

10 Rail services

10.1 Where do we want to be?

Stakeholders placed the efficiency of the rail network at the heart of economic growth and sustainable development across the Borough and particularly for the CMC within which the majority of the growth is predicted to occur. Improved radial links to central London and Docklands are essential for the viability of the proposed CMC growth scenarios and so this Strategy seeks the following enhancement to Croydon's railway network.

- an enhanced and expanded East Croydon station, better integrated with surrounding land uses and proposed development within the CMC;
- an enhanced West Croydon station with better bus/ tram interchange facilities and links to the main shopping area along North End;
- local stations that are easily accessed from surrounding areas by foot and cycle;
- stations that are safe and secure;
- stations that provide good rail-rail interchange with convenient links to bus and tram stops (where appropriate);
- secure cycle parking at all stations and the development of cycle hubs and East Croydon and West Croydon stations;
- frequent train services that do not suffer overcrowding; and
- adequate provision for rail freight, particularly with regard to freight train access to terminals and paths.

Croydon Council will seek a closer working partnership with the Train Operating Companies and Network Rail to ensure these aspirations are realised in line with new development and the predicted increase in demand this will generate on the rail network.

10.2 Where are we now?

10.2.1 Structure

The **provision & level of service** and **performance** of the National Rail network can be defined in three ways. 'Network planning' relates to the geographical reach of train services; 'network capacity' to frequency of services; while 'network infrastructure' focuses on the stations, tracks and junctions required to ensure train services can operate efficiently and safely.

Under performance, 'network planning' issues address gaps in the network or destinations not served while, 'network capacity' highlights insufficient service frequency leading to train overcrowding. 'Network infrastructure' is concerned with the functionality of stations and the access routes to them.

Specific issues relating to the performance of the rail services are provided in the 'Issues & Solution' table provided in Appendix D under the railway heading.

10.2.2 Provision & level of service

Network planning

Train services are currently operated by Southern, First Capital Connect and London Overground Rail Operations Ltd (LORAL). The main rail services in Croydon are:

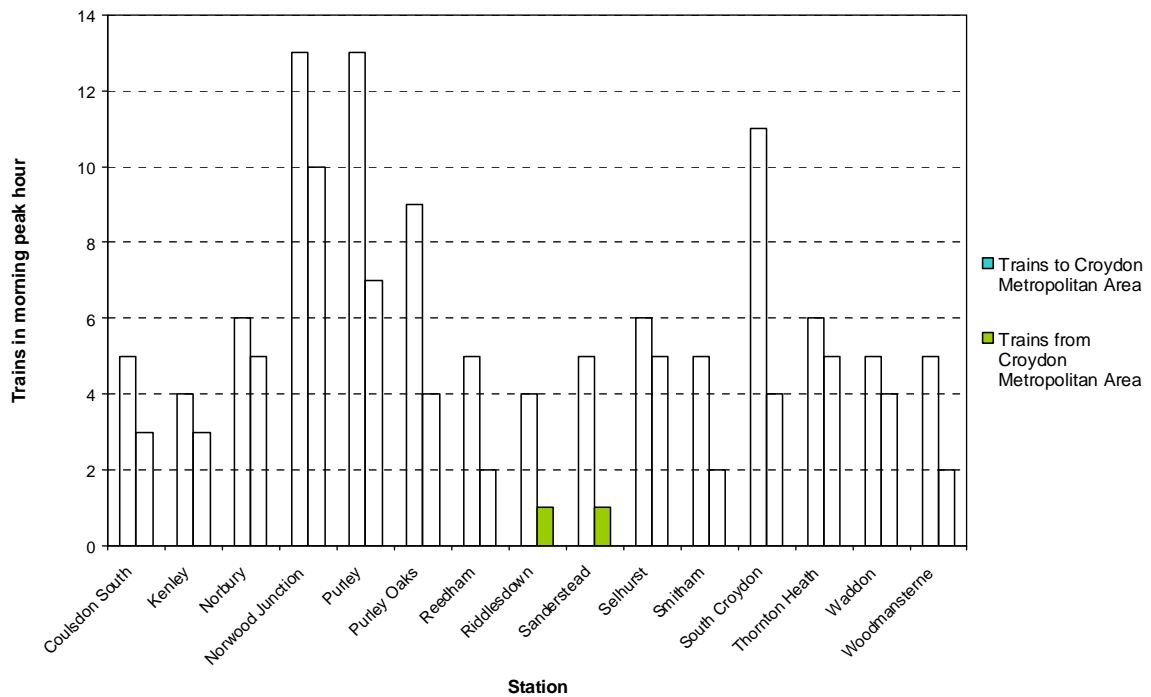
- Southern and First Capital Connect provide fast services along the Brighton Main Line (BML) connecting East Croydon with London Victoria, London Bridge, Redhill, Gatwick Airport, Hayward's Heath and the Sussex Coast.
- Southern and LORAL run East London Line rail services connecting West Croydon with central London (London Victoria and London Bridge),
- Southern operate services to all local stations within the Borough from:
 - Horsham, Epsom and Wallington via Waddon and West Croydon;
 - Tattenham Corner via Woodmansterne, Smitham, Reedham, Coulsdon South, Purley, Purley Oaks, South Croydon and East Croydon;
 - Caterham via Whyteleafe, Kenley, Purley, Purley Oaks, South Croydon and East Croydon;
 - East Grinstead via Riddledown, Sanderstead, South Croydon and East Croydon; and
 - East Croydon and West Croydon to London suburban destinations.
- First Capital Connect operates Thameslink services towards central London (London Blackfriars) and those stations on the Thameslink loop including Mitcham Junction.

Network capacity

The frequency of train services from railway stations in Croydon is provided by Figure 10-1 which shows the number of trains stopping at each station during the morning peak (0800 to 0900 hrs). It shows that stations to the south of the Borough have at least 4 trains per hour to both a CMC and central London destination. The accessibility of the CMC by rail from within the Borough is illustrated by Figure 10-1. This shows the number of trains serving each local station in the morning peak with a destination to either East Croydon or West Croydon stations.

Norwood Junction, Purley, South Croydon and Purley have the best level of service towards the CMC with at least 9 trains serving the station. The remaining stations have at least 4 to 6 trains stopping at each of the station which suggests that the rail network provides good links to the CMC from local stations. The CMC to local areas are less well served with rail service frequency reflecting the tidal pattern of commuter trip patterns. Consequently rail services in the evening peak show the reverse.

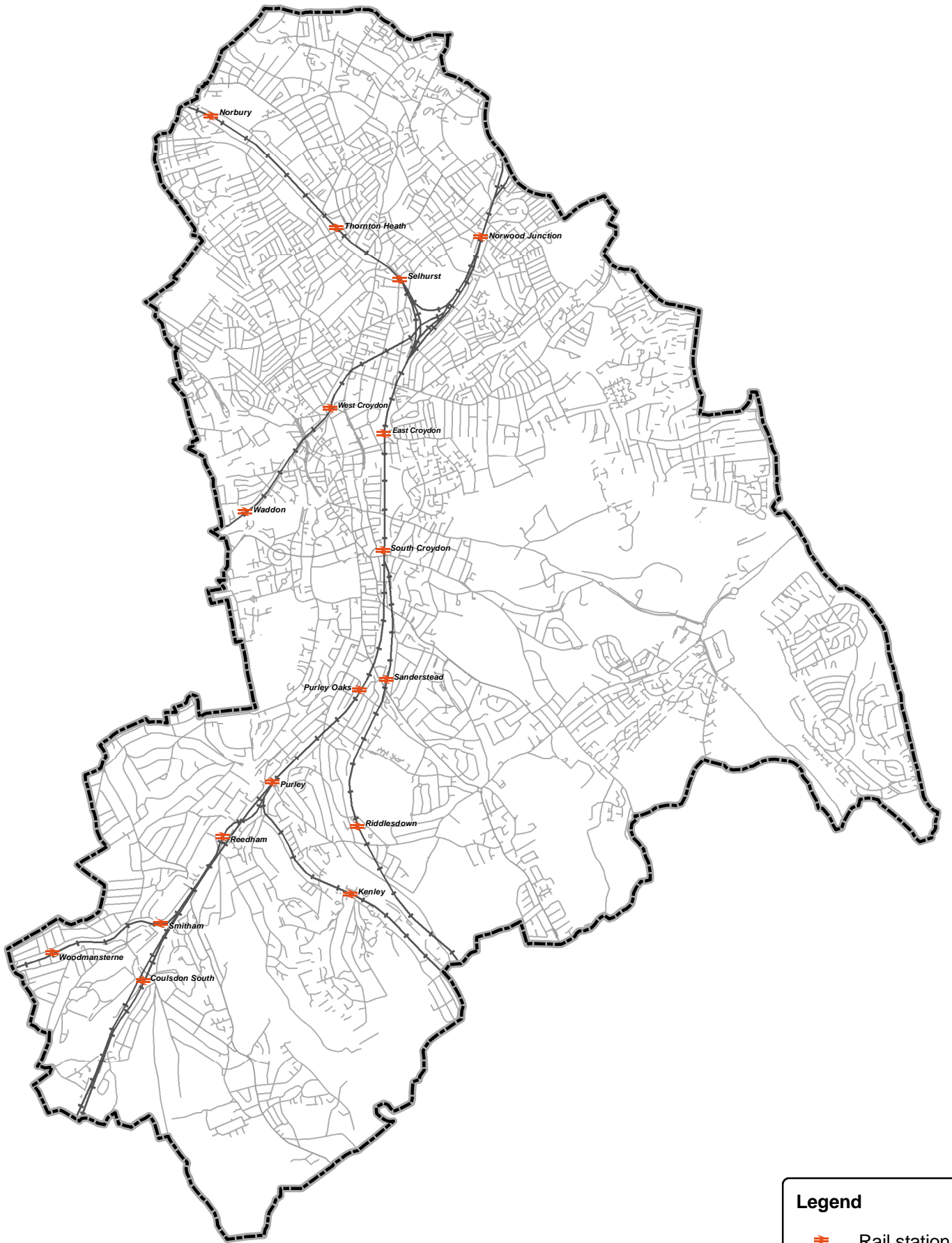
Figure 10-1: Train service stopping frequencies



Network infrastructure

There are 16 railway stations in the Borough¹⁰ whose location is illustrated in Figure 10-2. The Borough has good coverage of railway stations except in areas to the east where the rail network does not pass through. Access to rail services from these areas is however covered by Tramlink which is discussed in the next Chapter.

¹⁰ Norbury, Thornton Heath, Selhurst, Norwood Junction, Waddon, West Croydon, East Croydon, South Croydon, Purley Oaks, Purley, Reedham, Woodmansterne, Smitham, Coulsdon South, Sanderstead, Riddlesdown, and Kenley



Legend	
	Rail station
	Railway

0 1.5 3 Kilometres



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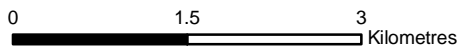
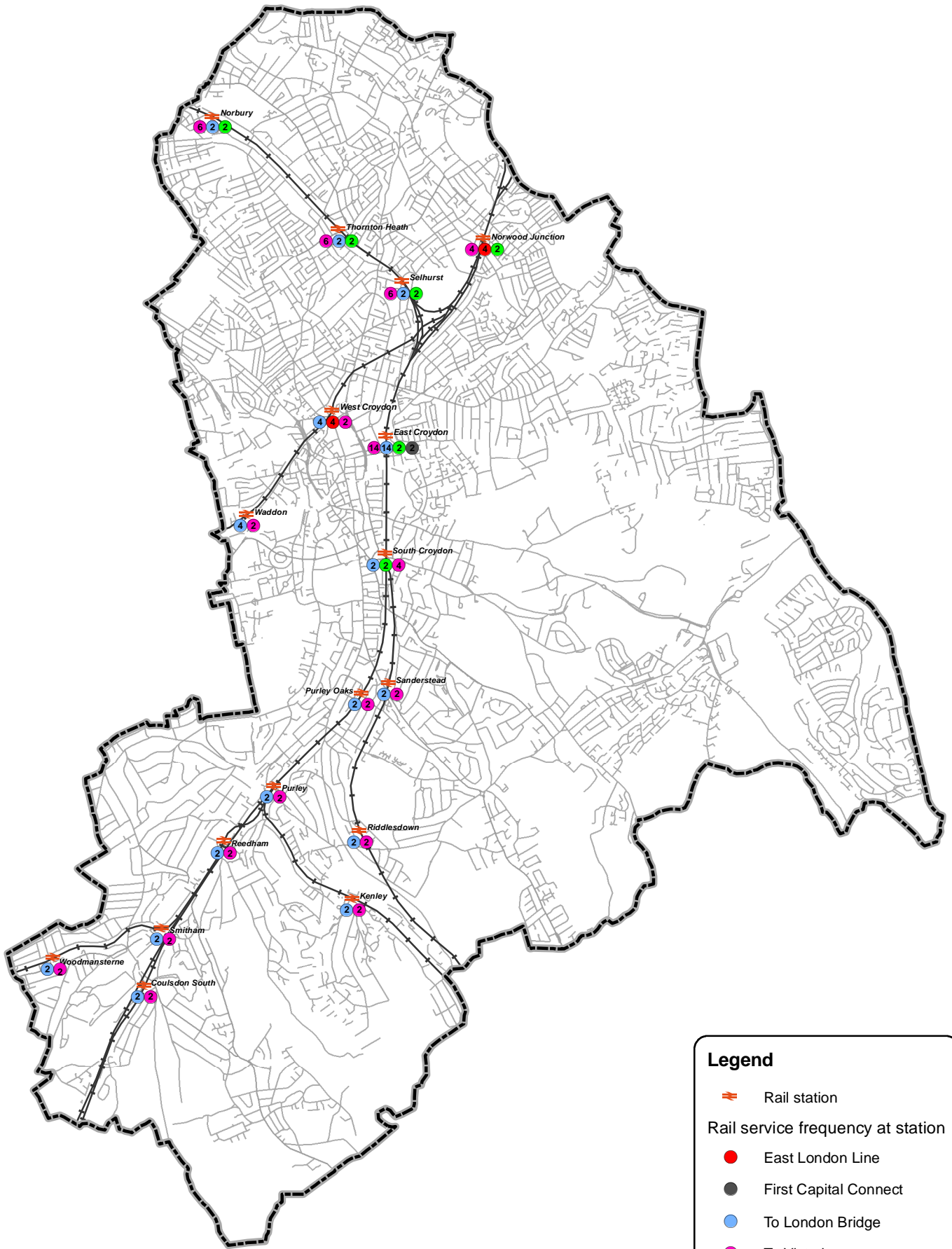
Location of railway stations

Date	May 2010
Scale	1:65,000 @ A4
Drawn By	TH
Checked By	PL
Figure Number	Figure 10-2

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Legend

- Rail station
- Rail service frequency at station**
- East London Line
- First Capital Connect
- To London Bridge
- To Victoria
- West London Line

Croydon Borough Wide Transport Strategy

Stopping frequency of rail services

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10.2.3 Performance

Network planning

There are no current plans to extend the National Rail network to new destinations and none have been suggested by key stakeholders during the preparation of this Strategy. For those areas not served by rail because of there being no convenient local station or capacity constraints (that result in overcrowded and infrequent services) make services unattractive, it is suggested that Tramlink extensions offer a more realistic rail solution (see Chapter 11).

The East London Line extension and Thameslink proposals will increase over the next 5 years the number of stations more easily accessed from Croydon including important destinations within North London (Finsbury Park & New Cross) and beyond to Peterborough and Cambridge.

Network capacity

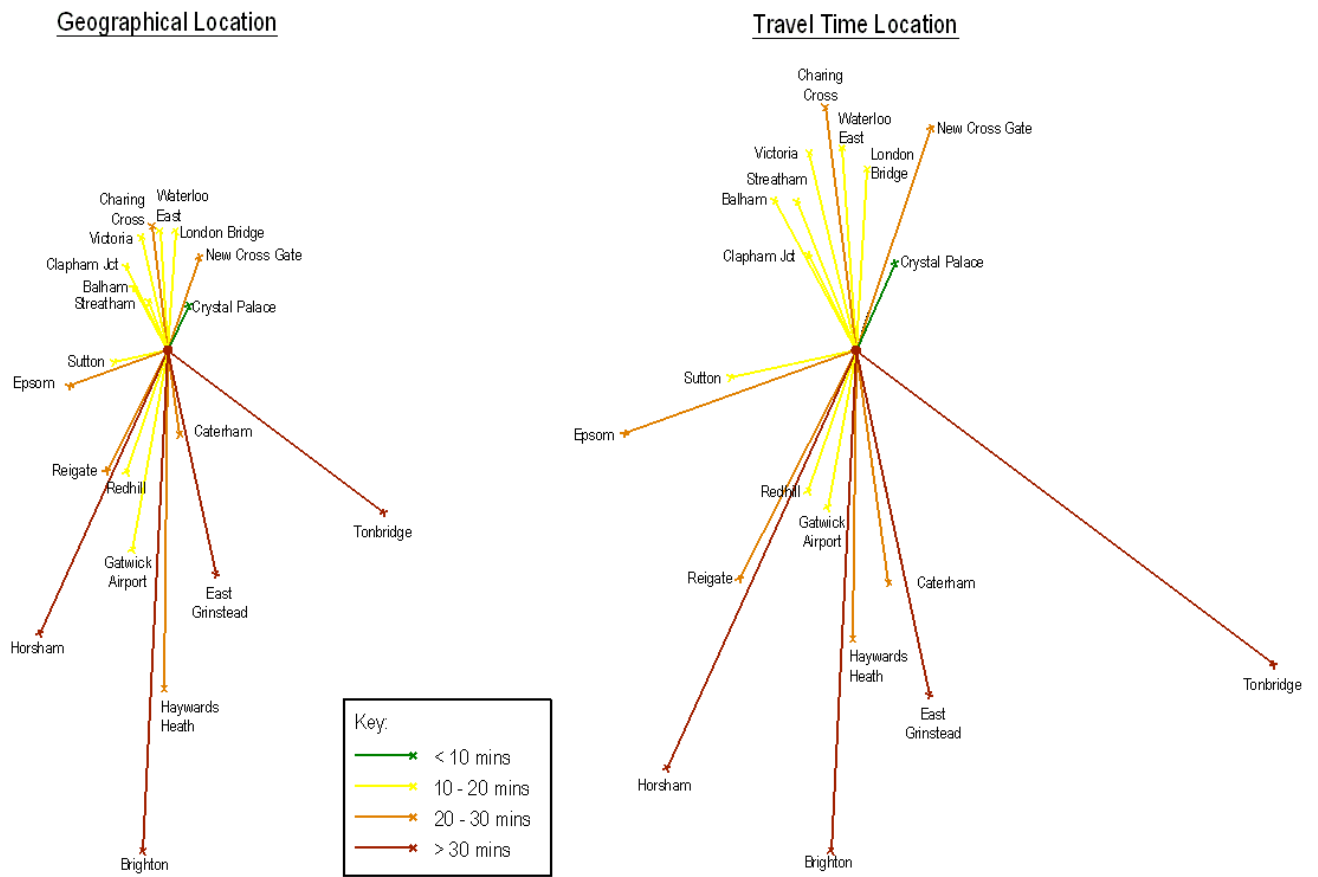
Travel time: Train travel times from East Croydon and West Croydon stations to key destinations are shown in Figure 10-4 . The geographical distance is also shown to indicate relative (i.e. between Brighton and Croydon) train speeds. In the morning peak hour (0800 to 0900 hrs) central London (London Victoria or London Bridge) can be directly accessed from East Croydon in less than 20 minutes (20 trains per hour) while from West Croydon it takes about 30 minutes (4 trains per hour).

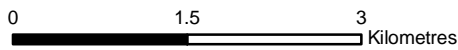
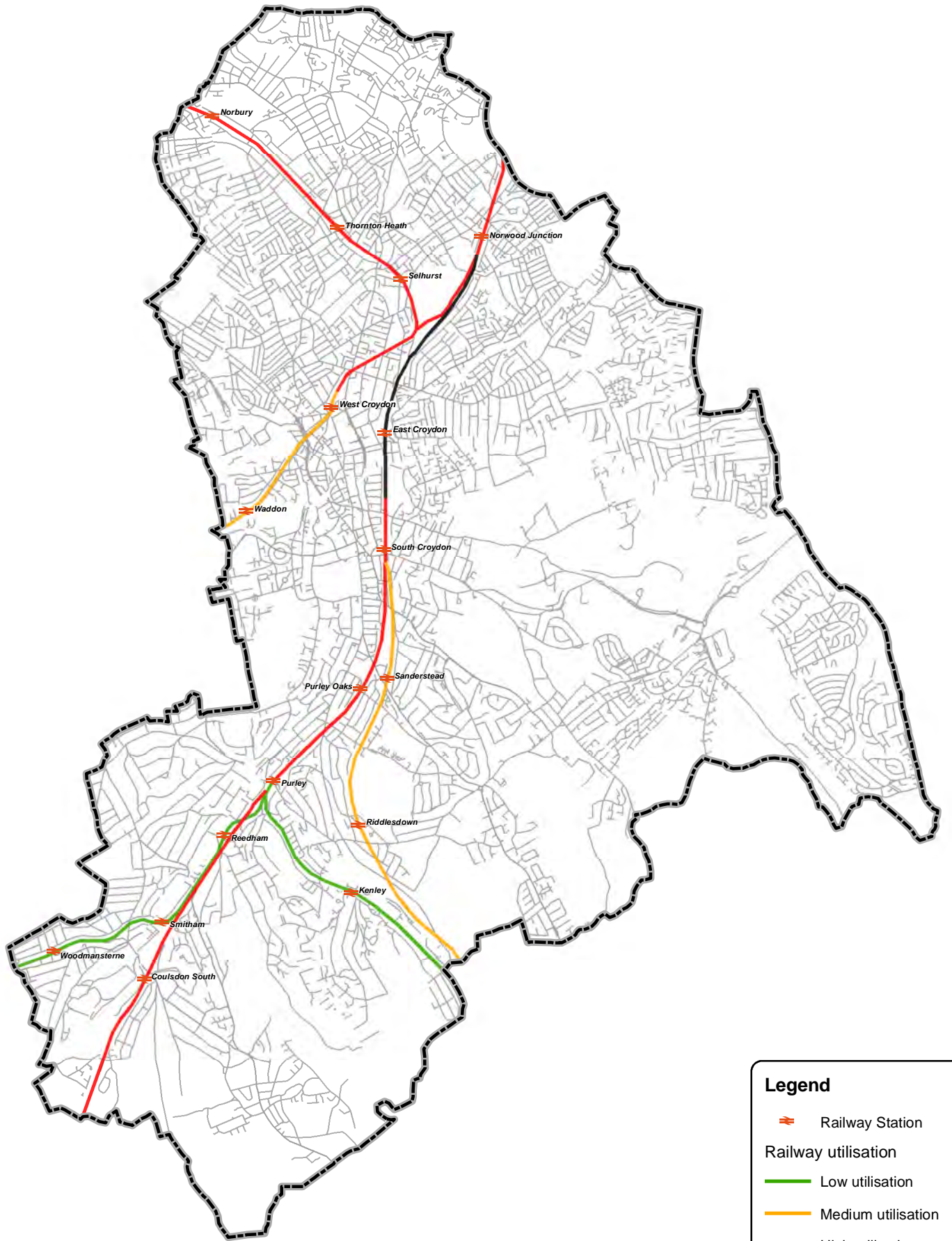
Train speeds are highest along the BML from Brighton and Haywards Heath into Croydon and are slowest from destinations such as Tonbridge, Horsham and Reigate. Train speeds slow between London and Croydon (relative to Brighton trains) due to the number of trains converging on London Victoria or London Bridge station but access times between Croydon and central London are still very good.

Track utilisation (track capacity): On the approach to East Croydon station where the two lines connecting London Victoria and London Bridge meet track utilisation is very high. The high frequency services to Gatwick Airport and Brighton contribute towards this high utilisation of the railway tracks (see Figure 10-5). The utilisation of the rail track throughout the Croydon area is also high compared to the surrounding network and is a major constraint on improving the train service frequencies in the future to accommodate growth and potential increased demands. **[NRN.01]**

Train utilisation (overcrowding): In the morning peaks, there is a significant number of standing passengers on train services at the following train stations: Purley, Purley Oaks, Riddlesdown, Sanderstead, South Croydon, Waddon, West Croydon, Norwood Junction and East Croydon (see Figure 10-6). While most services are over crowded in peak hours, there is capacity to carry additional passengers off peak and against peak flows. For instance, there is capacity to carry more passengers between Croydon and Redhill/ Gatwick in the morning peak. Some stations are particularly quiet off peak and it has been suggested that the smaller stations in the south of the Borough could play a more important role in local transport. **[NRN.01]**

Figure 10-4: Rail network and key destinations





Legend

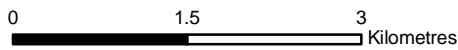
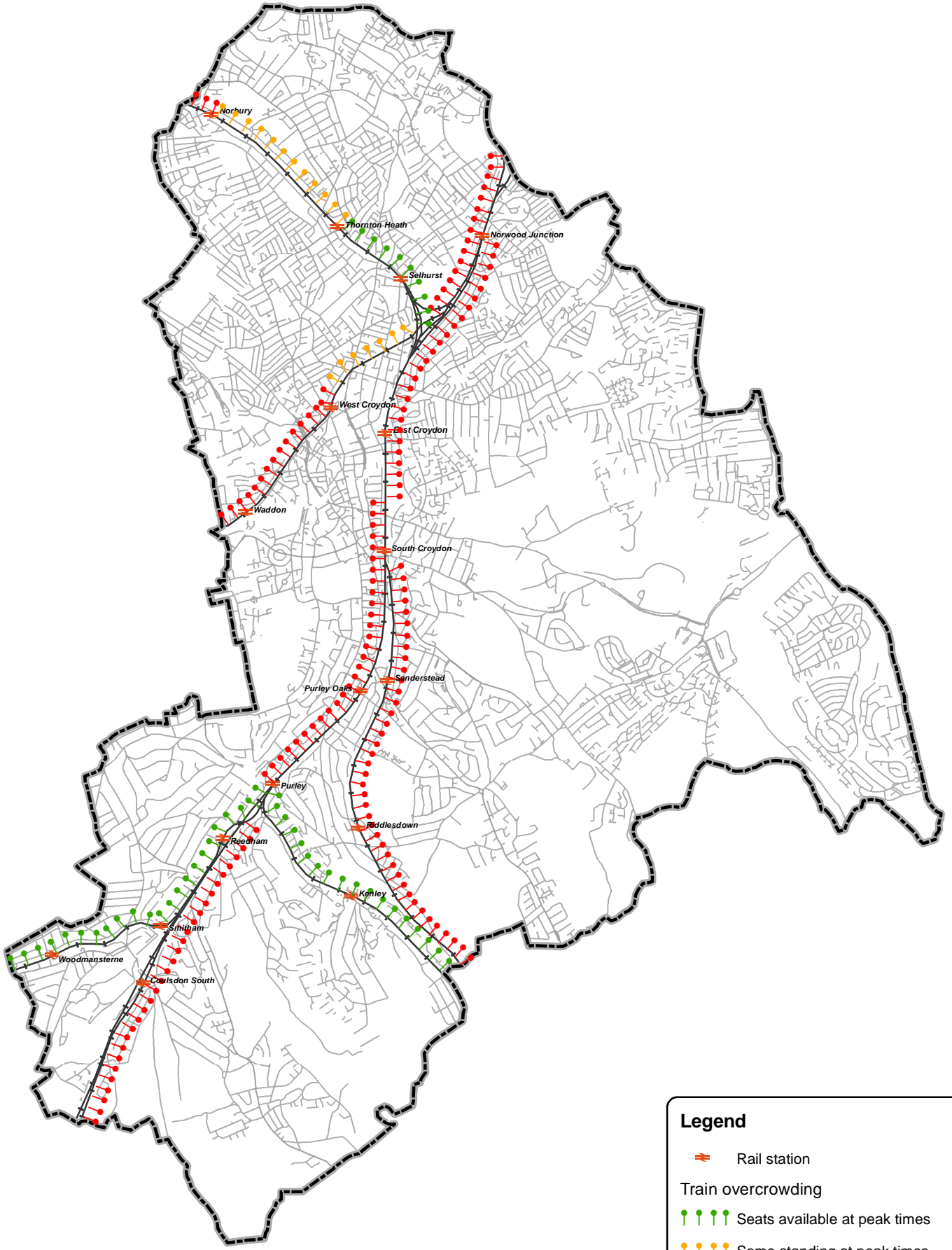
- Railway Station
- Railway utilisation**
- Low utilisation
- Medium utilisation
- High utilisation
- Very high utilisation

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Railway network - track utilisation

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Legend

- Rail station
- Train overcrowding**
- Seats available at peak times
- Some standing at peak times
- Significant standing at peak times

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Railway network - train overcrowding

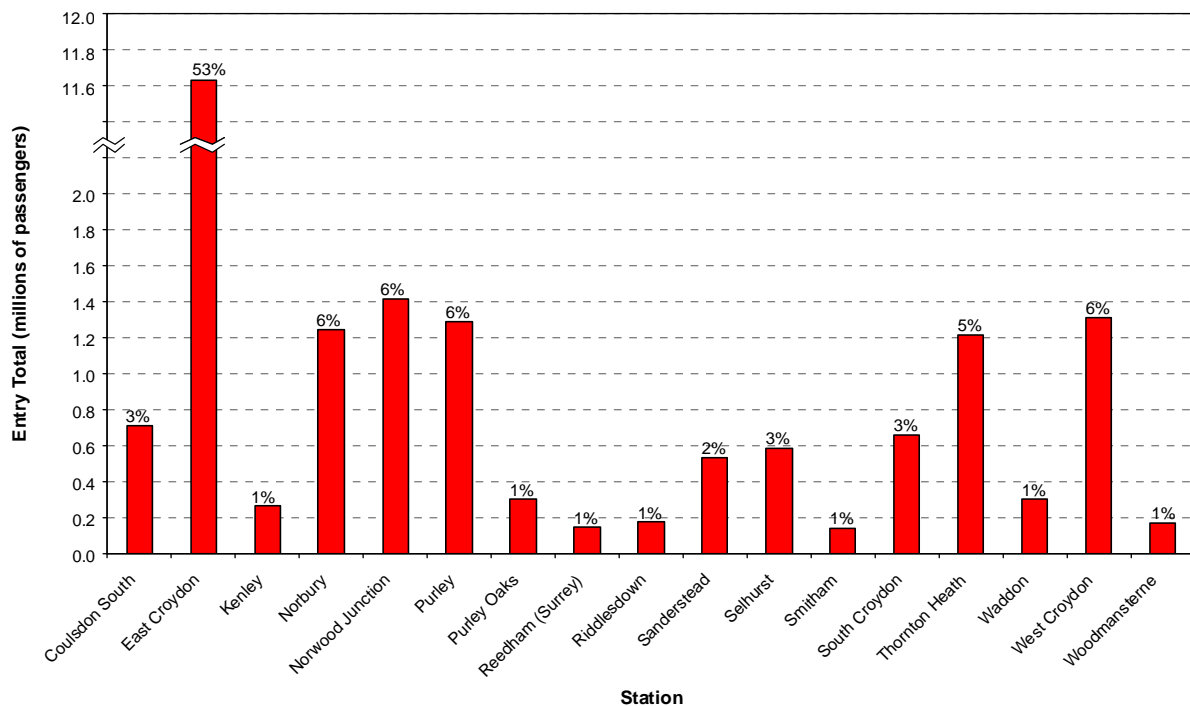
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Network infrastructure

The number of passengers using stations in Croydon varies considerable as shown in Figure 10-7 which shows the total number of people entering the station each year. Passenger numbers are by far the greatest at East Croydon railway station reflecting its importance to the CMC and a key interchange station for trips into central London. East Croydon is the 10th busiest in UK serving key central London destinations and those towards the south coast. West Croydon railway station is the next busiest, serving mainly suburban destinations within London but also direct trains to London Victoria or London Bridge.

Other stations within the Borough will generally connect to either East or West Croydon railway stations with services either northbound towards London, southbound towards, Gatwick Airport and Brighton (via East Croydon) or westwards towards Sutton, Epsom Downs and Horsham (via West Croydon). The South London Rail Utilisation Strategy [Network Rail, 2008] indicates there will be 4-6 services available for each of the outlying stations in the AM peak hour (8am-9am) in 2010.

Figure 10-7: Station usage



East Croydon station [NRN.02]: This station is one of the two most overcrowded stations in London with figures indicating that between 2.5 million and 3.25 million passengers use each of East Croydon's six platforms every year [London Assembly Transport Committee, 2009]. Strategic Business Plan's produced by Network Rail [Network Rail, 2007 and 2008] identified a specific funding requirement for passenger congestion relief works at East Croydon while a Delivery Plan [Network Rail, 2009a] sets out the scope of work for East Croydon to include:

- increased passenger circulation area on the concourse;
- substantially increased gateline capacity;
- improved passenger flows from the platforms to the concourse; and
- increased passenger circulation space on the platforms.

The current preferred scheme developed during the option selection phase will expand the size of the station concourse by developing the lands to the east and west of the station building. It will also reduce the concentration of retail tenancies and remodel the overall concourse to ensure improved passenger flows. Platform accommodation will be removed to ensure improved circulation space. Planning permissions will be required to extend the station building into adjoining Network Rail land holdings to the east and west of the station. Passive provision for an additional platform to the west of the station is currently included in the project. The desired output of the East Croydon station capacity project is to deliver a station that accommodates predicted passenger growth over the next 30 years.

West Croydon [NRN.03]: West Croydon station is a major access point for shoppers and workers in central Croydon but the pedestrian route between the station entrance on London Road and the High Street is constrained by the narrow footways, congested roads and busy junctions. Interchange with bus and tram services is also poor with no direct link to the tram and bus stops, despite their location adjacent to the railway.

It has been suggested that the taxi rank close to West Croydon encourages illegal parking (generally by minicabs) which in turn causes delay to traffic including buses and trams. Cycle parking at the station could also be improved if this mode of access is to be encouraged.

The station lies within the West Croydon Masterplan area from which there are long-term plans, as part of an overall re-development of the area, to have better connections between rail, tram and bus services. All three Tramlink routes use the West Croydon stop and the adjacent bus station is a hub for many London Buses services, including the X26 bus to Heathrow Airport and services to Surrey.

Recently completed track remodelling work to accommodate the terminating ELL services has resulted in the out of use bay platform 2 being used to extend the Up platform 3. The bay platform 1 has been retained but the station would struggle to cope with any additional services in its current configuration.

Norwood Junction [NRN.04]: Is a well used station but has number of deficiencies that discourage use. The station was originally operated by Southern Railways however was taken over by LOROL in September 2009 as part of the management for the East London Line extension (see Section 10.3.1). A pedestrian subway links each of the 7 platforms within the station via steps.

The station building is fairly inaccessible for disabled users, with level access to only one operating Platform. An 'Access for All' review conducted by Network Rail identified the need for improvements at the station which are being carried out in preparation for East London Line services.

Access routes to the Station can be poor, particularly at night when the public subway and links to South Norwood High Street or across the nearby Recreational ground become more isolated. A recent Areas Based scheme due for implementation is seeking to address these problems.

Selhurst [NRN.13]: There is limited information of the quality of both the station and access routes to it but stakeholder comments suggested the station environs were unattractive and areas both surrounding and within the station seemed isolated particularly at night.

Station access [NRN.02 to NRN.19]: Several stations within the Borough are perceived as being disconnected from town centres, with poor wayfinding and severance by busy roads. These include East Croydon, Purley, Coulsdon and Waddon stations.

Many railway stations within the Croydon area also lack fully step free access to accommodate for the needs of passengers with mobility problems, these stations include: Norwood Junction, Thornton Heath, Selhurst, Waddon, West Croydon, South Croydon, Purley Oaks, Purley, Kenley, Reedham and Woodmansterne. Pedestrian crowding within the East Croydon railway station is also a particular problem.

CCTV: TfL and the Train Operating Companies have recently invested in station and train improvement, so that all stations in the Borough are now covered by CCTV, and rolling stock is fitted with CCTV to improve safety and security. New cycle storage facilities are provided at East Croydon, Purley Oaks and Selhurst stations.

10.2.4 Common themes

- All peak services are over crowded. All lines through Croydon are at or near to their maximum train capacity. There is spare capacity off peak and against peak flows of passengers.
- East Croydon station: lack of platform capacity, platform and concourse overcrowding, poor access routes for pedestrians and cyclists, no spare capacity to accommodate additional trips generated by the growth scenarios being proposed within the CMC.
- West Croydon station: lack of platform capacity for future growth, inadequate bus and tram interchange, poor pedestrian and cycle links.
- Several other stations are in need of improvement relating to their connectivity to local centres and residential areas, step free access, personal security concerns.

10.3 What are the options for change?

10.3.1 Network planning

East London Line

A current enhancement to rail services is the East London Line extension which is taking place in two main phases. Phase 1 (due to be completed by Summer 2010) extends the existing line north to Dalston Junction and south to Crystal Palace and West Croydon and opens up new journey opportunities, particularly with good connections to London Docklands and the Olympic Park. A further transformation will take place by January 2011, when the East London Line extension links with Highbury & Islington through a connection to the North London Railway at Dalston Junction. Phase 2 runs west to Clapham Junction.

It will be operated by London Overground Rail Operations Ltd. (LOROL) who will also take over the operation of West Croydon and Norwood Junction stations bringing in Underground levels of service such as more staffing. The four trains per hour to West Croydon are achieved at the expense of losing a London Victoria and a London Bridge train, but the result will be 4 trains per hour to each of London Victoria, London Bridge and the East London Line. The extension to West Croydon opens in 2010 which should ease overcrowding at East Croydon.

Thameslink

Improvements to Thameslink services are also planned which will result in a consistent pattern of 12 car trains between London Bridge and East Croydon, providing additional capacity. The current franchise operators are planning a programme of running longer trains through Croydon wherever possible, and the Network Rail Sussex RUS suggests a small number of further services that could be lengthened. This was forecast to provide sufficient additional capacity to alleviate over crowding until 2014, but by which time current levels of overcrowding would return.

The Network Rail Sussex RUS forecasts do not take into account any suppressed demand due to current overcrowding, nor do they take into account Croydon's plans for the regeneration of CMC. There is a high risk therefore that over crowding may not improve, even in the short term, and will worsen significantly before 2019.

Furthermore there has been increasing pressure to address the needs of longer-distance rail traffic on the BML, primarily that between the South Coast and the central London termini. The train operator has dealt with this pressure by introducing timetable alterations that have partially squeezed out both inner and outer suburban services. As a result there is now a key gap affecting suburban rail services through East and West Croydon, which will be only partially addressed by the advent of the East London Line Extension from 2010.

Gatwick Express

Although strongly opposed by BAA in the past, the extent of capacity problems at East Croydon station makes the stopping of Gatwick Express services increasingly compelling.

10.3.2 Network capacity

The above planned service improvements should see additional rail network capacity over the next few years. From 2016 onwards it is likely services to and through Croydon will return to the present unacceptable levels of overcrowding, providing only limited capacity to meet growth from that point onwards. If the network is more crowded in peak hours, a key focus should be to make the most effective use of limited capacity to meet local needs where possible. This might include promoting opportunities for counter peak flow commuting, and reconsidering the role of off peak services.

In the longer term there are few options for providing further additional capacity in peak hours using the existing network. The potential for running more trains or longer trains beyond those already planned is extremely limited and would not open up any opportunities to provide a wider range of services or changes in the hierarchy of services. Longer trains might actually reduce track capacity by

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extending clearance times at junctions. The Department for Transport and Network Rail should therefore be encouraged to research the potential to operate double deck trains on the Brighton Main Line route through Croydon.

An alternative to longer or double deck trains would be to implement a series of major projects to alleviate bottlenecks. In the Croydon area these would need to include providing:

- more tracks and platforms at East Croydon station; and
- a substantial alteration to the junction north of the CMC (where the London Bridge and Victoria lines divide) – this complex junction is a significant capacity constraint with its layout and congestion contributing to poor train performance. [NRN.01a]

These enhancements would need to be planned along with providing more capacity at London termini or providing more route options. While these proposals are long term, planning needs to start now, not least to ensure that land that may be required is not lost.

A substantially more ambitious option would be to develop a new North – South route through Croydon underground. This possibility was mentioned in the Sussex RUS Consultation document. A key advantage to Croydon would be to eliminate some longer distance trains from the surface tracks, offering opportunities to use the rail network to play a more important role in local transport. [NRN.01c]

Opportunities to improve stations in terms of platform capacity, interchange and access are described below.

Network infrastructure

East Croydon station

Pedestrian access between the station and the central areas of the CMC needs to be improved. There are opportunities to do this through the East Croydon Masterplan development and Network Rails plans to enhance East Croydon station.

The East Croydon Masterplan proposals consider new layouts for the area around the station building that include internal and external pedestrian loops. Network Rail plans (along with the economic downturn) aim to reduce over-crowding from current levels until at least 2016. The improvements include a new pedestrian footbridge across the railway tracks to create a new station entrance to the north of the current station building. The footbridge will link to a pedestrian route through the Stanhope development onto Dingwall Road with a future extension in the other direction being proposed towards Cherry Orchard Road. Other improvements being proposed by Network Rail include a rationalisation of retail outlets within the main station building to increase circulation space for pedestrians. This proposal would close the main entrance in favour of more substantial entrances at each end of the building. [NRN.02a]

Another measure to relieve overcrowding would come from the East London Line (ELL) extension with its additional connections between West Croydon station and central London should help reduce passenger numbers at East Croydon. [NRN.02a]

In the longer term the capacity of the station will remain constrained by the number and width of the platforms. Scope to provide additional platforms and a wider corridor for the railway should be investigated, with land potentially safeguarded, and it is understood that Network Rail may include passive provision for this in its station upgrade. [NRN.02b]

West Croydon station

There are short to medium term opportunities to improve the pedestrian link between the station and the retail area along North Street, the quality of the surrounding area, better interchange with bus and tram services (with a possible second station entrance), an improved taxi rank and cycle parking. The

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major opportunity would be the comprehensive redevelopment of the surrounding area to provide a new, high quality, station and transport interchange and which could form part of the West Croydon masterplan development. [NRN.03a, NRN.03b, NRN.03c, NRN.03d]

Network Rail is planning further significant improvements to the track layout and platforms by 2014 [Network Rail, 2008]. Additional rail services from West Croydon station are limited by platform capacity and this document suggests that the post ELL works for West Croydon could facilitate improved terminating capacity for suburban services. This is significant, since it potentially offers a simpler way forward in the short to medium term than providing further terminating capacity in the East Croydon area. In particular, if completed by the time of the London Bridge blockade, 12-car Sydenham Line Thameslink services could be turned round at West Croydon should this route prove to be a favoured Key Output 2 option. The proposed scheme could include creation of a through Up platform 1 and improvements to station concourse and platform access, improved terminating capacity, with capability to turn back 12 car services conflict free of Up services. [NRN.03e]

Other stations

Access to the other stations in the Borough needs to be improved, particularly those serving town centres such as Purley, Coulsdon and Waddon where severance problems need to be addressed. It is suggested that the Council undertake a review of all railway stations within the Borough and assess their priority for funding under TfL's major scheme funding programme (previously know as the Area Based Scheme programme). A particular focus should be on ensuring stations are easily accessed from surrounding areas without need for using a car. [NRN.04 to NRN.19]