buses are the single largest contributors to nitrogen dioxide in the street over and above background levels. That said cumulative emissions from other vehicle categories; goods vehicles, diesel cars and taxis are significant. The single carriageway has been one way eastbound for many years. Traffic emissions arise from vehicles climbing up hill and buses docking at bus stops that can cause frequent brief blockages of traffic flow along the single lane. If the traffic flow was downhill instead of up emission would not cause an exceedance of the standard in the street. A modest sustained improvement in ambient nitrogen dioxide could eliminate more than one hundred dwellings from the area of exceedance. Further information on community discussion with local action teams (LAT) is given in section 9.1.1.

7.2.7 B2118 Rottingdean High Street from Marine Drive to Vicarage Lane

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Total Traffic a day	14,300
• Typical monitored nitrogen dioxide at Rottingdean High St facade	49 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	210m
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	0.6 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	82
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	45
• Distance main road centre line to retail-residential building line	2.7 metres
• Emission from Preston Circus (A23) contribute to lower New England Road	
• NO ₂ contribution from traffic to Rottingdean High Street:	
	34% Diesel Cars
	18% HGV
	13% Buses
	13% Taxis
	11% Vans
	11% Petrol Cars

Rottingdean High Street has inappropriate levels of traffic (>10,000 vehicles a day) within an especially confined space. The main road carriageway kerb is no more than eighteen inches from flint cottages. The contribution of cars & vans to ambient nitrogen dioxide (60%) is more substantial than anywhere else in the city council's area.

It is recommended that re-routing of general traffic is considered with modelling or trials. Determine the effectiveness of weight restrictions on the High Street. Consideration of Keep Clear zones near the narrowest section of the High Street.

Discussions can be had via the Sussex Air Group, Lewes District Council and East Sussex County Council about the reliance on private cars for transport in the Peacehaven area and the impact this has on the Rottingdean AQMA within Brighton & Hove City Council.

Action to provide more transport choice; explore funding of communal rapid electrical charging for vehicles in order to encourage electric and hybrid vehicles. Encourage the wider community to reduce the number of car journeys they take along the High Street.

7.2.8 B2119 Trafalgar Street-Frederick Place

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)	
• Traffic Counts a day	2,600
• Typical monitored nitrogen dioxide at Frederick Place (near B2119)	52 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	350m
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	0.6 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	68
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	22
• Emission from Queens Road and main station contribute to Frederick Place	
• NO ₂ contribution from traffic to the B2119 part of North Laine:	27% Buses
	24% Taxis
	21% HGV
	15% Diesel Cars
	9% Vans
	6% Petrol Cars

Some of the impact on Fredrick Place relates to emissions from traffic on Queens Road. Improvement in emissions from buses and taxis should reduce ambient concentrations in the area. It is recommended that larger trucks are restricted as with the Old Town or South Laine. Consider the possibility of freight consolidation centres serviced by ultralow emissions vans to deliver within 3km of the city centre.

7.3 AQMA Streets with high NO₂ and low contribution from buses

7.3.1 A270 (west of A23) Old Shoreham Road-New England Road plus Cheapside and New England Street

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA) Prior to Valley Gardens Transport Scheme

• Total Traffic Count (HGV 290)	16,400
• Typical monitored nitrogen dioxide at New England Road facade	58 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	4.25km
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	16.1 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	826
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	616
• Emission from Preston Circus (A23) contribute to lower New England Road*	
• NO ₂ contribution from traffic to New England Road:	32% Diesel Cars
	24% HGV
	17% taxis
	10% Petrol cars
	10% buses*
	7% vans

Discussion about: high frequency of queuing and congestion on New England Road, measures to encourage general traffic to avoid lower Old Shoreham Road and New England Road. Consider no left turn onto A23 northbound and alternative directional signage. Identify if car parks attract traffic along the most congested road link. The Drove and New England bridging points under the railway have either high durations of traffic queuing or short hill climb accelerations and are enduring air quality hotspots. Consider long-term transport strategy for east west connection across the London-Brighton & Hove railway.

7.3.2 C-Road Edward Street and Eastern Road

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA) Prior to Valley Gardens Transport Scheme

• Average daily traffic for the Edward Street-Eastern Road (HGV 333)	17,000
• Monitored nitrogen dioxide at Eastern Road facade	46 µg/m ³
• Road Length of nitrogen dioxide at risk of exceeding	910m
• Area likely to be > 36 µg/m ³ NO ₂ as annual average	4.4 hectares
• Total address count Feb 2015 likely to be > 36 µg/m ³ NO ₂	297
• Residential dwelling count Feb-2015 likely to be > 36 µg/m ³ NO ₂	197
• NO ₂ contribution from traffic to Eastern Road:	32% HGV
	23% Diesel Cars
	13% Buses
	10% Taxis
	10% Vans
	9% Petrol Cars

Consider future HGV impacts and plans to mitigate these. Potential LEZ for frequenting HGV includes A23 and Edward Street. Plans tied in with those for A23 southbound especially Grand Parade.

7.3.3 A2023 Sackville Road Old North End

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Total Traffic Counts Sackville Road	>20,000
• Typical monitored nitrogen dioxide at Sackville Road North End	49 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	970m
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	2.6 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	174
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	112
• NO ₂ contribution from traffic Sackville Road North End:	
	26% HGV
	23% Diesel Cars
	15% taxis
	15% vans
	12% buses
	9% petrol cars

Discussions are required about: functionality of Sackville Road-Old Shoreham Road Junction including seeking opportunities when new development arise adjacent and considering future landscaping around the junction. Compliance with nitrogen dioxide standards has been recorded further south along Sackville Road.

7.3.4 Hollingdean Road

Summary of Air Quality investigations for the Designated Transport Corridor (part of the AQMA)

• Total Traffic Counts Hollingdean Road (of which HGV 320)	16,850
• Typical monitored nitrogen dioxide at Hollingdean Road facade	49 $\mu\text{g}/\text{m}^3$
• Road Length of nitrogen dioxide at risk of exceeding	290m
• Area likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂ as annual average	1.1 hectares
• Total address count Feb 2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	87
• Residential dwelling count Feb-2015 likely to be > 36 $\mu\text{g}/\text{m}^3$ NO ₂	70
• *Emission from Lewes Road (A270) contribute to Hollingdean Road	
• NO ₂ contribution from traffic to Hollingdean Road:	
	32% HGV
	23% Diesel Car
	13% Taxis
	13% Buses*
	10% Vans
	10% Petrol Car

Recommend that funding is sought for tests and improvements for HGV frequenting Hollingdean Road. Council fleets have been quick to invest in euro-6. Push for hybrid vehicles or alternative fuels especially public service vehicles.

7.4 Bus Low Emission Zone (LEZ)

Brighton & Hove bus LEZ came in effect with a Traffic Regulation Condition (TRC) in January 2015. The zone covers the North Street-Western Road public transport corridor described in section 7.1.1. At inception the LEZ required that all frequent bus services entering the zone meet euro five emissions standard or better. Enforcement is via prior agreement with the bus companies and will be monitoring using existing CCTV.

By 2015/16 the local bus fleet will include a significant number of euro-6 high capacity vehicles. Testing of diesel electric hybrids on local routes through the AQMA shows substantial fuel and NO_x emission savings.

Improvements to the local bus fleet have been achieved through the following:

- Multi million pound investment by several bus companies to modernise their fleets including scheduled purchases of euro six double deck buses for 2014/15
- The Green Bus Fund supported 13 diesel electric hybrid vehicles
- In 2014 the Clean Bus Transport Fund supported the retrofit of fifty euro three buses to almost euro six standard

7.5 Discussion about Low Emission Zone (LEZ) update

In the first instance the bus LEZ is for euro five emission standard, available since 2008. The bus companies continue to work towards lower emissions of oxides of nitrogen. Main operators employ hybrid or euro six vehicles on the most frequent services. Some bespoke work is required to engineer best available emission performance for the AQMA and closer working with the original manufactures is high desirable. Due to economy of scale and the substantial size of bus operations further innovative work can be trialled locally. It is recommended that the council seek funding to improve NO_x emissions from existing euro-5 vehicles and explore realistic schedules for a euro-6 hybrid or ultralow emission LEZ.

The following construction projects close to the A23 and Edward Road-Eastern Road axis are likely between 2016 and 2021

- Redevelopment of the Royal County Hospital
- Circus Street Major Development
- American Express Major Demolition and Building Replacement
- Valley Gardens Transport Scheme
- Brighton & Hove Centre and consolidation of Churchill Square Retail Hub

The action plan would like to recommend a fund assisted strategy for low emissions from construction traffic in this area of the AQMA. The action plan recommends that council committee explore options and government funds for reducing the cumulative impact of longer term construction projects. This is most especially applicable for HGV movements and oxide of nitrogen emissions along the A23, Lewes Road and Edward Street-Eastern Road transport corridors. The movement of construction traffic along these corridors without substantially modernised emissions standards is likely to seriously compromise near road compliance with nitrogen dioxide at the same time as influencing local concentrations of fine particles.

7.6 Funded Projects

The city council will explore new funding opportunities with Department of Transport and the Office of Low Emission Vehicles. This will be an ongoing strategy of the AQAP between 2015 and 2020. By 2018/19 it is expected that most frequent public service fleets will be euro-6 and hybrid. A significant number of older vehicles will be retrofitted to at least euro-6 standard. By 2020 there will be much less dependence on diesel for city transport.

Transport projects are to explore how traffic light sequences might improve flow at AQMA intersections especially for; Viaduct Terrace-Ditchling Road, Lewes Road-Elm Grove, Grand Parade, London Road, North Street Clock Tower.

Further Portable Emission Monitoring System (PEMS) testing can be used to test real time emissions. Local firm Ricardo-AEA engineering has carried out a series of tests to determine the tailpipe emissions from heavy vehicles along the number 7 bus route. The route travels from the Marina to the cities western suburbs via the retail centre and crosses through the nitrogen dioxide area of exceedance for about 1200 metres of its regular journey. Interesting findings of the work show that NO_x emissions:

- Peak around North Street uphill which shows good agreement with ambient monitoring in the area
- Are much higher on hill climbs and standing hill starts
- Are low for Electric mode (on hybrid vehicles) that activates on downhill sections
- Are higher for euro four and five compared with retrofitted euro three, euro-6 and diesel electric hybrid vehicles

7.7 Road Signage and Information Technology

Unlike some cities the Brighton & Hove's AQMA covers a small fraction of the total land area (220 hectares = 2.7%). It may be possible in some places to explore how road signage might direct traffic away from the air quality management area to alternative routes that have wider proportions, buildings set back from the carriageway, front gardens and better flowing access to the national road network. The action plan welcomes strategies that minimise general traffic to AQMA streets where space is restricted. LTP has a series of measures in place to avoid short distance city centre car journeys.

Explore options to submit digital maps of the AQMA and its component streets to mobile phone applications and satellite navigation systems so people can make informed and educated decisions about:

- Their mode of travel
- The route they take
- The number of journeys they make through the polluted or congested area

7.8 Targeting Nitrogen Dioxide by Location

Section 7 sets out the severity and extent of nitrogen exceedance within the AQMA. Local transport measures such as alteration of traffic flow must insure pollution is not displaced from one location to another. Allocation of funding for intervention measures can to some extent work in a similar way to UK flood defence policy in that spending

priority will be allocated where dwellings and people can be protected from the risk factor (in this case airborne pollution). Also for consideration is the degree to which local traffic emissions increase pollutants above background concentrations and the contribution traffic bottlenecks can have on local pollution. The evidence that may justify targeted action of limited funds is balanced is through the consideration of:

Severity	- measured concentration of NO ₂ at roadside	units: µg/m ³
Extent hectares	- area at risk of exceeding NO ₂ standard	units:
Length	- length of road at risk of exceeding NO ₂ standard	units: km
Dwelling Count	- residential dwellings count 90% or > standard = number of dwellings	
Emission	- emission rate from all road traffic using the local road link: g/NOx/sec	
Emission/Space	-traffic emission divided by the volumetric space in the street [calculated as distance from exhausts to building line ² *height=m ³]	

Concentration above Background: The Roadside NO₂ concentration with local background subtracted

The council is working towards reducing the severity and extent of pollution and must have regard to the number of dwellings affected. It is a council target to reduce the area and number of people affected. That said the most cost effective strategy is to identify where modest reductions in emissions could substantially improve air quality. This is most likely for confined street environments with high population density. That said residential-retail strips run adjacent to the main transport corridors to and from the city centre especially the A23 and A270.

7.8.1 Streets with the highest ambient concentrations of Nitrogen Dioxide

Following many years of outdoor monitoring combined with emission assessment and dispersion modelling evidence, we can state with a high degree of confidence where nitrogen dioxide is most concentrated. Combined monitoring and modelling evidence is summarised as follows:

Table 7-1 Highest Nitrogen Dioxide in Brighton & Hove (Façade) Ordered by Transport Corridor

Rank	Road Name	Street Area	Four Year Average NO ₂ µg/m ³ 2010 to 2013
1	B2066	North Street-Western Road	80 (114)
2	A23 Northbound	London Road near Oxford Street	69
3	A2073 and A270	Lewes Road near Vogue Gyratory and Elm Grove Junction	68
4	A23 Southbound	Viaduct Terrace	66

5	A23 Northbound	Marlborough Place to York Place	61
6	A270	New England Road-Lower Old Shoreham Road	58
7	A2010	Terminus Road-Queens Road	56
8	B2139	Trafalgar Road, Portslade	53
9	B2199	Frederick Place near Queens Rd	50
10	A259	Wellington Road	49
11	B2123	Rottingdean High Street	49
12	A2023	Sackville Road north end	49
13	A23 Both Ways	Preston Road near Preston Drove	49
14	C-Road	The Drove	49
15	C-Road	Hollingdean Road	49
16	C-Road	Eastern Road near Hospital	46
17	B2118	St James Street near Old Steine	46
18	A2010	Buckingham Place Seven Dials	45

Table Note: Quoted levels are for the highest monitored NO₂ along the transport corridor listed. (114 µg/m³ as a two year average) is monitored on North Street above the pavement where there are high pedestrian counts, but no permanent residence. Nitrogen dioxide exceedance has not been monitored on Boundary Road, Portslade in recent years. This has been modelled for the pub closest to the railway level crossing.

7.8.2 Areas with high NO₂ relevant to pedestrian exposure

The following street areas have high pedestrian footfall and repeated evidence of NO₂ > or close to 60 µg/m³ as an annual average:

- North Street, Western Road B2066
- London Road A23 northbound
- Viaduct Terrace A23 southbound
- Marlborough Place A23 northbound
- New England Road A270 both ways

Nitrogen dioxide at 60 µg/m³ level for long term durations risks non-compliance with the hourly average nitrogen dioxide standard equal to 200 µg/m³ (not to be exceeded more than eighteen times in a calendar year). Relevant receptors at these higher concentrations include people that might be present in the area for brief durations such as an hour or thirty minutes. Therefore protection is required for visitors, pedestrians and shoppers. Where the 40 µg/m³ annual average is exceeded, environmental protection is required for all residential dwellings where people are likely to be present for half a year or more.

7.8.3 Transport corridors with highest tally of dwellings at risk of exceeding

Using detailed traffic data, Defra's emission factor toolkit and dispersion modelling, Environmental Protection at Brighton & Hove have mapped nitrogen dioxide in around the

AQMA (see appendix). Using Geographical Information Systems (GIS) the length and area at risk of exceeding the limit can be quantified (in km and hectares) and the number of addresses and residential dwellings counted using mapping functionality. The following results are presented in Table 7-2.

Table 7-2 AQMA Transport Corridors Sorted by the Count of Residential Dwelling at Risk of Exceeding Nitrogen Dioxide ($36 \mu\text{g}/\text{m}^3 \text{NO}_2$ annual mean)

Rank	Road Name	Continuous Road Link	Road Length km	Area hectares	Address Count	Residential Dwellings Count
1	A23 southbound	Beaconsfield - Viaduct Rd- Ditchling Rd- Grand Pde- Pavilion Pde	3.0	14.2	1468	1017
2	B2066	Castle Sq- North Street- Western Road LEZ and Church Rd, Hove	2.4	13.6	1734	834
3	A2073- A270 Eastside	Lewes Road at Elm Grove- Vogue Gyratory- Coombe Terrace	2.0	12.6	967	709
4	A23 northbound	Pavilion- Marlborough PI- York PI- London Rd- Preston Rd	2.5	11.5	1066	651
5	A270- Westside	East Old Shoreham Road- New England Rd	4.3	16.1	826	616
6	A2010	Terminus rd- Surrey Street- Queens Rd	1.5	6.3	1022	534
7	A259	Wellington Rd- Kingsway	2.9	21.5	769	509
8	B2194	Boundary Road	1.0	5.0	462	245
9	C-Road	Edward Street and Eastern Road	0.9	4.4	297	197
10	B2118 eastbound	St James Street	0.5	1.5	317	181
11	B2139	Trafalgar Rd and Church	1.0	3.0	188	148

		Rd, Portslade				
12	A2023	Sackville Road	1.0	2.6	174	112
13	C-Road	The Drove and Millers Road	0.5	1.5	130	102
14	C-Road	Hollingdean Road	0.3	1.1	87	70
15	B2123	Rottingdean High Street	0.2	0.6	82	45
16	B2199	Trafalgar Street-Frederick Place	0.4	0.6	68	22

7.8.4 Streets with moderate emission rates to a restricted volumetric space

The first two hierarchical tables consider peak severity and overall extent of higher levels of nitrogen dioxide along the various transport corridors within the 2013-AQMAs. This information can be used to guide AQAP priorities for intervention such as low emission zones and traffic restrictions. However if we look at the actual NO_x tailpipe emission rates (not ambient concentrations) and divide these by the volumetric space available in each street a different picture emerges. It is possible to see where local changes could make substantial differences and where the current emission rates from road traffic are entirely inappropriate for the street space available. Emphasis on an alternative complimentary hierarchy to guide prioritisation is given in the following table:

Table 7-3 Hierarchy of AQMA Streets: Emission / Available volumetric Street Space

Rank	Road Name	Location	NO _x emission rates for the Road Link g/km/second	Volumetric Space m ³	Hourly Emission/Space m ³
1	B2123	Rottingdean High Street	0.16	51	11.3
2	A2010	Terminus Road-Queens Rd	0.28	104	9.7
3	A2073	Lewes Road	0.49	188	9.4
4	A270	New England Road	0.19	77	8.9
5	B2066	LEZ Castle Sq-North Street	0.51	225	8.2
6	A23	London Road nr Oxford St	0.43	192	8.1
7	A259	Wellington Road, Portslade	0.35	155	8.0
8	C-Road	Eastern Road	0.32	177	6.5
9	A23	Marlborough Place	0.31	177	6.3
10	B2139	Trafalgar Road, Portslade	0.30	173	6.2

11	C-Link	Hollingdean Road	0.2	126	5.7
12	A23	Grand Parade	0.22	145	5.5
13	B2118	St James Street	0.1	68	5.3
14	A23	Viaduct Terrace	0.19	132	5.2
15	A2023	Sackville Road North End	0.41	288	5.1
16	C-Road	Edward Street near Hospital	0.27	227	4.3
17	B2139	Church Road, Portslade	0.24	211	4.1
18	C-Link	The Drove to Millers Road	0.12	116	3.7
19	A270	New England Street	0.18	188	3.5
20	A23	Preston Road by Preston Dr	0.34	368	3.3
21	A259	Viceroy House Junction	0.45	729	2.2
22	B2066	Church Road, Hove	0.24	392	2.2
23	B2199	Trafalgar Street-Frederick Pl	0.07	116	2.2
24	B2194	Boundary Road	0.22	368	2.2
25	B2066	Church Rd, Hove	0.33	640	1.9
26	A259	Kings Road	0.46	900	1.8
27	A270	Old Shoreham Road, Hove	0.42	1080	1.4
28	A2010	Buckingham Place Dials	0.19	512	1.3
29	C-Link	Wharf Road, Portslade	0.18	600	1.1

Table Note: Available volumetric space is calculated by squaring the distance measured between the building line and the nearest road carriageway emission centre line multiplied by approximate height of the enclosed space. Emissions for Marlborough Place and Grand Parade are prior to the Valley Gardens transport scheme.

Dividing the volumetric street space by the roads emission rate (derived from the Defra emission factor toolkit) for all traffic on the specified link gives a guide of how enclosed or confined NO_x emissions are at the key NO₂ monitored locations. Such a targeted approach is likely to be more cost effective and faster to implement than general emission reduction strategies that could take some years to work in practice.

In the final hierarchical table, background NO₂ is subtracted from roadside NO₂. This gives an indication of where localised transport emissions are dominant and add considerably to the prevailing background levels that have been monitored over the years at park and suburban locations. The number of monitors (about 100 including archives) should not be counted as separate issues in their own right. More than one monitor along the same transport corridor can be indicative of the same or similar issues further along. Near junctions, emission contributions to a monitor are likely to be significant from more than one road link or transport corridor and this should be taken into account when prioritising improvement measures.

Table 7-4 Roadside Nitrogen Dioxide Minus Background Nitrogen Dioxide

Rank	Road Name	Continuous Road Link	Nitrogen Dioxide $\mu\text{g}/\text{m}^3$		
			Roadside	Background	Difference
1	B2066	LEZ North Street	80	26	54
2	A270	Lewes Road	68	22	46
3	A23	London Road- Preston Road	69	26	43
4	A23	Viaduct Terrace	66	25	41
5	B2123	Rottingdean High Street	49	13	36
6	A23	Marlborough Place	61	26	35
7	A270	New England Road	58	25	33
8	A2010	Terminus Road	56	25	31
9	A23	Preston Road by Preston Dr	49	18	31
10	A23	Grand Parade	55	24	31
11	A23	The Drove near railway	49	19	30
12	B2139	Trafalgar Road, Portslade	53	23	30
13	A2023	Sackville Road North End	49	23	26
14	C- Road	Hollingdean Road	49	24	25
15	A259	Wellington Road	49	25	24
16	B2199	Trafalgar Street- Frederick Pl	50	27	23
17	B2118	St James Street	46	23	23
18	A259	Kings Road	45	22	23
19	C- Road	Eastern Road by Hospital	46	23	23
20	A2010	Buckingham Place	45	24	21
21	C- Road	Edward Street	46	26	20
22	B2066	Church Road nr The Drive	41	23	18
23	A259	Viceroy House Junction	39	22	17
24	B2066	Church Rd nr Sackville Rd	39	23	16
25	A270	Old Shoreham Road, Hove	39	23	16
26	B2139	Church Road, Portslade	39	24	15
27	A270	New England Street	39	25	14
28	B2194	Boundary Road	38	24	14

Table Note: Nitrogen Dioxide readings taken from bias corrected and calibrated diffusion tube results as a four year average. Where recent monitoring is not available archive and modelled results have been used.

7.9 Taxi Licence Policy

Taxis and private hire vehicles play a vital role in the city, helping to tackle congestion and improving accessibility particularly for older people and those with disabilities (the Brighton & Hove fleet now has a higher and increasing proportion of Wheelchair Accessible Vehicles (WAVs) due to licensing policy changes. Taxis are important in terms of personal safety, particularly for children and women, especially since mandatory CCTV was fitting as a licence condition.

7.9.1 Lower Emission rates favoured instead of vehicle age

The taxi forum has also discussed proposals to change vehicle age limits to the requirement of Euro six standards. In 2014 there were real concerns regarding the costs to proprietors. Officers and trade representatives carefully considered the issue of vehicle standards twice in consecutive taxi forum meetings. There are benefits in moving from age limits to emission standards and hybrid options which are more scientific and evidence based, which is also comparable with the clean bus technology fund that has helped establish the low emission zone.

However, public policy must be predicated on a partnership approach. The licensing authority works with local taxi businesses as stakeholders to make sure regulation is clear, proportionate and effective, and to insure the concerns of business are heard and there is appropriate opportunity to influence policy. At this time the local industry reports experiencing fundamental uncertainty: political, with proximity of local and general elections, economic, with challenging trading conditions and regulatory, with both the Law Commission's proposals and the deregulation bill clauses potentially increasing the differences and standards between the two tiers: taxis and private hire. Licensing and air quality officers are researching opportunities with the Office for Low Emission Vehicles (OLEV), the cross government, industry-endorsed policy and funding body promoting ultralow emission vehicles. There is a potential for supporting ultralow emission taxis; OLEV has pledged funding opportunities for local authorities. The innovative work already undertaken by the transport planning authority for a low emission zone and the high standards of taxi fleet the trade and licensing authority has developed is likely to place the city at an advantage. Government is expected to publish criteria in the autumn. Collaboration between the taxi trade and Council could be the basis of bidding for funds for both vehicles and supporting infrastructure.

7.9.2 Taxi Rank Policy

Principles for appointing and revoking ranks have been set out with a traffic regulation order at Environment, Transport and Sustainability Committee. This is to always have regard to the proximity of taxi ranks adjacent to permanent residential dwellings in areas of poor air quality ($36-40 \mu\text{g}/\text{m}^3$ annual mean NO_2) when designating new rank spaces, and to assess potential for residential annoyance or nuisance with consideration of the prevailing roadside air quality and noise. The location of taxi ranks can have a harmful impact on residential amenity in terms of noise, fumes and air quality. It is therefore proposed that work is undertaken with officers in the Planning Department to promote the consideration of the impact of the proximity of existing taxi ranks on proposals for new residential units in terms of residential amenity.

This work will also look at opportunities for providing new taxi ranks as part of larger developments close to retail, commercial, catering, nightlife and transport links, whilst avoiding rank provision adjacent to residential dwellings (within several metres – dependent on local noise and air pollution levels). The aim is not to lose existing rank spaces in areas of high demand and seek new opportunities to increase rank numbers in

keeping with city population and economic growth. For major strategic developments work will be undertaken with planners to consider scope for new rank spaces as a condition of the major developments Funding to further support alternative refuelling infrastructure would complement ongoing initiatives between Sussex Air and Electromotive in across the South East.

7.9.3 Taxi Anti Idling Strategy

On 6 March 2014 Committee supported the investigation of proposals that would assist with the lowering of emissions from licensed vehicles such as “Cut Engine. Cut Pollution” signs at taxi ranks and amendments to vehicle licence requirements to be based on emission and not age. The cost of these signs has come from the hackney carriage budget. Stickers based on the same design as the taxi rank sign should become part of the required livery for hackney carriage and private hire vehicles. It is hoped that this will get the message to members of the public to cut their engine when not moving. A rotating carousel with low level seasonal heating would eliminate the need for any active engines at the busiest taxi ranks.

7.9.4 Proposed Taxi Licence Conditions

The following Licence Conditions have been proposed at licensing Committee:

- Relax licence conditions for passenger seat width
- Diversify licence conditions for the maximum number of passengers per cab: 1, 2, 3, 4, 6 & 8
- Licence conditions to allow for lighter vehicles that carry fewer passengers
- opening a niche market opportunity (cars that weigh less are more suited to narrow streets, slow speeds, electric and petrol)
- Taxi design brief: less weight, smaller engine, higher ratio of passenger & luggage space relative to bonnet
- Auto engine cut off advisable on all new cars
- “Cut engine. Cut pollution” signs at selected ranks
- Licence conditions to be based on emission and not age (in practice only the larger taxi minibuses will be more than five years old so this may have to consider exemptions in balance with wheelchair accessibility requirements)
- Local condition requires taxis to pass an oxide of nitrogen test, like the existing MOT certificate for hydrocarbons and carbon monoxide (consistent with existing US policy and EU directive being considered).
- Consider fleet test.
- Propose traffic regulation order engine idling and Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002 becomes condition of taxi licence[1] (potential exemptions for certain temperatures).

The aim is to provide evidence regarding which licensed taxis in practice have the lowest NO_x and fine particulate emissions on local drive routes.

7.9.5 Clean Vehicle Transport Fund Retrofits Tailpipe Tests for taxis

NO_x sensors are being used to assess retrofitted minibus taxis funded by the clean vehicle transport scheme (CVTF Department for Transport). Twenty five minibus taxis are being retrofitted with compact selective catalytic reduction and ammonia slip. The scope is to be likely expanded to consider options for more detailed tailpipe tests that use Portable

Emission Monitoring Systems (PEMS) testing in order to assess actual NO and NO₂ emissions on local drive cycles.

7.10 Fuel Strategy and Exhaust Treatment

To pass simple emission tests modern diesel engines rely on exhaust gas after treatment in order to mitigate soot and other emissions. Typically these are Exhaust Gas Recirculation (EGR), Diesel Particulate Filters (DPF) or Continuous Regenerating Traps (CRT). For low NO_x emissions CRT is used in conjunction with Selective Catalytic Reduction (SCR) that has been retrofitted to older buses and minibuses in Brighton & Hove. CRTs used without SCR are likely to generate additional NO and NO₂ and be significant contributors to local NO_x. The CRT-SCR combination will only work with Ultra Low Sulphur Diesel (ULSD) at optimum temperatures. Since Dec-2007³⁹, the sulphur content of fuel has been 10ppm (parts per million) a substantial reduction in sulphur content of 500ppm since the 1990s. The UK has no plans to further modify the specification of ULSD apart from an increase in the proportion of bio-liquids. Vehicles will perform better after an engine oil change and exhaust line clean during services.

The energy demand required to refine a high specification product such as ULSD will depend on the sulphur content of crude supply. For example sour crude oil at >0.42% sulphur content will require substantially more energy to refine than sweet crudes such as Brent Blend at around 0.24% sulphur. Continued supply of the most desirable sweet crude is finite. Refining of more common sour crudes from unconventional sources will increase refining costs, well to wheel energy demand and CO₂ emissions.

Local efforts are being made through a variety of funded infrastructure projects to reduce transport and construction dependency on diesel in the AQMA especially through electric, petrol hybrid, Liquefied Natural Gas (LNG methane) and Compressed Natural Gas (CNG methane).

7.11 Railways and Air Quality

Brighton main station is one of the busiest rail hubs for passenger numbers along the South Coast. However there is scope for an increase in services on weekends, at night around 12:30 AM and for match day events. Restoration of the Uckfield to Lewes line could save car commuting into Brighton's Lewes Road AQMA corridor.

Nitrogen dioxide in the Brighton & Hove AQMA is dominated by road traffic with minor contributions from light industry, commercial and domestic heating, shipping and railways. Emissions and brake wear from railways are thought to be most significant around Terminus Road and possibly The Drove near Preston Park station. Approximately 90% of the locomotives travelling through Brighton & Hove stations are electrified. At this time there remains a significant minority of diesel locomotives that pass through West Sussex into Brighton & Hove. The AQAP supports proposals to electrify western railways (that travel from Wales via Westbury and Bath)⁴⁰. When this modernisation is complete is expected that 100% of scheduled locomotives entering the Brighton & Hove AQMA will be electric. If as a result of spending reviews electrification of rail lines is delayed, the council proposes to write to the Minister for Transport setting out the air quality benefits for the urban area.

Brighton & Hove City Council Air Quality Action Plan supports and agrees with London Borough initiatives to communicate with government ministers to make the case for stronger control of the environmental effects of rail services through existing mechanisms. Department of Transport and Defra should put in place requirements to insure operators are required to reduce excessive air, noise and light pollution from rail activities. It is appropriate that decisions regarding assessment of new rail franchises should be taken at a national level as long as environmental considerations are an explicit and significant part of the assessment. The current franchising process does not give satisfactory consideration to impacts on health and the environment.

8 Addressing Contribution from Non-Transport Sources

While the council acknowledges that local transport emissions are the dominant contribution to nitrogen dioxide in the AQMA, every effort needs to be made to avoid oxides of nitrogen from other sources in the vicinity of the AQMA. One such priority is to avoid boiler emissions directly into the problem street spaces identified in section 7. Flu terminations should have clearance above highest roof apex. Horizontal emission releases from domestic gas boilers to the street should be avoided. The Air Quality Action Plan strongly recommends a policy to avoid fixed plant combustion processes in and adjacent to the AQMA. Events and major construction projects should avoid diesel generators and seek plugged in places. For example the Brighton & Hove Pavilion seasonal open air ice rink switched from using diesel generators to its own electricity provision which helped save costs and emissions. The council has received a number of complaints in the AQMA for ad hoc diesel generators and use of these in the area is an offence that contravenes the objectives and policies of the Air Quality Action Plan.

8.1 Development and Buildings

From 2015 it will not be sufficient for developments to demonstrate insignificant impact on local air quality where nitrogen dioxide continues to exceed legal limit values. For major developments and demolitions around the revised smaller 2013 AQMA air quality will be a key consideration of the planning process. Developers will need to propose mini schemes and measures to improve air quality and reduce exposure of future residents to airborne pollution. Further guidelines are set out in the 2013 Sussex Air Quality and Emissions Mitigation Guidance²².

In some cases it may not be necessary to carry out a detailed air quality assessment. This will depend on the amount of new traffic that is likely to be attracted or generated by the new development, the combined influence of other developments and any fixed combustion plant proposed at the site. The influence of demolition and construction may need to be assessed.

The local planning authority will require the developer to demonstrate that they have taken air quality issues into account. The type of measures proposed to reduce air quality impacts will depend on the nature and scale of the proposed development and should be proportionate to the likely impact. The local planning authority will work with applicants to consider appropriate mitigation so as to ensure the new development is appropriate for its location and unacceptable risks are prevented. Planning conditions and obligations (where the relevant tests are met) will be used to secure mitigation.

Examples of mitigation include:

- the design and layout of development to increase separation distances from sources of air pollution;
- using green infrastructure, in particular trees, to absorb dust and other pollutants;
- means of ventilation;
- promoting infrastructure to promote modes of transport with low impact on air quality;
- controlling dust and emissions from construction, operation and demolition;

National Planning Policy Guidance indicates that where mitigation cannot be made on site developers could be asked to contribute funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development. Any agreed offsetting measures will be secured through planning conditions and/or Section 106 planning obligations.

For many smaller developments in the AQMA such as flats above retail the primary consideration with regard to air quality is to avoid new dose and exposure to the known area of NO₂ exceedance. The action plan aims to reduce the number of dwellings that are above the 40 µg/m³ limit and 90% of the limit that is 36µg/m³. In recent years the council has received hundreds of applications for change of use that are seeking planning permission for residences adjacent to roads in the AQMA where these concentrations are exceeded. The following strategies should be considered for change of use applications:

- Internal arrangement to position non-habitable rooms (bedroom and living rooms) on polluted façades.
- Avoid features encouraging residents to spend significant periods of time in polluted external environments, for example, balconies fronting AQMA transport corridors and junctions
- Place sensitive uses at higher storeys only.
- A passive or mechanical ventilation strategy for flats and houses adjacent to road in the AQMA with recommended for intakes from the rear and top of the premises furthest from the road traffic emissions
- Consider the impact of new traffic generated as a result of the development including off site impacts on local road sections
- Follow the hierarchy for energy provision in and adjacent to the AQMA

8.2 Hierarchy for Energy Provision on AQMA developments

To avoid the inefficiencies of transmission of power over long distances many developments will seek to provide their own heat and power that is either independent or supplementary to electricity and gas grids. Such a strategy is combined with improved energy efficiency and insulation in buildings. Micro-generation on site is encouraged by a number of planning policies. The Environmental Protection team has developed a hierarchy of energy options that it would prefer to see on new developments and renovations. This preference order treats air quality and pollution (NO₂ and PM) avoidance as priority in and around the AQMA (3% of the City Council's area). These local air quality considerations are in addition to building regulations and BREEAM ratings. Renewable obligation certificates are best advised to direct combustion options outside of the AQMA.

Whilst log fireplaces in pubs are attractive and small scale, and wood pizza ovens are likely to be permitted with conditions, applications for commercial solid fuel burning in the AQMA are likely to be refused. Although tall chimney combustion processes with flue termination above the building canopy may address air quality concerns, in and around BHCC's AQMAs modern chimneys may be out of character where flue terminations need to be above Regency and Victorian architecture. Proposals for new tall building will need to address tall building considerations⁴¹. Chimney height determinations could be

invalidated where there is likely to be tall buildings in the future. Tall buildings may have energy centres connected to ultralow NO_x gas boilers and the lowest NO_x Combined Heat and Power (CHP) with exit flues on the top. The council wants to encourage renewable microgeneration, however this must be balanced with appropriate land use. Combustion plant including biomass is best suited to industrial estates or port side wharfs and is not appropriate in high density, largely residential areas.

For space heating hot water and electricity, new developments in and adjacent to the AQMA should seek alternatives to combustion by adhering to the following preference hierarchy that avoids emissions to air:

8.2.1 AQMA Non Combustion Solutions

- Air Source Heat Pumps
- Ground Source Heat Pumps
- Solar Panels
- Grid electricity from clean renewable sources such as offshore wind, wave and tidal
- Electric storage heaters
- Hot water via an electric immersion tank

8.2.2 Combustion Preference Order for the AQMA

If on site combustion is the only option for new developments in and adjacent to the AQMA, the following hierarchal preference list should be followed:

- Biogas for use in Ultralow NO_x boilers derived from Anaerobic Digestion (AD) that can seek Renewable Obligation (AD would be outside of the city centre)
- Ultralow NO_x boilers that run on natural gas with vertical flues at least 1.5m above the buildings highest roof apex, natural gas is the cleanest fossil fuel with
- Combined Heat Power tends to have higher emission of NO_x than the best gas boilers; any installation would have to demonstrate the lowest possible emission of NO_x, a flue release height above all roof tops in the vicinity, and a stack height determination would need to justify effective dispersion of NO_x emissions with no impact on dwellings in the AQMA
- “Low” NO_x gas boilers (not ultralow) that meet basic generic national requirements for the code for sustainable homes are not best available technology for the AQMA and may be refused planning permission
- Wood Fuel is renewable and carbon neutral but has higher emissions of NO_x and PM compared with gas, non-combustion, and grid supply meaning this method it is not appropriate for use in the AQMA. Determinations of Chimney height may be required as proof of effective dispersion of NO_x emissions including during start up and operation. A copy of Lord Hunts letter on biomass burning in areas sensitive for air quality is included in the appendix as a reference to the policy.

Gas fuel can achieve renewable obligation credit (ROCs) where it is derived from organic waste. Anaerobic digestion on farms or industrial estates outside the AQMA can produce biogas. The resultant gas is chemically very similar to natural gas (mostly methane) and

can be added to the gas grid and used for normal applications such as space heating, hot water and cooking.

Emission peaks happen during start up and shut down. That said, a simple rule of thumb is that oxide of nitrogen and PM emission rates depend on the type of combustion fuel. Emissions tend to increase down the list in the following order:

Fuel List of AQMA Dos for fixed combustion

- Electricity derived from renewable
- Natural Gas or Biogas
- Electricity derived from other grid generation
- Low Sulphur Gasoline

Fuel List of AQMA Don'ts for fixed combustion

- Wood Pellets
- Logs
- Heating Oil
- Diesel including low sulphur diesel and red diesel
- Heavy Fuel Oil (HFO)
- Low Sulphur Coal
- High Sulphur Coal

The fuels in the top list are fit for purpose in the AQMA environment.

8.2.3 Summary of AQMA Fixed Combustion Plant Policy

AQAP policy states in or adjacent to the AQMA that commercial scale combustion (> 45 kw peak) that is fuelled by wood, oil, or coal without a tall flu (above all surrounding building canopy and roof tops) should be avoided. Tall flues or chimneys are likely to be refused in the vicinity of Brighton & Hove and Rottingdean AQMAs due to conservation and visual planning considerations. Exemptions include small scale burning of wood and low sulphur coal in domestic properties. However in order to lawfully comply with the Clean Air Act, domestic burning in smoke control areas must use an exempt appliance with compatible fuels⁴². This AQAP strongly recommends that the Clean Air Act requirement is extended to those parts of the AQMA that are not part of pre-existing smoke control areas. Best practice in domestic solid fuel burning should happen throughout the city's AQMA and smoke control areas. Brighton & Hove City Council has produced a guideline pamphlet: *Using Solid Fuels Safely and Legally*⁴³.

8.2.4 Policy on Avoidance of Waste Burning

Another source of pollution in the city is household fireplaces and bonfires that are used as a means of disposing waste. Smoke and fumes can give rise to neighbourhood complaint that is difficult to prove as a statutory nuisance. The most sensitive, offensive place for this to happen is in and around the AQMA that is recognised as having the poorest air quality. Fires can contribute to transient emissions of oxides of nitrogen, smoke and the finest particles that can be an annoyance that offends neighbours. Smoke mixed with fog

can also impair visibility on highways that can be dangerous. This AQAP strongly recommends that alternative methods of waste disposal are used in and around both AQMAs. The council waste disposal site details can be found on the BHCC web page⁴⁴. Significant parts of the AQMA are in valleys and under certain meteorological conditions such as calm inversions a mix of smoke and invisible pollution can hang in these depressions in the landscape.

9 Community Involvement with Air Quality

The report has discussed how road traffic related air quality issues differ from climate change in that the impacts are immediate, local and constant. Some community groups have been very proactive and air quality issues are at the top of their agenda. However the Council will like to explore opportunities for more consistent community engagement across the remaining AQMA. This should be guided by the priorities identified in the summary tables listed. AQMA outreach needs to target residential dwellings in the area likely to exceed the nitrogen dioxide standard (Table 7-2) and locations where moderate emissions happen in a very confined street space (Table 7-3). The following summary describes community engagement relating to air quality to date.

9.1 Local Action Teams (LAT)

9.1.1 St James Street LAT

Air quality and traffic reduction are at the top of the St James Street LAT agenda. Recent discussions between Environmental Protection, elected members and Brighton & Hove buses and local people have discussed the possibility of exploring different bus routing options. Another favoured suggestion amongst some local residence is to make the street pedestrian priority with limited access for loading and pick up. Brighton & Hove buses are happy to consider an extension of the bus LEZ into St James Street and to consider some alternative routing trials. That said it is very important that there are no adverse consequences of route changes to Edward Street which already carries several times the amount of traffic compared with St James Street and is also part of the AQMA. By comparison, St James Street is narrower and has a higher density of dwellings within a few metres of the carriageway likely to exceed the nitrogen dioxide limit.

9.1.2 Rottingdean Parish Council

A number of meetings and talks have been held with the transport authority and Rottingdean Parish Council. Top of their list of items is air quality and reducing the impact of traffic in the High Street. Members and residents are very keen to minimise the impact of traffic on the character of the village in a conservation area and are concerned about the health impacts of pollution. Whilst the area of nitrogen dioxide exceedance is not as extensive as other AQMA streets, levels are considerably higher than background and continue to exceed the 40 µg/m³ level. It is recommended that alternative routings and keep clear zones are considered for a trial period. Air quality concerns can be relevant to neighbourhood planning, and it is important to consider air quality when drawing up a neighbourhood plan or considering a neighbourhood development order.

9.1.3 South Portslade Community Meeting

The council has received enquiries and complaints about air quality from residents in the Boundary Road and Trafalgar Road areas. Environmental Protection officers have met with residents to discuss traffic flow and air quality. Residents expressed interest in a countdown display that tells road users how many minutes and seconds until the railway crossing barriers are raised. If more than a few minutes', people would be happy to seek an alternative route to Boundary-Station Road. It was also hoped this idea would reduce the duration and frequency of traffic queuing at the level crossing on Boundary road. The road safety team have an active walk to school programme in Portslade and have considered the air quality benefits of such a scheme. Crossings include wider pavements and refuge islands to help pedestrians cross the road. The action plan recommends a funded exploratory study to determine and improve emissions standards for HGV using haulage routes along Wellington Road and Trafalgar Road.

9.1.4 Terminus Road Queens Road North Street

Discussions between Environmental Protection, Brighton & Hove Friends of the Earth, Brighton & Hove buses and the Transport Authority have emphasised the need for east-west priority for the Clock Tower Junction to ease bus congestion. As one of the most important parts of the AQMA community outreach is recommended to discuss air quality improvements for the area.

9.1.5 North Laine

With the exception of Frederick Place near to Queens Road Quadrant, air quality is good in this inner city area. A number of residents have been diligent to enquire about smoke control requirements and their legal duties with regard to the Clean Air Act. Environmental Protection has sent out advice and pamphlets as appropriate. Some residents have complained about motorbike parking and engine revving against lower ground floor windows and parking policy have been made aware. Action plan investigations show motorbikes are insignificant contributors to nitrogen dioxide over a calendar year or more.

9.1.6 Preston Circus Community Meeting

The last time the action plan went to open consultation an open community meeting organised by Councillors and was held near Preston Circus. The bus company, transport planning, University of London and Environmental Protection presented and participated in discussions relating to transport and air quality. About forty members of the public attended and the public had the opportunity to comment on the AQAP.

9.1.7 Lower Old Shoreham Road New England Road

Given the known Air Quality issues in this area further community engagement is required. The action plan recommends exploring options to minimise the amount of general traffic on the road link which is congested for many hours of the week.

9.1.8 Lewes Road

In the past community engagement for this area has expressed concern about the number of cars along the transport corridor. The new transport scheme favours extra capacity for cycling and bus usage. Since road works are completed, junction changes have been

implemented and buses retrofitted we would expect to see improvements in nitrogen dioxide along the corridor.

9.1.9 A23 Southbound: Beaconsfield Road Viaduct Road-Viaduct Terrace-Ditchling Road-St Peters-Grand Parade-Pavilion Parade-Old Steine

During 2014 a series of workshops discussed options for the proposed Valley Gardens transport scheme. The area has high residential population density adjacent to the main road and is collectively the most important section of the AQMA. Given the extent of the Air Quality issues in this area further engagement is required.

9.1.10 Eastern Road and Edward Street

Residents have expressed concerned about HGV deliveries in and around Edward Street, idling coaches and taxis near Eastern Road and buses routes from Edward Street to Egremont Place. Taxi licensing has adopted an anti-idling policy and coaches are asked to switch engines off. Further community engagement relating to air quality is recommended for Edward Street Eastern Road area around American Express and the Hospital. The middle section of the transport corridor has better air quality.

10 Educational Remit

In addition to communicating with community groups and LATs, part of the Air Quality Action Plans is an educational remit. Information and investigation findings are communicated in a variety of ways as follows:

- Environmental Protection Team Officers have given regular talks and lectures and local universities and schools.
- Talks and presentations to other council departments including health teams
- Regular information and press releases are edited and sent to the Council's media and communications teams that manage interest from press, radio and TV
- Information on monitoring and action planning is posted on the City Council's Web pages: "Air Quality Management in the City".
- Aim to continue to increase public awareness of local air pollution as a major influence on public health
- Linkages of travel plans
- Environmental Protection (author of this report) has given a number of Talks and presentations at national conferences. Topics have included air quality in a compact city, dispersion modelling, smoke control and air quality action planning.

11 Summary

For non-transport sources the report sets out a hierarchy of preferences for renewable energy options in the AQMA. For promoting pedestrian connectivity a hierarchy of crossing preferences to minimise emissions has been proposed in the section on road safety.

For transport this report has characterised where and why nitrogen limits exceed legal standards. The main contributors to roadside nitrogen dioxide vary in ratio, severity and extent:

11.1 Buses

The following routes are only likely to get better for local air quality if there is a substantial reduction in NOx emission from buses.

- B2066 North Street-Western Road
- A23 Northbound between Marlborough Place and Preston Circus
- A2010 Queens Road and Terminus Road
- B2118 St James Street
- B2194 Boundary Road

This aspect of the AQAP is advanced and has made tremendous progress in the past two years.

11.2 Heavy Goods Vehicles

The routes listed below require substantial reductions in emissions from HGV if we are to reduce nitrogen dioxide to compliant levels where people live adjacent to roadside.

- A23 Southbound Beaconsfield Road to Grand Parade and Pavilion Parade
- Edward Street and Eastern Road
- A259 Wellington Road through to B2139 Trafalgar Road, Portslade
- Hollingdean Road
- Sackville Road Old Shoreham Road Junction

HGV movements associated with an increase in construction and demolition risk adverse effects on air quality along these transport corridors and could compromise the air quality action plan.

11.3 Diesel Cars

The following routes are essentially bottlenecks or pinch points for diesel cars and vans. It is advisable that alternative modes and routing strategies are seriously considered.

- B2123 Rottingdean High Street
- A270 New England Road
- The Drove under the railway bridge to Millers Road

Whilst in many places bus and HGV emissions contribute most to ambient nitrogen dioxide the contribution for diesel cars and vans (LDV) is significant and should not be overlooked.

11.4 Taxis

Taxis are significant contributors to AQMA nitrogen dioxide especially around Queens Road, Brighton Train Station-Fredrick Place and the East Street-Castle Square ranks. Brighton & Hove continues exemplar Taxi Licence policy and is seeking opportunities, funds and incentives for encouragement of ultralow emission vehicles.

11.5 Recommendations

The council has had success with winning capital grant funds of one £million to enable measures in support of the ongoing air quality action plan. This has not included support for staff time to manage evidence base investigations, contractors, bids and projects. Resource support is required to enable staff to implement recommendations in the plan.

Explore funding for further improvements to bus emissions

- Fine-tuning of euro-5 performance conditioned for drive circuits through the AQMA
- Discuss realistic timings for bus LEZ to become euro six (2013 emission standard) or better (euro five has been available since 2008 and will soon fall out of date)

Explore funding for substantial improvement to HGV emissions

- A23 southbound Preston Circus to Edward Street including Grand Parade
- A259 Wellington Road and B2139 Trafalgar Road and Church Road, Portslade

Explore reductions in the amount of general traffic through:

- New England Street and link under the railway bridge
- Rottingdean High Street
- The Central AQMA A23 and A2010
- The Drove link under the railway bridge

Consider routings that:

- Favour gentle gradients and minimise stopping on steeper hill climbs
- Prioritise measures to improve flow and reduce emissions on AQMA road hill climbs especially; North Street, Terminus Road, Edward Street, St James Street, Trafalgar Street

12 Results from Formal Consultation on Air Quality Action Plan

Defra (Department of Environment Food and Rural Affairs) have requested that we include feedback from the council's consultation process in this action plan. Transport and Planning departments have made detailed comments on the document which have been incorporated into this post consultation edition of the action plan. This section summarises all the responses to the action plan consultation that was open between March and May 2015. Responses were received from the following departments, groups or individuals:

- Defra comments received April 2015 and are available as a report addendum
- Transport
- Planning
- Defra
- Friends of the Earth, Brighton & Hove
- Bricycles, the Brighton & Hove Cycling Campaign
- Brighton & Hove Food Partnership (more sustainable food delivery)
- West Sussex County Council

- Lewes Road for Clean Air Community Group
- Local residents that refer to: Lewes Road, North Street, Western Road, Preston Circus, London Road, Viaduct Road, New England Road, Valley Gardens, Pavilion Roundabout, Trafalgar Road Portslade and Balfour Road

Disclaimer: Individuals or couples have taken the initiative and responded to the consultation portal on behalf of groups or organisations; their views may or may not be representative.

12.1 Defra Review of the BHCC draft AQAP March 2015

This appraisal report covers the Air Quality Action Plan report submitted by Brighton & Hove City 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, and will replace the previous action plan, which was published in October 2010.

The overall plan is clear, and generally follows the guidance outlined in LAQM Policy Guidance PG (09). The plan provides comprehensive background to the review and assessment work undertaken by the council. The plan also provides an overview of other relevant plans and policies that are likely to have a bearing on local air quality. Twenty-eight measures been included in the draft action plan and ones which have been estimated to have a high impact on air quality and are high priority measures include;

- Bus initiatives including: a Low Emission Zone for Buses, SCRT retrofit programme for buses and the development of a procurement strategy for buses;
- Changes to the taxi licencing and anti-idling policies;
- Alternative fuel infrastructure, including electric vehicle charging;
- Restrictions to vehicle numbers in AQMA areas;
- Refusal of new commercial solid fuel burning in or adjacent to the AQMA, with the focus on ultra-low NO_x boilers; and
- Consideration of freight initiatives including a Freight Consolidation Centre.

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

Commentary

1. Brighton & Hove City Council has adopted a strategic approach to the update of their action plan with strong links made to other council policy and other authorities through the Sussex Air Quality Steering Group, which is welcomed. Details of the statutory consultees engaged with during the consultation phase should be included in the final draft (included above).
2. The AQAP includes a map of both AQMA sites and states that the AQMA has been declared for NO₂. The AQAP also includes a table outlining the nature of exceedences and this is an example of best practice.

3. The AQAP discusses the nature of source apportionment and provides details of both transport, commercial and domestic measures to reduce emissions. The AQAP would benefit from the inclusion of the source apportionment for each vehicle type, and each source to demonstrate whether the measures selected are the most suitable for reducing emissions in the two Brighton & Hove AQMAs.
4. Brighton & Hove City Council provide a clear indication of the dates that each of the measures is expected to be completed, although no information is provided in relation to the cost benefit analysis, or prioritisation method used to create the actions. Indicators that demonstrate when the action has been completed have been included, but an overall summary of when the overall objective is likely to be attained is not included.
5. The relevant authority for delivering each action has been identified and each has the necessary powers to create the change. Where funding is already in place, this has been identified within the AQAP. The council have identified several approaches for sourcing future funding, particularly through the Sussex Air Quality Steering Group, to deliver the changes required.
6. Information has been included within the AQAP relating to how Brighton & Hove City Council will monitor each of the actions to demonstrate that air quality has been improved within each of the AQMA areas.
7. The council strongly promotes partnership engagement and ownership within its action plan which is very much encouraged.
8. Overall, it is clearly evident that much work has gone into the production of this action plan and the importance of linking it to the transport policy within the authority and wider county.

Defra's commentary is not designed to deal with every aspect of the local 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.

12.2 Friends of the Earth Brighton & Hove

On behalf of Brighton & Hove Friends of the Earth (BHFOE) I would like to welcome the opportunity to comment on the Brighton & Hove City Council Air Quality Action Plan. This comes at an interesting time with the recent Supreme Court ruling on air pollution.

Overall, BHFOE is very supportive of the need to take a more coordinated approach to tackling air pollution and where practicable in a more scientific way. However, this isn't always possible without a lot of modelling, while some of the solutions (such as investing in walking and cycling) can have other health and social benefits and so should be brought forward anyway.

BHFOE believes that a great deal of work has gone into the Action Plan, particularly in explaining the background and the nature of air pollution. However, BHFOE is not so convinced by some of the solutions suggested which it doesn't believe are based on an evidence based approach as espoused in the Action Plan.

The whole issue of air pollution is also a fast-moving area and since the consultation was started, the Supreme Court ruled on 29 April, 2015, that the Government needed to draw up a new Air Quality Action Plan by the end of the year. The ruling also touched on the issue that compliance with the Directive¹ needs to happen in “as short as time as possible”². This means that the Brighton & Hove City Council Air Quality Action Plan also needs to be considering actions in the same light and needs to be revised to accommodate this.

Similarly, while the council has done a fair amount to improve walking, cycling and public transport use, and all of these forms of transport have benefited from investment, there is still much to be done to create a fully connected cycle network which would allow a step change in cycle use. To a lesser extent, walking also needs further investment, while public transport needs urgent action to reduce delays on the bus network, something BHFOE has consistently raised now for many years. To date it has largely been ignored.

BHFOE also believes that the use of modelling to predict air pollution levels with changes in road layouts needs to be approached cautiously. That’s because a road layout change could lead to a change in road capacity, which might predict, a greater or smoother flow of motor vehicles initially and possibly a reduction in air pollution. However, this could be short-lived if the changes encourage more people to drive and could actually make the situation worse in the medium and long term. Ultimately, only schemes which facilitate modal shift have any chance of reducing long term air pollution.

In the section on road safety, BHFOE takes issue with some of the suggestions and analysis. For example, the report talks of the need to keep traffic moving, with pedestrian crossings subordinate to this. However, there is no consideration of whether it is more important to keep traffic flowing or whether by doing this pedestrians are kept waiting by the kerbside, exposed to poor air quality for longer and thereby placed at greater risk. This isn’t quite so black or white as it seems and the answer could vary depending on the location and the numbers of pedestrians involved.

BHFOE also disagrees with the comments on speed bumps which are potentially misleading. When considering the impact of speed bumps, research has shown that their frequency is the critical factor as to whether there is compliance with the speed limit and whether vehicles accelerate and brake in-between the speed bumps. Above a certain frequency of speed bump cars tend to be driven at a constant speed without increasing emissions. The situation as depicted in the Action Plan is not a given and highlights the need for good design, rather than the avoidance of ‘acute’ speed bumps.

BHFOE also questions the discussion of park & ride which fails to acknowledge that this has been problematic for decades now because of the impact that it would have on the South Downs National Park. Now that Brighton & Hove City Council is no longer the planning authority for the South Downs, this is likely to be even harder to deliver, or will involve using land which could more usefully provide housing or employment land.

The comments around park & ride are not backed up by any evidence and BHFOE cannot see how part time park & ride sites, other than when marketed for specific events, could prove to be of any use. If they became successful then it is likely that they would increase people’s expectation of being able to use them. This would encourage more people to

drive to the city but when they weren't available, this is likely to lead to more people then trying to park in the city centre, actually worsening the current situation.

Equally, BHFOE would be totally opposed to any suggestion of a park & ride site on greenfield land near the University of Brighton & Hove. BHFOE cannot see how encouraging more people to drive into the Lewes Road corridor is going to reduce air pollution there. It would lead to delays for traffic using Lewes Road both from the extra traffic and as cars would have to cross Lewes Road to access the site. Given the acute housing shortage, if that land is to be developed, it should be for housing.

It is also disappointing that this section does not discuss making better use of existing infrastructure (the railway) to deliver park & ride, or of reducing city centre parking. Unless city centre parking is not removed with the advent of park & ride, there is a real danger that overall, park & ride would just lead to more cars driving into the city with no relief from air pollution.

BHFOE would also suggest that the section on the Biosphere (section 5.3.5) needs revising and is rather confusing. Apart from the name of the Biosphere is incorrect, this section talks more about Bioregional and 'One Planet Living' than it does about Biosphere. While the two have overlapping objectives, they are not the same thing.

Comments on specific corridors

Castle Square to Lower Dyke Road and Western Road

The comments on this section are particularly disappointing and potentially misleading. It states that existing initiatives in the North Street corridor include improving "*east-west flow through Clock Tower by optimising the phasing of the traffic lights at the key junction*". Yet this is clearly not happening.

BHFOE has campaigned for changes to be made in this area, including banning private vehicles from travelling through the area (north-south) which cause significant delays to taxis and buses from the station, but also this movement takes time from the east-west traffic flow. BHFOE has also proposed 2-way operation of the junction to increase its capacity (currently the signals only allow buses to go in one direction at a time) and allow more time for pedestrians as well. Brighton & Hove Buses have demonstrated that they can safely operate two-way bus movements at the Western Road junction with Lower Dyke Road so therefore improvements should be brought forward straight away. The recent ruling in the Supreme Court should add urgency to the need to make changes here.

A23 Northbound Marlborough Place and London Road (Aquarium roundabout to Preston Park)

The Valley Gardens scheme will be essential if pedestrian and cycle infrastructure in this critical part of the city is to be brought into the 21st century. When completed, this will boost walking and cycling into and through the area, providing safer and more convenient facilities for people going across town or accessing the seafront. The scheme, if designed properly, will also remove the hold-ups to the bus network that the current system creates at either end of York Place, the bus stop at the bottom of North Road and the advance bus filter near the Royal Pavilion.

BHFOE would, however, be totally opposed to electric vehicles being allowed to use the bus lanes, as the Action Plan seems to be suggesting. It would not take many electric vehicles to cause significant hold-ups to bus users, which would then increase emissions.

BHFOE is also concerned that in this corridor, no mention is made existing problems, some of which are listed above. Oxford Street junction is another area, where there needs to be improvements as southbound buses are often held up here, while services coming out of Oxford Street, frequently don't have enough time to exit and this leads to quite long delays. A rephasing of the lights and a more intelligent traffic light system are needed here.

Clock Tower north to Brighton & Hove Station and Seven Dials

BHFOE would welcome the suggestion to restrict private vehicles in this area to allow more space for buses, taxis and pedestrians where it is feasible. This would be helped by restricting private vehicles travelling north-south through the Clock Tower junction which needs to be prioritised to address the current hold-ups to the bus network in the North Street corridor.

A270 Lewes Road and wider area

BHFOE has real concerns about the suggestions contained in this section, as they are not evidence based and risk making traffic and air pollution worse. As already described, using existing parking intermittently as park & ride sites would not provide certainty for users and could lead to more people trying to park in the city centre when these intermittent sites were not available. Equally the unreliability could undermine their viability. Linked to this, BHFOE cannot understand how it is sensible to be suggesting building a park & ride site near Watts building / Preston Barracks on greenfield land. This would attract more traffic into the Lewes Road corridor and cause more delays and pollution.

Likewise, BHFOE would be suspicious of any attempt to upgrade Wilson Avenue – Drove Road route. While its purpose would be to relieve congestion, it could actually lead to an increase in car use and overall traffic levels as well as impacting on the South Downs National Park.

BHFOE would be totally opposed to allowing electric vehicles to use the bus lanes here too, even for a temporary period as once allowed it would be harder to then restrict again. It would also impact on cycle safety and bus efficiency along this route.

BHFOE strongly agrees with the need to have a restored rail link between Lewes and Uckfield as this would have significant and wider benefits.

A23 southbound Beaconsfield Road to Pavilion Parade

The implementation of the Valley Gardens scheme will be critical to the success of reducing emissions. In the scheme, all private vehicles will be routed down the eastern side of Valley Gardens. While, this will lead to more traffic on the eastern side, the 'reservoir' capacity of the roads will be reduced (not their flow capacity) and the road carriageway will be moved further away from the building frontages where possible. This should help reduce air pollution in the area.

St James Street

While BHFOE understands the reason for suggesting having the traffic flow westbound or downhill along St James Street, it is concerned at the impact that this could have on the area. Research needs to be done on how and why people are using buses in the area. If they are using the buses to get up the hill after they have done their shopping in St James Street, then changing the services around could severely undermine the shops in the area. Few people are going to want, or potentially going to be able to, walk either north to Edward

Street or south to Marine Parade with heavy bags of shopping to catch a bus east, up the hill.

Trafalgar Street – Frederick Place

BHFOE would support the idea of a freight consolidation centre serving the city. This would have many benefits in addition to air pollution, particularly on safety and the public realm.

Comments on specific issues

Taxi anti-idling strategy

This needs constant education and promotion. Having the sticker is not enough if the taxi driver then leaves their engine idling when they don't need to.

Railways and Air Quality

BHFOE would strongly support investment in railway infrastructure to improve services and reduce emissions. At present the unreliable services, particularly at weekends and bank holidays, are reducing the potential to bring more people into the city centre in a clean and efficient manner. The Council needs to lobby for improvements to address these issues.

Development and Buildings & 7.3 Policy Commitment from developer contributions for air quality

BHFOE is particularly disappointed that no mention is made of car parking and its role in encouraging more cars into the city centre, causing more congestion and pollution. This is an area that the Council does have some control over and it should be doing its utmost to reduce car parking in new developments, particularly in the city centre and adjacent to bus corridors. Failure to do so could have serious economic repercussions for the city centre and undermine city centre bus services, reducing their reliability and increasing their costs. The problem with the current planning system is that the investment in clean alternatives often pales into insignificance compared to the amount spent on subsidising car use. For example, the cost of the new car parking at the Royal Sussex County Hospital is likely to be over £10 million, while the money allocated to walking, cycling and public transport is only around £1 million. Unless this imbalance is addressed, the planning system is going to perpetuate the subsidy of car use which is only going to exacerbate the current air quality and congestion problems. This Action Plan needs to address these issues.

BHFOE is also concerned at what is meant in the Action Plan when it is suggested that developers pay for 'short access roads' in and around Rottingdean. BHFOE would be very concerned at new roads here and their possible impact on the South Downs National Park.

1 European Union law, Directive 2008/50/EC

2 Paragraphs 15 & 16, page 7, paragraph 27, page 12 and paragraph 33, page 14, Supreme Court Judgment on ClientEarth vs Defra, 29 April 2015 -

<https://www.supremecourt.uk/cases/docs/uksc-2012-0179-judgment.pdf>

12.3 Bricycles, the Brighton & Hove Cycling Campaign

Bricycles (Brighton & Hove Cycling Campaign) and as a CTC (national cycling charity) representative for Brighton & Hove, we are writing to support the good work in this area and all policies and actions to ensure a switch to ultralow emissions or zero emissions of

oxides of nitrogen and particulate matter from traffic and other sources. Many thanks for all the work that has contributed to producing this report and acting on poor air quality. We would like to state our strong support for decisive action to improve the situation. Some things are clear. More evidence is emerging beyond the shocking figure that 29,000 people per year are dying prematurely due to poor air quality: <http://healthyair.org.uk/the-problem/>

There is a new link to strokes: <http://www.nhs.uk/news/2015/04April/Pages/Air-pollution-linked-to-shrunken-brains-and-silent-strokes.aspx>. Although most vehicle emissions occur less than one metre above ground, current sampling and monitoring does not take account of this: <http://www.airqualitynews.com/2015/04/24/road-pollution-at-pram-height-studied-in-glasgow/>. Poorer air quality at the level of children on foot or in buggies, often within inches of tailpipes, is likely to demonstrate even more serious health consequences for some young people. We were shocked at the air quality emergency in South East England in early April 2015. Brighton & Hove Public Health leads advised people with respiratory conditions such as asthma not to train outdoors at all. It is intolerable that due to air pollution, medical advice must be to stay indoors and avoid health-giving physical activity. We want this pollution to be reduced. We would like to be reassured that this Air Quality plan takes full account of the recent judgement on ClientEarth vs Defra of 29 April, 2015 <https://www.supremecourt.uk/cases/docs/uksc-2012-0179-judgment.pdf>. The UK Supreme Court has ordered the Government to take immediate action on air pollution, producing effective plans by the end of the year to cut illegal levels of air pollution in Britain. The Government, and therefore also the local councils, must urgently clean up pollution from diesel vehicles, the main source of the illegal levels of Nitrogen Dioxide found in many UK towns and cities. This ruling will benefit everyone's health but particularly children, older people and those with existing health conditions like asthma and heart and lung conditions. We support the point in the plan to target the most polluting traffic emissions that happen in high density retail and residential areas that have limited land and space. Where people shop or spend time is also important as well as where they live and work. This was not captured in the survey questions. Would like to see continued encouragement by the council of sustainable transport; building on the established high levels of bus use, low car ownership, and increased cycling in Brighton & Hove and Hove. We would like to see the Council continue to improve infrastructure so that more people are able to walk and cycle e.g. by making one way streets two-way for cycling and radically redesigning junctions to ensure that journeys are simpler and safer for people on foot or on bikes. We are strongly in favour of implementing the Valley Gardens scheme with big improvements for people who walk, cycle or use wheelchairs to make the journey from St Peters to the Sea front and back. At present this area is extremely confusing and hazardous due to convoluted roads and cycle tracks and a lot of polluting traffic, which is often at a standstill on summer weekends. We are very concerned that cyclists are exposed to this pollution, while producing none of it. We are very supportive of traffic reduction to combat toxic emissions. We do not support park and ride schemes as a solution because they involve big subsidies to car use, do not reduce car dependence for whole journeys and are traffic generators. We see that The Air Quality Action Plan (AQAP) recommends that wherever possible smooth traffic flow is maintained and not disrupted. The plan says (page 27) this means a strong preference for pedestrian

crossings that do not stop traffic, hinder smooth flow or create road blockages. The aim should be to minimise vehicle queue durations that risk delay. We want to make sure that pedestrians and cyclists are not delayed by non-stop traffic. We favour a scheme where motor vehicles are restricted to prevent poor air quality, rather than people being restricted. We would like to see walking and cycling being made safer and convenient throughout the whole City. Appropriate infrastructure and junction redesign needs to take place, with road space switched from motor vehicle use where necessary.

Given that NO_x / NO₂ emissions controls on diesels have not been successful so far then it is no surprise that the city has some of the highest concentrations in the UK, about (114 ug m⁻³ which is more than 2.5 times the 2010 EU Limit) according to the council's assessments on roads where traffic is almost exclusively diesel (North St, Western Road etc). It is suggested that the council should work with DEFRA to ensure that these measured concentrations are reflected in the reporting to the EU. This could risk EU fines for the council but it could also leverage more funding if the magnitude of problem was properly recognised beyond the city. The bus LEZ could be extended to taxis but crucially it has to be systems that are effective in city centre driving conditions. This has been the problem with the progressive Euro standards. There is some very early evidence that Euro VI for heavy vehicles might work better:

<http://www.theicct.org/comparing-real-world-nox-euro-iv-v-vi-mar2015>

Keeping an eye on this evidence and perhaps incentivising these newest vehicles as part of the LEZ would be good rather than spending resources in getting Euro V or Euro IV. Similar might apply to taxi Euro 6 but this is not clear yet.

Wood burning is important and the refusal of planning for new applications within the AQMA is good. The action hierarchy is well considered too.

PUBLIC HEALTH: It is suggested that the council could be more ambitious in this area. Public health is now part of the council and there is a public health indicator related to PM_{2.5} which focuses on reduction beyond EU Limits. New evidence on the health effects on NO₂ suggests that decreasing exposure below the EU Limit is desirable too. So the council should also work more actively to decrease pollution concentrations everywhere. If the council focuses on encouraging active transport then the public health benefits will be far greater than policies that focus on exhaust emissions alone. Another aspect would be to decrease exposure as well as concentrations. For example encouraging people to take low pollution routes when walking and cycling. This could be done by signage, education and building walking and cycle infrastructure away from the side of busy roads.

Care has to be taken with trees. If these reduce air circulation around roads they could lead to greater concentrations. Not really a substitute for a proper emissions abatement programme. They do make an area more attractive for walking and cycling and should be supported for this reason but are not really an air quality measure beyond this.

FREIGHT: Not much mention in the consultation document? Extending the LEZ to include delivery vehicles would be a great way forward especially given the amount of retail in the central AQMA.

ENGAGEMENT WITH BUSINESS: In central London many of the business improvement districts are becoming concerned that poor air quality might affect the attractiveness of their area as a place for shopping , locating offices etc. and are working to do something about it. Working with business would enable to council to get a great spread of ideas and maybe access different funding steams too. Have a look at the good work being done by <https://thenorthbank.london/>
<https://thenorthbank.london/making-progress/public-realm-and-environment/>
and some progressive things is their rather large report:
<https://www.thenorthbank.london/wp-content/manual-uploads/Publica-Northbank-Report.pdf>

Also

<http://inmidtown.org/>

specifically:

<http://midtown.london/our-work/air-quality/>

<http://midtown.london/our-work/cycling/>

http://inmidtown.org/wp-content/uploads/2014/09/IMT_Cycling_Report.pdf

12.4 Brighton & Hove Food Partnership

Just wanted to add a brief comment on behalf of the Brighton & Hove Food Partnership to say we welcome the fact the strategy draws out the links with wider sustainability initiatives, such as One Planet in which we are a partner, and in which food plays an important role. However we feel the strategy should also address: 1) The importance of facilities especially provision local shops in neighbourhoods, to reduce dependence on people travelling to purchase food. This also has food access/food poverty benefits. 2) when considering freight, Food transportation is a major contributor to pollution from this source. Getting food from A to B more intelligently is something we would like to see the city addressing and we hope may come out of any future freight strategy for the city.

12.5 West Sussex County Council

We welcome the detailed evidence-based justification for initiatives within the plan. In particular, we note the intention to consider a Low Emission Zone or low emission funds for HGV traffic routing along part of A259 around the port, as well as potential for alternative routing strategies for diesel cars and vans into the city on some corridors such as A270 Old Shoreham Road (near New England Road). We also note the potential for amendments to the bus low emission zone for the North Street-Western Road corridor and further work to promote ultralow low emission taxi vehicles. The County Council would like to be consulted on any specific proposals that come forward which could affect traffic routing in West Sussex, particularly any impacts on Air Quality Management Areas declared at A259 High Street, Shoreham-by-Sea and the A270 Old Shoreham Road, Southwick. It would be helpful if these AQMAs could be referenced in the plan and in due course for consideration to also be given to the impact of initiatives on AQMAs outside the city. Any further consultation should also include Worthing and Adur Councils, the

Shoreham Port Authority, and bus and taxi operators on any specific proposals that come forward.

12.6 Lewes Road for Clean Air Community Group

We appreciate how hard this issue is to tackle and how painfully slow progress can and has been. We are pleased to see this report offering information and action on the subject. We applaud the suggestion of a park and ride scheme making use of existing infrastructure in the form of Preston Barracks and university car parks along the Lewes Road. This is something that we have been suggesting for the last six years and so it's great to see it as a recommendation here. When we ran a trial weekend park & ride scheme in September 2009 (car-free day), using the Mithras House car park, drivers visiting the city were delighted to have this option. We'd like to add that park & ride should include cycling options and should link into the city's planned cycle-sharing scheme. Also the concept of 'park & stride' - walking into the city should be included. We do not believe that park and ride needs to rely on free or special bus services but should ideally be linked to existing bus services. We support all possible efforts to promote modal shift away from private car dependency toward active travel, public transport and car-sharing as much as possible. It's crucial that new housing and business developments are pressured to do everything possible to support and incentivise more sustainable travel and limit private car-use. We are particularly excited/concerned at the prospect of the Preston Barracks development and the need to ensure that traffic impact from this is minimised and active travel/bus/train use supported. We believe that a cycle-sharing scheme for the city has particular potential along the Lewes Road corridor with Preston Barracks as a key hub. The Valley Gardens scheme is also an exciting prospect for the city in what it can offer for more walking and cycling, particularly linking the Lewes Road and London Road corridors to the seafront and improved permeability to the North Laine area. The potential to improve bus services and smooth motor traffic flow is also significant. We fully support the proposals for Valley Gardens and acknowledge its importance in addressing air quality and other transport and health issues for the city. We support increased messaging to the public to increase awareness about the impact we can all make to improve air quality, including signage to encourage drivers (not just taxi-drivers) to switch engines off at traffic lights. We believe that severe air pollution events should be used more as an opportunity to ensure motorists take more responsibility and are encouraged to not drive on such days. We support charging for car parking at all university sites as essential in incentivising alternatives to car use for staff and students and helping to moderate traffic along the Lewes Road corridor. We also believe that this can help raise revenue for both universities and should be compatible with a park & ride scheme. We support lobbying for the opening of the Lewes to Uckfield line and believe that this would help to reduce some traffic along the Lewes Road and into and out of the city centre. We are delighted that the issue of diesel emissions from buses is being tackled and is vital in shifting the ironic situation where buses are increasing the main source of pollution. We believe that the routing of so many buses along North Street is problematic and support proposals to use alternative routes, including services linking neighbourhoods around the edge of the city. We believe that it would be helpful to encourage bus companies to consider express services between Falmer and the west of city (Portslade/West Hove) using the bypass and linking with

Hollingbury as an alternative to the popular 25 route. This would take some pressure off the city centre and Lewes Road corridor.

12.7 Local Resident Comments (order received)

If the parking restrictions were enforced (double yellow lines) along Western Road this would improve the flow of traffic. Particularly during peak times the free flow of traffic is prevented by illegally park cars. This causes problems for buses in general and bendy buses in particular. Enforcing parking restriction would also improve road safety and encourage cycling.

Fully support all action to improve air quality in our City. The incentives to electric vehicles could be highlighted a lot more to encourage private owned car switching to electric cars.

The pollution created by school drop off and pick up. Balfour road is particularly bad.

Lewes Road is very (much) polluted.

As a resident of Trafalgar Road living in a council property with an asthmatic partner and child, I feel the council should be obliged to fit double glazed doors (front and back) with proper draft exclusion to prevent fumes entering our house which is right near the traffic lights on Old Shoreham Road and also that our windows have adequate seals fitted for the same reason, also could the port not be charged for air filters for inside the house and window cleaning etc.

I have looked carefully at the document and the one thing that stands out is the fact that petrol cars seem to be a very small proportion of the NO₂ problem in all areas. Buses and HGVs and diesel vehicles are the main issue. The city has been at gridlock for the last four years due to constant road developments and tinkering. This looks set to continue if the Valley Gardens proposal actually goes ahead. I speak to bus drivers who are convinced that Traffic Light phasing is getting worse and causing more problems. Take for example the junction of New England St and Viaduct Rd. You can see up to 30 vehicles get out of New England during one phase but only three or four from Viaduct Rd when their turn comes round. The build-up of traffic under the viaduct and up the Old Shoreham Rd is unacceptable. Because the lights on Preston Circus do not work in proper phasing with these other sets the space between New England and Preston Circus fills up with cars from New England Rd, thereby not allowing other cars to even get moving at all. The Green administration has been using a stick to hit vehicle users with rather than a carrot. "Make life more difficult and unpleasant by slowing traffic down to a virtual standstill rather than allow traffic to flow freely" If the roundabout at the Palace Pier is changed to a T-Junction with traffic lights this will also make things far worse. We are told it is one of the most dangerous junctions in the city. I have never heard or read about an accident of any kind on this roundabout because all vehicles use it sensibly and carefully. Can you tell me how many accidents there have been in the last five years involving motor vehicles?

It is very comprehensive and for a lay person (ME!) difficult to understand and read. It is good to see emissions from types of transport from specific roads/areas. A Light version would be good for community engagement (Glad to see this mentioned) with the process. It would be interesting to see regular emissions levels for key 'zones' published regularly in

local media and council website so public could a) see the extent of the problem and b) The Progress from introducing the plan. Some public Education about NOx and where it is coming from in a simple format that is really pushed as many traffic related schemes have been publically criticised by people not being aware of the benefits.

A load of impenetrable jargon that is almost entirely meaningless to the layman. Recommend a 'one side of A4 summary in plain English.

12.8 Summary Response to Consultation Comments

It is noted that not all consultation comments share the same views. However there is considerable commonality that can be taken forward. Agree that extra initiatives are required to reduce vehicular movements associated with food and waste distribution most especially in the AQMA.

References provided by Bricycles are welcome. The council monitors outdoor pollution at various heights. HGV vertical exhaust pipes are often higher than other vehicles and can be 3 meters above the ground. In streets where freight emissions contribute significantly to ambient nitrogen dioxide this can influence the vertical distribution of pollution. Brighton & Hove is meteorologically different to Glasgow where the study references changes in pollution with height. Stronger and more frequent sunshine gives rise to unstable atmospheric conditions that can cause daily pollution to rise to first and second storey levels. Convective movements within an enclosed street canyon tend to mix pollution at ground and first floor levels. Stronger winds across rooftops (~10 metres height) are free from the building canopy and tend to be much better for dilution of pollutants and entrainment of fresher air. Dispersion modelling has mapped nitrogen dioxide one meter above the ground and these results have been reported to Defra. The Air Quality Management regime sets out to define areas, but the local authority does consider the depth and height of the problem which are important for the planning process.

Agree with Friends of the Earth (FOE) that Defra's policy is to comply with the EU Directive in "as short a time as possible". FOE is not convinced that some of the solutions set out in the AQAP are evidence based. The evidence presented includes; dispersion modelling, traffic counts, long term nitrogen dioxide monitoring, population density, the measured dimensions of streets combined with field observations. Agree that BHCC can implement solutions such as active travel for a variety of reasons and not only because a street has been identified as priority for air quality improvement.

Traffic needs to be kept flowing in order to reduce emissions per mile. At the same time there needs to be reasonable provision for pedestrians to cross (preferably without stopping the traffic). Pedestrians (including children) and cyclists can be exposed to pollution for brief (transient) periods at a time for example when waiting to cross a road; however the most likely exposure to pollutants over the long term is people that reside in roadside housing day after day over a number of years. This is our priority for environmental protection. It is therefore very important that traffic is not stop-start in close proximity (8 metres) to permanent residential especially high density and overcrowded housing.

The AQAP advises emissions avoid confined spaces where people live or spend time such as within street canyons with high footfall and where people lead sedentary lifestyles. We are not aware of committed plans to increase road capacity. Locally Friends of the Earth state that only modal shift in transport can reduce long term pollution. At this stage it would help if modal shift in transport choices is not from petrol over to diesel OR from public transport and active travel to electric cars (which would reduce road capacity). We note a number of objections to an inner or outer city centre park and ride. The revised section explains that vehicles (including cars and vans) left outside the centre could help reduce the amount of traffic that enters city centre transport corridors where air quality is a problem. Many new developments in and near the AQMA are car free with provision for cycle storage. It is imperative that the Valley Gardens transport scheme does not worsen pollution along Grand Parade. Suggestions for changes to junctions in the AQAP consultation can be passed onto to the Transport Department.

Locally there is a necessity to support the most sustainable forms of ultralow or no emission travel for; waste and food distribution, general freight movement, construction and works traffic, highways maintenance, school and work commutes, events, leisure, shopping and tourist visits.

Defra sets out guidelines of what it would like to see in Local Air Quality Management Reports (LAQM regime). The reports in the public domain provide detailed information that is useful for consultants and others. It can be less helpful for members of the public seeking simple take home messages.

A non-technical summary of this document (about four pages) is written for the Environment, Transport and Sustainability Committee scheduled for October 2015. Agree it would be of benefit to have further public education information about the benefits of council initiatives to create a healthier more active city.

Table 12-1 Air Quality Action Plan Summary Table (updated from 2014 Progress Report)

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
1	Low Emission Zone for Buses	EP with DfT	2013	Euro V compliance for frequent Services Completed early 2015	All frequent services in bus LEZ at least euro-5 standard by 2015 Prior agreement with bus operators. CCTV in place	Seeking >2g/km NOx for buses Primary NO ₂ not more than 50%	Traffic Regulation Condition (TRC) for Brighton & Hove bus LEZ unanimously approved by committee Jan-14. Referenced in LTP4	COMPLETE	Portable Emissions Monitoring System (PEMS) revealed differences between euro3, euro 5 OME and retrofits

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2	SCRT Retrofit Programme for Buses	Clean Bus Transport Fund (CBTF) £750,000 awarded	EP with BHB	2013	Delivered	50 Retrofit Completed	Seek 80% NOx emission reduction on fifty frequently used Euro III buses	Won £750,000 from 2013-CBTF for Brighton & Hove buses matched funded		Retrofit of Euro III close to Euro-IV
3	Flywheel Hybrid Euro-VI new Purchases	New buses for 2015 Metro Bus & Go Ahead Group	Go Ahead including Metro Bus	2014	Mid-2015	New Euro VI buses with flywheel	New buses operating in AQMA	New hybrid vehicles to arrive March-2015	COMPLETE	reduction in NOx on launch reduction in fuel and carbon

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
4	Procurement Strategy for new buses	Go Ahead including Metro Bus supports by CVTF, OLEV	Ongoing	2015 Move towards better than euro 5 for LEZ	Number of hybrid and euro 6 buses achieve better than OME euro-5 through the LEZ	Test NOx reduction with PEMS or roadside monitoring	13 hybrid buses in service 24 brand new buses euro 6 and flywheel hybrid for 2015	COMMITTED MID-2015	Euro III retired from the fleet by 2015 improvement euro 5 OME 2016/17
5	Retrofit of Taxi Minibuses	Clean Vehicle Transport Fund (CVTF) and taxi company	2014	2015	22 retrofitted minibus taxis NOx sensors and track testing	SCR	Successful bids at design phase for bespoke compact catalysts	ONGOING 2015	Aim for NOx down by >80% Seeking PEMS or Millbrook tests

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
6	Taxi Licencing Policy	Taxi Licence Forum	2013/14	20415/16	Encourage niche market in light low emission taxis licenced for one or two passengers	Aim for emissions of NOx <50mg/km i.e. better than euro 6	Discussion s with Taxi Licence Forum	AGREED IN PRINCIPAL 2015/16	To be supported by structure for fuel choice: such as methane ethanol and electric
7	Signs not Fines	Taxi Licence Forum approved by Committee	2013/14	Done	Action to reduce idling time and taxis and other vehicles	Emission and annoyance	Agreed & funded by taxi licencing forum	COMPLETE	Avoid fuel consumption and emissions when not moving

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
8	Assess junction light phasing to reduce AQMA queuing	TA and prioritised schemes	2015	2015/2016	Better flow for AQMA road links	Reduce breaking and idling and new standing start accelerations	Brighton & Hove Gateway-Clock Tower. Lewes Road Elm Grove Junction Rottingdean	PROPOSED	Prioritise NOx reduction for key corridors with housing
9	Rapid vehicle charging network	Sussex Air Project	2013 Lead Sussex Air	2014/15	Rapid chargers across the Region including Brighton & Hove	Zero tailpipe emission of NOx	Sites to include Brighton & Hove	COMMITTED 2014/15	Strong growth in e-car share of market

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
10	Alternative fuel Infrastructure for vehicles in the AQMA	Seek opportunities for methane and or ethanol	EP and Partners possibly supported by DfT OLEV, Defra	2015	2015/16	Use of bio-methane and by-product ethanol as transport fuel	Aim for emissions of NOx <50mg/km for light vehicles better than euro-6 for heavy vehicles	Dialogue with partners	PROPOSAL FOR 2015/17	Benefits for NOx, PM and CO ₂

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
1	Air Quality Assessment for Major Transport Schemes in the AQMA	Urban realm improvement and Local Sustainable Transport Capital Projects	TA with support from SEP, LEP, LSTF mode modal changes and Gateway Project	2012/14	2016/17	Seek Improvements in ambient air quality especially NO ₂ in the AQMA	Better traffic flow, wider concourse, planting & amenity green space	Impact assessment of schemes to consider NO ₂ improvement in the AQMA paramount	ONGOING	Substantiate designed improvements with monitoring
1	NO ₂ improvement sort									

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
1	Assess Environment Capacity of transport corridors through the AQMA	Assess heavy vehicle numbers relative to NO ₂ limit consider likely constraints and capacity limitations	EP Delivered as part of AQAP	To be balanced with emission reduction achieved by other measures	2015 and ongoing	Established Baseline of bus and HGV movements on AQMA road links	Substantial Emission reductions of NOX	From 2015	2015	Consider London AQ action plans; Oxford St and Putney High Street
2										

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
13	Actively seek alternative renewable solutions and avoid combustion plant in the AQMA	EP and Planning	Active comment on the planning process	2015 AQ action plan policy	Take up alternative renewables	Solid fuel burning prone to emission peaks on starting up. NOx and PM higher than for oil and coal	Ongoing	ONGOING	Appropriate location for carbon saving strategies

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions	
14	For Developments in the AQMA aim for lower NO _x emission rates than the government zero carbon homes standards or BREEAM	Combustion development in the AQMA to use ultra-low NO _x boilers or electric heaters in and adjacent to the AQMA	EP comment on planning apps	Active via the planning process	Policy of the 2014 AQ action plan	Seek other renewable solutions before certification of ultralow NO _x gas boilers	>20 mg/MJ new gas boilers in and adjacent to the AQMA	Ongoing	ONGOING	An order of magnitude reduction compared to regular boilers

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
15	Where new gas combustion plant is proposed in the AQMA to have vertical flue terminations above roof apex in accordance with the Clean Air Act guidance	EP comment on planning apps	Active via the planning process	Policy of the 2014 AQ action plan	Conditions on planning applications	Effective dispersion and exposure avoidance	Ongoing	ONGOING	Measure relates to flue height, location & dispersion and not emission rate

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
16	Ensure new residential developments do not have a negative impact on local air quality and public exposure to air pollutants is reduced at roadside.	EP	Active via the planning process	Ongoing	Where appropriate Conditions on planning applications	Measure is not about emissions. Effective exposure avoidance	Ongoing	ONGOING	Ventilation strategy to avoid dose and exposure

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
1	Encourage domestic solid fuel burning to use smokeless fuels and exempt appliances	EP Info leaflet complaint responses comments on planning apps	EP	2012	2012/13	Enquires	Less NOx, PM and smoke reduction of indoor CO	Pamphlet and web sites Delivered	ONGOING	Reduce complaints from solid fuel burning in the home
7										
1	Households not to use fires to dispose of waste in AQMA	Encourage where appropriate with enforcement having regard to the Council Enforcement Policy.		2012	Ongoing	Enquires	Less NOx, PM and smoke	Web information	ONGOING	Reduce complaint for fires
8										

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
19	Ensuring that new developments do not have a negative impact on local air quality and public exposure to air pollutants is reduced.	EP and Planning Policy	2015	2015	S106 contributions secured where appropriate to support mitigation measures.	Insure beneficial change from new development	Part of AQAP	ONGOING	Explore opportunities for offsite mitigation towards green infrastructure, traffic management measures, sustainable transport improvements

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
20	Intervention measures to consider alternative routings for trails for traffic	TA	Proposed	To consider	NO2	Reduce Traffic entering AQMA especially with a view to main contributors	To be considered	PROPOSED	More than half
21	Higher Standards for bus LEZ Moving towards Euro-6 and higher % of Hybrid	TA, EP DfT and Go Ahead Group	2015/16	To be Defined	Frequent Services to be Euro-6 or Hybrid. OME Euro-5 fine-tuned for operation and drive circuit	Target bus corridors in AQAP assessment	LES Phase II First mention in AQAP March 2015	ONGOING	Approximately half of the bus fleet operating through the LEZ are Euro-6 emissions standard although actual performance varies

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2	Explore Grant Application for lower emissions from construction traffic	Edward Street, A23 and Lewes Road, Grand Parade Identified by Source Apportionment	2015	To Confirm	Seek funds for retrofits and or make up the difference of hybrid purchases	Target haulage corridors	First mention in AQAP 2015	PROPOSED	Aim for 95% NOx reduction with monitor check

Brighton & Hove City Council Air Quality Action Plan

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2 3	Explore Grant Application for Lower Emission Standard for frequent HGV from the Port Inland	A259 and B2139 Wellington Road & Trafalgar Road Identified by Source Apportionment Assessment	2016	2017	Seek funds for retrofits and or make the difference on hybrid purchase	Target haulage corridors	First mentioned in AQAP 2015	PROPOSED	Aim for 95% NOx reduction with monitor check

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2	Consider impact of pedestrian crossing points on traffic flow and impact on emissions and air quality	AQMA especially A23 A270 and A259	Road Safety and EP	2015	To consider	Reduction in frequency of queuing breaking and accelerations	Improve Flow of traffic, cyclists and pedestrians	Included on consultation comments on walk to school transport schemes	ONGOING	Reduce frequent transient emissions

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2	Review Central parking spaces that attracts traffic into the AQMA	Queens Road North Road access requires traffic to drive through the AQMA More Parking outside AQMA	To Confirm	Proposed	Proposed	Reduction in general traffic attracted to the Central AQMA	Reduction in emission for general traffic	First mentioned in AQAP 2015	PROPOSED	Take out general traffic emissions
5										

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
2 6	Consider Freight Consolidation Centres	Outside AQMA provision of "Last Mile Services" actually 3km along A23 and A270 from AQMA boundary to City Centre	To confirm	Proposed	Proposed	Reduce HGV impact on AQMA	Impact on AQMA	Discussed in the past and referenced in LTP4	PROPOSED	Avoidance of HGV emissions in AQMA for frequent services

Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
27	Based on Existing Evidence Buses to reduce emissions for steep uphill sections. Consider preference for downhill routings	St James Street Edward Street Terminus Road, Technology use on North Street To confirm	2015/16	PROJECT	NO ₂ on uphill sections monitored to determine trends	At steeper road links with bus routes	Due to works North Street Hill climb first half of 2015	PROPOSED	Substantial emission reduction where engines are in load
28	Location of new Taxi Ranks to consider ambient air quality	Especially Main Station and Coombe Terrace-Lewes Road EP Taxi licence Forum	2015	2016	NO ₂ levels in the vicinity	At modal interchanges and new developments	Discussions on routing around Station Gateway	Ongoing	Move to locations away from people better for dispersion

Brighton & Hove City Council Air Quality Action Plan

	Measure	Focus	Lead Section BHCC and Partner Body	Planning Phase	Implement Phase	Indicator	Target Annual Emission Reduction in the AQMA	Recent Progress	Estimated Completion Date	Comments Relating to Emission Reductions
29	Coach Strategy	Coach Parking	TA to consult EP	2015	4 year plan		Mentioned in LTP4	Response to complaints	2019	Around coach parking areas

13 Appendix (separate pdf)

13.1 Emission Assessment

13.2 Model Verification

13.3 Model Map Results with annotated road links

13.4 Traffic Source Apportionment

13.5 Photographs in the AQMA

14 References and Endnotes

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³ Air Pollution may cause more deaths than previously thought say scientists. Found At: <http://www.theguardian.com/environment/2015/apr/02/air-pollution-may-cause-more-uk-deaths-than-previously-thought-say-scientists> [July 2015]

⁴ The Environmental Research Group, University of London 2015 *Air Quality Research Analysing the Impacts of Air Pollution on Health in the Modern World*. Available from: <http://www.kcl.ac.uk/lsm/research/divisions/aes/research/ERG/index.aspx> [2 February 2015]

⁵ Committee on the Medical Effects of Air Pollutants 2010, *The Mortality Effects of Long Term Particulate Air Pollution in the UK*. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304641/COMEAP_mortality_effects_of_long_term_exposure.pdf [2 February 2015]

⁶ Part IV of the Environment Act 1995, Available from: <http://www.legislation.gov.uk/ukpga/1995/25/contents> [2 February 2015]

⁷ Brighton & Hove City Council 2013 *Declaration of Air Quality Management Areas* Available from: <http://www.Brighton & Hove-hove.gov.uk/content/environment/air-quality-and-pollution/air-quality-management-city> [2 February 2015]

⁸ Brighton & Hove City Council *Local Transport Plan 4, 2015* Available from: <http://www.Brighton & Hove-hove.gov.uk/content/parking-and-travel/travel-transport-and-road-safety/local-transport-plan> [February 2015 pending]

⁹ Parliamentary Commons Select Committee, *Air Quality Inquiry last update 2014* Available from: <http://www.parliament.uk/eac-air-quality-2014> [2 February 2015]

¹⁰ Risk of exceeding 90% of the NO₂ standard >36 µg/m³ (micrograms per cubic meter of air) over at least three years that is also more than twice ambient background levels monitored in local parks and suburbs. Method developed from department of the Environment Local Air Quality Management 2009 Technical Guidance https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69334/pb13081-tech-guidance-laqm-tg-09-090218.pdf

¹¹ Westminster City Council *Air Quality Action Plan* https://www.westminster.gov.uk/sites/default/files/uploads/workspace/assets/publications/AQAP_2013-2018_FinalDraft_V1-re-1368525818.pdf [Feb 2015]

¹² Note: 2013 AQMA 220 hectares of Brighton & Hove, Hove and Portslade and < one hectare of Rottingdean Village

¹³ BBC Radio 4 Costing the Earth *The Diesel Decade 2014* <http://www.bbc.co.uk/programmes/b04f9r9h> [25th February 2015]

¹⁴ Channel 4 Dispatches *The Great Car Con* January 2015 available at: <http://www.channel4.com/programmes/dispatches/on-demand/59670-003> [25th February 2015]

¹⁵ Brighton & Hove City Council 2014 *Air Quality Progress Report* found at: <http://www.Brighton & Hove-hove.gov.uk/content/environment/air-quality-and-pollution/air-quality-management-city> [25th February 2015]

¹⁶ EU Environment *Air Quality Standards* including Particulate Matter less than 2.5 microns found at <http://ec.europa.eu/environment/air/quality/standards.htm> [25th February 2015]

¹⁷ EU Urban Access Regulations Found at: <http://urbanaccessregulations.eu/home> [Feb 2015]

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- ²⁷ Cambridge Environmental Research Consultant *ADMS-Urban Model* <http://www.cerc.co.uk/environmental-software/ADMS-Urban-model.html>
- ²⁸ Brighton & Hove City Council *Joint Health and Wellbeing Strategy* draft [Feb 2015] <http://www.Brighton & Hove-hove.gov.uk/content/council-and-democracy/councillors-and-committees/health-and-wellbeing-board>
- ²⁹ Brighton & Hove City Council Climate Change Strategy found at: <http://www.Brighton & Hove-hove.gov.uk/content/environment/sustainability-city/climate-change>
- ³⁰ Rampion Offshore Windfarm Latest newsletter found at https://eon-uk.com/downloads/1304_Rampion_Newsletter_%28Final%29_pdf.pdf
- ³¹ South East Car Charging Network found at: <http://www.energisenetwork.co.uk/>
- ³² Edgeley Green Power Station found at: <http://www.edgeleygreenpowershareham.co.uk/> [June 2015]
- ³³ Electric Car Sales Accelerate in 2015 found at: <http://www.businessgreen.com/bg/news/2394293/electric-car-sales-accelerate-into-2015>
- ³⁴ Renewable Heat Incentive found at: <http://www.rhincidentive.co.uk/> [June 2015]
- ³⁵ Appraisal of the London Plane in polluted environments <http://www.field-studies-council.org/urbaneco/urbaneco/woodland/trees.htm> [March 2015]
- ³⁶ Annual Report of the Director of Public Health (2014 written as if it were 2024) <http://www.Brighton & Hove-hove.gov.uk/content/health-and-social-care/health/public-health-annual-report>
- ³⁷ Brighton & Hove City Council Press Release *Bus Patronage Doubles* June 2013 <http://www.Brighton & Hove-hove.gov.uk/content/press-release/bus-patronage-doubles> [Feb 2015]
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- ³⁹ Refining Britain's Fuels found at: http://www.ukpia.com/industry_issues/fuels/sulphur-free-petrol-diesel-and-non-road-fuels.aspx [March 2015]
- ⁴⁰ Western Railways between Southern England and Wales Route Modernisation found at: <http://www.networkrail.co.uk/great-western-route-modernisation/> [Feb 2015]
- ⁴¹ Brighton & Hove City Council Supplementary Planning Guidance on Tall Buildings http://www.Brighton & Hove-hove.gov.uk/sites/Brighton & Hove-hove.gov.uk/files/downloads/localplan2001/15_SPGBHTall_buildings.pdf
- ⁴² Defra's List of Exempt Appliances for legal use in Smoke Control Areas (SCA) declared under the Clean Act 1968
- ⁴³ Brighton & Hove City Council Burning Solid Fuels Safely and Legally [2012], <http://www.Brighton & Hove-hove.gov.uk/content/environment/air-quality-and-pollution/using-solid-fuels-safely-and-legally>
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Equality Impact and Outcome Assessment (EIA) Template - 2015

EIAs make services better for everyone and support value for money by getting services right first time.

EIAs enable us to consider all the information about a service, policy or strategy from an equalities perspective and then action plan to get the best outcomes for staff and service-users¹. They analyse how all our work as a council might impact differently on different groups². They help us make good decisions and evidence how we have reached these decisions³.

See end notes for full guidance. Either hover the mouse over the end note link (eg: Age¹³) or use the hyperlinks ('Ctrl' key and left click).

For further support or advice please contact the Communities, Equality and Third Sector Team on ext 2301.

1. Equality Impact and Outcomes Assessment (EIA) Template

First, consider whether you need to complete an EIA, or if there is another way to evidence assessment of impacts, or that an EIA is not needed⁴.

Title of EIA ⁵	EIA for the 2015 Air Quality Action Plan	ID No. ⁶
<p>Team/Department⁷</p> <p>Environmental Protection / Environmental Health and Licencing</p>	<p>Focus of EIA⁸</p> <p>The Air Quality Action Plan is a local authority statutory duty (under part IV of the Environment Act 1995) that is required following the declaration of an Air Quality Management Area (AQMA). The AQMA is declared for none compliance with legally binding limits for nitrogen dioxide that are for the protection of human health and outdoor air. Brighton's main AQMA covers the urban centre. A smaller area includes the High Street in Rottingdean village. The city's AQMAs include residential and retail areas with a varied range of deprived and affluent groups.</p> <p>The purpose of the Equalities Impact Assessment is to insure that no group is disadvantaged in any way due to the proposals in the air quality action plan and to identify health benefits that will be inclusive across the population. Air pollution affects the population disproportionately. The most vulnerable are the; elderly, neo natal infants and babies, those with occupational history of working with asbestos and coal dust, adults with history of smoking and drug use and those in sedentary, care, less active lifestyles and people that have lived next to a confined road for a long duration.</p>	

The quality of housing; façade and fenestration at roadside (a few feet / metres from a road carriageway or junction) may also be an influence on in-home dose and exposure to road traffic pollution. Rent and property prices are high for much of the city's AQMA. Poor ambient air quality due to emissions from road traffic is not exclusive to deprived areas. Varied groups including affluent people are exposed to airborne pollution that they breathe in whilst in their homes, cars and on the street.

List of measures highlighted with potential impact on protected groups:

- Anti-Idling signs on all taxi ranks in around the AQMA. Avoid fuel consumption and emissions when not moving.
- Extra no engine idling signs to be considered for loading areas applicable for all vehicle types
- Encourage domestic solid fuel burning to use smokeless fuels and exempt appliances
- Households not to use fires to dispose of waste in the AQMA
- Consider impact of pedestrian crossing points on traffic flow and impact on emissions and air quality have regard to implications for disabled groups
- Review Central parking spaces that attracts traffic into the AQMA Consider disable parking to ensure appropriate to people's needs
- Seek Opportunities for new Taxi Ranks, consider proximity to residential and ambient air quality when selected appropriate sites

2. Update on previous EIA and outcomes of previous actions

What actions did you plan since the 2010 AQAP EIA? (List them from the previous EIA)	What improved as a result? What outcomes have these actions achieved?	What further actions do you need to take? (add these to the Action plan below)
2010 Auto Oil Programme to encourage cleaner vehicles with lower emissions	Limited Improvement as a result because tail pipe testing tended not be realistic of driving conditions in urban areas such as the Brighton and Portslade AQMA	More accurate real world and track testing to represent real world drive cycles
Clear zone open to pedestrians and restricted for vehicles	Good progress areas such as New Street can help the AQMA and the urban realm where there are high pedestrian counts	Comments on new schemes or changes to the urban realm in the AQMA
Behavioural change in the way people travel especially in the AQMA. Encourage use of walking and cycling and mass use of public transport.	Excellent progress	Simon Hickmotts team are carrying out proactive door knocking.
Education Initiatives schools and universities	Excellent progress Lectures or interactive talks to local school, universities, sustainability conference.	More of the same ongoing improvement to webpages

Protected characteristics groups from the Equality Act 2010	What do you know ⁹ ? Summary of data about your service-users and/or staff	What do people tell you ¹⁰ ? Summary of service-user and/or staff feedback	What does this mean ¹¹ ? Impacts identified from data and feedback (actual and potential)	What can you do ¹² ? All potential actions to: • advance equality of opportunity, • eliminate discrimination, and • foster good relations
Age ¹³	More vulnerable are elderly people and those in care living by roadside in the AQ Management Area. Sedentary lifestyles are more vulnerable to pollution than active ones.	OAPs and young people tend to be more concerned about air pollution than people of working age.	Impacts and perceptions not likely to be equal across the population	Insure people of working age make good decisions that benefit the most vulnerable age groups.
Disability ¹⁴	Taxis are offering increased mobility assistance to those with disability needs. In the city centre where space is very limited this service may be more affective in providing travel for those with a disability than on street disabled parking bays.	More taxi ranks in the city centre woven into new transport schemes and developments but not so close to residential that this may cause complaints for fumes and engine noise.	Recognise that Wheelchair Accessible Vehicles (WAV) may increase the size of vehicles and this can influence emissions per km.	Training for licenced taxis drivers to assist with disability mobility and those in care. Recognition that many in need of assistance may not be wheel chair users. Taxi licencing to favour low fuel consumption and low NOx emission vehicles without compromising targets for WAV %.
Gender reassignment ¹⁵	Potentially vulnerable to inhalation of pollutants if on a prescribed course of medication / rehabilitation.			
Pregnancy and maternity ¹⁶	Local mothers have expressed concern regarding roadside pollution in their homes.	Some have requested relocation to better areas or an improvement to fenestration or ventilation in the residence.	Important to reduce dose and exposure to pollution in AQMA residences adjacent to roadside.	More effective low emission vehicles. Possible that not all vehicle movements are necessary for <2 miles in the AQMA.

Protected characteristics groups from the Equality Act 2010	What do you know ⁹ ? Summary of data about your service-users and/or staff	What do people tell you ¹⁰ ? Summary of service-user and/or staff feedback	What does this mean ¹¹ ? Impacts identified from data and feedback (actual and potential)	What can you do ¹² ? All potential actions to: • advance equality of opportunity, • eliminate discrimination, and • foster good relations
Race ¹⁷	The City Centre AQMA is racially mixed and more diverse than both BHCC and England's average.	The AQMA is more ethnically diverse than both England and Brighton and Hove as a whole	Lack of action to improve local air quality could be discriminatory.	On right track to prioritise improvements where the most dwellings are affected by pollution.
Religion or belief ¹⁸	Health impacts of airborne pollution in The AQMA affect those with; no religion, Christian, Buddhist, Muslim and others.	Rottingdean Parish Council tends to feel neglected within the wider Unitary Authority. Taxi driver lifestyles are common amongst the Egyptian Muslim community.	Targeted messages	Potential outreach to various groups to foster good relations and avoid health deprivation
Sex/Gender ¹⁹	May influence lifestyle and travel choices.	Woman, mothers and older men tend to be more concerned about airborne pollution.	Targeted messages	Messages to women, and older people groups
Sexual orientation ²⁰	Thought to be most diverse in East Brighton and Kemp Town which is part of Brighton's Air Quality Management Area.	Concern about air pollution, health and traffic in confined spaces is high amongst residence of Kemp Town and St James Street.	Suggests that high density neighbourhoods and or entertainment districts more likely to be concerned about health of the urban environment	Further community engagement and awareness
Marriage and civil partnership ²¹	Parts of the AQMA have more co-habitation than married couples.	Partners likely to encourage early doctor visits for their spouses.	Middle-age and older single people without a close friend of carer likely to be more vulnerable to a poor environment.	Potential outreach and education

Protected characteristics groups from the Equality Act 2010	What do you know ⁹ ? Summary of data about your service-users and/or staff	What do people tell you ¹⁰ ? Summary of service-user and/or staff feedback	What does this mean ¹¹ ? Impacts identified from data and feedback (actual and potential)	What can you do ¹² ? All potential actions to: • advance equality of opportunity, • eliminate discrimination, and • foster good relations
Community Cohesion ²²	Main roads, traffic and pollution can cause community severance.	This can influence the number of friends and social interactions.	Potential influence on mental health and drug abuse in the AQMA.	Potential for social services to be aware of a poorer environment in the designated area.
Other relevant groups ²³	Air pollution affects people with varied financial means. Rent and Property prices are very high in the AQMA. People are exposed to pollutants in their homes and cars and to a lesser extent walking and cycling.	Pollution is inhaled by a broad spectrum of the population that includes deprived and affluent individuals.	Whilst the AQMA scores highly in terms of deprivation indices, it also has high levels of education, home ownership and lower than average levels of obesity.	Measures to improve the problem need to be inclusive and receive support from a broad representation of the city.
Cumulative impact ²⁴	Cumulative impacts of air pollutants with smoking, drug use and occupational hazards such as past or present working with asbestos or coal dust. Poor diet and a lack of exercise.	Poor respiratory and circulatory health can be linked with a lack of activity.	Advice to stay indoors during pollution episodes (particles, ozone and nitrogen dioxide) needs to be balanced with encouraging more active forms of travel on a day to day basis.	Adapting to pollution linked with adapting to climate change. Lifestyle choices in terms of activity, diet and the locations people choose to spend time; run, walk, café, eat-picnic, relax and sleep. High capacity Care Homes in places such as Patcham are outside of the AQMA.
Assessment of overall impacts and any further recommendations ²⁵				

Analysis using the Community Insight tool shows that compared to the whole of Brighton & Hove (and England) the BHCC AQMA (Air Quality Management Area) has demographic differences with a higher proportion of some protected characteristics. Findings as follows for the main Brighton, Hove and Portslade AQMA:

- **The area has one of the highest population densities in England i.e. 100 people per hectare: (even though approximately half of the area comprises road carriageway, concourses and traffic gyratory)**
- **Population of the area is 9,000 with many residential dwellings adjacent to transport corridors including bus and taxi routes**
- **The AQMA has 34% overcrowded housing a much higher proportion than for the whole City and England**
- **Net migration into the AQMA with a sharp increase in population to the area from 2012/13**
- **Excellent public transport links with high visitor numbers and through traffic**
- **Higher than average property prices and rents**
- **High percentage of residents of working age and a lower than average proportion of pensioners and children**
- **People in the AQMA have achieved above average educational attainment and 72.4% of adults are economically active which is above the City average**
- **62% of households in the AQMA do not own a car which is exceptional for England**
- **Lower than average obesity (possibly linked with higher than average active movement, walking and cycling)**
- **The highest rates of residential turnover are amongst young adults**
- **Old people and infants are more vulnerable to airborne pollution and are more likely to settle in the AQMA for a number of years and are therefore more likely to be exposed to pollutants over longer durations**
- **Better than average diets (excellent access to food choice)**
- **Higher incidence of smoking and binge drinking compared to BHCC and England averages**
- **Higher proportion of deaths due to lung cancer, circulatory disease and stroke compared to BHCC and England averages**
- **Higher likelihood of hospital admission for all causes including; chronic obstructive pulmonary disease and stroke**
- **Community Insight shows the AQMA is a health deprivation hotspot**
- **Male life expectancy two years lower than for the whole City and three years less than the average for England**
- **Lower proportion of deaths expected for respiratory diseases may relate to young adult population profile in the AQMA**
- **The AQMA is Ethnically diverse with a higher than average percentage Black and Minority Ethnic (BME) Population**

Rottingdean High Street AQMA

- *Traffic emissions in a confined space with retail and residential*
- *Relatively few bus and taxi movements*
- *Very high private car usage*
- *Ancient Parish Council*
- *A Heritage Building Conservation area*
- *Mostly a White British population*

Measures to improve air quality are inclusive of a diverse population that lives in a range of affluent and deprived private and public sector housing.

3. List detailed data and/or community feedback which informed your EIA

Title (of data, research or engagement)	Date	Gaps in data	Actions to fill these gaps (add these to the Action plan below)
Mapping of pollution levels and declaration of the Air Quality Management Area	2010 to 2014	Can depend on location of Traffic Counts	Liaise with Transport Authority to Determine which traffic counts continue
Arc GIS (Geographical Information System) Address Gazetteer can counts the number of residential dwellings	Early 2015	Archive data prior to 2014 not available	N/A
Local Community Insight https://www.communityinsight.org/	2015	Census is March 2011, with updates to 2013	More accurate analysis of the declared AQMA
Enquires and Complaints about air pollution	2008 to 2015	N/A	Could be more proactive and less reactive

Local Action Teams and community engagement	2009 to 2015	Some community groups are more engaged with the air quality action plan than others	Each area dealt with equally in the air quality action plan having regard to the monitoring evidence
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4. Prioritised Action Plan identified with implications for the Equality Impact Assessment²⁶

Impact identified and group(s) affected	Action planned	Expected outcome	Measure of success	Timeframe
NB: These actions must now be transferred to service or business plans and monitored to ensure they achieve the outcomes identified.				
Complaints from residents about idling engines can affect taxi drivers from a variety of backgrounds	Anti-Idling signs on all taxi ranks in around the AQMA. Avoid fuel consumption and emissions when not moving.	Signs	Signs are visible and recognised in the city	2015
Complaints from residents about idling engines no engine idling signs to be considered for loading areas applicable for all vehicle types and high density residential areas with mixed population	Extra no engine idling signs to be considered for loading areas applicable for all vehicle types	Signs	Fewer complaints more awareness about not idling in high density residential areas	Ongoing
Higher Oxide of nitrogen and particulate emission from fireplace solid fuel burning in the cosmopolitan urban area	Encourage domestic solid fuel burning to use smokeless fuels and exempt appliances	Pamphlet and internet information available to those that want to install domestic stoves	Informative sent out to households especially in the Autumn	Ongoing
Complaints about bonfires used to dispose of waste influence builders and their impact on neighbourhoods	Households encouraged not to use fires to dispose of waste in AQMA where air quality is worse	Household advice when complaints received and linked with pamphlet and webpage information	Avoid complaints about fires in the AQMA	Ongoing

Emissions from stop-start road traffic on vulnerable people near roadside	Consider impact of pedestrian crossing points on traffic flow and impact on emissions and air quality have regard to implications for disabled groups	Consultation on development and crossing points be aware of disabled need and modal interchange	Less stop start traffic	Ongoing as the opportunity arises for comments
Trip generation through the AQMA contributes to nitrogen dioxide reconsider the need for ~4,000 centralised car parking spaces	Review Central parking spaces that attracts traffic along polluted corridors Consider disable parking to ensure appropriate needs are met. Taxis drivers trained to assist with disability transport and many minibuses have wheelchair access.	Proposal to review the amount of parking in the centre	Dialogue with Parking	2015/16
Provision of taxi ranks in the City Centre needs to grow in line with population growth and have regard to residents where there is high population density with protected characteristics	Seek Opportunities for new Taxi Ranks, consider proximity to residential and prevailing ambient air quality when appropriate sites are selected	Ranks at central locations where there is a need but not adjacent to sensitive residential site in order to minimise the risk for complaints for fumes and noise	Brought forward with new developments and the planning process	From 2014 Onwards

EIA sign-off: (for the EIA to be final an email must sent from the relevant people agreeing it or this section must be signed)

Lead Equality Impact Assessment officer:

Date:

Directorate Management Team rep or Head of Service:

Date:

Communities, Equality Team and Third Sector officer:

Date:










Local Insight profile for 'Air Quality Management Area' area

Brighton and Hove

Report created 23 September 2015



Introduction Page 3 for an introduction to this report

 <p>Population</p>	<p>There are 8,880 people living in Air Quality Management Area</p> <p>See pages 4-9 for more information on population by age and gender, ethnicity, country of birth, language, migration, household composition and religion</p>	 <p>Education & skills</p>	<p>10% of people have no qualifications in Air Quality Management Area compared with 22% across England</p> <p>See pages 32-34 for more information on qualifications, pupil attainment and early years educational progress</p>
 <p>Vulnerable groups</p>	<p>22% of children are living in poverty in Air Quality Management Area compared with 19% across England</p> <p>See pages 10-19 for more information on children in poverty, people out of work, people in deprived areas, disability, pensioners and other vulnerable groups</p>	 <p>Economy</p>	<p>37% people aged 16-74 are in full-time employment in Air Quality Management Area compared with 39% across England</p> <p>See pages 35-39 for more information on people's jobs, job opportunities, income and local businesses</p>
 <p>Housing</p>	<p>8% of households lack central heating in Air Quality Management Area compared with 3% across England</p> <p>See pages 20-25 for more information on housing characteristics: dwelling types, housing tenure, affordability, overcrowding and communal establishments</p>	 <p>Access & transport</p>	<p>62% of households have no car in Air Quality Management Area compared with 26% across England</p> <p>See pages 40-42 for more information on transport, distances services and digital services</p>
 <p>Crime and Safety</p>	<p>The overall crime rate is higher than the average across England</p> <p>See pages 26-27 for more information on recorded crime and crime rates</p>	 <p>Communities & environment</p>	<p>The % of people 'satisfied with their neighbourhood' is higher than the average across England</p> <p>See pages 43-45 for more information on neighbourhood satisfaction, the types of neighbourhoods locally, local participation and the environment, air pollution</p>
 <p>Health & wellbeing</p>	<p>14% of people have a limiting long-term illness in Air Quality Management Area compared with 16% across England</p> <p>See pages 28-31 for more information on limited long-term illness, life expectancy and mortality, general health and healthy lifestyles</p>	<p>Appendix A</p>	<p>Page 46 for information on the geographies used in this report and 47 for acknowledgements</p>

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Local Insight for Brighton and Hove

Local Insight gives you access to interactive maps and reports at small area level. These reports show key social and economic indicators and allow you to compare the area selected to your own chosen comparators.

OCSI

Local Insight is a tool developed by Oxford Consultants for Social Inclusion (OCSI) based on a project developed jointly between OCSI and HACT.

OCSI develop and interpret the evidence base to help the public and community organisations deliver better services. A 'spin-out' from the University of Oxford Social Policy Institute, OCSI have worked with more than 100 public and community sector clients at local, national and international level. See www.ocsi.co.uk for more.

About the indicators

Information published by government as open data – appropriately visualised, analysed and interpreted – is a critical tool for Local Authorities.

OCSI collect all local data published by more than 50 government agencies, and have identified key indicators relevant to local authorities to use in this report and the interactive webtool (local.communityinsight.org).

How we have identified the “Air Quality Management Area” area

The definition of the “Air Quality Management Area” area (you can view this area on the Local Insight map, through finding the area on the ‘show services’ dropdown in the top left hand corner of the map). We have aggregated data for all the neighbourhoods in “Air Quality Management Area” to create the charts and tables used in this report.

Alongside data for the “Air Quality Management Area”, we also show data for your selected comparator areas: Brighton and Hove and England.

This is version 1.92 of the Local Insight profile datasets and report

This report was created on 23 September 2015, and is based on version 1.92 of the Local Insight datasets and report.



Population: Age and gender

What information is shown here?

The information on this page shows the number of people living in Air Quality Management Area. These population figures provide detail of the structure of the population by broad age bands and sex.

The first information box shows the total number of people usually resident in the area, with the male female breakdown. Also shown are numbers by sex and age, and the 'dependency ratio' (the ratio of non-working age to working age population). The final information box shows the population density, based on the total population divided by the area in hectares for the local area

The population pyramid compares the proportion of males and females by five year age bands. The line chart shows how the population is changing over time in Air Quality Management Area and comparator areas. The stacked bar chart, below, shows the age breakdown of the population in Air Quality Management Area and comparator areas by broad age band.

Total Population	8,880	Aged 0-15	880	Working age population	7,340	Aged 65+	655	Dependency ratio	0.21
53.3% male; 46.7% female		9.9% (England average = 19.0%)		82.7% (England average = 63.8%)		7.4% (England average = 17.3%)		England average = 0.57	

Source: Mid-Year Estimates (ONS) 2013

Figure: Population estimates by 5 year age band

Source: Mid-Year Estimates (ONS) 2013

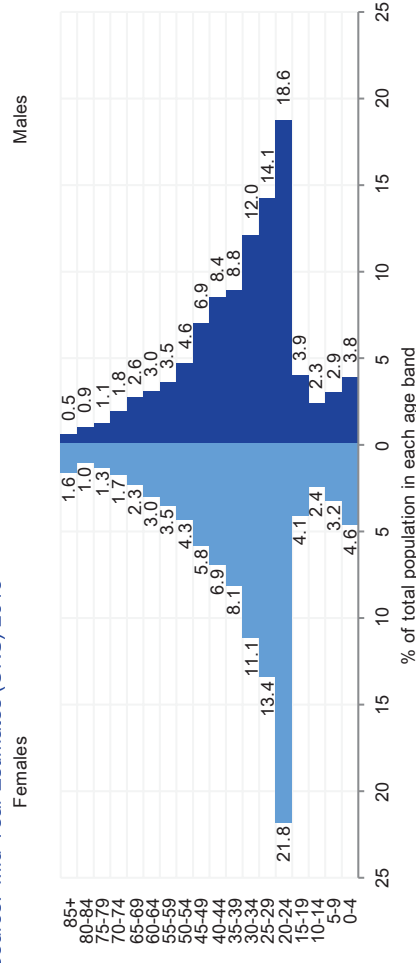


Figure: Population by age

Source: Mid-Year Estimates (ONS) 2013

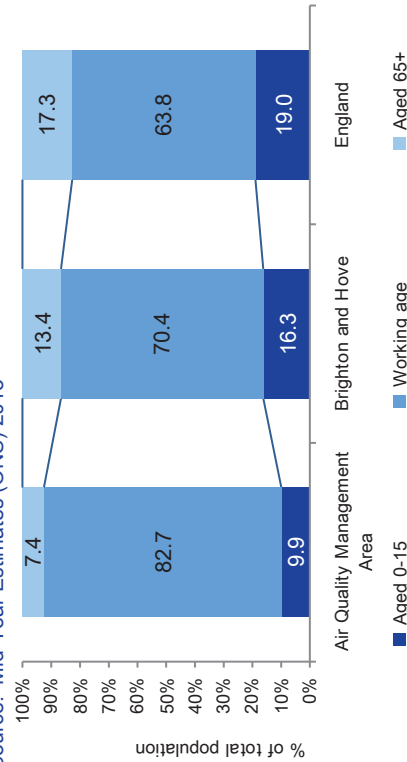
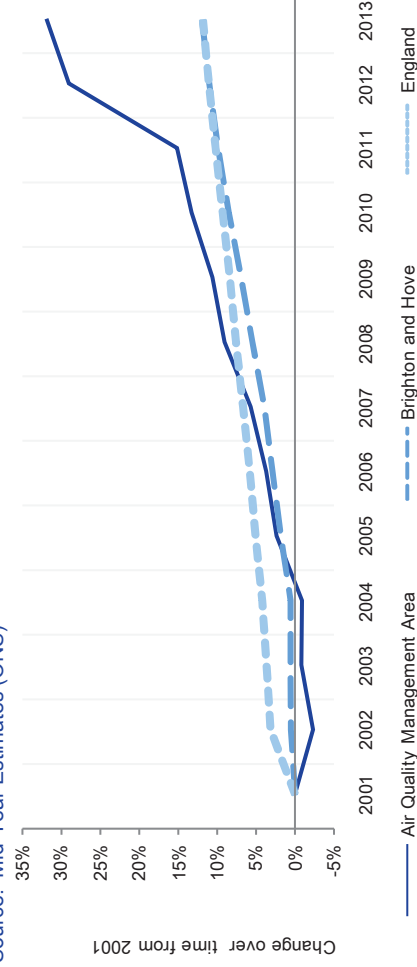


Figure: % change in total population from 2001-2013

Source: Mid-Year Estimates (ONS)





Population: Ethnicity

What information is shown here?

The information on the right shows the number of people in Air Quality Management Area by ethnicity, based on each person's perceived ethnic group and cultural background.

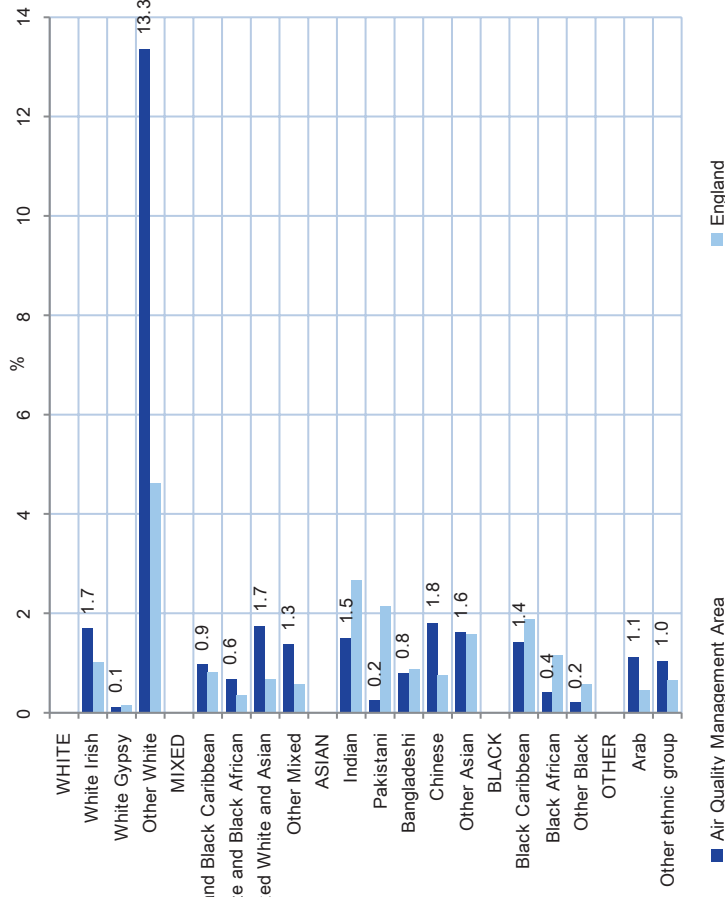
The information boxes display the number of people who have identified themselves as White British and the number from Black or Minority Ethnic groups (BMEs), as well as the five broad ethnic minority groups (White non-British, Mixed, Asian, Black and other ethnic group). The BME category includes all people who do not state their ethnicity as White British including those who identify as White but of a different ethnic identity.

The final information box shows the proportion of households where not all household members are of the same ethnicity (households with multiple ethnic groups).

The bar chart on the right shows a detailed breakdown of the percentage of people in BME groups by ethnic category.

White British	5,985	70.6% (England average = 79.8%)
BME	2,495	29.4% (England average = 20.2%)
White-non-British	1,275	15.0% (England average = 5.7%)
Mixed	390	4.6% (England average = 2.3%)
Asian	490	5.8% (England average = 7.8%)
Black	160	1.9% (England average = 3.5%)
Other ethnic group	175	2.1% (England average = 1.0%)
Households with multiple ethnicities	805	18.6% (England average = 8.9%)

Source: Census 2011
Figure: Population by ethnic group
Source: Census 2011





Population: Country of birth and household language

What information is shown here?

The information on the right shows the number of people in Air Quality Management Area by country of birth.

The top row information boxes display the number of people in Air Quality Management Area who were born in England and outside the UK as well as the number of people with a UK passport and non-UK passport.

The second row information boxes show the language breakdown of households, identifying the number of people in Air Quality Management Area with one or more household members who cannot speak English.

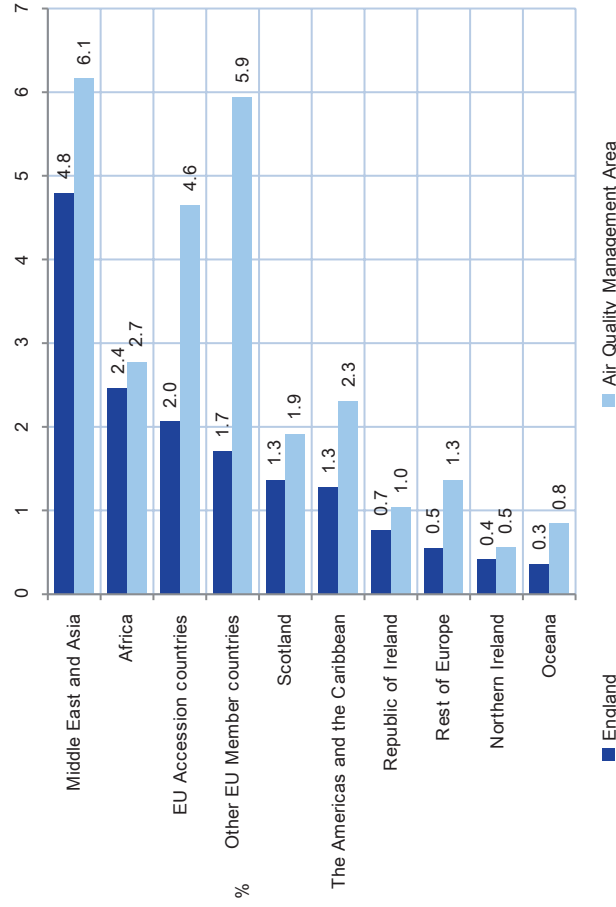
The bar chart on the right shows a detailed breakdown of the percentage of people in Air Quality Management Area born outside of England by the geographic region of birth.

Born in England	6,040	Born Outside the UK	2,120	With a UK passport	6,260	With a non-UK passport	1,680
71.2% (England average = 83.5%)		25.0% (England average = 13.8%)		73.8% (England average = 75.8%)		19.9% (England average = 8.8%)	
All people in households have English as main language	3,460	At least one adult (not all) has English as main language	325	No adults but some children have English as main language	25	No household members have English as main language	480
80.7% (England average = 90.9%)		7.6% (England average = 3.9%)		0.5% (England average = 0.8%)		11.2% (England average = 4.4%)	

Source: Census 2011

Figure: Population born outside England

Source: Census 2011





Population: Migration

What information is shown here?

The information box shows the number and percentage of migrants in Air Quality Management Area and across England as a whole. A migrant is defined as a person with a different address one year before Census day. The migrant status for children aged under one in households is determined by the migrant status of their 'next of kin' (defined as in order of preference, mother, father, sibling (with nearest age), other related person, Household Reference Person).

The chart on the right shows the population turnover rate. This is calculated as the rate of in or out migratory moves within England and Wales per 1,000 resident population. Figures are based on GP patient register records. The left-hand bars (lighter colour) show people moving *out* of the area – higher values for a particular group indicate that this age-group is more likely to move away from the area. The right-hand bars (darker colour) show people moving *into* the area – higher values for a particular group indicate that this age-group is more likely to move into the area.

The data table on the top right and the chart on the bottom right show the total number of people registering with a National Insurance number who have come from overseas. This is a measure of the number of people who have migrated to the UK from overseas to work, who have registered for a National Insurance number in the local area.

People who have moved address within the last 12 months (Census 2011)	2,890
34.0% (England average = 12.3%)	

Overseas migrants (National Insurance no. registrations of overseas nationals) (DWP 2014)	325
4.4% (England average = 1.6%)	

Figure: Level of inward and outward migration (by age)

Source: Population Turnover Rates – Office for National Statistics (2010)

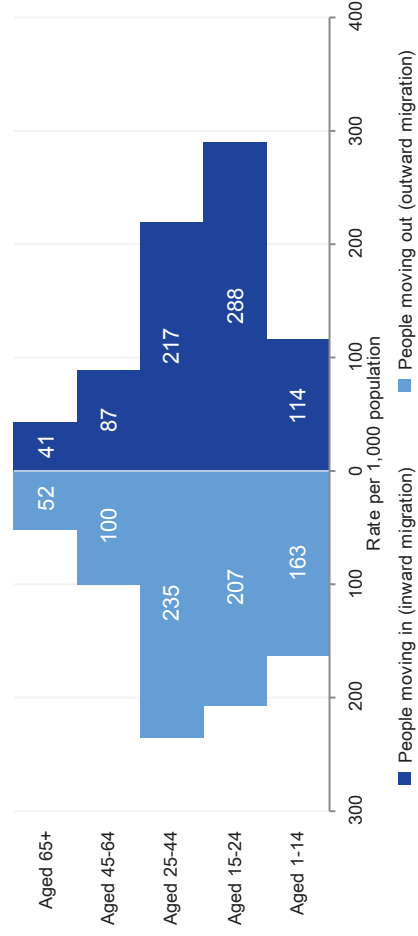
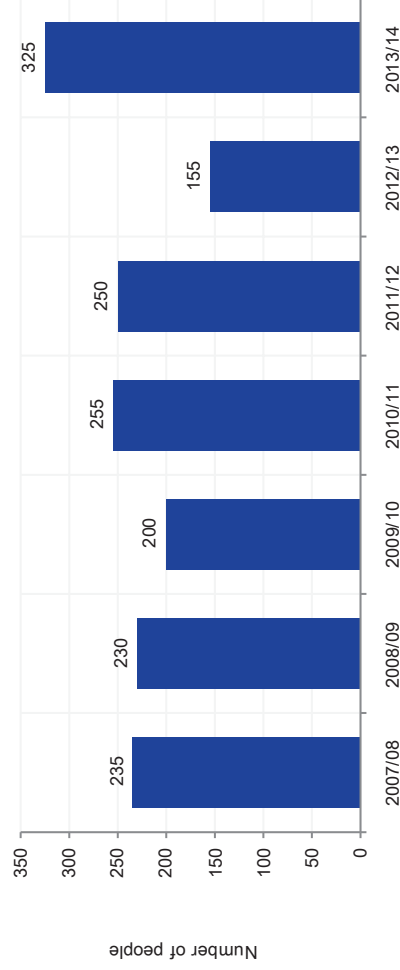


Figure: Number of overseas nationals registering with a National Insurance Number

Source: National Insurance No. registrations – Department for Work and Pensions (2014)





Population: All households

What information is shown here?

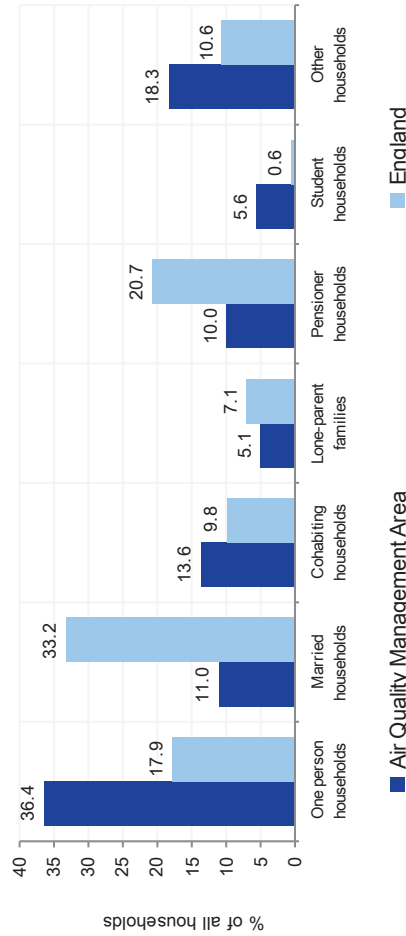
The information on this page shows the composition of household types in Air Quality Management Area. The information boxes contain the number of households in Air Quality Management Area classified under the main household composition breakdowns. The chart shows the same information as a percentage of all households, with comparator areas.

Pensioner households	430	10.0% (England average = 20.7%)
Married households	470	11.0% (England average = 33.2%)
One person households (aged under 65)	1,560	36.4% (England average = 17.9%)
Lone parent families with dependent children	215	40.6% of all families with dependent children (England average = 24.5%)
Other households	240	5.6% (England average = 0.6%)
Student households	240	5.6% (England average = 0.6%)
Cohabiting households	585	13.6% (England average = 9.8%)

Source: Census 2011

Figure: Population by household composition

Source: Census 2011





Population: Religion

What information is shown here?

The information on the right shows the number of people living in Air Quality Management Area by religious belief, categorised by the six major religions, other religion and no religion.

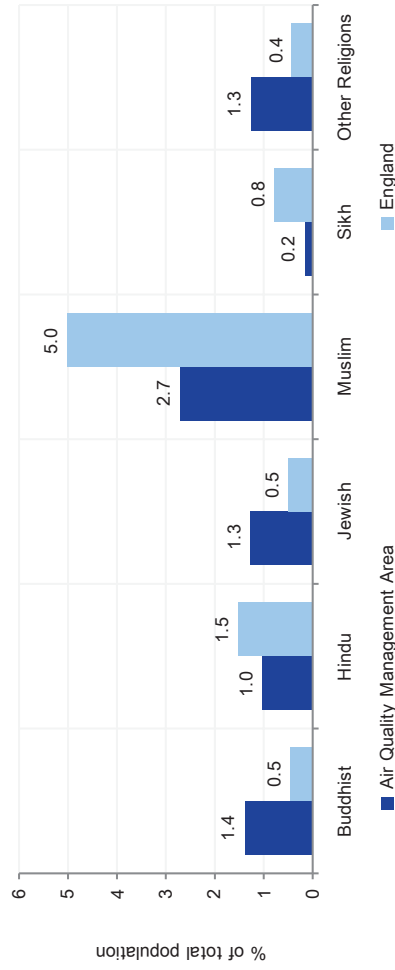
The bar chart shows the percentage of people in Air Quality Management Area and comparator areas who are of non-Christian religion, displayed by religious belief.

Christian	2,695	31.8% (England average = 59.4%)
Buddhist	115	1.4% (England average = 0.5%)
Hindu	90	1.0% (England average = 1.5%)
Jewish	110	1.3% (England average = 0.5%)
Muslim	230	2.7% (England average = 5.0%)
Sikh	15	0.2% (England average = 0.8%)
Other religion	105	1.3% (England average = 0.4%)
No religion	4,345	51.2% (England average = 24.7%)

Source: Census 2011

Figure: Population with non-Christian religion

Source: Census 2011





What information is shown here?

The information in this section shows counts of people who are out of work and receiving workless benefits: Jobseekers Allowance (JSA) claimants and Incapacity Benefit (IB)/Employment Support Allowance (ESA) claimants.

JSA is payable to people under pensionable age who are available for, and actively seeking, work of at least 40 hours a week. IB and ESA are workless benefits payable to people who are out of work and have been assessed as being incapable of work due to illness or disability and who meet the appropriate contribution conditions.

The information boxes on the top right show: the total number of adults (aged 16-64) receiving JSA; the total claiming for more than 12 months; claimants aged 18-24, the number of people receiving 'Incapacity benefits' (IB or ESA); and the number and proportion of 16-24 year olds receiving workless benefits (JSA, IB or ESA).

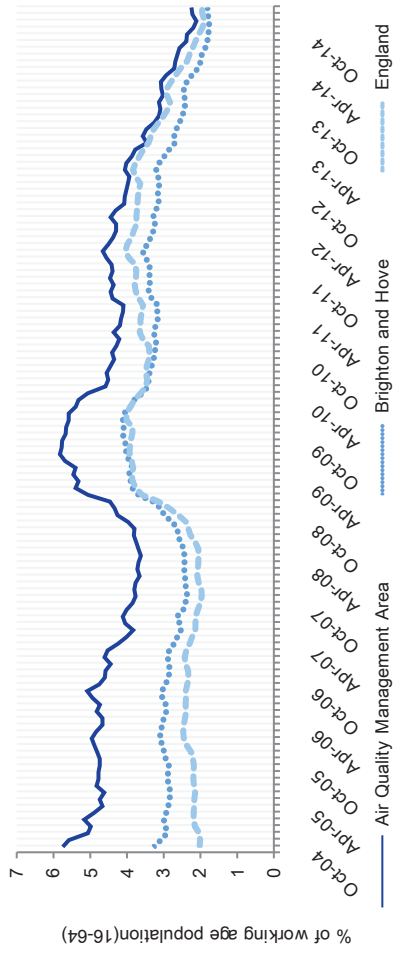
The line charts on the following page show month on month changes in the proportion of people claiming IB or ESA and the proportion claiming JSA across Air Quality Management Area and comparator areas.

Jobseekers Allowance (JSA) claimants (Feb-15)	165	2.2% (England average = 2.0%)	JSA claimants claiming for more than 12 months (Feb-15)	31	0.4% (England average = 0.5%)	Youth unemployment (JSA claimants aged 18-24) (Feb-15)	39	2.0% (England average = 3.1%)	Female JSA claimants (Feb-15)	48	1.4% (England average = 1.4%)
Male JSA claimants (Feb-15)	119	3.0% (England average = 2.5%)	Incapacity benefits claimants (May-14)	614	8.4% (England average = 6.0%)	Working age workless benefit claimants (May-14)	813	11.1% (England average = 8.5%)	16-24 year olds receiving workless benefits (May-14)	89	4.2% (England average = 5.5%)

Source: Department for Work and Pensions

Figure: Unemployment benefit (Jobseekers Allowance) claimants

Source: Department of Work and Pensions





Vulnerable groups: People out of work (2)

Figure: % of Jobseekers Allowance claimants claiming for more than 12 months
Source: Department of Work and Pensions (Feb-15)

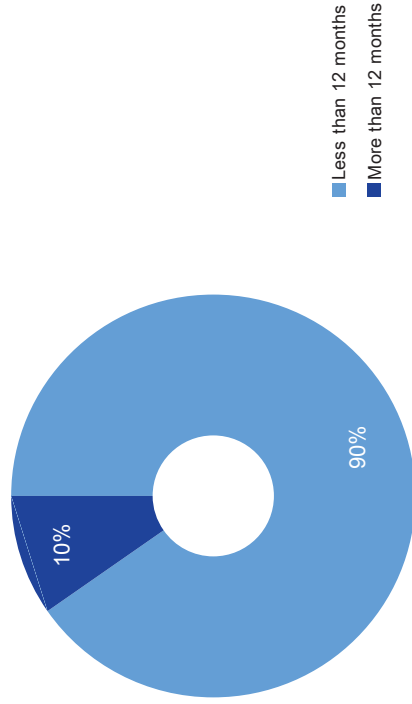


Figure: Workless benefit claimants aged 16-24 and 16-64
Source: Jobseekers Allowance – Department for Work and Pensions (Feb-15) Incapacity benefits/Workless benefit claimants – Department for Work and Pensions (May-14)

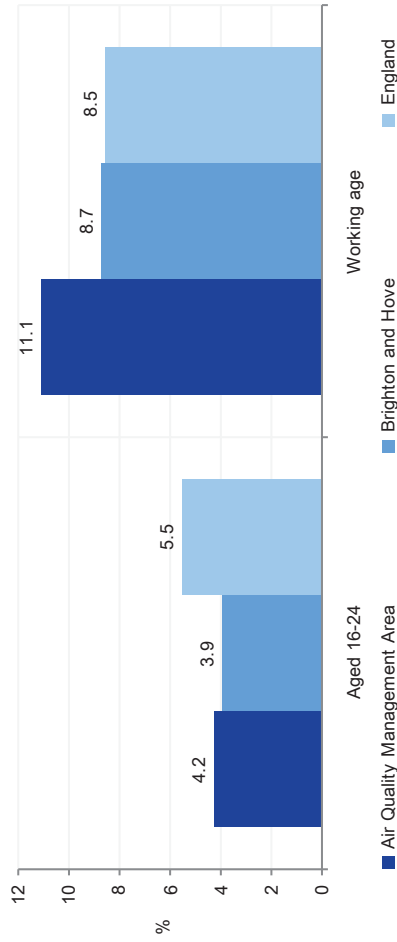


Figure: Working age population claiming incapacity benefits (Employment Support Allowance and Incapacity Benefit)
Source: Department for Work and Pensions

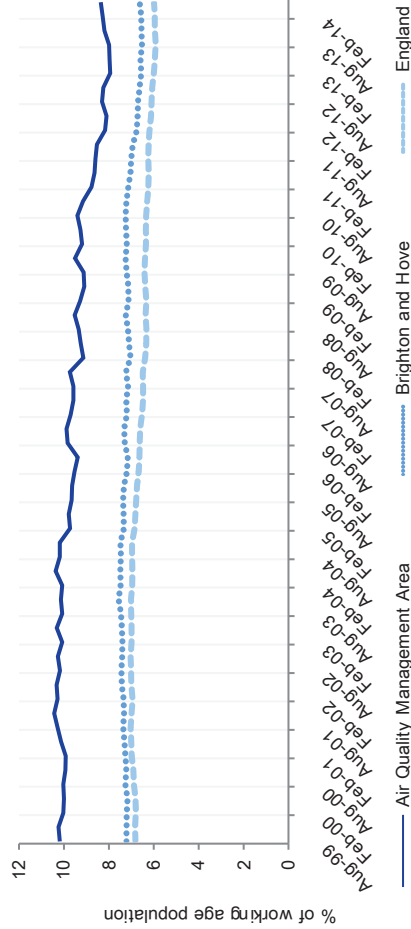
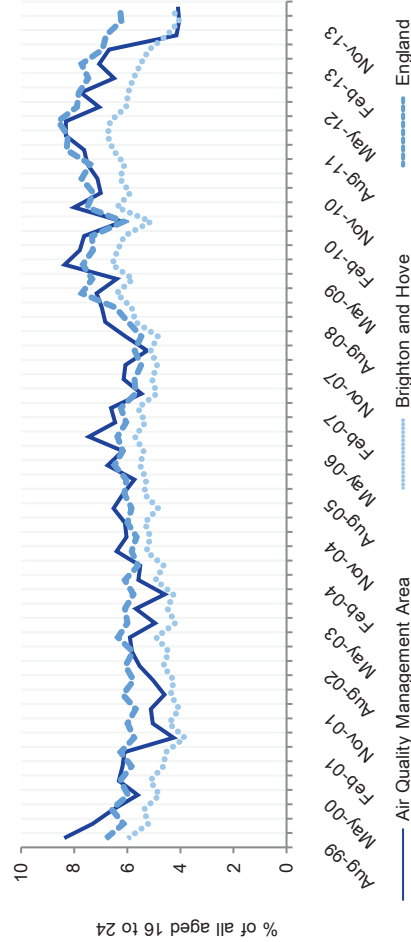


Figure: 16-24 year olds receiving 'Workless' benefits (Incapacity Benefit, Employment Support Allowance, Jobseekers Allowance)
Source: Department of Work and Pensions





What information is shown here?

The information in this section looks at the prevalence of disability among people living in Air Quality Management Area. There are two measures of disability presented: those claiming Attendance Allowance or Disability Living Allowance.

Attendance Allowance is payable to people over the age of 65 who are so severely disabled, physically or mentally, that they need a great deal of help with personal care or supervision. Disability Living Allowance is payable to children and adults in or out of work who are below the age of 65 and who are disabled, need help with personal care or have walking difficulties. It is a non-means tested benefit, which means it is not affected by income. Disability Free Life Expectancy reports the age people can expect to live to without a disability.

The information boxes on the right show the total number of people receiving Attendance Allowance and Disability Living Allowance across Air Quality Management Area.

Disability Living Allowance claimants	Attendance Allowance claimants
455	95
5.1% of people claim DLA in Air Quality Management Area areas and 5.0% claim in England	14.5% of people claim Attendance Allowance in Air Quality Management Area areas and 14.6% claim in England

Source: Department of Work and Pensions (May-14)

Figure: Adults with a disability (receiving Disability Living Allowance)

Source: Department for Work and Pensions (May-14)

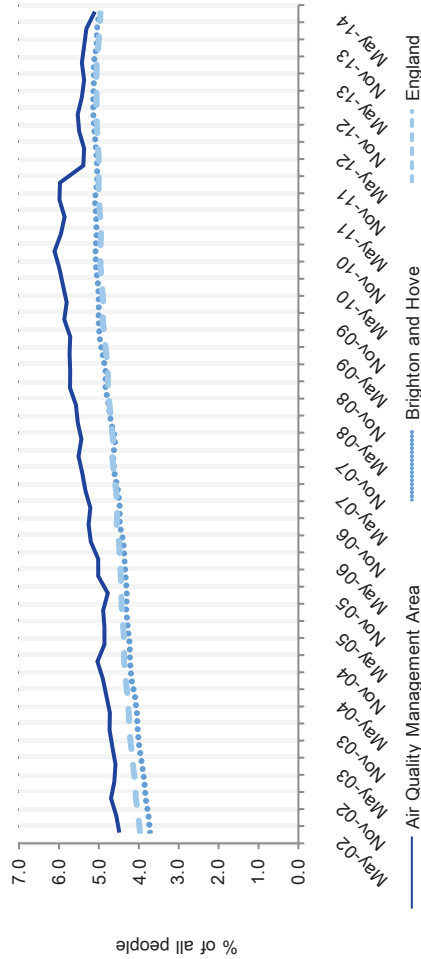
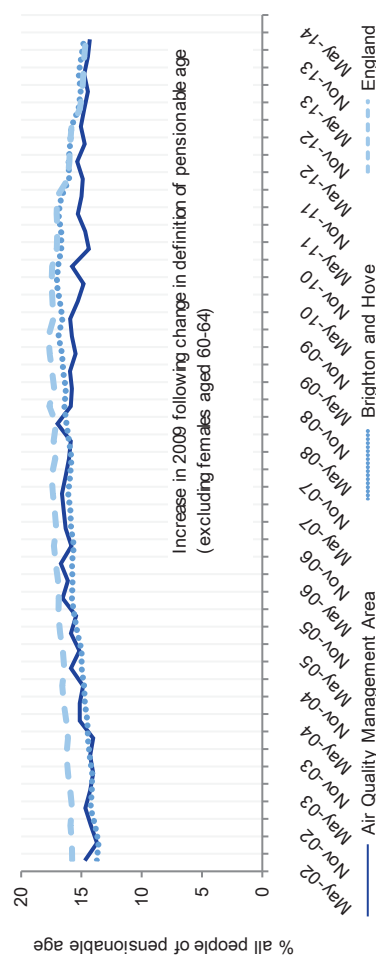


Figure: Older people with social care needs (receiving Attendance Allowance)

Source: Department for Work and Pensions





What information is shown here?

The information in this page shows the number of people in receipt of key welfare benefits payable by the Department for Work and Pensions (DWP).

Working age DWP Benefits are benefits payable to all people of working age (16-64) who need additional financial support due to low income, worklessness, poor health, caring responsibilities, bereavement or disability. Housing Benefit (HB) can be claimed by a person if they are liable to pay rent and if they are on a low income and provides a measure of the number of households in poverty. Income Support is a measure of people of working age with low incomes and is a means tested benefit payable to people aged over 16 working less than 16 hours a week and having less money coming in than the law says they need to live on.

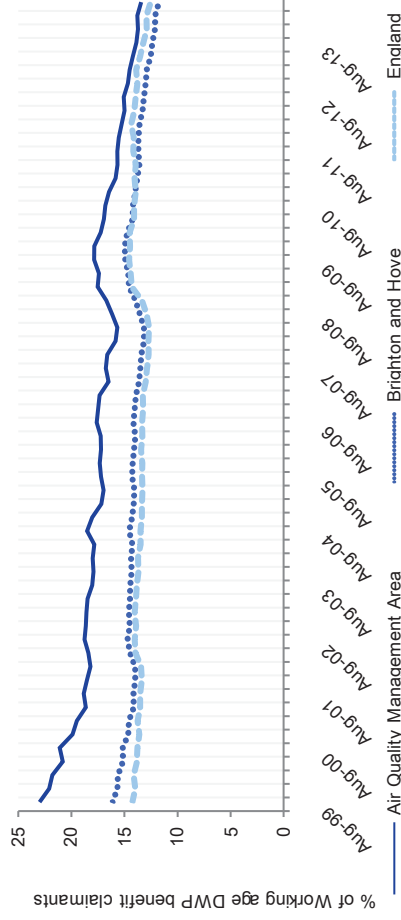
The chart on the right shows the change in the proportion of working age people receiving DWP benefits. The charts on the following page show the change in the proportion of Income Support and Housing Benefits claimants and the age breakdown of DWP benefit claimants across Air Quality Management Area and comparator areas.

Working age DWP Benefit claimants (May-14)	986	13.4% (England average = 12.5%)
Female working age benefit claimants (May-14)	597	15.1% (England average = 12.1%)
Male working age benefit claimants (May-14)	387	11.4% (England average = 13.0%)
Income Support (IS) claimants (May-14)	101	1.4% (England average = 2.2%)
Housing Benefit claimants (Nov-14)	1,318	30.1% (England average = 18.1%)

Source: Department for Work and Pensions (DWP)

Figure: Working age population claiming DWP benefit claimants (for all DWP benefits)

Source: Department for Work and Pensions





Vulnerable groups: Working age benefit claimants (2)

Figure: Income Support claimants

Source: Department for Work and Pensions (May-14)

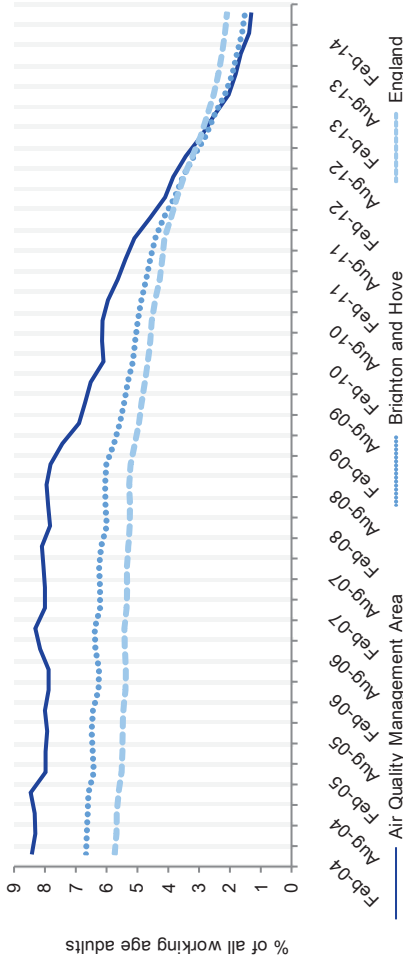


Figure: Housing Benefit claimants

Source: Department for Work and Pensions

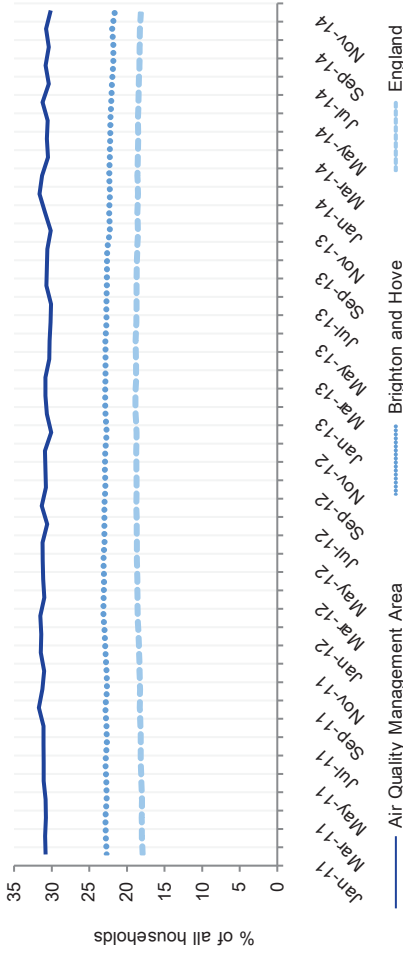


Figure: Age breakdown of working age DWP benefit claimants (for all DWP benefits)

Source: Department for Work and Pensions (May-14)

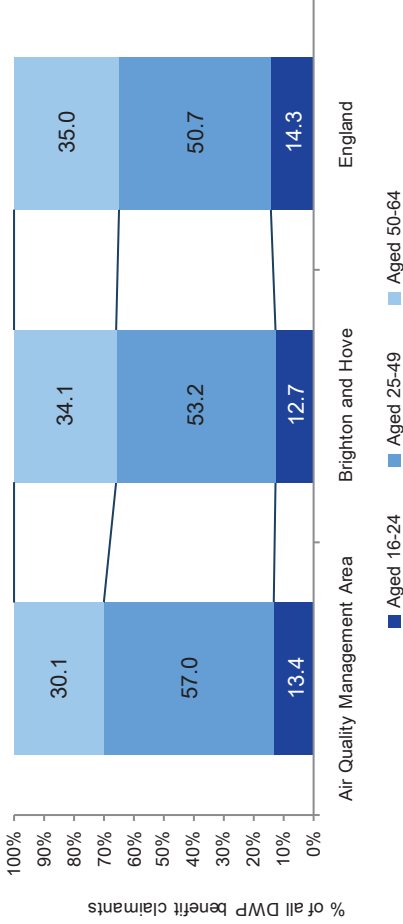
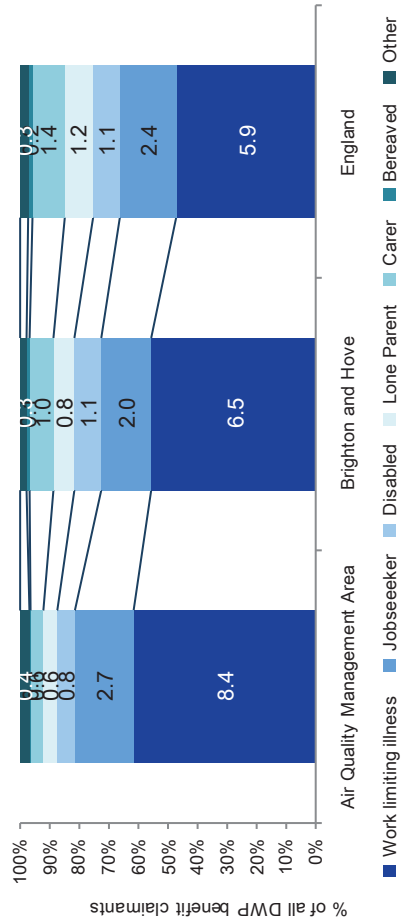


Figure: Breakdown of working age DWP benefit claimants by reason for claim

Source: Department for Work and Pensions (May-14)





What information is shown here?

The information on this page looks at overall levels of deprivation across Air Quality Management Area based on the Index of Multiple Deprivation (IMD) 2010. IMD 2010 is the most comprehensive measure of multiple deprivation available. The concept of multiple deprivation upon which the IMD 2010 is based is that separate types of deprivation exist, which are separately recognised and measurable. The IMD 2010 therefore consists of seven types, or domains, of deprivation, each of which contains a number of individual measures, or indicators¹.

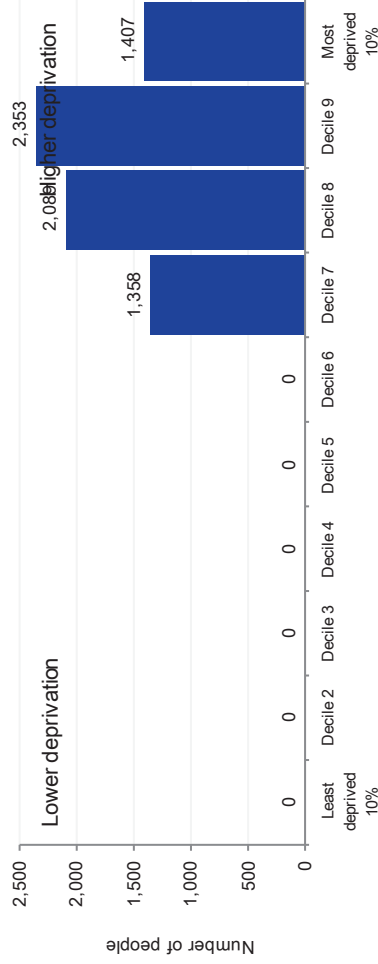
The information boxes on the right show the number of people in Air Quality Management Area living in neighbourhoods ranked among the most and least deprived 20% of neighbourhoods in England on IMD 2010. The chart on the right shows the number of people living in neighbourhoods grouped according to level of deprivation. All neighbourhoods in England are grouped into ten equal sized groups "deciles"; the 10% of neighbourhoods with the highest level of deprivation (as measured in the IMD) are grouped in decile 10, and so on with the 10% of neighbourhoods with the lowest levels of deprivation grouped in decile 1.

Number of people in Air Quality Management Area living in the most deprived 20% of areas in England	3,760	52.2% (England average = 19.8%)
Number of people in Air Quality Management Area living in the least deprived 20% of areas in England	0	

Source: Communities and Local Government (Index of Multiple Deprivation 2010)

Figure: Number of people in each deprivation decile, Index of Multiple Deprivation 2010

Source: Communities and Local Government (Index of Multiple Deprivation 2010)



¹ The seven domains of deprivation included are: Employment deprivation, Income deprivation, Health deprivation and disability, Education, skills and training deprivation, Crime, Living environment deprivation, Barriers to housing and services.



What information is shown here?

This page looks at children in out of work households, children in poverty and children in lone parent households. Children in 'out of work' households, are defined as dependent children living in families where all adults are in receipt of Income Support or income-based Jobseeker's Allowance (IS/JSA). The children in poverty measure shows the proportion of children (aged 0-15) in families in receipt of out of work benefits, or in receipt of tax credits where their reported income is less than 60% median income. Out of work means-tested benefits include: Income-Based Jobseekers Allowance, incapacity benefits and Income Support.

The information boxes on the right show the count of people in each of these three categories in Air Quality Management Area. The bar chart shows the percentage of people in each of these categories across Air Quality Management Area and comparator areas (as a percentage of all children receiving Child Benefit). The line chart shows the year on year change in the proportion of children in out of work households.

Children in 'out of work' households (2011)	208	22.4% (England average = 19.1%)
Children in lone parent households (2011)	316	34.0% (England average = 27.3%)
Children in poverty (2012)	186	21.9% (England average = 19.2%)

Source: HM Revenue and Customs (2011/12), Department of Work and Pensions (2011/12).

Figure: Children living in poverty, worklessness and lone parent households

Source: HM Revenue and Customs (2011/12), Department for Work and Pensions (2011/12)

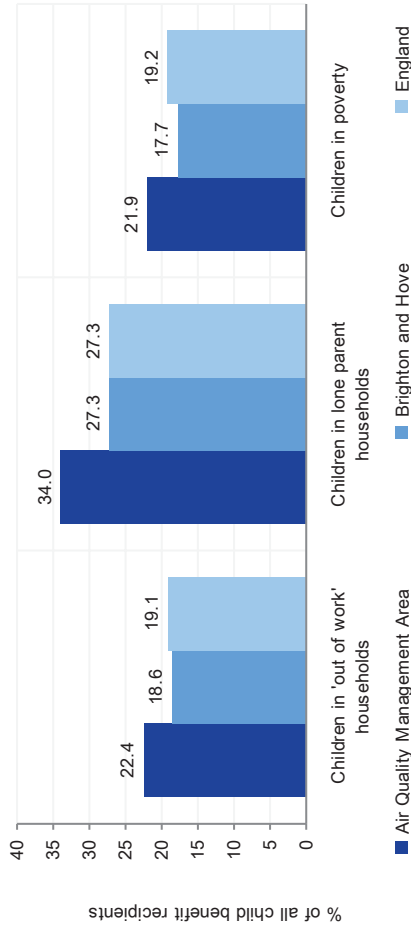
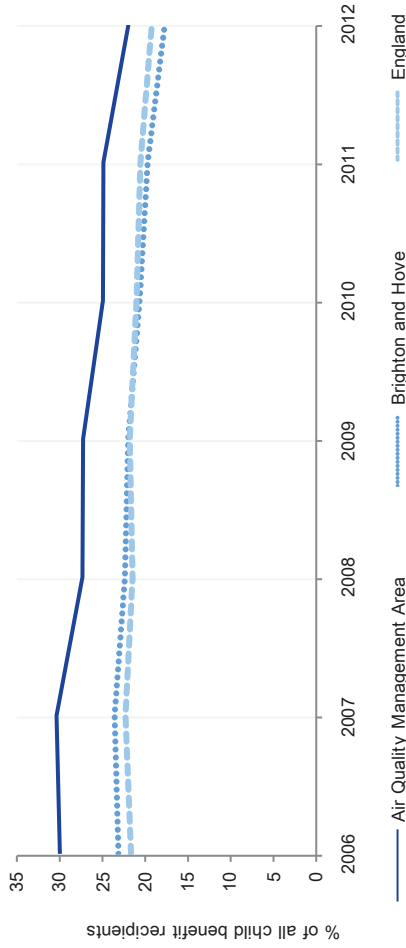


Figure: Children living in poverty

Source: HM Revenue and Customs, Department for Work and Pensions





What information is shown here?

The information on this page shows levels of child wellbeing across Air Quality Management Area as measured using the Child Wellbeing Index (CWI). The CWI is a small area index measuring child wellbeing – how children are doing in a number of different aspects of their life. The index covers the major domains of a child's life that have an impact on child well-being and that are available for neighbourhoods in England. The CWI is made up of seven domains².

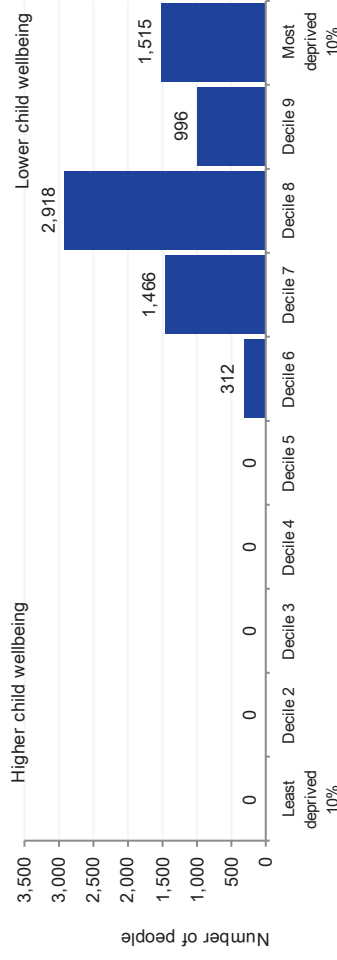
The eight information boxes on the right show the number of people in Air Quality Management Area living in areas ranked among the most deprived 20% of neighbourhoods in England on CWI and the seven domains. The chart on the right shows the number of people living in neighbourhoods grouped according to level of child wellbeing deprivation. All neighbourhoods in England are grouped into ten equal sized groups "deciles"; the 10% of neighbourhoods with the highest level of deprivation (lowest level of child wellbeing) are grouped in decile 10, and so on with the 10% of neighbourhoods with the lowest levels of deprivation grouped in decile 1.

Number of people in Air Quality Management Area living in the most deprived 20% of areas of England by Child Wellbeing Index domain			
Child Wellbeing Index	Children in Need domain	Material Wellbeing domain	Education domain
2,376 33.0% (England average = 20.2%)	2,599 36.1% (England average = 20.1%)	2,376 33.0% (England average = 20.2%)	1,755 24.4% (England average = 19.8%)
Environment domain	Health domain	Housing domain	Crime domain
5,551 77.0% (England average = 20.5%)	2,733 37.9% (England average = 19.9%)	5,894 81.8% (England average = 20.4%)	284 3.9% (England average = 19.8%)

Source: Communities and Local Government (Child Wellbeing Index 2009)

Figure: Number of people in each deprivation decile, Child Wellbeing Index 2009

Source: Communities and Local Government (Child Wellbeing Index 2009)



² Material wellbeing - children experiencing income deprivation; Health and disability – children experiencing illness, accidents and disability; Education - education outcomes including attainment, school attendance and destinations at age 16; Crime - personal or material victimisation of children; Housing - access to housing and quality of housing for children; Environment - aspects of the environment that affect children's physical well-being; Children in need – vulnerable children receiving LA services.



What information is shown here?

The information on this page looks at pensioner groups that may face greater risks or who may have different types of need. There are three measures included: pensioners without access to transport, pensioners living alone and pensioners in poverty.

Pensioners without access to transport are those with no access to a car or van. The dataset only includes pensioners living in private households.

Pensioners living alone are defined as households of one pensioner and no other household members.

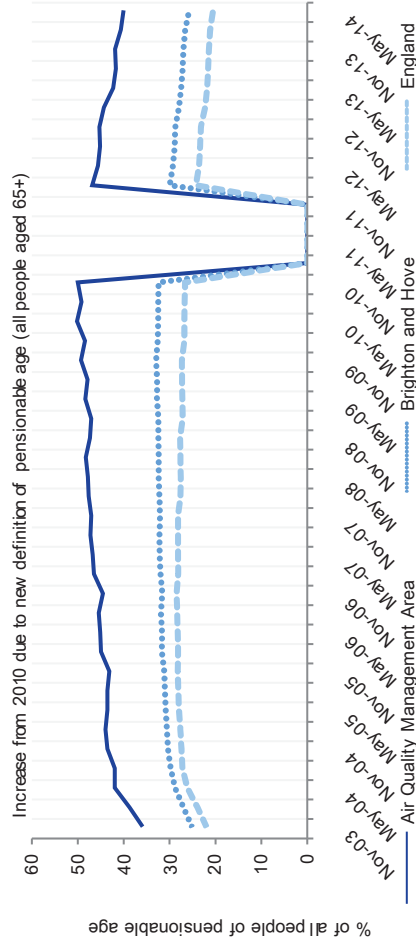
Pensioners in poverty are those in receipt of Pension Credit. Pension Credit provides financial help for people aged 60 or over whose income is below a certain level set by the law.

The information boxes present information on the counts of pensioner households or pensioners in each category. The chart on the right shows the change in the proportion of people receiving Pension Credit across Air Quality Management Area and comparator areas.

Private pensioner households with no car or van (Census 2001)	473	76.2% of pensioner households (England average = 50.1%)
Households of one pensioner (Census 2011)	340	79.3% of pensioner households (England average = 59.6%)
Pension credit claimant (Department for Work and Pensions: May-14)	263	40.0% (England average = 20.5%)

Figure: Pension Credit claimants

Source: Department for Work and Pensions (May-14)





What information is shown here?

The information on this page looks at the number and proportion of people in three groups with specific needs: mental health issues; households with multiple deprivation; people providing unpaid care.

The figures for people with mental health issues are based on Employment Support Allowance/Incapacity Benefit claimants who are claiming due to mental health related conditions. Incapacity Benefit is payable to persons unable to work due to illness or disability.

Households with multiple deprivation are households experiencing four key measures of deprivation:

- All adult household members have no qualifications
- At least one household member is out of work (due to unemployment or poor health)
- At least one household member has a limiting long-term illness
- The household is living in overcrowded conditions

Informal care figures show people who provide any unpaid care by the number of hours a week they provide that care. A person is a provider of unpaid care if they give any help or support to another person because of long-term physical or mental health or disability, or problems related to old age.

The line chart on the right shows the change in the number of people claiming Incapacity benefit for mental health reasons as a proportion of the working age population and the chart below it includes figures for children and all people providing unpaid care across Air Quality Management Area.

Mental health related benefits (DWP May-14)	370	5.0% of working age adults (England average = 2.8%)
Households suffering multiple deprivation (Census 2011)	75	1.7% (England average = 0.5%)
People providing unpaid care (Census 2011)	521	6.2% (England average = 10.2%)
Unpaid care (50+ hours per week) (Census 2011)	97	1.1% (England average = 2.4%)

Figure: Receiving Employment Support Allowance (ESA) and Incapacity Benefit (IB) due to mental health Source: Department for Work and Pensions

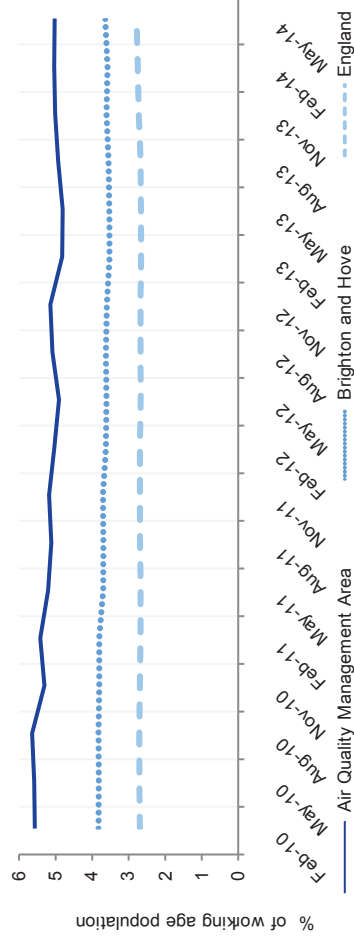
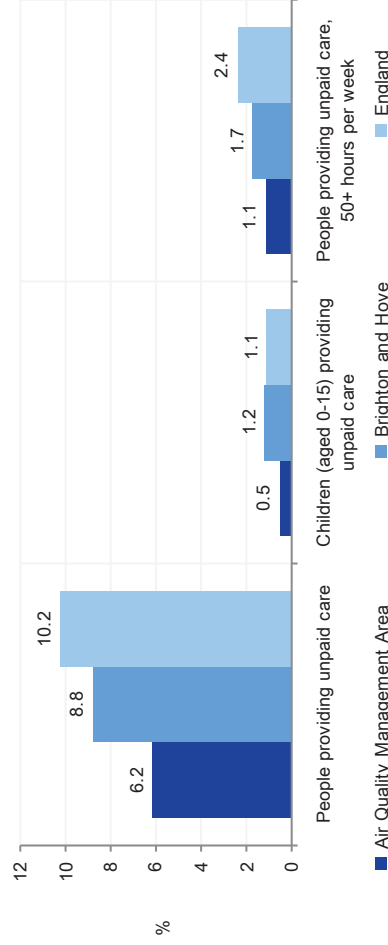


Figure: People providing unpaid care Source: Census 2011





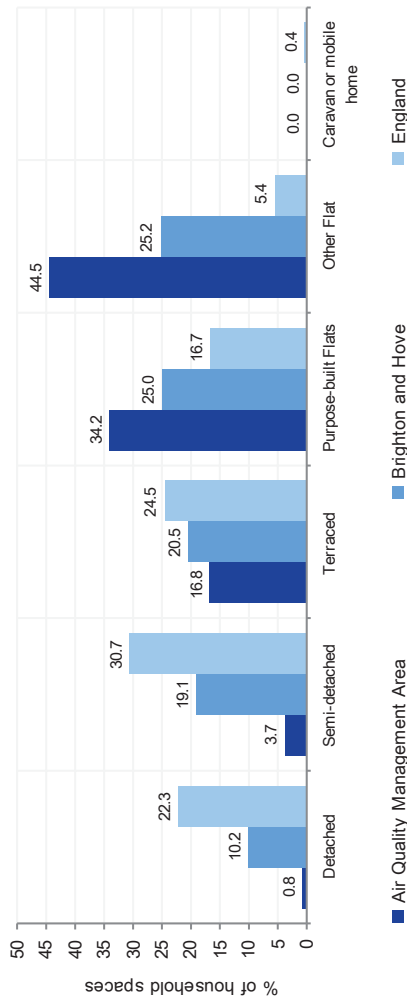
What information is shown here?

The information on this page looks at the type of dwelling space people live in. A dwelling space is the accommodation occupied by an individual household or, if unoccupied, available for an individual household, for example the whole of a terraced house, or a flat in a purpose-built block of flats.

The information boxes below show the number of people in Air Quality Management Area living in each accommodation type. The chart on the right shows a breakdown of households by accommodation type across Air Quality Management Area and comparator areas.

Detached	Semi-detached	Terraced	Purpose built flat
35	170	763	1,553
0.8% (England average = 22.3%)	3.7% (England average = 30.7%)	16.8% (England average = 24.5%)	34.2% (England average = 16.7%)
Flat (in converted house)	Flat (in commercial property)	Caravan or other temporary dwelling	Second homes
1,571	451	01	86
34.6% (England average = 4.3%)	9.9% (England average = 1.1%)	0.0% (England average = 0.4%)	2.2% (England average = 0.6%)

Source: Census 2011
Figure: Dwellings type breakdown
Source: Census 2011





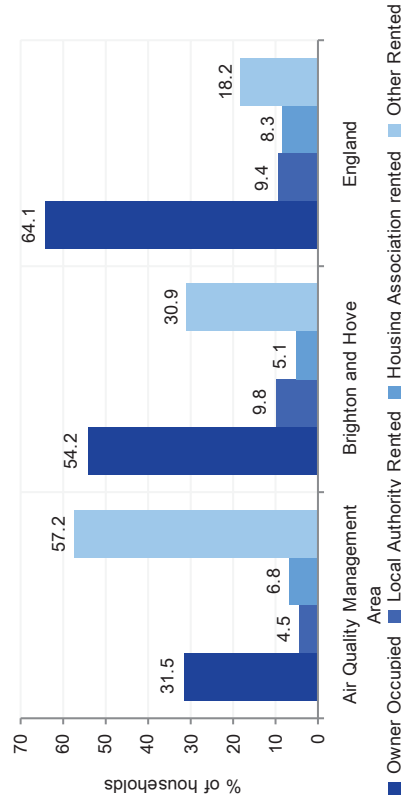
What information is shown here?

The information on this page looks at the tenure of housing in Air Quality Management Area. The information boxes show the number of households broken down by tenure type and the chart shows the tenure breakdown across Air Quality Management Area and comparator areas.

- 'Owner occupied' housing includes accommodation that is either owned outright, owned with a mortgage or loan, or shared ownership (paying part rent and part mortgage).
- 'Social rented' housing includes accommodation that is rented from a council (Local Authority) or a Housing Association, Housing Co-operative, Charitable Trust, Non-profit housing company or Registered Social Landlord.
- 'Rented from the Council includes accommodation rented from the Local Authority
- 'Housing Association or Social Landlord' includes rented from Registered Social Landlord, Housing Association, Housing Co-operative, Charitable Trust and non-profit housing Company.
- 'Private rented or letting agency' includes accommodation that is rented from a private landlord or letting agency.
- 'Other Rented' Includes employer of a household member and relative or friend of a household member and living rent free.

Owner occupied	Owner-occupied: owned outright	Owner-occupied owned: with mortgage or loan
1,349 31.5% (England average = 64.1%)	529 12.3% (England average = 30.6%)	790 18.4% (England average = 32.8%)
Owner-occupied: shared ownership	Social rented households	Rented from Council
30 0.7% (England average = 0.8%)	484 11.3% (England average = 17.7%)	192 4.5% (England average = 9.4%)
Rented from Housing Association or Social Landlord	Rented from private landlord or letting agency	Other rented dwellings
292 6.8% (England average = 8.3%)	2,279 53.2% (England average = 15.4%)	174 4.1% (England average = 2.8%)

Figure: Housing tenure breakdowns
Source: Census 2011





What information is shown here?

The information in this section shows measures of housing costs in Air Quality Management Area. Data on house prices is from the Land Registry open data price-paid dataset (www.landregistry.gov.uk/market-trend-data/public-data/price-paid-data), which is updated monthly. Affordability ratios are based on the most recent small area income estimates (for 2008).

House prices by dwelling type

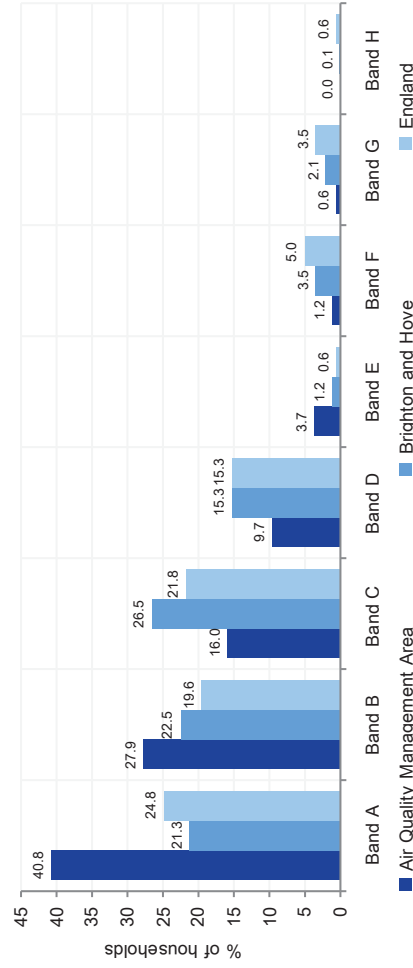
The information boxes on the right and the chart on the following page show the mean house prices by accommodation type across Air Quality Management Area and comparator areas for four key dwelling types (detached houses, semi-detached houses, flats and terraced houses). The second bar chart on the following page shows the monthly change in the number of transactions and average price across Air Quality Management Area.

Council tax bands

The data on Council Tax bands shows the number (and proportion) of houses in bands A, B or C (the lowest price bands) and F, G and H (the highest price bands) locally. These price bands are set nationally, so can be used to show how the cost of all local property (not just those properties that have recently been sold) compares with other areas; the chart on the right compares Air Quality Management Area and comparator areas for these Council Tax bands.

Average house price (all types of housing) (Land registry Jan14-Dec14)	£271,203 England average = £263,933	Average house price (flats) (Land registry Jan14-Dec14)	£223,209 England average = £264,834
Average house price (semi-detached) (Land registry Jan14-Dec14)	£543,750 England average = £223,315	Average house price (detached) (Land registry Jan14-Dec14)	£599,000 England average = £362,102
Households in Council Tax Band B (VOA 2011)	1,236 27.9% (England average = 19.6%)	Average house price (terraced) (Land registry Jan14-Dec14)	£373,977 England average = £220,748
Households in Council Tax Band C (VOA 2011)	709 16.0% (England average = 21.8%)	Households in Council Tax Band A (Valuation Office Agency (VOA) 2011)	1,810 40.8% (England average = 24.8%)
		Households in Council Tax Band F-H (VOA 2011)	79 1.8% (England average = 9.1%)

Figure: Dwelling stock by council tax band
Source: Valuation Office Agency (2011)





Housing: How affordable is local housing? (2)

Figure: Average property price by dwelling type
Source: Land registry Aug 2013 – Jul 2014

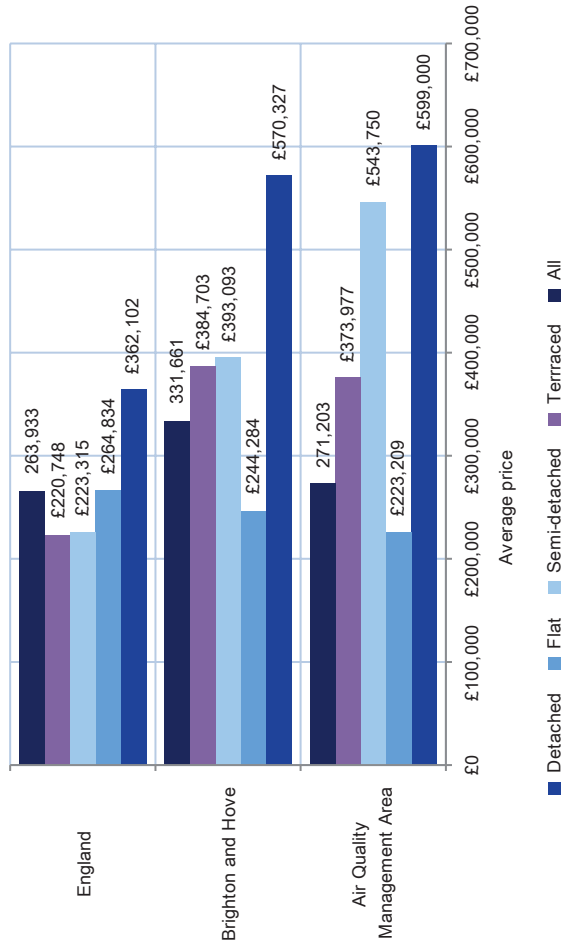
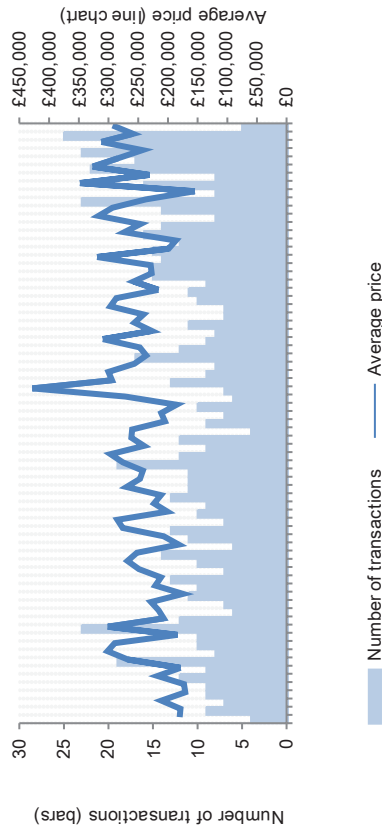


Figure: Average house prices and number of transactions, by month
Source: Land Registry





What information is shown here?

The information on this page details indicators of the built environment: overcrowded housing, vacant housing, population density, the size of housing units and the proportion of households lacking central heating.

A household's accommodation is described as 'without central heating' if it had no central heating in any of the rooms (whether used or not). The data also shows breakdowns by tenure. This enables users to compare differences in the proportion of households with inadequate heating supply in the owner occupied, social rented and private rented sectors.

Households are classified as overcrowded if there is at least one room fewer than needed for household requirements using standard definitions. The standard used to measure overcrowding is called the 'occupancy rating' which relates to the actual number of rooms in a dwelling in relation to the number of rooms required by the household, taking account of their ages and relationships. The room requirement states that every household needs a minimum of two common rooms, excluding bathrooms, with bedroom requirements that reflect the composition of the household. The occupancy rating of a dwelling is expressed as a positive or negative figure, reflecting the number of rooms in a dwelling that exceed the household's requirements, or by which the home falls short of its occupants' needs.

Vacant dwellings include housing that was not occupied at the time of the census (excluding second residences or holiday accommodation).

Population density (persons / hectare)	Houses lacking central heating	Overcrowded Housing
99.8	358	1,456
England average = 4.1	8.4% (England average = 2.7%)	34.0% (England average = 8.7%)
Vacant Dwellings	Dwellings with 2 rooms or fewer	Dwellings with 8 or more rooms
258	955	136
6.0% (England average = 4.3%)	22.3% (England average = 3.7%)	3.2% (England average = 12.7%)

Source: Census 2011. Population density data – Office for National Statistics (ONS) 2013
Figure: Housing Environment
Source: Census 2011

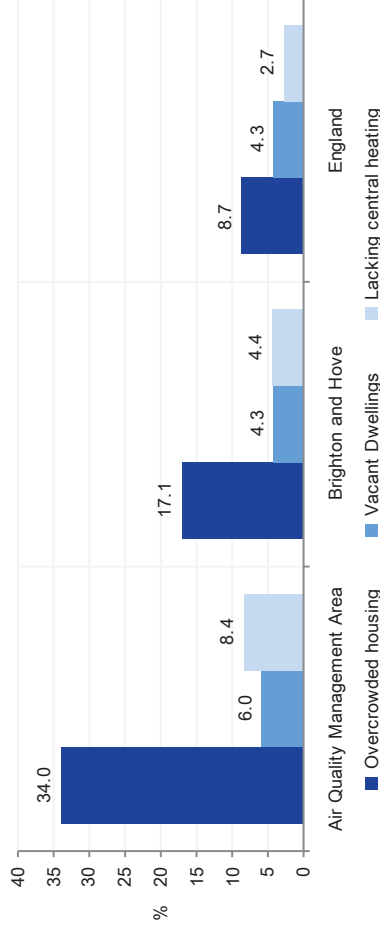
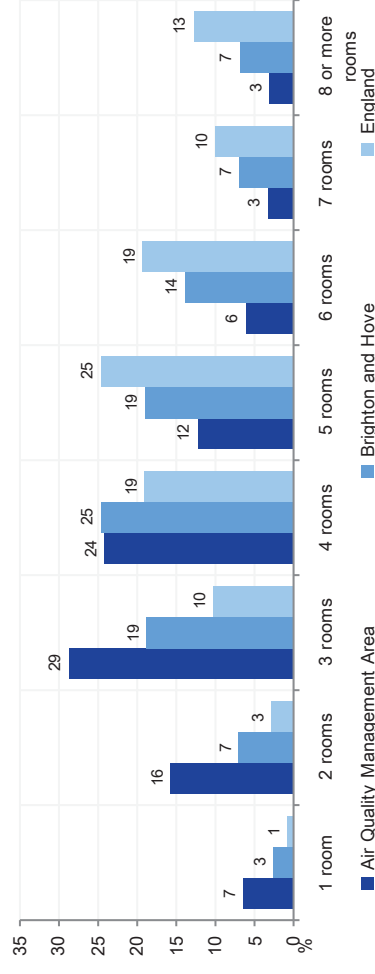


Figure: Dwelling size (number of rooms per household)
Source: Census 2011





Housing: Communal establishment residents

What information is shown here?

The information on this page shows the number of people living in communal establishments, with breakdowns by the main types.

A communal establishment is defined as an establishment providing managed (full-time or part-time supervised) residential accommodation.

The information boxes on the right show the number and proportion of people in communal establishments by main type of establishment. Note: Medical and care establishments include psychiatric hospital / homes, other hospital homes children's homes, residential care homes, nursing homes managed by the NHS, Local Authority or private organisation; Educational establishments include primarily University halls of residence; Defence establishments include barracks, air bases and naval ships; Other establishments include prison service establishments, bail hostels, hotels, boarding houses or guest houses, hostels and civilian ships.

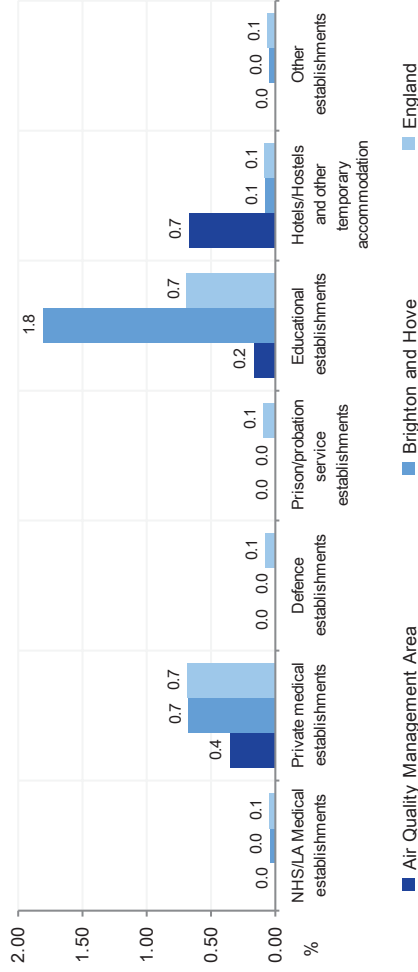
The chart on the top right provides the same information with associated comparator areas. The chart on the bottom right shows the age breakdown of people living in communal establishments.

All in communal establishments	127	1.5% (England average = 1.8%)
Medical and care establishments	56	0.7% (England average = 0.7%)
Education establishments	14	0.2% (England average = 0.7%)
Defence establishments	00	0.0% (England average = 0.1%)
Other establishments	00	0.0% (England average = 0.1%)

Source: Census 2011

Figure: Communal establishments by type

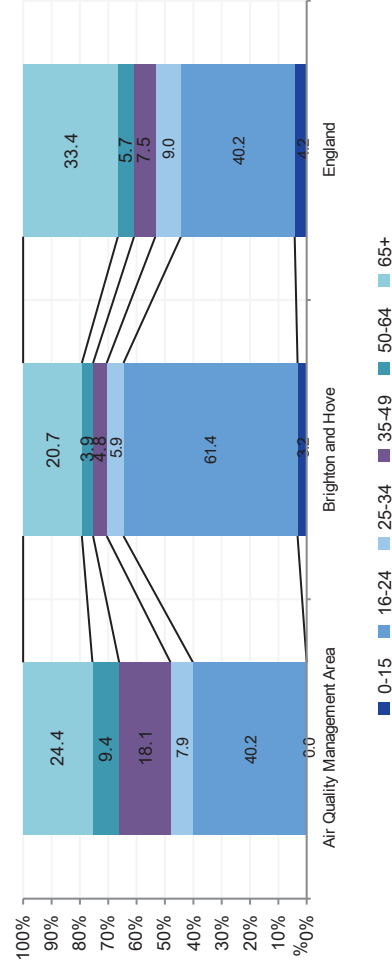
Source: Census 2011



Legend: Brighton and Hove (dark blue), England (light blue)

Figure: Age breakdown of communal establishment residents

Source: Census 2011





What information is shown here?

The information on this page and the following shows the level of recorded crime in Air Quality Management Area and comparator areas. This is based on data for individual crime incidents published via the www.police.uk open data portal, which has been linked by Local Insight to your selected neighbourhoods. Further information on how these crimes and incidents have been categorised, as well as which crimes and incidents have been mapped and why, is available at: www.police.uk/about-this-site/faqs/#why-are-some-crimes-not-displayed-on-the-map

The information boxes show counts and rates for the main crime types and anti-social behaviour incidents. The overall crime rate is presented for monthly, quarterly and annual snapshots, with the underlying crime types shown as annual totals.

The line charts below and on the following page track monthly change in recorded crime across five key offences (violent crime, anti-social behaviour, burglaries, criminal damage and vehicle crime) across Air Quality Management Area and comparator areas for the last 12 months of data.

All crimes December 2014 monthly total	305 36.1 per 1,000 population (England average = 8.1)	All crimes Oct-2014 to Dec-2014	1,018 119.1 per 1,000 population (England average = 25.0)	All crimes Jan-2014 to Dec-2014	4,380 512.1 per 1,000 population (England average = 105.8)
Violent crimes Jan-2014 to Dec-2014	719 83.3 per 1,000 population (England average = 14.2)	Criminal damage incidents Jan-2014 to Dec-2014	229 25.8 per 1,000 population (England average = 8.6)	Anti-social behaviour incidents Jan-2014 to Dec-2014	1,425 160.5 per 1,000 population (England average = 34.3)
Burglaries Jan-2014 to Dec-2014	142 32.5 per 1,000 households (England average = 17.3)	Robberies Jan-2014 to Dec-2014	19 2.1 per 1,000 population (England average = 0.9)	Vehicle crimes Jan-2014 to Dec-2014	53 58.0 per 1,000 population (England average = 53.0)

Source: Recorded crime offences – www.police.uk (2014)

Figure: Violent crime offences
Source: www.police.co.uk (2014)

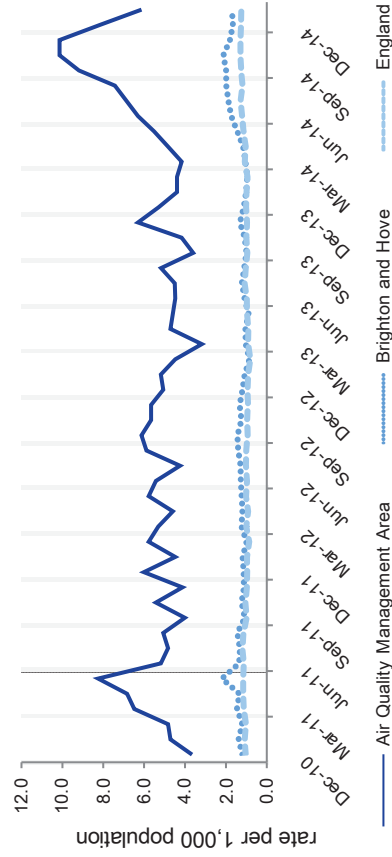




Figure: Anti-social behaviour offences
Source: www.police.co.uk (2014)

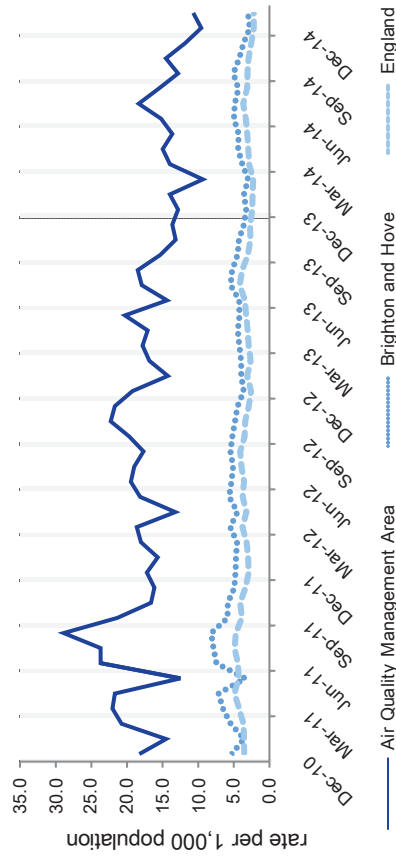


Figure: Burglary offences
Source: www.police.co.uk (2014)

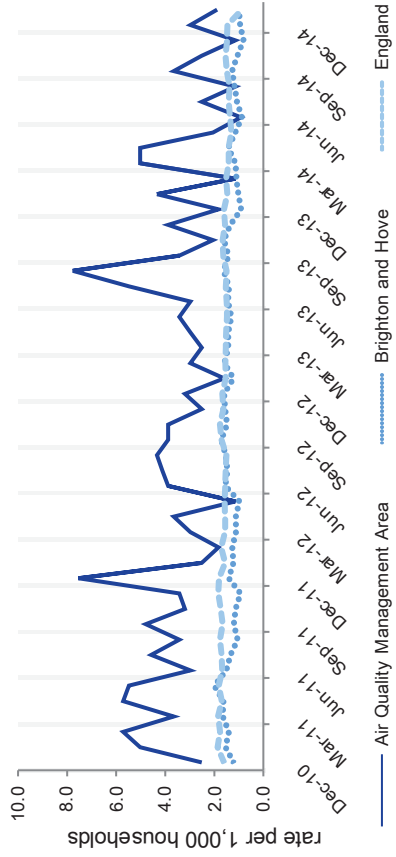


Figure: Criminal damage offences
Source: www.police.co.uk (2014)

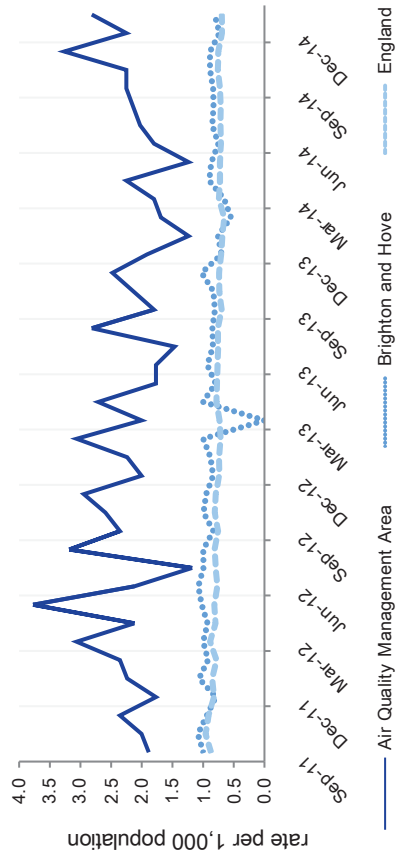
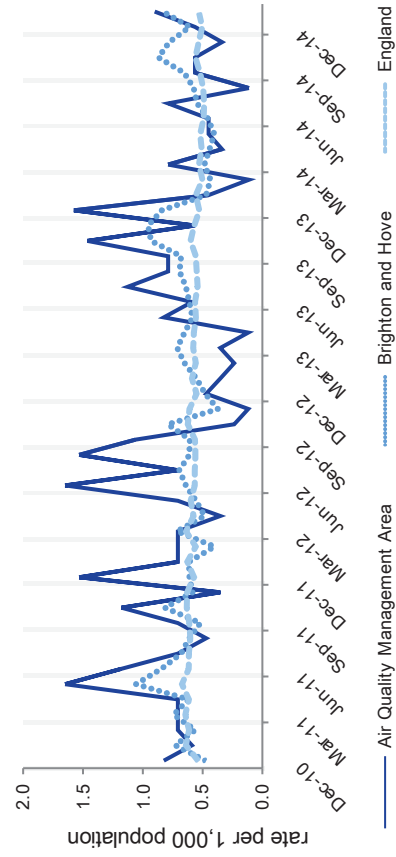


Figure: Vehicle crime offences
Source: www.police.co.uk (2014)





What information is shown here?

The information in this section explores variations in life expectancy and premature mortality. Life Expectancy is a measure of the age a person being born today can expect to live until, if they experience current mortality rates throughout their life. The chart on the right shows life expectancy at birth for females and males in Air Quality Management Area and comparator areas.

The chart below it shows the standardised mortality ratio for all causes and all ages for Air Quality Management Area. This indicator highlights the ratio of observed to expected deaths (given the age profile of the population). A mortality ratio of 100 indicates an area has a mortality rate consistent with the age profile of the area, less than 100 indicates that the mortality rate is lower than expected and higher than 100 indicates that the mortality rate is higher than expected.

The chart below shows incidence of cancer (with breakdowns for the four most common forms of cancer). The data is presented as an incidence ratio (ratio of observed incidence vs expected incidence given the age profile of the population).

Figure: Life expectancy
Source: Office for National Statistics (2011-2013)

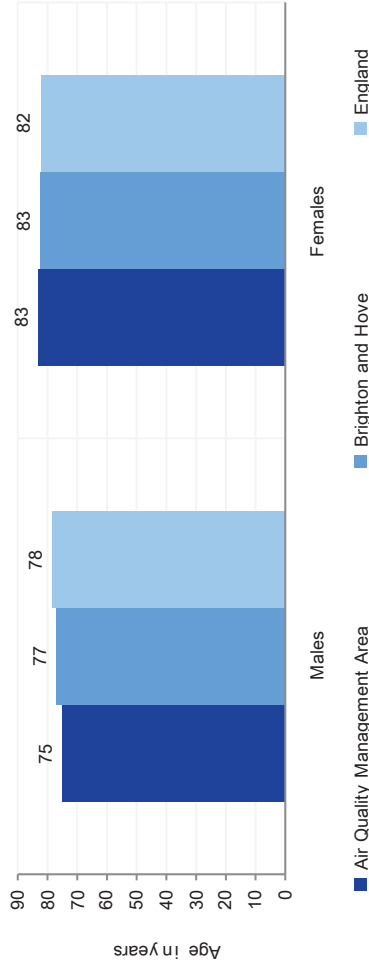


Figure: Standardised mortality ratio (select causes)
Source: Office for National Statistics (2011-2013)

If an area is above 100, there is a higher proportion of deaths than had been expected. If it is below 100, there is a lower proportion of deaths than expected.

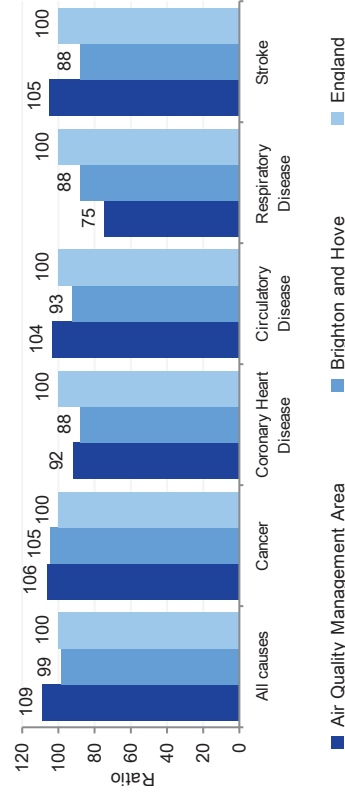
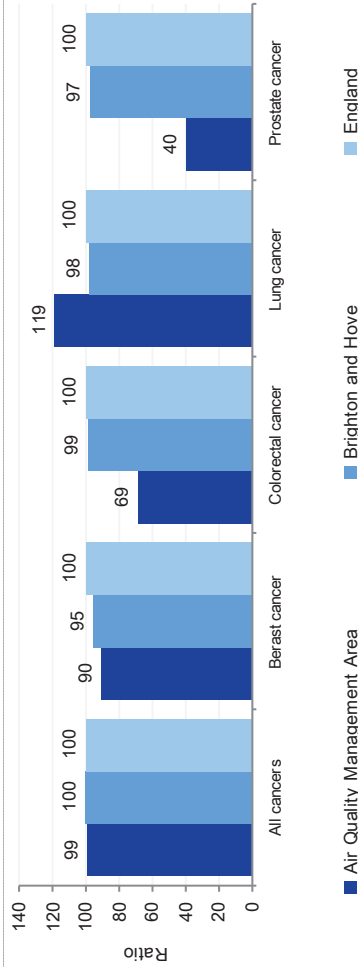


Figure: Prevalence of cancer: Standardised incidence ratio (select causes)
Source: Office for National Statistics (2011-2013)

If an area is above 100, there is a higher incidence of cancer than had been expected. If it is below 100, there is a lower incidence of cancer than expected.





What information is shown here?

The information in this section looks at general levels of health, focusing on the number of people living in neighbourhoods with poor levels of overall health (health deprivation hotspots) and the number of people with a limiting long-term illness.

Health deprivation 'hotspots' are neighbourhoods ranked among the most deprived 20% of neighbourhoods in England on the Indices of Deprivation 2010 Health domain. The domain measures morbidity, disability and premature mortality. All neighbourhoods in England are grouped into ten equal sized groups "deciles"; the 10% of neighbourhoods with the highest level of health deprivation are grouped in decile 10, and so on with the 10% of neighbourhoods with the lowest levels of health deprivation grouped in decile 1.

The chart on the right shows the number of people in Air Quality Management Area living in each health decile. The charts below shows the proportion of residents in Air Quality Management Area with a limiting long-term illness by age.

Number of people living in health deprivation 'hotspots' (Indices of Deprivation 2010)	6,558	91.0% (England average = 19.6%)
People with a limiting long-term illness (Census 2011)	1,230	14.5% (England= 17.6%)
People aged 16-64 with a limiting long-term illness (Census 2011)	830	11.7% (England= 12.8%)
Babies born with a low birth weight (ONS 2013)	97	1.1% (England average = 2.4%)

Figure: Number of people in each deprivation decile, Health domain
Source: Indices of Deprivation 2010

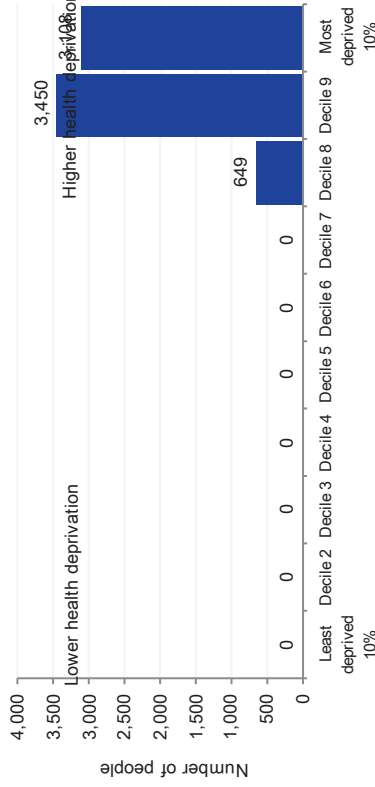
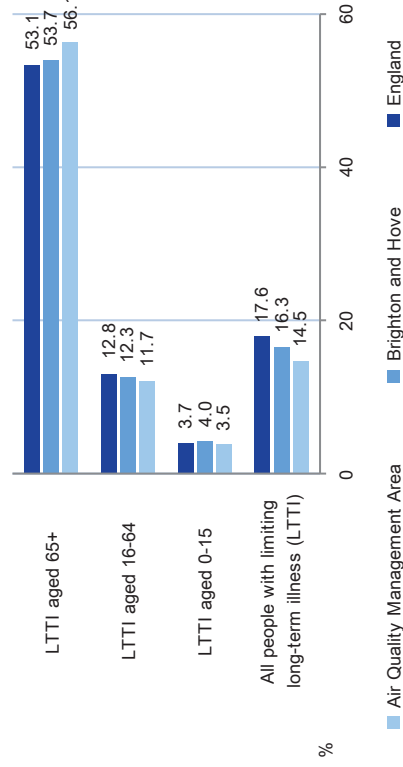


Figure: People with a limiting long-term illness
Source: Census 2011





What information is shown here?

The information in this section looks at admissions to hospital by main health condition. The chart on the top right shows emergency admissions to hospital across Air Quality Management Area and comparators. The chart on the bottom right shows elective in-patient hospital admissions (admissions that have been arranged in advance).

The data are presented as standardised ratios; a ratio of 100 indicates an area has an admission rate consistent with the national average, less than 100 indicates that the admission rate is lower than expected and higher than 100 indicates that the admission rate is higher than expected.

Figure: Emergency hospital admissions: Standardised ratio (select causes)
Source: Hospital Episode Statistics, Information Centre for Health and Social Care, Office for National Statistics (2011-2013)

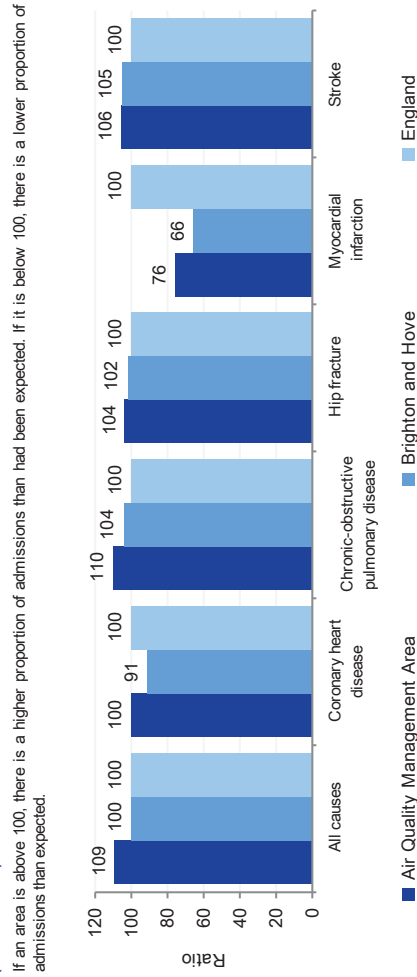
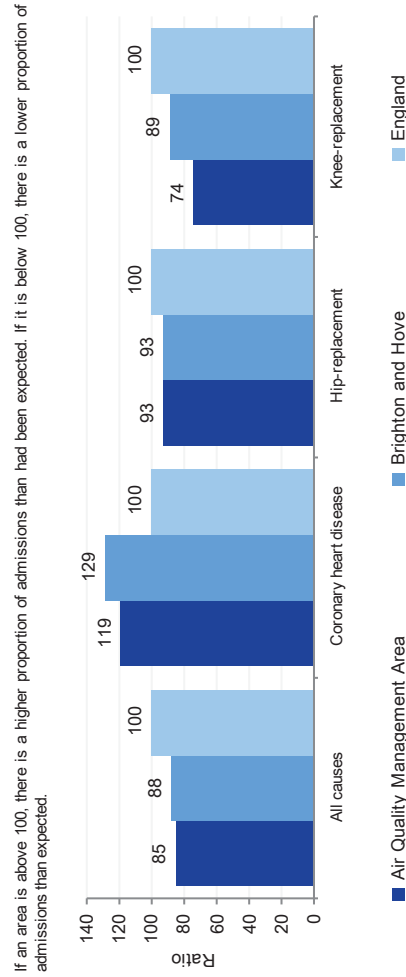


Figure: Elective hospital admissions: Standardised ratio (select causes)
Source: Hospital Episode Statistics, Information Centre for Health and Social Care, Office for National Statistics (2011-2013)





What information is shown here?

The information on this page looks at lifestyle behaviours of people living in Air Quality Management Area. Lifestyle behaviours are risk factors which play a major part in an individual's health outcomes and will have varying physical and psychological consequences.

The chart on the top right shows the healthy eating levels (consumption of five or more portions of fruit and vegetables a day among adults) in Air Quality Management Area. It also shows smoking prevalence and levels of binge drinking in these areas. The chart on the bottom right shows the percentage of people children (in reception year and year 6) and adults classified as obese in Air Quality Management Area. Binge drinking is defined as the consumption of at least twice the daily recommended amount of alcohol in a single drinking session (8 or more units for men and 6 or more units for women). People are considered obese when their body mass index (BMI) a measurement obtained by dividing a person's weight by the square of the person's height, exceeds 30 kg/m².

Figure: "Healthy eating" (consumptions of 5+ fruit and veg a day), binge drinking and smoking
Source: Office for National Statistics (2011-2013)

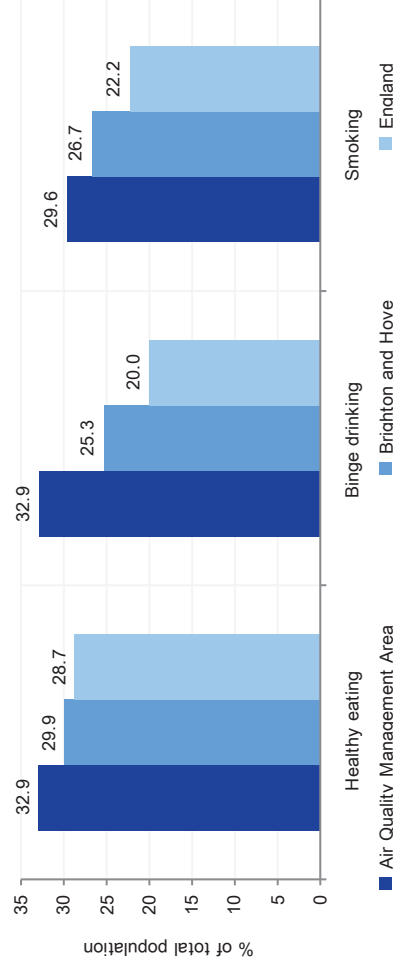
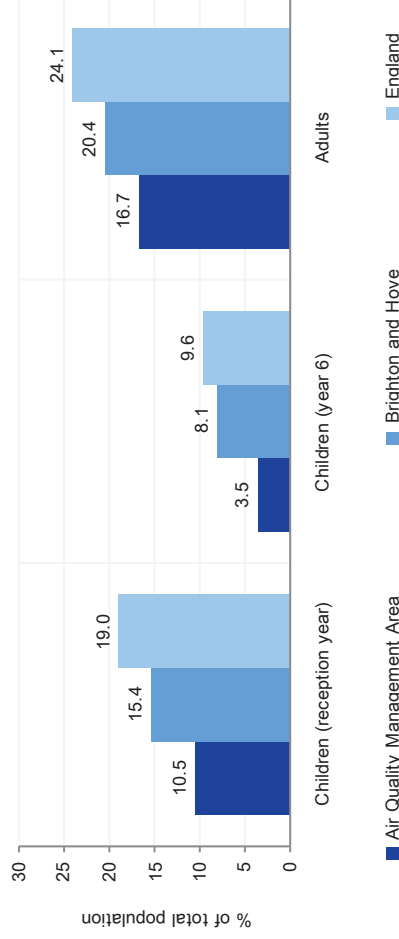


Figure: Children and adults classified as obese
Source: Office for National Statistics (2011-2013)





What information is shown here?

The information boxes and chart on the top right show the education levels of residents in Air Quality Management Area, showing the number and proportion of adults (aged 16+) by highest level of qualification.

People with no qualifications	800	People with highest qualification level 3
10.3% of working age people (England= 22.5%)		21.4% of working age people (England= 12.4%)

People with highest qualification level 1	730	People with highest qualification level 2
9.4% of working age people (England= 13.3%)		10.3% of working age people (England= 15.2%)

People with highest qualification level 1	730	People with highest qualification level 2
9.4% of working age people (England= 13.3%)		10.3% of working age people (England= 15.2%)

People with highest qualification level 1	730	People with highest qualification level 3
9.4% of working age people (England= 13.3%)		21.4% of working age people (England= 12.4%)

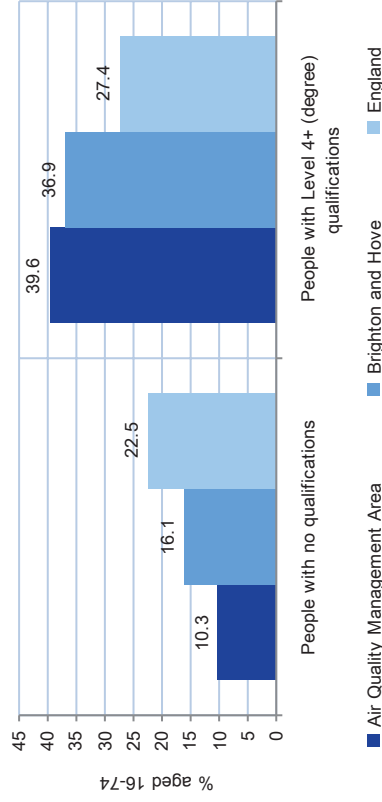
People with highest qualification level 4+ (degree)	3,075
39.6% of working age people (England= 27.4%)	

'Level 1' qualifications are equivalent to a single O-level, GCSE or NVQ. 'Level 2' qualifications are equivalent to five O-levels or GCSEs. 'Level 3' qualifications are equivalent to two A levels. 'Level 4' qualifications are equivalent to degree level or higher.

Source: Census 2011

Figure: People with no qualifications and degree level qualifications

Source: Census 2011





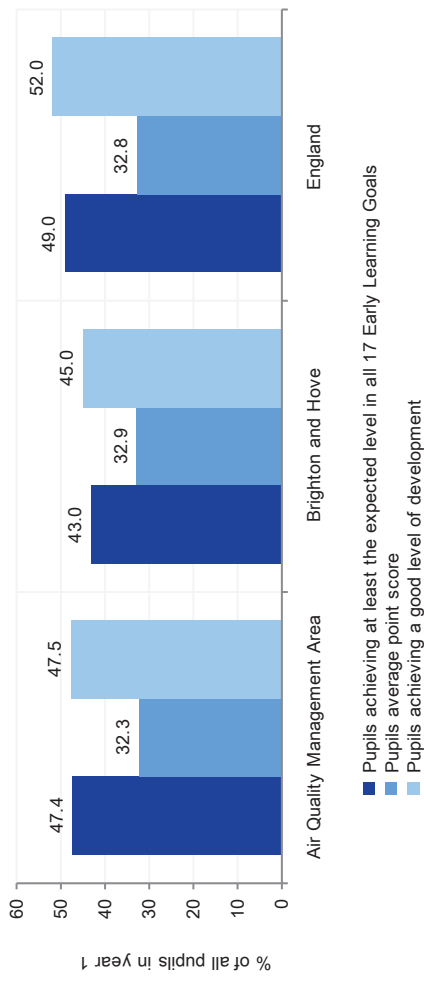
What information is shown here?

The information on this page shows the outcomes of children in the Early Years Foundation Stage (EYFS), a series of tests measuring children's progress in terms of Personal, Social and Emotional Development (PSED) and Communication, Language and Literacy (CLL). These are typically 5 year old pupils; however a minority of slightly older and younger pupils may have been assessed.

The new Early Years Foundation Stage Profile requires practitioners to make a best fit assessment of whether children are emerging, expected or exceeding against each of the new 17 early learning goals (ELGs). Children have been deemed to have reached a good level of development (GLD) in the new profile if they achieve at least the expected level in the ELGs in the prime areas of learning (personal, social and emotional development; physical development; and communication and language) and in the specific areas of mathematics and literacy. These are 12 of the 17 ELGs. The Department for Education has also introduced a supporting measure which measures the total number of points achieved across all 17 ELGs and reports the average of every child's total point score.

The chart on the right shows the percentage of pupils achieving 17 ELGs, the average point score at Early Years Foundation stage and the percentage of pupils achieving a good level of development.

Figure: Early years foundation stage profile
Source: Department for Education (2012-2013)





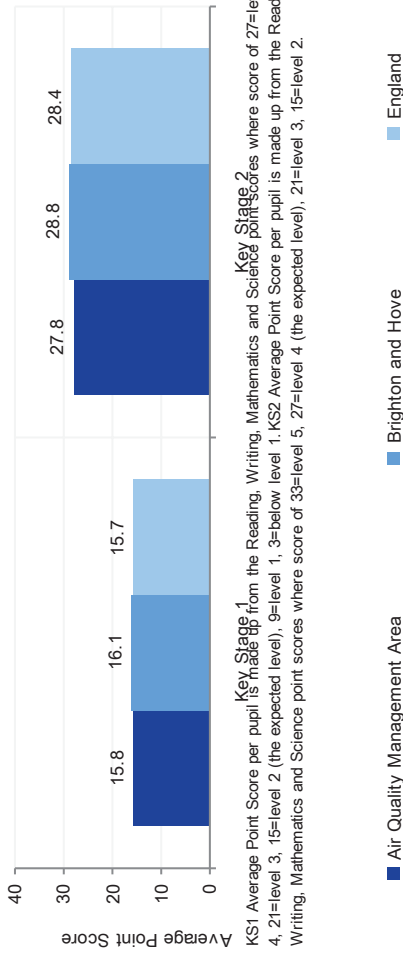
What information is shown here?

The chart on the top right show the education levels of pupils in Air Quality Management Area, showing the examination results at Key Stage 1 (tests set at aged 7) Key Stage 2 (tests set at aged 11) and Key Stage 4 (GCSEs).

The figures show the Average Point Score of pupils from each of the key stage examinations. This adjusts for high achieving pupils as well as pupils achieving expected levels.

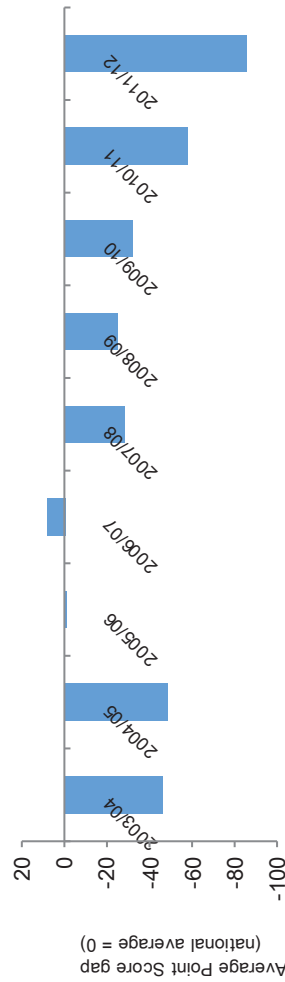
The chart on the top right shows Average Point Score (across all examinations) per pupil at Key Stage 1 and Key Stage 2. The chart on the bottom right compares the gap in Average Point Score at Key Stage 4 (GCSE) per pupil between Air Quality Management Area and the national average over time. The gap is measured as the point difference against the England average. Areas with a score of greater than 1 are performing better than the national average, while areas with a score of less than 1 are performing below.

Figure: Pupil attainment at Key Stage 1 and Key Stage 2
Source: Department for Education (2012-2013)



KS1 Average Point Score per pupil is made up from the Reading, Writing, Mathematics and Science point scores where score of 27=level 4, 21=level 3, 15=level 2 (the expected level), 9=level 1, 3=below level 1. KS2 Average Point Score per pupil is made up from the Reading, Writing, Mathematics and Science point scores where score of 33=level 5, 27=level 4 (the expected level), 21=level 3, 15=level 2.

Figure: Gap in pupil attainment at Key Stage 4 (difference from the national average)
Source: Department for Education



Scores above 0 show an improvement on the National average. Average Point Score is made up of all GCSE examinations sat, with a point score of 58=A, 52=A-, 46=B, 40=C, 34=D, 28=E, 22=F, 16=G.

What information is shown here?

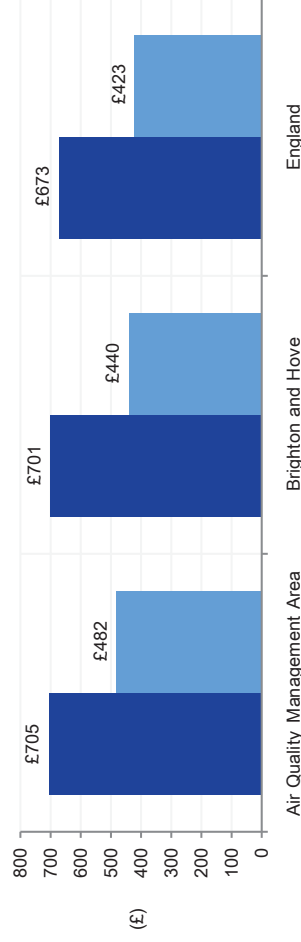
The information on this page looks at three types of income category: households below the poverty line; average household income; and households living in fuel poverty. Households are defined as in 'poverty' if their equivalised income (after size of household is taken into account) is below 60% of the median income (after housing costs). In 2007/08 a household's weekly net equivalised income would need to be below £199 for it to be classified as in poverty. Fuel poverty is said to occur when in order to heat its home to an adequate standard of warmth a household needs to spend more than 10% of its income on total fuel use.

The information boxes on the top right provide an estimate of the number of households in Air Quality Management Area below the poverty line and an estimate for the number of households in fuel poverty.

The chart on the right shows the average weekly household income estimate (equivalised to take into account variations in household size) across Air Quality Management Area and comparator areas (before and after housing costs).

Households below 60% of the median income, after housing costs (Office for National Statistics 2007/08)	16.8	Households living in 'Fuel Poverty' Department for Energy and Climate Change (2012)	625
England Average = 21.5%		14.5% of households (England = 10.4%)	
Weekly household income, after housing costs (Office for National Statistics 2007/08)	£482	England Average = £423	

Figure: Weekly household earnings (£)
Source: Office for National Statistics (2007-2008)



■ Total weekly household income estimate ■ Net weekly household income estimate after housing costs

What information is shown here?

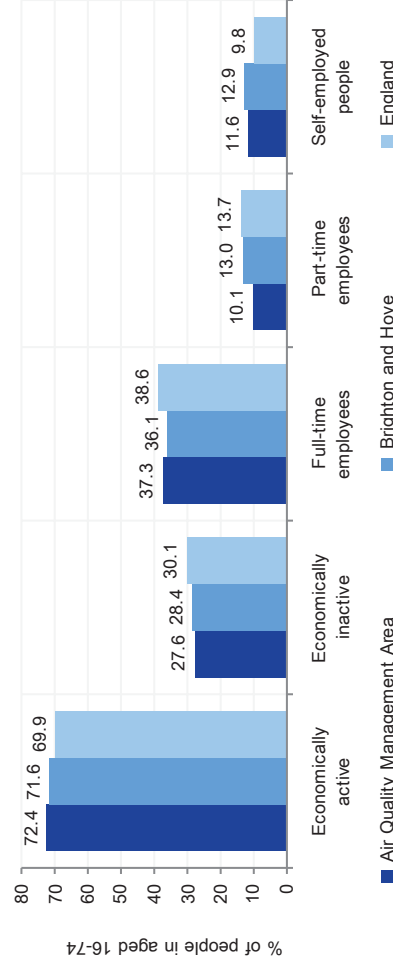
The information on this page shows economic activity breakdowns for adults aged 16-74 in Air Quality Management Area.

The data in the information boxes shows the number and proportion of residents who are working part time, full time or are self-employed. The lower information boxes show the economic activity rates in Air Quality Management Area.

Economically active	5,389	72.4% (England average = 69.9%)
Full-time employees	2,776	37.3% (England average = 38.6%)
Part-time employees	749	10.1% (England average = 13.7%)
Self-employed people	867	11.6% (England average = 9.8%)
Economically inactive	2,056	27.6% (England average = 30.1%)

Source: Census 2011

Figure: Economic Activity
Source: Census 2011



What information is shown here?

The information on this page shows breakdowns of the main industry sectors people in Air Quality Management Area are working in, and their occupational status.

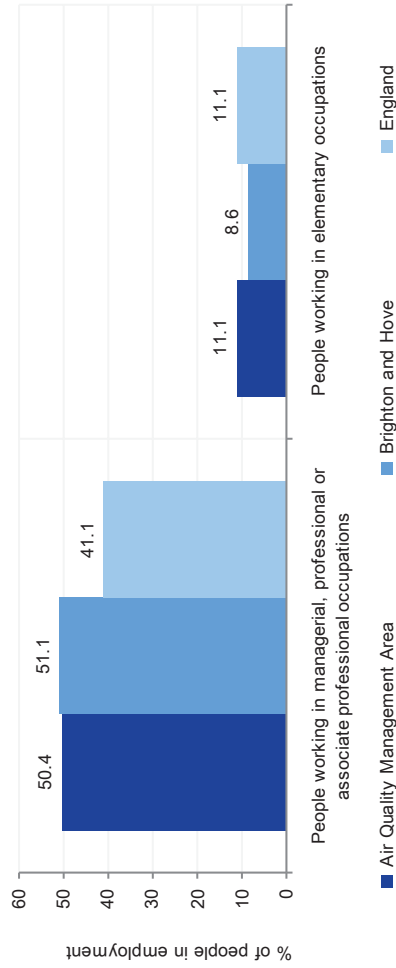
The data in the top information boxes shows the three largest employment sectors for residents in the local area, also the number and percentage of employed people working in each of these sectors. The lower information boxes and the chart on the right shows the numbers of residents in Air Quality Management Area by type of occupation (e.g., managers, professional, administrative).

Largest employment sector	Second largest employment sector	Third largest employment sector
Retail	Accommodation & food services	Health & social work
700 employees (14% of 4,875 of people in employment)	610 employees (13% of 4,875 of people in employment)	560 employees (11% of 4,875 of people in employment)
Managerial occupations	Administrative or secretarial occupations	Skilled trades occupations
550	435	360
11.3% of 4,875 people in employment (England = 10.9%)	8.9% of 4,875 people in employment (England = 11.5%)	7.3% of 4,875 people in employment (England = 11.4%)
Professional (or associate) occupations	Elementary occupations	Elementary occupations
1,905	540	540
39.1% of 4,875 people in employment (England = 30.3%)	11.1% of 4,875 people in employment (England = 11.1%)	11.1% of 4,875 people in employment (England = 11.1%)

Source: Census 2011

Figure: People in professional and elementary occupations

Source: Census 2011



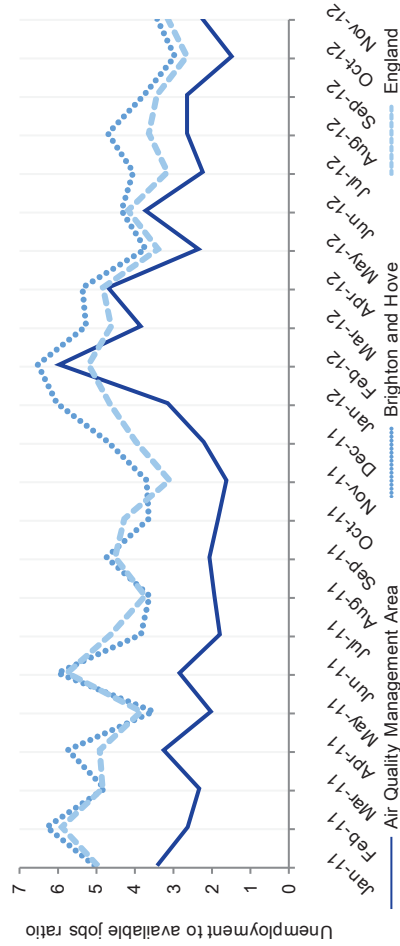
What information is shown here?

The information on this page shows the number of vacant jobs in Air Quality Management Area compared against the overall unemployment levels in the area.

The 'Unemployment to 'Available Jobs' ratio, shown in the information box and the line chart on the right is the total number of people claiming unemployment benefit (Jobseekers Allowance) divided by the total number of job vacancies notified to Job Centre Plus expressed as a ratio.

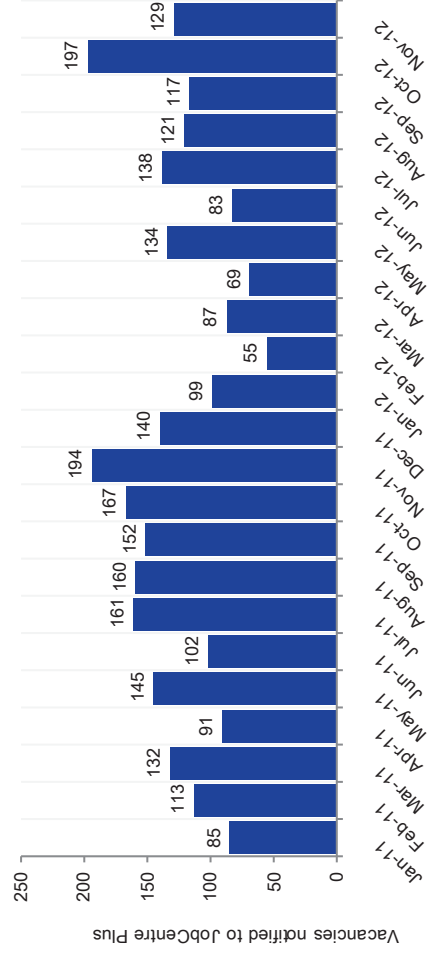
The bar chart on the bottom right shows month-on-month changes in the number of job vacancies notified to Job Centre Plus, that are located in the area covering Air Quality Management Area (based on postcode location of the job). Note this data was last updated by Job Centre Plus for November 2012.

Figure: Ratio of unemployment (JSA claimants) to jobs (vacancies notified to Job Centre Plus)
Source: Office for National Statistics/Job Centre Plus, Department for Work and Pensions



Unemployment to 'Available Jobs' ratio	Source: Job Centre Vacancies - Office for National Statistics/Job Centre Plus (Nov-12), Jobseekers Allowance claimant count - Department for Work and Pensions (Nov-12)
2.68 claimants per job	
England average = 3.43	

Figure: Total number of vacancies notified to Job Centre Plus
Source: Office for National Statistics/Job Centre Plus



What information is shown here?

The information in this section shows the concentration of 'local business units' in Air Quality Management Area. 'Local business units' are counts of businesses based on the location of an operational unit, so for example though larger businesses such as supermarket chains may have their head office in a large city, these figures measure all subsidiaries of that larger enterprise based on where they are located not their head office. The figures cover all business eligible for VAT (1.7 million businesses in the UK are registered for VAT). These businesses are categorised into 16 broad industry groups derived from the Standard Industrial Classification (UKSIC (2003)).

The information boxes show the three industry groups for business based in Air Quality Management Area. The line chart shows the change in the number of businesses per head of the population across Air Quality Management Area over time. The bar chart shows the count of local business broken down by size of business. Businesses are broken down into four employment size bands based on the number of paid employees (0-4, 5-9, 10-19 and 20+ paid employees).

Largest business sector	Second largest business sector	Third largest business sector
Retail industry	Professional, scientific & technical services	Post and telecommunications
17.2% of all local businesses	16.2% of all local businesses	12.5% of all local businesses

Source: Office for National Statistics (2014)

Figure: Percentage change in number of businesses (VAT based local units) per 10,000 working age population

Source: Office for National Statistics

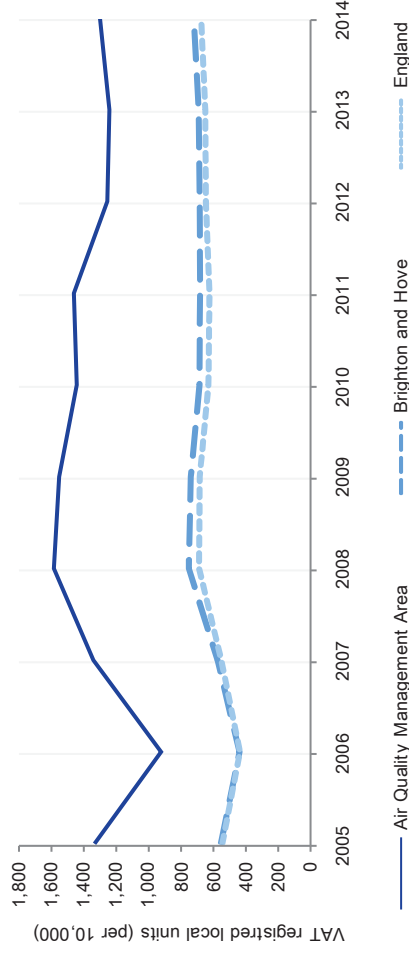
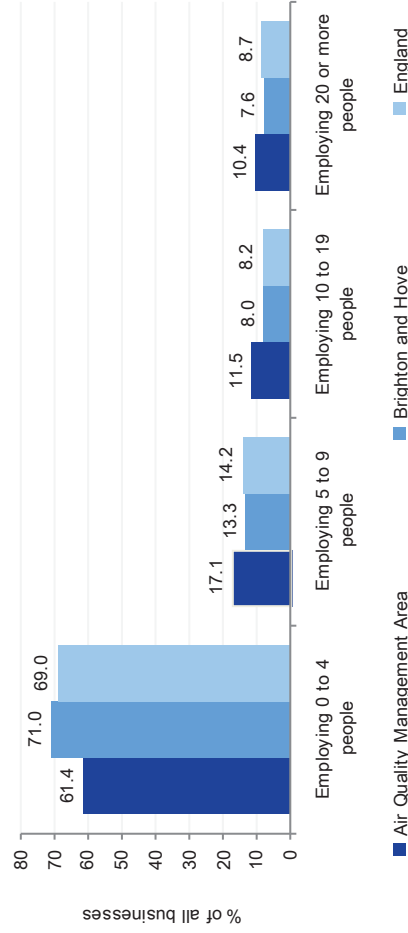


Figure: Businesses (VAT based local units) by employment size band

Source: Office for National Statistics





What information is shown here?

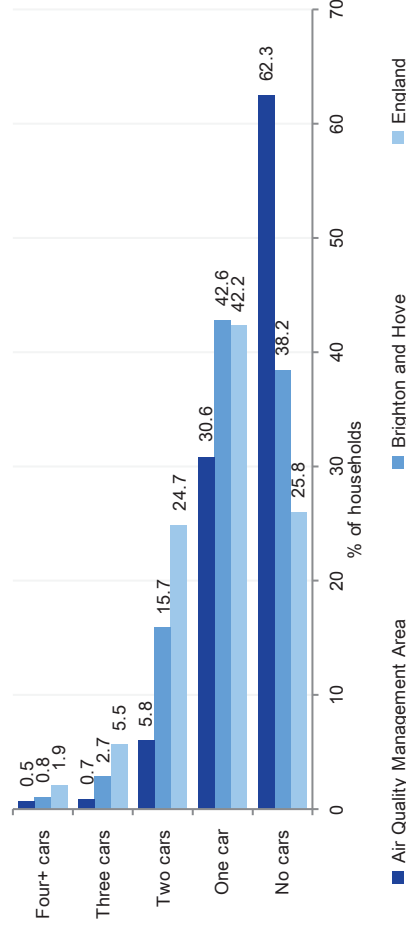
The information on the right shows details of the number of cars and vans in each household in Air Quality Management Area. The count of cars or vans in an area is based on details for private households only. Cars or vans used by residents of communal establishments are not counted.

The information boxes show the number of households by number of cars owned across Air Quality Management Area, while the charts show the same information (expressed as a percentage) against comparator areas.

No cars	One car	Two cars	Three cars	Four + cars
2,670 62.3% of 4,290 households (England = 25.8%)	1,315 30.6% of 4,290 households (England = 42.2%)	250 5.8% of 4,290 households (England = 24.7%)	30 0.7% of 4,290 households (England = 5.5%)	25 0.5% of 4,290 households (England = 1.9%)

Source: Census 2011

Figure: Car ownership
Source: Census 2011





What information is shown here?

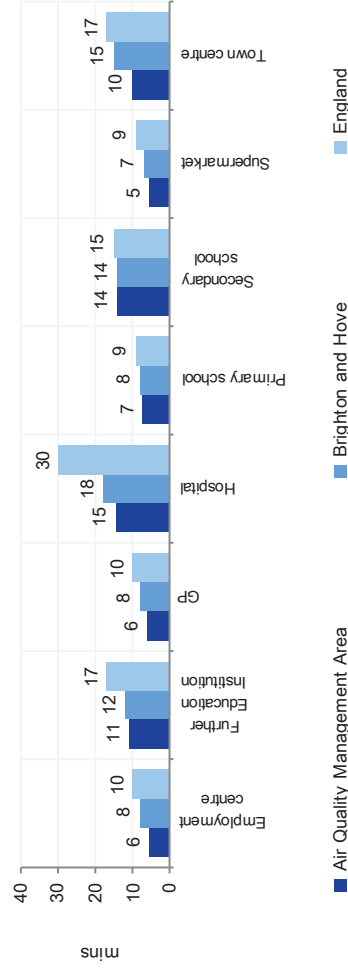
The information on this page shows the accessibility of key services and amenities to people living in Air Quality Management Area. Accessibility is measured both in terms of distance and travel times to key services.

The information boxes on the right show average distances (in kilometres) to five key services. The chart on the right shows average travel times in minutes to key services when walking or taking public transport.

Average road distance from Job Centre	1.2km	England average = 4.6km
Average road distance from Secondary School	2.0km	England average = 2.4km
Average road distance from GP	0.3km	England average = 1.2km
Average road distance from Pub	0.1km	England average = 0.7km
Average road distance from Post Office	0.4km	England average = 1.0km

Source: Road distances - Commission for Rural Communities: Distance to Service dataset (2010)

Figure: Average travel time (mins) by walking or public transport to the nearest key service
Source: Department for Transport: Core Accessibility Indicators (2011)





What information is shown here?

The information on this page shows two measures of access to the internet. The first measure shows information on broadband take-up, speeds and availability. It has been produced by Ofcom and contains data provided by communications providers. The data shows the average broadband line speed in the Air Quality Management Area and the proportion of postcodes in the Air Quality Management Area which contain homes with low broadband speeds (less than 2 Mbit/s).

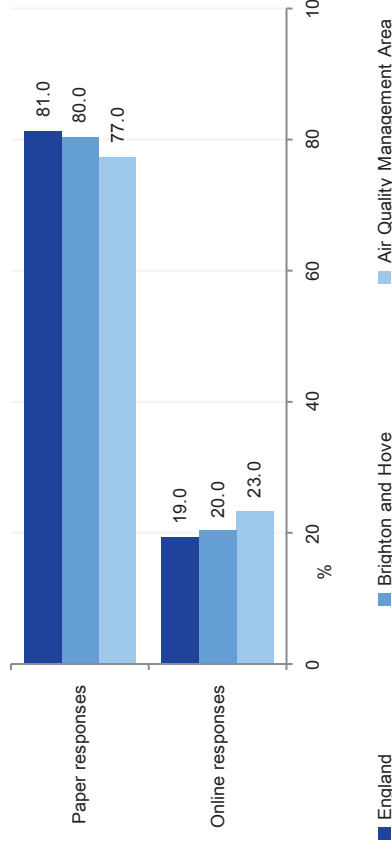
Postcodes containing homes with low broadband speeds (less than 2 Mbit/s)	62	Average broadband speed (Mbit/s)	20.64
	36.3% (England average = 41.0%)		England average = 17.57

Source: Ofcom 2013/Census 2011

Figure: Census online and paper responses

Source: Census 2011

The chart on the right shows the proportion of people who responded to the census 2011 online, compared with the proportion who filled in the census form on paper in the Air Quality Management Area. This is a proxy measure of digital engagement with typically areas with a high proportion of online census responses more likely to be digitally engaged than those in areas with low levels of online responses.



What information is shown here?

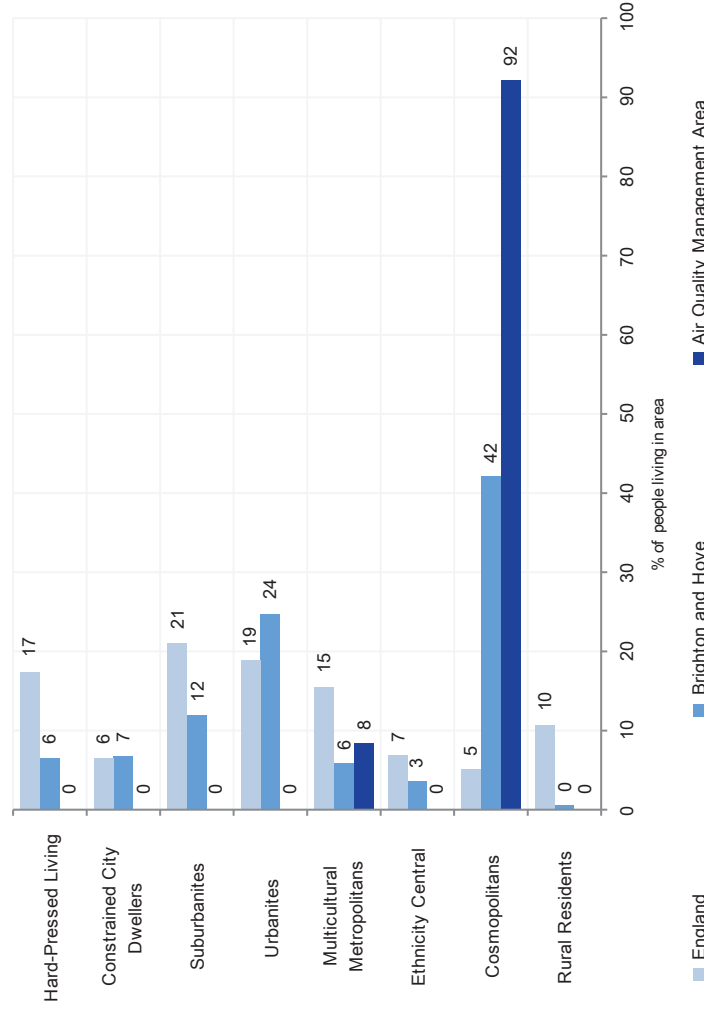
The information on this page looks at the characteristics of neighbourhoods across Air Quality Management Area as defined using the Output Area Classification (OAC). OAC classifies every area in the country based on a set of socio-demographic characteristics, to provide a profile of areas to identify similarities between neighbourhoods. The information boxes on the right show the number and proportion of neighbourhoods in Air Quality Management Area that fall within the eight supergroup categories, detailed below. The chart on the right shows the proportion of areas falling within supergroup categories across Air Quality Management Area and comparators.

Rural residents	0	0.0% (England average = 10.5%)	Cosmopolitans	7,791	91.9% (England average = 4.9%)	Ethnicity central	0	0.0% (England average = 6.6%)	Multicultural metropolitans	691	8.1% (England average = 15.3%)
Urbanites	0	0.0% (England average = 18.6%)	Suburbanites	0	0.0% (England average = 20.8%)	Constrained city dwellers	0	0.0% (England average = 6.2%)	Hard-pressed living	0	0.0% (England average = 17.2%)

Source: Office for National Statistics Output Area Classification 2011

Figure: Area Classification 2011: Number of people living in different types of neighbourhood (by classification type)

Source: Output Area Classification (2011)



Rural residents	Rural areas, sparsely populated, above average employment in agriculture, higher number owning multiple cars, an older married population, a high provision of unpaid care and an above average number of people living in communal establishments.
Cosmopolitans	Residing in densely populated urban areas, high ethnic integration, high numbers of single young adults without children including students, high public transport use, above average qualification levels
Ethnicity central	Concentrated in Inner London and other large cities, high ethnic diversity, high proportion of rented accommodation, high proportion of people living in flats, low car ownership.
Multicultural metropolitans	Concentrated in larger urban conurbations in the transitional areas between urban centres and suburbia, high proportion of BME groups, high proportion of families.
Urbanites	Predominantly in urban areas with high concentrations in southern England. More likely to live in either flats or terraces that are privately rented.
Suburbanites	Located on the outskirts, in areas with high owner occupation, high numbers of detached houses, low unemployment, high qualifications and high car ownership.
Constrained city dwellers	Higher proportion of older people, households are more likely to live in flats and to rent their accommodation, and there is a higher prevalence of overcrowding, higher proportion of people in poor health, lower qualification levels and high unemployment
Hard-pressed living	Mostly on the fringe of the UK's urban areas, particularly in Wales and the North of England. High levels of people in terraced accommodation, high unemployment, low ethnic diversity, high levels of people employed in manufacturing

What information is shown here?

The information on this page shows different measures of people's satisfaction with their neighbourhood and their sense of community cohesion in the neighbourhood. It also shows different measures of people's participation in volunteering and political decision making in the local area. In addition the information box on the far bottom right shows the number of active charities per 1,000 population.

Figures are self-reported and taken from the Place Survey. The Place survey is collected at Local Authority level so does not include neighbourhood information, and ceased nationally in 2008.

"People from different backgrounds get on well together in the local area"	86% (England = 76%)	People who feel that they belong to their neighbourhood	54% (England = 58%)	People who are satisfied with local area as a place to live	86% (England = 79%)	Aged 65+ "satisfied with both home and neighbourhood"	86% (England = 83%)
People involved in decisions that affect the local area in the past 12 months	15% (England = 14%)	People who believe they can influence decisions in their local area	28% (England = 29%)	People who have given unpaid help at least once per month over the last 12 months	24% (England = 23%)	Active charities	2.3 per 1,000 population (England = 2.6 per 1,000)

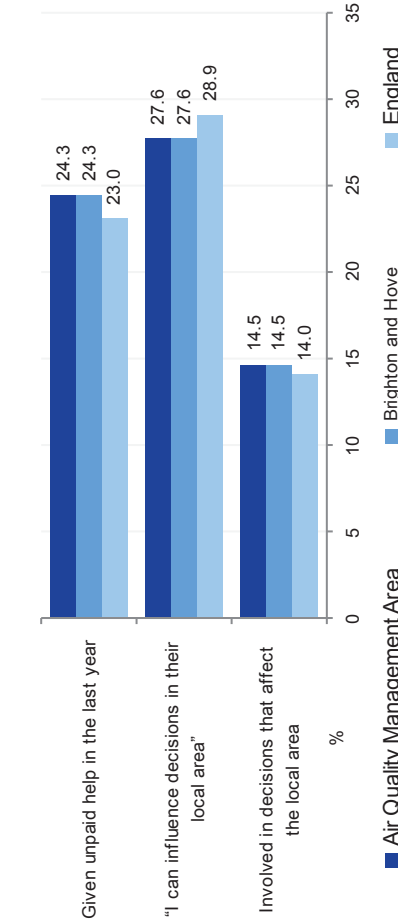
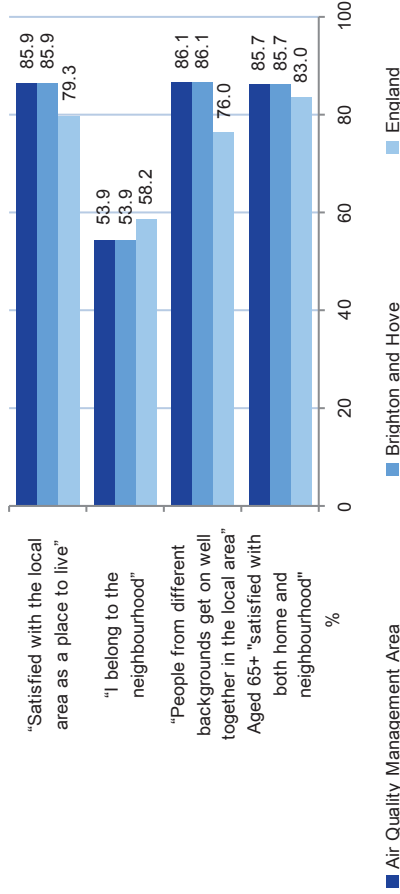
Source: Place Survey (2008), Active Charities - National Council for Voluntary Organisations (NCVO) (2009). Note all information is collected at Local Authority level

Figure: Indicators of civic engagement

Source: Place Survey (2008)

Figure: Indicators of community strength

Source: Place Survey (2008)



Page left How we have identified the “Air Quality Management Area” area

This report is based on the definition of the “Air Quality Management Area” area (you can view this area on the Local Insight map, through finding the area on the ‘show services’ dropdown in the top left hand corner of the map. We have aggregated data for all the neighbourhoods in “Air Quality Management Area” to create the data used in this report.

Alongside data for the “Air Quality Management Area” neighbourhood we also show data for selected comparator areas.

Data in this report is based on regularly updated open data published by government sources

All the data in this report is based on open data published by more than 50 government agencies, collected and updated by OCSI on weekly basis. Data is updated on regular basis, with the reports and mapped data on the website reflecting the latest available data.

Details of the individual datasets are provided on the pages where the data is presented, with information on dates and sources at the foot of the page. On the website, information about each source is available on the popup “About the data” link at the bottom-right of the map.

Standard geographies used in this report

Super Output Areas (SOAs): SOAs are a statistical geography created for the purpose of presenting data such as the Census, Indices of Deprivation, and other neighbourhood statistics. There are two layers to the SOA geography: ‘lower layer’ (LSOA) and ‘middle layer’ (MSOA). Unlike wards, SOAs are designed to produce areas of roughly equal population size - 1,500 people for LSOAs and 7,200 for MSOAs. The majority of data used in this report is based on LSOA boundaries; of which there are 32,844 in England (there were changes to around 4% of LSOA definitions in Census 2011).

Output Areas (OAs): OAs are a more detailed statistical geography than SOAs, with each covering around 300 people, or 120 households. There are 171,372 OAs in England (there were changes to around 5% of OA definitions in Census 2011).

Wards: A small number of datasets are published at ward level. These are on average four times larger than LSOAs, so data is less detailed than LSOA level datasets. However, a major weakness of ward level data for analysis is that wards vary greatly in size, from less than 200 residents (Isles of Scilly), to more than 36,000 residents (in Sheffield).



Local Insight gives you the data and analysis you need to ensure your services are underpinned by the best possible knowledge of local communities, leveraging the power of information right across your organisation, from high-level visualisations for Board level to detailed reports on local neighbourhoods. Saving you time and money, Local Insight gives you the most relevant and up-to-date data on the communities where you work, with no need to invest in specialist mapping and data staff, consultancy or software. See <http://local.communityinsight.org/> for more information.

Local Insight is developed by OCSI, based on a project that was jointly developed by HACT and OCSI.



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