APPENDIX B

Mayor of London's nine strategic transport outcomes

Outcome 1: London's streets will be healthy and more Londoners will travel actively

Outcome 2: London's streets will be safe and secure

Outcome 3: London's streets will be used more efficiently and have less traffic on them

Outcome 4: London's streets will be clean and green

Outcome 5: The public transport network will meet the needs of a growing London

Outcome 6: Public transport will be safe, affordable and accessible to all

Outcome 7: Journeys by public transport will be pleasant, fast and reliable

Outcome 8: Active, efficient and sustainable travel will be the best option in new developments

Outcome 9: Transport investment will unlock the delivery of new homes and jobs'

APPENDIX C

LIP3 consultation document

HARROW DRAFT TRANSPORT LOCAL IMPLEMENTATION PLAN CONSULTATION

Introduction

The draft Local Implementation Transport Plan sets out how the borough proposes to implement the Mayor of London's Transport Strategy at the borough level. The plan 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 delivery proposals for the period 2019/20 - 2021/22.

LIP3 is needed to ensure that the predicted growth in the borough is managed in a sustainable way that we address the critical environmental and climate change issues associated with transport and that healthier street environments and an improved public realm are delivered across the borough.

The full draft plan is available to view on Harrow's consultation portal and on Harrow's transport policy page.

The plan does not remove the requirement for the Borough to consult on individual schemes in your area when they are brought forward for design and implementation.

Recommended transport objectives
LIP3 includes the following draft objectives:

1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage 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
5. Encourage the uptake of more sustainable modes of travel 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 CO_2 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

Proposed Schemes
The types of schemes to be implemented include infrastructure improvements, traffic managements and sustainable transport measures. All of the proposed schemes are subject to the funding being available.

Suggested schemes are congestion relief measures, 20mph zones, local safety schemes, school road safety initiatives, travel planning, increased opening hours for Shopmobility, independent travel training support, bus priority, cycle training, increased cycling infrastructure, healthy street initiatives, active travel and air quality initiatives, walking schemes, improved freight management, accessibility improvements, extended Legible London schemes, school travel plan highway schemes, increased electric charging infrastructure, car clubs, road safety education, controlled parking zones and liveable neighbourhoods.

Conclusion
The draft Transport Local Implementation Transport Plan aims to improve the quality of life for Harrow's residents, local businesses and visitors. The aim is to encourage sustainable transport, to help people travel to destinations in a way that respects the borough's environment and helps to sustain a healthy economy.

If we successfully make the necessary changes, then in the longer term we can improve air quality, improve physical and mental health through increased active travel and also improve the attractiveness of Harrow as a place to live, work and visit.

To deliver the changes, we will need continued support, contribution and commitment from all individuals and organisations in order to help achieve the objectives of the Plan. We will therefore welcome your contribution to the development of the Plan by suggesting ideas that will help make local travel a sustainable and civilized activity.

What happens now?

The full draft Transport Local Implementation Plan will be revised to take into account your views and then submitted to the Mayor of London for his approval and approval by Harrow Council. Once adopted by the council, it will be available to view on the Harrow website.

We'd like to hear what you have to say about the draft Transport Plan and the proposed objectives?

In particular we would like to know:

1. Do you recommend any changes to the proposed LIP3 objectives?

2. Do you recommend any changes to the proposed LIP3 borough policies, shown in the LIP3 Appendix A?

3. Do you recommend any changes to the LIP3 delivery plan?

4. Do you have any other comments?

APPENDIX D

Draft LIP3 transport objectives

1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage 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
5. Encourage the uptake of more sustainable modes of travel 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 CO_2 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

APPENDIX E

Draft LIP3 policies

Walking

W1 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

W2 Encourage recreational walking as well as active walking as a mode of transport and support of national walking campaigns

W3 Provide additional school walking buses

W4 Work in partnership with health providers to promote walking and the Walking for Health scheme

W5 Work with the Active Harrow Strategic Group to promote active and sustainable travel

W6 Promote the Walk London network and new leisure routes through Harrow's extensive green areas

W7 In partnership with Harrow Public Health, work with selected communities to promote the benefits of walking

W8 Review the Harrow Rights of Way Improvement Plan with a view to increasing active travel through Harrow's parks and open spaces

W9 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

W10 Improve access to Harrow's green spaces and historic areas and improves pedestrian walkways that use and link existing parks and open spaces with the town centre and transport interchanges.

W11 Improve pedestrian linkage between Harrow town centre and Harrow on the Hill

Cycling

C1 Promote and deliver cycle training for children and adults who work, study or live in the borough

C2 Promote and deliver cycle training for children and adults who work, study or live in the borough

C3 Promote the recreational cycling – but give priority to increasing cycling as an alternative to car use.

C4 Encourage cycling generally and in particular for journeys to school

C5 Provide cycle training for children and additional cycle parking in schools

C6 Provide safe and secure cycle parking

C7 Review the level of cycle parking available across the borough

C8 Review cycle parking on station land particularly at Harrow and Wealdstone, Harrow on the Hill station, Stanmore and Rayners Lane stations

C9 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

C10 In partnership with WestTrans, trial introduce dockless cycle hire in the town centre with a view to expanding the service throughout the borough

C11 Review the existing cycle delivery plan with a view to expanding the network

C12 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

C13 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

C14 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"

C15 Work with TfL to contribute to delivery of strategic cycle routes including Quietways

Schools

S1 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

S2 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

S3 Encourage cycling generally and in particular for journeys to school

S4 Provide cycle training for children and additional cycle parking in schools

S5 Provide additional school walking buses

S6 Work with TfL to ensure take-up of Children's Traffic Club, a London road danger reduction education resource for pre-schoolers

S7 Work with TfL to ensure take-up of the Safety and Citizenship pre-transition safe and responsible behaviour sessions for Year 6 pupils

S8 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

S9 Provide road safety education events at schools and colleges throughout the borough

S10 Work with schools to reduce the number of school trips made by car

S11 Liaise with schools regarding suggested highway works required in school locality

S12 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

S13 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

S14 Work with schools to promote travel training for children and young people with learning difficulties

Public transport

PT1 Seek to secure a fully integrated approach to the provision and operation of public transport services within Harrow, including:
· 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

PT2 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, if appropriate, a fully wheelchair-accessible boarding / alighting points, as a basis for supporting a network of fully wheelchair-accessible scheduled bus services

PT3 Support the extension of additional taxi rank operational hours where this supports late travel such as the night time running of the Jubilee Line

PT4 Seek to work with public transport providers and regulators to ensure that engineering works and service closures are coordinated to minimise passenger inconvenience

PT5 Deploy full range of available bus priority measures ensuring that measures are designed to reduce problems for all modes

PT6 Liaise with the Public Carriage Office regarding improving the accessibility of taxi ranks in the borough

PT7 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

PT8 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

Road safety

RS1 Adopt a Vision Zero approach towards eliminating all road deaths and serious injuries by 2041

RS2 Employ a road danger reduction approach to design, using the streets toolkit for designers, Road Safety Audit, and Healthy Streets Check for Designers

RS3 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

RS4 Ensure that the safety concerns of all road users are considered when considering any traffic scheme

RS5 Prepare a programme of 20 mph zones in the borough and incorporate these into schemes for future TfL funding

RS6 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

RS7 Work with parking enforcement and police to enforce and promote safe driving and parking in school zones

RS8 Where possible use engineering solutions to minimise the need for additional road safety enforcement

RS9 Maintain an effective method of accident monitoring for the borough

RS10 Use accident statistical data to recognise trends and deliver targeted educational and engineering initiatives, with a focus on roads with a higher risk of motorcyclist collisions

RS11 Support the police in targeting illegal and non-compliant behaviour that puts motorcyclists at risk, using data to focus on the roads with a higher risk of motorcyclist collisions

RS12 Educate road users on the shared responsibility for safer motorcycle journeys, through driver and motorcyclist skills training and communications

RS13 Promote Motorcycle Industry Association (MCIA) accredited training providers to motorcyclists looking to undertake Compulsory Basic Training

RS14 Provide BikeSafe vouchers for subsidised courses delivered by local Motorcycle Industry Association (MCIA) accredited training providers

RS15 Improve the safety of street design by following the design guidance set out in TfL's Urban Motorcycle Design Handbook

RS16 Encourage safe and considerate driving, at appropriate speeds, as part of travel awareness and road safety education campaigns and review existing speed limit to ensure they are appropriate to the location

RS17 Support the police in targeting illegal and non-compliant behaviour that places other road users at risk

RS18 Carry out road safety audits of all new significant traffic and highway proposals

RS19 Deliver appropriate road safety interventions and resources for road users aged 60+ by targeting community groups, day centres and social clubs, facilitating bespoke workshops and presentations and providing road safety literature

RS20 Support the police to maintain focus on disrupting the criminal gangs involved in motorcycle theft and enabled crime

RS21 Improve lighting across the borough by a change to LED lighting

RS22 Work with the Metropolitan Police in using their powers of enforcement to deal with illegal cycling on pavements and footpaths

Parking and Enforcement

PE1 Give high priority to the enforcement of parking and road traffic regulations, particularly to those affecting the safety of all road users, reliable operation of bus services and the prevention of traffic congestion

PE2 Monitor and review the provision and operation CPZs in all areas of the Borough experiencing on-street parking stress and install new CPZs subject to, demand and consultation with the local community

PE3 For new CPZs, and as CPZs are reviewed, change the operational hours of enforcement to target the busiest times of the location

PE4 Review the parking regulations in the Opportunity Area to ensure that the needs of planned growth are appropriately addressed

PE5 As reviews of CPZs take place, progressively enable the provision of business parking permits in CPZs for vehicles where permits are required as a major part of the operation of the business and where such journeys are not viable without such parking permits

PE6 Provide reduced cost parking permits for appropriate greener vehicles

PE7 In the development of parking schemes, the council will ensure convenient car parking for people with disabilities is considered

PE8 Ensure adequate provision of blue badge parking is available in all town centres

PE9 Enforce all road traffic, parking and waiting regulations in the interests of improving bus priority.

Social inclusion

SI1 Prioritise in all new schemes the needs of those with mobility difficulties who need to drive to work, shops or other facilities

SI2 Consider accessibility improvements in all new schemes, such as dropped kerbs, tactile paving and audible signals

SI3 Work towards introducing a fully integrated, accessible bus and underground station at Harrow on the Hill

SI4 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

SI5 Petition TfL to improve the accessibility of all stations in the borough where there is no disabled access

SI6 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

SI7   Continue to support of the expansion of the Harrow Shopmobility services and their opening hours

SI8   Work with schools to promote travel training for children and young people with learning difficulties

SI9   Ensure convenient car parking for people with disabilities is considered In the development of all parking schemes

SI10   Where alternative options exist, prevent or deter parking on footways and verges ensuring that the safety and convenience of pedestrians, the visually impaired and disabled people is paramount

SI11   Ensure adequate provision of blue badge parking is available in all town centres

SI12   Liaise with the Public Carriage Office regarding improving the accessibility of taxi ranks in the borough

SI13   Ensure that all aspects of a safe environment, including improved lighting, better sight lines particularly for vulnerable road users and well-lit waiting areas, are effectively considered when delivering works for all new schemes

SI14   In the development of parking schemes, the council will ensure convenient car parking for people with disabilities is considered

SI15   Work with schools to promote travel training for children and young people with learning difficulties

SI16   Work with Harrow Association of Disabled People and other disability organisations to address a range of accessibility issues

Public Realm

PR1   Ensure that the vitality of town centres are supported through good transport access via all modes of transport prioritising sustainable modes of transport

PR2   Continue to support the Harrow town centre neighbourhood of the future and deliver new NOFs across the borough

PR3   Work with TfL to expand Legible London throughout the Harrow Opportunity Area and into more areas in Harrow such as Stanmore and Headstone Lane

PR4   Improve on the condition of Harrow roads by continuing to prioritise road maintenance in Harrow's capital and revenue budgets in line with best practice asset management principles

PR5   Ensure that all aspects of a safe environment, including improved lighting, better sight lines particularly for vulnerable road users and well-lit waiting areas, are effectively considered when delivering works for all new schemes

PR6   Increase the amount and variety of trees and plants across the Borough's open spaces and within streetscapes

PR7   Seek opportunities for new tree planting in the Opportunity Area

Regeneration

R1   Ensure all projects consider their air quality and noise impact and that where possible mitigation is introduced to minimise adverse impacts

R2   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

R3   In all new neighbourhood schemes the borough will consider the Healthy Streets checklist

R4   Improve pedestrian and cycle wayfinding across the borough and work with TfL to expand Legible London in Harrow

R5   Promote growth in areas of greatest public transport to encourage residual travel by public transport, walking and cycling

R6   Promote mixed use development in growth locations to reduce the need to use a vehicle for trips between residential, retail, leisure and employment areas

R7   Consider the improvement of local access by walking, public transport, motorcycling and cycling as a core element in future regeneration programmes for local centres and employment areas

R8   Secure deliverable Travel Plans for major trip generating development

R9   Ensure convenient access for walking, cycling and public transport be required in the design and layout of new development

R10   Use the planning process on major planning applications to require a Construction Logistics Plan that reduces the environmental impact through the use of lower vehicle emissions and reduced noise levels; improves the safety of road users; reduces vehicle trips particularly in peak periods and encourages efficient working practices

R11   Improve the environment for pedestrians and cyclists in the whole borough and particularly within the Harrow Opportunity Area

R12   Ensure that all schemes implemented follow the Harrow street furniture design guide ensuring best practice for materials and reducing street clutter

R13   Use the planning process to ensure that the discharge rate for new development is restricted to the greenfield run off rate using various SUDS measures

R14   Use Section 106 Planning Agreements to secure developer contributions towards the costs of meeting and ameliorating the travel demand generated by development through improvement to public transport, walking and cycling, installing parking controls and, where necessary, creating regulated and controlled public car-parks

R15   In considering planning applications for non-residential development the council will have regard to the specific characteristics of the development including provision made for:
- Operational parking and servicing needs
- Convenient car-parking for people with disabilities
- Car parking related to shift and unsociable hours working
- Convenient and secure parking for bicycles
- Needs of parking for motorcyclists

R16   Where accessibility by non-car modes is particularly good or can be made so, the council will actively seek to secure lower levels of car parking provision or even zero provision in developments, and require the completion of a binding agreement to introduce residential permit restrictions on the developments to limit the increase in car use and ensure that any measures necessary to improve accessibility by non-car modes are secured

R17   For new larger developments, use travel plan bonds, for failure to meet performance of agreed travel plans and secure Developer funding to pay to monitor the travel plans; monitoring will continue for at least five years following development completion.

R18   When considering housing developments the council will encourage developers to explore the potential for schemes to provide access to cars without individual ownership, possibly linked to inducements to use other modes

R19   In preparing Transport Assessments and Transport Statements to demonstrate sufficient/appropriate levels of car parking provision for location outside of high

PTAL areas, trip generation data should be assessed alongside Census travel to work and car ownership data for the relevant ward or Middle Super Output Layer

R20   Ensure that walking permeability (a multiplicity of routes to give easy accessibility to, from and within a site) is assessed and prioritised for all new residential or business developments

R21   Use its powers as local planning authority to make planning permission for future development conditional upon the availability of an appropriate level of pedal cycle parking and facilities such as showers and lockers and encourage provision of "cycle pools"

R22   Use the planning process on major planning applications for larger developments to require a Construction Logistics Plan that reduces the environmental impact through the use of lower vehicle emissions and reduced noise levels; improves the safety of road users; reduces vehicle trips particularly in peak periods and encourages efficient working practices

R23   Require, as a condition of securing planning permission, that development proposals make proper off-street provision for servicing and loading/unloading within the development site, in such a way that all vehicles entering or leaving a site are enabled to do so in a forward gear

R24   Maximise training, apprenticeship and employment opportunities on all schemes to ensure residents benefit from the economic opportunities generated by transport infrastructure programmes and journey to work times are reduced.

Freight

F1   Work with GPS providers to ensure that freight routes are appropriately guided within the borough and avoid residential areas

F2   Ensure that freight movement, delivery and servicing within the borough is provided for in an environmentally sensitive, economic and efficient manner and ensuring appropriate routing avoiding residential areas while reducing impacts and conflicts with other modes, for example bus lanes, cycle lanes

F3   Periodically review the provision in town centres and the Harrow Opportunity Area for all aspects of servicing, delivery, loading/unloading and freight movement, with particular regard to its impact on all other modes of transport, the local economy and the local environment

F4   Seek to provide adequate delivery and servicing access to shops, businesses and residential premises and in particular to provide convenient on-street short-stay spaces for servicing / delivery vehicles

F5   Produce and publish a map setting out key information in respect of restrictions on lorry movement within the Borough, in terms of:
      · Width, weight and length restrictions
      · Low bridges
      · Loading bans
      · Access restrictions, including pedestrian areas
      · Preferred routes for lorries

F6   Work with WestTrans to develop a freight heat map enabling the borough to be better informed about the parking and loading needs of freight in the borough

F7   Support and seek, via the responsible regional/subregional authorities, appropriate sub-regional provision of break-bulk, consolidation, distribution and modal-transfer facilities for freight management, and appropriate and effective access to those facilities from the Borough

F8   Promote and maintain local area lorry bans together with supporting initiatives to move freight by non-road transport modes

Highway Management

H1   Maximise the efficiency and reliability of the operation of the road network through methods outlined further in Harrow's Highway Network Management Plan

H2   Reduce traffic volumes on local roads through traffic management techniques and where possible by diverting traffic to main arterial/distributor roads

Changing behaviour

CB1   Promote and support the development of travel plans in accordance with TfL guidelines either for individual organisations or on an area wide basis as appropriate

CB2   Promote sustainable and healthy travel choices through the use of school travel planning, travel awareness campaigns, cycle training and an improved walking environment

CB3   Encourage modal shift towards more sustainable forms of transport

CB4   Provide effective alternatives to the car to encourage modal shift

CB5   Seek to ensure that new facilities to reduce car dependency e.g. real time public transport information and shopping lockers are placed in shopping centres

CB6   Work with the Mayor, the GLA and the Government to pursue the progressive removal / control of "free" parking – through planning agreements (new development), through voluntary initiatives (retail partnerships) or by extending the principle of charging for car parking spaces

CB7   Improve transport connectivity within the Opportunity Area between Harrow Town Centre and Wealdstone including the provision of in station cycle parking

CB8   Promote the use of travel plans for all educational establishments, hospitals and other places of work and where appropriate work with organisations to improve site specific travel plans

CB9   Provide effective alternatives to the car to encourage modal shift and increase provision for non-motorised modes of travel including cycling on all local access roads and treating walking as a priority travel mode, to be treated on a par with other means of transport

CB10 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

CB11 Provide effective alternatives to the car to encourage modal shift and increase provision for non-motorised modes of travel including cycling on all local access roads and treating walking as a priority travel mode, to be treated on a par with other means of transport

CB12 Review the Harrow Rights of Way Improvement Plan with a view to increasing active travel through Harrow's parks and open spaces

CB13 Increase provision for non-motorised modes of travel including cycling on all local access roads and treating walking as a priority travel mode, to be treated on a par with other means of transport

Environmental issues

E1   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

E2   Review the viability of introducing a revised parking permit structure based on vehicle emissions

E3   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, e.g. providing specific locations for parking by providing charging points for electric vehicles

E4   Request all providers or users of Council transport fleets to consider how they can move towards the use of less polluting vehicles

E5   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

E6   Raise awareness among residents about the planning requirements around paving over front gardens and opportunities to use permeable surfacing

E7   In addition to flood protection, create surface flood storage areas in parks and open spaces to improve water quality and increase biodiversity

E8   For all new schemes, review opportunities to introduce rain gardens, additional trees and protect existing grass verges to increase local biodiversity

E9   Use new polymer modified materials with EME material (Enrobé a Module Élevé) a derivative for use on bus stops where there is heavy static loading and low speed heavy movements for road surfacing to reduce noise, increase durability and increase the roads lifespan. New materials and better road conditions can reduce noise by up to 20%

E10   Maximise procurement opportunities for SMEs and local suppliers to minimise supply chain journeys

Partnership working

PW1   Work with TfL to improve the frequency and reliability of weekend and late night public transport services to/from Central London

PW2   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

PW3   Persuade TfL to concentrate on continuing to improve public transport service reliability ensuring improved radial and orbital services

PW4   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

PW5   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.

PW6   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

PW7   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

PW8   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

PW9 Work 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 to offer a safe, secure and passenger-friendly environment and appropriate 'state-of-the-art' passenger interchanges

PW10 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

PW11 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

PW12 Work with TfL to expand Legible London throughout the Harrow Opportunity Area and into more areas in Harrow such as Stanmore and Headstone Lane

PW13 Work with schools and police to address perceptions of personal safety on buses

PW14 Work with the Metropolitan Police to consider introducing traffic calming to lower speed and reduce impact of hostile vehicles in selected locations

PW15 Work with Harrow Association of Disabled People and other disability organisations to address a range of accessibility issues

APPENDIX F

SEA Environmental Report (draft)

Non-technical summary of Strategic Environmental Assessment (SEA)

Background

The Local Implementation Plan (LIP) is a statutory document required by the Mayor of London. All London Boroughs are required to produce a Local Implementation Plan and it is a statutory requirement that it is in accordance with the Mayor's Transport Strategy.

The LIP is prepared under Section 145 of the GLA Act and sets out how the borough proposes to deliver the Mayor's Transport Strategy (MTS) in its area, as well as contributing to other local and sub-regional goals. It has been developed in accordance with the Revised Guidance for Borough Officers on Developing the Third Local Implementation Plan.

LIP3 (3rd Local Implementation Plan) covers the same period as the MTS (published in March 2018) and also takes account of the transport elements of the draft London Plan, and other relevant Mayoral and local policies. The document sets out long terms goals and transport objectives for the London Borough of Harrow for the next 20 years, a three-year programme of investment starting in 2019/20, and includes a delivery plan for the period 2019/20 - 2021/22 and the targets and outcomes the borough are seeking to achieve. A more detailed delivery plan is provided for the financial year 2019/20.

In line with the legislation, this Strategic Environmental Assessment of the draft LIP3 considers the following environmental issues:

- Biodiversity, Fauna and Flora
- Population and Human Health
- Soil
- Water
- Air
- Climatic Factors
- Material assets
- Cultural heritage
- Landscape

Borough environmental issues

Population growth in the borough is the biggest environmental issue currently facing the borough. In Harrow, the borough needs to build 13,920 new homes by 2028/29[1]. Any increased traffic will have associated environmental consequences. The forecast growth will put increasing pressure on both public infrastructure and public spaces. The new population will also require access to a range of employment, schools, health, retail, leisure and other infrastructure and this will generate demand for travel in line with the rise in population.

Environmental issues in the borough include the following:

- Population growth increasing demand on the physical and social infrastructure
- Need to ensure good access to nature
- Additional safe and secure cycle parking provision required
- Traffic main source of air pollution in borough

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[1] Draft London Plan 2017

- Over reliance on cars in the borough and very high car ownership
- River flooding following high rain falls
- Low levels of traffic accidents
- Diabetes and obesity in the borough is above the national average for England and particularly prevalent in Wealdstone
- Borough has been identified as one where there is scope for growth in cycling
- Loss of trees due to age of trees, diseases and structural problems

Draft LIP3 objectives

The draft LIP3 objectives have been identified as follows:

1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage 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
5. Encourage the uptake of more sustainable modes of travel 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 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

Strategic Environmental Assessment and objectives

Having considered all the environmental issues in the borough and following a consultation of a scoping report of the SEA, the objectives identified in this Strategic Environmental Assessment are as follows:

1. Enhance biodiversity, flora and fauna and natural habitats by
   a. ensuring the use of sensitive materials appropriate to the aesthetics and environmental nature of locality
   b. increasing the opportunities of coming into contact with wildlife and green places and thereby appreciating them more
   c. increasing the extent of biodiversity by grass, tree and flower planting where opportunities arise to do so
2. Improve the health and well-being of Harrow residents by:
   a. adopting a vision zero approach towards eliminating all road deaths and serious injuries by 2041
   b. increasing the extent of 20mph roads in the borough and expanding the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school
   c. encouraging walking and cycling as a means of travel as well as for recreational purposes
   d. promoting health walks through Harrow's green spaces
   e. maximising the use of materials that reduce traffic noise and plant trees at appropriate locations to reduce traffic noise where appropriate
   f. promoting travel awareness education campaigns
   g. increasing opportunities to access the greenbelt and open space
3. Reduce crime, fear of crime and anti-social behaviour by
   a. introducing healthy streets and liveable neighbourhoods
   b. designing safer environments for all
   c. improving lighting across the borough by a change to LED lighting so that the levels of lighting are brought up to the necessary standards
   d. regeneration
4. Reduce inequality and social exclusion by
   a. reducing the obstacles to travel for people with mobility difficulties or for those with heavy shopping or with pushchairs
   b. supporting schemes such as Shopmobility to promote independence
5. Reduce air pollution and reduce traffic emissions by:
   a. introducing more neighbourhoods across the borough that support low emission vehicles
   b. increasing electric vehicle charging infrastructure in the borough
   c. preventing /reducing pollution emanating from engineering activities
   d. encouraging contractors to improve their environmental performance
   e. increasing staff awareness of energy efficiency
   f. encouraging modal shift towards more sustainable forms of travel
   g. reducing traffic congestion
   h. reducing the need to travel by supporting development where there is a high level of public transport provision

    i.   targeting schools with initiatives to address poor air quality

    j.   parking management to encourage less traffic and greener vehicles

6. Mitigate the causes of climate change through:
   a. encouraging the use of greener vehicles
   b. planting trees which provide shade, take up carbon dioxide from the atmosphere and store carbon
   c. reducing the need to travel

7. Promote liveable neighbourhood and regeneration through:
   a. improvements to the public realm
   b. renewing the physical environment

8. Promote recycling by:
   a. maximising the use of recycled construction materials in carriageways and footways
   b. encouraging responsible sourcing of materials as well as BES 6001 accreditation for appropriate suppliers

9. Introduce engineering methods to benefit the environment by:
   a. maximising the use of noise reducing surfacing material where appropriate
   b. encouraging the conservation and sustainable use of non renewable resources
   c. reducing waste creation from engineering activities
   d. maintaining Harrow EMS standard in traffic and engineering services

10. Protect and preserve historic areas and greenery in the borough by:
   a. reducing adverse traffic impacts on the historic environment
   b. maximising opportunities to improve the historic environment through appropriate transport infrastructure and public realm upgrades
   c. promoting appropriate streetscape improvements, including reducing unnecessary street clutter
   d. supporting upgrades to public transport infrastructure which widens access to the historic environment
   e. using materials appropriate to the location

11. Minimise the risk of flooding from rivers and watercourses to people and property by:
   a. construction and maintenance of flood defence structures and flood storage areas in appropriate locations

Baseline data

In order to see the environmental impact of the Local Implementation Plan, baseline data is required. The Environmental Report contains baseline data for the following:

  Rolling average KSIs
  Traffic volumes
  Modal share
  School mode share
  Children receiving cycle training
  Adults receiving cycle training
  Numbers participating in Harrow Health Walks
  Electric charging points
  Number of new street trees planted
  Number of events promoting smarter travel
  Uptake in Shopmobility

Car free housing development
Works completed

Alternatives

Alternative options for meeting the objectives in draft LIP3 have been considered in the SEA and their environmental impact assessed. The alternatives considered were as follows:

1. Continue with the current approach and continue to deliver the current policies outlined in LIP2
2. Only promote sustainable forms of transport
3. Only deliver infrastructure management
4. Only increase capacity for sustainable forms of transport

After analysis of the SEA topics, only air quality and human health issues were considered in detail.

This is because the LIP impact on the other SEA topics would most likely be negligible.

Mitigation

As there are no significant adverse effects from the proposals outlined in LIP3, no mitigation measures were included in the Environmental Report.

Following consultation

The SEA and LIP3 objectives will both be reviewed following the completion of the draft LIP3 consultation. In addition, the SEA baseline data and monitoring, LIP3 borough policies and programmes of works will all be reviewed as needed.

Strategic Environmental Assessment (draft)

Environmental report for Harrow's 3rd Transport Local Implementation Plan

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Introduction

This is the environmental report for the London Borough of Harrow's 3rd Transport Local Implementation Plan (LIP3).

The Local Implementation Plan (LIP) is a statutory document prepared under Section 145 of the GLA Act and sets out how the borough proposes to deliver the Mayor's Transport Strategy (MTS) in its area, as well as contributing to other local and sub-regional goals. It has been developed in accordance with the Revised Guidance for Borough Officers on Developing the Third Local Implementation Plan.

LIP3 covers the same period as the MTS (published in March 2018) and it also takes account of the transport elements of the draft London Plan, and other relevant Mayoral and local policies. The document sets out long terms goals and transport objectives for the London Borough of Harrow for the next 20 years, a three-year programme of investment starting in 2019/20, and includes delivery proposals for the period 2019/20 - 2021/22 and the targets and outcomes the borough are seeking to achieve. A more detailed delivery plan is provided for the financial year 2019/20.

Unlike outer London Local Transport Plans (LTPs), the LIP is not a bidding document. It contains transport objectives, delivery proposals and actions that the borough will undertake but clearly states that many of these are subject to funding being available.

European Directive 2001/42/EC (EC, 2001) requires SEAs of a wide range of plans and programmes. The objective of the "SEA Directive" is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development.

The environmental assessment highlights where there are risks that effects will occur depending on the tools used to meet LIP3 objectives. It is not the same as a detailed Environmental Impact Assessment but is more concerned with how the proposals in the plan will interact with the environment and what the overall effect of the plan may be. Mitigation measures are suggested to minimise risks.

Following the decision to proceed with an SEA, there are 5 key stages to the SEA process. These are as follows:

1.   Set context and objectives, establish baseline and scope

2.   Developing and refining alternatives and assessing effects

3.   Preparing the environmental report

4.   Consulting on the draft plan and the environmental report

5.   Monitoring implementation of the plan

In line with legislation, Harrow's Strategic Environmental Assessment of LIP3 will consider the following environmental topics. This list of topics is provided in the Practical Guide to the

Strategic Environmental Assessment Directive which was issued alongside by the Office of the Deputy Prime Minister in September 2005.

- Biodiversity, Fauna and Flora

- Population and Human Health

- Soil

- Water

- Air Quality

- Climatic Factors

- Material assets

- Cultural heritage

- Landscape

Carrying out the SEA and producing the Environmental Report has been a key part in the development of the draft LIP3. The Environmental Report has progressed simultaneously with the draft LIP3. Because both the draft LIP3 and the Environmental Report have been produced by the same person, the results of the SEA and the Environmental Report necessarily influenced the development of the draft LIP3. It is also advantageous that both documents have been overseen by the same people. This has also ensured that both documents are well co-ordinated and developed well together.

The scoping report for the SEA for LIP3 was started at the same time as LIP3. The scoping report underwent consultation between 6th July 2018 and 10th August 2018. The consultation included both statutory environmental groups and local environmental groups. Statutory consultation for the scoping report was the Environment Agency, Historic England and Natural England. Local environmental groups that were consulted include Harrow in Leaf, Harrow Friends of the Earth, Harrow Natural History Society, Harrow Nature Conservation Forum, Pinner Local History Society, Herts and Middlesex Wildlife Trust and Harrow Heritage Trust. Internal Council departments responsible for transport, planning and the environment were also included in the scoping report consultation as was Transport for London (TfL). The scoping report was made available on Harrow's website throughout the consultation period.

Feedback received from all consultees was fed into the development of this Environmental Report as well as into the development of the draft LIP3 and appropriate changes made to various sections of both documents. Because the main focus of LIP3 is to implement the Mayor's Transport Strategy, which itself has undergone a SEA and as a result of previous LIP documents, minimal environmental effects were identified in preparing this SEA.

Changes made to this Environmental Report and to LIP3 as a result of the scoping and screening report consultation are shown in Appendix A.

Review and link with other relevant plans and programmes

1.1   The SEA Regulations state that an Environmental Report should outline the plan's relationship with other relevant polices, plans and programmes (PPP) and the environmental objectives relevant to the plan. It should also outline the environmental considerations that have been taken into account during its preparation. LIP3 and the SEA Environmental Report need to consider the environmental protection objectives established at international, EU, national, regional and local levels.

1.2   To ensure the context of other relevant PPP were appropriately considered, a comprehensive review was undertaken of the environmental and transport related objectives relevant to LIP3. The review was also used to highlight environmental problems and opportunities within the Borough and assisted in the setting of draft SEA objectives which are compatible with those in other PPPs.

1.3   LIP3 is being developed as a response to the Mayor's Transport Strategy 2018 and identifies how the London Borough of Harrow will work towards achieving the MTS goals of:

- Healthy Streets and healthy people

- A good public transport experience

- New homes and jobs

1.4   In developing LIP3 Harrow has also considered the following Harrow documents:

- Harrow Core Strategy, 2012

- Harrow Development, Management Policies, 2013

- Harrow Biodiversity Action Plan 2015 – 2020

- Harrow Health and Wellbeing Strategy 2016-2020

- Waste Management Strategy (2016-2026)

- Harrow Council Local Flood Risk Management Strategy, May 2016

- London Borough of Harrow Tree Strategy 2015-2018

- Harrow Transport Local Implementation Plan 2011/12 - 2013/14

- London Borough of Harrow Climate Change Strategy April 2013 onwards

1.5   Regional documents considered in preparing this report have mainly been produced by the Mayor of London and Transport for London. These documents include the following:

- West London Sub-regional Transport Plan 2016 update

- Mayor's Transport Strategy – Local Implementation Plan guidance, 2018

- The London Plan, Spatial Development Strategy for Greater London, 2017 draft

- London Environment Strategy, 2018

- Vision Zero for London, 2017

- Healthy Streets for London, 2017

- Better Environment, Better Health, 2013

1.6   Other documents considered include the following:

- Disability Discrimination Act 2005

- Home to school travel and transport guidance, 2014

1.7   Additional details on the content of the above plans and their links to LIP3 is provided in Appendix B.

Geographical area

1.8   Harrow is an outer-London Borough situated approximately 10 miles to the north-west of central London with a land area of some 5,047 hectares (50 sq kilometres or 20 sq miles). It is the 12th largest borough in London by area but 21st in terms of size of population. Neighbouring local authorities are the London boroughs of Barnet, Brent, Ealing and Hillingdon, and to the north Hertsmere Borough Council and Three Rivers District Council in Hertfordshire. Figure 1 shows the borough in the London context.

1.9   Over a quarter of the Borough consists of designated open space; residential gardens provide private or communally accessible spaces. Harrow's land area includes 1,088 hectares Green Belt and a further 313 hectares Metropolitan Open Land. Statutorily protected assets include 2 Sites of Special Scientific Interest, 28 Conservation Areas, over 300 listed buildings, four historic parks and gardens, and 9 scheduled ancient monuments.

1.10 Harrow is located at the upper reaches of the Thames basin, tributaries of the Crane, Colne and Brent Rivers rise in Harrow and some parts of the Borough are susceptible to fluvial and surface water flooding.

1.11 Harrow has a significant network of open spaces including Green Belt, Metropolitan Open Land, local parks, allotments and amenity space. Figure 2 shows a map of these features.

1.12   Notable historic components in the Borough comprise Harrow Village including St. Mary's Church and Harrow School atop Harrow Hill, Headstone Manor and Pinner Deer Park, Pinner High Street, St. John the Evangelist Church and St. Lawrence Church in Stanmore, Canons Park and North London Collegiate College, the Grim's Dyke earthwork and the Grim's Dyke Hotel, and Bentley Priory;

1.13   Parts of Bentley Priory and Harrow Weald Common are Sites of Special Scientific Interest and are protected by statutory provisions. Stanmore and Harrow Weald are home to the only Metropolitan Sites of Importance for Nature Conservation in Harrow, as well as a number of Grade I & II Borough importance sites.

Figure 1: Harrow in London
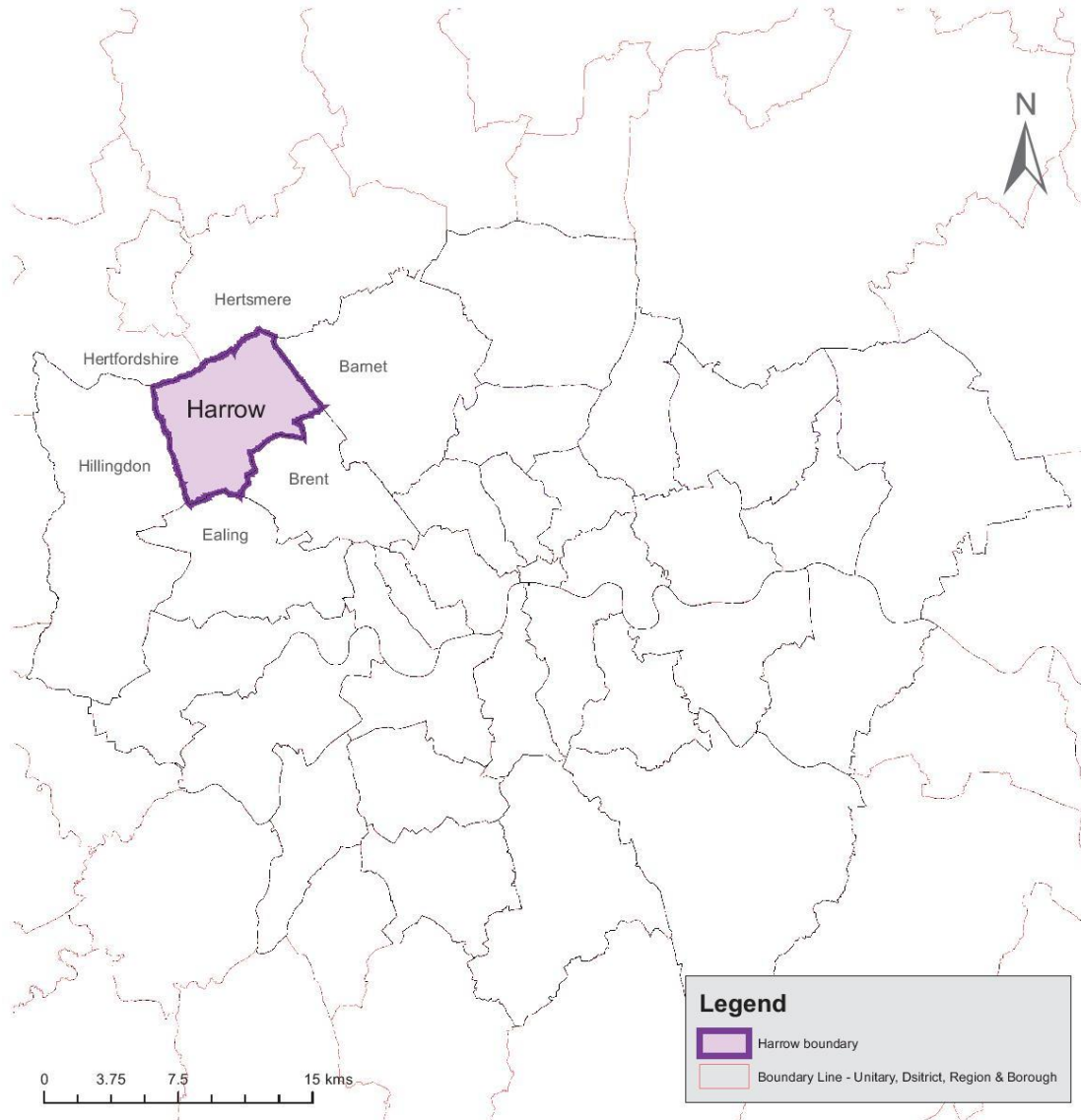
Legend
- Harrow boundary
- Boundary Line - Unitary, Dsitrict, Region & Borough

Figure 2: Borough key environmental features

Legend

- Conservation Areas
- Green Belt
- Metropolitan Open Land
- Designated Open Space
- Green Chains and Corridors
- Sites of Special Scientific Interest (SSSI)
- Borough boundary

Stations

Tube and Rail Stations

- Rail
- Tube
- Tube and Rail
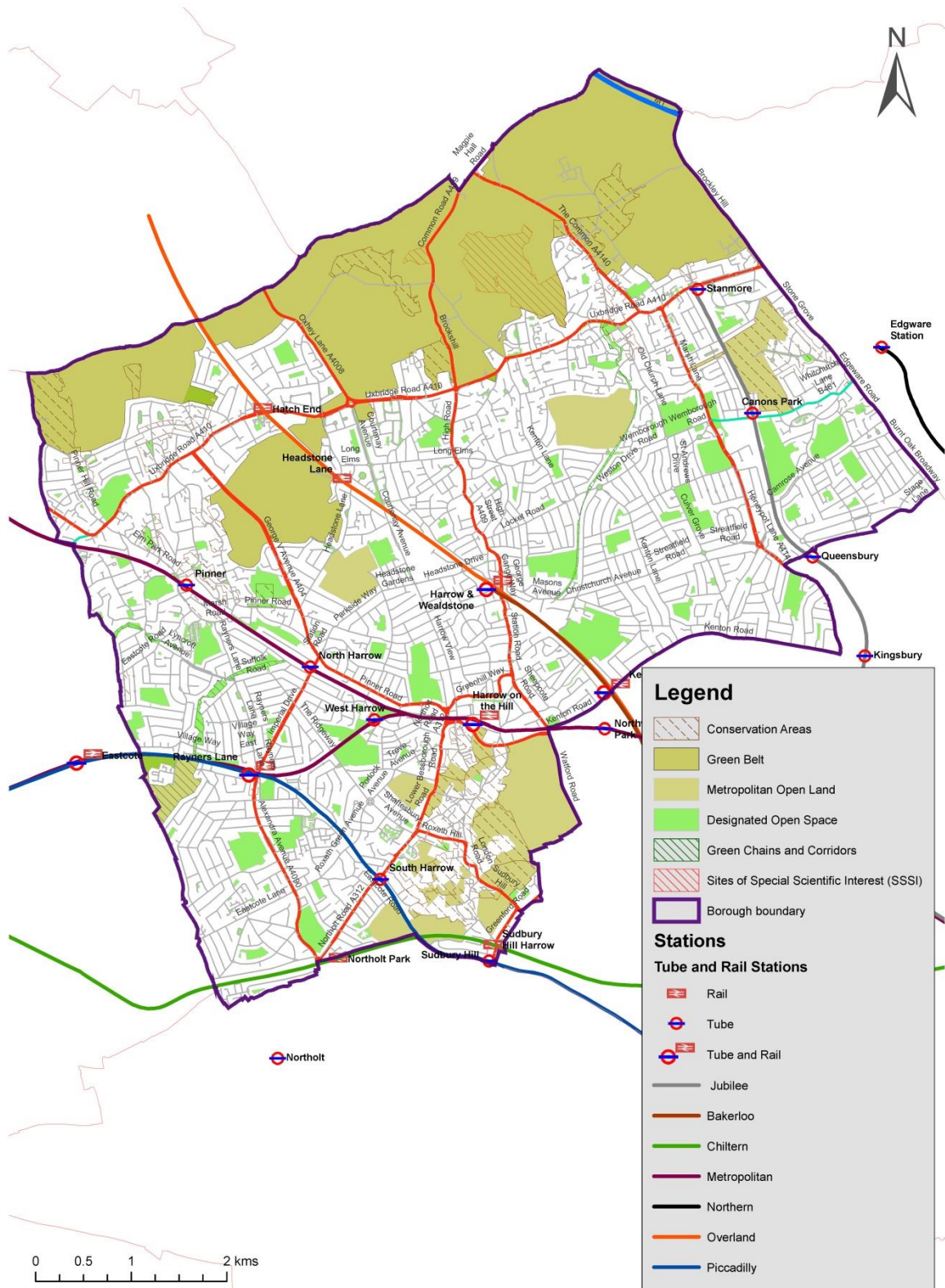- Jubilee
- Bakerloo
- Chiltern
- Metropolitan
- Northern
- Overland
- Piccadilly

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Harrow COUNCIL
LONDON

Borough Environmental Issues

1.14   Environmental issues in the borough include the following:

- Population growth increasing demand on the physical and social infrastructure
- Need to ensure good access to nature
- Additional safe and secure cycle parking provision required
- Traffic main source of air pollution in borough
- Over reliance on cars in the borough and very high car ownership
- River flooding following high rain falls
- Low levels of traffic accidents
- Diabetes and obesity in the borough is above the national average for England and particularly prevalent in Wealdstone
- Borough has been identified as one where there is scope for growth in cycling
- Loss of trees due to age of trees, diseases and structural problems

1.15   Key environmental issues for the borough are described in more detail below.

Growth

1.16   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 2028/29[2]. This will all put increasing pressure on both public infrastructure and public spaces. The new population will also require access to a range of employment, schools, health, retail, leisure and other infrastructure and this will generate demand for travel in line with the rise in population.

1.17   The increased growth needs to be managed so that it can deliver sustainable development and communities. Without proper planning and management, the impact of the additional growth can have a serious detrimental impact on transport pollutants and therefore on public health and the general environment. **Figure 3** shows growth areas in the borough.

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[2] Draft London Plan 2017

Figure 3: Growth areas in Harrow
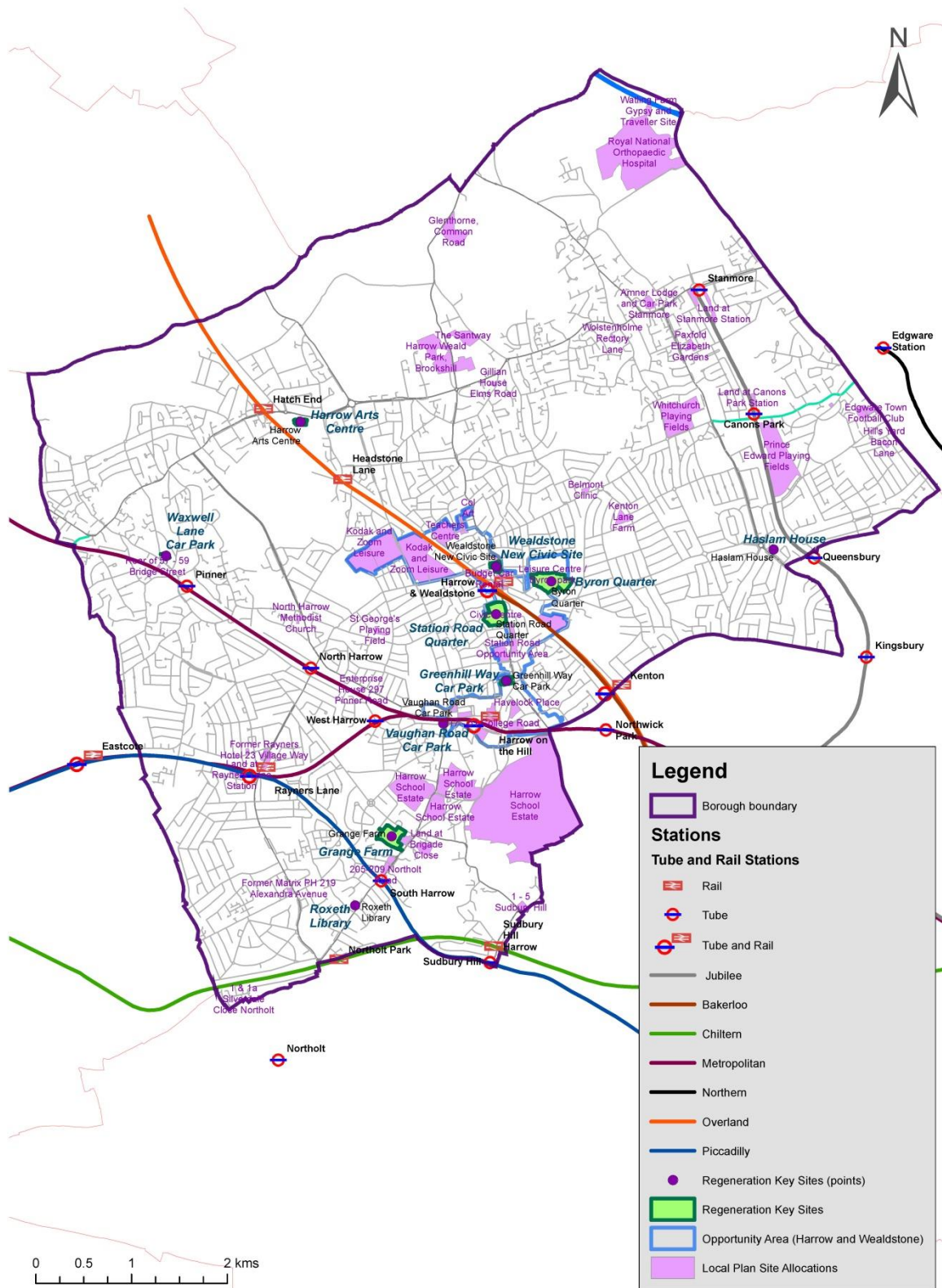
Figure 3: Growth areas in Harrow

Legend

Borough boundary

Stations

Tube and Rail Stations

Rail

Tube

Tube and Rail

Jubilee

Bakerloo

Chiltern

Metropolitan

Northern

Overland

Piccadilly

Regeneration Key Sites (points)

Regeneration Key Sites

Opportunity Area (Harrow and Wealdstone)

Local Plan Site Allocations

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Climate change

1.18   In 2007 the Council signed the Nottingham Declaration, a pledge which recognises climate change and the need for action to combat it.

1.19   Climate change is predicted to increase global temperatures, and could also lead to increased flooding in the borough. To address this, Harrow needs to reduce its carbon dioxide emissions and its impact on the environment in general, to contribute to climate change mitigation, whilst at the same time adapting the built environment to become more resilient to the effects of climate change. This includes flood resilience measures being designed into developments, and other sustainable construction techniques being encouraged, whilst protecting the heritage around us. In addition, lifestyles need to become more sustainable and so issues such as reducing car travel, tackling waste and increasing the provisions for recycling need to be addressed.

Air quality

1.20   The main cause of London's and Harrow's poor air quality is motor vehicles and especially diesels. Busy and congested roads are the main source of pollution for poor air quality hotspots in the borough, and roadsides as a result of traffic are the areas of highest pollutants. It is estimated that around half of nitrogen oxides (NOx) emissions come from road transport sources.

1.21   Reliance on the car poses a major challenge for the borough in seeking to reduce carbon dioxide emissions (and tackle air quality problems). For many who commute to work outside the borough but not to central London, the car is an integral part of life. 76% of households in Harrow had access to a car or van at the time of the 2011 census. In addition, a third of households recorded that they had access to two or more cars at home.

Material assets

1.22   The public realm and in particular cycling infrastructure in the borough needs to be improved. This includes introducing more healthy streets and liveable neighbourhoods as well as additional cycle parking facilities and safer cycle routes. This is particularly necessary to encourage a shift to greener forms of transport as well as to combat congestion.

1.23   In addition to this, additional vehicle charging infrastructure needs to be provided across the borough.

Landscape and Cultural Heritage

1.24   Harrow's open spaces and green grid provide a substantial environmental resource that contributes to biodiversity, adaptation to climate change, and to people's health and

wellbeing. Harrow also contains some attractive and unique historic neighbourhoods, notably the medieval village of Pinner, and the renowned Harrow-on-the-Hill.

1.25   There are a number of historic parks and gardens, many originating from grand estates that once occupied the area. Change needs to be managed in a way that respects local character and heritage, and also enhances it whenever possible.

1.26   The residents of Harrow are fortunate to have a significant amount of mature tree cover across many parts of the Borough and have a large number of attractive tree-lined streets. Trees make a significant contribution to the quality of life and they also provide character and many environmental benefits. Trees reduce air pollution and therefore they play a role in preventing premature deaths from chronic diseases. They also absorb, and therefore, reduce noise. Their cooling effect is especially important during extreme summer heat.

1.27   Many of the borough's tree lined streets have tree populations that are mature. These trees were mainly planted at approximately the same time and therefore they all have similar life expectancies. The age of trees, their location, structural problems and tree diseases are all issues that impact on the way Harrow manages the tree stock. Budgetary constraints mean there is a lack of funding to support the planting of new trees and this is of particular concern as trees reach their natural end of life.

Water

1.28   Located at the upper reaches of the Thames basin, tributaries of the Crane, Colne and Brent Rivers rise in Harrow; some parts of the Borough are susceptible to fluvial and surface water flooding.

1.29   Watercourses in Harrow form part of the catchment of the Rivers Brent, Colne and Crane, which ultimately flow into the Thames. The Brent, Colne and Crane catchments are all identified in the London Rivers Action Plan (Environment Agency, 2009). Large sections of many of the Borough's watercourses were culverted during the 20th Century to facilitate residential development. These piped sections have finite capacity to carry water at times of peak flow and impact upon the functioning of natural flood plains, with consequences for flooding both within the Borough and elsewhere downstream. Harrow's Strategic Flood Risk Assessment (2009) identified the risk from fluvial flooding in Harrow.

1.30   New development throughout the Borough need to seek to achieve the Greenfield run-off rates, where feasible, through source control, sustainable urban drainage systems and rainwater harvesting.

Health

1.31　Harrow's overall health indicators are good and people born in Harrow can expect to live longer than the London and England averages. However, Harrow does have areas of relative deprivation with residents who have serious health needs.

1.32　Harrow residents enjoy good life expectancy (82.7 years for men and 86.1 years for women) resulting in a disproportionately high increase in the proportion of older residents and adults living alone. There is also considerable differences in life expectancy between wards in the borough with female life expectancy as high as 91.7 in Pinner South and male life expectancy as low as 78.5 in Greenhill.

1.33　The high rate of diabetes in the borough is a key concern. In 2016/17 there were 19,637 people, aged 17 years or older with diabetes. The total prevalence of people with diabetes, diagnosed and undiagnosed, is estimated to be 10.5% of the population. Wealdstone has the highest level of diabetes in the borough.

1.34　There is a known association with obesity and Type-2 diabetes. As obesity is a risk factor for diabetes this is something that needs to be addressed. One aspect of obesity management is the level of physical activity.

1.35　Harrow is less active and more inactive than London and the nation as a whole:

1.36　Nearly one in three (31%) of the adult population in Harrow is classed as physically inactive falling into the Chief Medical Officer's (CMO) "high risk" health category. This is higher than the London (27%) and the national (27.7%) level of inactivity. This means that 31% of the adult population in Harrow do less than 30 minutes of moderate intensity physical activity per week.

1.37　Harrow's road safety record is one of the best in London. However the borough is very concerned about the number of motorcycle casualties in the borough.

Developing Harrow's LIP3

1.38　Harrow's LIP3 is being developed to contribute to:

- The Mayor of London's overarching aim that 80% of all trips in London will be made on foot, by cycle or using public transport by 2041
- The Mayor of London's nine transport strategy outcomes.

1.39　The nine Mayor's Transport Strategy outcomes identified in the Mayor's Transport Strategy are as follows:

Outcome 1:　London's streets will be healthy and more Londoners will travel actively
Outcome 2:　London's streets will be safe and secure
Outcome 3:　London's streets will be used more efficiently and have less traffic on them
Outcome 4:　London's streets will be clean and green
Outcome 5:　The public transport network will meet the needs of a growing London
Outcome 6:　Public transport will be safe, affordable and accessible to all

Outcome 7:   Journeys by public transport will be pleasant, fast and reliable

Outcome 8:   Active, efficient and sustainable travel will be the best option in new developments

Outcome 9:   Transport investment will unlock the delivery of new homes and jobs

1.40   The draft LIP3 objectives are being developed to help delivery the Mayor's Transport Strategy as well as to support the delivery of Harrow's Local Plan.

Draft LIP3 objectives

1.41   As well as supporting the Mayor of London's aims and the delivery of the Harrow Local Plan, the LIP3 objectives have been developed to encourage cycling and also to reduce motorcycle casualties, both of which are of considerable concern to the borough. The Council wants to encourage more cycling and walking to deliver significant direct impact on personal health as part of its Borough wide concern for local health. Diabetes levels in the borough which correlate to obesity are estimated to be the highest in London and above the average for England. Cycling and walking will need to be better integrated into Public Health programmes to further reap the potential health benefits.

1.42   It is crucially important that growth in London encourages a shift from car use to active, efficient and sustainable modes of transport. This would enable a long-term solution to growth, health, environment and quality of life challenges. Good Growth means ensuring that Londoners have available options other than to drive to the shops, school or work.

1.43   Having considered the Mayor's aims and the local issues in Harrow, draft LIP3 objectives have been developed. Following draft LIP3 consultation, these still may change. The draft objectives are as follows:

1.   Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage 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

5.   Encourage the uptake of more sustainable modes of travel 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 CO_2 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 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

Borough Environmental Management System (EMS)

1.44 The borough manages its own Environmental Management System. Information for the EMS is collated for all schemes via a form that is completed during the design phase and as the scheme progresses. The purpose of this is to minimise any environmentally detrimental aspects whilst ensuring the project is cost effective, functional, durable, low maintenance, reduces unnecessary clutter from street furniture and fulfils the design objectives.

1.45 The EMS enables the borough to do all of the following:

- Assess, control and reduce the adverse impacts of our activities that affect the elements of the environment whilst improving the beneficial impact on the environment
- Seek the efficient use of energy in the provision of borough activities, products and services
- Encourage the conservation and sustainable use of non-renewable resources in borough activities

- Reduce the waste created by borough activities and promote reduction, recovery, reuse and appropriate disposal of waste
- Prevent or reduce pollution emanating from borough activities and from other sources by the use of enforcement and advice
- Encourage borough suppliers and Contractor's to improve their environmental performance
- Prevent or limit environmental accidents by the use of procedures, regulations or advice and develop contingency procedures to minimise the effects of environmental incidents
- Foster a sense of responsibility for the environment in borough staff
- Comply with all applicable legal requirements which relate to environmental aspects
- Review and update the EMS to ensure continual improvement

SEA Objectives

1.46 Draft SEA objectives have been identified taking into account the issues mentioned above, previous SEA reports prepared for LIP2, the Harrow Local Plan, other existing borough reports and internal discussions with Council officers. In particular, the SEA objectives all link with the following borough reports:

- Harrow Core Strategy 2012
- Active Harrow - Harrow Physical Activity and Sports Strategy 2016-20
- Harrow Joint Strategic Needs Assessment 2015-20
- Harrow Tree Strategy 2015-18
- Harrow Biodiversity Action Plan 2015 – 2020
- Harrow Council Local Flood Risk Management Strategy 2016
- Harrow Climate Change Strategy 2013 onwards

1.47 The following reports have also had direct influence over the contents of LIP3 and the draft SEA for LIP3:

- The Mayor's Transport Strategy, 2018
- Mayor's Transport Strategy – Local Implementation Plan guidance, 2018
- The London Plan, Spatial Development Strategy for Greater London, 2017 draft
- Vision Zero for London, 2017
- Healthy Streets for London, 2017
- London Environment Strategy, 2018
- Healthy Streets for London, 2017

1.48 The initial objectives were consulted on as part of the SEA Scoping report consultation and have been changed to reflect input from the consultation.

1.49 The revised objectives for the SEA are as follows:

1. Enhance biodiversity, flora and fauna and natural habitats by

a. ensuring the use of sensitive materials appropriate to the aesthetics and environmental nature of locality

b. increasing the opportunities of coming into contact with wildlife and green places and thereby appreciating them more

c. increasing the extent of biodiversity by grass, tree and flower planting where opportunities arise to do so

2. Improve the health and well-being of Harrow residents by:
    a. adopting a vision zero approach towards eliminating all road deaths and serious injuries by 2041

    b. increasing the extent of 20mph roads in the borough and expanding the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school

    c. encouraging walking and cycling as a means of travel as well as for recreational purposes

    d. promoting health walks through Harrow's green spaces

    e. maximising the use of materials that reduce traffic noise and plant trees at appropriate locations to reduce traffic noise where appropriate

    f. promoting travel awareness education campaigns

    g. increasing opportunities to access the greenbelt and open space

3. Reduce crime, fear of crime and anti-social behaviour by
    a. introducing healthy streets and liveable neighbourhoods

    b. designing safer environments for all

    c. improving lighting across the borough by a change to LED lighting so that the levels of lighting are brought up to the necessary standards

    d. regeneration

4. Reduce inequality and social exclusion by
    a. reducing the obstacles to travel for people with mobility difficulties or for those with heavy shopping or with pushchairs

    b. supporting schemes such as Shopmobility to promote independence

5. Reduce air pollution and reduce traffic emissions by:
    a. introducing more neighbourhoods across the borough that support low emission vehicles

    b. increasing electric vehicle charging infrastructure in the borough

    c. preventing /reducing pollution emanating from engineering activities

    d. encouraging contractors to improve their environmental performance

    e. increasing staff awareness of energy efficiency

    f. encouraging modal shift towards more sustainable forms of travel

    g. reducing traffic congestion

    h. reducing the need to travel by supporting development where there is a high level of public transport provision

    i. targeting schools with initiatives to address poor air quality

    j. parking management to encourage less traffic and greener vehicles

6. Mitigate the causes of climate change through:
   a. encouraging the use of greener vehicles
   b. planting trees which provide shade, take up carbon dioxide from the atmosphere and store carbon
   c. reducing the need to travel
7. Promote liveable neighbourhood and regeneration through:
   a. improvements to the public realm
   b. renewing the physical environment
8. Promote recycling by:
   a. maximising the use of recycled construction materials in carriageways and footways
   b. encouraging responsible sourcing of materials as well as BES 6001 accreditation for appropriate suppliers
9. Introduce engineering methods to benefit the environment by:
   a. maximising the use of noise reducing surfacing material where appropriate
   b. encouraging the conservation and sustainable use of non renewable resources
   c. reducing waste creation from engineering activities
   d. maintaining Harrow EMS standard in traffic and engineering services
10. Protect and preserve historic areas and greenery in the borough by:
    a. reducing adverse traffic impacts on the historic environment
    b. maximising opportunities to improve the historic environment through appropriate transport infrastructure and public realm upgrades
    c. promoting appropriate streetscape improvements, including reducing unnecessary street clutter
    d. supporting upgrades to public transport infrastructure which widens access to the historic environment
    e. using materials appropriate to the location
11. Minimise the risk of flooding from rivers and watercourses to people and property by:
    a. construction and maintenance of flood defence structures and flood storage areas in appropriate locations
    b. ensuring that where paving is required for off street parking the surfacing installed to the front of a property (over 5 square metres) for car parking complies with permeability requirements

1.50 The following table shows the relationship between these draft SEA objectives and the SEA topics.

Table 1: Relationship of SEA objectives with SEA environmental topics

SEA objective	SEA Topic

	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape
1. Enhance biodiversity, flora and fauna and natural habitats by a. ensuring the use of sensitive materials appropriate to the aesthetics and environmental nature of locality b. increasing the opportunities of coming into contact with wildlife and green places and thereby appreciating them more c. increasing the extent of biodiversity by grass, tree and flower planting where opportunities arise to do so	✓	✓					✓		✓
2. Improve the health and well-being of Harrow residents by: a. adopting a vision zero approach towards eliminating all road deaths and serious injuries by 2041 b. increasing the extent of 20mph roads in the borough and expanding the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school c. encouraging walking and cycling as a means of travel as well as for recreational purposes d. promoting health walks through Harrow's green spaces e. maximising the use of materials that reduce traffic noise and plant trees at appropriate locations to reduce traffic noise where appropriate f. promoting travel awareness education campaigns g. increasing opportunities to access the greenbelt and open space		✓			✓	✓			
3. Reduce crime, fear of crime and anti-social behaviour by a. introducing healthy streets and liveable neighbourhoods b. designing safer environments for all c. improving lighting across the borough by a change to LED lighting so that the levels of lighting are brought up to the necessary standards d. regeneration		✓					✓	✓	✓

SEA objective	SEA Topic								
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape
4. Reduce inequality and social exclusion by a. reducing the obstacles to travel for people with mobility difficulties or for those with heavy shopping or with pushchairs b. supporting schemes such as Shopmobility to promote independence		✓							
5. Reduce air pollution and reduce traffic emissions by: a. introducing more neighbourhoods across the borough that support low emission vehicles b. increasing electric vehicle charging infrastructure in the borough c. preventing /reducing pollution emanating from engineering activities d. encouraging contractors to improve their environmental performance e. increasing staff awareness of energy efficiency f. encouraging modal shift towards more sustainable forms of travel g. reducing traffic congestion h. reducing the need to travel by supporting development where there is a high level of public transport provision i. targeting schools with initiatives to address poor air quality j. parking management to encourage less traffic and greener vehicles		✓			✓				
6. Mitigate the causes of climate change through: a. encouraging the use of greener vehicles b. planting trees which provide shade, take up carbon dioxide from the atmosphere and store carbon c. reducing the need to travel		✓			✓	✓			

SEA objective	SEA Topic								
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape
7. Promote liveable neighbourhood and regeneration through: a. improvements to the public realm b. renewing the physical environment		✓					✓		
8. Promote recycling by: a. maximising the use of recycled construction materials in carriageways and footways b. encouraging responsible sourcing of materials as well as BES 6001 accreditation for appropriate suppliers						✓	✓	✓	✓
9. Introduce engineering methods to benefit the environment by: a. maximising the use of noise reducing surfacing material where appropriate b. encouraging the conservation and sustainable use of non renewable resources c. reducing waste creation from engineering activities d. maintaining Harrow EMS standard in traffic and engineering services		✓		✓		✓	✓		
10. Protect and preserve historic areas and greenery in the borough by: a. reducing adverse traffic impacts on the historic environment b. maximising opportunities to improve the historic environment through appropriate transport infrastructure and public realm upgrades c. promoting appropriate streetscape improvements, including reducing unnecessary street clutter d. supporting upgrades to public transport infrastructure which widens access to the historic environment e. using materials appropriate to the location	✓	✓	✓			✓	✓	✓	✓

SEA objective	SEA Topic								
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape
11. Minimise the risk of flooding from rivers and watercourses to people and property by: a. construction and maintenance of flood defence structures and flood storage areas in appropriate locations b. ensuring that where paving is required for off street parking the surfacing installed to the front of a property (over 5 square metres) for car parking complies with permeability requirements	✓		✓				✓	✓	✓

Current and Future Baseline

1.51   The SEA Directive requires the Environmental Report to provide information on "relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" and "the environmental characteristics of the areas likely to be significantly affected.

1.52   The baseline information is gathered in order to:

- provide the evidence base against which the potential effects of implementing the plan can be measured and assessed;
- identify the key environmental issues and trends that characterise the area; and
- help identify problems and alternative ways of dealing with them

Future environmental scenario without implementing LIP3

1.53   If the borough did not prepare and implement LIP3, it would still have a statutory duty to do the following:

Table 2: Measures needed without LIP3

Measure	Legislation
Reduce congestion	Traffic Management Act
Monitor and review accident locations	Road Traffic Act 1984
Promote sustainable travel to school	Educations and Inspections Act 2006

Measure	Legislation
Disability Discrimination Act measures	Disability Discrimination Act
Highway maintenance duties	Highways Act 1980

1.54 Following publication of the MTS, the borough would still be required to introduce measures to support the MTS such as increasing sustainable transport, lowering traffic speeds, providing electric car clubs and reducing emissions.

1.55 Most of the activities outlined in LIP3 need to be implemented in order to achieve the measures shown in **Table 2**. Therefore the scenario considered here is that the borough doesn't receive the annual funding awarded as part of the LIP3 process. It is possible that if this was the case, the schemes will still be implemented at some time in the future but not in the timescale outlined in the plan.

1.56 The environmental impact of a future without the funding from LIP3 is shown in **Table 3**.

Table 3: Impact of not implementing LIP3

Topic	Possible future without LIP3 funding
Biodiversity, Fauna and Flora	Any increase in traffic will have a detrimental impact on the local flora and fauna. Improvements being made as a result of LIP3 such as using materials sensitive to the locations could not proceed as they would be too costly for the borough. If fewer schemes are introduced, it is likely that fewer trees will be planted which would help biodiversity.
Population and Human Health	There would be less healthy streets and accidents could potentially increase. This would be because of the inability to introduce healthy street audits and the reduced work in extending 20mph zones and also not implementing traffic management solutions when accidents relating to speed occur. This would all have a detrimental impact on walking and cycling numbers which would then impact human health through less exercise, poorer air quality and more casualties. The air quality impact on health as a result of the reduced impact of LIP3 would also be considerable. Air quality would deteriorate if there were insufficient funds to address congestion issues and encourage walking and cycling. It would be far harder to introduce more electric charging infrastructure. It would be harder to reduce the numbers of children travelling to school by car. Locations where bicycle and motorcycle accidents occur would not necessarily all be addressed. There would be less road safety training for cyclists and motorcyclists. Access to the outdoors is of particular importance to mental health. Low levels of exercise in the borough will have a detrimental impact on diabetes and obesity levels borough wide.
Soil	The impact would be neutral though increases in traffic would increase pollution of soil quality.
Water	If fewer schemes were introduced as a result of not implementing LIP3, fewer new gullies would be installed. This would have a negative though minor impact on water quality across the borough.
Air Quality	The impact will be negative as congestion increases and there would also be less installation of new charging points. The school run will result in increased car traffic thereby also having a negative effect on air quality. Although the

Topic	Possible future without LIP3 funding
	borough will need to address congestion under the Traffic Management Act, many of the road traffic management changes will not be able to take place as a result of a lack of funding. Promotions of walking, cycling and sustainable travel would be reduced as a lack of resources. Less adult cycle training would be offered.
Climatic Factors	Greenhouse gas emissions will continue to increase. Lack of funding will limit what the borough could do to encourage behaviour change. The lack of funding would result in less tree planting and fewer incentives to change vehicle types used.
Material assets	The condition of roads and associated footways would decline. Less new schemes will result in deterioration of assets.
Cultural heritage	Rising traffic levels would impact the public's enjoyment of lots of sites as the traffic noise impacts on visitors.
Landscape	A reduced access to nature will result from fewer promotion of walking and cycling and sustainable transport. This reduced access could result in less awareness of the importance of the wider landscape and thereby a reduction in its perceived importance.

Baseline Information

1.57　**Table 4** was provided in the scoping report and shows the baseline information that was to be considered in order to show the environmental impact of implementing LIP3 and also shows where there are existing gaps in data. The table has been slightly revised since the scoping report to better reflect existing available data.

Table 4: Baseline data and source and data gaps

SEA objective	Baseline data source	Source	Data availability
1. Enhance biodiversity, flora and fauna and natural habitats by a. ensuring the use of sensitive materials appropriate to the aesthetics and environmental nature of locality b. increasing the opportunities of coming into contact with wildlife and green places and thereby appreciating them more c. increasing the extent of biodiversity by grass, tree and flower planting where opportunities arise to do so	a. Square meterage of recyclable material used b. Walking for Health database c. Square meterage of removed hard paving to introduce soft landscaping such as grass verges	a. Traffic, Harrow b. Public health, Harrow c. Traffic, Harrow	a. On request b. Annual c. On request
2. Improve the health and well-being of Harrow residents by: a. adopting a vision zero approach towards eliminating all road deaths and serious injuries by 2041 b. increasing the extent of 20mph roads in the borough and expanding the existing 20mph zones to cover more areas where people live, work and shop and where children travel to school c. encouraging walking and cycling as a means of travel as well as for recreational purposes d. promoting health walks through Harrow's green spaces	a. STATS19 Road Accident data b. Number of 20mph zones extended or added c. Children learning to ride a bike c. Adults learning to ride a bike c. New cycle parking facilities c. School cycle training participants c. Schools participating practical pedestrian training d. Number participating in organised walks - Walking for Health database e. Number of new trees planted in transport schemes f. Number of travel awareness campaigns	a. MPS and TfL b. Traffic, Harrow c. Community Engagement, Harrow c. Traffic, Harrow d. Public health, Harrow e. Traffic, Harrow f. Traffic, Harrow g. Public health, Harrow	a. Data lag but otherwise quarterly b. Annual c. Annual d. Annual e. On request f. Annual g. Annual

SEA objective	Baseline data source	Source	Data availability
e. maximising the use of materials that reduce traffic noise and plant trees at appropriate locations to reduce traffic noise where appropriate f. promoting travel awareness education campaigns g. increasing opportunities to access the greenbelt and open space	g. Number of organised walks in greenbelt and open spaces - Walking for Health database		
3. Reduce crime, fear of crime and anti-social behaviour by a. introducing healthy streets and liveable neighbourhoods b. designing safer environments for all c. improving lighting across the borough by a change to LED lighting so that the levels of lighting are brought up to the necessary standards d. regeneration	a. Number of healthy streets and liveable neighbourhood initiatives b. Schools participating practical pedestrian training b. Number of older user workshops delivered b. Number of major projects and regeneration projects introduced c. Number of upgraded LED lighting columns d. Number of major projects and regeneration projects introduced	a. Traffic, Harrow b. Traffic Harrow b. Community Engagement, Harrow b. Regeneration and Economic Development, Harrow c. Traffic, Harrow d. Regeneration and Economic Development, Harrow	a. Annual b. Annual c. Annual d. Annual
4. Reduce inequality and social exclusion by a. reducing the obstacles to travel for people with mobility difficulties or for those with heavy shopping or with pushchairs b. supporting schemes such as Shopmobility to promote independence	a. Number of bus stops suitable for low floor buses which meet DDA requirements a. Number of designated disabled parking bays b. Use of Shopmobility	a. Traffic, Harrow b. Traffic, Harrow b. Shopmobility	a. Annual b. Annual c. Annual

SEA objective	Baseline data source	Source	Data availability
5. Reduce air pollution and reduce traffic emissions by: a. introducing more neighbourhoods across the borough that support low emission vehicles b. increasing electric vehicle charging infrastructure in the borough c. preventing /reducing pollution emanating from engineering activities d. encouraging contractors to improve their environmental performance e. increasing staff awareness of energy efficiency f. encouraging modal shift towards more sustainable forms of travel g. reducing traffic congestion h. reducing the need to travel by supporting development where there is a high level of public transport provision i. targeting schools with initiatives to address poor air quality j. parking management to encourage less traffic and greener vehicles	a. Number of NOFS in borough b. Number of electric vehicle charging infrastructure c. Harrow internal EMS (Environmental Management System) d. Harrow EMS e. Harrow EMS f. Number of off-road cycle facilities introduced f. Number of cycle parking facilities f. Number of dockless cycle parking facilities f. Number of children learning to ride a bike f. Number of adults learning to ride a bike f. Number of schools participating in cycle training g. Number of congestion reduction schemes introduced h. Number of planning applications with cycle parking and travel plans i. Number of schools with initiatives to address poor air quality j. Number of new or extended CPZs introduced	a. Traffic, Harrow b. Traffic, Harrow c. Traffic, Harrow d. Traffic, Harrow e. Traffic, Harrow f. Traffic, Harrow f. Community Engagement, Harrow g. Traffic, Harrow h. Traffic, Harrow i. Traffic, Harrow j. Traffic, Harrow	a. Annual b. Annual c. On request d. Annual e. Annual f. Annual g. Annual h. Annual i. Annual j. Annual
6. Mitigate the causes of climate change	a. Number of greener vehicle parking permits purchased	a. Traffic, Harrow b. Traffic, Harrow	a. Annual b. Annual

SEA objective	Baseline data source	Source	Data availability
through: a. encouraging the use of greener vehicles b. planting trees which provide shade, take up carbon dioxide from the atmosphere and store carbon c. reducing the need to travel	b. Number of trees planted c. Number of transport assessment / statements developed for planning applications	c. Traffic, Harrow	c. Annual
7. Promote liveable neighbourhood and regeneration through: a. improvements to the public realm b. renewing the physical environment	a. Number of major projects introduced b. Number of regeneration projects introduced	a. Economic Development, Harrow b. Regeneration, Harrow	a. Annual b. Annual
8. Promote recycling by: a. maximising the use of recycled construction materials in carriageways and footways b. encouraging responsible sourcing of materials as well as BES 6001 accreditation for appropriate suppliers	a. Harrow EMS checklist b. Harrow EMS checklist	a. Traffic, Harrow b. Traffic, Harrow	a. Annual b. Annual
9. Introduce engineering methods to benefit the environment by: a. maximising the use of noise reducing surfacing material where appropriate b. encouraging the conservation and sustainable use of non renewable resources c. reducing waste creation from engineering activities d. maintaining Harrow EMS standard in traffic	a. Harrow EMS a. Square meterage of polymer modified materials laid b. Number of locations with oil based materials removed c. Harrow EMS d. Harrow EMS	a. Traffic, Harrow b. Traffic, Harrow b. Traffic, Harrow c. Traffic, Harrow d. Traffic, Harrow	a. On request b. On request c. On request d. On request

SEA objective	Baseline data source	Source	Data availability
and engineering services			
10. Protect and preserve historic areas and greenery in the borough by: a. reducing adverse traffic impacts on the historic environment b. maximising opportunities to improve the historic environment through appropriate transport infrastructure and public realm upgrades c. promoting appropriate streetscape improvements, including reducing unnecessary street clutter d. supporting upgrades to public transport infrastructure which widens access to the historic environment e. using materials appropriate to the location	a. Square meterage of polymer modified materials laid in historic locations b. Amount of bespoke street furniture used in historic areas in the borough c. Guardrails and signs removed in historic areas d. Number of measures to improve bus performance in historic areas e. Square meterage of polymer modified materials laid	a. Traffic, Harrow b. Traffic, Harrow c. Traffic, Harrow d. Traffic, Harrow e. Traffic, Harrow	a. On request b. Annual c. Annual d. Annual e. On request but no real need to measure as this is guidance
11. Minimise the risk of flooding from rivers and watercourses to people and property by: a. construction and maintenance of flood defence structures and flood storage areas in appropriate locations b. ensuring that where paving is required for off street parking the surfacing installed to the front of a property (over 5 square metres) for car parking complies with permeability requirements	a. Number of properties taken out of flooding risk b. Harrow EMS b. Number of applications for paving / resurfacing front of house spaces	a. Traffic, Harrow b. Traffic, Harrow b. Traffic, Harrow	a. Only very large schemes can be measured so not appropriate b. Annual b. data only available when dropped kerb is requested and planning permission is sought. If no dropped kerb requested then Council not informed so no baseline data available

1.58 **Table 5** has been produced to summarise the proposed baseline data with the SEA topics.

Table 5: Link between baseline monitoring and SEA topics

Baseline monitoring from scoping report	SEA Topic									
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape	Comment
Adults learning to ride a bike		✓			✓	✓				
New cycle parking facilities		✓					✓		✓	
Number of off-road cycle facilities introduced		✓			✓	✓	✓		✓	
Number of dockless cycle parking facilities		✓			✓	✓	✓		✓	
School cycle training participants		✓			✓	✓				
Number of schools participating in cycle training		✓			✓	✓				
Number of children learning to ride a bike		✓			✓	✓				
Number of adults learning to ride a bike		✓			✓	✓				
Schools participating practical pedestrian training		✓			✓	✓				
Number of organised walks in greenbelt and open spaces - Walking for Health database		✓			✓	✓				Will not be significantly influenced by LIP3
Number participating in organised walks - Walking for Health database		✓			✓	✓				Will not be significantly influenced by LIP3
Number of designated disabled parking bays		✓					✓	✓	✓	More influenced by other issues
Use of Shopmobility		✓								
Number of older user road safety workshops delivered		✓								
Number of bus stops suitable for low floor buses which meet DDA requirements		✓					✓	✓	✓	
STATS19 Road Accident data		✓								

Baseline monitoring from scoping report	SEA Topic									
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape	Comment
Number of 20mph zones extended or added		✓			✓		✓			
Number of new trees planted in transport schemes	✓	✓			✓	✓	✓		✓	
Number of trees planted	✓	✓			✓	✓	✓		✓	
Number of travel awareness campaigns		✓			✓	✓				
Number of healthy streets and liveable neighbourhood initiatives	✓	✓			✓		✓	✓	✓	
Number of major projects and regeneration projects introduced		✓	✓		✓	✓	✓			Will not be significantly influenced by LIP3
Number of upgraded LED lighting columns		✓				✓	✓			Will not be significantly influenced by LIP3
Number of NOFS in borough		✓			✓	✓			✓	
Number of electric vehicle charging infrastructure		✓			✓	✓	✓		✓	
Number of greener vehicle parking permits purchased		✓			✓	✓				
Number of planning applications with cycle parking and travel plans		✓			✓	✓	✓			Will not be significantly influenced by LIP3
Number of congestion reduction schemes introduced		✓			✓	✓	✓			
Number of schools with initiatives to address poor air quality		✓			✓	✓				
Number of new or extended CPZs introduced		✓			✓		✓			
Number of transport assessment / statements developed for planning applications		✓				✓	✓			Will not be significantly influenced by LIP3

Baseline monitoring from scoping report	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape	Comment
Number of major projects introduced		✓			✓		✓			Will not be significantly influenced by LIP3
Number of regeneration projects introduced		✓	✓			✓	✓			Will not be significantly influenced by LIP3
Amount of bespoke street furniture used in historic areas in the borough		✓					✓	✓	✓	
Guardrails and signs removed in historic areas							✓	✓	✓	
Number of measures to improve bus performance in historic areas		✓			✓		✓			
Number of properties taken out of flooding risk		✓	✓			✓	✓		✓	Will not be significantly influenced by LIP3
Number of applications for paving / resurfacing front of house spaces			✓			✓				Will not be significantly influenced by LIP3
Number of locations with oil based materials removed						✓	✓			Will not be significantly influenced by LIP3
Square meterage of removed hard paving to introduce soft landscaping such as grass verges	✓			✓		✓	✓		✓	Will not be significantly influenced by LIP3
Square meterage of recyclable material used	✓					✓	✓	✓	✓	Will not be significantly influenced by LIP3
Square meterage of polymer modified materials laid						✓	✓			Will not be significantly influenced by LIP3
Square meterage of polymer modified materials laid in historic locations						✓	✓			Will not be significantly influenced by LIP3

Baseline monitoring from scoping report	SEA Topic									
	Biodiversity, flora and fauna	Population and Human Health	Water	Soil	Air	Climate factors	Material Assets	Cultural heritage	Landscape	Comment
Harrow EMS checklist (Environmental Management System)	✓	✓	✓	✓	✓	✓	✓	✓	✓	The borough EMS influences all topics

1.59 In order to better link the baseline data to the environmental topics, the next section considers each topic separately and identifies the key measures that will be used to monitor progress. Some measures will not be used as they are not providing sufficient additional information to measure the SEA topic.

Biodiversity, Fauna and Flora

1.60 Progress will be measured by:

Number of trees planted in transport schemes

In 2017/18 there were 77 new street trees planted in the borough.

Removal of hard paving to introduce soft landscaping such a grass verges

Year	m^2
2017/18	300
2018/19 (April to end July only)	1063.97

Population and Human Health

Road accident casualties

1.61 Reducing road accident casualties will improve the health and well-being of Harrow residents Harrow Council has an excellent road safety record and for many years has achieved lower accidents than nearly all other London Boroughs. For this reason, achieving even further reductions is considerably more challenging.

Year	KSIs
2016	44
2015	46
2014	51

2013	38

Adults receiving cycle training

Year	Number of adults
2017/18	325
2016/17	1044
2015/16	332

Children receiving cycle training

Year	Number of children
2017/18	1191
2016/17	1016
2015/16	1588

Number participating in Health Walks

1.62   Harrow currently runs 20 regular health walks in the borough. Between 1/4/17 and 31/3/18 the walk registers reported 13,224 walks took place by walkers in the borough. 712 walkers took part in at least 1 walk during the year and 580 walkers took part in at least 2 walks during the year. In 2017/18, 352 new walkers joined in with the Health Walks programme.

Uptake in shopmobility

1.63   Over 4,000 people are registered to use the Shopmobility service. Over 70 users have long term loans of wheelchairs.

Water

1.64   Impact likely to be negligible

Soil

1.65   Impact likely to be negligible

Air quality

1.66   Previously there were two air quality monitoring sites in the borough. Both of these sites are now closed.

Schools addressing poor air quality

1.67   40 schools in the borough are now monitoring the level of air pollution in their localities. This is done through the use of diffusion tubes at schools with a main road within a 5

minute walk of the school. The diffusion tubes will measure nitrogen oxide emissions at each location. There is currently no baseline data to use for this monitoring.

Electric vehicles

1.68   There are currently 19 electric car charging points within the Borough of Harrow that can be used by the public.

Mode share

1.69   Reducing the modal share of motorised trips is important. Trips originating in Harrow by main mode, average day (7-day week) 2014/15 to 2016/17 are shown in **Error! Reference source not found.**. This is the latest data currently available. If in the future more data becomes available this will be used to consider changes in mode share.

Figure 4: Harrow modal split 2014/15 to 2016/17
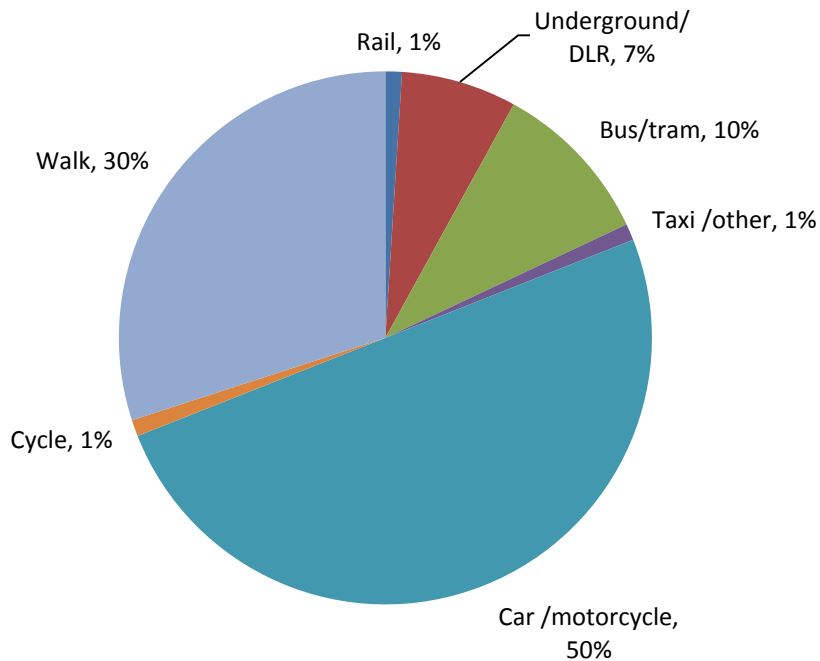
Source: Travel in London 10 supplementary information
Total trips per day 460,000

1.70   School mode share is measured in most schools in Harrow for children aged 4-16. These surveys are carried out annually so it is a good way of measuring changing impact of measures to encourage sustainable transport. The survey is taken by a class room hands up survey of children present. **Figure 5** and **Figure 6** show the results of the mode share surveys for 2015/16 and 2017/18 and show the increases in those walking to school from 39% to 47% between these years.

Figure 5: Journey to school mode share 2015/16

Park and Stride
7%

Car share
3%

Car/Motorbike
25%

School Bus/
Taxi
2%

Public Bus
14%

Tube
2%

Rail/Overgroun
d
1%

Cycling
3%

Scooting
4%

Walking
(actual)
39%
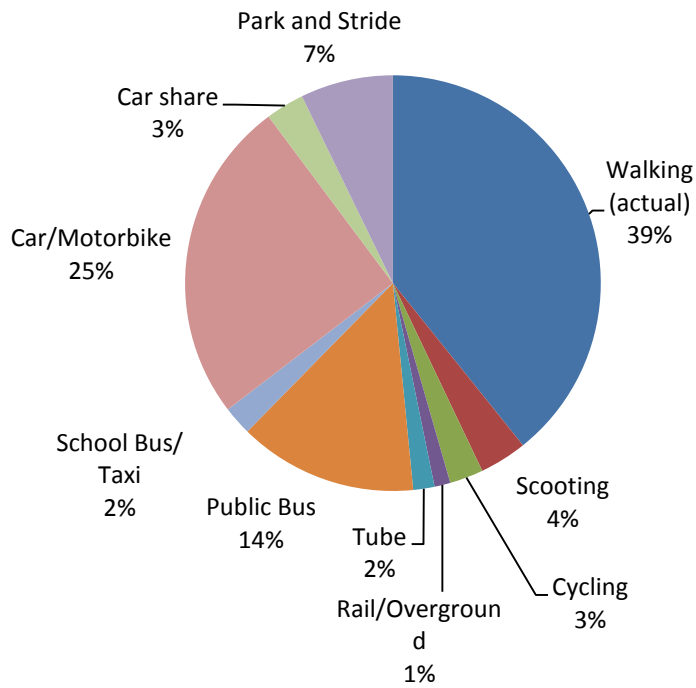
Figure 6: Journey to school mode share 2017/18

Park and Stride,
7%

Car share, 3%

Car/Motorbike,
23%

School Bus/
Taxi, 2%

Public Bus, 9%

Tube, 1%

Rail/Overgroun
d , 0%

Cycling, 3%

Scooting, 5%

Walking
(actual), 47%
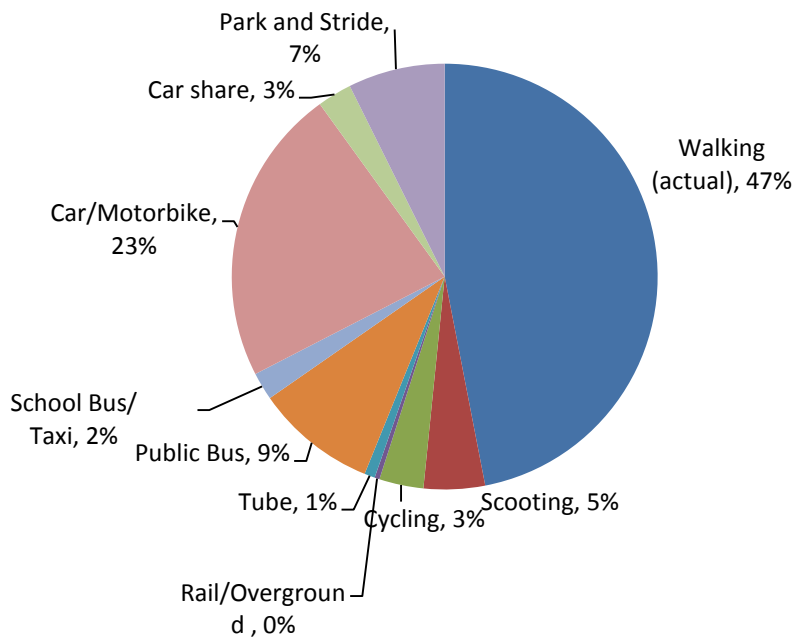
Traffic volume

9.20 Traffic volumes in the borough have the most significant impact on air quality. 0.35 billion vehicle miles were travelled on roads in Harrow in 2017. This is routinely measured by the Department for Transport and the volume of traffic per annum is shown in **Figure 7**. This data will continue to be used to monitor traffic volumes in the borough.

Figure 7: Traffic volume per vehicle type

Annual traffic by vehicle type in Harrow

Traffic in Great Britain from 1993 to 2017 by vehicle type in vehicle miles (millions)
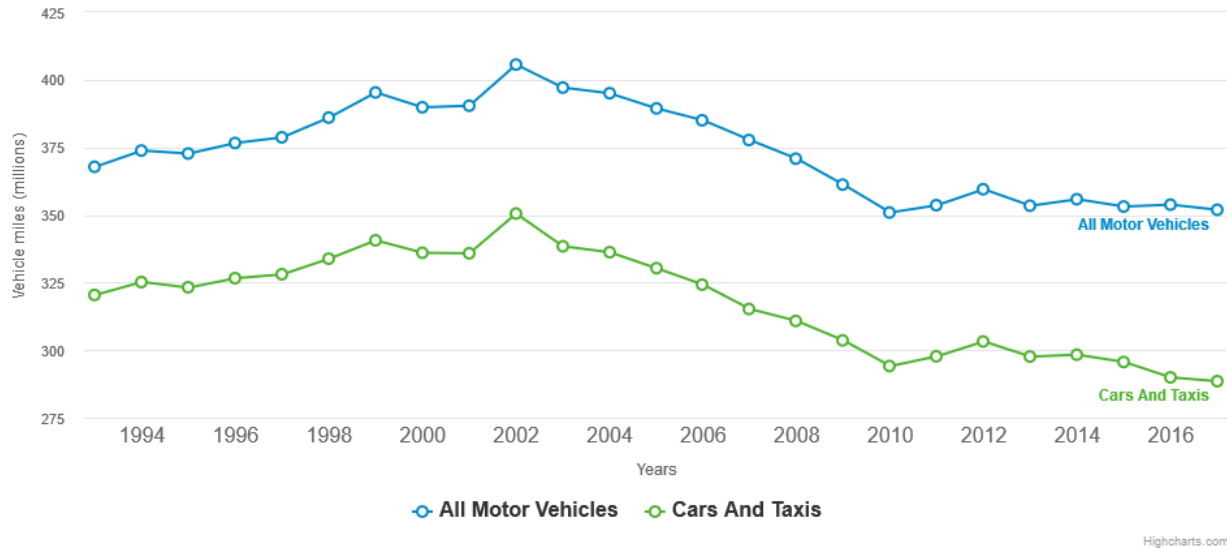
Travel awareness

1.21 There were 62 events promoting smarter travel in 17/18.

Works completed

1.22 Most works completed in the borough will impact on modal share. Some baseline information on works completed in 2016/17 is as follows:

Works	2016/17	2017/18
Total number of CPZs in the borough	7	6
Number of 20mph zones in borough	4	3
Number of congestion relief schemes implemented	3	4
Number of bus priority schemes implemented	3	2
Number of walking schemes implemented	2	3
Number of cycling schemes implemented	2	2

Climatic Factors

1.23 The key factors that will impact on climate change as a result of LIP3 are uptake of electric vehicles, electric vehicle charging points, planting of trees and modal shift. Because climate change is a long term issue, the impacts of the programmes in LIP3 will be minimal over the timeframe of LIP3.

Electric charging points

1.24 There are currently 16 electric car charging points within the Borough of Harrow that can be used by the public.

Permit restricted properties

1.25 The number of additional permit restricted properties in the borough by year is as follows:

Year	Number of additional permit restricted properties
2015	2
2016	7
2017	6

Car free development

1.26 Car free development is a key climatic issue, but it is unlikely that LIP3 will greatly influence this. The number of car free major developments (i.e. 10+ flats) approved from 1 April 2016 to 31 March 2018 was as follows:

> 4 entirely car free
>
> 9 partially car free (ie no car parking apart from Blue Badge spaces)

Four of these developments are completed and three are under construction as on July 2018.

Material assets

1.27 Changes in the material assets will be a result of all built schemes implemented in LIP3.

Cultural heritage

1.28 Improved access to historic areas will improve the value given to these areas. Reduced speeds in these areas will also be of benefit.

1.29 Transport and traffic issues are not a factor in any of the buildings identified by Historic England to be at risk within the borough.

Landscape

1.30 All area based schemes will offer enhancements to the landscape. Therefore this can be measured through implementation of any of the major schemes identified in LIP3.

Environmental problems and opportunities

1.31 The review of other plans and programmes and the collation of the environmental baseline data have all been used as a way of identifying environmental issues that can be addressed by strategies and measures included in LIP3. These have been considered following discussions with Council officers, reviewing other Environmental reports of similar documents and through responses to the scoping consultation. These problems are shown in **Table 6.**

Table 6: Possible issues and solutions

Topic	Possible issue	Possible solution
Biodiversity, flora and fauna	Pollution resulting from increased traffic Disturbance from noise Grass verges disruption from traffic and from building works	Alternative habitat creation Using appropriate materials to protect ecosystems and small mammals
Population and Human Health	Transport system insufficient to address population growth Those with obesity and diabetes don't engage with activities Increase in motorcycle and cycle casualties	Liaise with TfL and other operators Consider reprofiling schemes to support change regarding service provision Increase provision and promotion of Healthy Walks Increase cycle training Increase motorcycle safety training Increase emphasis on targeting those at risk with active travel initiatives Refocus schemes to address accidents above all else
Soil	Extremely unlikely that there will be any issues	
Water	Increased surface run-off and increased flooding - very unlikely to be as a result of LIP3	Increased enforcement of planning policy regarding surface run-off Create additional surface water storage areas and implement flood alleviation schemes if necessary
Air Quality	Congestion from increasing traffic volumes	Increased reprioritisation of schemes to address congestion hotspots Increased publicity about the problem Promote information about the impact of cars and the benefits of cycling and walking Provide education to drivers about fuel efficient driving

Topic	Possible issue	Possible solution
Climate factors	Worse air quality as a result of increased traffic volumes	Increase electric vehicle charging points across the borough Increase tree planting Increase the number of additional parking spaces for electric vehicles only Increase parking permit costs for "non-green" vehicles
Material assets	Extensive road damage	Targetted approach to maintenance and prioritising safety above all else.
Cultural heritage	Loss of tranquillity Loss of visitors from speeding traffic reducing the enjoyment of the area	Possible road width restrictions and diversions Increased traffic management Improved speed enforcement
Landscape	Loss of tranquillity Downturn in vitality of town centres	Roll out of healthy streets Increase tree planting Improve speed enforcement Increased traffic management Faster roll out of 20mph zones and extensions Improve general access to the town centre

Testing the compatibility of draft LIP3 Objectives against SEA objectives

1.32 Table 7 shows the link between the LIP3 objectives and the SEA objectives. Clearly there is a compounded impact on many of the SEA objectives.

Table 7: **Link between the LIP3 objectives and the SEA objectives.**

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property
LIP3 objective											
1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage 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	✓	✓			✓	✓					✓

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property
4. Improve freight servicing and delivery arrangements to reduce congestion and delays on the network		✓			✓	✓					
5. Encourage the uptake of more sustainable modes of travel 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		✓		✓	✓	✓	✓			✓	

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property
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				✓	✓						

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property
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 the London Plan and local development framework		✓	✓		✓	✓	✓			✓	

SEA objective	Enhance biodiversity, flora and fauna and natural habitats	Improve the health and well-being of Harrow residents	Reduce crime, fear of crime and anti social behaviour	Reduce inequality and social exclusion	Reduce air pollution and traffic emissions	Mitigate the causes of climate change	Promote neighbourhood and town centre renewal	Promote recycling	Introduce engineering methods to benefit the environment	Protect and preserve historic areas and greenery in the borough	Minimise risk of flooding from rivers and watercourses to people and property
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			✓		✓		✓				✓
14. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage active and safer travel particularly for pedestrians and cyclists thereby reducing congestion and improving public health and local air quality	✓	✓	✓	✓	✓	✓	✓			✓	

Alternatives

1.33 The draft LIP3 objectives were identified as the best way for Harrow to do the following:

- Assist in delivering the borough corporate priorities
- Address Harrow's key transport concerns
- Assist in delivering the Mayor of London's nine outcomes identified in the MTS
- Assist in delivering the Mayoral aim for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041

1.34 Harrow's corporate priorities are:

- Build a Better Harrow
- Be more business-like and business friendly
- Protect the most vulnerable and support families

1.35 Harrow's key transport concerns are:

- Reduce motorcycle casualties across the borough
- Increase cycling
- prioritise the transport needs of the Harrow and Wealdstone Opportunity Area
- The condition of the principal road network which continues to be a very high issue for Harrow residents

1.36 Identifying appropriate strategic alternatives and reviewing these against the draft SEA objectives will help to ensure that the plan's environmental impacts are taken into account during its preparation. Environmental considerations will then inform the chosen option and become fully integrated into the final plan.

1.37 To help further consider the variety of alternative ways to achieve the LIP3 objectives, Table 8 has grouped the different ways to achieve the draft objectives into three different groupings.

Table 8: Draft LIP3 objectives grouping

LIP3 draft objective	Ways to achieve objective	Grouping
1. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage active and safer travel particularly for pedestrians and cyclists thereby reducing congestion and improving public health and local air quality	More neighbourhoods of the future More liveable neighbourhoods Increased cycle routes and cycle parking	Only increase capacity for sustainable forms of transport Only deliver infrastructure management
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	Extend and increase 20mph zones around schools Increased motorcycle safety training Increased school road safety training	Only deliver infrastructure management Only promote sustainable forms of transport
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	Increase cycle training Increase cycle parking facilities Extend borough cycle routes Provide dockless cycle hire facilities Increase provision of electric vehicle charging points	Only increase capacity for sustainable forms of transport Only deliver infrastructure management Only promote sustainable forms of transport
4. Improve freight servicing and delivery arrangements to reduce congestion and delays on the network	Provide additional freight loading facilities Increase hours for freight loading	Only deliver infrastructure management

LIP3 draft objective	Ways to achieve objective	Grouping
5. Encourage the uptake of more sustainable modes of travel 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.	Increase cycle training Increase school travel awareness training Provide dockless cycle hire facilities More neighbourhoods of the future More liveable neighbourhoods More 20mph zones	Only increase capacity for sustainable forms of transport Only deliver infrastructure management Only promote sustainable forms of transport
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	Increased electric charging facilities Increased neighbourhoods of the future Increase school travel awareness training	Only deliver infrastructure management Only promote sustainable forms of transport
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	Bus priority measures Bus stop accessibility improvements	Only deliver infrastructure management

LIP3 draft objective	Ways to achieve objective	Grouping
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	Legible London Increase cycle parking facilities Extend borough cycle routes Controlled parking zones Bus priority Improved lighting Increased healthy streets	Only deliver infrastructure management Only promote sustainable forms of transport
9. Ensure that the vitality of all town centres are supported through good transport links prioritising sustainable modes of transport	Bus priority Increase cycle parking facilities Increased healthy streets Extend Shopmobility facilities	Only deliver infrastructure management Only promote sustainable forms 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	Increased bus stop accessibility Increased blue badge parking Increased bus priority More dropped kerbs	Only deliver infrastructure management Only promote sustainable forms of transport
11. Prioritise sustainable travel improvements for all new developments to support the London Plan and local development framework	Shared vehicle charging for developments Increased cycle facilities in developments Electric vehicle charging in developments	Only deliver infrastructure management Only promote sustainable forms of transport Only increase capacity for sustainable forms of transport

LIP3 draft objective	Ways to achieve objective	Grouping
12. Prioritise the transport needs of the Harrow and Wealdstone Opportunity Area	Increase bus priority, bus stop accessibility, cycle route and cycle parking in opportunity area	Only deliver infrastructure management Only promote sustainable forms of transport Only increase capacity for sustainable forms of transport
13. Keep the transport network in good condition and serviceable to encourage the use of sustainable transport modes	Introduce more liveable neighbourhoods and healthy streets, bus priority, walking and cycling schemes	Only deliver infrastructure management Only promote sustainable forms of transport
14. Improve the public realm through the introduction of healthy streets and liveable neighbourhoods to encourage active and safer travel particularly for pedestrians and cyclists thereby reducing congestion and improving public health and local air quality	Introduce more NOFs, liveable neighbourhoods, healthy streets, bus priority, walking and cycling schemes	Only deliver infrastructure management Only promote sustainable forms of transport

1.38 Based on this information, the alternatives that Harrow will consider further will be as follows:

1. Continue with the current approach and continue to deliver the current policy outlined in LIP2
2. Only promote sustainable forms of transport
3. Only deliver infrastructure management
4. Only increase capacity for sustainable forms of transport

1.39 Only promoting sustainable forms of transport includes:

- Increase cycle training
- Increase school road safety training
- Increased motorcycle safety training
- Increase school travel awareness training
- Provide dockless cycle hire facilities

1.40 Only delivering infrastructure management includes:

- Extend and increase 20mph zones around schools
- More neighbourhoods of the future
- More liveable neighbourhoods
- Increased healthy streets
- Provide additional freight loading facilities
- Increase hours for freight loading
- Bus stop accessibility improvements
- Bus priority measures
- Extend borough cycle routes
- Increase cycle parking facilities
- Controlled parking zones
- Improved lighting
- Extend Shopmobility facilities
- Increased blue badge parking
- More dropped kerbs
- Legible London

1.41 Only increasing capacity for sustainable forms of transport includes:

- Extend borough cycle routes
- Increase cycle parking facilities
- Increase bus priority measures
- Increase provision of electric vehicle charging points

- Increased cycle facilities in developments
- Electric vehicle charging in developments
- Shared vehicle charging for developments

Assessment of Alternative Options

1.42 Table 9 shows the likely impact of LIP3 on each of the SEA topics.

Table 9: LIP3 likely impacts on SEA topics

SEA topic	LIP3 Impact
Biodiversity, Fauna and Flora	Likely not to be significant. However, impacts will be from: • Increased trees planted as part of various schemes • Less car pollution as cars get cleaner as a result of technology and various incentives
Population and Human Health	Likely to be significant. Main impacts will be: • Reduced road casualties • Better life expectancy as a result of less air pollution and more active travel • Healthier lifestyles from increased walking and cycling
Soil	Minimal impact
Water	Minimal impact
Air	Main impacts will be less pollution from: • Reduced congestion at specific locations • Modal shift away from motorised vehicles towards walking and cycling • Increased use of greener vehicles • Lower rate of increase in traffic volumes
Climatic Factors	Main impacts will be : • Increased tree planting • Reduced CO_2 emissions from modal shift
Material assets	• Improved condition of material assets where schemes take place • Some areas regenerated

Cultural heritage	Likely not to be significant. However impacts will be from: • In some areas reduced pollution will cause less damage to heritage buildings
Landscape	Main impact will be : • Benefits will be from regeneration projects and public realm improvements

1.43 Table 10 shows an initial assessment of alternative options on SEA topic areas

Table 10: Assessment of alternative options on SEA topics

SEA topic area Alternatives	Biodiversity , flora and fauna	Population and Human Health	Water	Soil	Air quality	Climate factors	Material Assets	Cultural heritage	Landscape
Continue with current approach without implementing LIP2	-	+	0	0	-	-	-	-	-
Only promote alternative sustainable forms of transport	+	++	0	0	++	+	0	0	0
Only deliver infrastructure management	+	+	0	0	+	0	+	+	+
Only increase capacity for sustainable forms of transport	+	++	0	0	++	+	+	+	+

0   no significant effect
+   overall effect likely to be positive
-        overall effect likely to be negative
++   overall effect could be significant and positive

1.44 Because the impact of alternative options is considered not to be significant for Biodiversity, flora and fauna, Water, Soil, Climate factors, Material assets, Cultural heritage and Landscape, only Population and Human Health and Air Quality have been assessed further regarding their significance.

Table 11: Significance of alternatives on population and human health

		Population and human health		
		Only promote sustainable forms of transport	**Only deliver infrastructure management**	**Only increase capacity of sustainable forms of transport**
Magnitude	Probability of effect happening	Increase in walking and cycling are both likely but this would be associated with an increase in cycle casualties. There would be a small improvement in general health associated with the increases in walking and cycling and a decrease in associated traffic fumes. There could be an increase in use of electric vehicles. The decrease in traffic might also be helped by the increase in bus use but this would be fairly small. Improvements in air quality would be small.	It is likely that increased CPZs, extending 20mph zones, increasing dropped kerbs, more accident reduction schemes, increased healthy streets, more cycling infrastructure and would have a positive impact on health. There would be a positive impact for disabled people regarding their parking and also increased use of electric vehicles in CPZs. More bus lanes would also result in a likely improvement to human health	Increasing cycle lanes and cycling infrastructure would all be positive for both cycling and walking. An increase in cycle accidents may occur as a result in the increase in cycling. Bus frequency may improve slightly as more bus lanes introduced. Bus lane and cycle lane increases would be limited by the capacity of the road network. More electric vehicle charging infrastructure would have a very minor impact on human health mainly in terms of improved air quality.
	Duration, frequency and reversibility of effect	Traffic levels are more affected by national issues such as the cost of petrol, the overall economy, and taxation. The availability of parking spaces is also a key issue. Therefore only promoting sustainable transport is unlikely to have a significant impact on traffic levels. The increase in cycling and walking could be maintained over time but	The additional parking spaces available for electric vehicles and for disabled people as a result of more CPZs would have a long term impact but very small as this won't impact on many residents in the borough. More 20mph zones and accident reduction schemes would have an impact on human health and would be sustainable over time.	Increased cycle lanes and bus lanes would have a positive impact on human health. Once people see how fast cycling and good bus lanes can be they do generally stick at them. However the increase is likely to be small as it is so hard to change people's behaviour. Increases in bus use will be limited by potential overcrowding of

		Only promote sustainable forms of transport	Only deliver infrastructure management	Only increase capacity of sustainable forms of transport
	Population and human health			
		attracting new cyclists and walkers would be limited and would not have a significant impact on the overall health of borough residents. All soft measures incentives are easily reversible.		buses.
	Cumulative nature	As Harrow has such a low accident record, many other issues have a greater impact on health. However the long term impact on obesity and diabetes could be considerable only for those participating. The increase in those cycling and walking is very beneficial to those involved but probably miniscule across the whole borough.	As Harrow has such a low accident record, other issues have a greater impact on health. There could be a cumulative impact of increased cycling and fewer accidents. Wellbeing of those with disabled parking needs would be improved.	The increase in cycling might be counteracted by the increase in cycle accidents. The cumulative impact would most likely be very small without additional measures.
	Nature of risks to humans or the environment	Cycling is inherently dangerous on non-segregated roads. Improvements in air quality would be very miniscule on human health but lower level of obesity and diabetes is likely for those participating in activities.	Cycling is inherently dangerous on non-segregated roads. More safety schemes can improve safety but it is never guaranteed.	Cycling is inherently dangerous on non-segregated roads but more cycle road space would be good for cyclists. Increased electric charging infrastructure will be good for human health but always better to walk or cycle.
	Extent of area and population size affected	Impact would be borough wide.	Main impact only limited to areas where changes take place but also impact on all those travelling through location.	Impact would be borough wide.
Sensitivity	Particular physical or cultural characteristics, or sensitive receptors	Young most impacted as more likely to walk and cycle.	Most impact limited to areas where changes take place. Those needing disabled parking spaces also likely to benefit.	Young most impacted as more likely to walk and cycle. Also those with electric vehicles would benefit.
	Existing environmental thresholds, standards,	London's Vision Zero road safety targets would still apply		

Population and human health			
		Only promote sustainable forms of transport	**Only deliver infrastructure management**	**Only increase capacity of sustainable forms of transport**
	values or limits			
	Protected/designated status	Not applicable		

Table 12: Significance of alternatives on air quality

Air Quality				
		Promote sustainable forms of transport	**Introduce infrastructure management**	**Increase capacity of sustainable forms of transport**
Magnitude	Probability of effect happening	Increase in walking and cycling are both likely.	Likely to improve particularly where congestion locations are addressed but will take some time to impact overall borough air quality. NOFs, more electric charging infrastructure and more cycling infrastructure are most likely to have an impact.	Likely to improve as a result of most cycling infrastructure and more electric charging facilities but will take time to impact air quality.
	Duration, frequency and reversibility of effect	Changes may be short term only as public gets resistant to encouragements to change.	Changes to infrastructure management could have long term positive effect.	Changes to infrastructure to support increased capacity could have long term effect.
	Cumulative nature	Traffic is main contributor to air pollution in borough but other factors impact traffic more than LIP3 – in particular the overall economy.	Traffic is main contributor to air pollution in borough but other factors impact traffic more than LIP3 – in particular the overall economy.	Traffic is main contributor to air pollution in borough but other factors impact traffic more than LIP3 – in particular the overall economy.
	Nature of risks to humans or the environment	Promoting walking and cycling will have health benefits such as reduced diabetes, obesity and improved overall general fitness levels.	Diabetes and obesity will be less impacted if only this option is pursued.	Increased cycling will result in health benefits such as reduced diabetes, obesity and improved overall general fitness levels.
	Extent of area and	Whole population impacted.	The whole population would be impacted,	Whole population impacted but

Air Quality				
		Promote sustainable forms of transport	**Introduce infrastructure management**	**Increase capacity of sustainable forms of transport**
	population size affected		but main impact would be in the vicinity of schemes introduced.	mainly those in the vicinity of schemes introduced.
Sensitivity	Particular physical or cultural characteristics, or sensitive receptors	Residents in close proximity to roads across the borough where pollution is highest		
	Existing environmental thresholds, standards, values or limits	London's transport system to become 'zero emission' by 2050 World Health Organization's ambient air quality guideline limits for the emission of particulate matter		
	Protected/designated status	Not applicable		

Assessment of significance

1.45 The cost of cars, fuel, air flights, healthy food, air flight paths, the cleanliness of water supplies, the local doctor and hospital facilities, how close we live to main roads, our working location and environment also greatly affect all of our health as well as our surrounding air quality and will most likely have a greater impact on all individuals than the programmes included in LIP3. However small changes particularly around schools and for children can make long term improvements.

Cumulative effects

1.46 It is a requirement of the SEA regulations to evaluate the cumulative effects of the plan and thereby to enable them to be avoided or at least minimised. Many of the proposals in LIP3 have a number of inter-related environmental effects.

1.47 All schemes which improve road safety such as 20mph extensions improve human health by reducing accident levels. At such locations, more people tend to walk and cycle more thereby also improving human health. As speeds slow down and drivers' journeys are smoother, less pollutants are emitted and noise and community severance is reduced. As people walk and cycle more, their health improves through reduced obesity and diabetes and improvements to their overall fitness levels.

1.48 Slower traffic speeds across the network improve human health as accident numbers reduce. However, where congestion is associated with the slower traffic, air pollution can increase as can community severance. Areas with low traffic volumes can also act as an inducement to increased traffic levels thereby increasing air pollution.

1.49 Increasing awareness of biodiversity, fauna and flora tends to increase how much people care about the issue. However large visitor numbers can also destroy such environments and therefore increasing visitor numbers needs to be managed carefully. In addition, when schemes are introduced, materials used need to be sensitive to the environment and can provide greater protection for some species.

1.50 All impacts of climate change are likely to be cumulative and permanent and are considerably impacted by traffic levels.

1.51 During all works implemented as a result of LIP3 the environment is considered during all stages. This is monitored through Harrow's Environmental Management System. Where necessary, materials will be changed and schemes revised to minimise the cumulative environmental impact.

Mitigation

1.52 As there are no significant adverse effects from the proposals outlined in LIP3, no mitigation measures are included in this report.

Monitoring

1.53 All measures referred to in section 0 will be considered for monitoring the SEA and LIP3. Monitoring for the environmental impact of LIP3 will predominantly focus on changes in the following:

- Rolling average KSIs
- Traffic volumes
- Permit restricted properties
- Number of trees planted
- Adult cycle training numbers
- Child cycle training numbers
- Electric charging points
- Annual number of participants in Harrow Health walks

1.54 Some of the monitoring will be reported as part of the LIP3 annual report on progress of delivering LIP3. These annual reports to TfL will include information on the following:

- Adult cycle training numbers
- Child cycle training numbers
- Number of electric charging points
- Number of extensions or new 20mph zones
- Number of additional Legible London schemes

1.55 All the monitoring criteria will also reviewed on an annual basis.

1.56 There are significant gaps in data available measuring the extent of walking and cycling in the borough. Ways of collecting this data will be given further consideration but is limited by the available budget.

Additional issues

1.57 It should be noted that funding, resourcing, public consultation as well as environmental concerns will all have a considerable impact on the final Local Implementation Plan produced.

Next steps

1.58 This environmental report will be produced alongside the draft LIP3 and undergo consultation and be made available on Harrow's website.

1.59 Following consultation of the draft LIP3 and any revisions, an SEA statement will be produced alongside LIP3 to be adopted by full Harrow Council. The SEA statement will include information on the changes made to LIP3 based on information received as part of the consultation, the alternative options taken forward and the monitoring process to be taken forward.

Appendix A: SEA document changes

Changes to all objectives of the SEA and the draft LIP3 were made following the SEA scoping consultation.

Table 13: Changes made to SEA

Source	Change made
TfL following Scoping consultation	Added to SEA objective: 8. Promote recycling by encouraging responsible sourcing of materials as well as BES 6001 accreditation for appropriate suppliers
Internal Harrow consultation	m^2 of increased grass verge Now changed to Square meterage of removed hard paving to introduce soft landscaping such as grass verges

Appendix B: Plans, programmes and policies most relevant to LIP3

This is a review of plans, programmes and policies of most relevance to LIP3

Strategy/ Policy document	Key content relevant to LIP3
Mayor's Transport Strategy – Local Implementation Plan guidance, 2018	All content, but particularly identifying objectives
The London Plan, Spatial Development Strategy for Greater London, 2017 – Consultation draft	Improving links between growth and transport Importance of transport link to health Ensure that development facilitates ambitious transport mode share targets Importance of opportunity areas Ensure that dedicated public transport and walking and cycling provision are at the heart of planning for Opportunity Areas Significance of transport to night time economy Mayor's zero-carbon target by 2050 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041 Aim to reduce Londoners' dependency on cars Accessibility and inclusivity embedded in the planning and design of Healthy Streets Vision zero approach to road casualties Vehicle and cycle parking standards for developments

Strategy/ Policy document	Key content relevant to LIP3
Harrow Core Strategy, 2012	Core objective is to maintain an integrated, sustainable transport network which supports growth
	Ensure public transport links to employment opportunities outside Harrow and Wealdstone are maintained and enhanced
	Work to secure enhancements to the capacity, accessibility and environmental quality of the transport network in accordance with the Local Investment Plan and to improve orbital connectivity between neighbouring boroughs
	Continue to seek improvements to the town centre's public transport accessibility.
	Seek to pool funding towards projects that address the identified access, capacity and safety problems associated with Harrow on the Hill and Harrow Bus stations
	The Development Management Policies DPD will give local interpretation of London Plan parking standards and detail requirements for sustainable Travel Plans
	Parking for new development will be managed to contribute to the delivery of a modal shift from the private car to more sustainable modes
	Major growth will be directed to the Harrow & Wealdstone Opportunity Area
	Development will be encouraged in district and local centres that are also well served by rail and bus services
	Over-development of sites with a low public transport accessibility rating will be resisted
	Reduce road traffic through support for more sustainable modes of transport
	All new development within Harrow and Wealdstone will be required, through the securing of planning obligations, to contribute to the funding and implementation of:
	• A Green Travel Plan covering the Opportunity Area;
	• Way-finding and other proposals to improve connectivity between Harrow town centre, Harrow College and Harrow Hill, to contribute to the wider commercial and tourism opportunities in the area;
	• On-street electric charging points throughout the Opportunity Area;
	• Public realm enhancements; and
	• Proposals to improve the accessibility and quality of local open spaces

Strategy/ Policy document	Key content relevant to LIP3
Harrow Core Strategy, 2012 continued	Manage the Borough's contribution to climate change and increase resilience to flooding by: • Co-ordinating development and public transport to promote more sustainable patterns of land use to reduce reliance on private vehicles; • Achieving sustainable design and construction in all new development; • Promoting retrofitting and other initiatives that improve the energy efficiency of the existing housing stock; • Reducing waste generation and increase recycling rates; • Directing development away from areas of high flood risk and increase natural and sustainable drainage; and • Improving air quality. Direct development away from areas of high flood risk and increase natural and sustainable drainage All new development must create and maintain accessible, safe and secure neighbourhoods in accordance with best practice standards. Where appropriate, development should also seek to promote and enhance biodiversity in accordance with the aims of the Harrow Biodiversity Action Plan and best practice

Strategy/ Policy document	Key content relevant to LIP3
Harrow Development, Management Policies, 2013	Detailed parking standards for all types of development included Improvements to the public realm must achieve an inclusive, legible pedestrian and cycling environment. Where opportunities exist, pedestrian and cycle routes between suburban areas, town centres, neighbourhood parades, public transport and green infrastructure should be strengthened. Proposals which impede pedestrian and cyclist permeability will be resisted New and replacement bus stops must be of accessible design. All proposals must make appropriate provision for car parking for disabled people Proposals for major development will be required to submit a Transport Assessment for objective review by the Council. The Transport Assessment should quantify the impacts of the proposal upon public transport, the highway network, the cycle network and upon conditions for pedestrians Proposals for major development will be required to satisfactorily mitigate the impacts identified in the Transport Assessment and any others arising from the Council's assessment of it Proposals that fail to satisfactorily mitigate the transport impacts of development will be resisted Where necessary, construction logistic plans and delivery and servicing plans should be submitted with an application. Non-residential proposals will be required to make arrangements for servicing that maintain or improve the safety and flow of traffic on the public highway, and which protect the amenity of neighbouring occupiers Proposals for major development should make satisfactory arrangements for access to and servicing within the site during construction Proposals that would be detrimental to safety, traffic flow or the amenity of neighbouring occupiers will be resisted

Strategy/ Policy document	Key content relevant to LIP3
Harrow Biodiversity Action Plan 2015 – 2020	Protect the historical and environmental features that contribute to Harrow's character and distinctiveness as a place to live, work and visit Enhance the infrastructure, environment and other resources which make Harrow a desirable place to live, work and visit Manage the Borough's contribution to climate change and increase resilience to flooding by: achieving sustainable design and construction in all new development; directing development away from areas of high flood risk and increase natural and sustainable drainage; improving air quality Adapt to population and demographic changes to meet people's needs and quality of life by: promoting walking, cycling and participation in sport by all age Maintain and protect the current tree stock in line with London and local targets Increase overall tree coverage Enhancement of the built environment for biodiversity
Harrow Health and Wellbeing Strategy 2016-2020	In Harrow as nationwide, people living in the most deprived areas of the borough are less likely to live near green space. These areas are associated with the lowest rates of physical activity and higher rates of obesity and cardiovascular disease. Increasing green space in areas where it is scare may have social and economic benefits and may reduce health inequalities. Encouraging and creating an environment where more people are motivated to swap their car for walking, cycling or public transport would have an impact on physical activity and reduce related health inequality as well as potentially reducing injury and deaths from traffic collisions A healthy high street and neighbourhood is one in which there is 'clean air, less noise, more connected neighbourhoods, things to see and do, and a place where people feel relaxed Neighbourhoods should provide a safe environment where residents do not live in fear of crime, violence, harassment or accidents
Waste Management Strategy (2016-2026)	Increase recycling year on year Prioritise high performing, low emission, modern, sustainable technologies and operations that achieve value for money Achieve zero growth in the amount of waste produced by each household per year by 2026

Strategy/ Policy document	Key content relevant to LIP3
Harrow Council Local Flood Risk Management Strategy, May 2016	Flood risk from all sources of flooding i.e. surface water, groundwater, sewer and river Critical infrastructure flood risk Sustainable urban drainage systems will now be a planning requirement for developments of ten dwellings or more and equivalent non-residential schemes from April 2015 unless developers can demonstrate that SuDS would be inappropriate
London Borough of Harrow Tree Strategy 2015-2018	Maintain the managed tree stock on the highways, within school boundaries, housing estates and parks and woodlands on a proactive cyclical maintenance regime to ensure that trees are in a safe and healthy condition Limit the felling of trees to those circumstances where it is essential or advisable Increase the role of street trees and woodland in minimising the impacts of and adapting to climate change Undertake the phased removal and replanting of street trees to ensure the safety of trees and diversity of the age and species of trees to encourage future sustainability and biodiversity Provide public information in advance of planned tree works and in advance of planting schemes Continue to create a varied and sustainable tree population in the Council's Parks Ensure that there is a clear programme of maintenance and management to keep trees safe and healthy Improve the quality of life of all members of the community by creating a healthier and attractive environment by encouraging tree planting Improve the local environment and biodiversity through the legal and physical protection of trees

Strategy/ Policy document	Key content relevant to LIP3
Harrow Transport Local Implementation Plan 2011/12 - 2013/14	Previous objectives which were: Further develop the transport system to provide access to employment opportunities within and beyond the borough Support improved orbital transport links across the Borough and between outer London centres Encourage a healthier lifestyle by promoting healthy and safe travel particularly for pedestrians and cyclists Provide improved facilities for pedestrians and cyclists Ensure that the transport delivery needs of the Area of Intensification are prioritised Reduce the number of motorcycle casualties across the borough Improve social inclusion in the borough Support projected population growth within the new Intensification Area Increase the number of people cycling in the borough Support Harrow's local economy by reducing congestion, improving the efficiency of servicing and delivery and making essential car journeys easier Improve pedestrian walkways that use and link existing parks and open spaces with town centres and public transport provision Ensure that the vitality of the town centre is supported through good transport access via all modes of transport prioritising sustainable modes of transport
London Borough of Harrow Climate Change Strategy April 2013 onwards	Borough commitment to ensure that low carbon forms of transport are supported and encouraged Support delivery of LIP2 Encourage residents to improve the environmental impact of their cars by providing free resident parking permits for environmentally friendly vehicles Protect residential parking and parking at local shops by discouraging commuter parking through introducing controlled parking zones
West London Sub-regional Transport Plan 2016 update	Useful map data on population, housing, employment and commuting mode share, changes in mode share, bus congestion locations, indices of deprivation and poor air quality locations.

Strategy/ Policy document	Key content relevant to LIP3
London Environment Strategy, 2018	Diesel vehicles, especially cars and vans remain the main source of road transport pollution. London's entire transport system to be zero emission by 2050 Reduce emissions from London's road transport network by phasing out fossil fuelled vehicles, prioritising action on diesel, and enabling Londoners to switch to more sustainable forms of transport Mayor to promote and prioritise more sustainable travel in London, including walking, cycling and public transport, as part of the Healthy Streets Approach Mayor, through TfL, to clean up the bus fleet by phasing out fossil fuels, prioritising action on diesel, and switching to zero emission technologies Mayor to encourage the take up of ultra low and zero emission technologies to make sure London's entire transport system is zero emission by 2050 to further reduce levels of pollution and achieve WHO air quality guidelines Mayor, through TfL, to ensure all taxis and private hire vehicles are zero emission capable by 2033 and the bus fleet is entirely zero emission by 2037 Mayor , working with government, TfL, the London boroughs and industry to aim for London's entire transport system to be zero emission by 2050, with work towards this including using regulatory and pricing incentives to support the transition to the usage of Ultra Low Emission Vehicles Mayor aims to improve access to green space and nature by identifying those areas of the city that should be greener, and developing green infrastructure programmes and projects especially in major regeneration areas: through the Mayor's Transport Strategy, the Walk London network will be protected, improved and promoted Minimise the adverse impacts of noise from London's road transport network
Vision Zero for London, 2017	Reduce the dominance of motor vehicles and the targeting of road danger at source Need to reduce road danger is a consideration in all schemes Improve procedure and process for infrastructure design, vehicle design and behaviours Establish an environment where risk is diminished Reverse the recent rise in motorcyclist KSIs
Healthy Streets for London, 2017	Indicators for streets to measure all of the following: 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 public transport, People feel safe, Things to see and do, People feel relaxed, Clean Air

Strategy/ Policy document	Key content relevant to LIP3
Better Environment, Better Health, 2013	Active travel information Concentration of NOx in the borough
Disability Discrimination Act 2005	Protects disabled people in a number of areas, including access to goods, facilities and services Main issues for LIP3 are disabled access to public transport and provision of disabled parking at appropriate locations and tactile paving and cones
Home to school travel and transport Guidance, Statutory guidance for local authorities 2014	Las must prepare 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; promote sustainable travel and transport modes on the journey to, from, and between schools and other institutions; publish a Sustainable Modes of Travel Strategy

Appendix C: GLOSSARY

CMO	Chief Medical Officer
EMS	Environmental Management System
LIP	Local Implementation Plan
LIP3	3rd Local Implementation Plan
LTP	Local Transport Plan
MTS	Mayor's Transport Strategy
PPP	Polices, plans and programmes
SEA	Strategic Environmental Assessment
TfL	Transport for London

APPENDIX G

Funding required to deliver LIP3

Annual Formula LIP funding is provided in the Corridor, Neighbourhoods & Supporting Measures programme. Other funding can be bid for through Discretionary and Strategic funding programmes subject to TFL approval. The LIP3 sets out the Borough's ambitions in this regard.

London Borough of Harrow TfL BOROUGH FUNDING 2019/20 TO 2021/22	Programme budget		
	Indicative 2019/20	Indicative 2020/21	Indicative 2021/22
Local transport initiatives			
CORRIDOR, NEIGHBOURHOODS & SUPPORTING MEASURES	£k	£k	£k
Road Safety Schemes (Vision Zero)	240	240	240
Walking and Cycling Schemes	300	300	300
Bus Priority Schemes	250	250	250
Freight management schemes	40	40	40
Congestion Relief Schemes	40	40	40
Accessibility schemes	35	35	35
Shopmobility	5	5	5
Travel training	20	20	20
ULEV and air quality schemes	60	60	60
Active and sustainable travel	40	40	40
Road Safety Education	40	40	40
Cycle training	65	65	65
Travel plans	105	105	105
Forward programme development	50.7	50.7	50.7
Sub-total	1,290.7	1,290.7	1,290.7
DISCRETIONARY FUNDING	£k	£k	£k
Liveable Neighbourhoods	200	2,000	2,000
STRATEGIC FUNDING	£k	£k	£k
Bus Priority	100	100	100
Road Safety	100	100	100
Cycle Quietways	1,500	1,500	0
Mayor's Air Quality Fund	100	100	100
Sub-total	1,800.0	1,800.0	300.0
All TfL borough funding	3,290.7	5,090.7	3,590.7

APPENDIX H

Equalities Impact Assessment

Equality Impact Assessment (EqIA) July 2018

Equality Impact Assessment (EqIA)		
Type of Decision: Key Decision	Cabinet	
Title of Proposal	Transport Local Implementation Plan (LIP3)	**Date EqIA created** 05/07/18
Name and job title of completing/lead Officer	David Eaglesham - Head of Traffic, highways & asset Management	
Directorate/ Service responsible	Community Directorate	
Organisational approval		
EqIA approved by Directorate Equality Task Group (DETG) Chair	**Name** Dave Corby	**Signature** ☒ **Tick this box to indicate that you have approved this EqIA** **Date of approval** 18/07/2018

1. Summary of proposal, impact on groups with protected characteristics and mitigating actions
(to be completed **after** you have completed sections 2 - 5)

a) What is your proposal?

Preparation of LIP3 is a statutory requirement and is prepared under Section 145 of the GLA Act and sets out how the borough proposes to deliver the Mayor's Transport Strategy (MTS) in the borough, as well as contributing to other local and sub-regional goals.

LIP3 identifies how LB Harrow will work towards improving the transport network and achieving the MTS priorities and which are:

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

It also outlines how Harrow Council will set local priorities, targets and a delivery plan in order to assist with achieving these Mayoral priorities.

b) Summarise the impact of your proposal on groups with protected characteristics

There are wider beneits to all members of the public and all people within the protected characteristics groups. Additionally there are specific benefits for those for those with mobility issues, learning difficulties or more vulnerable road users such as the elderly and children in the Age and Disability groups which will improve access to the transport network and their quality of life. These specific benefits will be delivered through healthier streets, improved air quality initiatives, more dropped kerbs, disabled parking, easier road crossing facilities, increased provision of seating, Shopmobility, travel training and travel planning support.

c) Summarise any potential negative impact(s) identified and mitigating actions

No negative impacts have been identified.

2. Assessing impact					
You are required to undertake a detailed analysis of the impact of your proposals on groups with protected characteristics. You should refer to borough profile data, equalities data, service user information, consultation responses and any other relevant data/evidence to help you assess and explain what impact (if any) your proposal(s) will have on **each** group. Where there are gaps in data, you should state this in the boxes below and what action (if any), you will take to address this in the future.					What does the evidence tell you about the impact your proposal may have on groups with protected characteristics? Click the relevant box to indicate whether your proposal will have a positive impact, negative (minor, major), or no impact
Protected characteristic	For **each** protected characteristic, explain in detail what the evidence is suggesting and the impact of your proposal (if any). Click the appropriate box on the right to indicate the outcome of your analysis.	Positive impact	**Negative impact**		No impact
			Minor	Major	
Age	Wider benefit for all members of the public. Affects vulnerable road users, particularly the elderly and children in a positive way. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. More active travel provides health benefits, cycle training and walking for Health encouraged. School travel planning supports safer and more sustainable journeys to school. Deliver road safety interventions and resources for road users aged 60+ by targeting community groups, day centres and social clubs, facilitating bespoke workshops and presentations and providing road safety literature.	☒	☐	☐	☐
Disability	Wider benefit for all members of the public. Affects people with impaired mobility and learning difficulties in a positive way. More appropriately located disabled parking spaces. Ongoing shopmobility and travel training support.	☒	☐	☐	☐

	Healthy streets reviews to include appropriate dropped kerbs and improved road crossings suitable for those with visual or auditory impairments. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Independent travel training supported for people with learning difficulties.				
` **Gender reassignment**	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged.	☐	☐	☐	☒
Marriage and Civil Partnership	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged	☐	☐	☐	☒
Pregnancy and Maternity	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Walking for Health encouraged.	☐	☐	☐	☒

Race/ Ethnicity	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged.	☐	☐	☐	☒
Religion or belief	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged.	☐	☐	☐	☒
Gender	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged.	☐	☐	☐	☒
Sexual Orientation	Wider benefit for all members of the public. No specific impact on this protected characteristic. Increased provision of healthy streets suitable for improved access for all; including improved road safety, additional seating, an improved environment for walking and cycling and general environmental improvements. Cycle training and Walking for Health encouraged.	☐	☐	☐	☒

2.1 Cumulative impact – considering what else is happening within the Council and Harrow as a whole, could your proposals have a cumulative impact on groups with protected characteristics?

☒ Yes ☐ No

The cumulative impact of this policy and other major policies combine to have a significant beneficial impact on people in the Age and Disabled protected characteristic groupings.

2.2 Any other impact - considering what else is happening nationally/locally (national/local/regional policies, socio-economic factors etc), could your proposals have an impact on individuals/service users, or other groups?

☒ Yes ☐ No

The policy has the potential for significant wider benefits to the health agenda and encouraging people to take up active travel.

3. Actions to mitigate/remove negative impact

Only complete this section if your assessment (in section 2) suggests that your proposals may have a negative impact on groups with protected characteristics. If you have not identified any negative impacts, please complete sections 4 and 5.

In the table below, please state what these potential negative impact (s) are, mitigating actions and steps taken to ensure that these measures will address and remove any negative impacts identified and by when. Please also state how you will monitor the impact of your proposal once implemented.

State what the negative impact(s) are for **each** group, identified in section 2. In addition, you should also consider and state potential risks associated	Measures to mitigate negative impact (provide details, including details of and additional consultation undertaken/to be carried out in the future). If you are unable to identify measures to mitigate impact, please state so and provide	What action (s) will you take to assess whether these measures have addressed and removed any negative impacts identified in your analysis? Please provide details. If you have previously stated that you are unable to identify measures	Deadline date	Lead Officer

with your proposal.	a brief explanation.	to mitigate impact please state below.		
N/A				

4. Public Sector Equality Duty

How does your proposal meet the Public Sector Equality Duty (PSED) to:

1. Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Equality Act 2010
2. Advance equality of opportunity between people from different groups
3. Foster good relations between people from different groups

There are no negative consequences of the policy on relations between people from different groups or on unlawful conduct prohibited by the Equality Act 2010.

The proposed LIP3 will advance the equality of opportunity for people in the Age and Disability groups by enabling easier access to the transport network and access to all employment, entertainment and services thereby improving quality of life. In particular the policy will support vulnerable road users such as children, the elderly and those with mobility and learning disablilities.

5. Outcome of the Equality Impact Assessment (EqIA) click the box that applies

☒ **Outcome 1**

No change required: the EqIA has not identified any potential for unlawful conduct or disproportionate impact and all opportunities to advance equality of opportunity are being addressed

☐ **Outcome 2**

Adjustments to remove/mitigate negative impacts identified by the assessment, or to better advance equality, as stated in section 3&4

☐ **Outcome 3**

This EqIA has identified discrimination and/ or missed opportunities to advance equality and/or foster good relations. However, it is still reasonable to continue with the activity. Outline the reasons for this and the information used to reach this decision in the space below.

Include details here