

# 5 Transport Vision

## Introduction

Travel in outer London is, and will remain, predominantly by car. This places significant pressure on available road space. Sustainable development on the scale envisaged within the Development Framework is only feasible if a high proportion of new trips can be made by non-car modes.

The challenge is to implement the Framework in a manner that will unlock the area for regeneration, acknowledging the opportunities and overcoming the constraints of the existing transport infrastructure and the improvements that can be delivered by new development opportunities.

As Section 3 describes, the area is currently bisected by several strategic highways that have an important function in distributing traffic within London as a whole and beyond. The key roads within the area include the M1 motorway, the A406 North Circular Road and the A41 Hendon Way. The A5 is an important Borough road. The configuration of main roads and railways within the area offers great potential, but currently limits accessibility. This is addressed by the transport vision in the form of new and improved local linkages.

The Development Framework includes a series of major highway infrastructure proposals that will ensure that the strategic road network continues to operate satisfactorily. Local highway and traffic management measures will safeguard the efficient operation of local distributor and residential access roads whilst minimising potential rat-running by through traffic.

The transport vision has been developed in consultation with key transportation authorities, including Transport for London (TFL), the Highways Agency and the Department for Transport Rail (DFT), formerly the Strategic Rail Authority (SRA).

The principles of the transport vision are illustrated on Figure 23.

The transport vision is an integral part of the land use proposals, and together they aim to minimise additional car use through the application of the following principles:

- Create a new outer London town centre that will reduce journeys into Central London during periods of peak travel demand.
- Mixed use development that creates opportunities for short local trips and linked trips, especially by non-car modes of travel.
- New and improved public transport services that provide additional capacity, new links between areas and an overall higher standard of service.
- Integration between modes to facilitate access by public transport to the area.
- Improved accessibility and convenience to walking and cycle routes to make journeys easier and more attractive.
- Limited new parking associated with development to discourage the use of the car for non-essential journeys.





Key

- Regeneration Area
  - Existing Shopping Centre
  - Existing Multi-storey Car Park
  - Proposed Multi-storey Car Park
  - Basement/ Undercroft Parking
  - Underground Station
  - Proposed Bus Station
  - Existing Rail Station
  - Proposed Rail Station and Public Transport Interchange
  - Existing Primary Vehicular Circulation
  - Existing Road Network
  - Rapid Transit System (illustrative)
  - Secondary Vehicular Circulation
  - Tertiary Vehicular Access (illustrative)
  - New Bridge
  - New Pedestrian Bridge
  - Pedestrian Street Network Within Town Centre
  - Brent River Walkway
  - Pedestrian Environment and Junction Improvement
1. Staples Corner/ M1 Junction
  2. A406/ A41 Mid-level roundabout
  3. New connection to A41
  4. New connection to A5
  5. A5/ Cricklewood Lane
  6. Claremont Road/ Cricklewood Lane
  7. The Broadway
- Pedestrian/ Cyclists network are not shown on this map.

Figure 23: Access and movement

## Movement Strategy

Transport improvements have been identified to accommodate projected increases in travel demand associated with the proposed land uses described in the Development Framework. Travel demand has been assessed by land use to estimate movements by mode of travel, time of day, and direction of trips. The estimates reflect the transport initiatives proposed, including the effect of constrained parking at commercial developments and the provision of significantly enhanced public transport services. The travel demand forecasts have been agreed with TFL

Overall, new trips to the area by different modes will be as follows:

Public Transport	49%
Bus	27%
Rail	16%
London Underground	6%
Private car (including passengers)	34%
Walk	13%
Cycle	2%
Other (including taxis)	2%

A proportion of the rail and underground trips will access stations using the proposed Rapid Transit System (RTS). Walking trips are based on observations and are likely to include some longer distance movements from Hendon Central and Brent Cross underground stations.

The forecasts by mode vary significantly by the land use of the origin or destination of the journey. For example, trips to commercial office developments have a greater proportion of public transport based trips (64%) than those to residential developments (37%).

In total, it is forecast that the land use proposals within the Framework will generate 132,800 new person trips per 12-hour weekday into the area, including 29,100 additional vehicles. An additional 35,800 passengers per day will arrive by bus and 28,900 passengers will arrive by rail or underground. Walking and cycle journeys will be shorter in distance and many of these will be made entirely within the area.

The modal split relates to movement of people and does not include service vehicles. The arrival by bus includes passengers on the bus network as a whole and the Rapid Transit System (see overleaf).



The movement strategy has been developed to include measures that will maintain or improve current conditions for existing highway and public transport users, provide enhanced access to all parts of the regeneration area, and improve the capacity of all travel modes consistent with the above forecasts of demand.

## Integration

The improvements delivered by the transport vision will assist the integration of the new development with surrounding areas. This will include new and improved local access roads and pedestrian cycle links. The improved and extended Brent Cross bus station, the interchange at the additional railway station, and the existing Brent Cross Underground Station represent the key transport interchanges in the Framework. These will be integrated into the surrounding area through RTS, bus, walking and cycle routes, utilising the new Spine Road, the High Street, the replacement Tempelhof Bridge and the new pedestrian footbridges.

The replacement Tempelhof Bridge over the A406 North Circular Road with improved provision for all road users, including pedestrians, will be the key link within the new town centre.

The railway station will be linked to the A5 Edgware Road by a new road bridge, overcoming issues of east-west severance, increasing the catchment area of the new station and expanding bus routing opportunities that avoid Staples Corner.

Improvements will be made to the footway and cycle network to provide convenient access from the surrounding areas to the new facilities within the regeneration area and to provide easy access for residents to facilities in the surrounding areas. These will include the two new proposed pedestrian bridges over the A41 and the A406 linking Brent Cross shopping centre, Brent Cross Underground Station, and the additional rail station via the High Street.



## Delivering the Vision

The high proportion of travel by sustainable modes will be delivered by the provision of a comprehensive and extensive package of improvements to the transportation network.

Existing bus routes will be improved as appropriate with higher frequency services and/or higher capacity vehicles to serve existing communities throughout the regeneration area.

The opening up of the Cricklewood Rail and Eastern Lands provides an opportunity to introduce a more comprehensive and integrated public transport network to the area. Brent Cross bus and Underground station and the additional railway station will provide public transport interchanges through which a number of existing and new bus services will operate, thus extending links into surrounding areas. A Rapid Transit System (RTS) will serve the existing Cricklewood and additional station, the Market Square, Brent Cross Shopping Centre, the Eastern Lands, and Brent Cross Tube Station. This will provide fast links, interchange opportunities and better integration between public transport modes.

The High Street and improved highway and pedestrian links into neighbouring communities will assist in overcoming barriers to movement and better integrating local amenities. Strategic highway junctions will be improved to accommodate additional vehicle trips.

### Buses

The existing Brent Cross bus station is the focal point for many of the existing bus services in north west London. The transport vision seeks to build on this through the provision of new services, enhanced frequencies and improved vehicles on existing services. Brent Cross bus station will be expanded to double its present capacity and include a full range of modern passenger facilities.

A comprehensive and high quality bus network will connect the regeneration area to a wide range of destinations in north-west London and encourage greater use of buses. New routing opportunities will be created by the provision of the A5 bridge and the A41 junction. The improvement to bus services delivered by the transport vision will be able to accommodate the additional 35,800 daily bus trips into the area.

Several possible new services have been identified to serve the regeneration area. The details of the operation of these services will be discussed and agreed with London Buses to provide adequate capacity and maximise the number of people with convenient access by bus from within the surrounding catchment area.

The only bus services currently operating through Cricklewood are on three routes running along Claremont Road. A new spine road to the west of Brent Terrace continuing along the High Street and over the replacement bridge to the town centre on the north side of the A406 North Circular Road presents the opportunity to expand existing routes so they can serve the additional railway station and the adjacent development opportunity areas.

A replacement Brent Cross bus station will be constructed. It will be conveniently located to serve the High Street and designed to accommodate the enhanced services that will be provided by the transport vision with capacity to handle passenger volumes allowing for growth over the levels forecast. The bus station will provide an interchange between conventional bus services and the RTS. The layout of the bus station will be agreed with TFL. The RTS route to Brent Cross Underground Station will benefit from an improved underpass under the A41.

Walking distances, between alighting stops and the town centre will be minimised.

An interchange for buses and the RTS will be provided at the additional railway station allowing easy transfer between bus and train and maximising the attractiveness of rail for longer distance journeys.

### Main Line Railway Station

An additional railway station will be located to the south-west of the new town centre. The railway station will be part of a public transport interchange with the RTS and bus services.

The railway station will be designed in accordance with modern standards with personal safety and accessibility as high priorities. The railway station will improve access from areas to the west of the regeneration area by the provision of the new bridge over the railway. Bus services planned to stop at the station will serve Cricklewood, Kilburn, the West End, Golders Green, Finchley, Willesden, Wembley, Neasden, Hendon and Edgware.

The railway station will initially be served by 8-car Thameslink trains, but designed to accommodate 12 cars to take advantage of future improved service and capacity enhancements. It is envisaged that at least four trains per hour in each direction will call at the station, increasing to eight trains during peak periods.

The construction of the railway station does not result in technical reasons why trains cannot continue to stop at the existing Cricklewood station.

A proportion of the catchment area of the existing station, particularly to the north may find the location of the new railway station more convenient.

## Rapid Transit System (RTS)

The RTS will be distinctively liveried and operate in a complementary way to conventional bus services. It will provide a fast and frequent metro-style turn-up-and-go service with limited stops.

The RTS provides an important function running through the heart of the regeneration area. Its main purpose will be to link the Northern Line at Brent Cross Underground Station with the Midland Mainline at Cricklewood Station via the new town centre. It also provides a fast shuttle along the length of the High Street.

The service will operate with modern low floor and low emission vehicles providing dual entry and exit points.

The service will run mainly on newly constructed or widened roads within the regeneration area to facilitate reliable operation.

## Strategic Road Network

The area cannot be developed as envisaged in the Framework unless improvements are made to the strategic highway network. Strategic routes are the M1, A406 and A41. The effective running of traffic on the A406 North Circular Road is key to meeting the aims of the transport vision.

Development proposals must provide additional traffic capacity at the following junctions:

- M1/A406 North Circular Road
- A406 North Circular Road/A5 Staples Corner
- A406 North Circular Road /A41 Hendon Way

TFL is developing the inherited major improvements to the A406 North Circular Road at Brent Street, Henlys Corner and Bounds Green, which will overcome the existing lack of capacity to the east of the regeneration area.

The three junctions do not have spare capacity in peak periods to accommodate additional traffic from the land uses described in the Framework. Proposals have been developed for the M1 and A5 junctions that would remove the existing roundabouts and replace them with traffic signals, segregating major conflicting traffic movements and easing congestion. Significant additional east-west capacity will be created by opening up additional rail arches to vehicular traffic. The A41 mid-level junction will also be improved, and a new junction created on the A41 (near the existing food store) to enable access to the Eastern Lands.

## Local Road Network

The configuration of strategic highway routes and railway lines currently limits accessibility by road to the regeneration area. A key objective is to link these areas more effectively with the surrounding network. A series of improvements are proposed to provide better accessibility.

A key proposal for internal traffic circulation is the replacement Tempelhof Bridge. The replacement bridge will provide a link between the two parts of the new High Street north and south of the A406 North Circular Road. The bridge will form part of the RTS route.

The town centre on the south side of the A406 North Circular Road will be accessible from the replacement bridge and the proposed A41 junction, as well as from the south. The High Street (south) will continue via the additional railway station into a spine road running west of Brent Terrace and connecting with Claremont Road in the south. A new bridge over the railway will connect the High Street with the A5 Edgware Road. Two new local access roads will link the High Street with Claremont Road to provide access to the town centre from surrounding residential areas.

Access to the town centre on the north side of the A406 North Circular Road will be rationalised by the provision of a new on-slip direct to the A406 North Circular Road and a link from the A406/A41 mid-level roundabout into a new junction with Prince Charles Drive. The new connections simplify access to the town centre on the north side of the A406 North Circular Road and reduce traffic entering via Tilling Road and Renters Avenue roundabout.

The majority of traffic generated by the Framework proposals will access the strategic network or the A5 directly via existing or new connections described above. A small element of additional traffic will use local distributor roads to access development opportunities and may cause additional problems on the highway network that would need to be mitigated, possibly by road improvements. Proposals have been identified to provide additional lanes at the junction of Claremont Road with the A407 Cricklewood Lane, but other improvements may be necessary.

Capacity restraints will be relieved in West Hendon town centre by the widening of the A5 and junction improvements.

It is important that the proposals within the Framework do not worsen conditions on the local highway network and that any impacts are mitigated.

Such effects are expected to be marginal and will depend upon the precise direction and routing of vehicle trips. This will need to be assessed, as the proposals are developed, and suitable measures incorporated where necessary to mitigate any adverse impacts.

## Pedestrian and cycle routes

The transport vision will encourage sustainable walking and cycle travel modes by providing a network of routes within the area and improved links with surrounding communities and transport facilities. The objective of the vision is to increase demand for short to medium length trips by providing attractive facilities for pedestrians and cyclists.

The High Street will create a high amenity pedestrian spine providing connectivity between Brent Cross Underground Station, Brent Cross Shopping Centre, the Market Square, and the new Railway Station. The High Street will connect to the Eastern Lands via a main street which will vary in character and use. New pedestrian footbridges will be constructed over the A41 and A406, and new links from the High Street formed into surrounding residential areas to overcome barriers to movement that currently exist and to encourage sustainable travel. The Town Centre North will become more accessible from neighbouring residential areas and underground stations.

Given the complexity of the existing highway network some footbridges and underpasses will be required. The environmental quality of existing structures will be improved, particularly on routes connecting new development within the regeneration area with surrounding public transport facilities. All new footway and cycleway links will be designed to be safe and secure.

A package of measures designed to encourage cycling by providing clear, more direct and safer links within the new town centre will be implemented. The footways and cycleways will generally run adjacent to the new highway system, but there will also be some separate routes.

Measures will be provided to make walking and cycling more attractive including:

- CCTV and improved lighting at strategic points managed by a central control area
- Cycle parking for visitors and shoppers at prominent positions close to the entrances of individual developments
- Secure cycle parking and shower and changing facilities with lockers for staff that cycle to work
- Promotional campaigns and local information

With the provision of safe and attractive facilities, all localised trips within the regeneration area and its environs will be more attractive on foot or by cycle.

## Parking

The following parking standards will be applied to proposals that come forward within the area defined by the Development Framework.

Residential	1 space per unit
B1-B8 Employment	1 space per 300 m <sup>2</sup>
Retail and leisure within Town Centre North	7,600 spaces (No further car parking to that currently permitted)
Other town centre retail	As set out within the London Plan
Hotels	1 space per 2 bedrooms, plus 1 space per 5 seats for conference facilities
New Mainline Railway Station	Parking only for disabled passengers and staff and pick up and set down

Community Facilities	1 space per 3-5 Staff
Leisure (excluding Town Centre North)	1 space per 22 m <sup>2</sup>
Commercial (Freight and Waste Recycling Facilities)	Operational Parking

These parking standards are appropriate in areas highly accessible by public transport, which will be achieved in the town centre with the improved services described above. The application of these standards will need to be accompanied by complementary on-street controls to prevent displacement into residential areas. Detailed proposals will need to address the effective management of both on and off-street parking in the area.

As development proposals come forward they will need to be supported by comprehensive transport assessments prepared in accordance with best practice.

## The Way Forward

This transport vision has been prepared in consultation with key partners with the objective of guiding the preparation of development proposals and supporting infrastructure improvements that will maximise the use of sustainable travel modes and minimise the use of the private car.

Transport assessments will take the transport vision and its principles forward. The transportation assessments should demonstrate that traffic generated by development proposals could be accommodated on the improved highway network without additional delays to traffic.

Where it is not possible to demonstrate that at individual access junctions would be lower with the improvements than otherwise without development proposed within the Framework, it must be shown that excess delays can be mitigated by either of the following:

- further public transport initiatives that will reduce traffic and free capacity for additional development traffic
- measures to encourage greater use of non-car modes or additional parking restraint
- availability of acceptable alternative routes to allow traffic to avoid busy junctions

Strategic junction improvements have been discussed with the Highways Agency and TFL and they have confirmed that there are no significant obstacles to the implementation of the proposals described with the Framework, subject to the further design and safety approvals required before the works and any contingent development are able to proceed.

A comprehensive package of public transport improvements has been formulated. Design and implementation issues will need to be discussed with and approved by the relevant authorities.