

# NORTH STAFFORDSHIRE LOCAL AIR QUALITY PLAN

UNAPPROVED OUTLINE BUSINESS CASE

APPENDIX 9 - Appraisal Summary Table - Preferred Option



Appraisal Summary Table		Date Produced:	15 May 2020	Contact:			
Name of Scheme:	North Staffordshire Local Air Quality Plan			Name	Nesta Barker		
Description of Scheme:	<p>In October 2018, Stoke-on-Trent and Newcastle-under-Lyme authorities, who both have responsibility for environmental health, were issued a Ministerial Direction to produce a local air quality plan to address their respective nitrogen dioxide (NO<sub>2</sub>) problems. Given their proximity to one another, they were tasked with producing a joint plan. As the highway authority for the Newcastle-under-Lyme area, Staffordshire County Council has been assisting the authorities and together, the three authorities have developed a plan to tackle NO<sub>2</sub> exceedances at the roadside – known as the North Staffordshire Local Air Quality Plan (NSLAQP).</p> <p>This Plan will help to protect and promote the health of the local population by improving air quality and reducing the impact of air pollution on the environment. In so doing, the local authorities are complying with the primary aim of the UK Air Quality Plan and bringing NO<sub>2</sub> air pollution within statutory limits in the shortest possible time.</p> <p>This Appraisal Summary Table presents the appraisal results for the NSLAQP Preferred Option.</p>			Organisation	Newcastle-under-Lyme		
				Role	Senior Responsible Officer		
Impacts	Summary of Key Impacts	Assessment					
		Quantitative (£000's)	Qualitative	Monetary (£000's NPV)	Distributional 7-pt Scale / Vulnerable Group		
Economy	Business Users & Transport Providers	<p>The Preferred Option will achieve the main aim of bringing NO<sub>2</sub> air pollution within statutory limits by 2022. As a result, business users will disbenefit from the provision of the package of measures making up the Preferred Option through increased travel times and vehicle operating costs amounting to -£16.1m PV and -£4.1m PV, respectively. The introduction of the bus gates and potential issue of Penalty Charge Notices (PCNs) will also be a disbenefit to users of -£0.02m PV, giving an overall net disbenefit of -£20.3m PV.</p> <p>The Preferred Option includes a range of bus infrastructure improvements involving real time passenger information (RTPI), addition of new shelters, accessible kerbs at bus stops and CCTV at bus shelters. The bus infrastructure improvements mentioned will generate a benefit of £0.7m for business users.</p> <p>The measures proposed in the Preferred Option do not place a direct cost on vehicle owners although businesses are likely to be affected through having to reroute around the peak-time bus gates. The main impact from the Preferred Option might be felt more by businesses based in Fenton Industrial Estate, where access will be limited as a result of the A50 Victoria Road bus gate. However, this would represent a small proportion of all businesses within North Staffordshire and should not have a significant impact on affordability for businesses. The only business type to see any direct impact are bus operators. Measures to encourage the use of buses, such as RTPI and retrofitted buses is expected to have a positive impact on bus patronage.</p>	-£19,557	Slight Adverse	-£19,557	Slight adverse impact on businesses especially located in the Fenton Industrial Estate and a slight beneficial impact to bus operators.	
	Reliability Impact on Business Users	Journey time reliability has not been assessed as part of the project.	N/A	N/A	N/A		
	Regeneration	Regeneration has not been assessed as part of the project.	N/A	N/A	N/A		
	Wider Impacts	Wider economic impacts have not been assessed as part of the project.	N/A	N/A	N/A		
	Noise	No road links are predicted to experience a change in traffic volumes greater than 50% or changes in speed greater than 10 kph; as such, this option is considered to have negligible impacts on noise.	N/A	Neutral	N/A	No vulnerable groups are adversely affected.	
Environmental	Air Quality	<p>No exceedances of air quality for NO<sub>2</sub> are predicted for the Preferred Option and is expected to generate £2.3m air quality benefits due to its implementation.</p> <p>The Preferred Option reduces the impacts of air quality across all sensitive receptors tested, in particular, nurseries, playgrounds, public open spaces and nature reserves. The analysis suggests that there will be a disproportionate benefit for more deprived areas and areas with higher numbers of children. All in all, the Preferred Option is expected to deliver positive impacts in air quality, whilst in fact benefiting particular vulnerable groups.</p>	Assessment : NO <sub>2</sub> Change: £1,534 PM <sub>2.5</sub> : £807		Moderate Beneficial	£2,341	Beneficial outcome for all vulnerable groups.
	Greenhouse Gases	Changes in GHG emissions have been derived from Transport User Benefit Appraisal software (TUBA). As the Preferred Option will likely lead to rerouting around the proposed bus gates but does not explicitly encourage upgrading to cleaner vehicles, it can be expected that the impact of GHGs is negative. This might be offset to an extent with a mode shift to bus travel through the bus infrastructure improvements that are proposed as of the Preferred Option.	Change in non-traded carbon over 10y (CO <sub>2</sub> e)	8,539	N/A	-£518	
			Change in traded carbon over 10y (CO <sub>2</sub> e)	66			
	Landscape	Landscape has not been assessed as part of the project.	N/A	N/A	N/A		
	Townscape	Townscape has not been assessed as part of the project.	N/A	N/A	N/A		
	Historic Environment	Historic environment has not been assessed as part of the project.	N/A	N/A	N/A		
	Biodiversity	Biodiversity has not been assessed as part of the project.	N/A	N/A	N/A		
Water Environment	Water environment has not been assessed as part of the project.	N/A	N/A	N/A			
Social	Commuting and Other Users	<p>The Preferred Option will achieve the main aim of bringing NO<sub>2</sub> air pollution within statutory limits by 2022. As a result, commuting and other users will disbenefit from the provision of the package of measures making up the Preferred Option through increased travel times and vehicle operating costs amounting to -£32.1m PV and -£4.3m PV, respectively. The introduction of the bus gates and potential issue of Penalty Charge Notices (PCNs) will also be a disbenefit users of -£0.4m PV, giving an overall net disbenefit of -£36.8m PV.</p> <p>The Preferred Option includes a range of bus infrastructure improvements involving real time passenger information (RTPI), addition of new shelters, accessible kerbs at bus stops and CCTV at bus shelters. The bus infrastructure improvements mentioned will generate a benefit of £34.1m for commuting and other users.</p> <p>Under the Preferred Option, the operation of peak period bus gates on Victoria Road and Etruria Road will lead to a mixture of improved and longer travel times. Whilst journeys that would otherwise utilise the bus gates are likely to be longer, it may be that journeys using adjacent routes will make journey time savings due to reductions in overall traffic. The Preferred Option results in a moderate adverse impact across all quintiles and so no specific distributional effect is experienced. Considering the size of impact however, the reduction in user benefits will be greatest for the most deprived households.</p>	-£2,630	Moderate Adverse	-£2,630	Moderate adverse impact for all vulnerable groups.	
	Reliability Impact on Commuting and Other Users	Journey time reliability has not been assessed as part of the project.	N/A	N/A	N/A		
	Welfare and Upgrade Impacts	Bus retrofitting delays the purchase of new vehicles meaning that older vehicles will be in operation for longer. This would reduce the costs associated with vehicle upgrade but would subsequently increase fuel and non-fuel VOCs that accompany older vehicles. Whilst the bus retrofitting measures appears as an overall disbenefit, the benefits derived from this measure can be captured in the air quality assessment through the use of cleaner buses in the short-term.	-£773	N/A	-£773		
	Physical Activity	The impacts of active travel and so physical activity as a result of the Preferred Option are likely to be limited as the option does not directly incentivise modal shift towards active travel.	N/A	Neutral	N/A		
	Journey Quality	The Preferred Option includes a range of bus infrastructure improvements involving real time passenger information (RTPI), addition of new shelters, accessible kerbs at bus stops and CCTV at bus shelters. In addition, to the bus improvements, the Preferred Option will also improve pedestrian access across the A53 and reductions in traffic flows on some routes.	N/A	Moderate Beneficial	N/A		
	Accidents	In the Preferred Option, potential accident risk impacts are concentrated in areas around the two proposed gates on the A53 Etruria Road and the A50 Victoria Road. The option results in a combination of benefits and disbenefits, as traffic is primarily rerouted rather than being removed through modal shift. However, there is an overall small net benefit. 2.2% of road links are predicted to experience a reduction in traffic flows greater than 10%, while 1.3% of road links are predicted to experience an increase. Roads where significant increases are predicted include Manor Street, Porthill Bank Road and some road links which form connections to the A500. Distributional analysis of these impacts demonstrates that low-income households will benefit disproportionately, as will households with a registered disability, as both these areas are located in LSOAs with a high proportion of these groups. No distributional effects are predicted to occur for the over 65 and under 16 groups.	N/A	Slight Beneficial	N/A	Beneficial outcome for all vulnerable groups.	
	Security	The Preferred Option includes a substantial investment in CCTV cameras at bus stops which will have a positive impact on both the actual and perceived security of bus users. It might also encourage those who previously had concerns regarding the security of the bus network to in fact utilise it. The proposed CCTV camera locations are predominantly in areas with a relatively low-income population, with a high ratio of persons with disabilities and a high proportion of BME. As previously described, these demographic groups are likely to travel by public transport and therefore will benefit disproportionately from these security improvements.	N/A	Moderate Beneficial	N/A	Beneficial outcome for all vulnerable groups.	
	Access to Services	<p>The A53 Etruria Road and A50 Victoria Road bus gates will act as a physical barrier to private vehicles but not to buses. However, limiting the bus gate restrictions to peak times and to one direction of travel only will help to mitigate any negative distributional impacts associated with private vehicle travel. Vulnerable groups using public transport might be positively impacted through faster journey times at peak times.</p> <p>Pedestrian access to the existing bus stop along the A53 Etruria Road will be enhanced through improvements to the signalised pedestrian crossing facilities on this route.</p> <p>Improvements to bus infrastructure could serve to improve accessibility through bus users as there will be an increased availability of information through RTPI as well as the provision of accessible kerbs at bus stops. The bus infrastructure measures associated with the Preferred Option are anticipated to deliver a disproportionate benefit to more deprived households, those with a higher proportion of children and disabled and those with a lower proportion of elderly residents.</p>	N/A	Slight Beneficial	N/A	Beneficial outcome for the more deprived households, those with a higher proportion of children and disabled and those with a lower proportion of elderly residents.	
	Affordability	The Preferred Option will increase costs to individuals who have to reroute around the proposed bus gates through an increase in fuel costs and VOC. The cost of this impact is relatively small. The Preferred Option may also provide positive indirect impacts to households through the improvements to bus infrastructure. Public transport is more commonly used by vulnerable people and so these improvements might have a positive distributional effect.	N/A	Slight Adverse	N/A	Slight adverse impact to the majority of vulnerable groups. This adverse impact is slightly offset for vulnerable people able to utilise public transport.	
	Severance	The majority of severance impacts from the Preferred Option are improvements resulting from the diversion of traffic from congested road links, potentially improving the ability of pedestrians to take their preferred line to nearby amenities. The amenities affected cover a wide range of groups. Manor Street has been assessed to have a slight adverse impact on severance as it acts as a displacement route from the bus gate on the A50 Victoria Road. This route is of relevance as it acts as the entrance to Christ Church C of E Primary School and so will impact children. Additional measures form part of the Preferred Option to help alleviate the impacts of possible increased traffic flow on this route including the provision of new road humps, carriageway resurfacing and enhanced signage.	N/A	Slight Beneficial	N/A	Slight beneficial impact to the majority of vulnerable groups with children being slightly adversely impacted.	
Option and Non-Use Values	Option and non-use values have not been assessed as part of this project.	N/A	N/A	N/A			
Public Accounts	Cost to Broad Transport Budget	The Preferred Option will require an investment in the transport network of £14.5m. Revenues are treated as part of wider public finances for appraisal purposes. When the potential revenues from PCNs of £0.4m PV are offset against costs, the overall PV of net costs is £14.1m.	Implementation costs of £14,482 offset by public sector revenue of £404		N/A	£14,482 costs, offset by £404 revenue	
	Indirect Tax Revenues	As a result of significant changes to vehicle routing and the subsequent impact on travel times and fuel consumption, there will be an indirect taxation revenue to the government of £2.3m PV.	£2,270		N/A	£2,270	