

Harrou Walking, Cycling and Sustainable Transport Strategy 2019



CONTENTS

1.	Introduction	9
1.1	Why it matters.....	9
1.2	The challenge	10
1.3	LIP3 objectives.....	10
1.4	Sustainable transport choices	11
1.5	Healthy streets approach	11
1.6	Targets.....	12
1.7	The benefits of active travel.....	12
1.8	Barriers to walking and cycling.....	13
1.9	Funding improvements	14
1.10	Borough programme entry system	14
2.	Walking	15
2.1	Existing walking targets.....	15
2.2	Objectives for walking.....	16
2.3	Walking objective 1: Improve the quality and experience of walking throughout the borough	16
2.3.1	<i>Local walking schemes</i>	16
2.3.2	<i>Liveable neighbourhoods</i>	17
2.3.3	<i>Public realm improvements</i>	17
2.3.4	<i>Legible London</i>	17
2.3.5	<i>Preventing parking on verges and footways</i>	18
2.3.6	<i>Improving pedestrian access to green spaces</i>	18
2.3.7	<i>Road maintenance</i>	19
2.4	Walking objective 2: Improve the perceived and actual safety of pedestrians	20
2.4.1	<i>20mph zones</i>	20
2.4.2	<i>Local safety schemes</i>	21
2.4.3	<i>Local safety parking schemes</i>	21
2.4.4	<i>Community roadwatch</i>	21
2.4.5	<i>Pedestrian crossings</i>	23
2.5	Walking objective 3: Improve health of borough residents by promoting healthy walking and encouraging active travel and recreational walking	24
2.5.1	<i>Walking for health</i>	24
	<i>School walking bus</i>	25
2.5.2	<i>Walk Once a Week (WOW)</i>	25
2.5.3	<i>International walk to school month</i>	25
2.5.4	<i>Theatre in education</i>	25
2.5.5	<i>School active travel maps</i>	25
2.5.6	<i>Active Harrow Strategic Group</i>	26
2.5.7	<i>Walking campaigns and promotions</i>	26
2.6	Delivering the walking objectives.....	28
2.7	Funding the walking action plan	30
2.8	Walking Action Plan.....	31
3.	Cycling	36
3.1	Cycling vision	37
3.2	Existing cycling targets	37
3.3	Objectives for cycling	37
3.3.1	<i>Cycling objectives link to healthy streets</i>	37

3.4	Cycle monitoring	38
3.5	Cycling objective 1: Make cycling journeys safer	40
3.5.1	<i>Cycle training</i>	40
3.5.2	<i>Women-only cycle training</i>	41
3.5.3	<i>Balance and Ride courses for children</i>	41
3.5.4	<i>Improving bikeability of all routes in Harrow</i>	41
3.6	Cycling objective 2: Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel	42
3.6.1	<i>National bike week</i>	42
3.6.2	<i>Biking fun days</i>	42
3.6.3	<i>Biker's breakfast club</i>	42
3.6.4	<i>Dr Bike sessions</i>	42
3.6.5	<i>E-bike trial</i>	42
3.6.6	<i>School active travel maps</i>	43
3.6.7	<i>Tour de Harrow</i>	43
3.6.8	<i>Tour de Salah</i>	43
3.6.9	<i>BMX cycling facility</i>	43
3.7	Cycling objective 3: Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes	44
3.7.1	<i>Creating a better cycle network</i>	44
3.7.2	<i>Harrow TfL Cycleway route</i>	46
3.7.3	<i>Recreational cycle network</i>	47
3.7.4	<i>Crossing signals for cyclists</i>	47
3.8	Cycling objective 4: Facilitate and support bicycle ownership/access and secure parking	47
3.8.1	<i>Borough wide cycle parking survey</i>	48
3.8.2	<i>Dockless Cycle Hire Scheme</i>	48
3.8.3	<i>Electric Dockless cycle hire scheme</i>	48
3.8.4	<i>Borrow a bike campaign</i>	48
3.8.5	<i>Cycle parking</i>	48
3.8.6	<i>Cycle hubs</i>	49
3.9	Delivering the cycling objectives	50
3.10	Funding the cycling action plan	52
3.11	Cycling Action Plan	54
4.	Public transport	57
4.1	Managing public transport in Harrow	57
4.2	Harrow public transport liaison group	58
4.3	Benefits of buses	58
4.4	Benefits of Underground & Rail services.....	58
4.5	Existing public transport targets	58
4.6	Objectives for public transport.....	59
4.6.1	<i>Public transport objectives link to healthy streets</i>	59
4.7	Public transport objective 1: Improve the accessibility of the public transport network and ensure increased inclusivity	60
4.7.1	<i>Bus stop accessibility</i>	60
4.7.2	<i>Station step-free access</i>	61
4.7.3	<i>Accessible parking at stations</i>	61
4.8	Public transport objective 2: Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use	61
4.8.1	<i>Bus priority schemes</i>	62
4.8.2	<i>Wealdstone town centre bus priority</i>	62

4.8.3	<i>Route 140 and other route studies</i>	63
4.8.4	<i>Night buses</i>	63
4.9	Public transport objective 3: Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs	63
4.9.1	<i>Cycle parking at stations</i>	64
4.9.2	<i>Cycle parking hubs at stations</i>	64
4.9.3	<i>Public realm improvements</i>	64
4.9.4	<i>Taxis at stations</i>	65
4.10	Delivering the public transport objectives	66
4.11	Funding the public transport action plan	67
4.12	Public Transport Action Plan	68
5.	Low emission vehicles	72
5.1	Low emission vehicles vision	72
5.2	London initiatives to encouraging change to less polluting vehicles	72
5.2.1	<i>London Low Emission zone</i>	72
5.2.2	<i>T-CHARGE</i>	73
5.2.3	<i>London Ultra Low Emission Zone</i>	73
5.3	Access to charging points	73
5.4	Electric charging network.....	73
5.5	Types of electric vehicle charging facilities	74
5.6	Electric vehicles	74
5.7	Current Harrow network for electric charging vehicles	76
5.8	Mayoral ambition	78
5.9	Objectives for low emission vehicles.....	78
5.9.1	<i>Low emission vehicle objectives link to healthy streets</i>	78
5.10	Low emission vehicles objective 1: Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles	79
5.10.1	<i>Electric vehicle car clubs</i>	79
5.10.2	<i>Discouraging use of diesel vehicles</i>	80
5.10.3	<i>Promoting low emission vehicles</i>	80
5.11	Low emission vehicles objective 2: Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate	80
5.11.1	<i>On-street vehicle charging</i>	80
5.11.2	<i>Neighbourhoods of the Future</i>	80
5.11.3	<i>Training Mechanics</i>	81
5.11.4	<i>Extending vehicle charging facilities</i>	82
5.11.5	<i>Rapid charging facilities</i>	82
5.11.6	<i>Rapid charging for taxis</i>	84
5.11.7	<i>Electric Vehicle Fleet Trial</i>	84
5.12	Low emission vehicles objective 3: Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot	84
5.12.1	<i>Increasing the number of electric vehicles into the Council's fleet</i>	85
5.12.2	<i>Increasing electric charging facilities for vehicles at the depot</i>	85
5.13	Delivering the low emission vehicle objectives.....	86
5.13.1	<i>Funding for the low emission vehicles action plan</i>	87
5.14	Low Emission Vehicles Action Plan.....	88
6.	Schools – Sustainable Modes of Travel (SMOT)	90
6.1	Legislation.....	90
6.2	School travel.....	90

6.3	School travel plans	90
6.4	School expansion programme.....	91
6.5	Support for schools	91
6.6	Types of schools in Harrow	91
6.7	How are pupils in Harrow currently travelling to school	92
6.8	STARS - Sustainable Travel: Active, Responsible, Safe	92
6.8.1	<i>What is the latest Harrow STARS status?</i>	93
6.9	Healthy Schools London	93
6.9.1	<i>What is the latest Healthy Schools award level for schools in Harrow?</i>	94
6.10	SMOT Objectives	94
6.11	SMOT objective 1: Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment	96
6.11.1	<i>School active travel maps</i>	96
6.11.2	<i>Bike week</i>	97
6.11.3	<i>Bikers breakfast club</i>	97
6.11.4	<i>Dr Bike</i>	97
6.11.5	<i>Children’s Traffic Club (CTC)</i>	97
6.11.6	<i>Tour de Salah</i>	97
6.11.7	<i>RideLondon</i>	97
6.11.8	<i>Junior Travel Ambassador (JTA) Scheme</i>	98
6.11.9	<i>Youth Travel Ambassadors</i>	98
6.11.10	<i>Free School Travel Party Scheme</i>	98
6.11.11	<i>20mph zones</i>	99
6.11.12	<i>School travel plan engineering measures</i>	99
6.12	SMOT objective 2: Achieve and improve school’s TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans... 102	
6.13	SMOT objective 3: Raise awareness of air quality around schools by working with schools to identify local air quality issues	102
6.13.1	<i>Identifying air quality around schools</i>	103
6.13.2	<i>Anti-idling campaigns (air quality events)</i>	103
6.13.3	<i>Congestion Busting</i>	103
6.14	SMOT objective 4: Reduce the number of schools trips made by car and improve pupils’ independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport.....	103
6.14.1	<i>Cycle training</i>	103
6.14.2	<i>Balance and ride courses for children</i>	105
6.14.3	<i>Walk to school</i>	105
6.14.4	<i>Walk Once a Week (WOW)</i>	105
6.14.5	<i>Walking bus</i>	105
6.14.6	<i>Travel Training</i>	105
6.15	Delivering the SMOT objectives	105
6.16	Funding the SMOT action plan	106
6.17	SMOT Action Plan.....	109
Appendix A: Latest STARS school accreditation status		112
GLOSSARY		115

TABLES

Table 1: Barriers to walking or cycling	13
Table 2: Walking objectives link to healthy streets	16
Table 3: Long term walking targets.....	28
Table 4: Walking targets to deliver objectives.....	28
Table 5: Key funding source for walking initiatives	30
Table 6: Walking action plan.....	31
Table 7: Cycling objectives link to healthy streets.....	38
Table 8: Long term cycling targets	50
Table 9: Cycling targets to deliver objectives	50
Table 10: Key funding sources for cycling initiatives	52
Table 11: Cycling Action Plan	54
Table 12: Achieving public transport targets	59
Table 13: Public transport objectives link to healthy streets.....	60
Table 14: Public transport targets to deliver objectives	66
Table 15: Key funding sources for public transport initiatives	67
Table 16: Public transport action plan	68
Table 17: Vehicle emissions objectives link to healthy streets.....	78
Table 18: Low emission vehicle targets to deliver objectives.....	86
Table 19: Key funding sources for low emission vehicles initiatives	87
Table 20: Low emission vehicles action plan	88
Table 21: Summary of STARS school accreditation status.....	93
Table 22: Walking objectives link to healthy streets	95
Table 23: SMOT targets to deliver objectives	105
Table 24: Key funding source for SMOT initiatives	107
Table 25: SMOT action plan	109

FIGURES

Figure 1: Healthy Streets indicators.....	12
Figure 2: Schools and 20mph zones in Harrow.....	22
Figure 3: Percentage change in cycling 2017-2018.....	39
Figure 4: Harrow cycling connectivity map.....	45
Figure 5: Harrow aspirational strategic cycle network	46
Figure 6: Proposed cycleway - Northwick Park to Harrow Weald	47
Figure 7: Number of registered electric vehicles in the UK by quarter	75
Figure 8: Number of registered electric vehicles in London by quarter	75
Figure 9: Comparison of number of registered electric vehicles within outer London boroughs.....	76
Figure 10: Electric charging point in Harrow, February 2019	77
Figure 11: Proposed rapid charging facilities.....	83
Figure 12: Harrow mode of travel to schools 2017/18.....	92
Figure 13: Schools and 20mph zones in Harrow.....	101

1. Introduction

The way we live our lives and travel around our locality feels personal and private but the impacts are far wider. The choices we make impact climate change, the environment and the health and life expectancy of those living around us. Choosing to use motorised vehicles does not just impact on our own personal health, it also impacts the health and well-being of the surrounding population.

Walking and cycling are the healthiest and most sustainable ways to travel, either for whole trips or as part of longer journeys on public transport. The borough policies included in this strategy aim to increase the number of people participating in active travel and to encourage and enable more people to walk and cycle more often. More active travel can improve our health as well as our psychological well-being. For transport to have long term sustainability, it must also minimise environmental damage which is a key policy priority for Harrow.

This strategy has been prepared to show how Harrow encourages sustainable transport choices and to provide more information to support the Harrow Transport Local Implementation Plan 2019/20 - 2021/22 (LIP3).

Although different transport modes are discussed separately in this strategy, they are never considered in isolation. In all locations, the issues are addressed holistically and all modes of travel are always considered. This is further ensured through Harrow's adoption of the Healthy Streets approach.

1.1 Why it matters

In London around half of nitrogen oxides (NO_x), around half of PM₁₀ and over half of PM_{2.5} emissions come from road transport sources. Breathing in air pollution can increase the risk of heart disease and stroke, worsen asthma symptoms, contribute to lung cancer, exacerbate other health conditions and shorten lives. The communities suffering the most from poor air quality are often the most vulnerable in society. Outdoor air pollution is responsible for the equivalent of up to 36,000 premature deaths a year in the UK¹.

Greater London Authority research has shown that if every Londoner walked or cycled for 20 minutes a day, it would save the NHS £1.7bn in treatment costs over the next 25 years. This includes 85,000 fewer people being treated for hip fractures, 19,200 fewer people suffering from dementia, and an estimated 18,800 fewer Londoners suffering from depression.

In Outer London only 60 per cent of journeys are done on foot, by cycle or using public transport, with cars currently being used for the remaining 40 per cent. While about 80 per cent of these car journeys are short enough to feasibly be switched to active, efficient and sustainable modes, such a switch is dependent on providing more appealing alternatives and also changing attitudes.

Sources of greenhouse gas emissions in London are dominated by buildings and transport. It is estimated that in 2015, 24 per cent of emissions in London were generated from transport.

The Mayor of London aims for London to be a zero carbon city by 2050. The 2008 Climate Change Act established a target for the UK to reduce its carbon emissions by at least 80% from 1990 levels by 2050 to limit global warming to 2°C. The climate change agreement in Paris in December 2015 agreed to limit global temperature increases to 1.5°C and the need to achieve zero net global carbon emissions by the second half of this century to achieve this. To meet these targets and to reduce premature deaths and emissions related illnesses, we all need to act now.

¹ Committee on the Medical Effects of Air Pollutants (COMEAP)

1.2 The challenge

London faces significant projected population growth (70,000 every year), reaching 10.5 million in 2041. This means that just to meet demand, at least 66,000 new homes need to be built in London every single year. In Harrow, the borough needs to build 13,920 new homes by 2028/29² to meet the growing demand.

If the population growth results in increased traffic volumes, there are economic, environmental and health consequences. The road and public transport network are already under pressure with congestion occurring on a daily basis. Sustained growth in demand for motorised travel will outstrip the available supply of land. Travel by car will therefore become even more difficult and the only way to address this demand is to spread the travel demand across a wider range of mode choices.

Continued growth in the borough population, the increase in single occupancy households and the increase in the proportion of people aged over 85 all need considering in terms of their impact on transport. Increased traffic volumes are likely to increase traffic congestion and worsen air pollution. Traffic congestion also damages the economy. Health of the borough will also be impacted. Two thirds of adults and one fifth of children start school overweight in Harrow, and diabetes rates in the borough are higher than the England average. Both these conditions are exacerbated by increasingly sedentary lifestyles. These are all issues that can be significantly addressed through ensuring a more active population living in a healthier environment.

To encourage those with access to a car to walk, cycle or use public transport, the alternatives need to compete favourably against the car in terms of journey times and reliability, comfort and personal independence. Active travel is far cheaper and in many cases quicker than other transport modes, but people are not always aware of this.

To ensure this Harrow has a sustainable future, the borough needs to reduce reliance on non-sustainable forms of transport, wherever possible remove motorised vehicle domination of neighbourhoods and create a better and healthier environment for sustainable forms of transport. Streets need to be inviting places for all, so that residents, visitors, employers and employees can better appreciate them.

This report will show how Harrow is addressing these issues and working towards a more sustainable future.

1.3 LIP3 objectives

LIP3 sets out long terms goals and transport objectives for the borough for the next 20 years, proposes a three-year programme of investment starting in 2019/20, and includes a delivery plan for the period 2019/20 - 2021/22. It also includes the targets and outcomes the borough is seeking to achieve.

The plan identifies how the London Borough of Harrow will work towards achieving the MTS priorities which are:

- Healthy Streets and healthy people
- A good public transport experience
- New homes and jobs

As part of developing LIP3, the following transport objectives were agreed:

² Draft London Plan, December 2017

1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to better enable active and safer travel particularly for pedestrians and cyclists thereby reducing congestion and improving public health and local air quality
2. Adopt a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041 and focus on reducing the number of motorcycle casualties across the borough
3. Increase the number of people cycling in the borough in order to improve public health, improve air quality, reduce congestion and to reduce the impact of climate change
4. Improve freight servicing and delivery arrangements to reduce congestion and delays on the network and consider other types of freight delivery options that could reduce traffic congestion
5. Encourage the uptake of more sustainable modes of travel including travel for those with mobility difficulties and dissuade use of private cars through active travel initiatives, delivering additional healthy routes to school, promotion of cycle hire schemes, the use of parking and permit policies and prioritising road space to walking and cycling to improve the environment.
6. Encourage the uptake of ultra-low emission vehicles instead of fossil fuel powered vehicles through the use of promotional activities, increased Ultra Low emission zones, neighbourhoods of the future, and greater availability of electric charging facilities, thereby improving air quality, reducing traffic noise and reducing CO₂ emissions throughout the borough
7. Support improved orbital transport links across the borough and between outer London centres to provide wider access to employment opportunities and to enable journeys currently made by car to be made by sustainable forms of transport and thereby improve the environment
8. Improve transport connectivity throughout the Harrow and Wealdstone Opportunity Area and particularly between Harrow-on-the-Hill station/ Harrow bus station and Harrow & Wealdstone station
9. Ensure that the vitality of all town centres are supported through good transport links prioritising sustainable modes of transport
10. Improve public transport accessibility, support the expansion of bus and rail services throughout Harrow and in particular, support increased bus priority to deliver a more reliable, faster and more accessible public transport experience
11. Prioritise sustainable travel improvements for all new developments to support population growth and housing needs identified in the London Plan and local development framework
12. Prioritise the transport needs of the Harrow and Wealdstone Opportunity Area
13. Keep the transport network in good condition and serviceable to encourage the use of sustainable transport modes

1.4 Sustainable transport choices

For the purposes of this document, sustainable transport includes walking, cycling, scooting and the use of low emission vehicles such as electric vehicles and public transport.

1.5 Healthy streets approach

The Healthy Streets approach is the underlying framework for the Mayor of London's Transport Strategy. This approach is a system of policies and strategies to put people, and their health, at the heart of decision making. Harrow has adopted the healthy streets approach to deliver improvements that will enable the borough to improve people's experience of walking, cycling and using public transport and also encourage fewer trips by car.

Healthy streets can provide high-quality environments with enough space for walking, cycling and public transport use. Streets can be enhanced with seating, shade, trees and greenery, and reduced dominance of vehicles by designing for slower vehicle speeds. They can hold events and activities that entice people out to shop, play and socialise. Adopting the healthy streets approach will help the

borough work towards creating a healthier and more attractive street environment, increasing the number of people walking, cycling and using public transport and changing streets so that quality of life for all people is improved, enabling people to live well and also to reduce inequalities.

The healthy streets approach is not a quick fix to deliver change, it is a long-term plan for improving people’s experiences of streets, helping everyone to be more active and enjoy the health benefits of an improved environment.

Figure 1 shows the ten indicators that are used to measure Healthy Streets. Using these evidence based indicators will help to ensure that streets are made to be more attractive places. This will enable Harrow to work towards creating a healthier street environment increasing the number of people walking, cycling and using public transport and improve streets so that all people are included and can live well.

Figure 1: Healthy Streets indicators



1.6 Targets

The Mayor of London’s Transport Strategy (MTS) puts active travel at its heart and sets the following targets for London:

- Mode share - 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041 (from 63 per cent in 2015)
- Physical activity - all Londoners to do at least the 20 minutes of active travel they need to stay healthy each day by 2041

As part of Harrow’s Transport Local Implementation Plan 2019/20 - 2021/22, Harrow has adopted these targets. In addition, Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041.

1.7 The benefits of active travel

Active travel includes walking, cycling and scooting. Daily physical activity is hugely important for maintaining health, and inactivity directly contributes to one in six deaths in the UK.

If more people walk or cycle and consequently fewer people drive, the direct benefits from the increased active travel are:

- Improved physical and psychological wellbeing
- Reduced social exclusion

- Reduced traffic volumes
- Reduced traffic congestion
- Reduced air pollution
- Less traffic noise
- Reduced carbon emissions
- Streets and neighbourhoods that are more pleasant

For the individual, the benefits of walking and cycling are:

- Improved personal health including weight loss – particularly of benefit to those with high blood pressure, obesity and type 2 diabetes but also of benefit to people with stressful lives
- Less breathing problems - pollution levels are lower in the open air than in motor vehicles
- Improved personal fitness level
- Improved sleep
- Increased independence
- An improved local environment
- Faster journeys particularly for shorter journeys where cycling is often the fastest modes of transport
- More money as walking and cycling are low cost modes of travel
- More accurately estimated journey times
- Improved access to essential services and facilities
- Increased social inclusion
- Reduced parking problems

Just 10 minutes physical activity a day has a big benefit to a person’s health and wellbeing. Harrow residents have reported that the barriers to being active are cost and time. Taking an active way to travel to work, school or recreational activities helps reduce these barriers.

1.8 Barriers to walking and cycling

Addressing the reasons that we don’t walk or cycle more is a key way to encourage increased active travel. Table 1 shows many of the reasons people give for not actively travelling.

Table 1: Barriers to walking or cycling

	Walking	Cycling/ Scooting
Not enough time	✓	✓
Security / safety concerns	✓	✓
Route safety perceptions	✓	✓
Bad weather	✓	✓
Not fit enough / too tired to walk or cycle or use scooter	✓	✓
Have a disability that makes it harder to walk/cycle/use scooter	✓	✓
Public anti-social behaviour	✓	✓
Unfamiliar with route	✓	✓
Car is more convenient	✓	✓
Habit	✓	✓
Distance perceived as too far	✓	✓

	Walking	Cycling/ Scooting
Too many hills	✓	✓
Need to carry heavy goods	✓	✓
Need car for next part of journey	✓	✓
Streets are dirty and too much litter everywhere	✓	✓
Poor lighting increasing perceptions of danger	✓	✓
Don't own a bike or scooter		✓
Concerns about cycle /scooter theft		✓
No seating along the route to rest	✓	
Footways cluttered and too often obstructed by cars, street furniture, signage	✓	
Poorly designed streets	✓	
Lack of tactile paving	✓	
Lack of safe crossings	✓	
Illegal cycling on the footpath makes journey feel unsafe	✓	
Fear of being involved in a collision		✓
No segregated cycle routes		✓
Nowhere weatherproof to leave bicycle		✓
Nowhere to shower / change at destination		✓
Nowhere safe to leave bicycle at destination		✓

1.9 Funding improvements

The key source of funding for most sustainable transport schemes is the borough's TfL LIP allocation funding. However lack of funding and supporting resources constrain the amount that the borough is able to deliver. The borough also hopes to achieve TfL Strategic and Discretionary funding for some schemes which is dependent on negotiations with TfL and successful bids. There is also a small amount of borough funding available for selected schemes.

1.10 Borough programme entry system

There is not sufficient funding or resources to address all of the issues identified in this plan. For this reason, Harrow has developed a formal framework for assessing and prioritising all suggestions for projects, schemes or works. This framework is known as the borough programme entry system. This enables the borough to develop a ranking list for each work category type. The work categories used in the programme entry system are based around the MTS and latest LIP. Those cases that satisfy the criteria and meet a set threshold are then used to inform the development of future programmes of investment.

2. Walking

Walking is one of the simplest ways to keep healthy, save money and help the environment, yet people are still too often reticent to choose to walk.

According to a Diabetes Care Report 2018 for Harrow, only 76.9% of people in Harrow do any walking at least once a week which is below the England average of 80.6%. Harrow has the 2nd lowest levels of walking in London. Nearly one in three (31%) of the adult population in Harrow is classed as physically inactive falling into the Chief Medical Officer's "high risk" health category. Not exercising enough can have serious health implications including childhood obesity and diabetes.

Fourteen per cent of Londoners say London is not pedestrian friendly, and 11 per cent say this of their local area. Sixty-six per cent of Londoners say they would walk more if routes were improved to give greater priority to people walking. People need space for walking as well as safe and convenient crossings.

This strategy has been developed to show how Harrow is working to improve the environment for walking and encouraging everyone to walk more. The plan supports the Harrow Transport Local Implementation Plan 2019/20 - 2021/22 (LIP3) by providing more details on the work that Harrow is doing.



2.1 Existing walking targets

Targets are important to ensure that borough progress in delivering sustainable transport can be monitored.

The following targets have all been agreed as part of LIP3:

1. By 2041, 64% of daily trips should be made by foot, cycle or public transport in Harrow
2. By 2041, 70% of Harrow residents will do at least 20 mins active travel each day
3. Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041

2.2 Objectives for walking

Based on the Harrow LIP3 and the Mayor of London’s Transport Strategy 2018, the following are the objectives for walking in Harrow:

1. Improve the quality and experience of walking throughout the borough
2. Improve the perceived and actual safety of pedestrians
3. Improve health of borough residents by promoting healthy walking and encouraging active travel and recreational walking

The walking objectives fit well with the Healthy Streets indicators and this is shown in Table 2.

Table 2: Walking objectives link to healthy streets

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Improve the quality and experience of walking throughout the borough	✓	✓	✓	✓	✓	✓	✓		✓	✓
Improve the perceived and actual safety of pedestrians	✓	✓			✓	✓	✓		✓	✓
Improve health of borough residents by promoting healthy walking and encouraging active travel and recreational walking	✓					✓	✓		✓	✓

2.3 Walking objective 1: Improve the quality and experience of walking throughout the borough

Good infrastructure enables more active travel. People walking need good routes and crossings, and uncluttered and attractive streets. The borough needs to improve the environment for pedestrians and cyclists in the whole borough and particularly within new growth areas such as the Harrow Opportunity Area.

Adopting the healthy streets approach will enable the borough to improve people’s experience of walking and also encourage fewer trips by car. Streets need to be inviting for everyone to spend time in and enjoy. Over the longer term, this plan aims to improve people’s experiences of the streets, helping everyone to be more active and enjoy the health benefits of an improved environment.

2.3.1 Local walking schemes

These schemes are introduced to address local barriers to walking at crossing points and to address severance issues that arise from heavily trafficked roads. The aim of walking schemes is to provide easy and safe access to local amenities and facilities within communities and particularly better access for people with mobility impairments.

The typical measures introduced in these schemes include pedestrian crossings, controlled crossings, signal pedestrian phases, pedestrian route signing as well as the introduction of new pedestrian routes and links. New schemes are prioritised using a formal framework for assessment based on the local environment.

2.3.2 Liveable neighbourhoods

A Liveable Neighbourhood is an area that provides attractive, healthy, accessible and safe neighbourhood for people. Typically, this may involve changes to town centres and their surrounding residential areas to improve conditions for walking and cycling and reduce traffic dominance. Liveable neighbourhoods will often also include increased planting and street greening.

Liveable neighbourhoods improve people's experience of walking, cycling and using public transport and encourage fewer trips by car. However they are expensive to introduce and the borough needs external financial support to enable their delivery. The borough has a long term aspirational programme for delivering liveable neighbourhoods over the next 15 years.

To identify the future programme for liveable neighbourhoods, a wide range of issues are considered. These include local health issues, poor air quality, local connectivity and high indices of multiple deprivation.

2.3.3 Public realm improvements

Harrow and Wealdstone Intensification Area will be the focus for growth in the borough. Wealdstone and Station Road will become the focus of regeneration efforts, providing for a substantial proportion of the Borough's future housing growth. Growth areas will be accompanied by large scale public realm improvements. These public realm improvements will include an improved walking environment that considers safety, accessibility, signing, seating, street greening and lighting etc.

2.3.4 Legible London

Legible London is a wayfinding project designed to provide better information throughout London for people who walk. The signs offer a consistent experience and information about distances between areas. The signs are also well integrated with other transport modes, so when people are leaving the tube they can quickly identify the route to their destination.

Legible London maps and signs help people find their way by detailing the landmarks they'll pass on their journey and estimate the time it will take to reach their destination. The signs are orientated to face the same way as the user is facing. This helps people understand their immediate environment more easily.

Harrow began rolling out Legible London in the borough in 2013. So far it covers all the underground and overground stations in the borough, all the town centres including Harrow, Wealdstone, Pinner, Stanmore, Hatch End, West Harrow, North Harrow, South Harrow, Sudbury Hill and Headstone Manor. As the signs are rolled out they encourage residents and visitors to the borough to walk more and to further explore local areas.



Previously the signs were supported financially by TfL funding. This will no longer happen and future support for these schemes will be dependent on receiving S106 funding from developers as part of the planning approval process.

2.3.5 Preventing parking on verges and footways

Parking on verges and footways anywhere in London is illegal, unless adjacent signs indicate otherwise. Doing so is obstructive to pedestrians, blind people, those with mobility difficulties and to people with pushchairs. It also causes additional maintenance costs, environmental damage and risk of infrastructure damage. Driving onto the pavement or footway (to park or otherwise) is an offence under Section 72 of the *Highways Act 1835*.

There are a few locations across the borough where regular and illegal footway parking has occurred. This was the result of the high number of cars needing to park in densely populated locations. There are some locations in the borough where footway parking is allowed. At these locations, marked bays are shown on the footway and it is clearly signed as such. Parking on footways or verges across the borough has been reviewed and in the future will be better enforced to ensure that the pavements and verges are kept clear for pedestrians and those with mobility difficulties.

2.3.6 Improving pedestrian access to green spaces

Green spaces provide social, environmental, and economic benefits which both directly and indirectly enhance an individual's quality of life. Access to green space improves quality of life and general well-being, aids in the treatment of mental illnesses, can reduce health inequalities, help remedy depression and generally improves the physical and mental health of individuals.



Rights of way

The borough's countryside comprises green belt, open spaces and parks. Harrow's rights of way run through much of these green areas. Rights of way in Harrow include footpaths, bridleways and byways. An annual survey is undertaken to review the condition of the rights of way and to identify remedial actions needed. Issues identified include extending the rights of way network to include new routes and also improving the overall accessibility of the network to all users, particularly those with mobility difficulties. Typical measures to improve the rights of way include way marking signage, handrails, seating along long routes, new rights of way and replacing stiles with kissing gates to improve accessibility.

Green grid

The Green Grid is a network of interlinked, multi-purpose open and green spaces with good connections to the places where people live and work. The Harrow Green Grid is part of a wider London Green Grid, and includes projects that will help develop and improve the network.

The All London Green Grid (ALGG) is a strategic project which provides a framework for the creation, enhancement and management of multifunctional green and open spaces across the whole of Greater London. It is an important initiative in facilitating green infrastructure projects across the capital.

The ALGG aims to:

- increase access to open space
- conserve landscapes and the natural environment and increase access to nature
- adapt the city to the impacts of climate change

- make sustainable travel connections and promote cycling and walking
- encourage healthy living
- promote sustainable food growing
- enhance visitor destinations and boost the visitor economy
- promote green skills and sustainable approaches to design, management and maintenance

Green grid funding is usually provided through Section 106 funding or CIL funding as part of the planning process.



2.3.7 Road maintenance

Poor road conditions can deter people from walking and can also be dangerous. All of Harrow roads and pavements are inspected regularly by a team of Highways Inspectors.

The council has put in place a system for reviewing and prioritising all highways maintenance defects to ensure resources are used in the most effective way through two main areas of work:

- Reactive maintenance which deals with immediate risks to the public from minor defects and,
- Structural maintenance which addresses large scale refurbishment due to significant deterioration of the highway structure.

Reactive repair works

All footways and carriageways in the borough are inspected by the council's highway inspectors on a cyclical routine inspection regime, between three and four times a year. As a result of these inspections localised minor works and repairs are implemented where a defect exceeds the council's intervention levels, and is considered to be a potential hazard to pedestrians or vehicles. This work is aimed at keeping the highway asset condition safe for the travelling public and complies with national guidance set out in the "Well Managed Infrastructure Code of Practice".

The public can also report defects that they see and the highway inspectors will undertake additional safety inspections to investigate these reports and implement repairs where the intervention levels are met.

Structural maintenance programmes

Major work programmes are developed on the basis of annual condition surveys undertaken to an agreed UK pavement management assessment system undertaken by specialised highway surveyors. The surveys are reviewed by the Council in accordance with the principles of the Council's highway asset management strategy to determine the maintenance priorities for the year. As far as practicable the Council produces a targeted programme of works that takes account of the condition surveys, traffic usage, reactive maintenance history and any other identified risks. The aim is to achieve the maximum benefit from the resources available so that the longevity of the highway is maximised and the speed of deterioration and any future maintenance costs are minimised. There are two main structural maintenance programmes, one for carriageways resurfacing and the other for footways reconstruction.

2.4 Walking objective 2: Improve the perceived and actual safety of pedestrians

Harrow has an excellent record in road safety and is one of the safest boroughs in London. However, busy roads, junctions and high-speed traffic all impact pedestrian safety and perceptions of safety and discourage walking.

One of the most effective ways of improving pedestrian safety is reducing vehicle speeds. Even at a relatively low impact speeds, pedestrians receive more severe injuries than many other road user groups, when involved in collisions, because often their only protection is their clothes.

The Council provides road safety courses at Harrow schools and more information on these is provided in the School Sustainable Mode of Travel strategy.

Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041 and the work identified in this section, all contribute to Harrow's vision zero approach to road safety.



2.4.1 20mph zones

20mph zones create a safer environment for all road users. They not only improve the safety of an area, but also improve the perception of safety.

Harrow has introduced 20mph zones around most of the schools in the borough. A few of the schools in the borough are located in areas where it is not possible to introduce a 20mph zone such as being located by a main road. Figure 2 shows schools in the borough as well as the existing 20mph zones in the borough. Around 50% of the road network in the borough is covered by 20mph speed restrictions and the borough will work to increase this.

Harrow 20mph zones are designed to be "self-enforcing" due to traffic calming measures which are introduced along with the change in the speed limit. Speed humps, chicanes, road narrowing, and other measures are typically used to both physically and visually reinforce the slower speed limits.

The main aims of the introduction of a 20mph speed limit in an area are to:

1. improve road safety
2. discourage passing through traffic
3. encourage walking and cycling
4. improve the local environment

Before and after site surveys such as speed surveys are undertaken to monitor the impact of the measures introduced. The borough shares recorded speed survey data with the police at quarterly traffic liaison meetings so they can decide whether they should target their resources to the area.

2.4.2 Local safety schemes

Local Safety schemes form part of the Mayor of London's vision zero transport strategy for deaths and serious injuries to be eliminated from all road collisions on London streets by 2041. They are introduced to reduce casualties in any area where clusters of accidents occur.

Pedestrians crossing roads are particularly vulnerable when involved in accidents with motorised vehicles, particularly when vehicles are travelling at speed. The types of improvements that can be made to improve safety for pedestrians in these schemes are: improved and new crossing facilities such as Countdown times, Zebras, Pelican, Puffin and Toucan crossings, or all red phased signalled crossings; traffic speed limit signs; vehicle activated traffic speed signs; improved lighting; and changes to parking regulations to improve visibility for pedestrians.



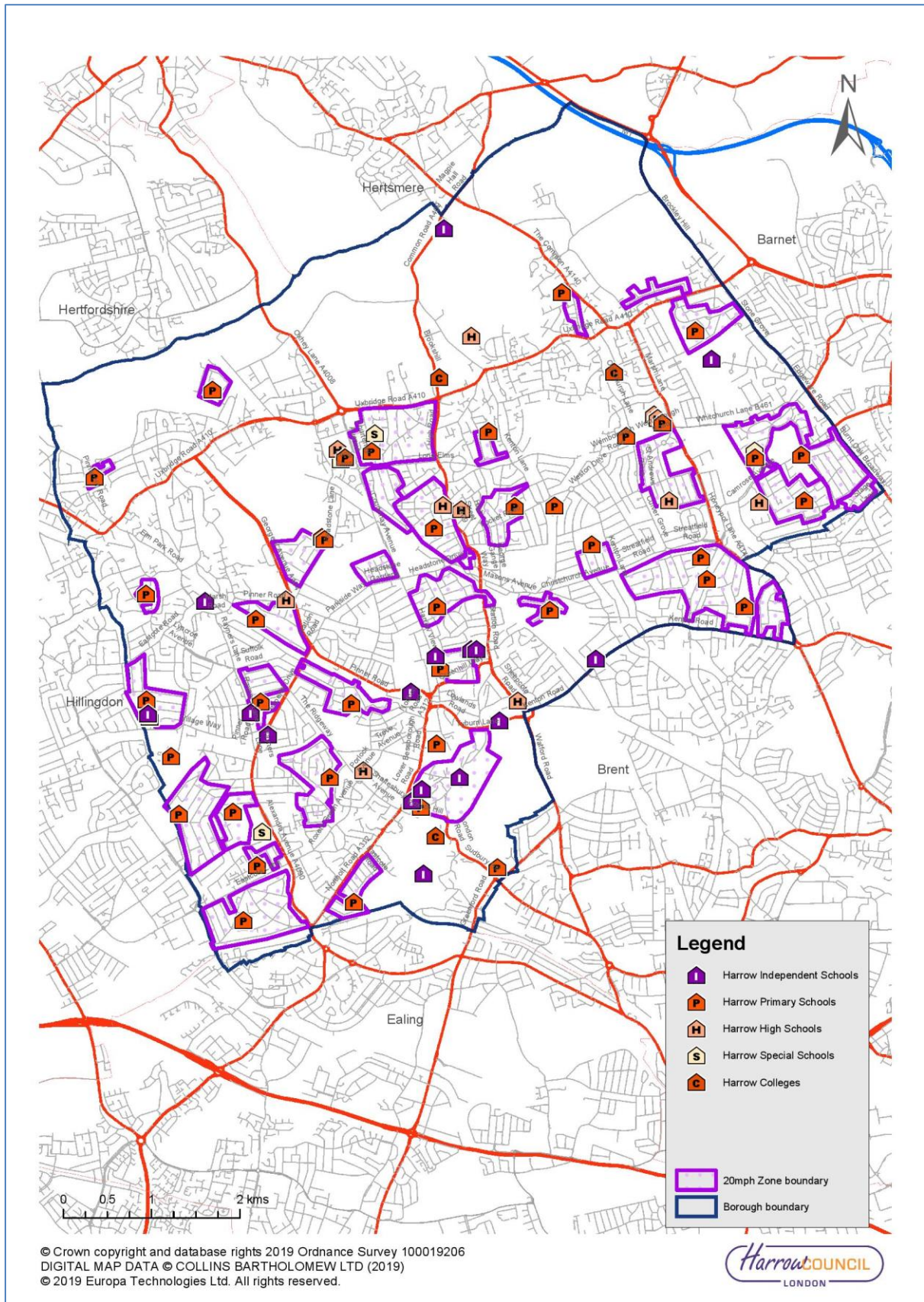
2.4.3 Local safety parking schemes

Local safety parking schemes are introduced to improve local pedestrian access and also to protect dropped crossings. These schemes often also improve visibility for road crossings and may involve changes to road markings or operational hours of controlled parking bays.

2.4.4 Community roadwatch

Community roadwatch is a scheme that gives local residents the opportunity to work side by side with their local police teams and use speed detection equipment to identify speeding vehicles in their communities. Warning letters are issued where appropriate, and the information can help to inform the future activity of local police teams. Community roadwatch events happen throughout the year at various sites across the borough where requests for speed enforcement have been received by the public.

Figure 2: Schools and 20mph zones in Harrow



2.4.5 Pedestrian crossings

The types of crossings available in any location, impact on pedestrian safety and also on pedestrian perceptions of safety. Road junctions and crossing points are, by definition, locations where conflicting movements between motor traffic, cyclists, pedestrians and mobility impaired users are concentrated. The type of crossing introduced at any location is chosen based on the local environment, the pedestrian and cycle flows and also traffic volumes and speed. Replacing any crossing facility has cost implications and for this reason, crossings in Harrow are primarily replaced where a need based on safety or improved accessibility has been identified.

Countdown timers

Pedestrian countdown timers show the amount of time left to cross the road before the red man appears. This allows pedestrians to decide if they have enough time to cross the road. The countdown display is shown on the opposite side of the road, next to the green and red man signals. After the green man has signalled to pedestrians to start crossing the road, there is a 'blackout' phase where no pedestrian signals are shown. During the blackout phase, the countdown begins, ending with a red man pedestrian signal. The duration of the countdown varies depending on the signal timings at the junction.

The advantages of these timers are as follows:

- Pedestrians feel less rushed when crossing
- Gives more confidence to mobility impaired pedestrians, who may cross more slowly
- Pedestrians who didn't see a green man signal can decide if they have enough time to cross the road
- Some installations can result in a small reduction in delay to motorised vehicle traffic

Harrow is reviewing all controlled crossings at junctions for suitability for introducing countdown timer crossings and will introduce these where deemed most beneficial in terms of safety benefits.

Zebra Crossing

Zebra crossings have two sets of flashing amber beacons. They have an area of road between them that's painted in black and white stripes. Drivers are legally obliged to give way to pedestrians waiting to cross. Failing to give way to pedestrians is a criminal offence that can result in points on a driving licence, or on a provisional licence.



Pelican Crossing

Pelican crossings use buttons, lights and sounds to allow pedestrians to cross the road safely. Pelican is short for Pedestrian Light Controlled Crossing. Pelican crossings differ from Zebra crossings in that the flow of traffic is controlled by traffic lights. Pedestrians waiting at a Pelican crossing are able to press a button that changes the traffic lights to red after a timed delay.

Puffin Crossing

At Puffin crossings the red and green man aspects are housed on the pole as part of the push button unit instead of on the far side of the road. This gives the waiting pedestrians a good view of

approaching traffic as they wait for the green man signal. A Puffin crossing has its sequences controlled by sensors mounted on the lights, rather than a timer.

Puffin is short for Pedestrian User Friendly Intelligent crossing. The crossing operates in a very similar way to the Pelican crossing, however they are fitted with smart sensors. These can tell when the crossing is clear to release the traffic with a green light, or when a pedestrian may be taking longer to cross the road and so can hold the traffic at a red light a little longer. If a pedestrian walks away without crossing the road, before the green man is shown, then the pedestrian demand is cancelled and the traffic signals stay at vehicle green. As a result, a Puffin crossing is more efficient for both pedestrians and traffic.

Toucan Crossing

Toucan crossings are designed so both pedestrians and cyclists can safely cross a road side-by-side. Apart from the addition of a cyclist crossing they are almost identical to Puffin crossings. They are slightly wider in order to accommodate both pedestrians and cyclists together. On the newer Toucan crossing installations the crossing time is determined by on-crossing detectors like at a Puffin crossing.

Pegasus Crossing

Also known as an Equestrian Crossings, Pegasus crossings are designed for pedestrians and horses to cross the road safely together. These are not currently used in the borough.

2.5 Walking objective 3: Improve health of borough residents by promoting healthy walking and encouraging active travel and recreational walking

People living in traffic-calmed environments feel safer and use public space more often. A safer environment means that children are more likely to be allowed outside on their own, where they will play for longer, and their physical activity will increase.

The borough encourages walking to school through the development of school travel plans. These plans include supporting and promoting events such as local walking campaigns, Walk on Wednesdays, Theatre in Education and encouraging school walking buses.

2.5.1 Walking for health

Harrow provides free Health Walks for local residents with an opportunity to walk regularly in a relaxed and friendly environment and enjoy some of Harrow's green spaces. The walks are varied in length and level and are all led by qualified and insured volunteer walk leaders, who encourage participants to walk at their own pace. Around 300 people every month participate in the walks. These walks are free and are advertised on the Harrow website and also at libraries and doctors' surgeries. Walks often start at schools, train stations and GP surgeries and provide



people with a social way to enjoy walking.

School walking bus

A walking school bus is a group of children walking to school with one or more adults. The aim of the walking school bus is to encourage children to walk to school together. Walking buses help to promote road safety, health and exercise however they also often reduce absence levels and improve attendance. School walking buses are dependent on support from local parents and staff and for this reason are often hard to keep going. In several schools across the borough school walking buses have started but have not managed to maintain ongoing support.

2.5.2 Walk Once a Week (WOW)

WOW is Living Streets' year-round walk to school challenge. Pupils record how they get to school each day on the interactive WOW Travel Tracker and those who walk (skate, scoot, cycle or Park & Stride!) at least once per week for a month are rewarded with a themed badge. In the future, the information will be recorded on the Internet via traveltracker.org.uk. WOW is aimed at changing the habits of children's travel on the school journey in hope that the children and parents will learn from a small change in the way they travel once a week to changing their behaviour further. The programme is aimed at ages 4-11 children in key stages 1 and 2.

2.5.3 International walk to school month

International Walk to School Month is held in October every year in a bid to promote the health and environmental benefits of avoiding cars. Schools across the world join forces to promote walking to schools and raise awareness of environmental issues. The aim of the month is to promote fun events and activities and to raise awareness about walking to school. It gives children, parents, school teachers and community leaders an opportunity to be part of a global event as they celebrate the many benefits of walking. Walkers from around the world walk to school together hoping to create communities that are safe places to walk.

2.5.4 Theatre in education

Theatre in Education provides a theatre production across selected primary schools in the borough and aims at encouraging sustainable travel for the children through an interactive experience. The show lasts for under an hour, it is a high energy enthusiastic show which is then followed by an interactive game to ensure that the children have understood the issues raised in the play. Issues raised in the play include:

- Car sharing
- Public transport
- Walking
- Fuel pollution
- Climate change
- Walking and cycling being fun, healthy and sociable
- Basic road safety

This play is always well received by schools, teachers and children.

2.5.5 School active travel maps

Active travel maps are provided to all schools in the borough to help pupils and parents choose sustainable, safe and healthy ways to travel to school. The maps show the sustainable travel options available to each school and are tailored to include:

- local public transport facilities (e.g. tube and train stations, and bus route information) – showing which bus routes travel on roads close to the school.

- 5 and 10 minute walking zones – showing approximate 5 and 10 minute walking distances from the school site.
- cycling route information – roads are colour-coded to Bikeability training and confidence levels to enable cyclists to plan routes according to their individual cycling abilities
- school keep clear markings and park entrances

The maps can be used by anyone travelling to the school including pupils, parents, staff and visitors. The maps are also available on Harrow’s website and have been designed for display in a highly visible location in the school such as notice boards and school foyers.

2.5.6 Active Harrow Strategic Group

Traffic and Highways are part of the Active Harrow Strategic Group. Active travel initiatives are promoted with this group and with other council and community and voluntary sector partners. The strategic group is also developing a multi-agency focus on two geographical areas of higher obesity and physical inactivity in the borough; an action plan will be developed to promote community led opportunities to be more active in South Harrow and a Superzone pilot based in Wealdstone which will look at a whole system approach to improving the health of the urban environment.

2.5.7 Walking campaigns and promotions

Various walking campaigns and promotions are run throughout the year including walk once a week, international walk to school month and theatre in education. Many of the campaigns involve school competitions linked to events such as road safety week.

The Living Streets Walk to School campaign is aimed at encouraging more parents, children and young people to make walking to school part of their daily routine. The Council supports this by providing schools with additional Living Streets resources to engage pupils in the campaign such as badges for reaching specific targets, wall charts to enable classroom discussions, calendars, T-shirts, pencils and certificates for participating.





Car owners in London are **2 – 3 times less** likely to do **half an hour of activity** in a day than those who don't own cars

Nearly **1/2** of car trips made by London residents could be **cycled** in around **10 minutes**



More than **1/3** of car trips made by Londoners as a driver or passenger could be **walked** in **under 25 minutes**

2/3 of car trips made by London residents could be **cycled** in under **20 minutes**



Only **1/3** of car trips are longer than **5km**. Some of these could be **cycled** in around **20 minutes**

2.6 Delivering the walking objectives

The long-term targets for walking that were agreed as part of LIP3 are shown in Table 3.

Table 3: Long term walking targets

Long term targets	Latest available data	Target and year
Physical activity - all Londoners to do at least the 20 minutes of active travel they need to stay healthy each day by 2041	2014/15 to 2016/17 25%	2041 70%
Mode share of all trips to be made on foot, by cycle or using public transport	2014/15 to 2016/17 48%	2041 64%

Table 4 shows the targets that will be used to measure the delivery of the walking objectives.

Table 4: Walking targets to deliver objectives

Walking objectives	Targets to monitor progress	Current status	Target and year
Improve the quality and experience of walking throughout the borough	Delivery of Wealdstone Square, Greenhill Place and Harrow Square	Wealdstone Square is currently being built	2021
	Maintain current urban tree stock levels		2021/22
Improve the perceived and actual safety of pedestrians	Increase proportion of network covered by 20mph speed restriction to 60% by 2021/22	50% of road network covered by 20mph restrictions in 2019	60% by 2021/22
	Introduce countdown crossings to 20% of all controlled crossings	10% of all controlled crossings are currently countdown crossings.	20% by 2021/22
	Reduce pedestrian KSIs to 15 KSIs by 2022	28 pedestrian KSIs in 2017	15 pedestrian KSIs in 2022
	Reduce number of vulnerable road user KSIs to 28 by 2022	50 vulnerable road user KSIs in 2017	28 vulnerable road users in 2022

Walking objectives	Targets to monitor progress	Current status	Target and year
Improve health of borough residents by promoting healthy walking and encouraging active travel and recreational walking	75% of children using sustainable modes to travel to school by 2020/21	65% based on latest hands up surveys	75% by 2020/21
	Provide cycle training for over 1500 children per annum	1026 children trained in 2018/19	1500 per year
	Maintain at least 20 health walks a week	20 health walks each week	Annual

2.7 Funding the walking action plan

Table 5 shows the key funding sources used for Harrow walking initiatives.

Table 5: Key funding source for walking initiatives

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
Walking objective 1: Improve the quality and experience of walking throughout the borough					
Local walking schemes	✓				
Liveable neighbourhoods		✓			
Public realm improvements			✓		✓
Legible London	✓		✓		
Preventing parking on verges and footways				✓	
Rights of Way			✓	✓	
Green grid			✓	✓	
Road maintenance				✓	
Walking objective 2: Improve the perceived and actual safety of pedestrians					
20mph zones	✓		✓		
Local safety schemes	✓		✓		
Community roadwatch	✓				
Pedestrian crossings	✓		✓		
Walking objective 3: Improve health of borough residents by promoting healthy walking routes to school and encouraging active travel including recreational walking for all					
Walking for health	✓			✓	
School walking buses					
Walk Once a Week	✓				
International walk to school month	✓				
Theatre in education	✓				
School active travel maps	✓				
Active Harrow strategic group					
Walking campaigns and promotions	✓				

2.8 Walking Action Plan

Table 6 shows the borough walking action plan and how the agreed borough LIP3 policies fit with the new walking objectives. The table also shows the outputs to be delivered relating to each policy.

Table 6: Walking action plan

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Walking objective 1: Improve the quality and experience of walking throughout the borough		
Ensure that all aspects of the walking environment including links to parks and open spaces are effectively considered when delivering works for liveable neighbourhoods and corridor schemes (W9)	These are all dependent on TfL funding. However programme is as follows: Harrow and Wealdstone 2020-2025 Rayners Lane 2022-2027 Stanmore 2024-2029 Edgware 2026-2031 South Harrow 2028-2033	2021-2033

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale										
Improve the environment for pedestrians and cyclists in the whole borough and particularly within the Harrow Opportunity Area (R11)	<p>Local Safety Schemes to be introduced by 2019/20: Oxhey Lane / Uxbridge Road – Harrow Weald, Alexandra Avenue – Rayners Lane, Pinner Road / Station Road – North Harrow Further locations will be selected based on KSIs.</p> <p>Delivering liveable neighbourhoods. However these are all dependent on TfL funding. The proposed programme is as follows:</p> <table data-bbox="1256 663 1778 836"> <tr> <td>Harrow and Wealdstone</td> <td>2020-2025</td> </tr> <tr> <td>Rayners Lane</td> <td>2022-2027</td> </tr> <tr> <td>Stanmore</td> <td>2024-2029</td> </tr> <tr> <td>Edgware</td> <td>2026-2031</td> </tr> <tr> <td>South Harrow</td> <td>2028-2033:</td> </tr> </table> <p>Additional walking schemes</p>	Harrow and Wealdstone	2020-2025	Rayners Lane	2022-2027	Stanmore	2024-2029	Edgware	2026-2031	South Harrow	2028-2033:	Ongoing
Harrow and Wealdstone	2020-2025											
Rayners Lane	2022-2027											
Stanmore	2024-2029											
Edgware	2026-2031											
South Harrow	2028-2033:											
Improve access to Harrow’s green spaces and historic areas and improve pedestrian walkways that use and link existing parks and open spaces with the town centre and transport interchanges (W10)	Increased green grid and rights of way improvements	Ongoing										
Improve pedestrian linkage between Harrow town centre and Harrow on the Hill station (W11)	Reengineer the public realm as part of developments within the town centre area											
Prevent or deter parking on footways and verges ensuring that the safety and convenience of pedestrians, the visually impaired and disabled people is prioritised (SI10)	<p>Reduction in illegal parking on footways and verges</p> <p>Review of parking strategies to develop policies to reduce the amount of illegal parking on footways and verges</p>	Ongoing										

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Consider the provision of additional seating in all new schemes to benefit the needs of those with mobility difficulties, giving particular consideration to road side seating in areas beyond the town centres which would enable many people to take short walking trips outside their own homes (SI6)	Additional public seating provided – most likely to be part of major public realm squares	Ongoing
Improve pedestrian and cycle wayfinding across the borough and work with TfL to expand Legible London in Harrow (R4)	Subject to funding, Legible London to be extended as follows: Rayners Lane area 19/20 Sudbury area 21/21 North Harrow area 21/22 Queensbury area 22/23	2020-2023
Increase the amount and variety of trees and plants across the borough's open spaces and within streetscapes (PR6)	More trees planted than removed as part of new transport schemes	Ongoing
In all liveable neighbourhoods schemes the borough will consider planting and street greening to provide shade and shelter and to create a more attractive environment, the potential reallocation of road space to benefit sustainable transport, as well as road traffic restrictions and the possible introduction of play streets (R2)	More street planting and greening	Ongoing
Walking objective 2: Improve the perceived and actual safety of pedestrians		
Increase the extent of 20mph roads in the borough and expand the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school (RS6)	20mph zones at the following locations: Clitheroe Avenue, Rayners Lane, Kingshill Avenue – all to be introduced by 2019/20. Further locations will be selected based on agreed criteria.	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Prioritise schemes that maximise casualty reduction predictions and pose the highest risk to vulnerable road users and in particular the numbers killed and seriously injured per annum for the available finance (RS3)	Local Safety Schemes to be introduced at following locations: Oxhey Lane / Uxbridge Road – Harrow Weald, Alexandra Avenue – Rayners Lane, Pinner Road / Station Road – North Harrow – all to be introduced by 2019/20 - Further locations will be selected based on KSIs.	Ongoing
Provide road safety education events at schools and colleges throughout the borough (S9)	Delivery of Theatre in Education and Community Roadwatch Reduced casualties for pupils on school journeys	Ongoing
Work with the parking service and police to enforce and promote safe driving and parking in school zones (RS7)	Improved enforcement activity at schools and modal shift to sustainable transport	Ongoing
Work with the Metropolitan Police in using their powers of enforcement to deal with illegal cycling on pavements and footpaths (RS22)	Engagement with Harrow Safer Neighbourhoods Teams. Increased public enforcement of cycling on pavements	Ongoing
Walking objective 3: Improve health of borough residents by promoting healthy walking routes to school and encouraging active travel including recreational walking for all		
Promote sustainable and healthy travel choices and healthy walking routes to school through the use of school travel planning, travel awareness campaigns, cycle training and an improved walking and cycling environment (W1)	Increased number of schools with active travel plans Increased number of journeys to school made by active transport	Ongoing
Work with schools to set up additional school walking buses (W3)	This is part of school travel planning process. More school walking buses	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Encourage recreational walking as well as active walking as a mode of transport and support national walking campaigns (W2)	Increased participation in borough Health Walks including maintaining 20 walks a week Improved walking environment throughout borough but particularly in Opportunity Area	Ongoing
Promote the Walk London network and new leisure routes through Harrow's extensive green areas (W6)	Increased participation in borough Health Walks including maintaining 20 walks a week	Ongoing
Work with the Active Harrow Strategic Group to promote active and sustainable travel (W5)	Increased active travel and active travel events	Ongoing
Work in partnership with Public Health to promote walking and the Walking for Health scheme (W4)	Increased participation in borough Health Walks	Ongoing

3. Cycling

Increasing the take up of cycling in the borough will improve the health of all those participating, could reduce traffic congestion, traffic noise and air pollution and could also help address climate change. Unfortunately, the number of people choosing to cycle in Harrow is currently low and Harrow was ranked the lowest of the 33 London boroughs for residents who cycle to work in the 2011 census.

Despite the low take up of cycling, Harrow has been identified as an area where there is considerable scope to increase cycling and it has been estimated that there are a potential of 228,100 cyclable trips in the borough. This is a challenge for the borough. Encouraging more trips to be cycled will be done through improving the safety of cycling in the borough, training more people to cycle with confidence, improving cycle links across the borough, providing more facilities to support cycle journeys and also focussing on encouraging cycling for shorter journeys that are currently made by car.

Most cycling in London is undertaken by people who cycle regularly, and the majority of the population do not do this. Across London, people who currently cycle are more likely to be white, male and earning more than £20,000 each year, suggesting that the barriers to cycling are felt more acutely by women, BAME (black, Asian and Minority Ethnic) people and those earning less than £20,000 each year. Harrow's population is very ethnically diverse and more needs to be done to encourage all of society but in particular women and BAME groups in Harrow to cycle more.

Interventions used to increase cycling among under-represented groups include behaviour change and marketing campaigns and activities with schools through the STARS accreditation programme. TfL also delivers a programme of cycle grants to help communities and not-for-profit groups across London to develop initiatives targeting people who may not otherwise ride a bike (e.g. cycle training, guided rides, bike loans).

Across the borough a network of cycle routes currently provides a total of 41km cycle lanes. This represents around 10% of the Harrow road network.



This strategy has been developed to show how Harrow is working to improve the environment for cycling and encouraging everyone to cycle more. The plan supports the Harrow Transport Local Implementation Plan 2019/20 - 2021/22 (LIP3) by providing more details on the work that Harrow is doing.

3.1 Cycling vision

Harrow's vision for cycling is for the borough to be one where more people choose to cycle more often; where cycling is widely considered to be enjoyable, safe, practical, convenient and accessible; where cycle routes provide improved connections and faster trips to more destinations, where people of different ages and backgrounds cycle with confidence and where cycling in the borough is a normal every day transport option to choose to go to school, work, shop, visit friends or spend free time and where cycling is the preferred mode of travel for more people particularly for shorter distance journeys.

There is a lot to be done to deliver this vision. A change in attitudes is needed, as well as improvements to the quality and extent of the existing cycling infrastructure across the borough. Delivering this vision will improve the health of those choosing to cycle, potentially reduce levels of diabetes and obesity, improve air quality, reduce traffic congestion and help address climate change.

3.2 Existing cycling targets

Targets are important to ensure that borough progress in delivering sustainable transport can be monitored.

The following targets have all been agreed as part of LIP3:

1. By 2041, 64% of daily trips should be made by foot, cycle or public transport in Harrow
2. By 2041, 70% of Harrow residents will do at least 20 mins active travel each day
3. Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041.
4. By 2041, 51% of Harrow residents will live within 400m of the London-wide strategic cycle network

3.3 Objectives for cycling

Based on Harrow LIP3 and the Mayor's Transport Strategy, the following are the objectives for cycling in Harrow:

1. Make cycling journeys safer
2. Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel
3. Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes
4. Facilitate and support bicycle ownership/access and secure parking

3.3.1 Cycling objectives link to healthy streets

The cycling objectives fit well with the Healthy Streets indicators and this is shown in Table 7.

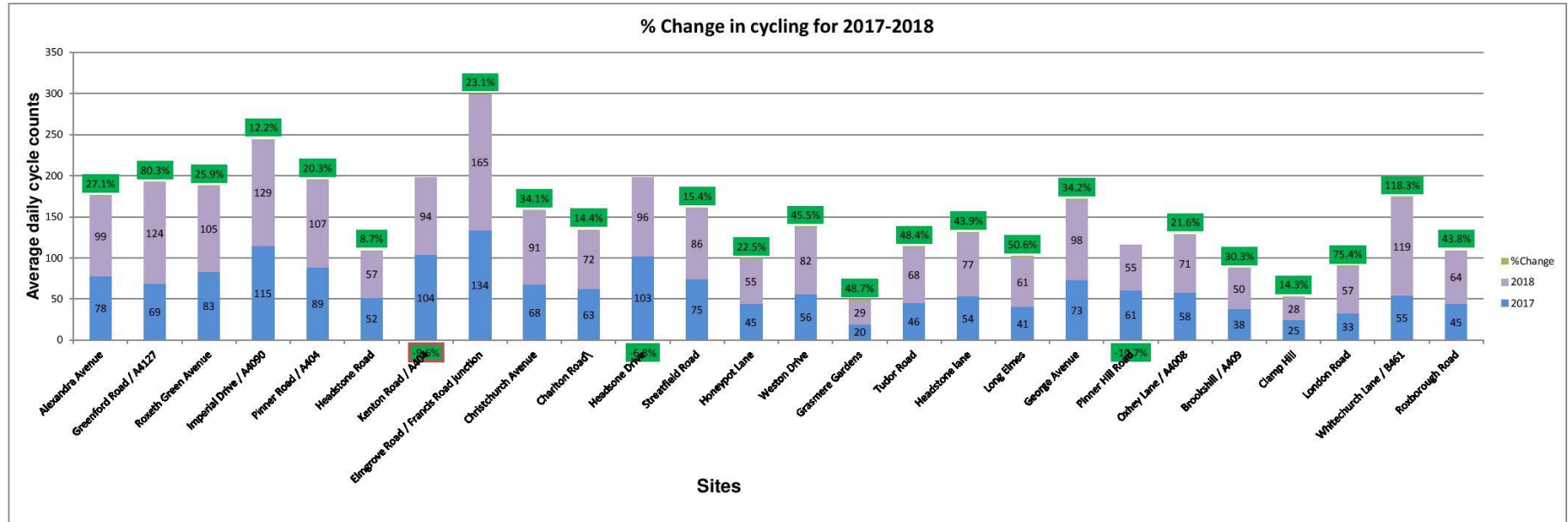
Table 7: Cycling objectives link to healthy streets

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Make cycling journeys safer					✓	✓	✓		✓	✓
Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel					✓	✓	✓		✓	✓
Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes					✓	✓	✓		✓	✓
Facilitate and support bicycle ownership/access and secure parking					✓	✓				✓

3.4 Cycle monitoring

In 2017, the borough introduced 26 new cycle counters across the borough at strategic locations. These have been introduced to show the impact of cycling measures introduced in the borough. The cycle counters have shown an average of 27.3% increase in cycling between 2017 and 2018. Figure 3 shows the percentage change at all locations across the borough.

Figure 3: Percentage change in cycling 2017-2018



3.5 Cycling objective 1: Make cycling journeys safer

The number of cycle casualties resulting from road collisions in the borough is low; this is partly as a result of the low number of cyclists in the borough. The main barrier to the take up of cycling is the fear of being involved in a collision.

It is essential to reduce road danger and also the perception of cycle safety. In Harrow this is being addressed through increased cycle training, giving cyclists the confidence they need to effortlessly choose to cycle as well as introducing schemes to address any locations where clusters of cycle casualties have occurred.

Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041 and the work identified in this section, all contribute to Harrow's vision zero approach to road safety.

3.5.1 Cycle training

Cycle training is an effective way of increasing confidence among adults, children and families, and encouraging more people to cycle. Cycle training is delivered to achieve various levels of bikeability proficiency.

To encourage increased cycling, cycle training is offered to all schools in the borough as well as offered outside the school environment. Cycle training is also facilitated for Special Educational Needs and Disability (SEND) schools providing an extended duration of training and adapted bikes for pupils to participate in training. Some SEND training is delivered within schools and tailored to each school's requirements.



Due to the variation of capabilities, not every child is able to participate. SEND training is also available to adults once requested. Training sessions are tailored to accommodate the requirements of the trainee.

To ensure that those who need to benefit from the health of increased cycling, promotional leaflets are provided across Harrow in doctor's surgeries and libraries, leisure centres, community notice boards, social media accounts/council website, Harrow People Magazine and Annual Council Tax guide promoting the health benefits of cycling and also providing information on how to access cycle training.

All cycle training courses are also promoted via the council website and with schools and businesses in the borough. Anyone who lives, studies or works in the borough is eligible to participate in cycle training. Cycle training courses are free beyond the initial £5 administrative fee. Training courses last approximately 90 minutes and are run throughout the year on Saturdays.

Bikeability training and courses

Bikeability training levels are as follows:

At **Bikeability Level 1** new riders learn to control and master their bikes in a space away from traffic such as a playground or closed car park. Trainees will usually be trained in a group of 2-12, though individual training may also be available.

Bikeability Level 2 takes place on local streets, giving trainees a real cycling experience. Trainees learn how to deal with traffic on short journeys such as cycling to school or the local shops. Trainees are usually trained in small groups – up to 6 trainees per instructor – though individual training may also be available.

Bikeability Level 3 equips trainees with skills for more challenging roads and traffic situations – busier streets, queuing traffic, complex junctions and roundabouts. It also includes planning routes for safe cycling. Level 3 training is delivered one-to-one or in groups of up to 3 so can be tailored to a trainee’s individual needs, such as a route to work or school.

Bikeability trained cyclists receive a badge and a certificate in recognition of the level they’ve achieved. The certificate also includes areas for further practice noted by the instructor.

Approximately 1100 - 1200 children across the borough are trained to bikeability levels 1 or 2 per annum. Bikeability courses are delivered during term time at primary schools for children in year 4 - 6 and in selected secondary schools for year 7 - 8.

3.5.2 Women-only cycle training

The Council provides women-only bike sessions which provide a supportive, social and fun environment for women aged 14+ to build their confidence and fitness. There is no required cycling ability or fitness level. These sessions are for complete beginners, nervous riders and women who are returning to cycling. Women who are not complete beginners can learn to cycle with other women building on their fitness for weekend adventures. Providing these courses encourages women’s uptake of cycling in the borough. The courses aim to build up attendees’ confidence level until they are riding for leisure or even riding for part of their daily commute. Women’s only sessions were introduced to not only encourage more women to cycle but appeal to women that were restricted in engaging in mixed gender activities due to cultural/religious lifestyles.

3.5.3 Balance and Ride courses for children

Learn to Balance and Ride courses take place after school and during school holidays in schools across Harrow. Courses are available for children aged 3-11 years who cannot yet ride a bike on two wheels. During these sessions, free bicycles are provided to children to help them to learn the core fundamentals of cycling. These sessions are free but require prior booking.

3.5.4 Improving bikeability of all routes in Harrow

A road’s bikeability provides information on the local road environment and the extent to which the area encourage cycling. Harrow works to improve the bikeability of all roads in the borough. However resources are focused on improving the identified aspirational network shown in Figure 5.

3.5.5 Local safety schemes

Local Safety schemes form part of the Mayor of London’s vision zero transport strategy for deaths and serious injuries to be eliminated from all road collisions on London streets by 2041. They are introduced to reduce casualties in any area where clusters of accidents occur.

Cycle safety can be addressed in local safety schemes. Three-quarters of collisions with cyclists happen at junctions. The types of improvements that can be made to improve safety for cyclists are: separating cycling from motorised vehicles, providing dedicated cycle lanes or advisory lanes and providing advanced stop lines for cyclists at junctions. Cycling advanced stop lines are designed to allow cyclists to pull away in front of traffic at signals where they change to green.

3.6 Cycling objective 2: Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel

Cycling should be fun. There is a sense of adventure for many cycle trips especially for young cyclists. It is also a sustainable way to travel. Cyclists save money and have more independent lives than those entirely reliant on cars and public transport.

3.6.1 National bike week

Bike Week is an annual opportunity to promote cycling at schools. Various kinds of activities are run during this week that encourage cycling. Most Bike Week events take place within the official event week in June.

3.6.2 Biking fun days

Biking fun days take place during National Bike Week. Biking fun days allows the children in key stage 1 the chance to learn balancing skills using balance bikes. At the end of the day, the whole school is treated to an assembly with a BMX stunt rider who focuses on safer cycling skills.

3.6.3 Biker's breakfast club

This is where a school offers cyclists a free breakfast on arrival at school for those who have cycled to school. This is to reward the cyclists and encourage others to get cycling by highlighting the benefits of active travel. Bikers' breakfasts also offer an opportunity to promote the school's other cycling initiatives and facilities such as cycling clubs, pool bikes, scooter schemes and Dr Bike sessions.

3.6.4 Dr Bike sessions

Dr Bike sessions provide an opportunity for bicycles to be checked over by an experienced cyclist and mechanic. Checks include the bicycle wheels, brakes, gears and tyre pressure, lights, racks, pedals, saddles and more. Minor adjustments can be made to the bike at the session and other issues that can't be fixed on site can be identified. Dr Bike sessions are provided to schools receiving Bikeability training before cycle training commences. This is to ensure that the pupil's bikes are road worthy.



3.6.5 E-bike trial

To encourage staff cycling, together with WestTrans, Harrow, took part in an e-bike trial. The aim of the trial was to see if electric bikes could play a role in shifting staff away from using the car for some shorter journeys to encourage modal shift. The trial involved six e-bikes being loaned to staff for a month at a time, to allow them to develop the habit of cycling to work and encourage them to purchase an e-bike for themselves. 36 staff and teams participated in trialling the bikes during the trial.

Civil Enforcement Officers (CEO) within the Parking Operations Team also participated in the e-bike trial and found that they could carry out some of their duties more quickly by e-bike than on foot. As a direct result the team purchased their own e-bike for use by the CEOs and may purchase additional bikes in the future.

The Council and WestTrans are in discussion regarding extending the trial and establishing whether it is possible to purchase the bikes used at a reduced cost.

3.6.6 School active travel maps

Active travel maps are available for all schools in the borough to help pupils and parents choose sustainable, safe and healthy ways to travel to school. The maps show the sustainable travel options available to each school and are tailored to include:

- local public transport facilities (e.g. tube and train stations, and bus route information) – showing which bus routes travel on roads close to the school.
- 5 and 10 minute walking zones – showing approximate 5 and 10 minute walking distances from the school site.
- cycling route information – roads are colour-coded to Bikeability training and confidence levels to enable cyclists to plan routes according to individual abilities.

The maps can be used by anyone travelling to the school including pupils, parents, staff and visitors. The maps are also available for download on Harrow's website.

3.6.7 Tour de Harrow

The Tour de Harrow is an annual week-long cycling roadshow combined with various cycling activities for adults and children. It was launched to boost the profile of cycling in the borough and aims to increase participation and interest in cycling as well as improving confidence and cycling competency for residents to make regular journeys by bike.

3.6.8 Tour de Salah

Tour de Salah is the largest Muslim cycling event in the UK and introduces cycling to novices within traditionally harder to reach groups. The event has been effective in encouraging more people in Muslim communities to engage in cycling. Participating cyclists cover up to 100km across the capitals iconic landmarks and mosques over one day. This year the Harrow Mosque is part of the route and the event is being promoted across the borough. This event helps to encourage increased BAME people to take up cycling.



3.6.9 BMX cycling facility

Harrow is proposing to construct a brand new BMX cycling facility to transform the lives of young people from disadvantaged communities and encourage the social and health benefits of cycling. The facility will serve the whole community and aims to increase cycling participation with young people from lower social grades and from BAME backgrounds to promote cycling in an exciting and engaging way. The facility will be based within one of the more deprived wards in the borough.

3.7 Cycling objective 3: Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes

New and enhanced cycling infrastructure is required to encourage more people to choose to cycle for commuter, shopping, educational and leisure trips. For new cycle routes in the borough, it is important that they provide new links both to educational institutions and where appropriate through to other boroughs. It is also important that existing and new routes take account of road conditions, local topology and traffic speeds to minimise cycling accidents. Reducing road danger and making Harrow streets more cycle friendly will enable the borough to unlock the existing cycling potential in the borough.

3.7.1 Creating a better cycle network

The existing cycle network in Harrow is integrated into the wider West London cycle network and provides some continuity of cycling to town centres located in adjacent boroughs. Figure 5 shows Harrow's aspirational strategic cycle network. The aspirational strategic network was identified by looking at TfL heat maps to create a network where cycling potential was greatest.



The network links up stations and local centres and as it is developed, the stations will become cycle hubs facilitating easy change between transport modes.

A recent review of the cycle network indicated that there are 50.6 km of on-road cycle routes, 4.8 km of off-road cycle routes and 7 km of Greenway cycle routes (off road routes through parks and green spaces) in the borough.

Harrow strategic cycle network

Harrow aspires to introduce a “tube map” of strategic cycle routes to provide a seamless, convenient and safe network of cycle routes across the borough. Figure 4 shows the connectivity being introduced with the proposed strategic cycle network. Figure 5 shows a further map of the aspirational strategic routes in the borough along with the delivery timetable. When completed, the network will improve connectivity across the Borough and also to key destinations in adjacent Boroughs.

Signage along the Harrow local cycle routes follow the colour codes of the London underground routes. For example the Metropolitan Route has purple signing along the route similar to the colour on the underground, the Jubilee Route is silver the Northern Route will be black etc.

The typical measures undertaken to improve the cycle network include junction improvements, cycle lanes and tracks, advance stop lines, signalised crossings and other crossing points. Funding for cycle lane improvements is predominantly from the TfL LIP programme of investment.

To ensure that improvements to the cycle network are effective, before and after site surveys are undertaken to monitor the impact of the measures to monitor mode shift.

Measures to improve the cycle network are prioritised based on agreed criteria.

Figure 4: Harrow cycling connectivity map

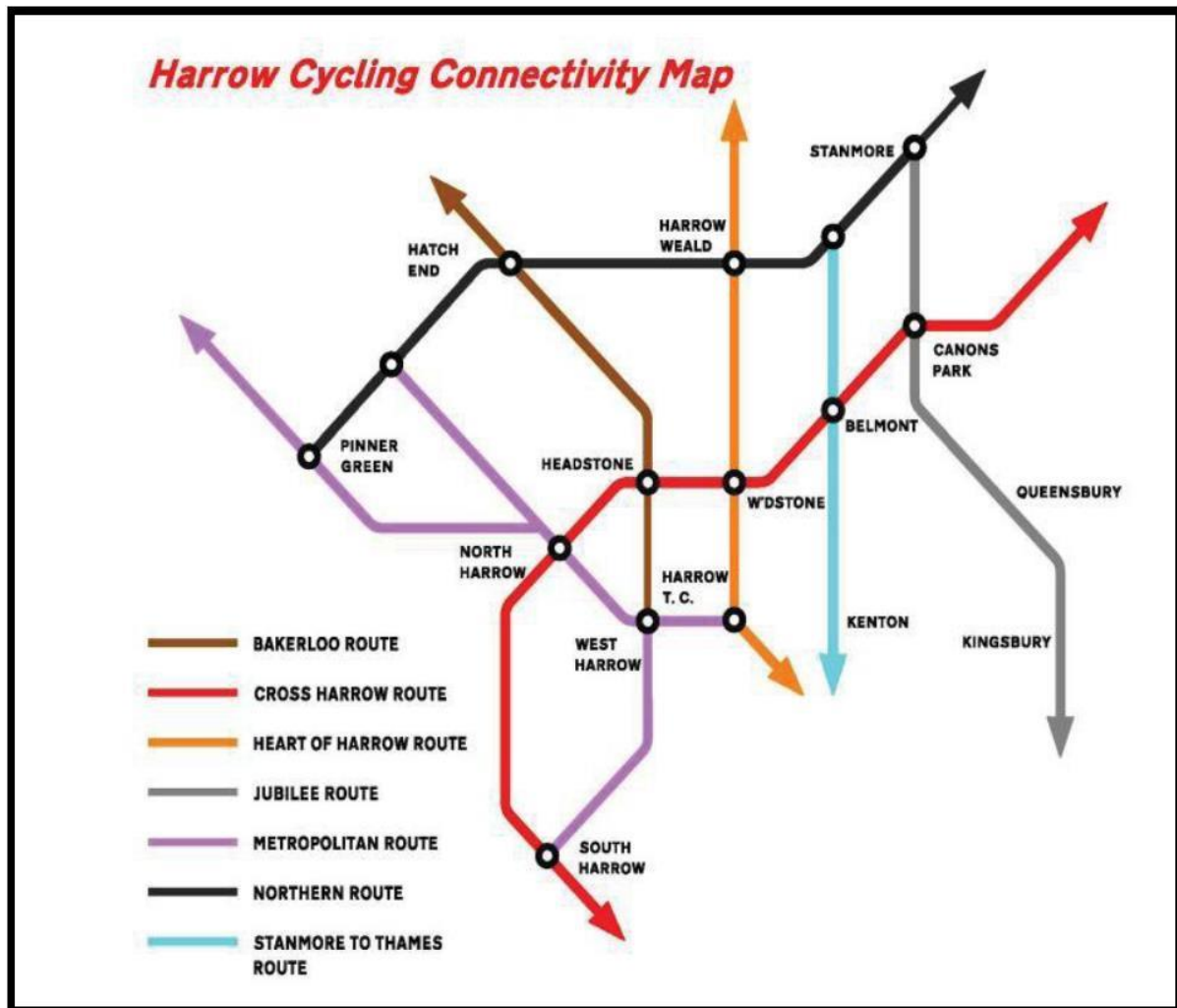
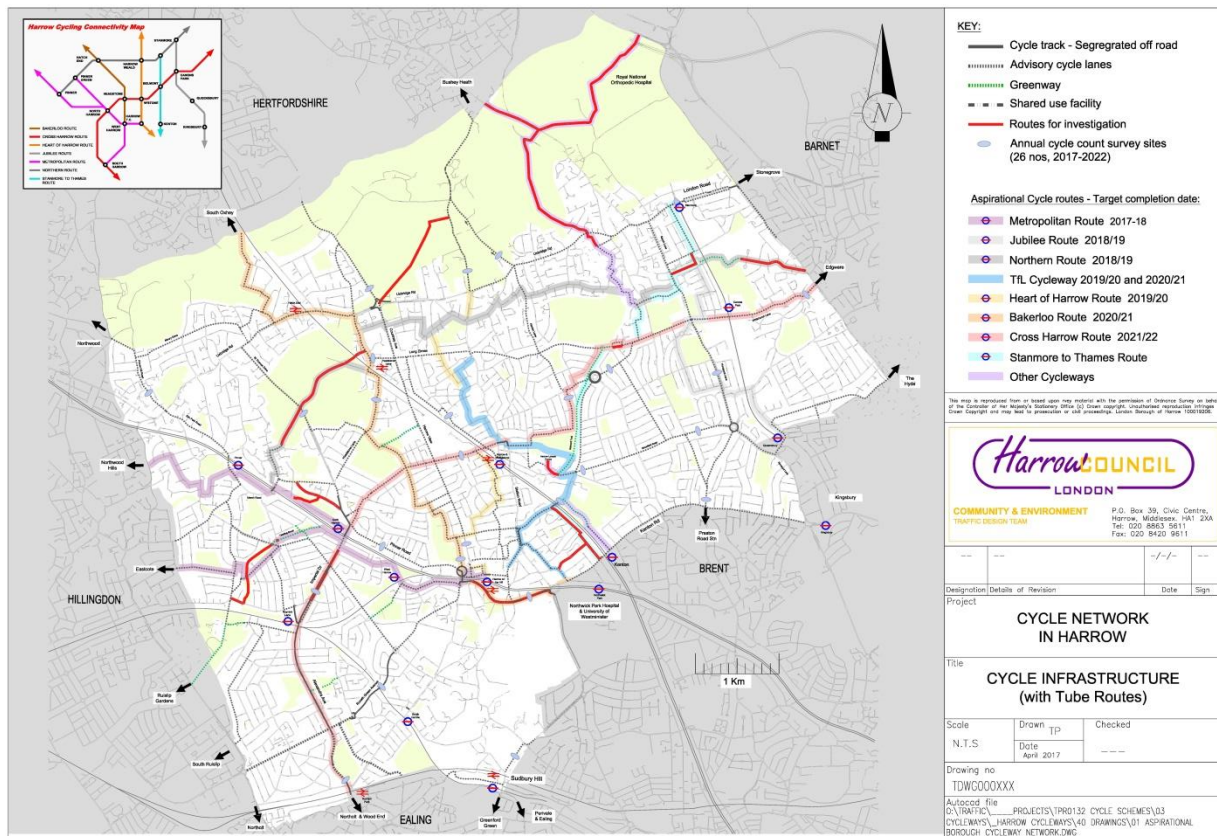


Figure 5: Harrow aspirational strategic cycle network



3.7.2 Harrow TfL Cycleway route

Cycleway³ routes are continuous and convenient cycle routes on less-busy backstreets across London. Cycleway routes are intended to form a network of radial and orbital cycle routes designed to overcome barriers to cycling and target cyclists who want to use quieter, low-traffic routes that provide a more suitable environment for those cyclists who want to travel at a gentler pace.

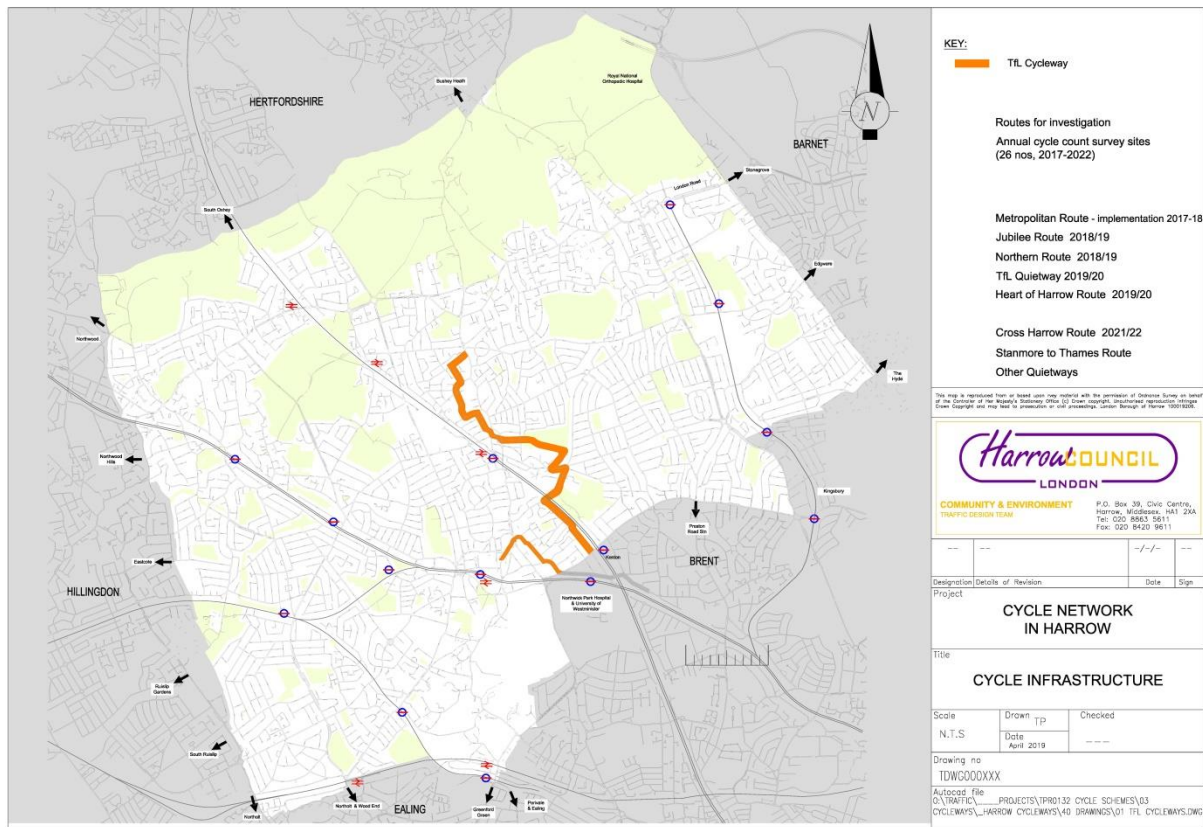
Cycleway routes are clearly marked with purple signs to help cyclists find their way along roads they may never have cycled along before. They are ideal for people who want to cycle on lower-traffic streets, especially if they are new to cycling in London.

A new Cycleway route is proposed in the borough which will link Harrow town centre and Wealdstone town centre via a network of quiet residential local streets to avoid the main heavily trafficked roads. The proposed route will run along a mainly north-south alignment between Harrow Weald and Kenton Road linking with Harrow town centre and passing through Wealdstone town centre for a distance of 6.35 km. The route will also utilise existing off road cycling facilities recently introduced in Station Road between Greenhill Way and Hindes Road. The route development and implementation will be funded by TfL.

Figure 6 shows the proposed cycleway route.

³ Previously known as Quietway routes

Figure 6: Proposed cycleway - Northwick Park to Harrow Weald



3.7.3 Recreational cycle network

To support the aspirational strategic cycling network, Harrow also supports additional cycling routes through parks and open spaces particularly to encourage recreational cycling. An additional green cycling route is proposed through the Kodak site. This route will run from Headstone Manor and crosses Harrow View near the large roundabout, continue through the development into Kodak East, run through the development and then come back out in Headstone Drive. It is being funded by Section 106 money and is estimated to be completed by 2023.

To allow increased cycling through parks, bylaws need to be changed and where possible, Harrow will consider making these changes.

3.7.4 Crossing signals for cyclists

Toucan Crossing

Toucan crossings are designed so both pedestrians and cyclists can safely cross a road side-by-side. The decision to implement a Toucan crossing is based on the numbers crossing and the local traffic flow. Apart from the addition of a cyclist crossing they are almost identical to Puffin crossings. They are slightly wider in order to accommodate both pedestrians and cyclists together. On the newer Toucan crossing installations the crossing time is determined by on-crossing detectors like at a puffin crossing.

3.8 Cycling objective 4: Facilitate and support bicycle ownership/access and secure parking

Safe, secure and weatherproof cycle parking needs to be available at both the start and end of journeys for cycling to even be considered. Cycle parking should be located in a way that avoids disruption to pedestrians, shoppers carrying goods and people with mobility difficulties and is in a

location that is visible to passers-by to limit the potential for theft and damage of bikes and also especially where bikes are likely to be well used.

3.8.1 Borough wide cycle parking survey

Harrow will commission a borough wide survey to identify locations where there is currently insufficient cycle parking. This survey will include the availability of cycle parking at Harrow on the Hill, Wealdstone, Stanmore and Rayners Lane stations and will be completed in 2019/20. Following this review, the borough will increase cycle parking facilities to meet any latent demand.

3.8.2 Dockless Cycle Hire Scheme

The Council are considering developing a dockless cycle hire proposal and exploring the viability of a partnership with an existing dockless cycle hire operator to increase the uptake of cycling across the borough.

3.8.3 Electric Dockless cycle hire scheme



The introduction of electric dockless cycle hire to Harrow is being considered. These would help target the first and last miles of journeys that in many instances may otherwise be undertaken by car. It would also promote cycling as a leisure activity and provide an additional mode of transport for people to access shops, colleagues and local places of interest. This will most likely be progressed in partnership with neighbouring boroughs and an electric bike hire company.

3.8.4 Borrow a bike campaign

In order to encourage the use of bikes and bike ownership Harrow launched a campaign 'Borrow a Bike' to allow those who live, study or work in the borough to loan a bike of their choice over a four week period. During the loan, the participants are required to keep a log of trips/activities completed. At the end of the loan period, participants are able to purchase the bikes and necessary equipment at a discounted price.

3.8.5 Cycle parking

To encourage increased cycling, cycle parking needs to be readily available in local shopping centres, educational places, hospitals, council offices and at other local amenities. Gaps in the provision of available cycle parking spaces will be identified in a borough wide survey in 2019/20 and following this, a programme of additional cycle parking will be introduced.



School and college cycle parking

The Council supports schools by providing some funding for additional cycle parking at schools. When schools update their travel plans, schools identify the level of cycle parking they have. Following completion of their school travel plan, schools are able to apply for small grants funding from TfL to supply more school cycle parking spaces

Station cycle parking

Cycle parking at stations improves the accessibility of underground and rail transport to those living further away from stations and where walking is less practical. It is particularly important for those who are only able to cycle a short part of their overall journey or only feel sufficiently confident enough to just cycle a short distance.

Most stations in the borough have some level of cycle parking available at or near the station, however the quality of cycle parking provided is not always of the same standard. The borough continues to liaise with TfL and Network Rail regarding suitable, secure and increased cycle parking at stations.

Following the cycle parking review in 2019/20, the borough will work towards cycling provision meeting likely demand at Harrow on the Hill, Wealdstone, Stanmore and Rayners Lane stations and at more stations further afield.

3.8.6 Cycle hubs

Harrow aspires to provide cycle hubs in Harrow town centre and Wealdstone Town Centres to support opportunities to introduce cycle hire schemes which may have a beneficial impact on increasing the take up of cycling. These would most likely be installed as part of a successful liveable neighbourhood funding bid to TfL. Cycle hubs will also be introduced at adjacent stations along the aspirational strategic cycle network as the network is delivered.



3.9 Delivering the cycling objectives

The long-term objectives for cycling targets that were agreed as part of LIP3 are shown in Table 8.

Table 8: Long term cycling targets

Long term targets	Latest available data	Target and year
Mode share of daily trips to be made by foot, cycle or public transport in Harrow	2014/15 to 2016/17 48%	64% 2041
Physical activity - all Londoners to do at least the 20 minutes of active travel they need to stay healthy each day by 2041	2014/15 to 2016/17 25%	70% 2041
Percentage of Harrow residents to live within 400m of the London-wide strategic cycle network	2016 0%	51% 2041

Table 9 shows the targets that will be used to measure the delivery of the cycling objectives.

Table 9: Cycling targets to deliver objectives

Cycling objectives	Targets to monitor progress	Latest available data	Target and year
Make cycling journeys safer	Harrow has adopted a Vision Zero approach towards eliminating all road traffic deaths and serious injuries by 2041.	Cyclists 2016 32KSIs	0KSIs 2041
Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel	Increase cycling by an average of 5% each year at existing cycle crossing counts	2132 cyclists passing cycle crossing counters in Harrow in 2018	2469 cyclists by 2021/22
	Provide cycle training for over 1500 children and over 100 adults	176 adults trained in 2018/19 1026 children trained in 2018/19	114 adults in 2019/20 1590 children in 2019/20
Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes	Deliver aspiration strategic cycling network Metropolitan route 2017/18 Jubilee route 2018/19 Heart of Harrow route 2019/20 Bakerloo route 2020/21 Cross Harrow route 2021/22	Metropolitan route delivered 2017/18 (6 miles)	2021/22

Cycling objectives	Targets to monitor progress	Latest available data	Target and year
Facilitate and support bicycle ownership/access and secure parking	Provide 50 additional cycle parking stands at strategic locations across the borough each year	700 stands in 2019.	800 stands by 2021/22

3.10 Funding the cycling action plan

Table 10 shows the key funding source used for Harrow cycling initiatives.

Table 10: Key funding sources for cycling initiatives

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
Cycling objective 1: Make cycling journeys safer					
Cycle training	✓				
Women only cycle training	✓				
Balance and ride courses for children	✓				
Improving bikeability of all routes	✓				
Local safety schemes	✓				
Cycling objective 2: Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel					
National bike week	✓				
Biking fun days	✓				
Biker's breakfast club	✓				
Dr Bike sessions					
E-bike trial	✓				
School active travel maps	✓				
Tour de Harrow	✓				
Tour de Salah	✓				
BMX cycling facility	✓				
Try cycling events	✓				
Cycling objective 3: Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes					
Harrow strategic cycle network	✓		✓		
Harrow TfL Cycleway route		✓			
Recreational cycle network			✓		
Crossing signals for cyclists	✓		✓		

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
Cycling objective 4: Facilitate and support bicycle ownership/access and secure parking					
Cycle parking survey	✓				
Dockless cycle hire scheme	✓				
Electric dockless cycle hire scheme	✓				
Borrow a bike campaign	✓				
Cycle hubs	✓		✓		
Cycle parking	✓		✓		

3.11 Cycling Action Plan

Table 11 shows the borough cycling action plan and how the agreed borough LIP3 policies fit with the new cycling objectives. The table also shows the outputs to be delivered relating to each policy.

Table 11: Cycling Action Plan

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Cycling objective 1: Make cycling journeys safer		
Adopt a Vision Zero approach towards eliminating all road deaths and serious injuries by 2041 (RS1)	Reduced KSIs on Harrow roads Local Safety Schemes to be introduced in 2019/20: Oxhey Lane / Uxbridge Road – Harrow Weald, Alexandra Avenue – Rayners Lane, Pinner Road / Station Road – North Harrow Further locations will be selected based on agreed criteria	Ongoing
Encourage cycling generally and in particular for journeys to school (C4)	Increased number of adults and children cycling Increase in pupils cycling to school Reduced car use, improvements to air quality, health and reduced congestion	Ongoing
Cycling objective 2: Promote cycling as a convenient, safe, healthy secure, inclusive and enjoyable activity and as a sustainable way to travel		
In partnership with WestTrans, trial and introduce dockless cycle hire in the town centre with a view to expanding the service throughout the borough (C8)	Dockless cycle hire throughout borough	2019/20
Promote recreational cycling – but give priority to increasing cycling as an alternative to car use (C3)	Increase in number of adults and children cycling Reduced car use, improvements to air quality, health and reduced congestion	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Publish and distribute cycling leaflets and maps in areas of the borough identifying the locations of designated cycle routes, cycle parking facilities, barriers to use and main road crossings (C7)	Maps are provided to all schools as part of school travel planning. These maps are all available for download on Harrow's website.	Ongoing
Introduce measures and programmes to encourage persons from BAME and other statistically cycling adverse groups to take up cycling and to cycle more often (C2)	Increase in women and BAME groups cycling	Ongoing
Cycling objective 3: Improve and extend the borough cycle network and cycling infrastructure to create a comprehensive network of comfortable and attractive cycle routes		
Review the existing cycle delivery plan with a view to expanding the network (C9)	Introduce the following cycle routes: Jubilee cycle route 2018/19 Heart of Harrow route 2019/20 Bakerloo route 2020/21 Cross Harrow route 2021/22 Reduced car use, improvements to air quality, health and reduced congestion	2019-2022
Work with TfL to contribute to delivery of strategic cycle routes including Cycleways (C13)	Conceptual design will start 2018/19 with a view to carrying out public consultation on sections of the route in the summer of 2019. Reduced car use, improvements to air quality, health and reduced congestion	2019/20
Ensure the progressive delivery and maintenance of a high quality of cycle route provision, consistent with London Cycling Design Standards, as well as clear continuity and consistency in design; and ensure that, wherever practicable, provision is designed and implemented to cater for tricycles and bikes with trailers (C10)	Introduce the following cycle routes: Jubilee cycle route 2018/19 Heart of Harrow route 2019/20 Bakerloo route 2020/21 Cross Harrow route 2021/22 Reduced car use, improvements to air quality, health and reduced congestion	2019-2022

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Improve pedestrian and cycle wayfinding across the borough and work with TfL to expand Legible London in Harrow (R4)	Improved wayfinding will occur along with the introduction of the cycle routes as follows: Jubilee cycle route 2018/19 Heart of Harrow route 2019/20 Bakerloo route 2020/21 Cross Harrow route 2021/22	2019-2022
Cycling objective 4: Facilitate and support bicycle ownership/access and secure parking		
Encourage employers to make provision for employees wishing to cycle to a similar standard to that required from new development including the provision of “cycle pools” (C12)	Negotiated through planning applications. More “cycle pools” for employees. Increased cycling	Ongoing
Encourage the delivery of secure and weather-protected cycle-parking at sites generating/attracting significant numbers of cycling trips – most particularly, at strategic interchanges and stations and at local shopping areas; and encourage other authorities with specific responsibilities within the borough to do the same (C11)	Cycle parking review to be completed 2019/20. New cycle parking programme to follow the review	2019/20 onwards
Provide additional cycle parking in schools, review and increase the level of safe and secure cycle parking available across the borough (C5)	More safe and secure cycle parking across the borough and particularly in schools	Ongoing
Review cycle parking at stations, particularly at Harrow on the Hill, Wealdstone, Stanmore and Rayners Lane stations and work towards cycling provision meeting likely demand at these stations and further afield (C6)	Cycle parking review to be completed 2019/20. New cycle parking programme to follow the review	2019/20 onwards
Provide and promote cycle training for children and adults who work, study or live in the borough (C1)	Increase in number of adults and children cycling Reduced car use, improvements to air quality, health and reduced congestion	Ongoing

4. Public transport

Public transport is a key contributor to sustainable transport. In Harrow, bus, underground or trains provide the only realistic sustainable alternative to those private car journeys which are impractical on foot or by bicycle especially for longer journeys. To ensure public transport is considered for existing car journeys, it needs to be a more attractive alternative to private car use. This can be achieved in many different ways.



For many people, using public transport often includes an active travel element to their journeys. People using public transport typically do between eight and 15 minutes of active travel a day, compared to less than one minute for those using a car. Half of all walking journeys in London are to or from public transport stations and stops.

Transport for London (TfL) is an executive body of the Greater London Authority and is responsible for implementing the Mayor's Transport Strategy and managing public transport services across the Capital. This includes the management of nearly all buses in London and the London Underground service. TfL also manages all of the traffic lights and signals across London.

There are 37 bus routes, including 5 night bus services, serving areas within the borough and providing links to neighbouring boroughs. Harrow bus station is currently operating over capacity. There are also four London Underground lines and a London Overground line managed by TfL together with several rail services providers which provide important connections to Central London.

4.1 Managing public transport in Harrow

The provision of almost all public transport is the responsibility of TfL who specify bus and underground service levels. Whilst the Council does not have any direct controls over the running of any public transport it does have a key role working in partnership with TfL and the operators regarding improvements to services required. The Council also facilitates improved communication between public transport interest groups, other stakeholders and TfL.

Although the Council has limited direct influence on the running of public transport services, there are many ways the borough can improve public transport in the borough. These include:

- Ensuring bus stops are accessible, usually done through raising kerb heights to enable use by low floor buses
- Providing bus priority measures on the road network such as additional bus lanes, yellow box junctions, bus gates and recommended changes to bus lane operational hours
- Reducing congestion along bus routes by revising parking regulations and improved enforcement
- Liaising with TfL over routes, signals, timetables etc.

4.2 Harrow public transport liaison group

Harrow liaises with TfL, public transport operators and user groups through its regular Rail (including Underground) and Bus and Highway liaison group meetings. The borough works through these quarterly liaison meetings to review and improve standards to improve the attractiveness of bus, underground and rail travel in the borough. Nominated councillors, representatives from TfL, Harrow Public Transport Users Association (HPTUA), London TravelWatch and other stakeholder attend both meetings. London Underground, Rail and bus operators, TfL Bus operations also attend the relevant meetings.

London TravelWatch is the independent, statutory watchdog for transport users in and around London. It is funded by the London Assembly and represents all London transport users on all modes of transport. HUPTA represents the interests of all public transport users who live, work, or travel in Harrow.

4.3 Benefits of buses

Buses can move 70 people in the same amount of space taken up by about three cars. Many trips that people make by car, which they may not want or be able to make by foot or cycle, can be switched to the bus. This frees up street space and reduces the dominance of motor vehicles that can make streets unpleasant and discourage active travel.

Buses help to reduce traffic and therefore make streets safer and easier to cross. They provide essential local transport links, enabling people to reach high streets and town centres and support local economic vitality. For older and disabled people, and those travelling with young children, buses also offer an accessible form of transport. Buses are also one of London's most affordable public transport options and, for many, they are the easiest choice.

4.4 Benefits of Underground & Rail services

Underground and rail services provide the most practical option for travel into central London for most people. They are direct and operate clear of road congestion. These services also provide a practical sustainable alternative to the private car to many destinations outside London.

4.5 Existing public transport targets

The Mayor of London identifies the importance of delivering a good public transport experience as one of the strategic outcomes in his transport strategy. This outcome is to be delivered by 2041 and to achieve this, the Mayor has identified that the following need to be delivered:

- The public transport network will meet the needs of a growing London
- Public transport will be safe, affordable and accessible to all
- Journeys by public transport will be pleasant, fast and reliable

To ensure that Harrow also works towards delivering the Mayoral outcome, the following borough targets, to be achieved by 2041, have been agreed and were included in the Harrow LIP3 :

- 173,000 trips per day made by public transport.
- Achieve a 5 minutes difference between total public transport network journey time and total step free public journey time in Harrow
- Deliver an average bus speed of 12.7 mph

Table 12 shows how Harrow will work towards achieving these targets:

Table 12: Achieving public transport targets

Harrow target	Historic data	Method
173,000 trips made by public transport in 2041	117,000 trips per day were made by public transport between 2013/14 and 2015/16.	This target will be achieved by a combination of programmes and particularly development regulations (parking restrictions) but also as a result of younger people in general being less car-dependent.
Achieve a 5 minutes difference between total public transport network journey time and total step free public journey time in Harrow by 2041	The difference between total public transport network journey time and total step free public transport journey time in 2015 was 12 minutes.	Achieving this target will be dependent on TfL improving the accessibility of stations in the borough by introducing step free access.
Deliver an average bus speed of 12.7 mph by 2041	In 2015, bus speeds were 11.1mph	This will be achieved by bus priority and congestion reduction schemes, traffic signal changes and reduced car use.

4.6 Objectives for public transport

Based on Harrow LIP3, the following are the objectives for public transport in Harrow:

1. Improve the accessibility of the public transport network and ensure increased inclusivity
2. Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use
3. Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs

4.6.1 Public transport objectives link to healthy streets

The public transport objectives fit well with the Healthy Streets indicators and this is shown in Table 13.

Table 13: Public transport objectives link to healthy streets

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Improve the accessibility of the public transport network and ensure increased inclusivity	✓			✓		✓	✓			✓
Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use	✓	✓		✓	✓	✓	✓		✓	✓
Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs	✓	✓				✓				✓

4.7 Public transport objective 1: Improve the accessibility of the public transport network and ensure increased inclusivity

Making public transport more accessible and inclusive is critical to delivering a better whole journey experience for people with mobility difficulties and the growing number of older people. However the current public transport system presents a range of barriers to being used by these groups.

Addressing these barriers, to create a more accessible and inclusive public transport system, will enable new trips to be made by those with mobility difficulties and older people, as well as making their current trips easier and quicker. This will improve overall social integration by giving more people a chance to participate in the opportunities that London has to offer and helping to create a more inclusive city.

4.7.1 Bus stop accessibility

Buses are typically the most common form of public transport used by older people, people with mobility difficulties and those travelling with children, or with pushchairs. The entire TfL bus network is now operated using low-floor vehicles. At the passenger's request, low-floor buses can be lowered, or 'kneel' at the bus stop to reduce the step height at stops. This improves accessibility for

all passengers. Mobility impaired passengers, including wheelchair users, benefit most from low-floor buses, however people with pushchairs or carrying heavy shopping also benefit.

Bus stop accessibility improvements include improved signage, lining, hard standing, accessible kerbing and bus stop shelters.

To improve accessibility to buses, the kerb heights of bus stops across London have been raised to ensure that they are suitable for use by low floor buses. Doing this, enables buses to deploy their ramps safely. In Harrow, over 95% of bus stops are accessible for use by people in wheelchairs. Harrow will continue to ensure that stops are suitable for use by low floor buses and prioritise additional work where the bus stops do not comply with the disability discrimination legislative requirements.

4.7.2 Station step-free access

London's tube and rail network is not sufficiently accessible to enable many older or mobility impaired people to travel comfortably. Step-free journeys across the network take longer than those that are not step-free. TfL analysis suggests that journeys by step-free routes take about 15 per cent longer than the quickest route on average across London, although this is considerably higher in areas served by tube lines with few step-free stations.

Improving the accessibility of stations in Harrow is key to improving accessibility but it is also very expensive. The borough actively lobbies TfL to improve station accessibility and works with developers to secure additional Section 106 and CIL funding for work to progress. As a result, step-free access is now being introduced at Harrow-on-the-Hill station and is scheduled to be completed by 2020. This includes one lift on College Rd side and three lifts to platforms. If the development plans progress successfully, then the developer will fund a fifth lift on the Lowlands Recreation Ground side. This improved station accessibility will provide significant improvements regarding the accessibility of Harrow town centre. Further underground step-free accessibility improvements are required at Stanmore, South Harrow and Sudbury Hill Harrow. Stanmore station has some accessibility through the car park but it is far from adequate. Harrow will continue to lobby TfL for the improvements needed.

4.7.3 Accessible parking at stations

As stations become more accessible, it is important that those people dependent on cars for reasons of mobility are able to reach the newly accessible stations. This can only be achieved if appropriate parking is provided in appropriate locations for those with mobility difficulties. The borough will continue to review the existing disabled parking facilities particularly where public transport station improvements have been delivered.

4.8 Public transport objective 2: Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use

The reliability of bus routes can be improved by good design, better managed roadworks and well managed kerbside space through appropriate parking regulations and good enforcement. Introducing appropriate bus priority including additional bus lanes, bus gates, introducing signal reviews, changes to bus lane operational hours and accessible bus stops can all improve the reliability of bus services. The importance and reliability of the bus service is always considered in managing the road network in the borough and enforcement of road traffic, parking and waiting regulations is considered in the interests of improving bus priority.

4.8.1 Bus priority schemes

Bus Priority schemes are introduced to improve bus journey reliability times and the overall public transport experience. New schemes are selected based on information provided from a range of sources including HPTUA, TfL, area studies, ibus data and transport operators. Issues addressed include new bus routes or amendments to existing bus routes, improved accessibility, connectivity and bus journey time reliability. Typical measures introduced as part of bus priority include junction improvements, signalised bus priority, bus lanes, bus routes and bus stop locations, countdown and information systems.

To ensure the bus priority measures are effective, site surveys are usually undertaken to measure the impact of bus journey times before and after new measures are introduced.

Using ibus data and route studies

All 8,000 London buses have now been fitted with iBus, a state-of-the-art system which provides passengers with useful information about their bus service. The on board 'next stop' announcements that the system delivers mean passengers know exactly where their bus is and what the next stop and final destination will be, even on an unfamiliar route. It also allows TfL and bus operators to track the location of every bus in London by time and point. The information provided by ibus is used to determine any problems along a route and where bus priority measures might be introduced.



4.8.2 Wealdstone town centre bus priority

The borough will be introducing a major bus priority scheme in Wealdstone town centre. Planned redevelopment and regeneration will change travel patterns and increase travel demand in the area. There is an opportunity to achieve modal shift to more sustainable travel and enhance the public realm, especially around core retail areas, bus stops, and the train station

An Area Transport Study was undertaken in Wealdstone town centre to assess the impact of the planned population growth. The study identified the need to improve the local bus network service. The planned bus priority measures will reduce bus journey time delays and improve journey time reliability which are both key to accommodating the planned population growth in a sustainable manner. Improvements will also ensure that connections to public transport and interchange opportunities are improved, pedestrian and cycle access to the town centre and public transport services are further developed and that good bus stop accessibility is maintained.

4.8.3 Route 140 and other route studies

WestTrans is a partnership formed of six west London Boroughs, Brent, Ealing, Hammersmith & Fulham, Harrow, Hillingdon and Hounslow. They work with TfL to identify, develop and implement transport projects to the benefit of West London. Part of their work has involved carrying out bus route studies which consider potential improvements that can be made to benefit the entire bus route. Route 140 has been identified as a route where improvements are needed. The route runs from Long Elmes to Heathrow Central and passes through both Harrow Town Centre and Wealdstone. The borough will work with WestTrans to deliver recommended improvements.



4.8.4 Night buses

London's night-time economy accounts for 8 per cent of the city's GDP, contributing around £26.3bn annually and represents 40 per cent of the entire UK night-time economy. It also employs over 700,000 people in London. Night time public transport is therefore important to support London's growing night time economy and also to support those working at night.

Harrow currently benefits from a 24 hour seven days a week service on routes 140, N98 and N18 bus services but a 24 hour service at weekends only on the 183 and 114 service. This means that places such as Kenton, North Harrow and Pinner in the northern and western part of the borough only have a night time bus service on the weekends (to match the night tube service). However, the rest of the week they neither have night tube nor night bus services. Harrow will work with TfL to extend the coverage of night time bus services and improve the frequency and reliability of weekend and late night public transport services to and from Central London.

4.9 Public transport objective 3: Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs

The integration of public transport with other sustainable transport modes is fundamental to improving the whole journey experience. Poor quality stations and poor surroundings reduce the likelihood of regular use of public transport. If there is nowhere to park a bike at a station, no taxis available when using the night time running of the underground network or the access to the public transport system is uninviting then less people will want to change mode to using public transport.

4.9.1 Cycle parking at stations

Cycle parking at stations improves the accessibility of the underground and rail transport to those living further away from stations and where walking is less practical. It is particularly important for those who are only able to cycle a short part of their overall journey or only feel sufficiently confident enough to just cycle a short distance.

Most stations in the borough have some level of cycle parking available at or near the station, however the quality of cycle parking provided is not always of the same standard. The borough continues to liaise with TfL and Network Rail regarding suitable, secure and increased cycle parking at stations.

The borough will review cycle parking across the borough but will initially focus on reviewing cycle parking at Harrow on the Hill, Wealdstone, Stanmore and Rayners Lane stations. Following this review, the borough will work towards cycling provision meeting likely demand at these stations and further afield.



4.9.2 Cycle parking hubs at stations

The provision of cycle parking hubs at stations will help to improve the integration between cycling and public transport journeys. The borough intends to introduce cycle parking hubs at adjacent stations to the aspirational strategic cycle network as the aspirational strategic network is delivered.

4.9.3 Public realm improvements

Harrow and Wealdstone Intensification Area will be the focus for growth in the borough. Wealdstone and Station Road will become the focus of regeneration efforts, providing for a substantial proportion of the Borough's future housing growth. All of these growth areas will be accompanied by large scale public realm improvements. These improvements will also work to improve access to the public transport network.

Old, poorly maintained or poorly lit public transport facilities and their approaches leads to insecurity which is a barrier or at least a disincentive to using public transport and can discourage modal shift away from private cars. It particularly affects those who do not access to their own vehicle as it can limit the ability to travel at all.

Recent public realm improvements like Rayners Lane, Mollison Way, Station Road, Harrow town centre and Sudbury Hill, have not only improved the environment in the immediate area but have improved the accessibility of public transport for all and the efficiency of bus services by reducing congestion.

Planned public realm improvements are focused in the intensification area. These are often supported by S106 or CIL funding by the associated developments. At Harrow on the Hill the proposed residential development will include public realm improvements, step free access and opportunities to improve the transport interchange.

4.9.4 Taxis at stations

The Mayor introduced late night running on Fridays and Saturdays on the Victoria, Jubilee, and most of the Central, Northern and Piccadilly underground lines in London. Arriving late at any station can be difficult if there is no onwards travel available. This can be particularly difficult in a large borough such as Harrow where the final leg of the journey may be too far to go on foot. To support these journeys, the borough will consider extending the taxi rank operational hours where this supports late travel such as the night time running of the Jubilee Line. The borough will also liaise with the Public Carriage Office about improving the overall accessibility of taxi ranks in the borough.

4.10 Delivering the public transport objectives

Table 14 shows the targets that will be used to measure the delivery of the public transport objectives.

Table 14: Public transport targets to deliver objectives

Public transport objectives	Targets to monitor progress	Latest available data	Target and year
Improve the accessibility of the public transport network and ensure increased inclusivity	Percentage of accessible bus stops across the boroughs	98%	98% by 2021
	Improved accessibility of station taxi ranks	Taxi rank stations at Pinner station, Rayners Lane station and North Harrow station reviewed	2019/20
Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use	Delivery of Wealdstone town centre bus priority scheme	Transport Vissim model and business case prepared	2020/21
	Deliver road widening at Pinner Road/Station Road and at High Road/Harrow Weald to enable improved bus priority	Statutory undertakers plant being relocated	2019/20
	College Road bus and cycle only route	Experimental trial in operation	2019/20
	In conjunction with WestTrans and TfL review bus routes to identify future bus priority work	Route 140 reviewed and designs being implemented	Ongoing
Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs	Review cycle parking at stations		2020/21

4.11 Funding the public transport action plan

Table 15 shows the key funding source used for Harrow cycling initiatives.

Table 15: Key funding sources for public transport initiatives

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
Public transport objective 1: Improve the accessibility of the public transport network and ensure increased inclusivity					
Bus stop accessibility	✓				
Station step-free access		✓	✓	✓	
Accessible parking at stations	✓				
Public transport objective 2: Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use					
Bus priority	✓	✓			
Wealdstone town centre bus priority	✓	✓			
Route 140 study	✓	✓			
Night buses		✓			
Public transport objective 3: Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs					
Cycle parking at stations	✓				
Cycle hubs at stations	✓				
Public realm improvements			✓	✓	✓
Taxis at stations		✓			✓

4.12 Public Transport Action Plan

Table 16 shows the borough public transport action plan and how the agreed borough LIP3 policies fit with the new public transport objectives. The table also shows the outputs to be delivered relating to each policy.

Table 16: Public transport action plan

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Public transport objective 1: Improve the accessibility of the public transport network and ensure increased inclusivity		
Seek to secure a fully integrated approach to the provision and operation of public transport services within Harrow, including: <ul style="list-style-type: none"> Improving the ease and convenience of approach routes to service access points, and the quality and clarity of the access signing Taking account of the specific needs of people with impaired sight or impaired mobility Improved taxi facilities at rail and underground stations (PT1)	Review of taxi facilities, disabled parking and all infrastructure arrangements at stations	2021/22
In partnership with public transport service providers and regulators, seek to ensure that all stations and bus stop locations in the borough are progressively improved with the intention of developing at access points, a fully wheelchair-accessible boarding / alighting points, as a basis for supporting a network of fully wheelchair-accessible scheduled bus services (PT2)	Maintain high level of bus stop accessibility in the borough (currently 98%) and review bus stop accessibility provision in all new developments	Ongoing
Seek to ensure that all stations and bus stop locations in the borough are progressively improved as a basis for supporting a network of fully wheelchair-accessible scheduled bus services (SI4)	Increased fully accessible bus stops Improved drop off facilities for disabled people at stations	Ongoing
Liaise with the Public Carriage Office regarding improving the accessibility of taxi ranks in the borough (PT6)	Review taxi facilities in the borough	2021/22

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Support the extension of additional taxi rank operational hours where this supports late travel such as the night time running of the Jubilee Line (PT3)	Later operating taxi rank hours to support tube line	2021/22
Public transport objective 2: Improve the reliability of buses in the borough to encourage modal shift and enable buses to be a viable alternative to car use		
Deploy full range of available bus priority measures ensuring that measures are designed to reduce problems for all modes (PT5)	North Harrow - Complete Pinner Road / Station Road - road widening scheme and High Road Harrow Weald will be introduced in 2019/20 Wealdstone town centre bus priority scheme by 2020/21	2020/21
Work with TfL to assess suggested service improvements for the Heathrow bus link route 140 as well as any additional routes needed to support the proposed Heathrow expansion (PT8)	Route 140 bus priority measures introduced	2020/21
Seek to work with public transport providers and regulators to ensure that engineering works and service closures are coordinated to minimise passenger inconvenience (PT4)	Improved coordination of engineering works	Ongoing
Support improved orbital transport links across the borough and between outer London centres to provide wider access to employment opportunities and to enable journeys currently made by car to be made by sustainable forms of transport and thereby improve the environment (PT7)	Borough support for improvements to route 140 which is an orbital route. Support for the development of the West London orbital Dudding Hill line. However the proposed route is unlikely to have a considerable impact on travel in the borough.	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Ensure that road markings to better enable bus priority enforcement are prioritised in all schemes (PR9)	Improved road marking for bus priority	Ongoing
Enforce all road traffic, parking and waiting regulations in the interests of improving bus priority (PE9)	Better enforcement and improved bus reliability in the borough	Ongoing
Work with TfL and bus operators to ensure adequate off-highway facilities are available for the storage and maintenance of buses at appropriate locations and to ensure that bus stands are appropriately located (PW8)	Additional opportunities to support off-highway facilities identified through public transport user groups	Ongoing
Work with TfL to prioritise available resources to provide the road space and traffic regulatory / management infrastructure to support development of the bus services as well as additional bus services (PW7)	Work with TfL to deliver improved borough bus services	Ongoing
Work with TfL to improve the penetration and expansion of local bus services into every local neighbourhood area – either by extending existing routes or, where necessary, by promoting new routes – this will be subject to the evaluation of the local impact of any additional bus services (PW2)	Work with TfL to deliver improved borough bus services	Ongoing
Persuade TfL to concentrate on continuing to improve public transport service reliability ensuring improved radial and orbital services (PW3)	Improved connectivity to neighbouring boroughs	Ongoing
Work with TfL to improve bus service reliability and to improve orbital bus links between the town centres and major employment locations and to other key destinations within Harrow and neighbouring boroughs (PW4)	Increased employment levels and connectivity to neighbouring boroughs	Ongoing
Work with the key regulators and providers of rail, Underground and bus services within the borough to progressively improve the network in terms of capacity and reliability (PW5)	Improved public transport reliability and improved connectivity particularly to Central London	Ongoing
Build on existing liaison arrangements with those parties responsible for regulating and operating public transport services in the borough – issues discussed will include concerns of public transport users with both TfL bus and all rail operators and will include bus driving standards, bus emissions, driver behaviour, bikes on buses and trains, as well as general service provision (PW6)	Regular public Transport liaison meetings	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Public transport objective 3: Improve public transport integration with all sustainable transport modes and improve the cycling and walking environment at transport hubs		
Review cycle parking at stations, particularly at Harrow on the Hill, Wealdstone, Stanmore and Rayners Lane stations and work towards cycling provision meeting likely demand at these stations and further afield (C6)	Cycle parking review to be completed 2019/20. New cycle parking programme to follow the review	2019/20 onwards
Work in partnership with public transport service providers and regulators to seek to ensure that all stations and bus stop locations in the borough are progressively improved to offer a safe, secure and passenger-friendly environment and appropriate 'state-of-the-art' passenger interchanges, including adequate and secure cycle parking facilities (PW9)	Cycle parking review to be completed 2019/20. New cycle parking programme to follow the review	2019/20 onwards
Support the extension of additional taxi rank operational hours where this supports late travel such as the night time running of the Jubilee Line (PT3)	Increased operational hours for taxi rank supporting Jubilee Line late night running	2021/22

5. Low emission vehicles

Emissions from road transport make the largest contribution to poor air quality in Harrow and this has a detrimental impact on the health of those living, visiting or working in the borough. The use of both petrol and diesel also contributes to climate change. More deprived areas are disproportionately affected by vehicle pollution due to their proximity to heavily trafficked streets.

The Mayor's Transport Strategy and the London Borough of Harrow transport policy both focus on reducing car use and encouraging a switch to walking, cycling and public transport as the most effective ways to achieve air quality improvements. Choosing active travel also has considerable health benefits and can reduce traffic congestion and improve local air quality. However, for some people in certain situations, the use of vehicles is essential. When vehicles are needed, it is clearly desirable that they should be as clean and energy efficient as possible.

This strategy shows how Harrow is encouraging the necessary change in behaviour away from using polluting vehicles to choosing to use low emission vehicles.

5.1 Low emission vehicles vision

Harrow's vision is that in the future, low emission vehicles represent an increased proportion of all vehicles being used in the borough; where those who need to purchase a vehicle are not prohibited from purchasing a low emission vehicle by a lack of supporting charging infrastructure; where across the borough there is a network of supporting infrastructure that ensures low emission vehicles are an attractive choice for those needing private motorised transport; where the increase in uptake of quieter electric vehicles results in noticeably quieter roads; where the visible signs of air pollution in borough centres is significantly reduced and where those driving low emission vehicles in the borough can easily find the necessary charging facilities to support their journeys.

If this vision is realised, then streets will be healthier and quieter places with improved air quality. This is not something that the borough can deliver alone. Delivering this vision needs support from government, regulatory authorities and industry. The benefits of delivering this vision are far reaching and include health, the environment and reduced climate change, however it is a realistic but long term vision to deliver.

5.2 London initiatives to encouraging change to less polluting vehicles

The Mayor of London has committed to improving air quality in London. To support this commitment, all TfL buses will meet the Euro VI diesel standard for NO_x and PM by 2020 and all new single-deck buses will be zero emission from 2020. The commitment is also partly reliant on the introduction and use of more electric vehicles in place of diesel and petrol polluting vehicles. Delivering changes to increase the uptake of electric vehicles will require substantial expansion in the electric vehicle infrastructure provided all across London.

Several London wide initiatives to encourage a switch to lower emission vehicles have been introduced. These include the London Low Emission zone, the T-charge and the London Ultra Low Emission zone.

5.2.1 London Low Emission zone

The London Low Emission Zone (LEZ) covers most of Greater London and operates 24 hours a day, every day of the year. It was introduced in 2008 to encourage the most polluting heavy diesel vehicles driving in the Capital to become cleaner. The London LEZ is enforced through the use of that read vehicle number plates as they are driven within the LEZ and check it against a database of registered vehicles.

5.2.2 T-CHARGE

The T-Charge is an emissions surcharge which operates in the Congestion Charge zone and is part of the Mayoral commitment to help clean up London's polluted air. Older vehicles, including cars, vans, minibuses, coaches and HGVs driving in central London need to meet minimum Euro emission standards or pay an extra daily toxicity charge. This is in addition to the Congestion Charge.

The T-Charge will be replaced by the Ultra Low Emission Zone which will mean vehicles using central London will have to meet new, tighter emissions standards from 8 April 2019. This will affect all vehicles.

5.2.3 London Ultra Low Emission Zone

To help improve air quality, an Ultra Low Emission Zone (ULEZ) will be introduced in central London from 8 April 2019. Most vehicles including cars and vans will need to meet new, tighter exhaust emission standards (ULEZ standards) or pay a daily charge to travel within the area of the ULEZ. Ultra Low Emission Vehicles (ULEVs) include battery electric vehicles, plug-in hybrid vehicles, range-extended electric vehicles and hydrogen fuel cell electric vehicles.

From 25 October 2021, the ULEZ area will be expanded to include the inner London area bounded by the North and South Circular Roads.

Its objective is to help improve air quality in London, in particular with regards to nitrogen dioxide (NO₂) and particulate matter, both of which have an adverse effect on human health. It is expected that this will discourage the use of older, more polluting vehicles driving into and within central London.

5.3 Access to charging points

Studies of electric vehicle user behaviour show that access to a charging point is a pre-requisite to the purchase of an electric vehicle and that this is best achieved by access to home charging facilities. However this is not always possible. The provision of charge points which are accessible from home is therefore critical in facilitating electric vehicle uptake. Similarly, the lack of off-street parking in some residential areas prohibits uptake of electric vehicles in these areas.

Londoners with access to off-street parking have been the early adopters of electric vehicles as they can privately source their own domestic charge point. Having a driveway or garage means that drivers have a guaranteed place to park and charge their vehicle, as well as the ability to charge overnight. This has skewed early electric vehicle ownership to wealthier areas, leaving the less wealthy to pay more in fuel costs, Vehicle Excise Duty and paying to drive in the London Low Emission Zone.

According to Zap-Map, the TfL-recommended charging point database, the number of charging points in London grew from an average of 1,586 in 2017 to 1,869 in 2018 – an increase of 17 per cent. According to DfT data released so far (from December 2016 to September 2017), the number of electric vehicles in London increased by 50 per cent in 2017.

5.4 Electric charging network

London has a range of public electric charging networks. These include BP Chargemaster, Polar and Source London, GeniePoint, Pod Point all used in Harrow and further afield. Payment and access methods across networks vary widely. Most charging facilities require an account to be set up before use, but some rapid units with contactless Pay As You Go (PAYG) card readers are being installed.

Although many electric vehicle charge points are free to use, the majority of fast and rapid chargers require payment. Charging tariffs tend to comprise a flat connection fee, a cost per charging time (pence per hour) and/or a cost per energy consumed (pence per kWh).

5.5 Types of electric vehicle charging facilities



There are three main types of electric vehicle charging facilities in use in London. These are rapid, fast, and slow. These represent the power outputs, and therefore charging speeds, available to charge an electric vehicle.

Rapid chargers are one of two types – AC or DC [Alternating or Direct Current]. Current Rapid AC chargers are rated at 43 kW, while most Rapid DC units are at least 50 kW. Both will charge the majority of electric vehicles to 80% in around 30-60 minutes (depending on battery capacity). Tesla Superchargers are also Rapid DC and charge at around 120 kW. Rapid AC devices use a tethered Type 2 connector, and Rapid DC chargers are fitted with a CCS, CHAdeMO or Tesla Type 2.

Fast chargers include those which provide power from 7 kW to 22 kW, which typically fully charge an EV in 3-4 hours. Common fast connectors are a tethered Type 1 or a Type 2 socket (via a connector cable supplied with the vehicle).

Slow units (up to 3 kW) are best used for overnight charging and usually take between 6 and 12 hours for a pure-EV, or 2-4 hours for a PHEV. EVs charge on slow devices using a cable which connects the vehicle to a 3-pin or Type 2 socket.

5.6 Electric vehicles

There are around 12,000 electric vehicles registered in London⁴, that's ten times as many as in 2012. A recent study by WestTrans found that in Harrow electric vehicles were reported to have made up 1 sale in every 351 – 501 vehicles purchased. This same study also forecast that the greatest uptake in electric vehicles in the borough is likely to be in Stanmore in the north eastern part of the borough, just south of the M1 and A41. Other areas that are expected to see a more rapid increase in electric vehicles were estimated to be in South Harrow and in areas to the north and south of Uxbridge Road in the north western part of the borough. The forecast takes into account the different housing stock existing across the borough.

The large increase in electric vehicles across the UK can be clearly seen in Figure 7. This shows the number of registered electric vehicles in the UK by quarter since 2012.



Figure 8 shows the increase in the number of registered electric vehicles in London by quarter since 2012.

Figure 9 shows a comparison in the number of registered electric vehicles within all outer London boroughs.

⁴ London Assembly Environment Committee, May 2018

Due to the growth in electric vehicle ownership, the borough routinely receives requests from residents regarding the provision of additional street charging points. As more charging facilities are installed across the borough, these requests are likely to increase.

Figure 7: Number of registered electric vehicles in the UK by quarter

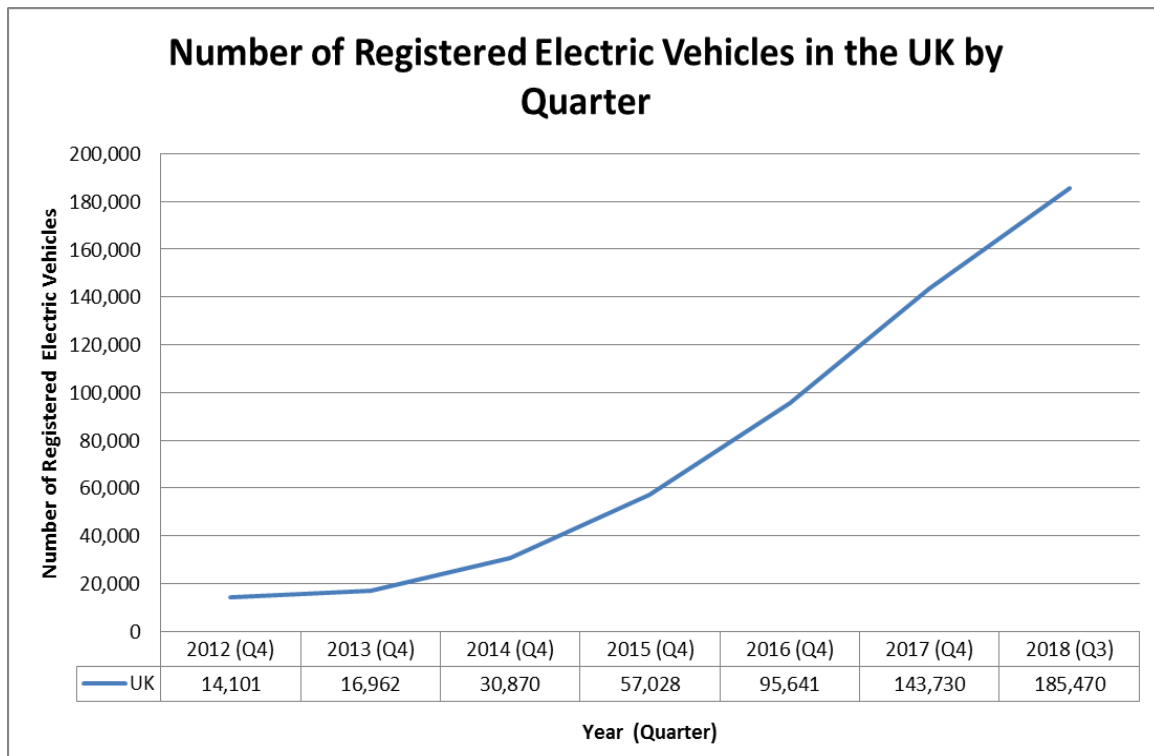


Figure 8: Number of registered electric vehicles in London by quarter

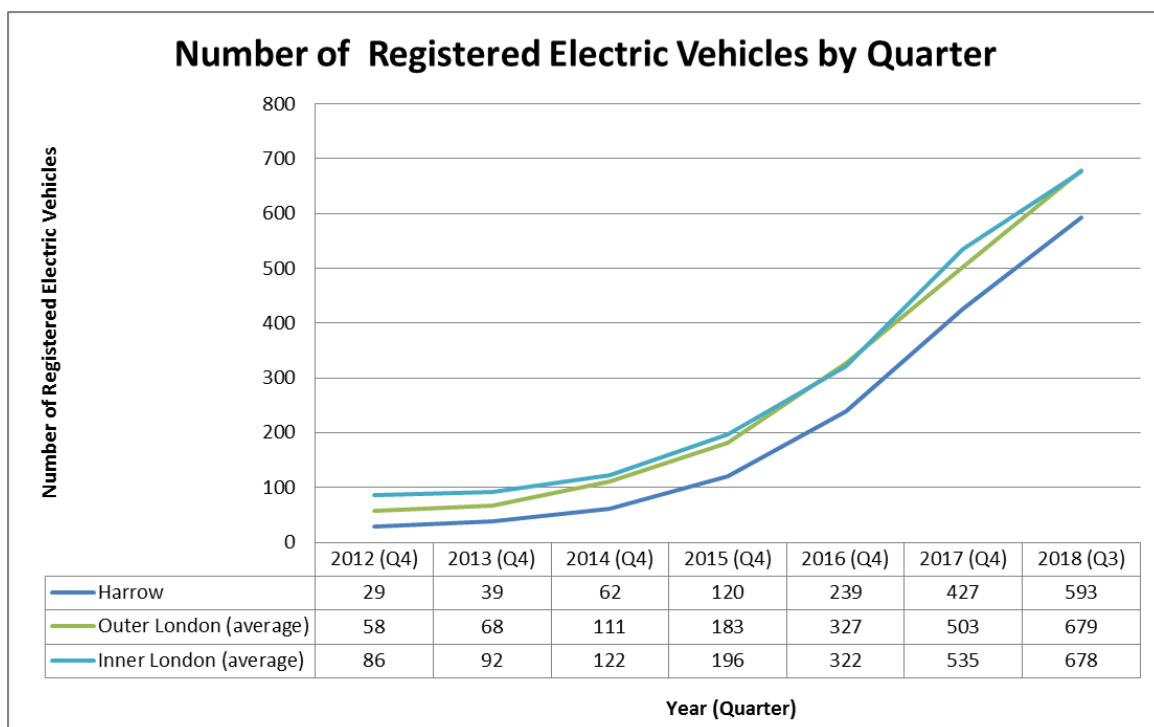
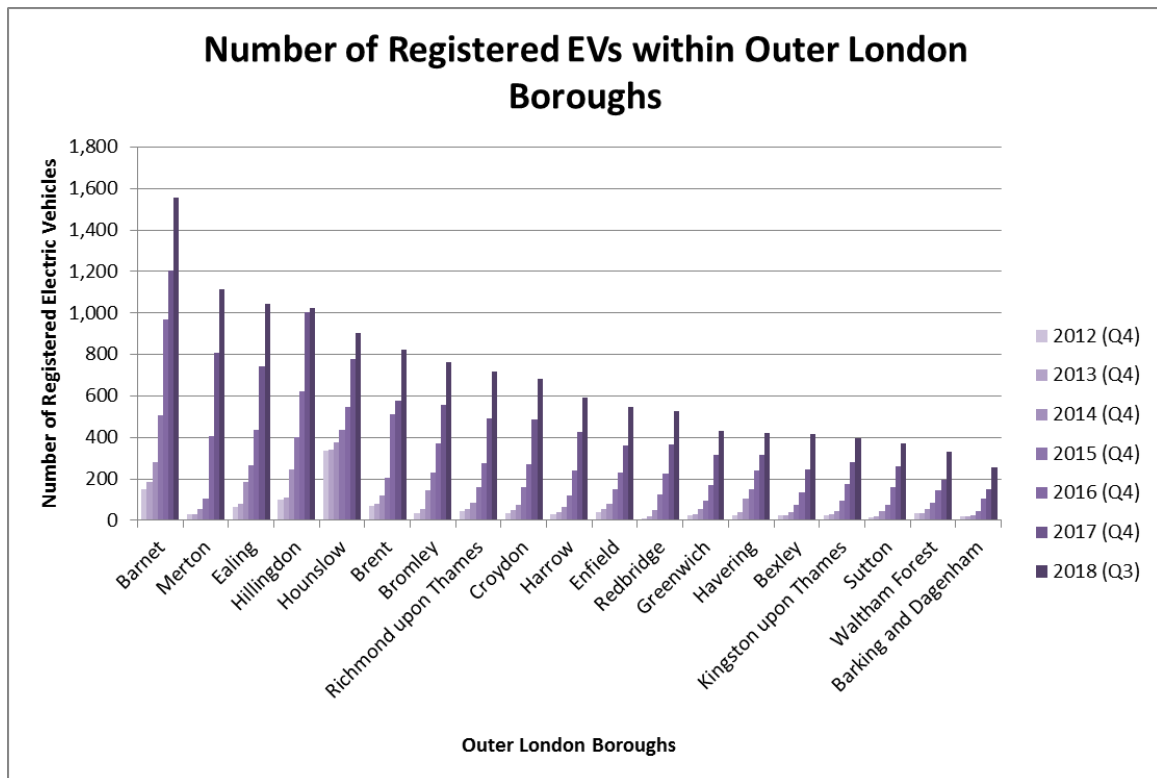


Figure 9: Comparison of number of registered electric vehicles within outer London boroughs



5.7 Current Harrow network for electric charging vehicles

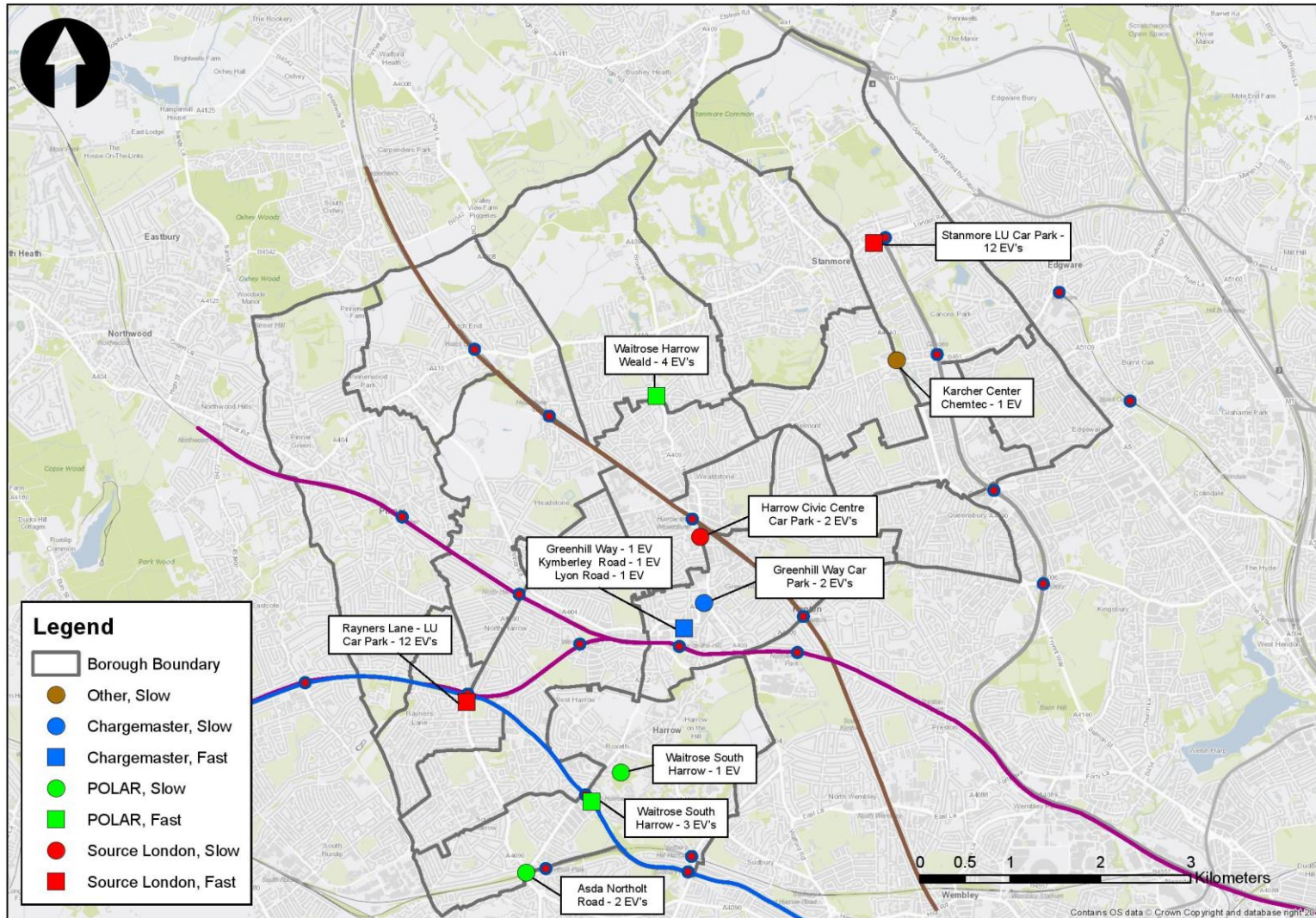
There is currently a total of 42 Electric Vehicle Charging Points located within Harrow. These are all located at just 7 sites. The majority of these are located in off-street (38) car parks. Locations are shown in Figure 10.

The main locations with EVCPs include:

- Rayners Lane LU Car Park (12)
- Stanmore LU Car Park (12)
- Waitrose – South Harrow (4)
- Waitrose – Harrow Wealdstone (4)
- Harrow Civic Centre Car Park (2)
- Asda – Northolt Road (2)
- Neighbourhoods of the Future Fleet Trial - Greenhill Way Car Park (2)
- Greenhill Way (1)
- Kymberley Road (1)
- Lyon Road (1)
- Karcher Center Chemtec (1)

The existing EVCPs consists of both slow / standard (19%) and fast (81%) charge points.

Figure 10: Electric charging point in Harrow, February 2019



5.8 Mayoral ambition

The mayor of London ambition is for the following:

- all taxis and private hire vehicles to be zero emission capable by 2033
- all TfL buses to be zero emission by 2037
- all newly registered road vehicles driven in London to be zero emission by 2030
- London's entire transport system to be zero emission by 2050

5.9 Objectives for low emission vehicles

Based on Harrow LIP3, the following are the objectives for low emissions vehicles in Harrow:

- 1 Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles
- 2 Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate
- 3 Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot

5.9.1 Low emission vehicle objectives link to healthy streets

The vehicle emissions objectives fit well with the Healthy Streets indicators and this is shown in Table 17.

Table 17: Vehicle emissions objectives link to healthy streets

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles					✓					✓

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate					✓					✓
Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot					✓					✓

5.10 Low emission vehicles objective 1: Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles

Increased understanding as to the harmful nature of polluting vehicles can help people to change their behaviour. Opportunities for people to use low emission vehicles will help to promote their use.

5.10.1 Electric vehicle car clubs

Car clubs represent an opportunity to get more electric vehicles on the road instead of Internal Combustion Engine vehicles. Car clubs have an economic incentive to have the most modern vehicle fleet possible and regularly update the cars they provide. Car club members have already shown an appetite for more electric vehicles, and nine out of ten people who had not yet used an electric vehicle in their car club expressed an interest. Car clubs also play a role in removing vehicles from the road entirely. Carplus estimates that each car club vehicle takes the place of ten private vehicles. The borough will investigate suitable locations for trialling electric vehicle car clubs in the borough.

5.10.2 Discouraging use of diesel vehicles

UK motorists were previously incentivised to buy diesel vehicles due to their perceived environmental impact, due to the fact they typically produce less CO₂ emissions than petrol equivalents. In built-up urban areas, these emissions mean that diesel engines are often the biggest cause of roadside air pollution, particular among older models.

Diesel vehicles are the single biggest source of NOx emissions in London. To discourage diesel vehicle ownership and use in the borough, the borough is considering adding a surcharge for both resident and business parking permits for diesel vehicles in the borough.

5.10.3 Promoting low emission vehicles

The borough promotes the use and benefit of low emission vehicles through providing information at pop-up sessions in the town centre and as part of the Neighbourhood of the Future. These events are done by working with low emission vehicle companies and with the Harrow internal communication team.

5.11 Low emission vehicles objective 2: Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate

The growth in the number of electric vehicles in the capital is outstripping the number of charge points and it is likely that this contributes to restricting the number of people owning an electric vehicles. The borough needs to work to address this issue.

60 per cent of Londoners do not have their own garage or driveway and would therefore need to rely on electric vehicle on-street charging. Access to off-street parking in residential areas, varies across the borough. Areas with low access to private off-street charging facilities will require significant increased availability of on-street charging facilities to encourage change.

5.11.1 On-street vehicle charging

Operational parking restrictions have been developed for on-street electric vehicle charging locations. Only an electric vehicle will be permitted to park in an electric vehicle dedicated bay at all times. Electric vehicles will be permitted a maximum three hour stay, whilst actively recharging with no return permitted within one hour operating between 7am to 7pm, Monday to Sunday. Overnight, any electric vehicle will be able to park without having to recharge or incur a maximum stay. The revised Parking Management and Enforcement Management Strategy will incentivise the uptake of electric vehicles through reduced charges for electric vehicle residential and business parking permits.

5.11.2 Neighbourhoods of the Future

In July 2015 London set out its vision to become an ultra-low emission vehicle (ULEV) capital. TfL, London Councils and eight London Boroughs submitted a joint bid for funding to the Office for Low Emission Vehicles (OLEV) for the Go Ultra Low City Scheme. The Office for Low Emission Vehicles (OLEV) is a team working across central government to support the early market for ultra-low emission vehicles (ULEV) and is part of the Department for Transport and the Department for Business, Energy & Industrial Strategy.

London's bid was successful in securing £13m to implement the proposed package of measures. Transport for London (TfL) dedicated £1.4m of this funding award to funding six Neighbourhoods of the Future (NoF) across London, that combine innovative green technology and other initiatives to tackle London's air quality emergency directly at a local level. Harrow Council was awarded funding

in order to deliver a NoF scheme in Harrow Town Centre to encourage a greater up take of electric vehicles and improve air quality.

In 2017/18 Harrow introduced its first ultra-low emission zone, neighbourhood of the future in Harrow town centre. The Town Centre has been identified as an area of poor air quality and suffered from congestion during peak periods. It was therefore appropriate to focus the introduction of the NoF in the town centre located mainly within the Greenhill ward.

Measures included in the zone are:

- amending parking policies to incentivise ULEV ownership and providing parking discounts
- providing increased charging infrastructure in destination car parks near to the two main shopping areas of St Ann's and St George's shopping centre
- providing free credited training to mechanics in the area to ensure ULEVs can be safely and easily serviced
- up skilling local mechanics to support local businesses, making Harrow a centre of excellence for ULEV servicing and maintenance and boosting the local economy
- enabling businesses based in the borough to trial Low Emission Vehicles (LEVs) for their fleets, implementing a long term behaviour change strategy to raise awareness of the benefits of LEVs and overcome any misconceptions.

Harrow is also considering restricting private cars from accessing Station Road/College Road and allowing only ULEVs access into the zone.

Subject to the availability of further funding, the borough will consider implementing more NoFs across the borough.



5.11.3 Training Mechanics

The growth in electric vehicles on the roads requires mechanics with the appropriate skills to service these vehicles. This is a new specialist skill that will be widely in demand as more electric vehicles enter the market. Part of the NoF funding that Harrow received was allocated to training local mechanics to gain accreditation to work on and service electric vehicles. This training is progressing in partnership with local businesses and is intended to support local businesses, and make Harrow a centre of excellence for ULEV servicing and maintenance and thereby boosting the local economy. It is anticipated that up to fifteen mechanics will be trained in Automotive Technology courses focusing on electric vehicle maintenance and safety. Depending on the success of this training, further funding to train mechanics may be available in the future.

5.11.4 Extending vehicle charging facilities

Increased facilities for electric charging will be rolled out across the borough. However locations need to be carefully identified as to where charging spaces should be provided. There is limited road space available and a loss of parking space for non-electric vehicles will occur where dedicated electric vehicle charging spaces are introduced. There is also a cost associated with a roll out in of charging points and funds to support this need to be pursued from available grants.

Town centre charging facilities

As part of the Harrow NoF, new electric vehicle charging points will be strategically located at four sites in close proximity to Harrow town centre. A total of 10 additional electric vehicle charging bays will be provided in the town centre using five dual socketed electric charge points procured from Chargemaster.

Three of the charge points (6 on street bays) will have a power supply of 22kw per socket, using a three phase supply connection. The remaining two charge points (4 off-street bays) will have a power supply of 7kw per socket and will specifically be installed for the Greenhill Way Car Park site to support the electric vehicle fleet trial.

The charge points will be operated on the Charge Your Car Network (CYC) that has been approved to be Open Charge Point Protocol (OCPP) compliant. A CYC user will be able to pay via the use of the App or a contactless RFID card to use the facility.

Provision of on-street residential charging facilities across the borough

A grant from OLEV will be applied for to enable the provision of increased on-street residential charge points for plug-in electric vehicles. The funding available from the grant is for 75% of the capital costs of procuring and installing the charge point and an associated dedicated parking bay. The rest of the funding will be provided by the TfL LIP funding allocation.

The borough is looking into using existing infrastructure such as lamp columns to support vehicle charging in residential areas. This will provide a way for drivers, without access to off-street parking, to charge their electric vehicles on residential streets, public parking and workplace car parks.

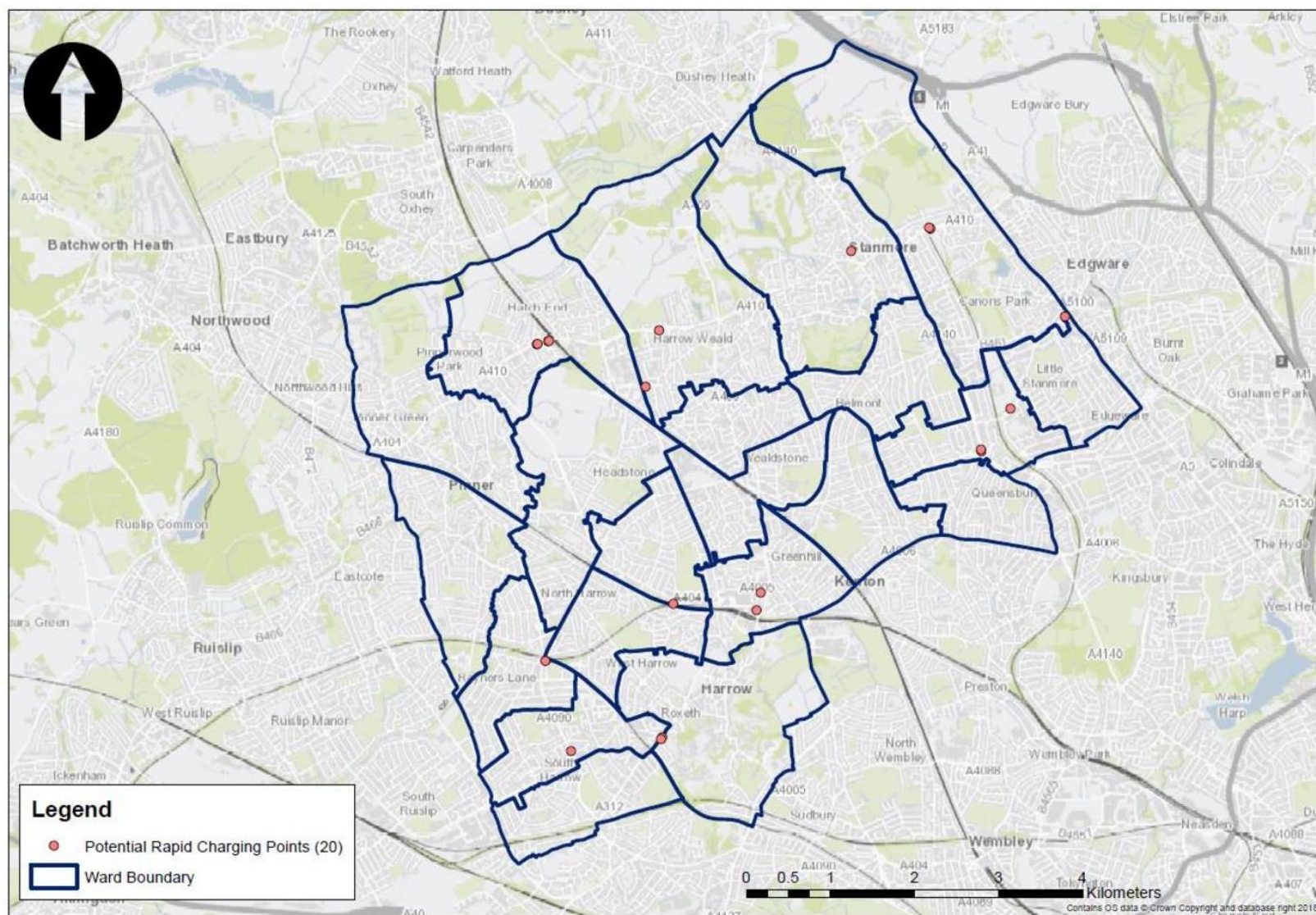
Priority for residential charging facilities will be given to locations where the borough has received sufficient requests, little off-street parking is available to charge off-street and the locations are not too near the town centres and so won't be used as an alternative to parking near shopping facilities.

Locations to install additional charging facilities are continually under review.

5.11.5 Rapid charging facilities

Rapid charge points can charge an electric vehicle battery in 20-30 minutes. This is quicker than regular vehicle charge points that can take 7-8 hours for a full charge. Rapid charging points will be rolled out across the borough primarily on the strategic network and possibly in some town centres. Figure 11 shows the proposed rapid charging locations across the borough. These will be funded by TfL.

Figure 11: Proposed rapid charging facilities



5.11.6 Rapid charging for taxis

Taxis are a significant contributor to London's toxic air quality and are responsible for 16 per cent of NOx and 31 per cent of Particulate Matter (PM_{2.5}) road transport emissions in central London.

No more diesel taxis are being licensed, and all taxis that are licensed for the first time now need to be zero-emission capable.

As part of the Mayor's bid to improve the capital's air quality, by helping phase out the use of diesel and encouraging the use of zero-emission vehicles, a network of rapid charging facilities primarily for use by taxis is being rolled out across London. TfL has a target to introduce 300 rapid charging points across London by 2020.

5.11.7 Electric Vehicle Fleet Trial

Part of the OLEV grant awarded to Harrow was specifically to enable local businesses based in the town centre to trial ULEVs for their fleets. The Greenhill Way Car Park location was chosen to support the Electric Vehicle Fleet Trial (EVFT). The trial is being run through Enterprise, a national car hire company, on behalf of the Council. As part of the trial, four Nissan Leaf vehicles have been made available to rent. The Council's travel planning team is working together with the Business Improvement District (BID) team to promote the initiative with local businesses.

Businesses will be able to rent an electric vehicle free on a daily basis in order to carry out their normal operational duties. The only cost to them will be a charge for the electricity used. It is hoped by using the electric vehicles businesses will see the benefits of using electric vehicles and consider more permanently using electric cars and fleets in the future. Several businesses in the town centre are participating in the trial.

Parking restrictions for the new electric vehicle charging bays in the Greenhill Way Car Park will restrict access to the electric vehicle fleet trial vehicles only via the use of a business permit at all times.



5.12 Low emission vehicles objective 3: Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot

The Harrow Council vehicle depot is being redeveloped. Vehicles using the depot are refuse and recycling vehicles, school buses and pool cars. The new depot facilities will ensure that there up to 40% electric vehicle charging points for service vehicles. Harrow Council buses are currently Euro V and Euro VI diesel but the borough intends to have a full fleet of Euro VI diesel vehicles by early 2019. Refuse vehicles are Euro V but the borough intends to have a full fleet of Euro VI vehicles by early 2019. Tipper and pool cars are planned to switch to a combination of diesel and electric vehicles by 2020. The new depot is scheduled to be complete by 2020.

5.12.1 Increasing the number of electric vehicles into the Council's fleet

It is currently only realistic to introduce electric vehicles for cars and vans in the Council's fleet. Electric larger vehicles are not easily supported in the UK due to the rapid charging support network required to make them viable. The Council intends to procure at least 20 electric cars and vans into the Council's fleet for use by pest control, housing, parking enforcement and libraries. These will be procured by 2020/21.

5.12.2 Increasing electric charging facilities for vehicles at the depot

The new depot being built in Harrow will ensure that there are sufficient electric charging facilities for the new electric vehicles being introduced. The new facilities will include 53 active charging spaces and 53 passive electric charging spaces. Active spaces are fully wired and connected with ready to use points at parking spaces. In passive spaces the necessary underlying infrastructure (e.g. capacity in the connection to the local electricity distribution network and electricity distribution board, as well as cabling to parking spaces) has been introduced to enable simple installation and activation of a charge point at a future date. These will be delivered by 2020/21.

5.13 Delivering the low emission vehicle objectives

Table 18 shows the targets that will help to measure delivering the low emission vehicle objectives

Table 18: Low emission vehicle targets to deliver objectives

Low emission vehicle objectives	Targets to monitor progress	Current status	Target and year
Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles	Deliver 3 air quality events per year to be run in schools	3 air quality events per year	Ongoing
Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate	Introduce 50 electric vehicle charging points by 2022 Introduce 20 rapid charging points Provide more electric charging places in car parks	5 new rapid charging points have currently been approved Currently 4 spaces in Greenfield car park but for use by fleet trial only 1 space in civic centre car park	50 points by 2022 20 points by 2020/21
Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot	Procure at least 20 electric cars and vans into the Council's fleet for use by pest control, housing, parking enforcement and libraries		2020/21
	Depot facilities to include 53 active charging spaces and 53 passive electric charging spaces		2020/21

5.13.1 Funding for the low emission vehicles action plan

Table 19 shows the key funding source used for the low emission vehicles initiatives.

Table 19: Key funding sources for low emission vehicles initiatives

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
Low emission vehicles objective 1: Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles					
Electric vehicle car clubs	✓		✓		
Discouraging use of diesel vehicles					
Promoting low emission vehicles	✓				
Low emission vehicles objective 2: Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate					
On-street vehicle charging	✓				
Neighbourhoods of the future		✓			✓
Training mechanics	✓				
Extending vehicle charging facilities	✓	✓			
Rapid charging facilities	✓	✓			
Rapid charging for taxis		✓			
Electric vehicle fleet trial	✓				
Low emission vehicles objective 3: Increase in the number of electric vehicles into the Council's fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow's new depot					
Increasing the number of electric vehicles into the Council's fleet				✓	
Increasing electric charging facilities for vehicles at the depot				✓	

5.14 Low Emission Vehicles Action Plan

Table 20 shows the borough low emission vehicles action plan and how the agreed borough LIP3 policies fit with the new low emission vehicles objectives. The table also shows the outputs to be delivered relating to each policy.

Table 20: Low emission vehicles action plan

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Low emission vehicles objective 1: Increased awareness of the impact of vehicle emissions and promotion of the benefits of low emission vehicles		
Review the viability of introducing a revised parking permit structure based on vehicle emissions (E2)	Revised parking permit structure based on emissions	2019/20
Encourage the use of cleaner and more environmentally friendly vehicles through prioritising specific facilities for parking of “greener” vehicles at all council owned car parks where practicable e.g. providing specific locations for parking by providing charging points for electric vehicles (E3)	Allocated environmentally friendly parking spaces with charging points allocated in car parks	2020/21
Provide reduced cost residential and other relevant parking permits for appropriate greener vehicles (PE15)	Provision of reduced cost permits for greener vehicles	2019/20
Low emission vehicles objective 2: Proactively develop an electric vehicle charging network across the borough in residential areas, town centres, work places and other key destinations and rapid charging infrastructure where appropriate		
Provide additional public electric charging points at key locations and consider the provision of rapid charging points to assist taxis, freight vehicles and car clubs (E1)	Increased electric charging facilities Increased rapid charging facilities	Ongoing
Support the introduction of rapid electric charging facilities for freight, taxis and car club vehicles to enable the introduction of Zero Emission Capable (ZEC) taxis (E5)	Provision of rapid charging facilities	Ongoing
Low emission vehicles objective 3: Increase in the number of electric vehicles into the Council’s fleet for use by pest control, housing, parking enforcement and libraries and introduction of electric charging facilities in Harrow’s new depot		

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Request all providers or users of Council transport fleets to consider how they can move towards the use of less polluting vehicles (E4)	Increased use of lower emission vehicles in Council's transport fleet At least 20 electric cars and vans into the Council's fleet 53 active charging spaces and 53 passive electric charging spaces at new Harrow depot	2020/21

6. Schools – Sustainable Modes of Travel (SMOT)

This section deals with the general duty on local authorities to promote the use of sustainable travel and transport as required by Section 508A of the Education and Inspections Act 2006.

6.1 Legislation

Section 508A of the Act places a general duty on local authorities to promote the use of sustainable travel and transport. The duty applies to children and young people of compulsory school age who travel to receive education or training in a local authority's area. The duty relates to journeys to and from institutions where education or training is delivered.

There are five main elements to the duty which local authorities must undertake:

- an assessment of the travel and transport needs of children, and young people within the authority's area;
- an audit of the sustainable travel and transport infrastructure within the authority's area that may be used when travelling to and from, or between schools/institutions;
- a strategy to develop the sustainable travel and transport infrastructure within the authority so that the travel and transport needs of children and young people are best catered for;
- the promotion of sustainable travel and transport modes on the journey to, from, and between schools and other institutions; and
- the publication of Sustainable Modes of Travel Strategy.

The Act defines sustainable modes of travel as those that the local authority considers may improve the physical well-being of those who use them, the environmental well-being of all or part of the local authority's area, or a combination of the two.

6.2 School travel

The average journey to school is less than one kilometre, that's around a 10-minute walk. However, many of these journeys are made by car leading to congestion and an unsafe and polluted environment for us all.

6.3 School travel plans

A school travel plan (STP) is a document produced by a school that promotes sustainable ways for the whole school community to travel to and from school. It includes a package of practical initiatives to encourage active, healthy, safe and sustainable travel as an alternative to car use on the school journey. All schools in Harrow are encouraged to develop travel plans to promote and encourage safe, active and sustainable travel on the school journey.

A STP is developed, maintained and monitored by the whole school community. It is based on consultation with pupils, staff, parents and governors, and is developed in partnership with the wider community. The STP process takes into account personal safety, road safety, environmental and healthy lifestyle issues.

The elements that every STP should contain are as follows:

- Survey results showing how pupils and staff currently travel to school, and how they would like to travel to school
- Objectives and specific, measurable, achievable, relevant and time specific (SMART) targets
- An action plan of activities and measures that will help make journeys to the school safer, healthier and more environmentally friendly
- A programme of monitoring and review
- Support and signatures from the head teacher, chair of the governors and other relevant stakeholders



STPs are living documents that evolve as initiatives and activities are implemented at the school and as pupils' travel needs change.

By implementing a travel plan, schools can demonstrate how they are working to keep children safe, improve health and wellbeing, and reduce the environmental impact of school journeys.

6.4 School expansion programme

As the population in the borough increases, schools are admitting more students. In cases where schools apply for planning permission to increase their size, they must submit a Travel Plan as part of the planning process. Planning conditions are then applied, which normally require a Travel Plan/ accreditation to be updated annually.

6.5 Support for schools

Schools in Harrow can access free support and advice from a dedicated Travel Planner in Harrow Council. The Travel Planners can help schools develop and maintain their travel plan, and provide advice on developing campaigns and activities to reduce car use, improve road safety and tackle issues such as inconsiderate parking.

6.6 Types of schools in Harrow

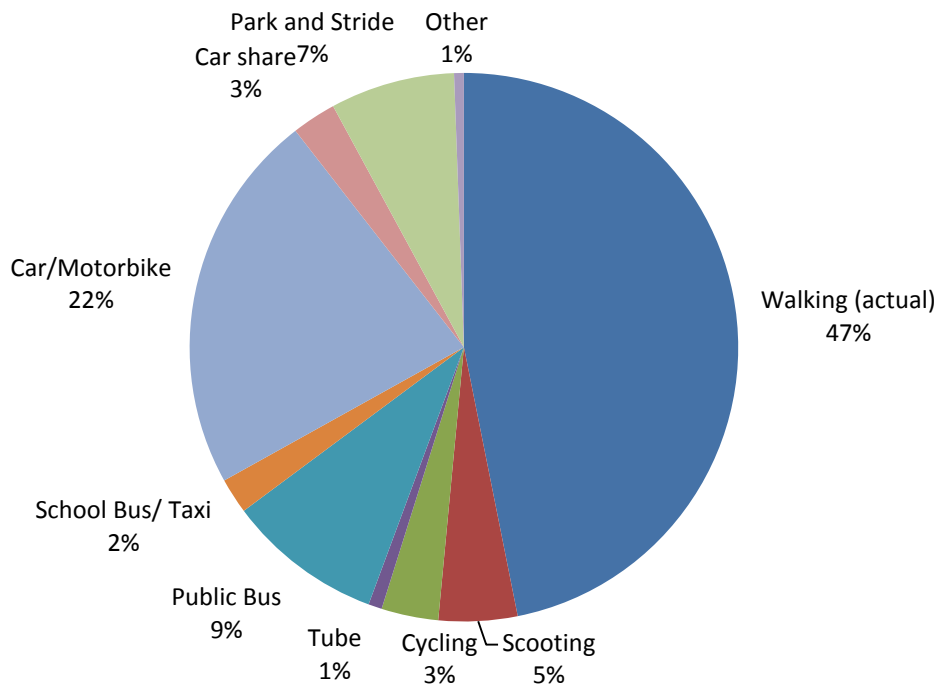
There are over 80 different schools in Harrow providing education for over 40,000 pupils in various age groups. Schools in Harrow include 42 primary schools and 12 secondary schools. 44 of these

schools are actively involved in the school travel planning process. Schools actively involved in the travel planning process represent approximately 58% of all school pupils.

6.7 How are pupils in Harrow currently travelling to school

Hands up surveys are carried out in schools across the borough to determine the modes of transport pupils are taking to school. Not all schools do this, but they are encouraged to do so as part of developing and reviewing their school travel plan. Figure 12 shows the modes of travel to school across the borough based on 47 schools in 2017/18.

Figure 12: Harrow mode of travel to schools 2017/18



6.8 STARS - Sustainable Travel: Active, Responsible, Safe

STARS is TfL's accreditation scheme for London schools and nurseries. STARS has been developed to inspire young Londoners to travel to school sustainably, actively, responsibly and safely by championing walking, scooting and cycling.

Gold accreditation

Around 10% of schools in London achieve gold accreditation status. To achieve gold accreditation, schools need to do the following:

- Within three academic years complete 25 different travel activities, 15 supporting activities and 8 consultation activities
- Provide evidence for each activity completed
- Demonstrate at least a 6% modal shift away from the car or at least 90% of pupils travelling actively

Silver accreditation

Silver accredited schools have engaged with the wider community to influence travel behaviours; have started to see a shift for the entire school community away from car use. To achieve silver accreditation, schools need to do the following:

- Within two academic years complete 20 travel activities, 10 supporting activities and 5 consultation activities

- Provide evidence for each completed activity
- Demonstrate a shift away from car use
- See pupils actively involved in the planning and running of travel activities

Bronze accreditation

Bronze accredited schools have started their journey towards a safer, healthier school environment. To achieve bronze accreditation, schools need to do the following:

- Within one academic year complete 10 different travel activities and 6 supporting activities
- Set at least two active travel targets to see a movement away from car use

6.8.1 What is the latest Harrow STARS status?

The latest STARS school accreditation status is shown in Appendix A: Latest STARS school accreditation status. A summary of this is shown in Table 21.

Table 21: Summary of STARS school accreditation status

STARS accreditation level	Number of schools	Total number of pupils
Gold	25	13,282
Silver	4	2,517
Bronze	11	5,636
Other schools engaged in the process	4	2,372
Schools not engaged	38	17,342
TOTAL	82	41,149

6.9 Healthy Schools London

Healthy Schools London is a programme sponsored by the Mayor of London, and is supported by a small team in the Greater London Authority. The programme has been shown to deliver the following benefits:

- Increased amount of opportunities that children and young people have to be physically active in and out of schools
- Increased participation of children and young people in physical activity in and out of school
- Improved links between schools and communities that promote physical activity
- Increased school meal uptake including free school meals
- Improved children and young people's access to healthy packed lunches and snacks throughout the school day

Participating in Healthy Schools London (HSL) supports sustainable travel objectives.

Awards are for schools to recognise their achievements in supporting the health and wellbeing of their pupils. There are three levels of award:

- Bronze: awarded to schools that complete either a Local Healthy Schools Review or the Healthy Schools London Review Tool (Bronze Award) and achieve the requirements
- Silver: in addition to holding a Bronze Award, the school needs to undertake an analysis of pupils' needs, and identify new actions that will help pupils achieve and maintain good health and wellbeing

- Gold: in addition to holding the Silver Award, the school needs to show the impact of the changes they have made and that these are sustainable. The school also needs to show how it has engaged the wider community, and supported others to help children maintain a healthy weight, healthy lifestyle and wellbeing.

6.9.1 What is the latest Healthy Schools award level for schools in Harrow?

There are 53 schools in Harrow registered to participate in Healthy Schools London. The following award levels have been achieved by schools in the borough:

- Bronze 32
- Silver 20
- Gold 11

6.10 SMOT Objectives

Harrow transport objectives were developed as part of the development of the Transport Local Implementation Plan 2019/20 - 2021/22. The objectives that are key to the SMOT are as follows:

1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to better enable active and safer travel particularly for pedestrians and cyclists thereby reducing congestion and improving public health and local air quality
3. Increase the number of people cycling in the borough in order to improve public health, improve air quality, reduce congestion and to reduce the impact of climate change
5. Encourage the uptake of more sustainable modes of travel including travel for those with mobility difficulties and dissuade use of private cars through active travel initiatives, delivering additional healthy routes to school, promotion of cycle hire schemes, the use of parking and permit policies and prioritising road space to walking and cycling to improve the environment.

To support these transport objectives, the objectives for this SMOT are as follows:

1. Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment
2. Achieve and improve school's TfL accreditation status, through encouraging individual schools to prepare, produce and review school travel plans
3. Raise awareness of air quality around schools by working with schools to identify local air quality issues
4. Reduce the number of schools trips made by car and improve pupils' independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport



The SMOT objectives fit with the Healthy Streets indicators as shown in Table 22.

Table 22: Walking objectives link to healthy streets

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment	✓	✓		✓	✓	✓	✓			
Achieve and improve school's TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans	✓	✓				✓	✓			

Objectives	How each objective contributes to the Healthy Streets Indicators' scores									
	Pedestrians from all walks of life	Easy to cross	Shade and shelter	Places to stop and rest	Not too noisy	People choose to walk, cycle and use PT	People feel safe	Things to see and do	People feel relaxed	Clean air
Raise awareness of air quality around schools by working with schools to identify local air quality issues	✓				✓				✓	✓
Reduce the number of schools trips made by car and improve pupils' independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport						✓	✓			✓

6.11 SMOT objective 1: Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment

There are several regular campaigns that take place throughout the year to encourage increased participation in sustainable travel. Most of the schools in Harrow participate in these schemes. The key campaigns and events are described below.

6.11.1 School active travel maps

Active travel maps are available for all schools in the borough to help pupils and parents choose sustainable, safe and healthy ways to travel to school. The maps show the sustainable travel options available to each school and are tailored to include:



- local public transport facilities (e.g. tube and train stations, and bus route information) – showing which bus routes travel on roads close to the school.
- 5 and 10 minute walking zones – showing approximate 5 and 10 minute walking distances from the school site.
- cycling route information – roads are colour-coded to Bikeability training and confidence levels to enable cyclists to plan routes according to individual abilities.

The maps can be used by anyone travelling to the school including pupils, parents, staff and visitors.

6.11.2 Bike week

Bike Week is an annual opportunity to promote cycling at school. Various kinds of activities are run during this week that encourage cycling. Most Bike Week events take place within the official event week in June.

6.11.3 Bikers breakfast club

This is where a school offers cyclists a free breakfast on arrival at school to reward them and encourage others to get cycling by highlighting the benefits of active travel. Bikers' breakfasts also offers an opportunity to promote the school's other cycling initiatives and facilities such as cycling clubs, pool bikes and scooters scheme and Dr Bike sessions.

6.11.4 Dr Bike

Dr Bike sessions give the school a chance to have bikes checked over by a mechanic to ensure they are roadworthy. Checks include the bicycle wheels, brakes, gears and tyre pressure, lights, racks, pedals, saddles and more.

Minor issues such as flat tyres or loose brake and gear cables are common reasons for bikes to be left unused. The sessions usually involve 10-minute check-ups on each bike including pumping tyres, adjusting saddles, and tuning up brakes and gears. More serious repairs or broken bikes should be referred to a bike shop.

The amount of Dr Bike sessions delivered is dependent on the amount of schools scheduled for Bikeability training.

6.11.5 Children's Traffic Club (CTC)

The Children's Traffic Club (CTC) London is a free road safety education programme for pre-school children. The club promotes the use and benefits of sustainable modes of transport such as walking, scooting and cycling.

CTC London is delivered through a mixture of digital and printed resources including an app. The app introduces key characters such as Barry Bus, Walter Walk and Scottie Scooter to reinforce key road safety and active travel messages through repetitive play. Fun activities which support the Early Years Foundation Stage curriculum using the Nursery Leaders' Guide are provided.

6.11.6 Tour de Salah

Tour de Salah is the largest Muslim cycling event in the UK and introduces cycling to novices within traditionally harder to reach groups. Participating cyclists cover up to 100km across the capitals iconic landmarks and mosques over one day. Since 2018 the Harrow Mosque has been part of the route and the event is promoted across the borough.

6.11.7 RideLondon

RideLondon is an annual cycling festival held in the Capital with a weekend-long family-friendly programme of bike rides, races and related events. This event is used to inspire both cyclists and non-cyclists to get on their bikes more often. School pupils are encouraged to take part or go along to spectate either with their families and friends or as part of an organised school group.

6.11.8 Junior Travel Ambassador (JTA) Scheme

The Junior Travel Ambassador (JTA) scheme encourages safer, active and independent travel within the school community, with a focus on year 6 pupils as they prepare for the transition to secondary school.

The scheme involves recruiting a team of JTAs; year 5 and 6 pupils who work to promote active travel and road safety to their peers through a range of activities.

TfL provides all the resources and guidance needed for the school to set up and run the school's JTA team.

6.11.9 Youth Travel Ambassadors

The Youth Travel Ambassadors (YTA) programme provides young people aged 11 to 19 with the skills and confidence to address transport issues affecting the school community.

YTA teams research and develop campaigns to change people's behaviour. They focus on walking and cycling, road safety and improving passengers' experiences. They are supported by TfL, the borough and school staff.

Schools usually recruit between 6 and 12 YTA students who deliver behaviour change campaigns to their peers over the course of the academic year. Campaign initiatives can include themed assemblies, walking and cycling competitions, creative workshops, films and community events.

6.11.10 Free School Travel Party Scheme

Free off-peak travel for visits to educational, sporting and cultural venues in London for school groups is available from TfL. The scheme gives free travel on:

- Bus
- Tube
- Tram
- DLR
- London Overground
- TfL Rail
- Most National Rail services within London Zones 1-6
- National Rail services outside London between Amersham and Moor Park

Schools in all London boroughs can register for this. The scheme is open to all state, independent and academy schools.

Nursery schools can also register but can't use National Rail services.

Schools need to register on the TfL website to participate in this.

Schools can apply online for free travel to educational, cultural or sporting venues that support the National Curriculum. These include:

- Animal parks and zoos
- Areas of cultural interest (for example Chinatown)
- Artists' studios, arts centres and design studios
- Buildings of architectural or environmental interest
- Cinemas, concert halls and theatres
- City Farms, commons, heaths and parks
- Film studios, galleries, museums and print works
- Sites of archaeological, environmental or religious interest
- Sporting venues, swimming pools, playing fields and indoor leisure centres. You can also be spectating or participating in sport
- Occasional venues which support an area of study but take place for a limited time

Any recreational trips, such as trips to theme or amusement parks, are excluded.

6.11.11 20mph zones

20mph zones create a safer environment for all road users. They not only improve the safety of an area, but also improve the perception of safety.

Harrow has introduced 20mph zones around most of the schools in the borough. A few of the schools in the borough are located in areas where it is not possible to introduce a 20mph zone such as being located by a main road.

Figure 13 shows schools in the borough as well as the existing 20mph zones in the borough. Around 50% of the road network in the borough is covered by 20mph speed restrictions and the borough will work to increase this.



Harrow 20mph zones are designed to be "self-enforcing" due to traffic calming measures which are introduced along with the change in the speed limit. Speed humps, chicanes, road narrowing, and other measures are typically used to both physically and visually reinforce the slower speed limits.

The main aims of the introduction of a 20mph speed limit in an area are to:

1. improve road safety
2. discourage passing through traffic
3. encourage walking and cycling
4. improve the local environment

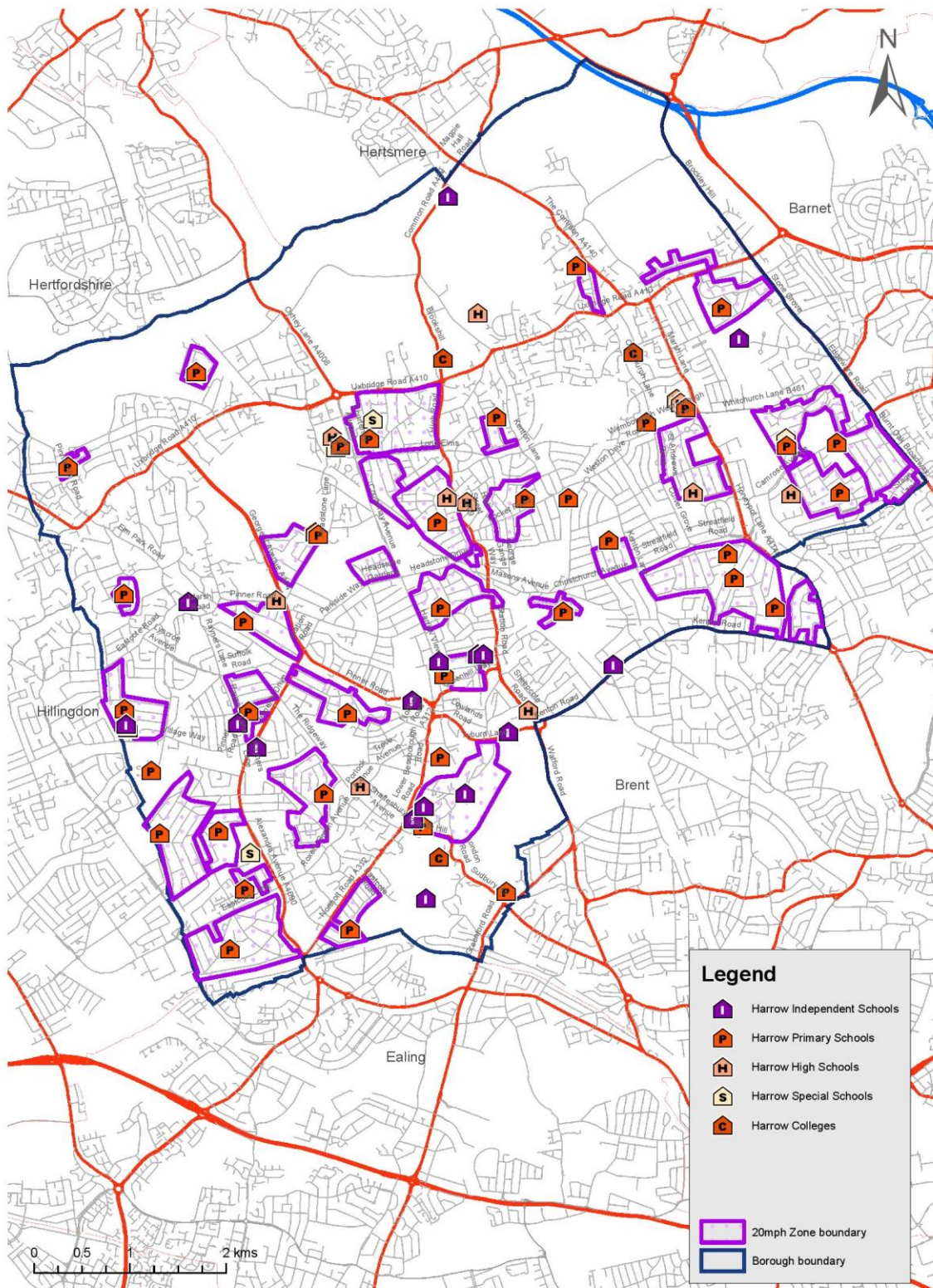
Before and after site surveys such as speed surveys are undertaken to monitor the impact of the measures introduced. The borough shares recorded speed survey data with the police at quarterly traffic liaison meetings so they can decide whether they should target their resources to the area.

6.11.12 School travel plan engineering measures

All schools in Harrow are encouraged to develop travel plans to promote and encourage safe, active and sustainable travel on the school journey. When STPs identify engineering measures that would help make journeys to the school safer, healthier and more environmentally friendly, the measures are given a high priority for implementation.



Figure 13: Schools and 20mph zones in Harrow



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6.12 SMOT objective 2: Achieve and improve school's TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans

Schools in Harrow are encouraged to develop school travel plans using Transport for London's STARS scheme process. STARS supports pupils' wellbeing, helps to reduce congestion at the school gates and improves road safety and air quality.

Benefits of STARS accreditation

Across London, STARS schools see an average 6% reduction in the number of trips made by car to school; gold and silver accredited schools can see up to 12% reduction.

Key benefits to pupils, the school and the wider community are as follows:

Benefit to pupils

- Improve pupils' emotional health and wellbeing
- Contributes to pupils' 60 minutes a day of physical activity
- Increases attendance and attainment
- Builds young people's influencing skills
- Encourages healthier travel behaviours and habits such as walking, scooting and cycling to school

Benefits to the school

- Develops School Travel Plan providing solutions to school's travel issues
- Creates positive travel behaviour change and provides access to funding
- Enables bespoke professional guidance and support from your local borough
- Raises the profile of the school, helps gain external recognition and contributes to Healthy Schools London Awards Programme

Benefits to the wider school community

- Helps to reduce congestion around the school site and improve air quality
- Encourages positive travel behaviour change in parents/carers and local residents
- Helps develop relationships with community stakeholder groups

Participating schools have demonstrated an average of a six per cent decrease in car use, resulting in 22 million vehicle kilometres saved. The average walk to school mode share for Gold accredited primary schools is 57 per cent (two per cent above the national target and four per cent above the London average). The STARS scheme aims to double the number of Gold-accredited schools across London by 2024.

6.13 SMOT objective 3: Raise awareness of air quality around schools by working with schools to identify local air quality issues

Poor air quality is bad for everyone's health, but even more so for children. Children living or attending schools nearer high-traffic density roads can be exposed to higher levels of motor vehicle exhaust gases and this is resulting in higher incidence and prevalence of childhood asthma and wheeze. Research has shown that a higher incidence of childhood asthma is positively associated with exposure to nitrogen dioxide. Exposure to particulate matter is associated with a higher incidence of wheeze in children.

Measures that can be introduced to address this are:

- Moving school entrances and play areas away from busy roads
- Anti-idling campaigns to reduce emissions from the school run
- Local road changes including improved road layouts and pedestrianisation by school entrances
- Adding green infrastructure to help filter the fumes
- Encouraging students to walk and cycle to school along less polluted routes

6.13.1 Identifying air quality around schools

The borough has committed to monitoring air quality sites near schools with a main road within a 5 minute walk of the school. Diffusion tubes have been put in place at the schools which will measure nitrogen oxide emissions at each location. At the time of writing this report, the results from these diffusion tubes are not yet available.

6.13.2 Anti-idling campaigns (air quality events)

Anti-idling action days have been funded by the Mayor's Air Quality Fund. A typical campaign involves an assembly at the school, where children are taught about the dangers to the environment of vehicles idling. Following this, volunteers and environmental professionals talk to parents outside the school gates about the dangers of idling, specifically targeting idling cars. Parents are asked to put their names forward and pledge not to idle in future.

The air quality work being carried out with schools has resulted in increased direct engagement with schools, an increase in awareness and understanding of air quality issues, increased face to face engagement with local businesses and increased advice to drivers through anti-idling action days at schools.

6.13.3 Congestion Busting

Congestion Busting is an initiative designed to make school communities aware of the impacts of idling in cars. Students are given the opportunity to learn about the effects of idling in cars and other factors that contribute to damaging the environment. A typical congestion busting event at a school consists of a playground event where pupils take part in events such as pedalling a smoothie bike (a bike with a blender attached) and playing education games with an environmental theme. Council officers speak to parents at the school gates about the dangers of idling in cars and polluting the environment.

6.14 SMOT objective 4: Reduce the number of schools trips made by car and improve pupils' independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport

Children need to develop independent mobility to improve both their mental health and physical wellbeing. The benefits of children's everyday mobility range from learning to navigate local streets, interacting with people in public places, gaining social responsibility, to independence and increased freedom. Although children may be nervous about travelling unaccompanied, many studies show that they quickly come to enjoy the feeling of freedom and actively seek greater opportunities for mobility. This particularly occurs in the late stage of primary school.

6.14.1 Cycle training

Cycle training is offered to all schools in the borough as well as offered outside the school environment. It is an effective way of increasing confidence among adults, children and families, and encouraging more people to cycle. Cycle training is delivered to achieve various levels of bikeability proficiency.

Cycle training is also facilitated for Special Educational Needs and Disability (SEND) schools providing an extended duration of training and adapted bikes for pupils to participate in training. The SEND

training is tailored to each school's requirements. Due to the variation of capabilities, not every child is able to participate.

All cycle training courses are promoted via the council website and with schools and businesses in the borough.



Bikeability training and courses

Bikeability is a cycle training programme designed to give pupils the skills and confidence to ride their bikes on the road. There are three levels of Bikeability training:

1. Bikeability Level 1: Control and master your bike in an off-road environment

New riders learn to control and master their bikes in a space away from traffic such as a playground or closed car park. Trainees will usually be trained in a group of 2-12, though some individual training may also be available.

2. Bikeability Level 2: Cycle on-road and deal with traffic on short journeys

This takes place on local streets, giving trainees a real cycling experience. Trainees learn how to deal with traffic on short journeys such as cycling to school or the local shops. Trainees are usually trained in small groups – up to 6 trainees per instructor – though individual training may also be available.

3. Bikeability Level 3: Tackle a wider variety of more challenging road and traffic conditions (suitable for competent cyclists of secondary-school age)

This equips trainees with skills for more challenging roads and traffic situations – busier streets, queuing traffic, complex junctions and roundabouts. It also includes planning routes for safe cycling. Level 3 training is delivered one-to-one or in groups of up to 3 so can be tailored to a trainee's individual needs, such as a route to work or school.

Bikeability trained cyclists receive a badge and a certificate in recognition of the level they've achieved. The certificate also includes areas for further practice noted by the instructor.

Approximately 1100 - 1200 children across the borough are trained to bikeability levels 1 or 2 per annum. Bikeability courses are delivered during term time at primary schools for children in year 4 - 6 and in selected secondary schools for year 7 - 8.

6.14.2 Balance and ride courses for children

In schools across Harrow, the borough offers Learn to Balance and ride cycle training for those aged 3-11. During these sessions, free bicycles are provided to children to help them to learn the core fundamentals of cycling.

6.14.3 Walk to school

Walk to School Week is a yearly event held in May to raise awareness of walking and other active ways to travel. The scheme is run by the charity Living Streets who create themed resources to support schools to run fun walking challenges or activities throughout the week, such as the Walking Roots challenge.

6.14.4 Walk Once a Week (WOW)

WOW is a year-round walking challenge run by the charity Living Streets. It encourages pupils and parents to walk, scoot or cycle to school one day each week, rewarding pupils with a badge if they do so four times over a month.

WOW is adaptable to the needs of the school and is supported by a range of classroom resources including the interactive WOW Travel Tracker which uses whiteboard technology to record how pupils travel to school each day.

6.14.5 Walking bus

Walking buses are most suitable for primary age children. They are a sociable and active way to travel to school. They allow pupils to learn about their local environment while reducing congestion and pollution at the school gates. Pupils and volunteers meet at an agreed time and location and walk a set route to school in a group, picking up 'passengers' along the way. The same is done in reverse for the walk home.

6.14.6 Travel Training

Travel training supports those with learning difficulties to develop the skills and confidence to travel independently. By promoting independence from an early age and reducing people's dependence on specialist transport, participants can develop independence through accessing learning and employment opportunities and maintain an improved quality of living. In particular, participants gain skills to travel independently on sustainable transport and in using public transport.

Harrow promotes travel training to eligible children and young adults at all schools in the borough.

6.15 Delivering the SMOT objectives

Table 23 shows the targets that will help to measure delivery of the SMOT objectives.

Table 23: SMOT targets to deliver objectives

SMOT objectives	Targets to monitor progress	Current status	Target and year
SMOT objective 1 Increase the proportion of trips made to and from school by	75% of school pupils travelling by sustainable modes to school by 2020/21	65%	75% by 2020/21

SMOT objectives	Targets to monitor progress	Current status	Target and year
sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment	Increase proportion of network covered by 20mph speed restriction to 60% by 2021/22	50% of road network covered by 20mph restrictions in 2019	60% by 2021/22
SMOT objective 2 Achieve and improve school's TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans	32 schools reaching gold STARS accreditation status	25 schools with gold accreditation	32 schools by 2021/22
	50 schools to be engaged in the STARS accreditation process by 2021/22	44 schools engaged	50 schools engaged by 2021/22
SMOT objective 3 Raise awareness of air quality around schools by working with schools to identify local air quality issues	3 air quality events to be held at schools each year	3 per year	Annual
SMOT objective 4 Reduce the number of schools trips made by car and improve pupils' independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport	75% of school pupils travelling by sustainable modes to school by 2020/21	65%	75% by 2020/21
	Provide cycle training for over 1500 children per annum	1026 children trained in 2018/19	1500 per year

6.16 Funding the SMOT action plan

Table 24 shows the key funding sources used for Harrow SMOT initiatives.

Table 24: Key funding source for SMOT initiatives

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
SMOT objective 1: Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment					
School active travel maps	✓				
Bike week	✓				
Bikers breakfast club	✓				
Dr Bike	✓				
Children’s Traffic Club	✓				
Tour de Salah	✓				
Ride London	✓				
Junior Travel Ambassador Scheme	✓				
Youth Travel Ambassadors	✓				
School Party Travel					✓
20mph zones	✓				
School travel plan engineering measures	✓				
SMOT objective 2: Achieve and improve school’s TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans					
STARS accreditation	✓				
SMOT objective 3: Raise awareness of air quality around schools by working with schools to identify local air quality issues					
Identifying air quality around schools					✓
Anti-idling campaigns (air quality events)	✓				
Congestion busting	✓				

Actions	TfL LIP programme funding	TfL strategic funding	Section 106 or CIL	Harrow funded	Other
SMOT objective 4: Reduce the number of schools trips made by car and improve pupils' independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport					
Cycle training	✓				
Balance and ride courses for children	✓				
Walk to school	✓				
Walk Once a Week	✓				
Walking bus					
Travel Training	✓				

6.17 SMOT Action Plan

Table 25 shows the borough SMOT action plan and how the agreed borough LIP3 policies fit with the new SMOT objectives. The table also shows the outputs to be delivered relating to each policy.

Table 25: SMOT action plan

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
SMOT Objective 1 Increase the proportion of trips made to and from school by sustainable modes, through the promotion of sustainable and healthy travel and an improved walking and cycling environment		
Promote sustainable and healthy travel choices and healthy walking routes to school through the use of school travel planning, travel awareness campaigns, cycle training and an improved walking and cycling environment (S1)	Increased active transport for school journeys	Ongoing
Work with schools to set up additional school walking buses (S5)	More school walking buses	Ongoing
Work with TfL to ensure take-up of Children's Traffic Club, a London road danger reduction education resource for pre-schoolers (S6)	Reduced child road casualties	Ongoing
Work with TfL to ensure take-up of the Safety and Citizenship pre-transition safe and responsible behaviour sessions for Year 6 pupils (S7)	Reduced child road casualties	Ongoing
Work with TfL to ensure take-up of the Junior Travel Ambassador and Youth Travel Ambassador schemes, addressing transport and road safety issues in schools (S8)	Reduced child road casualties	Ongoing
Provide road safety education events at schools and colleges throughout the borough (S9)	Delivery of Theatre in Education and Community Roadwatch Reduced casualties for pupils on school journeys	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Increase the extent of 20mph roads in the borough and expand the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school (RS6)	20mph zones at the following locations: Clitheroe Avenue, Rayners Lane, Kingshill Avenue – all to be introduced by 2019/20. Further locations will be selected based on agreed criteria.	Ongoing
SMOT Objective 2 Achieve and improve school’s TfL accreditation status, through encouraging individual schools to prepare, produce or review school travel plans		
Encourage and support schools, higher and further education establishments to review their own travel plans and to achieve and improve TfL accredited status where appropriate (S2)	Increased number of schools with higher STARS accreditation	Ongoing
SMOT Objective 3 Raise awareness of air quality around schools by working with schools to identify local air quality issues		
Work with schools to identify local air quality issues surrounding schools and where appropriate access the Mayor’s Air Quality Fund to provide appropriate solutions and raise awareness of the issue (S10)	Increased awareness of air quality issues Increased initiatives to address air quality around schools	Ongoing
SMOT Objective 4 Reduce the number of schools trips made by car and improve pupils’ independent mobility by increasing opportunities for all children (including those with special education needs) to travel to and from school using environmentally sustainable modes of transport		
Provide and promote cycle training for children and adults who work, study or live in the borough (S4)	Increased cycling in the borough	Ongoing
Encourage cycling generally and in particular for journeys to school (S3)	Increased mode share of school cycle journeys	Ongoing

LIP3 policies (LIP3 policy reference number)	Outputs	Timescale
Work with schools to reduce the number of school trips made by car and liaise with schools regarding suggested highway works required in school locality (S11)	Improved air quality around schools Reduced car mode share of school journeys	Ongoing
Work with schools to promote travel training for children and young people with learning difficulties (S12)	Increased independence by pupils with special needs and reduced reliance on car journeys	Ongoing
Work with schools to consider staggering school end times by a variety of measures including encouraging more school to introduce before and after school activities (S13)	More after school activities Reduced school trip crowding	Ongoing

Appendix A: Latest STARS school accreditation status

Educational establishment	Phase of education	No. of pupils	STARS accreditation level
Alexandra School	Not applicable	79	Bronze
Alpha Preparatory School	Not applicable	159	Bronze
Avanti House Primary School	Primary	0	Not Engaged
Avanti House School	Secondary	964	Gold
Aylward Primary School	Primary	493	Bronze
Belmont School	Primary	591	Gold
Bentley Wood High School	Secondary	1127	Not Engaged
Brightkidz	Nursery	20	Not Engaged
Buckingham Preparatory School	Not applicable	125	Not Engaged
Camrose Primary With Nursery	Primary	415	Not Engaged
Cannon Lane Primary School	Primary	746	Gold
Canons High School	Secondary	1197	Not Engaged
Cedars Manor School	Primary	596	Gold
Earlsmead Primary School	Primary	0	Gold
Elmgrove Primary School & Nursery	Primary	792	Engaged
Glebe Primary School	Primary	682	Gold
Grange Primary School	Primary	600	Gold
Grimdyke School	Primary	541	Gold
Harrow Collegiate	Not applicable	0	Not Engaged
Harrow High School	Secondary	827	Silver
Harrow Primary School	Not applicable	45	Not Engaged
Harrow School	Not applicable	827	Not Engaged
Hatch End High School	Secondary	1365	Not Engaged
Heathland School	Primary	679	Engaged
Hillview Nursery School	Nursery	37	Not Engaged
Kenmore Park Infant and Nursery School	Primary	390	Gold
Kenmore Park Junior School	Primary	422	Not Engaged
Khalsa College London	Not applicable	0	Not Engaged
Kingsley High School	Not applicable	78	Gold
Krishna Avanti Primary School	Primary	357	Not Engaged
Longfield Primary School	Primary	770	Silver
Marlborough Primary School	Primary	703	Gold
Mountville High	Other	1500	Not Engaged
Newton Farm Nursery, Infant and Junior School	Primary	354	Gold
Nisai Virtual Academy Ltd	Not applicable	0	Not Engaged
Norbury School	Primary	636	Gold
North London Collegiate School	Not applicable	1090	Not Engaged
Nower Hill High School	Secondary	1884	Gold
Oak Lee Montessori School	Nursery	132	Not Engaged

Educational establishment	Phase of education	No. of pupils	STARS accreditation level
Orley Farm School	Not applicable	490	Not Engaged
Park High School	Secondary	1502	Bronze
Pinner High School	Secondary	153	Silver
Pinner Park Infant and Nursery School	Primary	409	Bronze
Pinner Park Junior School	Primary	451	Bronze
Pinner Wood School	Primary	610	Gold
Priestmead Primary School and Nursery	Primary	772	Gold
Quinton Hall School	Not applicable	189	Gold
Red Balloon Learner Centre - Northwest London	Not applicable	20	Not Engaged
Reddiford School	Not applicable	313	Not Engaged
Regent College	Not applicable	90	Not Engaged
Rooks Heath College	Secondary	1061	Not Engaged
Roxbourne Primary School	Primary	552	Bronze
Roxeth Mead School	Not applicable	45	Not Engaged
Roxeth Primary School	Primary	473	Engaged
Saint Jerome Church of England Bilingual School	Primary	60	Bronze
Salvatorian Roman Catholic College	Secondary	526	Not Engaged
Shaftesbury High School	Not applicable	163	Gold
St Anselm's Catholic Primary School	Primary	420	Gold
St Bernadette's Catholic Primary School	Primary	466	Not Engaged
St Dominic's Sixth Form College	16 Plus	0	Not Engaged
St George's Primary School	Primary	428	Engaged
St John Fisher Catholic Primary School	Primary	513	Gold
St John's CofE School Stanmore	Primary	408	Not Engaged
St Joseph's Catholic Primary School	Primary	418	Not Engaged
St Teresa's Catholic Primary School and Nursery	Primary	468	Gold
Stag Lane Infant and Nursery School	Primary	404	Not Engaged
Stag Lane Junior School	Primary	362	Not Engaged
Stanburn Primary School	Primary	798	Not Engaged
Stanmore College	16 Plus	0	Not Engaged
The Helix Education Centre	Not applicable	74	Not Engaged
The John Lyon School	Not applicable	584	Not Engaged
The Jubilee Academy	Not applicable	2	Gold
The Moriah Jewish Day School	Primary	218	Not Engaged
The Sacred Heart Language College	Secondary	730	Not Engaged
Vaughan Primary School	Primary	619	Gold
Weald Rise Primary School	Primary	675	Bronze
Welldon Park Primary School	Primary	536	Bronze
West Lodge Primary School	Primary	640	Gold
Whitchurch Primary School & Nursery	Primary	767	Silver
Whitefriars School	All Through	720	Bronze

Educational establishment	Phase of education	No. of pupils	STARS accreditation level
Whitmore High School	Secondary	1676	Not Engaged
Woodlands School	Not applicable	121	Gold

GLOSSARY

ALGG	All London Green Grid
BAME	Black, Asian and Minority Ethnic
BID	Business Improvement District
CEO	Civil Enforcement Officers
CTC	Children's Traffic Club
CYC	Charge Your Car Network
DfT	Department for Transport
EV	Electric Vehicle
EVFT	Electric Vehicle Fleet Trial
HPTUA	Harrow Public Transport Users Association
HSL	Healthy Schools London
JTA	Junior Travel Ambassador
LEV	Low Emission Vehicle
LEZ	Low Emission Zone
LIP	Local Implementation Plan
LIP3	3 rd Local Implementation Plan
MTS	Mayor's Transport Strategy
NoF	Neighbourhood of the Future
OCPP	Open Charge Point Protocol
OLEV	The Office for Low Emission Vehicles
PAYG	Pay As You Go
SEN	Special Educational Needs
SEND	Special Educational Needs and Disability
SMART	Specific, Measurable, Achievable, Relevant and Time specific
SMOT	Sustainable Modes of Travel
STP	School Travel Plan
STARS	Sustainable Travel: Active, Responsible, Safe
TfL	Transport for London
ULEV	Ultra Low Emission Vehicle
ULEZ	Ultra Low Emission Zone
WOW	Walk Once a Week
YTA	Youth Travel Ambassadors
ZEC	Zero Emission Capable