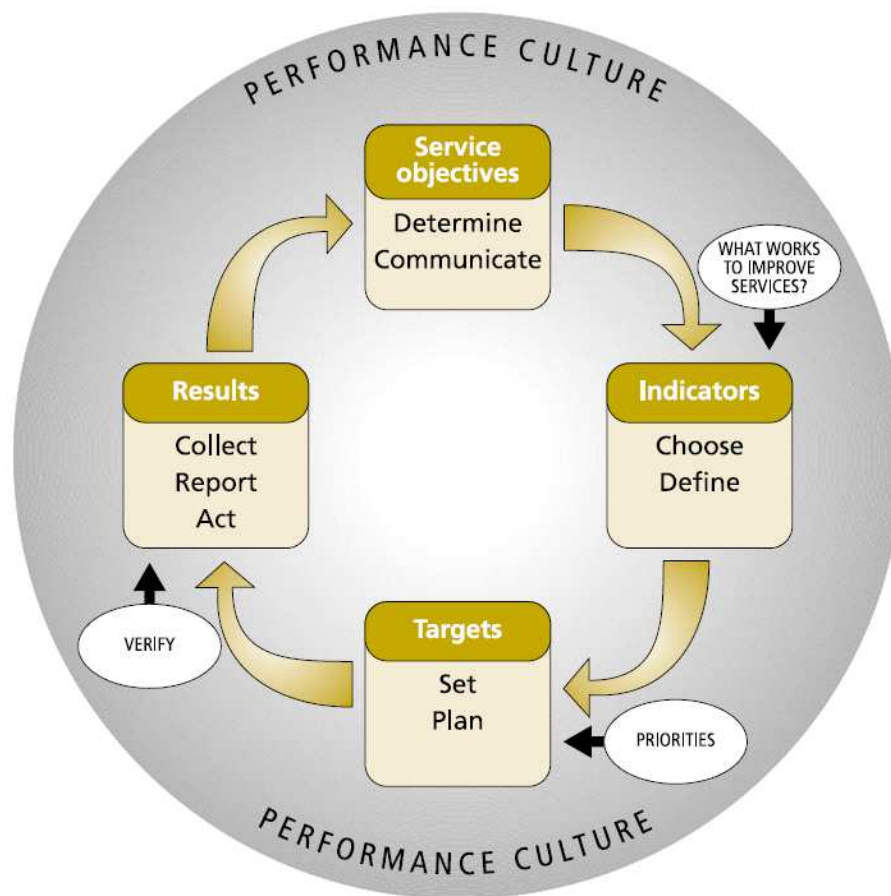


5.0 Monitoring Our Performance

5.1 Introduction

The Council will measure how well it is achieving its objectives and intended outcomes by checking progress against clear indicators and targets (which reflect local and regional priorities). The resulting information will be fed back into the decision making processes.

Figure 5.1: Performance Measuring Cycle



5.2 Indicators, Targets and Monitoring

Targets have been set and we will monitor progress towards achieving them. The regular monitoring of these targets allows the Council to assess how well it is moving towards delivery of the objectives and allows us to take action, where necessary, to adapt the performance. Progress will be reviewed and steps taken to address any under performance.

There are two types of targets included here.

1. *Core Targets* - are locally specific targets which all boroughs are required to set and agree with TfL. These targets will be used to assess delivery of the MTS outcomes at the borough level.
2. *Local Targets* - are set to ensure local priorities are identified and delivered.

Targets must be SMART, that is;

S	Specific
M	Measurable
A	Ambitious but achievable
R	Realistic
T	Time tied

The following section details how our targets and performance indicators have been developed, and how we intend to deliver them. Particular attention has been paid to the following:

- Ensuring targets are realistic and ambitious, given indicative funding levels. Targets have been developed through an assessment of the existing evidence of what has worked well previously in Greenwich. We have also looked at best practice in other boroughs and benchmarked our previous performance against London boroughs. Targets have been developed in line with related regional and local policy.
- Actions are demonstrably linked to the interventions proposed in the Delivery Plan.
- Identification and management of risks to delivery is detailed, including risks which may affect implementation and any potential negative impacts on the target areas.

5.3 Targets

The Council has to set core targets which require agreement from TfL. In addition, the Council has developed a set of local targets to measure performance on issues which are particularly important to the Borough

Table 5:1 shows the core indicators, as required by TfL, and Table 5:2 shows our selected local targets.

Table 5.1 Core Indicators for monitoring delivery of LIP outcomes

Locally specific targets for mandatory indicators												v1.0
Core indicator	Definition	Year type	Units	Base year	Base year value	Target year	Target year value	Trajectory data				Data source
Mode share of residents	% of trips by walking	Financial	%	2010	26.7%	2013	27.7%	2010	2011	2012	2013	LTDS
								26.7%	27.0	27.4	27.7%	
Mode share of residents	% of trips by cycling / no of trips	Financial	%	2010	1%	2013	2%	2010	2011	2012	2013	Specify LTDS or borough's own screenline counts
								1.0%	1.3%	1.7%	2.0%	
Bus service reliability	Excess wait time in mins	Financial	Mins	2010	0.9	2013	1.0	2010	2011	2012	2013	iBus
								0.9	1.0	1.0	1.0	
Asset condition - principal roads	% length in need of repair	Financial	%	2010	4.0	2013	4.0	2010	2011	2012	2013	Detailed Visual Inspection (DVI) data supplied for each borough to TfL
								4.0	4.0	4.0	4.0	
Road traffic casualties	Total number of people killed or seriously injured	Financial	Number	2010	TBC	2013	TBC	2010	2011	2012	2013	London Road Safety Unit
								TBC	TBC	TBC	TBC	
Road traffic casualties	Total casualties	Financial	Number	2010	TBC	2013	TBC	2010	2011	2012	2013	London Road Safety Unit
								TBC	TBC	TBC	TBC	
Transport CO2 emissions	CO2 emissions	Financial	Tonnes/ear	2005	223	2013	223	2010	2011	2012	2013	GLA's London Energy and Greenhouse Gas Emissions Inventory (LEGGI)
								223	223	223	223	

Table 5.2 Local Indicators for monitoring delivery of LIP outcomes

Additional (non-mandatory) local targets												
Local indicator	Definition	Year type	Units	Base year	Base year value	Target year	Target year value	Trajectory data				Data source
Increase public transport modeshare from 24.8% to 26.8%	Use of public transport originating in the Borough	Financial	%	2010	24.8%	2013	26.8%	2010	2011	2012	2013	Travel in London Report
								24.8	25.5	26.1	26.8	
Increase modeshare of all non-car use from 53.9% to 58.9%.	Use of all modes, except motorised vehicles	Financial			53.9%		58.9%	2010	2011	2012	2013	Travel in London Report
								53.9%	55.6%	57.2%	58.9%	
Unclassified Roads Condition	% of unclassified roads needing maintenance	Financial	%	2010	8%		5%	2010	2011	2012	2013	Subject to Funding - Detailed Visual Inspection (DVI) data supplied for each borough to TfL
								8%	7%	6%	5%	

5.4 Mode Share

This indicator monitors the proportion of personal travel made by each mode, providing an indication of general travel behaviour of households. The modeshare in Greenwich is as set out below³².

Rail	Underground/ DLR	Bus/ Tram	Taxi/ Other Public	Car/ Motorcycle	Cycle	Walking
5.0%	2.8%	17.0%	1.4%	46.3%	1.0%	26.7%

If a trip is made by more than one mode, the main mode is taken as the one that is used to cover the greatest distance. The cumulative total of all modes, excluding the car is used to provide information for 'non-car modes'. For Greenwich, this is 53.9%.

Data will be reported as a three year average, representing the three years up to the current one. Data will be published each year by TfL, however comparisons will only be made at the end of each three year period. The following local targets, related to non-car use have been set.

Table 5.3 Modeshare Targets

Indicator	Target	Baseline	2011/12	2012/13	2013/14	2014/15	2021/22
Mode share	Increase cycling levels to 2% of modeshare by 2014	1.0%			2.0%		3.0%
	Increase walking levels to 28% by 2014	26.7%			27.7%		29.0%
	Increase public transport modeshare from 24.8% to 26.8 % by 2013/14	24.8%			26.8%		
	Increase mode share for all non-car travel to 57% by 2014	53.9%			58.9%		

³²Source – Travel in London Report 2

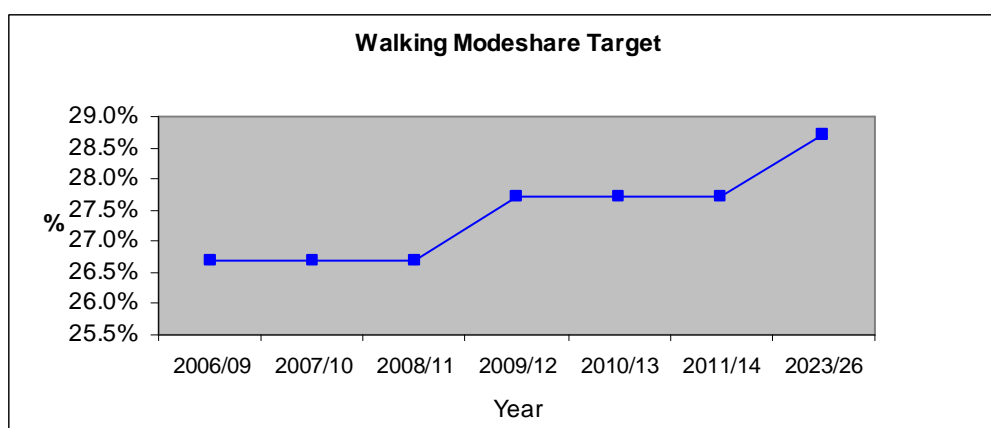
Further details on the local targets relating to walking and cycling mode share is set out below.

5.4.1 Walking Target

- Increase walking modeshare from 26.7% to 27.7% by 2013/14 and from 27.7% to 28.7% of modeshare by 2026.

Link between target, LIP objectives and Delivery Plan	<p>LIP Objectives: 1, 3, 4, 8,</p> <p>Delivery Plan: Several projects in the delivery plan support the uptake of walking. This includes physical infrastructure improvements to reduce severance (Marshgate Path); targeting different users i.e. STP programme;</p>
Evidence that target is ambitious and realistic.	<ul style="list-style-type: none"> • The Travel in London Report (2) indicates that walking trips, starting in the borough, was 27% of total modeshare, for the period 2006/07-2008/0. This is an increase of 1% from the findings for walking levels in Travel in London Report (1) which covered the period 2005/08. • Inner London walking average is 35% of modeshare. Outer London average is 28%. (Travel in London Report 2). • The MTS aim is to achieve increased levels of walking above the current 24 per cent mode share London wide. • There is scope to increase walking levels within the borough and to exceed Mayoral targets. A 1 per cent up to the interim target year of 2013/14, with an additional 1 per cent by 2026 is felt to be a realistic target. A revised road safety target will be set after the 2013/14 monitoring period. • This figure accounts for improvements included in the Delivery Plan (such as the pedestrianisation of Greenwich Town Centre), and Olympic and Paralympic Games legacy.
Key actions for the Council	<ul style="list-style-type: none"> • Implementation of the Walking Plan and Greenwich's Active Travel initiative. • Improve strategic walking routes, improving corridors between local destinations. • Utilise planning conditions to ensure public realm improvements consider pedestrians • Removal of street clutter such as railings and confusing signage. • Improving signage and way finding for walkers • Reduce the fear of crime • Improving access, safety and security between stations and surrounding areas for pedestrians and surrounding areas for pedestrians. • Smarter travel measures working with employers,

	schools, community groups and individuals to reduce single journey, short car journeys where possible i.e. implementation of the Council's workplace travel plan
Principal Risks and how they will be managed	<ul style="list-style-type: none"> • Delay to implementation of physical schemes. This will be minimised through coordination of various schemes to synergise benefits, reduce costs and reduce risk. This will include working with local partners such as PCT, neighbouring boroughs and the wider East region where possible. • Funding may be reduced by TfL or other sources. The impact of this risk cannot be fully managed but will be mitigated through combined delivery of projects and scheme prioritisation according to local needs i.e. improvements to safety • There is a risk that the increase take up of cycling will impact on walking modeshare and vice versa. Through promotion of these modes as an active, healthy travel option including groups with health related problems, we will ensure that the most appropriate mode i.e. cycling /walking is promoted for the individual's needs. Greenwich's new Active Travel Initiative will help identify and deliver these benefits. This will include use of social marketing approaches to encourage the uptake of walking and cycling.
How progress will be monitored against targets and how areas of underperformance will be managed	<ul style="list-style-type: none"> • Review walking mode share • Evaluation of travel demand measures at specific sites i.e. through travel plans • Social marketing to ensure key groups are targeted appropriately • Continually review above to increase walking levels at local level



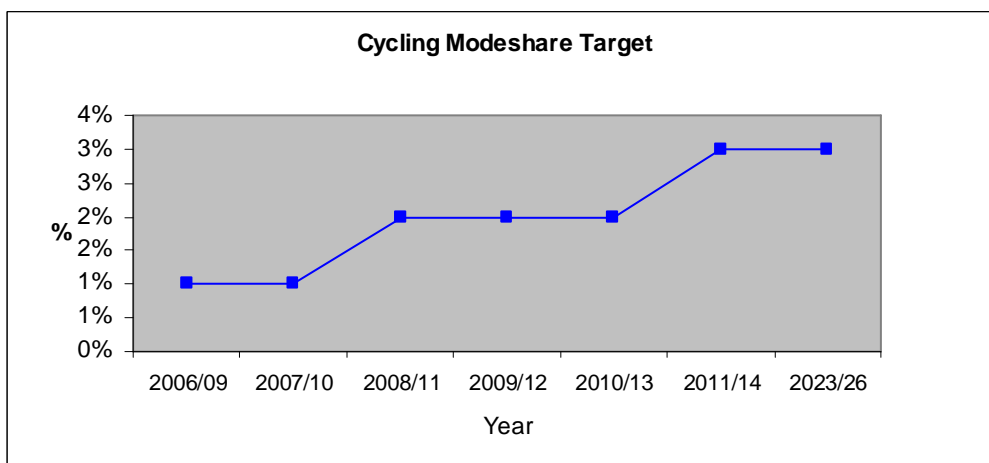
Mode	2006/09	2007/10	2008/11	2009/12	2010/13	2011/14	2023/26
Walking	26.7%	26.7%	26.7%	27.7%	27.7%	27.7%	28.7%

5.4.2 Cycling target

- To increase modeshare of cycling from 1% to 2 % of modeshare by 2013/14 and to 3% by 2026

Link between target, LIP objectives and Delivery Plan	<p>LIP Objectives: 1, 3, 4, 8,</p> <p>Delivery Plan: Several projects in the delivery plan support increased cycling levels including LCN+ and non-LCN measures – including implementation of cycle storage and cycle training. Cycling schemes will be prioritised related to the Olympics Route Network.</p>
Evidence that target is ambitious and realistic.	<ul style="list-style-type: none"> • The MTS aims to achieve a 5% modal share for cycling by 2026. • The Inner London cycling average is 3% of modeshare. Outer London average is equivalent to Greenwich at 1%. (Travel in London Report 2). • East London has unique opportunity to increase cycling levels with younger population and significant growth (LDF) • The Travel in London Report (2) indicates that cycling trips, starting in the borough, was 1% of total modeshare for the period 2006/07-2008/0. There is no change from the findings for cycling levels in Travel in London Report (1) which covered the period 2005/08. • Local counts at 29 screenlines indicate a 1.3% rate in cycling, which is comparable to the findings of the Report in London (2) cycling rates. • There is scope to increase cycling levels in the borough. The Atkins Benchmarking tool indicates that Greenwich is in the third quartile for cycling levels. (Atkins, 2009) • A 2 per cent increase up to the interim target year of 2013/14, with an additional 1 per cent by 2026 is felt to be a realistic target. • This figure accounts for LCN + improvements included in the Delivery Plan and Non LCN measures such as increased cycle parking. • The target reflects the current trend but is considered to be realistic. Travel demand measures will work towards changing travel behaviour. The scale of development in the borough presents an opportunity to ensure travel behaviour is in place from the outset.
Key actions for the Council	<ul style="list-style-type: none"> • Implementation of Greenwich's Active Travel initiative • Deliver road enhancements to make cycling safer and easier. • Increase provision for cycle storage /parking particularly at transport hubs to improve intermodal connectivity

	<ul style="list-style-type: none"> • Provide sufficient cycle storage in new and existing developments • Provide sufficient cycle facilities at workplaces including showers, storage, lockers. • Raise the profile of cycling through increased promotion. • Provide resources so that cycling information is easily accessible such as cycling maps, details of cycle storage. • Using behavioural change measures, including smarter travel initiatives and major events to raise profile and change travel behaviour, including the Olympic and Paralympic Games. • Improve safety for cyclists through the increased provision of cycle training for residents and Greenwich Council employees. • Improved signage for cyclists
Principal Risks and how they will be managed	<ul style="list-style-type: none"> • Delay to implementation of physical schemes. This will be minimised through coordination of various schemes to maximise benefits, reduce costs and reduce risk. • Funding may be reduced by TfL or other sources. The impact of this risk cannot be fully managed but will be mitigated through combined delivery of projects and scheme prioritisation according to local needs. • The Council is currently undertaking a best value review into cycling. The findings of this will help prioritise spend areas. • Cycling will be promoted as an active, healthy travel mode. Promotion will seek to reduce single journey, short car use where possible. • There is a risk that the increase take up of cycling will impact on walking modeshare and vice versa. Through promotion of these modes as an active, healthy travel option particularly to groups with health related problems, we will ensure that the most appropriate mode i.e. cycling /walking is promoted for the individual's needs. Greenwich's new Active Travel Initiative will help identify and deliver these benefits. This will include use of social marketing approaches to encourage the uptake of walking and cycling.
How progress will be monitored against targets and how areas of underperformance will be managed	<ul style="list-style-type: none"> • Review cycling mode share using TfL report, Travel In London. • Evaluate and review range of cycling related measures and promotions. Coordinate work to support. • Evaluation of travel demand measures at specific sites i.e. through travel plans. Travel Plan reviews



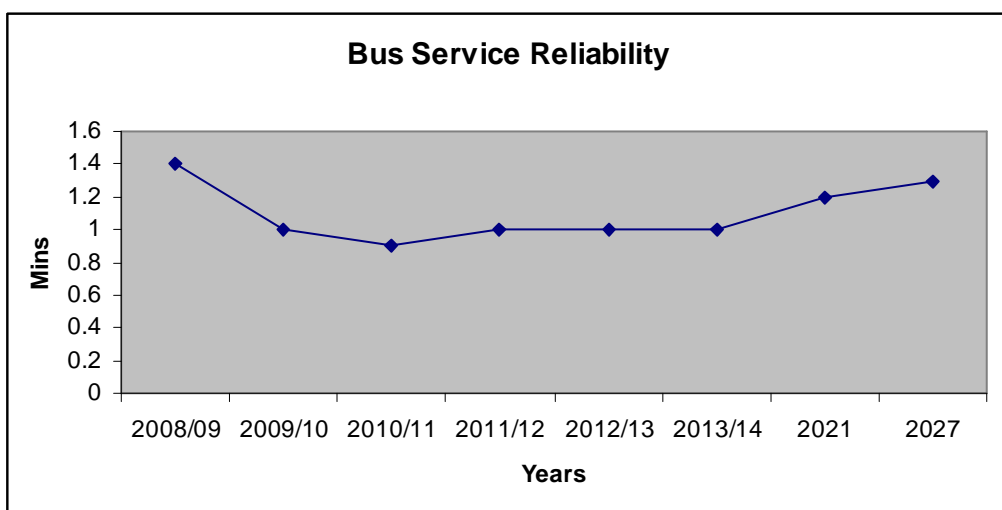
Mode	2006/09	2007/10	2008/11	2009/12	2010/13	2011/14	2023/26
Cycle Target	1%	1%	2%	2%	2%	3%	3%

5.5 Bus Service Reliability

Maintain Excess Wait Time at 1.0 minute until 2013/14

Link between target, LIP objectives and Delivery Plan	<ul style="list-style-type: none"> • LIP objectives 1,4,6,7,8,11,12 • Delivery Plan: includes delivery of bus priority measures, and improving accessibility.
Evidence that target is ambitious and realistic.	<ul style="list-style-type: none"> • The MTS target is to reduce excess wait times to 2006 levels across the entire network. The target set for Excess Waiting Time (EWT) is 1.2 minutes until the Interim target year of 2013/14. A revised EWT target is due to be set after the 2013/14 monitoring period. • Greenwich achieved an average EWT of 1.0 minute for 2009/10 and is the best performing borough. (Atkins benchmarking). EWT is reliant on performance of the bus network across all boroughs. • Neighbouring boroughs (Bexley and Bromley) achieved an EWT of 1.0. Lewisham, another neighbouring borough, achieved a EWT of 1.1 minutes. • This reflects the general trend for the Inner London boroughs to have higher EWT compared to Outer London boroughs. • The 2009 TfL Business Plan forecasts that EWT across London will increase from 1.1 minutes to 1.2 minutes in 2011/12. • Given the population increase in the borough, increased development and increases in traffic levels in the East (London Plan) it is considered that a target EWT of 1.0 minutes will be maintained until the interim target year of 2013/14. This will be reviewed after this period.
Key actions for the Council	<ul style="list-style-type: none"> • To work with TfL and partners to introduce improved bus services connecting the north and south of the borough. Ensure that bus priority measures are identified, appraised and delivered at key locations including town centres, new development sites and existing sites and where trip generators are located i.e. O2. • Working with TfL to introduce Countdown 2 • Ensuring that the appropriate enforcement of bus priority is carried out. • To work with TfL to ensure the needs and demands of the bus network are met where major change or development is taking place in the borough. • Assess bus routes and implement measures to improve bus priority along routes experiencing delays. • Assess bus routes and implement measures to smooth traffic flow along those routes experiencing delays.
Principal Risks and how	<ul style="list-style-type: none"> • Funding may be reduced by TfL or other sources. The

they will be managed	<p>impact of this risk cannot be fully managed but will be mitigated through combined delivery of projects and scheme prioritisation according to local needs i.e. improvements to safety/accessibility.</p> <ul style="list-style-type: none"> • Increase in car use and congestion. The council will continue to promote a reduction in car use, particularly for local journeys. • EWT is calculated on a London Wide basis. The EWT of any service at any given measurement point will inevitably reflect accumulated delays on the whole route. This risk should be reduced through the introduction of local EWT targets at each borough level. Local targets are also based on iBus data (travel times) between bus stops on 4 local routes: These findings will allow comparison to TfL's EWT data supplied quarterly by TfL. • Increased congestion is inevitable when river crossings are closed unexpectedly. This is difficult to manage as resilience is low when river crossing are reduced. Improved communication can reduce impact. • iBus data (travel times) between bus stops on 4 routes will allow the more problematic routes to be monitored closely. (Data to be provided by TfL).
Indicate how we intend to keep progress against targets under review and address areas of over or under performance	<ul style="list-style-type: none"> • EWT data will be reviewed quarterly. This data is supplied by TFL. Monitoring the local target for bus performance. • Greenwich will review short term trends, liaising with the Network Manager to assess any underperformance. Causes for underperformance may be temporary such as road works or caused by the longer term increase in traffic congestion. • Where underperformance can be managed by the Council, it will be improved such as reviewing requirements for bus priority measures.



2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2021	2027
1.4	1	0.9	1.0	1.0	1.0	1.2	1.3

TfL will provide data for 4 bus routes per borough for each year under consideration.

Four corridors / year for the period of 2011/12 to 2013/14 (i.e. the timeframe of the LIP Delivery Plan) have been selected based on the following factors:

- Bus frequencies
- Where there are known traffic delays, typically such locations are often found on the approaches to the main town and local centres (note: bus operator hot spot locational information can also be provided if required)

Bus start and end bus stops and a representative bus route on that corridor for which we require the iBus information on scheduled bus route run times (minimums, maximums and averages) and standard deviations.

5.6 Asset condition

Asset condition is a formal LIPs performance indicator.

Greenwich's LIP contains proposals to ensure the condition of the road network is maintained or improved: Year on year spending on repair, resurfacing and reconstruction

Good performance will be measured by maintenance or increase in the share of non-car modes.

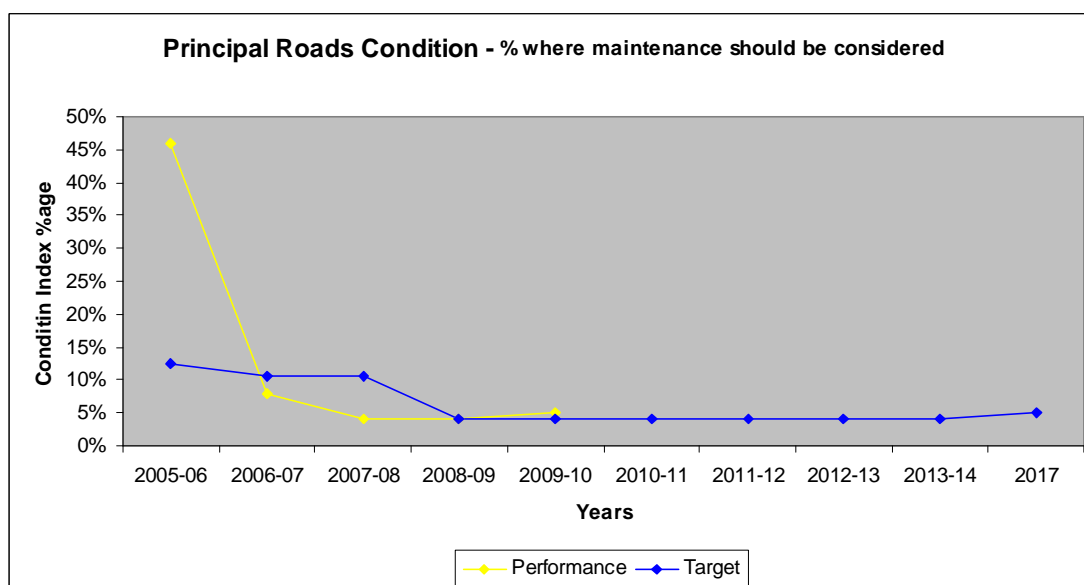
Percentage of Principal Roads needing maintenance	
Target trajectory	See graph below
Link between target, LIP objectives, and Delivery Plan	<ul style="list-style-type: none"> LIP strategic objective 2 Delivery Plan: Includes a programme of works to improve a proportion of the condition of Principal Roads carriageway. This is significant indicator of the state of the highways asset.
Evidence that the target is realistic and ambitious	<p>Good performance is typified by a low percentage. A reduction in levels represents improvement.</p> <p>Budget restraints and predicted growth in the borough (including housing and employment) will have an impact on asset condition as more people travel to, and within the Borough.</p> <p>The target is set to a level which is equal to, or below that attained in previous years and is therefore considered to be appropriate particularly given the budgetary restraints. There will be considerable pressure to reduce expenditure, however based on previous performance, the target is also considered to be realistic.</p>
Key actions for the Council	<p>Maintain a programme of inspections and evaluation of existing condition. Programme maintenance in order to achieve target.</p> <p>Ensure that expenditure reflects our prioritised list of principal road renewal requirements, and is consistent with the aims and objectives of our Highway Asset Management Plan;</p> <p>Ensure that maintenance is carried out in a timely manner.</p> <p>Ensure that Council funding commitments are secured, wherever possible</p>
Key actions for local partners	Ensure contractor involvement in scheme design is needed for them to make a positive contribution to the effective programming of, and delivery of the schemes.
Principal risks and how they will be managed	Unusual weather conditions (including dry summers, wet winters, floods, etc.) may cause increased amounts of damage to road surfaces in Greenwich. The proposed Climate Change Adaptation Strategies (MTS) will need to consider this issue further.

Data source	Hammersmith and Fulham run a contract on behalf of London Boroughs to assess road condition and to report accordingly.
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Indicator		Trend	Indicator	Data	London-wide Quartile Position	Comment
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Road Condition - Principal Roads	Current situation:	% road length in 2009/10	5	6	Top Quartile = lowest percentage
	Change over time:	% Reduction in road length in need of repair, 2005/06 - 2009/10	54%	4	Top Quartile = largest % reduction

Ref: Atkins LIP benchmarking data for London



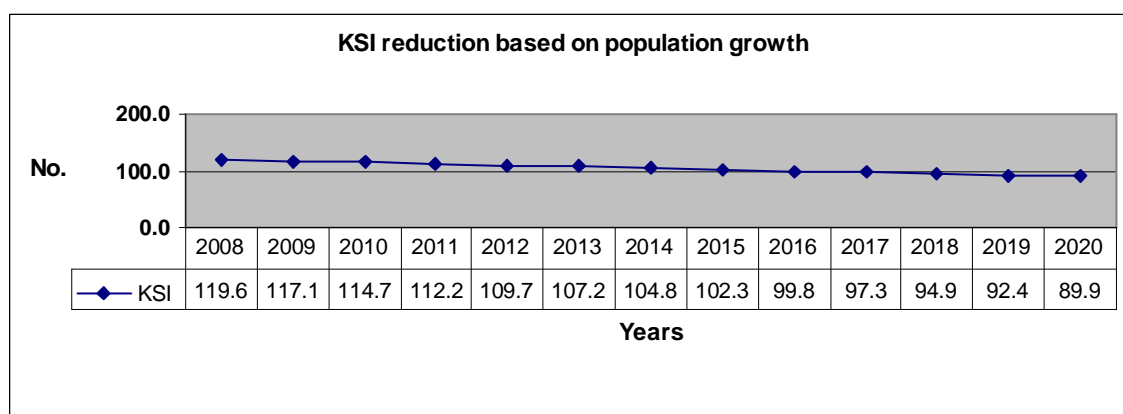
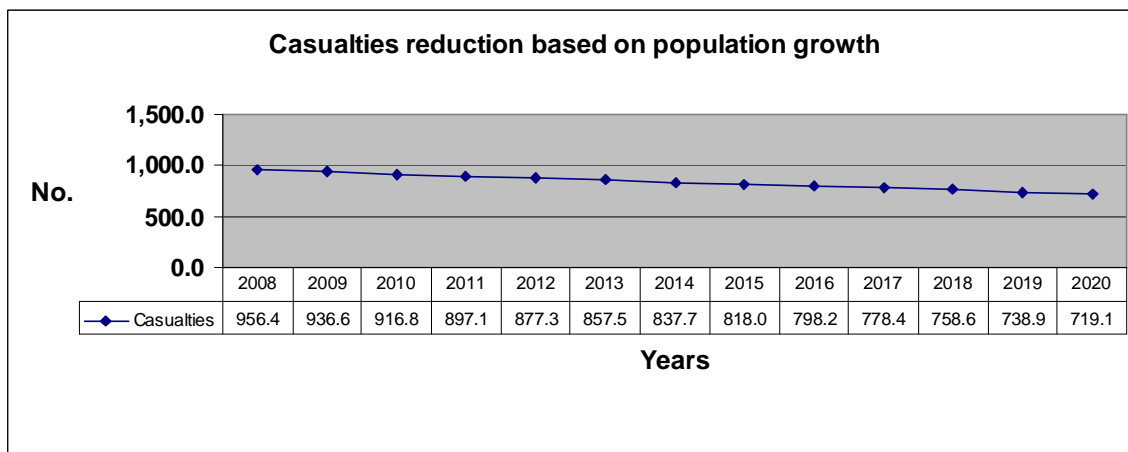
Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2017
Performance	46.00%	8%	4%	4%	5%					
Target	12.50%	10.50%	10.50%	4%	4%	4%	4%	4%	4%	5%

5.7 Road Safety

Target Trajectory	See graph below for target trajectory
Link between target, LIP objectives and Delivery Plan	<p>LIP Objectives: 4</p> <p>Delivery Plan:</p> <p>Most KSI's occur on the main road network including major arterial roads, trunk roads and main local roads (although the figures also account for TRLN).</p> <p>Increasing walking and cycling is a priority for Greenwich. Cycling KSI figures have increased and the Delivery Plan recognises this with an increased budget for improving LCN+ routes and local cycle routes.</p>
Evidence that the target is ambitious and realistic	<p>The DfT have consulted on a series of national targets, applicable to all local authorities which is currently being refreshed. The proposed targets applicable to this target are (1) to reduce the number of people killed in road collisions by at least 33% by 2020 and (2) to reduce the number of people seriously injured in road collisions by at least 33% by 2020, both compared to a baseline of the 2004-2008 average.</p> <p>The 2004-2008 average for KSIs is 119.60.</p> <p>The population of Greenwich is predicted to rise by 19% by 2026. The end year for the Road Safety target, as provisionally set by the DfT is 2020. By this year, the population is predicted to have grown by 12.7%. Therefore, when considering the weighting of population increase, a 20.3% reduction in KSIs would be equivalent to a 33% reduction in casualties without population increase.</p> <p>Population at base year of 2008 is 236,030. By 2026 the expected population is to have grown by 19%, or reaching 280,876. By 2020, the expected population would have grown to 265,927. This is equivalent to a 12.7% increase from the 2008 population figure. This percentage is deducted from the 33% DfT target, giving 20.3%.</p> <p>Total KSIs in 2008 were 119.60. A revised target, of 20.3% is considered appropriate, given the population growth, which would provide a revised figure of 95.28 KSIs by 2020.</p> <p> $236,030 * 19\% = 280,876$ $280,876 - 236,030 = 44,846$ $44,846 / 18 \text{ years} = 2,491 \text{ casualties per annum}$ $236,030 + (2,491 * 12 \text{ years}) = 265,927 \text{ pop by 2020.}$ $(265,927 - 236,030) / 236,030 = 0.127 \text{ or } 12.7\%$ </p>

	<p>$33\% - 12.7\% = 20.3\%$ revised target.</p> <p>A reduction of 20.3% from 119.60 = 95.28 KSIs.</p> <p>As KSI rates get lower it becomes more difficult and costly to achieve ongoing reductions; as such it is not considered realistic to continue to achieve significant annual casualty reductions particularly in light of TfL forecasts where the population in the borough is predicted to rise by 32% by 2026 (compared to 10% for the rest of London). Greenwich's core strategy suggests a lower percentage population increase of 19% which has been used to formulate the KSI target.</p> <p>A realistic target is to maintain KSIs at the 2006/08 base levels, for the period leading to 2026. This will be revised after the 2013/14 interim period.</p> <p>Casualties</p> <p>The average total casualties between the period 2004-2008 is 956.40.</p> <p>The population of Greenwich is predicted to rise by 19% by 2026. The end year for the Road Safety target, as provisionally set by the DfT is 2020. By this year, the population is predicted to have grown by 12.7%. Therefore, when considering the weighting of population increase, a 20.3% reduction in casualties would be equivalent to a 33% reduction in casualties without population increase.</p> <p>Population at base year of 2008 is 236,030. By 2026 the expected population is to have grown by 19%, or reaching 280,876. By 2020, the expected population would have grown to 265,927. This is equivalent to a 12.7% increase from the 2008 population figure. This percentage is deducted from the 33% DfT target, giving 20.3%. Total casualties in 2008 were 956.40. A revised target, of 20.3% is considered appropriate, given the population growth, which would provide a revised figure of 761.93.</p> <p> $236,030 * 19\% = 280,876$ $280,876 - 236,030 = 44,846$ $44,846 / 18 \text{ years} = 2,491 \text{ casualties per annum}$ $236,030 + (2,491 * 12 \text{ years}) = 265,927 \text{ pop by 2020.}$ $(265,927 - 236,030) / 236,030 = 0.127 \text{ or } 12.7\%$ $33\% - 12.7\% = 20.3\%$ revised target. </p> <p>A reduction of 20.3% from 956.40 = 761.93 casualties.</p>
Key actions for the Council	<p>Continue to deliver Greenwich Council's Road Safety Plan. Casualties occur primarily on main roads. The most effective way to approach this is to implement recommendations/transport</p>

	<p>initiatives from the Council's main road corridor investigations.</p> <p>Improve safety on walking and cycling routes.</p> <p>Improve safety for vulnerable road users.</p> <p>Road safety education and awareness.</p> <p>Extend cycle training.</p>
Principle risks and how they will be managed	<p>Delays to the implementation of schemes to improve road user safety. The Council will manage this risk by ensuring the risks of delivering schemes are considered before they are included in the LIP 3-year Program of Investment. The Council has a good history of delivering schemes on time.</p> <p>Reduced funding from LIP2 allocation, and/or reduction from other sources. Schemes will be prioritised that provide greatest contribution to improving safety.</p> <p>Increases in car use. Continued promotion of sustainable modes will mitigate the impact of increased use aligned with smoothing traffic flow and/or improving bus priority measures on congested routes.</p> <p>Increased walking and cycling rates could potentially increase the number of casualties and KSIs. It is not This can be mitigated in part, through infrastructure improvements, increased cycle training and pedestrian awareness and increased road safety education to vulnerable groups.</p> <p>Greenwich is an Olympic Borough. The numbers of visitors to the Borough will be very significant to our KSI and casualty reduction figures. This has not been factored into the calculations above.</p>
Indicate how we intend to keep progress against targets under review and address areas of over or under performance	<p>Review casualty trends/numbers annually.</p> <p>Investigate casualty 'hotspots'. Introduce safety improvements.</p> <p>Re-evaluate the level of funding allocated to safety improvements where necessary.</p>



5.8 CO₂ Reduction.

Reduce CO ₂ emissions	
Target trajectory	<p>Improvement to air quality is embedded at the core of all Greenwich Council's strategies. The trajectory set for transportation as a contributor to reductions to CO₂ emissions is a realistic one in relation to both the projected population increases in the Borough and committed transport provision contained in the current TfL business plan.</p> <p>The changes in the table are taken from the baseline of 223 thousand tonnes a year, and are shown increasing by the averaged population increase of 1.4% a year. The population growth factored in the forecast is based on the annualisation of the predicted 22.6% (17 year 2010 – 2017) increase in the Borough of 53,000.</p> <p>The emissions for the new population have been factored at 0.75 of current per capita emission levels. This has been factored to reflect the reduced per person emissions expected to be achieved for new residents through the introduction of cross Council policies which include both transportation and new development measures, and means that the increased population will 'only' add a net 16 thousand tonnes to the annual yield (if the full growth rate was added this would have instead been 21 KTn)</p> <p>The second row 'projected reductions' shows the reduced levels of annual CO₂ emissions when the interventions outlined in the LIP 2 and MTS are put in. The rows reflecting the reductions without the predicted population change are also included (and shown in the graph by the red line) to show the reduction levels that would be achieved by these measures without the population growth.</p>
Link between target, LIP objectives, and Delivery Plan	<ul style="list-style-type: none"> • LIP strategic objectives 1,3,4,6,7,8,11 and 12 • Delivery Plan: Smarter Travel Initiatives and Active Travel development (including cycle training, travel plans electric vehicle charging points and car clubs), Town centre interchange, public realm, cycling and walking initiatives. Bus priority and traffic smoothing.
Evidence that the target is realistic and ambitious	<p>The Council believes this target to be both realistic and ambitious in light of a number of factors. The assumption is made that technological improvements to vehicles will start to play a major role in CO₂ reduction at the latter part of the period, and that by this time strategic improvements in bus provision and routing will have started to take effect, along with interventions which continue to promote and increase active travel. The target is still slightly below the Mayoral assumptions, as by 2017 no new major infrastructure will have come into operation and the Borough will still be suffering from the effects of the Blackwall Tunnel and Woolwich Ferry as traffic attractors, as well as a lack of new transport infrastructure in the south of the Borough, and linking opportunity and development areas.</p> <p>A significant proportion of overall CO₂ pollution is produced by motor vehicles. A large proportion of these vehicles neither start nor end their journeys in Greenwich, but simply pass through on our roads, and this situation is beyond our control. Considerable</p>

	<p>reduction in local traffic will have to be achieved for a noticeable reduction in CO₂ production. However, the Borough is expected to contribute significantly to the provision of new housing in the East sub-region. By 2027 the population of the Borough is expected to have grown to 288,000, an increase of approximately 53,000 or 22.6% since 2010. According to the Mayor's predictions employment in the Borough is expected to have grown by less than 10% over the Draft London Plan's lifetime, so considerable travel to employment is expected. The lack of public transport in certain areas of the Borough, and South East London areas means it is acknowledged by TfL that use of the private car is expected to increase locally. Crossrail, when implemented in 2018 with stations at Woolwich Arsenal and Abbey Wood will provide additional public transport capacity in the north of the borough but without funding commitment for significant north / south links, the benefits of Crossrail will be limited.</p>
Key actions for the Council	<p>Promote public transport by improving access to stations and reducing bus journey times and by helping to keep bus journeys more reliable.</p> <p>Work with developers and employers to develop and implement travel plans.</p> <p>Work with the local health authority to encourage healthy travel choices.</p> <p>Work with schools to continue the benefits of travel plans.</p> <p>Increase Car Club parking provision (on street and in new developments).</p> <p>Continue to increase to numbers of electric vehicle charging points in the Borough, both on street and through conditions placed on new developments.</p>
Key actions for local partners	<p>Increased improvements are required to public transport infrastructure and access to it. Additional river crossings for road based vehicles, improved public transport orbital links to the south and east, a strategic review of bus services are all required to help ease congestion and reduce private car use. Central Government fiscal measures are required to improve cost advantage of public transport over that of the private car. Developers and employers need to continue to develop and monitor travel plans, and implement car club provision and electric vehicle charging points.</p>
Principal risks and how they will be managed	<p>Increased in traffic flows through the Borough on TfL controlled roads detrimentally affect CO₂ output. River crossings in the Thames Gateway are limited to the Blackwall Tunnel and Woolwich ferry, until additional crossings are provided the A2/A102 and Blackwall Tunnel approaches will continue to be an attractor of vehicles and a major contributor to poor air quality in the Borough</p> <p>Additional housing provision without sufficient public transport provision will increase use of the private car and increase transport based CO₂ output. The Borough will continue to work with TfL to progress infrastructure improvements seek funding for better walking, cycling and public transport provision and seek contributions to sustainable transport provision through development control.</p>

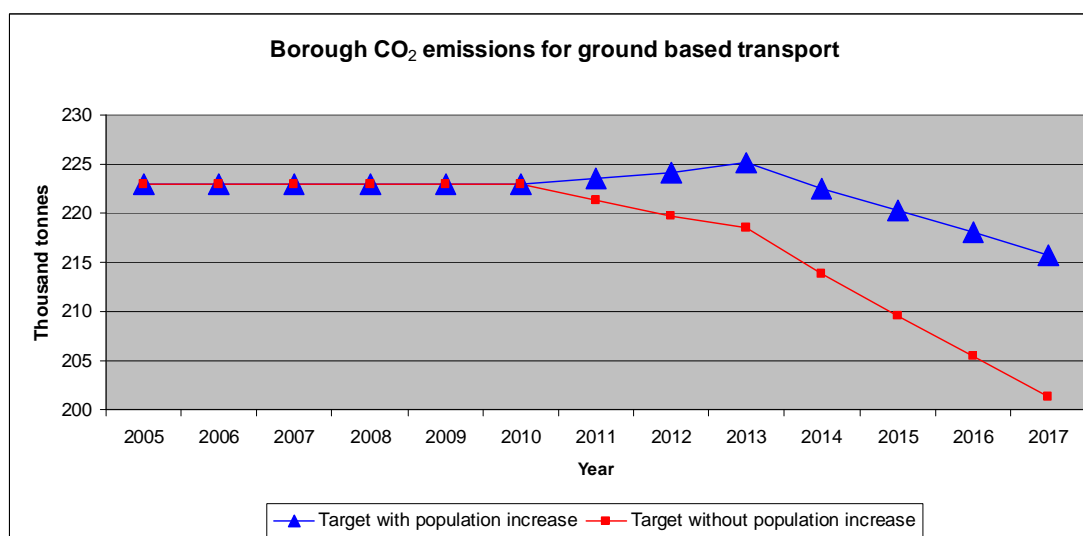
Data source	The GLAs London Energy and Greenhouse Gas Emission Inventory (LEGGI)
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Indicator		Trend	Indicator	Data	London-wide Quartile Position	Comment
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Greenhouse gas emissions for individual London boroughs	Current situation:	Total ground-based transport (2005 CO ₂ eq kilotonnes)	223	3rd Quartile	Top Quartile = smallest number
		Ground-based transport as % of all Emissions	21%	3rd Quartile	Top Quartile = smallest percentage

Ref: Atkins LIP benchmarking data for London

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Forecast Including Population projection	223	223	223	223	223	223	225.2	227.48	229.75	232.05	234.37	236.71	239.08	Projected emissions 'do nothing' (Kilo Tonnes)
	223	223	223	223	223	223	223.5	224.07	225.15	222.48	220.31	218.07	215.77	Projected emissions with LIP2 Interventions
Forecast Not Including Population projection	223	223	223	223	223	223	223	223	223	223	223	223	223	Projected emissions 'do nothing' (Kilo Tonnes)
	223	223	223	223	223	223	221.3	219.65	218.54	213.8	209.62	205.44	201.26	Projected emissions with LIP2 Interventions



5.9 Performance Management

Effective performance management will help integrate the second Local Implementation Plan with local priorities. Continual review of processes and actions and progress against targets, will allow the Council to improve existing services. In particular, we will ensure that areas of underperformance are addressed. This will include:

- Continued monitoring of outcomes and process including ongoing review of the delivery programme.
- Regular meetings will be held between key stakeholders to ensure that regular reporting of performance against targets is undertaken.
- New performance management systems are currently being developed within Transportation's Directorate which are linked to Borough wide monitoring systems. These allow regular review by senior management of all indicators. Local Performance Indicators contained within LAA's will be replaced in 2011.