

The London Borough of Hillingdon



Data on Measures, June 2004

Notes on the data presented in this report

Data presented

This part of Hillingdon's Air Quality Action Plan provides the following information for each measure:

- Package
- Option
- Effect on total NO_x emissions within the Borough
- Effect on NO₂ concentrations in the Borough
- Capital costs (as a range)
- Operating and maintenance costs (as a range)
- Other impacts (scale of -3 to +3)
 - Attractiveness of public transport
 - Congestion
 - Economic vitality
 - Noise
 - Other (non-NO_x) air pollutants
 - Social inclusion

The scale used for the 'Other impact' category is as follows:

-3	Probable significant negative impact
-2	Possible significant negative impact
-1	Negative impact, but not likely to be important
0	No likely effect
+1	Positive impact, but not likely to be important
+2	Possible significant positive impact
+3	Probable significant positive impact

The data presented here have been extracted from the Action Plan Tracker developed for Hillingdon. The full database contains additional information on implementation of measures (responsible parties, deadlines, specific actions) and stakeholder views, and permits searches and extraction of data according to the users' needs. It also allows generation of progress reports.

The numbering of options corresponds to that used in the main text of the plan. In some cases it has been necessary to split options from the plan into 2 or more components in derivation of the data that follow (e.g. option 3.04, which includes implementation of idling vehicle regulations and promoting use of the dirty diesel hotline).

Quality of data

The attitude taken in derivation of the data presented here has been that it is better to provide some quantitative guidance on costs and effects than none. This provides a rationale for expressing preference for various options, and for working out where the resources available for plan implementation are best spent. This enables stakeholders to better understand how priorities are

developed, and, if they believe data are not correct, to put together a case for a revision of priorities.

The information presented here should thus be regarded as indicative rather than precise. Costs, for example, are presented as a range, reflecting the fact that there may be considerable leeway in the extent to which any given measure might be implemented and how it might be implemented. In some cases it would be necessary to carry out full feasibility studies prior to undertaking an action – these should clearly provide much better information on costs and effects.

Missing data

There are several reasons for gaps in the data presented here. The first is that in many cases the measure, whilst necessary for the plan, has no direct effect on air quality. Take for example:

1.13 Investigate potential for more night buses (a follow-up measure to introduce night buses if appropriate would have an effect on air quality, costs, etc., but this essential first step would not).

2.15 Consider establishment of cross-agency regional group to address air quality issues with regards to roads (conclusions from such a group could be extremely beneficial to air quality, but the setting up of the group would clearly have no direct effect).

Another reason is uncertainty as to whether a measure contained in the plan would save money or incur additional cost. Note that this does not include measures where costs are potentially most significant, but typically covers options where the plan *may* be able to improve efficiency of local or regional decision making.

Note that zeroes in the dataset either represent zero or costs and effects that are very small, for example, that would have less than 0.00% effect on NO₂ concentrations.

Option Finder

In the electronic version of this report, (Control and Click) on options in this list to move to them in the text.

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Close or relocate industrial plant	45
Expansion of public transport using any available vehicles	45

Package 1: Switching to Cleaner Transport Modes

1.01 Establish a Green Travel Plan for Hillingdon.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.50
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.22
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.35

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	3
Economic Vitality	2
Noise	0
Other Air Pollutants	2
Social Inclusion	1

1.02 Improve access to, and quality of, public transport travel information for people living and working in the Borough.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	1
Economic Vitality	1
Noise	1
Other Air Pollutants	2
Social Inclusion	3

1.03 Encourage the development of more dedicated cycle (priority) lanes and signalling.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.02
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	1
Economic Vitality	1
Noise	1
Other Air Pollutants	1
Social Inclusion	3

1.04 Extend provision of more parking for motorcycles, mopeds and bicycles at public sites and new developments.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.02
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	1
Economic Vitality	1
Noise	0
Other Air Pollutants	1
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.05 Improve provision for pedestrians.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.02
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	1
Economic Vitality	1
Noise	1
Other Air Pollutants	1
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	100,000 - 999,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.06 Introduce more Safe Routes to School throughout the Borough with special regard to the schools within the highest exceedance areas.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.18
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	2
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

1.07 Ensure Green Travel Plans are a requirement for all businesses (new and existing) employing more than a specified number of people in the Borough.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

1.08 Improve access to, and quality of, public transport travel information on a regional basis both inside and outside the GLA boundary.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	1
Economic Vitality	1
Noise	1
Other Air Pollutants	2
Social Inclusion	3

1.09 Seek to ensure improvements in overall public transport service (facilities, cleanliness, safety, frequency, reliability) across the Borough and West London, and particularly in declared AQ Management Areas AQMAs.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.57
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.08
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.13

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1 million - 10 million

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	3
Economic Vitality	2
Noise	1
Other Air Pollutants	2
Social Inclusion	3

1.10 Improve the north-south public transport provision in the Borough.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	2
Economic Vitality	1
Noise	0
Other Air Pollutants	1
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.11 Support multi modal travel by further development of public transport interchanges for rail/cycle/bus/walking both within Hillingdon and the West London area.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	0
Economic Vitality	2
Noise	0
Other Air Pollutants	1
Social Inclusion	2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.12 Encourage development of efficient and high quality bus corridors.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.38
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	0
Economic Vitality	2
Noise	1
Other Air Pollutants	1
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.13 Investigate potential for more night buses.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts**Costs**

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

1.14 Investigate the feasibility of working with relevant stakeholders to subsidise bus, train and underground fares in order to achieve significant modal shift.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.28
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.44

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	3
Economic Vitality	0
Noise	1
Other Air Pollutants	3
Social Inclusion	3

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1 million - 10 million

Package 2: Tackling Through Traffic

2.01 Introduce Home Zones/20 mph in residential areas subject to significant amounts of through traffic that should use alternative routes.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.09
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	-2
Economic Vitality	0
Noise	3
Other Air Pollutants	2
Social Inclusion	3

2.02 Support the West London Transit Scheme project if appropriate.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	1
Noise	0
Other Air Pollutants	1
Social Inclusion	0

2.03 Ensure the provision of sufficient signage and details of spaces for public car parks.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.15
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	2
Economic Vitality	2
Noise	1
Other Air Pollutants	2
Social Inclusion	0

2.04 Investigate the creation of Clear Zones.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.06
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	2
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

2.05 Develop best practice advice to ensure air quality assessments are made for proposals for new transport infrastructure and changes to traffic management.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

2.06 Work in partnership with TfL to implement schemes along the high exceedance corridors designed to smooth traffic flows.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.15
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	3
Economic Vitality	1
Noise	2
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	100,000 - 999,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	100,000 - 999,999

2.07 Improve coordination of road works and provide more effective signing around them.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.15
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration (µg/m ³)	0.02
Max NO2 concentration (µg/m ³)	0.03

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	3
Economic Vitality	1
Noise	0
Other Air Pollutants	2
Social Inclusion	0

2.08 Investigate use of high occupancy vehicle lanes and freight priority schemes along the major exceedance corridors such as the M4, A4, A40 and A312.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration (µg/m ³)	0.03
Max NO2 concentration (µg/m ³)	0.04

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	1

2.09 Investigate the use of light rail/tram schemes along other high exceedance corridors such as the A4 and A40.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration (µg/m ³)	0.03
Max NO2 concentration (µg/m ³)	0.04

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	0
Economic Vitality	1
Noise	0
Other Air Pollutants	1
Social Inclusion	2

2.10 Investigate measures such as variable message signing and other measures to smooth traffic flows on the HA/TfL routes M4 and surrounding link roads.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	1
Economic Vitality	1
Noise	1
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

2.11 Investigate use of speed limits on major roads at the optimal level for NOx and PM₁₀ emissions for the current traffic profile.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	2
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

2.12 Identify air quality congestion-related hotspots throughout West London and the appropriate measures for delivering improvement in both congestion and air quality eg new access road from the A40 to Ruislip industrial areas.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

2.13 Support rail projects that have the potential effect to cut through traffic eg Crossrail and extending the Underground system (eg Central Line to Uxbridge).

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

2.14 Work in partnership to investigate use of fiscal measures, such as road pricing, for reducing traffic on major road networks.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

2.15 Consider establishment of cross-agency regional group to address air quality issues with regards to roads.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

Package 3: Promotion of Cleaner Vehicle Technology

3.01 Develop and implement an Action Plan via the BAA Heathrow Clean Vehicle Programme to make improvements in the Council vehicle fleet with regard to reducing emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.10
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	0

3.02 Encourage local businesses and freight operators in Hillingdon to sign up to the Clean Vehicle Programme and develop and implement action plans for reducing emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	2
Noise	0
Other Air Pollutants	3
Social Inclusion	0

3.03 Provide training for local authority drivers to minimise emissions, and consider opening training opportunities to other drivers working for businesses in Hillingdon.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.03
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	1
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	0

3.04 1) Ensure the implementation of the Idling Vehicles Regulations.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.03
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	0

3.04 2) Actively promote the use of the Dirty Diesel Hotline for reporting smoky vehicles spotted in Hillingdon.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1 - 999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	0

3.05 Consider the recommendations of the London Low Emission Zone Feasibility Study jointly with the GLA, ALG and TfL.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.13
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.21

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	2
Economic Vitality	0
Noise	2
Other Air Pollutants	3
Social Inclusion	0

3.06 Install signs in waiting areas of Council premises, bus garages, coach stations and major leisure venues, etc. advising drivers to switch off engines when stationary.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.03
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	0

3.07 Lead the way in trialling new technology, where appropriate, and act as a point of information for businesses and other stakeholders in Hillingdon for cleaner vehicle technologies, national schemes and grant systems for the use of alternative fuels.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.13
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.21

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	2
Noise	0
Other Air Pollutants	1
Social Inclusion	0

3.08 Participate in the London-wide Vehicle Emissions Testing programme.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.13
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.21

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	0

3.09 Investigate the provision of low or zero emission buses for schools within the high exceedance areas.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.40
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	100,000 - 999,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	1
Noise	2
Other Air Pollutants	2
Social Inclusion	0

3.10 Focusing on areas and corridors of high exceedance within residential areas, investigation into the banning or restricting of traffic, or particular types of traffic, from identified roads.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	-2
Economic Vitality	-2
Noise	3
Other Air Pollutants	2
Social Inclusion	2

3.11 Investigate the potential for discounts for residents with low emission vehicles in Parking Management Areas.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

3.12 Develop sub-regional Bus Quality Partnerships focussed on addressing the contribution of buses and coaches to emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.40
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	0
Noise	1
Other Air Pollutants	3
Social Inclusion	0

3.13 Work in partnership for the provision of low emission buses in the West London/Heathrow region.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.29
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.46

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	0
Economic Vitality	1
Noise	2
Other Air Pollutants	3
Social Inclusion	0

3.14 Ensure freight developments in the West London area are subjected to an air quality assessment before implementation.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

3.15 Work with the West London Freight Quality Partnership to develop a Freight Strategy to include reducing the air quality impact of freight maximising opportunities to move freight from road to other modes eg canals.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.24
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	2
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	0

3.16 Facilitate the uptake and use of alternative fuels, including water-diesel emulsion. This should include development of appropriate alternative refuelling infrastructure where necessary eg charging points for electric vehicles.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

3.17 Lobby national government to provide incentives through the fuel duty system for cleaner fuels, inc. further vehicle excise duty reductions for retrofitting to smaller vehicles and increased retrofitting grants.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Costs

<u>Capital Costs</u>		
Unit Cost Range (£)		
Total Cost Range (£)		1 - 999
<u>Operating and Maintenance Costs</u>		
Unit Cost Range (£/yr)		
Total Cost Range (£/yr)		

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	1
Other Air Pollutants	2
Social Inclusion	0

3.18 Work to ensure fiscal encouragement of the adoption of low and zero emissions vehicles through the provision of discounts when entering any proposed LEZ or Congestion charging zone.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.15
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03

Costs

<u>Capital Costs</u>		
Unit Cost Range (£)		
Total Cost Range (£)		
<u>Operating and Maintenance Costs</u>		
Unit Cost Range (£/yr)		
Total Cost Range (£/yr)		

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	-1
Economic Vitality	0
Noise	1
Other Air Pollutants	2
Social Inclusion	-2

3.19 Promote best practice in terms of emissions management with the train operators, the Strategic Rail Authority and Network Rail.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.24
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06

Costs

<u>Capital Costs</u>		
Unit Cost Range (£)		
Total Cost Range (£)		1 - 999
<u>Operating and Maintenance Costs</u>		
Unit Cost Range (£/yr)		
Total Cost Range (£/yr)		

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	1
Social Inclusion	0

Package 4: Measures Specific to Heathrow Airport

4.01 Continue to oppose any further expansion at Heathrow that leads to negative air quality impacts.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 - 999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

4.02 Develop system for auditing the ATM limit and parking provisions for operational T5.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

4.03 Audit all air quality conditions for the construction phase of Terminal 5.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

4.04 Pursue retention of the T5 related air quality monitoring network post T5 construction.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts**4.05 Quantify and pursue emission reductions for all new on-airport development.****Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.58
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.13

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

4.06 Evaluate best practice from European and International airports with regard to the minimisation of air quality impacts and assess feasibility of application at Heathrow.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.43
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.67

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	2
Other Air Pollutants	3
Social Inclusion	0

4.07 Work with National Government to ensure the use of all relevant fiscal measures to reduce emissions from Heathrow in order to achieve the 2010 EU limit.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

4.08 Assess the potential to set an emissions cap for Heathrow.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

4.09 1) Assess the potential to use landing emissions charges scheme to create revenue stream for public transport improvements.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

4.09 2) Introduce differentiated landing charges at a level that would force cleaner engine technology.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.43
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.67

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	3
Other Air Pollutants	3
Social Inclusion	0

4.10 Audit progress on the BAA Heathrow Air Quality Action Plan (2001-2006).**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	14.50
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	2.13
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	3.35

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	2
Other Air Pollutants	3
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.11 Review air quality monitoring regime at Heathrow and identify potential gaps.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts**Costs**

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.12 Maintain production of externally audited Emissions Inventory on bi-annual basis.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.13 Identify the areas where the existing BAA 5 year Action plan can be strengthened.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	5.80
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.85
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	1.34

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	3
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

4.14 Pursue quantification of measures in the BAA Air Quality Action Plan and Surface Access Strategy in terms of air quality impacts.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

4.15 Assess feasibility of Congestion/Access Charging at Heathrow to reduce overall travel movements to the airport.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.50
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.22
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.35

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	3
Economic Vitality	-1
Noise	2
Other Air Pollutants	3
Social Inclusion	-2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.16 Assess feasibility of a Heathrow specific LEZ to reduce emissions and accelerate take up of cleaner vehicle technology.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.50
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.22
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.35

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	1
Economic Vitality	0
Noise	1
Other Air Pollutants	3
Social Inclusion	0

4.17 Assess appropriate target for modal shift to maximise air quality improvements.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.36
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.05
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.08

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	3
Economic Vitality	0
Noise	1
Other Air Pollutants	2
Social Inclusion	0

4.18 Define programme for the establishment of code of practice for airlines best operating practice to maximise reduction of emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	3
Other Air Pollutants	2
Social Inclusion	0

4.19 Develop best practice guidelines to ensure air quality impact assessments are integral part of relevant transport and transport infrastructure proposals, and that appropriate mitigation measures are inclusive part of any scheme.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

4.20 Assess feasibility of specifying emissions criteria for Heathrow taxis, buses and coaches using the Central Bus Terminal, and car hire shuttles, hopper buses etc.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

4.21 Ensure the minimisation of the air quality impact of freight deliveries to and from Heathrow is a key objective of the West London Freight Quality Partnership (WLFQP).

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.24
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.06

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

4.22 Assess the use of bus priority, guided buses and high occupancy vehicle lanes in the Heathrow area.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	1
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.23 Assess the feasibility of a Park and Ride scheme specifically for Heathrow.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	2
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.24 Assess the health impact of Heathrow Airport and associated activities.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.25 Lobby Central Government to pursue more stringent emission standards for plant, aircraft and airside vehicles.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.90
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.43
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.67

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	2
Other Air Pollutants	3
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 - 999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.26 Explore feasibility of reducing fares on the Heathrow Express.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.03
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	1
Economic Vitality	0
Noise	1
Other Air Pollutants	1
Social Inclusion	1

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.27 Pursue relevant organisations to prioritise public transport provision to Heathrow, particularly rail links to the west, east and south.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.54
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.08
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.12

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	3
Congestion	3
Economic Vitality	2
Noise	2
Other Air Pollutants	2
Social Inclusion	2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 - 999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

4.28 Explore feasibility of an airport passenger tax, ring-fenced for increased public transport.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts**Costs**

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Package 5: Measures Concerning Local Industries and Other Businesses

5.01 Support opportunities for Combined Heat and Power where appropriate within the Borough.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.15
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	3
Noise	0
Other Air Pollutants	1
Social Inclusion	1

5.02 Introduce (within reason) progressively stricter conditions on Part A processes, including incineration processes, especially when located within high exceedance areas or where the impact is predicted to be within high exceedance areas.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.30
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.07

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	-2
Noise	0
Other Air Pollutants	1
Social Inclusion	0

5.03 Work with the Environment Agency to improve public dissemination of industrial pollutant emissions data and other relevant information, for example on performance against permit conditions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	0
Social Inclusion	0

5.04 Discourage the use of bonfires on all industrial sites.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	0
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1 - 999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	-1
Noise	0
Other Air Pollutants	1
Social Inclusion	0

5.05 Adopt best practice strategy for all proposed demolition and development projects. This will include the use of low emission vehicles and equipment and the use of dust minimisation techniques.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.03
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	2
Other Air Pollutants	1
Social Inclusion	0

5.06 Ensure continued regulation of part B processes and maintenance of part B register. Ensure register is available on-line.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

5.07 Investigate introduction of Air Quality Action Plans for local industries, including those currently un-regulated under EA.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

5.08 Consider introduction of Environmental Award system for local industries and businesses.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

5.09 Encourage businesses to participate in environmental management schemes and to continue to improve environmental performance.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.60
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.09
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.14

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	3
Noise	1
Other Air Pollutants	1
Social Inclusion	0

Package 6: Improving Eco-efficiency of current and future developments, inc. Council properties

6.01 Provide a consolidated platform for advising businesses and the public of the risks of air pollution, ways of reducing pollution, and campaigns such as Bike to Work Week, combining information from various Council departments and other bodies.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.19
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.04

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	2
Noise	1
Other Air Pollutants	0
Social Inclusion	2

6.02 Work with existing buildings and housing stock to secure improvements in emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

6.03 Ensure continued use of existing mechanisms such as section 106 agreements for improvements in air quality. Agreement relates to location of developments with regards to exceedance areas, scale of developments and projected emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.22
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.05

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	2
Economic Vitality	-1
Noise	0
Other Air Pollutants	2
Social Inclusion	2

6.04 Review and update Air Quality Supplementary Guidance when appropriate (see planning application form at Appendix 7).

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.08
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

6.05 Quantify cumulative effects of new developments within AQMA.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

6.06 Develop supplementary planning guidance for sustainable design and construction.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.08
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	1
Noise	2
Other Air Pollutants	2
Social Inclusion	2

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

6.07 Raise awareness of sustainable waste management practices.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.01
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	2
Noise	0
Other Air Pollutants	1
Social Inclusion	1

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	1,000 - 9,999

6.08 Development of West London Air Quality SPG to ensure consistency across borough boundaries, explore opportunities for joint section 106 agreements.**Effect on Air Quality**

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.29
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.46

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	1
Economic Vitality	1
Noise	0
Other Air Pollutants	2
Social Inclusion	0

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Package 7: Actions to be Taken Corporately, Regionally and in Liaison with the Mayor

7.01 Ensure that the London Development Framework, Borough Transport Strategy the Community Plan and future corporate strategies incorporate the borough air quality action plan and local air quality strategy measures where appropriate.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.15
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.23

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1,000 - 9,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	0

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	1
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

7.02 Develop an environmental management system for Hillingdon Borough Council.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.20
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.03
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.05

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	1
Economic Vitality	0
Noise	2
Other Air Pollutants	2
Social Inclusion	0

7.03 Establish an Environment Coordination Office for more effective integration of actions to improve environmental performance within and outside the Council.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.29
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.46

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	3
Noise	0
Other Air Pollutants	0
Social Inclusion	0

7.04 Implement an integrated procurement strategy so that purchase of goods and services is evaluated against London sustainability targets. This to include support to environmental industries in London, where appropriate.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.10
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.01
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.02

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	1
Noise	0
Other Air Pollutants	1
Social Inclusion	0

7.05 Provide air quality information to interested parties and link with other health initiatives.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

7.06 Work with the London Sustainable Distribution Partnership to implement infrastructure for effective and integrated distribution of goods in London.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	1.20
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.18
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.28

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	2
Economic Vitality	2
Noise	1
Other Air Pollutants	2
Social Inclusion	0

7.07 Work in partnership to ensure consistency of Action Plan measures and explore all opportunities for regional measures for reducing emissions.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	2.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.29
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.46

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	10,000 - 99,999
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	10,000 - 99,999

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	0
Noise	0
Other Air Pollutants	2
Social Inclusion	0

7.08 Development of regional Air Quality Strategy to tackle cross-boundary issues and include all National Air Quality Strategy pollutants, climate change etc.

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

Examples of Rejected Measures

Close or relocate industrial plant

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	0.00
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	0.00

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	0
Congestion	0
Economic Vitality	-3
Noise	0
Other Air Pollutants	2
Social Inclusion	-2

Reason for Rejection

Seems draconian when compared to the scale of industrial emissions in the Borough. Significant negative impacts likely with respect to economic vitality and social inclusion.

Expansion of public transport using any available vehicles

Effect on Air Quality

<u>NOx Emissions</u>	
Estimated reduction in total NOx emission (%)	
<u>Change in NO2 Concentrations</u>	
Min NO2 concentration ($\mu\text{g}/\text{m}^3$)	
Max NO2 concentration ($\mu\text{g}/\text{m}^3$)	

Costs

<u>Capital Costs</u>	
Unit Cost Range (£)	
Total Cost Range (£)	1 million - 10 million
<u>Operating and Maintenance Costs</u>	
Unit Cost Range (£/yr)	
Total Cost Range (£/yr)	

Other Impacts

<u>Impact</u>	<u>Score</u>
Attractiveness of Public Transport	2
Congestion	1
Economic Vitality	0
Noise	-1
Other Air Pollutants	-3
Social Inclusion	1

Reason for Rejection

Could reduce car traffic, but simultaneously increase emissions. Also sends the wrong signal to other drivers, if public transport is not perceived as being 'green'.

