ROYAL BOROUGH KENSINGTON & CHELSEA

URBAN DESIGN STRATEGY - DRAFT SPD

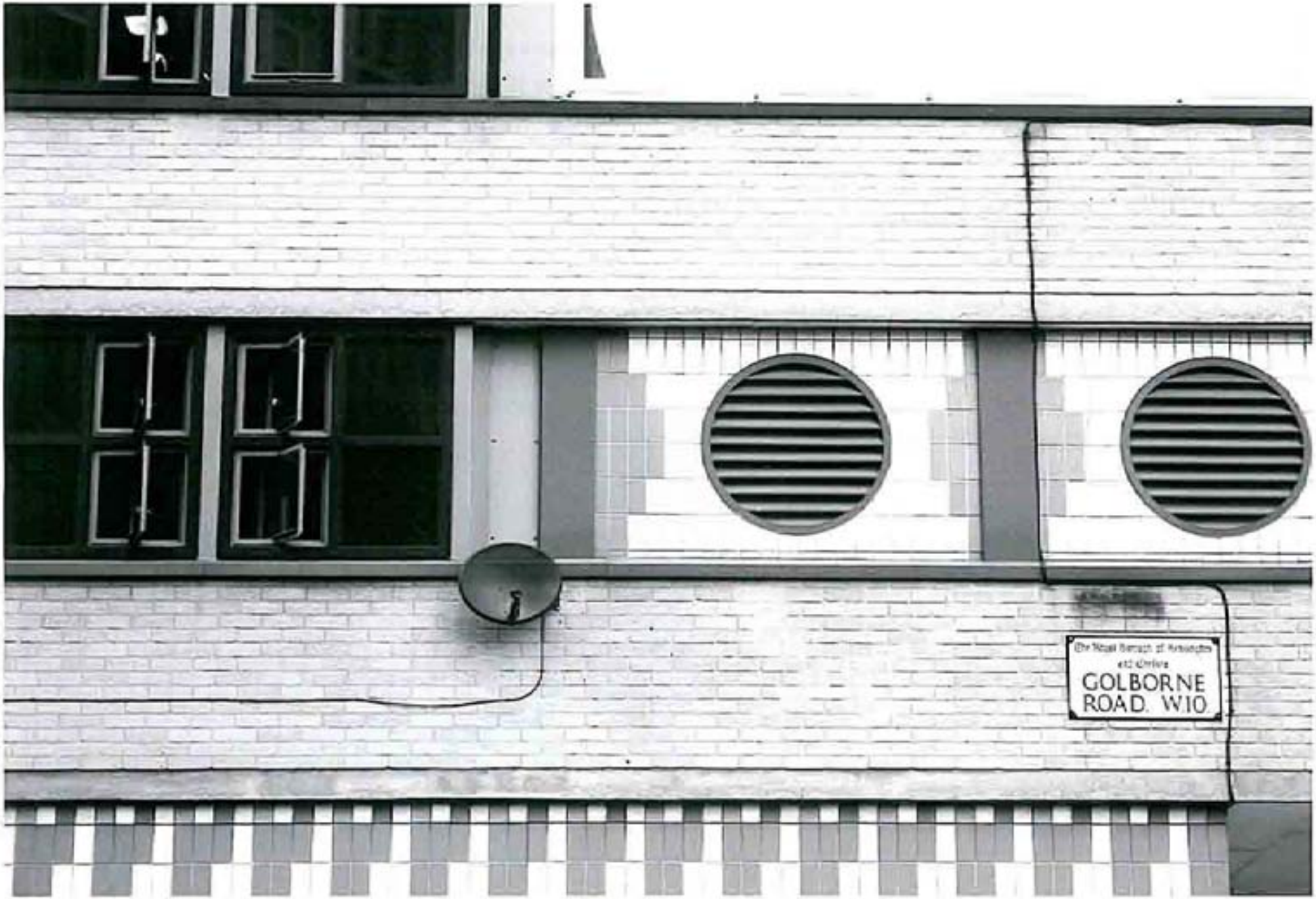
Background Report 01

Audit & Analysis

JULY 2006

THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA

urbaninitiatives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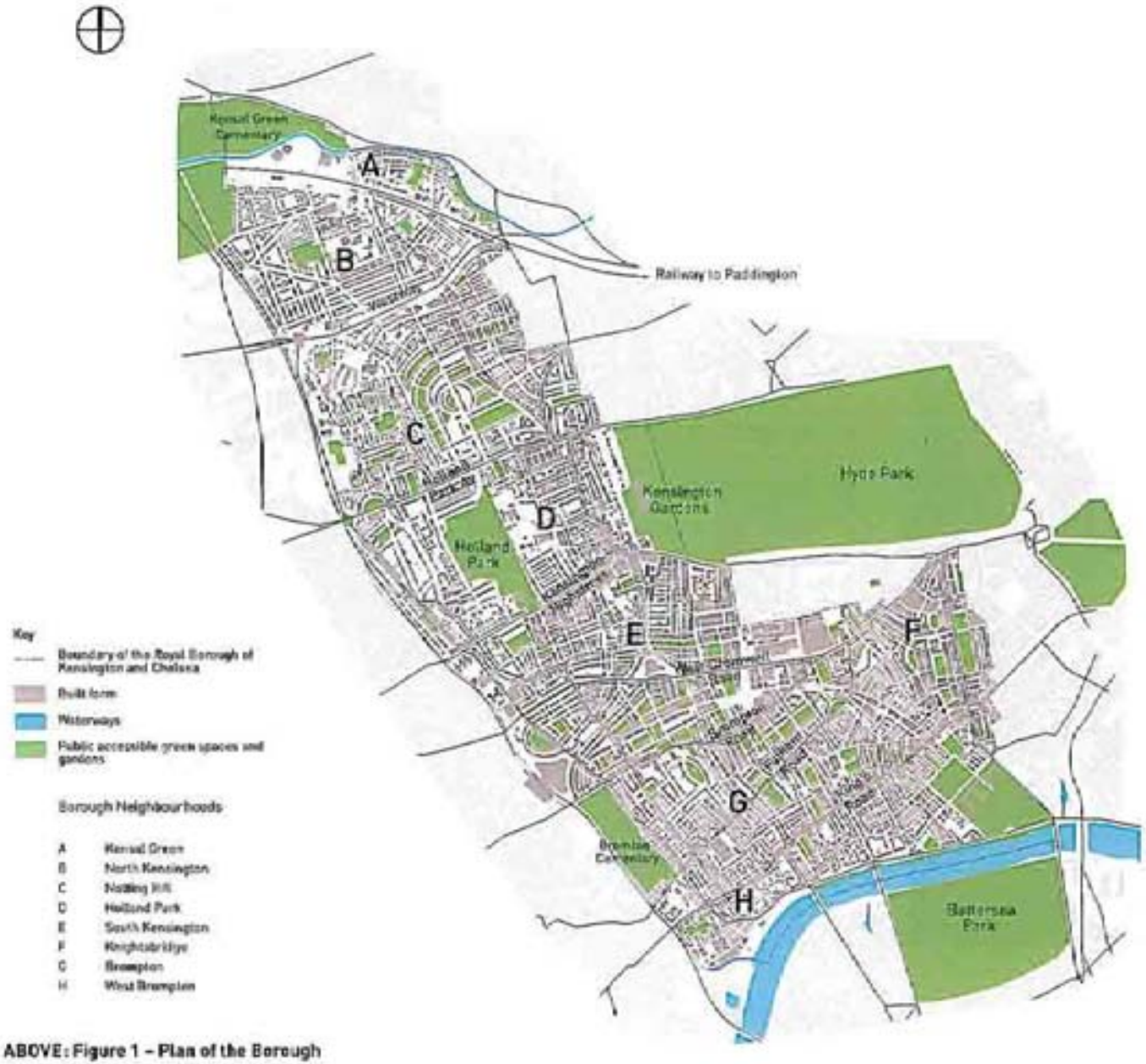

ABOVE: Figure 1 – Plan of the Borough

01

INTRODUCTION

In Autumn 2005 the Royal Borough of Kensington and Chelsea commissioned Urban Initiatives to prepare a Draft Supplementary Planning Document (SPD) - Urban Design Strategy for the Royal Borough. As part of this work a series of reports were produced which led to the preparation of the Draft SPD. These reports were summarised into three Background Reports that provide with detailed guidance and additional information as background to the SPD document.

This report is Background Report 01 – Appraisal and Analysis. It summarises working stage 1 and covers policy context, urban design analysis, a survey of character areas and a brief transport analysis of the Royal Borough.

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POLICY CONTEXT

Planning Policy Guidance Notes (PPGs) and their replacements Planning Policy Statements (PPSs) are prepared by the government to provide guidance to local authorities and others on planning policy and the operation of the planning system. Local authorities must take their contents into account in preparing their development plans. The guidance may also be relevant to decisions on individual planning applications and appeals.

PPS1

PPS1 sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system. The guidance underlines the importance of high quality design:

- Good design ensures attractive usable, durable and adaptable places and is a key element in achieving sustainable development (para. 33).
- Planning authorities should plan positively for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes.
- Good design should be integrated into the existing urban form and the natural and built environments (para. 35) and policies should ensure that developments respond to their local context and create or reinforce local distinctiveness (para. 36).
- Design which is inappropriate in its context, or which fails to take the opportunities available for improving the character and quality of an area and the way it functions, should not be accepted (para. 34).

BY DESIGN (CABE/DETR)

PPS1 is supported by good practice guidance (para. 37) By Design – Urban design in the planning system: towards better practice. By Design identifies seven objectives of good urban design that need to be considered within the context of an environment. These objectives allow the analysis of the factors that contribute to successful streets, spaces, villages, towns and cities and are as follows:

- Character - A place with its own identity.
- Continuity and Enclosure - A place where public and private spaces are clearly distinguished.
- Quality of the public realm - A place with attractive and successful outdoor areas.
- Ease of movement – A place that is easy to get to and move through.
- Legibility - A place that has a clear image and is easy to understand.
- Adaptability – A place that can change easily.
- Diversity - A place with variety and choice.

PPG3

This note concerns the supply, density, and mix of housing types in England. Local Planning Authorities are responsible for the implementation of the PPG. It sets down the need, in urban design terms, to:

- avoid housing development which makes inefficient use of land and provide for more intensive housing development in and around existing centres and close to public transport nodes;
- promote improved quality of developments which in their design, layout and allocation of space create a sense of community; and
- introduce greater flexibility in the application of parking standards. (para. 11)
- create places and spaces with the needs of people in mind, which are attractive, have their own distinctive identity but respect and enhance local character; and
- focus on the quality of the places and living environments being created and give priority to the needs of pedestrians rather than the movement and parking of vehicles. (para. 56)

PPG3 also sets down targets for building on previously-developed land (60%) (para. 22) and housing density (30 dph) (Annex C).

DRAFT PPS 3

The statement re-iterates the objectives for planning for housing in England. The statement's goals are to ensure supply and choice in housing designed to a high quality with good access to job, key services, and infrastructure. Both Regional Planning Bodies and Local Planning Authorities are responsible for the implementation of the PPS. Strategic goals such as housing provision, density, and brownfield targets will be set by the Regional Authority for the Local Authorities (para. 5).

It sets down the need, in urban design terms to:

- creating places, streets and spaces which meet the needs of people, which are attractive, have their own distinctive identity, and positively improve local character;
- which promote designs and layouts that are inclusive, safe, take account of public health, crime prevention and community safety; and
- informed by its wider context, having regard not just to neighbouring buildings but to the townscape and landscape of the wider locality. (paras. 34-37)

It retains targets for building on previously-developed land (60%) (para. 18) and housing density (30 dph) (Annex C). However, these targets can be revised both locally and regionally.

METROPOLITAN POLICIES

LONDON PLAN

The London Plan provides the Londonwide context within which individual boroughs must set their local planning policies and sets the policy framework for the Mayor's involvement in major planning decisions in London.

The Plan asks boroughs to ensure that developments among other principles maximize the potential of sites; are sustainable, durable and adaptable; respect local context, character and communities; and respect, protect and enhance London's built heritage (para. 4.36). Policy 4B.7 states that the Mayor will, and boroughs should, work with local communities to recognise and manage local distinctiveness ensuring proposed developments preserve or enhance local social, physical, cultural, historical, environmental and economic characteristics.

The London Plan sets out policies that affect the Royal Borough in seven areas: Central London, Town Centres, Tall Buildings, London View Protection Framework, the Blue Ribbon Network, Strategic Cultural Areas, and the Thames. The strategic priorities for Central London, including the Royal Borough of Kensington and Chelsea (Policy 5B.1) address culture and tourism, intensification in town centres, infrastructure projects, and protecting the quality of the environment. The Central London policies are set out in the Central London Sub-regional Framework.

The Royal Borough has a range of town centres from international (Knightsbridge) to local centres. The London Plan promotes the economic growth of mixed-use town centres (Policy 2A.5) to meet community needs and supports sustainable development. Strategic Cultural Areas, such as South Kensington, are encouraged, protected and enhanced (Policy 3D.4). The policy calls for boroughs in their UDPs to encourage arts and cultural facilities, and, if appropriate, support evening and night-time entertainment.

The River Thames and the Grand Union Canal have special design considerations. Major developments in the Thames Policy Area and the Blue Ribbon Network (Grand Union Canal) should have a design statement to ensure development respects the landscape and historical setting (Policies 4C.21, 4C.25, 4C.28).

DRAFT SUB-REGIONAL FRAMEWORK: CENTRAL LONDON

The Strategy regards Central London, including Kensington and Chelsea, as having:

- Strong identity through a set of distinctive places to attract people and investment
- Intense activity as a place for buyers, sellers, workers, competitors, and visitors as well as residents centred in one place
- 'Arguably' better connections than anywhere else on earth (para. 13)
- Central London, in the Mayor's view, is set to experience strong population growth (31% of all of Greater London's growth) and employment (38%) growth during the life of the London Plan (para. 23).

LONDON PLAN SUPPLEMENTARY PLANNING GUIDANCE: HOUSING (2005)

The London Plan SPG for Housing sets out policies for borough housing targets, density ranges, housing choice and mix, and affordable housing targets for the 33 London Boroughs. For the years 1997-2016, Kensington and Chelsea is expected to deliver on average 540 housing units per year (Table 3A.1). The Housing SPG has set a strategic objective of 50% affordable housing (Policy 3A.7).

The Sustainable Residential Matrix sets out the expected ranges of density in accordance to transport provision and housing mix and type (Table 4B.1). As a general rule, areas with good public transport accessibility should have a plot ratio of at least 3:1, and in more highly accessible areas up to 5:1 (para 10.4). An overall mix of 1-bed (32%), 2/3-bed (38%), and 4+ bed (30%) new units are required in Greater London (para. 11.3).

LOCAL POLICIES
UNITARY DEVELOPMENT PLAN (MAY 2002)

The overall aim of the Kensington and Chelsea UDP is 'to maintain and enhance the character and function of the Royal Borough as a residential area and to ensure its continuing role within the metropolitan area as an attractive place to work and live'. The UDP gives priority to the protection of the residential character of the Borough (STRAT 1) and furthermore seeks an increase in residential provision (STRAT 2). The Borough supports London's economic growth in those parts that are recognised as having capacity for additional commercial or industrial activity (STRAT 3) and that are or will be well served by public transport (STRAT 5, STRAT 7). Finally, sustainable development is promoted to conserve and enhance the environmental quality of the Royal Borough (STRAT 8).

The UDP sets out that all new development has to present a high standard of design (CD27, CD62) and preserve and enhance the residential character of the Borough (STRAT 9). New developments should 'be sensitive to and compatible with the scale, height, bulk, materials and character of the surroundings' (CD27) and reflect the traditional urban form of the Borough by preserving local plot widths, building lines, roofscape and open space (CD 28). The Borough will resist development, which will significantly overshadow existing adjoining buildings and amenity spaces (CD33) and/or harm the visual privacy of residents (CD35). The Borough will also oppose any new building 'which would significantly exceed the

height of neighbouring buildings and which would harm the skyline' (CD37).

The UDP requires the character or appearance of each conservation area to be protected and enhanced (CD57). Therefore, any development in a conservation area has to preserve the character of the area (CD61) and be compatible with scale and pattern, bulk and height, proportion and rhythm, roofscape, materials as well as landscaping and boundary treatment of the surrounding (CD62). The Borough makes it clear that it will resist any development, which would adversely affect the setting of a listed building (CD69).

SUPPLEMENTARY PLANNING GUIDANCE (RBKC)

Streetscape (undated) – complements Transport Standards SPG (July 2004)

Streetscape supports the overall aim of the 2002 UDP. The Royal Borough believes firmly that streets are places and its fine buildings should be complemented by streets of the same design quality. Streets in the Royal Borough should give distinctiveness and character to an area and street management should play a key role in recognising opportunities.

PUBLIC ART STRATEGY SPG (AUGUST 2004)

The strategy supports Policy LR36 in the 2002 UDP in order to negotiate the provision of new works of art or performing arts space in association with development proposals. The SPG applies the policy to identify locations, control the quality of work and generate finance for public art. Locations where public art is to be provided should be identified through the planning system. The quality of work should be governed by a public arts panel. Finances should be obtained through planning gain, ideally through the 'percent for art' scheme for major applications (currently above 10 dwellings or 1,000 square metres of floorspace).

TREE STRATEGY SPG (JUNE 2005)

The tree strategy supports policies contained in Section 4.7 of the 2002 UDP. The overall strategy is "to ensure trees are planted, preserved and managed in accordance with sound arboricultural practice, with regard to their contribution to amenity and the urban landscape, for both the current and future generations." Trees should be managed and maintained (Strategic Objective (SO) 1, SO 2), and, where possible the stock of trees should be increased (SO 4). Trees have a relationship with architecture, especially when deciding on new trees (SO 3). On development sites, trees will be protected or replaced with high quality standards (SO 5) backed up by enforcement (SO 6) and education (SO 7).

LOCAL DEVELOPMENT SCHEME (MAY 2005)

RBKC's Local Development Scheme indicates that certain urban design policies (CD 27, CD 28, CD 37) will be saved and supplemented by the Urban Design Strategy, which will become a Supplementary Planning Document.

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HISTORICAL CONTEXT

The patterns of urban development, which characterise the Royal Borough today, have to a great extent not been changed since the late 19th century.

Early development in the borough in the 17th century was largely concentrated along a number of radial routes running into the City of London and the Royal Palaces of Westminster from the west. Theses routes still remain the only continuous through routes across the Borough and have become vital arteries of the metropolitan area.

The subsequent development of residential estates in the 19th century established a fine grain of streets and spaces between these corridors. The estates evolved separately and show an internal organisation, which generally revolves around a set of garden squares. Although neighbouring estates joined their streets together, they largely failed to provide a new network of connecting streets on a wider Borough scale. This pelecemeal development and the lack of an overall plan accounts in particular for the limited north-south connectivity within the Borough and puts pressure on the historic arterial routes as only thoroughfares. However, the Georgian and Victorian development structures proved robust with buildings being adapted to meet today's needs, and streets and spaces largely coping with modern requirements. More than one and a half century later many of the urban quarters in Kensington and Chelsea represent one of the most desirable residential living environments in central London, and 70% of the Borough are designated as conservation areas.

With the Grand Union Canal in the north, the Creek and later West London Railway Line in the west and the River Thames in the south, physical barriers make up the majority of the Borough boundaries. With only a limited number of bridge-links into neighbouring areas, these border zones developed into typical fringe locations with a concentration of industrial and other peripheral uses such as cemeteries.

With the building of the railway and underground network development was concentrated and intensified around stations. These places became local centres and activity hubs and remain local areas until today.

From mid 1850s onwards some of the main streets began to develop into attractive shopping destinations, particularly with the arrival of major department stores, such as Harrods, Harvey Nichols, Peter Jones and Barkers in Knightsbridge, Sloane Square and High Street Kensington. During the same period the Borough saw the development of local theatres, cinemas, major museums and later exhibition centres, which still today attract millions of visitors in the Borough every year.

With the opening of "Bazaar" in the mid-1950s and the consecutive establishment of numerous exquisite fashion boutiques, Kings Road began its rapid transformation from a local high street into a place for the rich and beautiful. This laid the base for the particular cultural image and identity of Chelsea as exquisite and affluent living and shopping area. Notting Hill with Portobello Market and the yearly Notting Hill Carnival developed an equally strong identity and became important visitor attractions.

The built fabric and form of the Borough was to a large extent complete by the early 20th century. However it has continued to absorb change. War damage, the decentralisation of industries along the rail and waterways and slum clearance projects have led to the development of a number of large social housing estates in the Borough, particularly in North Kensington and Kensal. Built in modernist style these often included high-rise residential towers. Equally in other areas parts of the Borough the stock of large Victorian and Edwardian townhouses was subdivided into smaller flats to satisfy changes in market demands and lifestyle requirements.

During the past decades the Borough developed an increasing social polarisation between some of the sub areas. Large parts in the centre and south of the Borough became very affluent residential areas, registering in some parts the highest property prices in the country. Other parts towards the edges and especially in North Kensington are home to some of the most deprived and impoverished communities in England (index of deprivation 2004).

ABOVE: Mary Quant's shop Bazaar on the Kings Road, photographed by John Bignell, 1959; Copyright: RBKC Libraries

ABOVE: Figure 2 – Built Form 1741

ABOVE: Figure 3 – Built Form 1820

ABOVE: Figure 4 – Built Form 1863

ABOVE: Figure 5 – Built Form 1900

ABOVE: Figure 6 – Built Form 1950

04

URBAN DESIGN ANALYSIS

SUMMARY

- Except for small pockets the urban fabric of the Royal Borough is developed. Large parts of the borough are characterised by a coherent and fine grained historic street pattern with an outstanding building stock primarily from the Georgian, Victorian and Edwardian period that comprise of semi-detached and terraced town houses and mansion blocks. Some quarters are perceived as the most desirable residential areas in Central London. Other neighbourhoods especially in the north comprise of a series of large housing estates and are home to a number of deprived and impoverished communities.

- The Borough boundaries to the south, west and north are formed by major physical barriers. The areas along the railway corridors in the west and towards the grand union canal to the north particularly suffer from their fringe location with less intensive development patterns and lower value uses. Entrance routes into the borough are heavy trafficked and do not represent attractive gateways in to the Borough and Central London. Often areas on either side of the barrier condition face similar issues and may benefit from being addressed through an integrated cross border initiative.

- A number of east-west streets divide the Borough into different segments. On a metropolitan level these routes function as key access and transit corridors. Additionally they perform a significant shopping and retail function on a local and metropolitan scale. On some of these routes traffic has an adverse impact on the pedestrian environment. These areas are less attractive and perform below their potential. These corridors will be identified as improvement or showcase projects.

- North-south connectivity across the Borough is poor and less direct. This impinges on legibility of the Borough as contiguous entity and need to be addressed as part of this strategy.

- Although the borough has many small communal gardens and garden squares most are not open to the public and there is a shortage of public accessible open spaces. The majority of major open spaces are either located at the edges or beyond the boundaries of the borough. Some of them suffer from poor or illegible access. There is opportunity to create a network of legible green routes that connect theopen spaces and integrate them into a system of interlinked spaces.

- The majority of the Royal Borough comprises of low to medium rise development with building heights typically ranging between 2 to 6 storeys. The study however recognises a number of taller buildings across the Borough that are loosely confined to the vicinity of tube stations or form part post war residential development schemes.

FIGURE 7: Urban structure

4.1 INTRODUCTION

The Borough is a diverse place. It is composed of a variety of sub-areas with different characters and individual patterns of development. Given the strategic character of this work the urban design analysis takes a borough-wide approach. With the exception of particularly significant streets and places this study will not focus on individual spaces in great detail. The key aims are to identify on a strategic level the structural deficiencies and opportunities of the Borough. In the following work stage 2 these findings will inform the preparation of the urban design strategy for the Royal Borough.

The area is appraised using the urban design objectives as set out in "By design: urban design in the planning system: towards better practice". These include character, continuity and enclosure, quality of the public realm, ease of movement, legibility, adaptability and diversity. In regard to these objectives the following aspects of physical form area assessed:

- Urban Structures
- Urban Grain
- Density, Mix and Land uses
- Green and Public Spaces

Scale: Height and Massing

4.2 URBAN STRUCTURE

The urban structure is the framework of routes, spaces, infrastructures and waterways that characterise and form the backbone of an area in terms of access and movement. The layout has a considerable impact on legibility and the character of an area.

Figure 07 shows the analysis of the urban structure for the Royal Borough.

The Borough stretches from the Grand Union Canal in the north to the River Thames in the south. Its western border with Hammersmith and Fulham largely coincides with the West London Line. The eastern boundary is less distinct and follows the pattern of local streets. With three borders formed by major physical barriers the Borough divides into central and peripheral areas. The zones along the canal and the railway lines are typical fringe locations with poor accessibility and lower activity levels.

A number of east-west corridors intersect the Borough and divide it into various sub-parts. From north to south these key routes are the following:

- Paddington Railway Line
- Westway together with the elevated Hammersmith and City Line
- Holland Park Avenue
- Kensington High Street
- Cromwell Road
- Old Brompton Road
- Fulham Road
- Kings Road
- Chelsea Embankment

Chelsea Embankment is part of the orbital ring road around central London. The route continues along the West London Line towards the north and joins with the Westway. In the southern part this corridor divides into one-way south- and northbound sections along separate streets. From north to south the corridor includes the following streets: West Cross Route, Holland Road; Warwick Road, Finborough Road, Gunter Grove (north-bound); Earl's Court Road, Redcliffe Gardens & Edith Grove (south-bound). The orbital route and Ladbroke Grove are the only two significant routes that connect the Borough in a north-south direction.

Some of the above routes are in themselves major physical barriers and cause severance between neighbouring quarters. With the partial lack or inconvenience of crossing points and a traffic dominated adverse environment these corridors also act as mental barriers and do not encourage pedestrian movement across or along. North Kensington is particular affected. It is enclosed and dissected by a web of major barriers: the Grand Union Canal, the Paddington Railway line, the East London Line, the West Cross Route, the Westway and the Hammersmith and City Line. Similarly along the western edge, a large area is contained between the West London Line, the orbital road (southbound) and the River Thames. These areas will need particular attention as part of this study.

While the Royal Borough is well served by east-west routes, it lacks connectivity in a north-south direction. Although adjacent sub-areas are usually well linked by a network of secondary streets, there is a substantial lack of continuous primary routes in a north-south direction that connect more than two neighbouring sub-areas. This creates a poor relation between the northern and southern part of the Borough and has significant implications for legibility. The lack of primary routes makes orientation and navigation difficul. In some parts the Royal Borough is only perceived as a collection of fragmented subparts and not as a cohesive entity. This study offers the opportunity to propose measures that can improve legibility and better link the various parts together.

Both Holland Park and Kensington Gardens are major structuring elements and the centre of the Borough. All other major green spaces are located along or beyond the boundaries of the Borough.

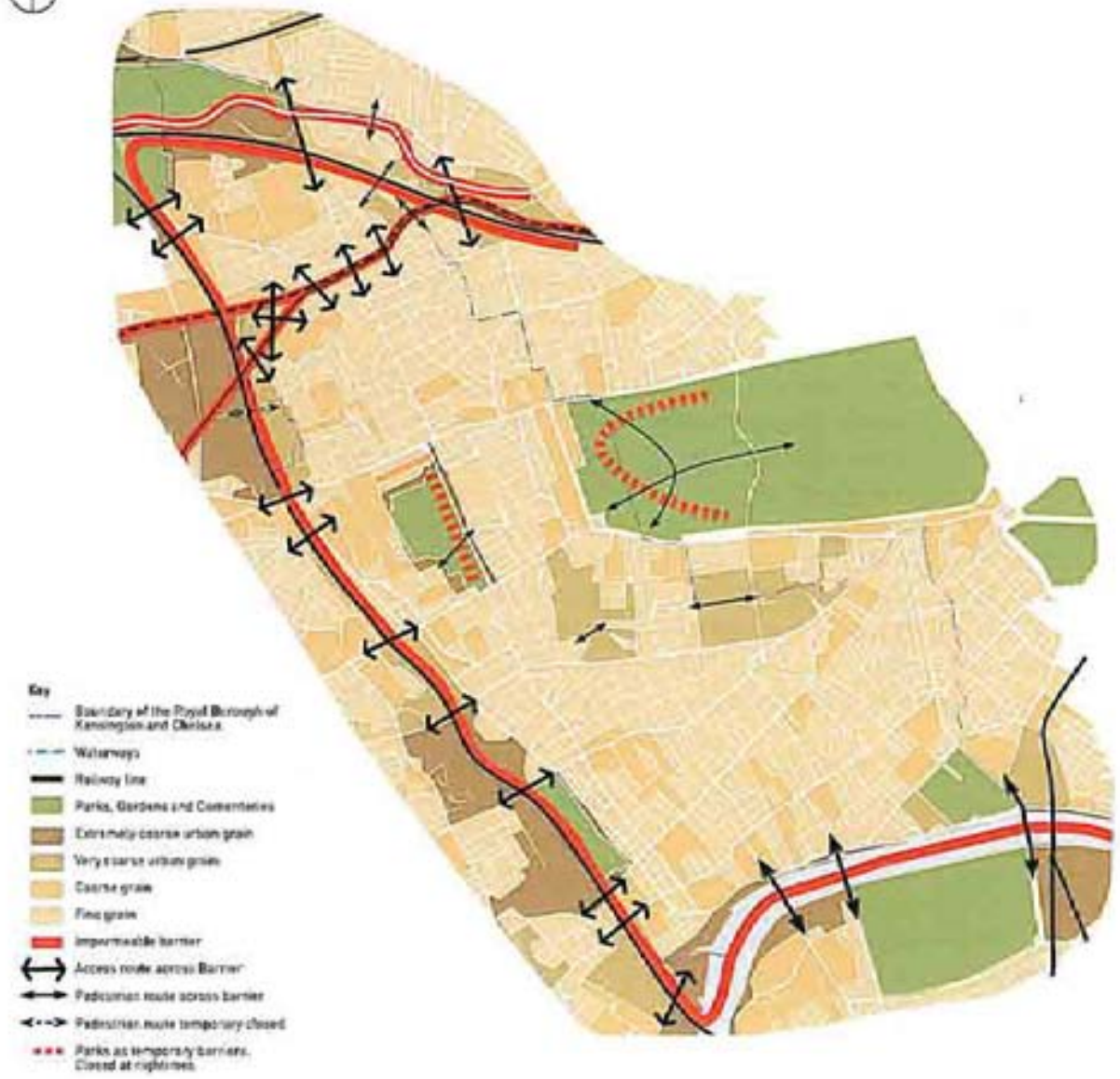

FIGURE 8: Urban Grain

4.3 URBAN GRAIN

Beside the key elements of the urban structure the layout of an area is determined by the pattern and arrangement of streets, blocks and plots. The concept of "urban grain" gives an indication of the degree to which an area's pattern of blocks and plots subdivision is respectively small and frequent (fine grain), or large and infrequent (coarse grain). The urban grain significantly impacts on the permeability of an area and the choices to move around. It similar has an influence on the extent of adaptability, diversity and inclusiveness an area can offer as a base for development.

Figure 08 shows the analysis of the urban grain for the Royal Borough.

The size of urban blocks varies across the borough. To a large extent the central areas are of a fine urban grain. In contrast most areas along the western and northern edge are of a coarse, very coarse or extremely coarse urban grain, and in parts reflect the industrial use pattern These places have a lower permeability and are affected by severance.

The analysis identifies a number of urban blocks with particular large grain, from north to south these include the following:

a North Kensington on either side of the railway line to Paddington

b White City – border with Hammersmith and Fulham on either side of the West Cross Route

c. Holland Park Area, with Holland Park inhibiting east-west movements

d. Western Border area along the West London line from Holland Park Avenue in the North and the River Thames in the South, including Warwick Road, Earl's Court Exhibition Centre, Brompton Cemetary and Chelsea Football Club

e. River Thames including Royal Hospital and Ranelagh Gardens

KEY ISSUES

The border areas to the neighbouring boroughs of Brent, Hammersmith and Fulham and Wandsworth (a, b, d, e) comprise of a very coarse urban grain due to layout, natural barriers or infrastructures. Connectivity and permeability in these areas and between the boroughs is extremely low. These areas would benefit from greater accessibility and opening up. With similar issues affecting adjacent areas in neighbouring boroughs these border zones should be addressed as part of integrated cross-border initiatives.

Holland Park and Kensington Gardens (c) both constitute large urban blocks, which although permeable for pedestrians, are largely impermeable for other movement modes. Both restrain connectivity between Notting Hill and South Kensington and largely inhibit east west movements through the Holland Park area.

The analysis identifies other localised areas in the Royal Borough that comprise of larger block sizes. Although they may impinge on permeability and legibility in theses areas, this study may not offer the scope to address these on this strategic level.

4.4 DENSITY AND MIX OF LAND USES

The density of an area is represented by the amount of development on a given piece of land, the mix indicates the respective range of uses. Density influences the intensity of development, and in combination with the mix of uses can affect a place's vitality and viability. The type and mix of land uses determines the activity patterns in a place and has an impact on the attractiveness, vitality and character of an area.

Relating to the scope of this work and in absence of a comprehensive height survey of the Borough the following indications of densities are broad brush only and based on partial site visits and photographic surveys.

Apart from pockets in the urban structure and some areas adjacent to the railways and the Westway the Borough is developed throughout. Densities are linked to building height, form and footprint of development. Average heights in the Borough range from 2-3 to 5-6 storeys, and therefore densities vary across the Borough. In most areas of the Borough the urban street block is the dominant development form. In some of these blocks the inner courtyards are built over. Depending on building height these very compact development patterns result in medium to high dense areas. Parts of Notting Hill, Kensington, South Kensington and North Chelsea are of a higher to high density with plot ratios well above 2:1. All remaining parts range from lower to medium density with plot ratios of about 2:1 or below.

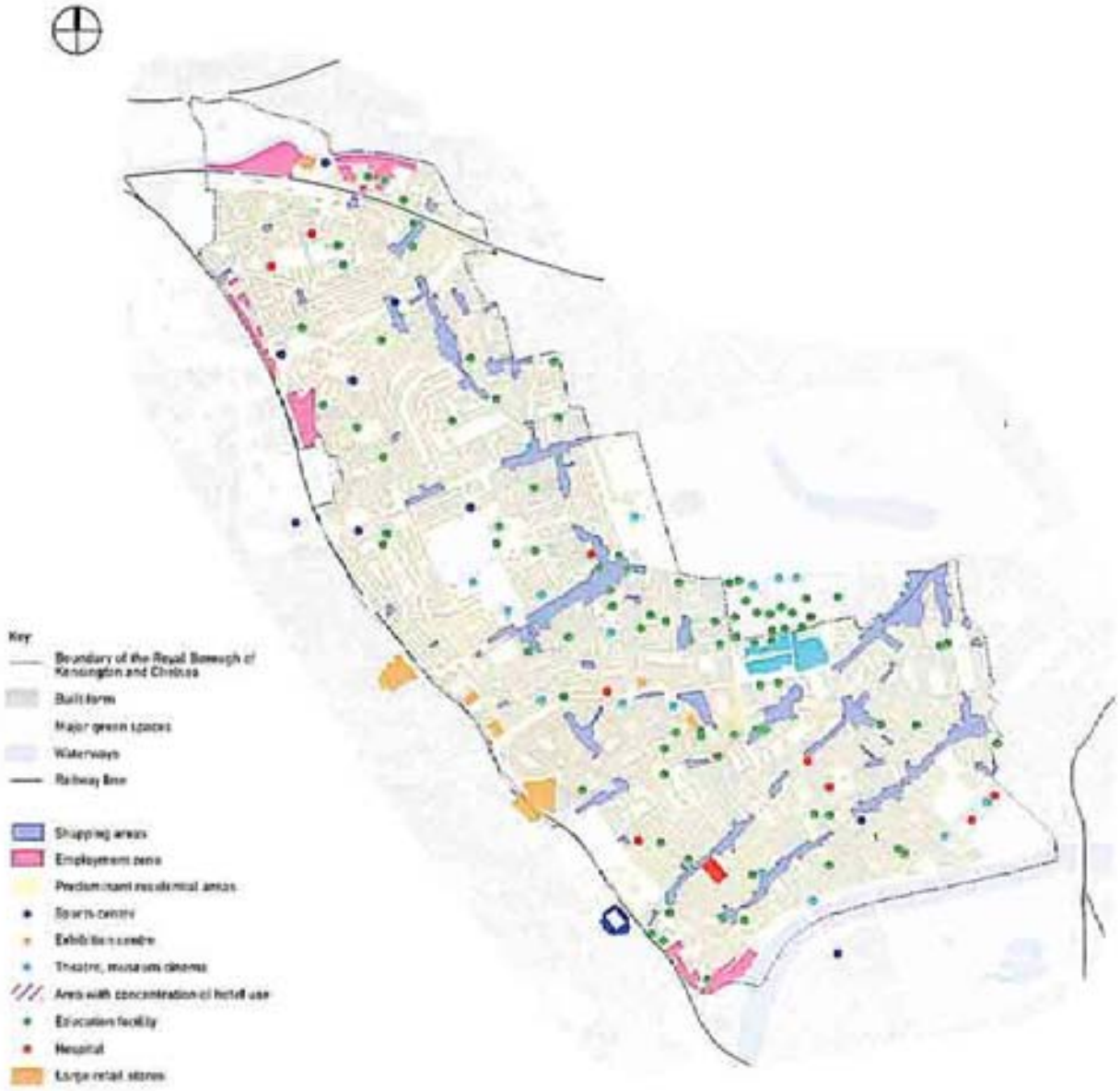

FIGURE 9: Land uses

There are a number of post war housing estates that show different development forms. Comprising stand-alone developments with surrounding leftover, green and parking spaces, these developments compensate their smaller building footprints with greater development heights. In some cases they accommodate tall residential towers. Across the Borough the density of these estates is considered medium to high.

The land use pattern is shown in Figure 09. This survey is (equal to the previous one) indicative only and based on a number of information sources, including shopping and employment areas as listed in the UDP document and a map survey on location of social, cultural, educational, hotel, leisure and health facilities supported by various site visits.

The borough is predominantly residential. Large areas are made up of historical estates, which accommodate an outstanding stock of some Georgian and mainly Victorian town houses and mansions. The unique arrangement of streets and places together with the flexibility and adaptability of the historic housing stock prove a successful combination for continuous residential uses: over the past two centuries large parts of the borough have been able to adapt to changing living and lifestyle requirements and have only seen minimal structural change. At present parts of the borough are regarded as the most desirable living environments within central London, which is reflected in high property prices.

In stark contrast to a large affluent resident population living in the central and southern parts, the Borough houses a number of poorer and deprived communities. While a few smaller social housing estates are also embedded across the Borough, the majority of these communities live in North Kensington towards the northern and western boundary, and in the south-west corner of Chelsea. The index of multiple deprivation for the Borough (2004) highlights that some of these neighbourhoods are particularly deprived. Often located in fringe location enclosed or bordered by impermeable barriers access is constrained, sometime provision with public transport is poor.

The layout of the often post-war housing developments is often fragmented and poorly integrates with the surrounding street-pattern. Connectivity and legibility are low, public spaces are of a poor quality; often lack enclosure and passive supervision. Some of these estates are poorly served by local shopping facilities. This applies in particular to the areas along the western borough boundary and in the surrounding of Latimer Road Tube station. A number of these areas are described in more detail in section 5 - character analysis.

The Borough comprises of a relatively small amount of office floor space compared to neighbouring boroughs. Not enough information could be obtained to identify the precise location of office uses. It is assumed that concentrations of medium to larger offices can be found around the main underground stations and along key corridors.

A number of designated employment zones are located in the vicinity of the western boundary, in North Kensington and South-West Chelsea. Some of these areas are not fully utilised and often accommodate low value land-uses.

In common with much of Central London the borough accommodates a large number of hotel visitors. The UDP states that about 30000 visitors stay in the Borough every night. The majority of these hotel uses are concentrated in the Earl's Court area and Courtfield area.

Besides local high streets and shopping centres the borough contains a number of shopping streets of metropolitan importance. With larger retailers and specialised retail they attract visitors from other London Boroughs, nation-wide and abroad. These include Kensington High Street, Knightsbridge, Fulham Road, Kings Road and Sloane Square. Another large metropolitan shopping centre is being built at White City being built just across the Borough boundaries in Hammersmith and Fulham. This may have a negative effect on retail expenditure patterns and visitor numbers particularly in shopping streets that comprise of a comparable market orientation.

Portobello Road is one of London's most famous street and antique markets. Starting nearby Notting Hill Tube Station the market extends all the way up to Golborne Road in North Kensington. The market is particularly popular with tourists and reaches its climax on Saturday.

With Portobello Road the Royal Borough accommodates one of London's most famous street and antique markets. Starting nearby Notting Hill Tube Station the market extends all the way up to Golborne Road in North Kensington. The market is in particular popular with tourists and reaches its climax on Saturday.

The Borough is rich in visitor attractions. Between South Kensington Tube Station and Kensington Gardens/ Hyde Park lies one of London's densest concentrations of Museums and cultural institutions. It accommodates the Victoria and Albert Museum, the Natural History Museum, the Science Museum, the Imperial College and the

Earl's Court Exhibition Centre, Olympia Exhibition Centre and Chelsea Football Club Stadium are located on either side of the West London Line (the latter two in neighbouring Hammersmith and Fulham). At the southern end of Holland Park the Commonwealth Institute is located, another (now disused) congress and exhibition centre.

KEY ISSUES

The predominant land use in the Borough is residential. There are however extreme contrasts in social and income structures between various sub areas of the Borough with very deprived neighbourhoods located adjacent to affluent areas with the highest property prices in the country. This disposition disadvantages to a large extent poorer residents. Affordable retail and leisure facilities often are replaced by higher-priced ones; the increasing numbers of privately provided education and health services reduces the demand and lowers provision-density of public facilities. Poorer residents hence must travel much greater distances and will find only a limited number of facilities they can afford. Many deprived neighbourhoods concentrate in North Kensington and along the western borough boundary in areas that generally are poorly served by public transport and may also suffer from physical segregation and poor integration into the surrounding.

In most parts of the Borough the built fabric is compact and building densities are medium to high. There is however a significant mismatch between spatial and population density in the Borough. In affluent areas increased spatial requirements and higher living standards of residents mean that higher spatial density is not necessary correlated with a greater number of residents. The significant share of irregularly inhabited second-homes in these areas adds to this phenomenon. Contrary in impoverished and deprived parts of the Borough residential densities might be higher than spatial densities, due to intensive use of homes with more inhabitants living in a place than common living standards would suggest. This has an effect on vitality and viability of certain areas, particularly for the provision and dimension of services and facilities.

While in large historical areas the scope for change is quite limited, some of the post-war developments may benefit from a restructuring of uses through infill- or re-development, particular when these developments would improve some of the inherent structural shortcomings of these schemes and improve the urban environment.

The present UDP indicates that the Borough aims to protect the residential profile of the Borough and not to intensify office accommodation. However, mixed-use opportunities may arise in which small office accommodation could form part. A greater mix with offices uses would contribute to local employment and reduce the need to travel. Further it may help to offset some adverse activity fluctuations, which are inherent to residential areas, and contribute to higher and more balanced activity levels.

Current employment zones will need to be critically assessed. Opportunities should be explored to redefine allocations and premises with vacant land or floorspace on low uptake, to create areas, which better relate to the needs of the community and market demand.

The Borough is home to a number of well-known shopping streets of metropolitan importance. With the building of other retail destinations in the West, particular the White City Shopping Centre, these traditional outdoor shopping streets may experience changes in expenditure patterns. One of their main disadvantages is their location along historical routes into central London, which nowadays are heavily trafficked thoroughfares and transit corridors. As on Kensington High Street some improvement schemes have been already implemented and have proofed successful. Other areas are in equal demand for improved and safer pedestrian environments, such as Notting Hill Gate, Knightsbridge, the Earls Court Area and Kings Road. An appropriate balance has to be found between the needs of pedestrian and the requirements of these roads as part of the strategic road network. car traffic should not be generally doomed since it may contribute to the vibrancy and vitality of these streets. The entire Borough will fall into the congestion charge zone when current plans go ahead. This is envisaged to ease some of the traffic pressure on theses routes. There may be opportunities to further explore traffic management schemes, which would reduce private car access at peak shopping times, yet allows free access for the remaining time. Such measures could significantly improve pedestrian qualities particularly along Kings Road and Portobello Street in peak-times.

4.5 GREEN AND PUBLIC SPACES

Figure 10 shows the green and public space provision in the Royal Borough.

There are eight major green spaces within or just beyond the Borough boundaries, two of which are cemeteries. From north to south these are:

- Kensal Green Cemetery and St. Mary's RC Cemetary (regulated opening times, restricted use)
- Little Wormswood Scrubs Recreation Ground (openly accessible land, Hammersmith and Fulham)
- Wormswood Scrubs (openly accessible land, Hammersmith and Fulham)
- Kensington Garden (regulated opening times) and Hyde Park (openly accessible land, City of Westminster)
- Holland Park (regulated opening times)
- Brompton Cemetery (regulated opening times, restricted use)
- Royal Hospital Gardens (regulated opening times, restricted use)
- Battersea Park (regulated opening times, Borough of Wandsworth)

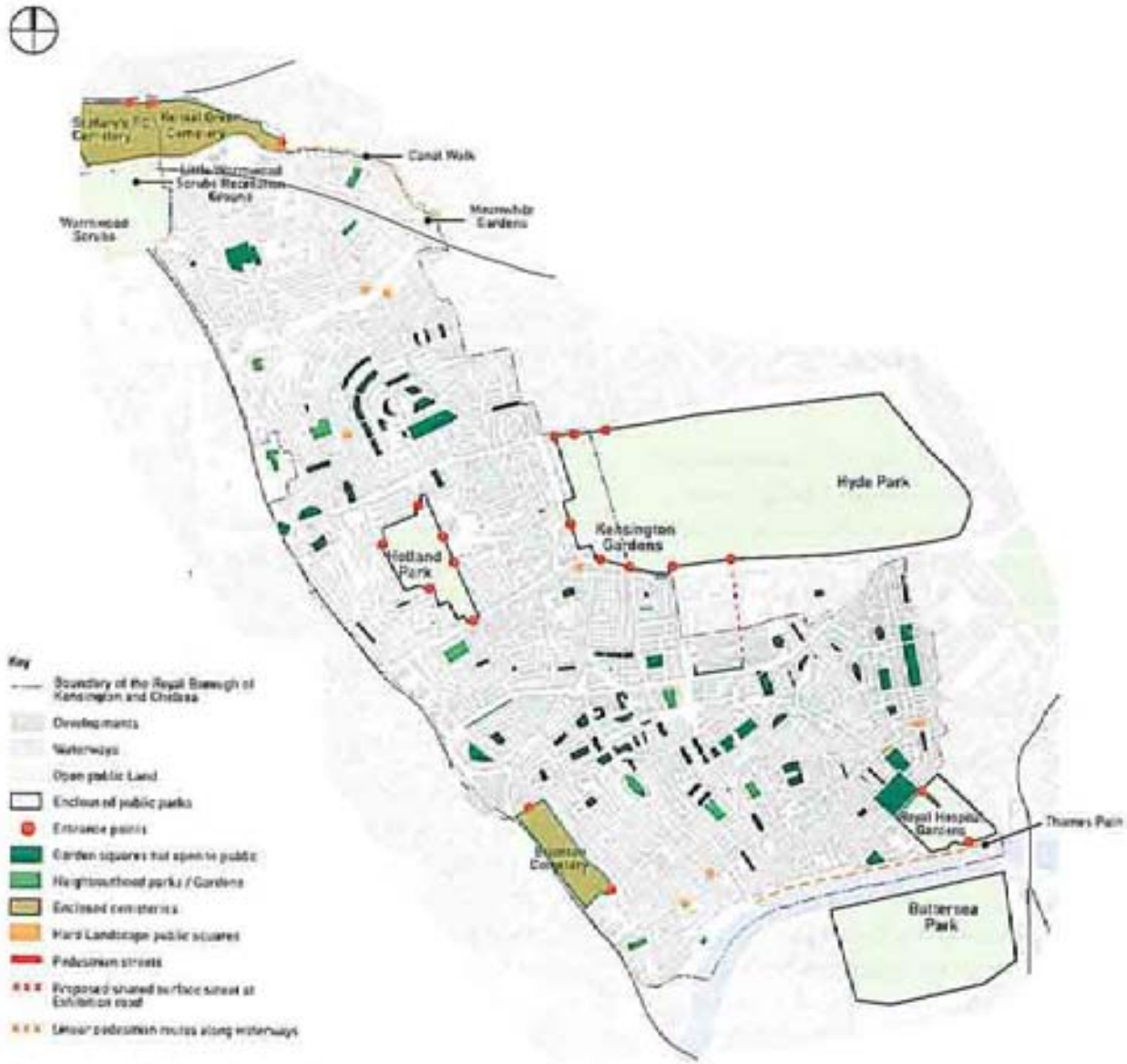

FIGURE 10: Green and public spaces

A river path accompanies the River Thames and allows access to the water edge. It follows Chelsea Embankment and stops opposite Worlds End. Another path accompanies the Grand Union Canal and offers an alternative pedestrian and cycle route from Little Venice towards Park Royal.

The Borough comprises a variety of smaller local neighbourhood spaces with a large concentration of communal garden spaces and garden squares in the South Kensington/ Chelsea area and Notting Hill. The majority are not open to the public.

There are only a few urban public spaces within the Royal Borough, the most prominent being Sloane Square. There are however a small number of built-out pavements or pedestrianised streets that allow for primary pedestrian activities. Overall the Borough lacks civic public spaces.

KEY ISSUES

Overall the borough suffers from a shortage of public space. This is identified in the UDP p.283 deficiency map.

Although they contribute to atmosphere and character in these areas the majority of communal garden spaces and garden squares in Notting Hill, South Kensington and Chelsea are not open to the public and fail to provide recreational spaces to the wider community. This increases the shortage of recreational and civic spaces in the Borough.

There are a number of neighbourhood spaces, which are in ownership by RBKC. These provide valuable recreation space for the community. However, most of them occupy leftover spaces between developments and are difficult to find (i.e North Kensington, South Kensal Town, Chelsea Creek).

Except for Holland Park all the larger open green spaces are located at the edges of the borough or in neighbouring boroughs. Most of them are enclosed and allow access only within strictly defined time periods. Access points are limited and sometimes difficult to find. This impinges on the accessibility, legibility and attractiveness of these spaces – although they might be next door the next entrance could be a long walk a way. There is opportunity to create legible and green routes, which link these spaces and respective entrance points with each other and with the wider neighbourhood. The opening of additional entrance points should be explored, in particular for Holland Park.

Due to its particular location the Little Wormwood Scrubs Recreation Ground is primary used by residents of Kensington and Chelsea although it belongs to the neighbouring borough Hammersmith and Fulham. This mismatch is reflected in the poor layout of the space and a limited provision with amenity features.

Access to the waterfront from Chelsea is difficult and involves the crossing of the strategic road along Chelsea Embankment. Heavy traffic flows on the embankment create an adverse environment in terms of noise and exhaust fumes, which considerably reduces the attractiveness of the Thames River Path.

The route along the Grand Union Canal does not integrate in the common network of routes and spaces across the Borough. Entrance points are not easily found and the presence and amenity of the canal are not fully exploited.

The Royal Borough lacks appropriate urban public spaces as places for civic formal and informal activities. Sloane Square, as the only hard surface space of significant size, is detrimentally affected by traffic circulation, which isolates the central space and makes it sparsely used. There are only a few other small public spaces and pedestrianised street sections across the Borough. Around transport nodes such as underground stations, where pedestrian flows are especially high, public spaces can help to mitigate congestion and allow for orientation, meeting and breathing space. The Borough lacks these types of spaces.

4.6 SCALE: HEIGHT AND MASSING

HEIGHTS

Average building heights vary across the Borough, but within particular aras, building heights are often relatively consistent. Average heights range from 2-3 storey-terraces in North Kensington to 4-6 storey Victorian houses and mansion blocks in Ladbroke Grove Area, Notting Hill, Holland Park area, South Kensington and Chelsea. Many of these areas were built during the 19th or early 20th century as residential estates. Developed on larger plots they often feature coherent architectural expression, typologies and heights.

Building plots along major corridors naturally experienced greater pressures for change, and therefore building sizes and heights vary notably. This is especially evident around Notting Hill Gate, along Kensington High Street, Cromwell Road, Brompton Road, Kings Road and parts of Sloane Avenue. The tall building survey indicates that along these routes developments reach heights between 7-9 and 10-14 storeys.

The borough accommodates two clusters of tall towers in the range of 15-24 storeys. Both are part of post-war social housing developments. The first group comprises of four stand-alone towers in the vicinity of Latimer Road Tube Station in North Kensington. The second group includes seven interlinked towers as part of part of the Worlds End Estate in Southwest Chelsea.

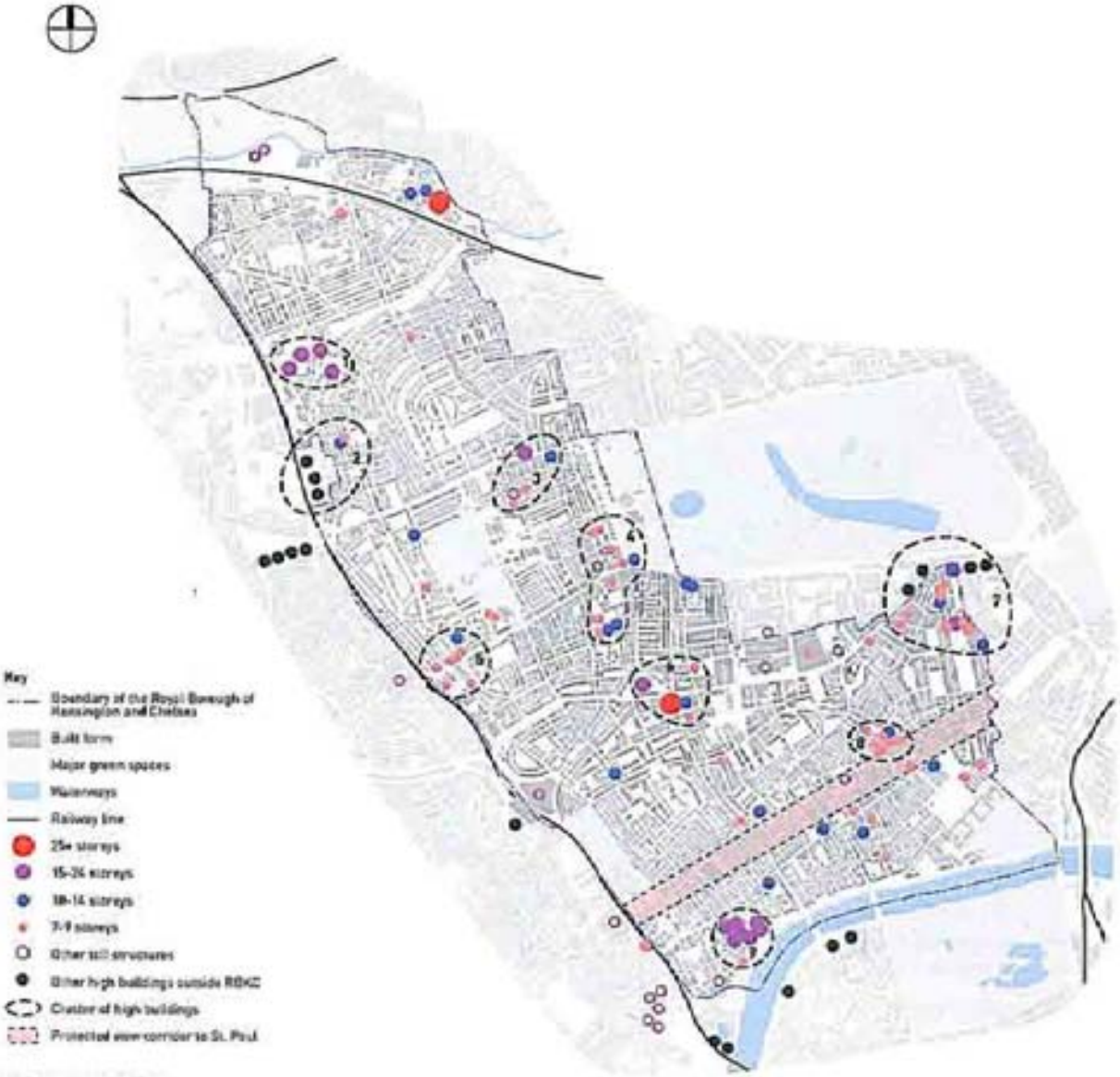

FIGURE 11: Height

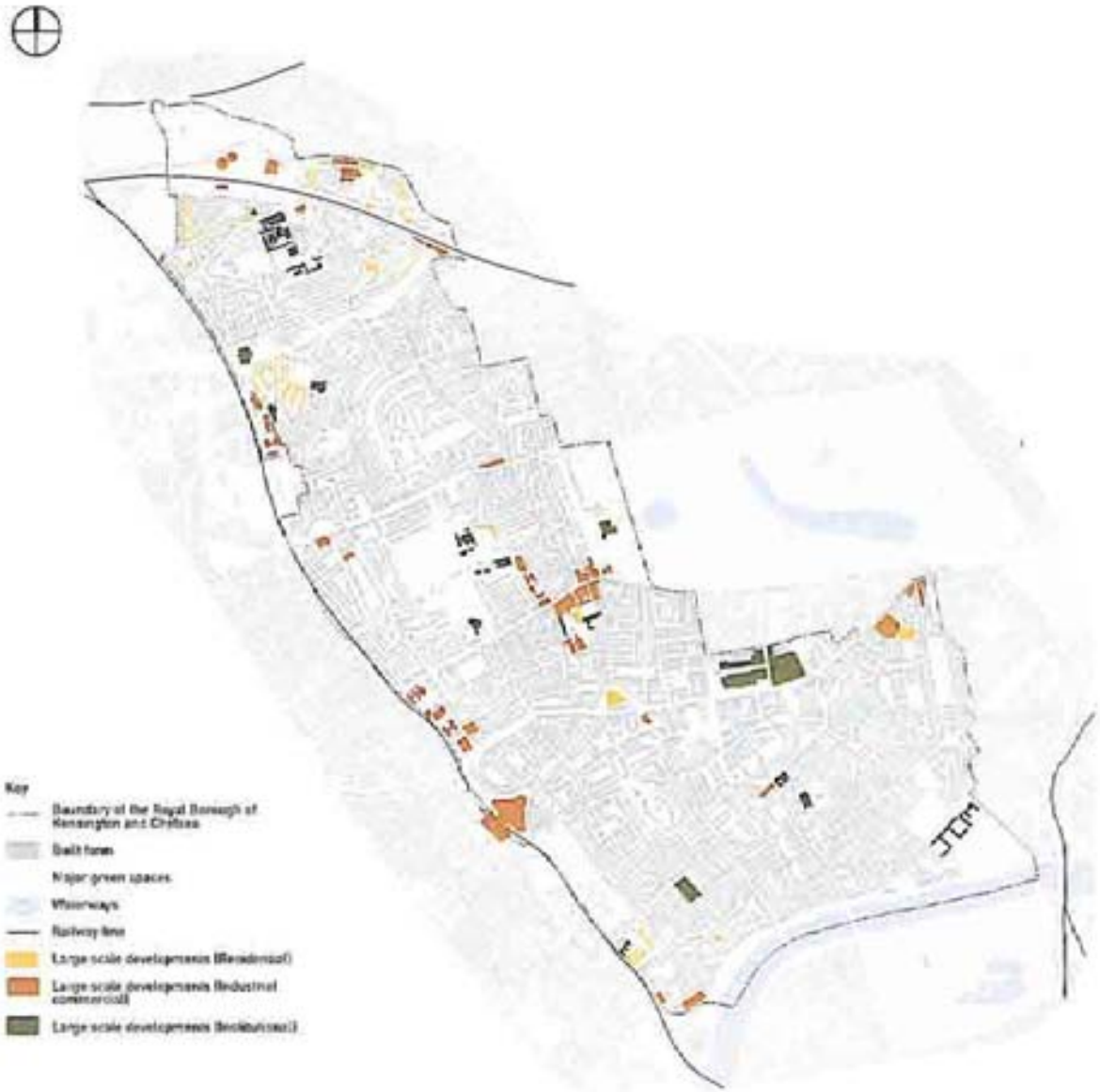

FIGURE 12: Massing

There is another group of towers, which although situated east of the West Cross Route, are actual part of the neighbouring Borough of Hammersmith and Fulham. These towers form part of a residential estate and significantly impact on the skyline of the Royal Borough.

Two buildings have more than 25 storeys. The first is the widely visible residential Trellick Tower at Golborne Road in North Kensington by the acclaimed Architect Erno Goldfinger. This 98m tower is listed as building of particular architectural interest. It forms a unique landmark, which assists orientation and contributes to the identity of this area.

The second tower is the Holyday Inn Kensington Forum Hotel Tower in Cromwell Road close to Gloucester Road Tube station. This 116m tall building appears out of scale and does not relate to its immediate context. Across Cromwell Road the slightly lower West Point development feels similarly out of place.

With the exception of a few single developments (particular along Kings Road) high buildings in the Borough tend to cluster in groups. Towers above 10 storeys are often accompanied by other higher developments of 7-9 storeys in its surrounding. The following groups of high buildings are identified:

1 Trellick Tower
2 Latimer Road Estate
3 West Cross Route Estate (to Hammersmith and Fulham)
4 Notting Hill Gate
5 Kensington High Street East
6 Kensington High Street West
7 Cromwell Road
8 Knightsbridge
9 Sloane Avenue
10 Worlds End Estate

A number of other taller structures equally determine the skyline of the Royal Borough. Among others these are the spires of Kensington Church, Brompton Oratory, the towers of the Natural History Museum and the Imperial College (City of Westminster), Earl's Court Exhibition Hall and Olympia Exhibition Hall (Hammersmith and Fulham), Chelsea Football Club Stadium (Hammersmith and Fulham), the Gasholders in North Kensington and the chimneys of Lots Road Power Station.

The high building survey also identifies a number of taller buildings, which are located just outside the Borough Boundaries. These similarly have an impact on the skyline of the Borough and will need to be included in the tall building study.

MASSING

With large areas composed of terraced housing the majority of developments in the Royal Borough is of small scale. A number of developments however are of greater scale and mass. These can be sorted into three broad categories:

1. The first category comprises culture, education, leisure and commercial uses including cultural institutions, such as museums, theatres and cinemas, religious institutions, administrative buildings and larger office complexes, department stores, large-scale retail units and exhibition centres, hospitals, schools and sports facilities. The majority of those are integrated into the urban context and occupy entire urban blocks or parts of them. Concentrations of these developments can be found along Cromwell Road, Kensington High Street and Warwick Road. Three particularly large developments are located along the West London Line, these are Earls Court Exhibition Centre, Olympia Exhibition Centre and Chelsea Football Club Stadium.

2. The second comprises industrial units and storage sheds. These are mainly located in the designated employment zones along the western and northern Borough boundary.

3. The third category covers large-scale residential developments. Particular large concentrations of post-war housing estates can be found in Kensal Town, North Kensington and South West Chelsea.

KEY ISSUES

Key issues relating to tall buildings will be addressed in detail as part of the high building study in stage 3 of this work.

Large-scale developments of the first and second group may have an adverse impact on the attractiveness and quality of their surrounding. Often only a fraction of their perimeter is active frontage comprising openings and entrances. Most of the remaining facades are blank or used for servicing. Surrounding streets often suffer from ill-defined (leftover) spaces, poor enclosure, the visual impact and the lack of supervision. This applies to some degree to a number of developments within RBKC as the Earls Court Exhibition Centre, Lots Road Power Station, the RBKC City Hall and the Sainsbury store off Ladbroke Grove in North Kensington. Other bulky industrial, commercial, hospital and sports developments are scattered across the Royal Borough or concentrate along its western boundary and the beside and beneath the West Way.

Like in other parts of Britain during the post-war period the Royal Borough saw the building of significant residential estate developments in the international style. Nowadays most of these developments fail in terms of their architectural and urban design. Often they comprise a concentration of numerous social and environmental problems and suffer from a negative perception. Frequently they are composed of interlinked large-scale structures or standalone developments freely placed within a landscape setting.

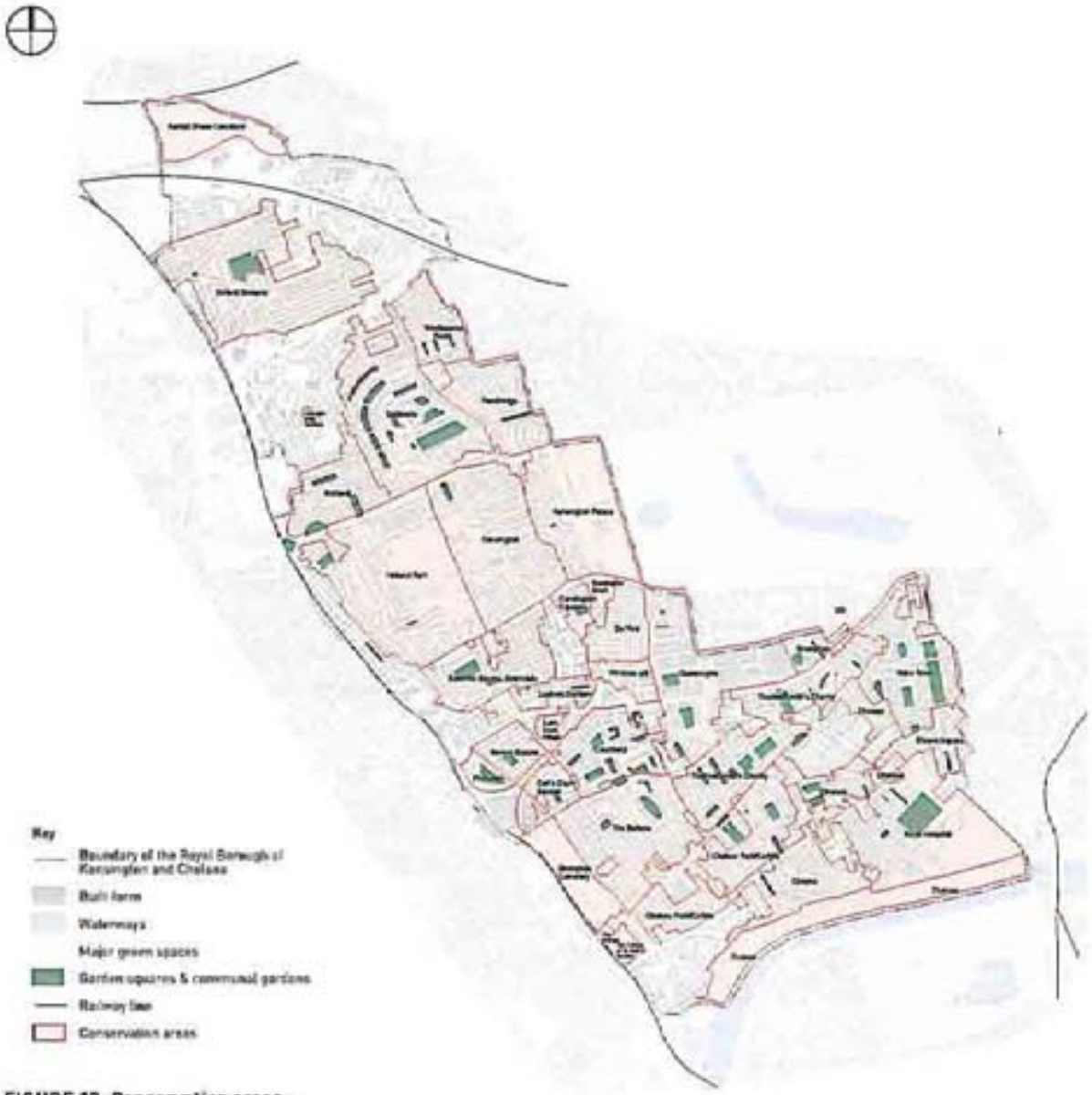

FIGURE 13: Conservation areas.

Most of these estate developments within the Royal Borough poorly relate to the historic street and development patterns. Links between neighbouring areas are often blocked, and permeability is low. They usually comprise of an abundance of public spaces that are weakly defined and lack enclosure, legibility and overlooking. This makes it difficult to orientate and move around these estates, and security fears deter non-residents from passing through the developments. All estates are addressed in more detail in Section 05 Character Analysis.

4.7 AREA DESIGNATIONS AND DEVELOPMENT POTENTIALS

CONSERVATION AREAS

A large part of the Borough derives its character and townscape from its heritage of eighteen, nineteenth and early twentieth century buildings. The Council has designated 35 conservation areas, some centred on the major estates and others on the many garden squares. They cover about 70% of the entire Borough. A map of conservation areas is shown in Figure 13. A conservation area statement prepared by the Council covers each area. These statements provide with an extensive character appraisal and historical analysis of the area, further they include proposals for their preservation and enhancement.

POTENTIAL AREAS FOR DEVELOPMENT

Figure 14 shows the potential development areas in the Borough. These are

a. Areas identified as major development opportunities in the UDP proposals map.

b. Intensification/ Renewal areas over the next 15 years as identified by the Spatial Planning overview of the RBKC , and

c. Other potential areas outside conservation areas and special policy zones, that may be identified as part of this study.

This study will particularly focus on these areas, which may come forward for development

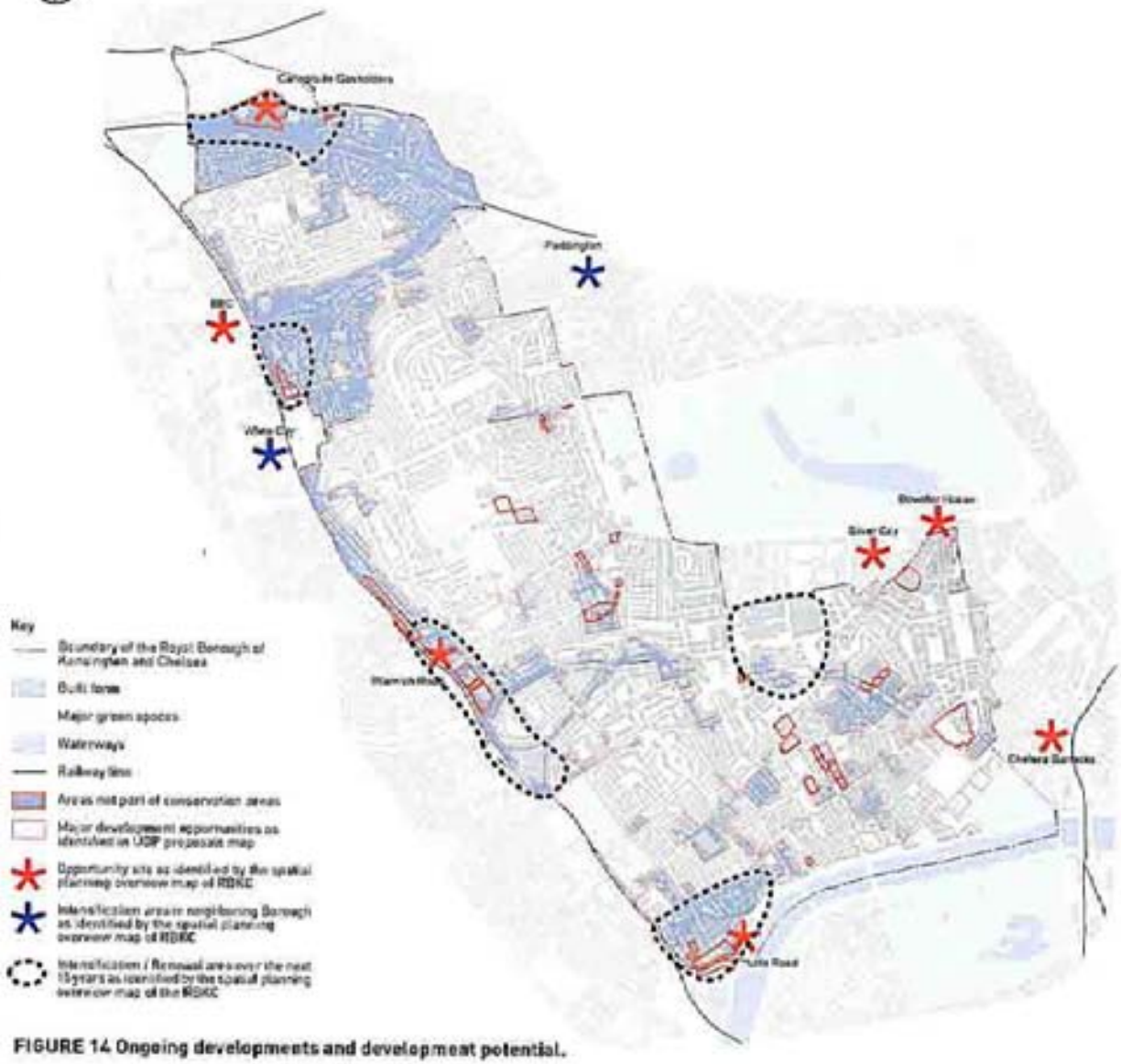

FIGURE 14 Ongoing developments and development potential.

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05

CHARACTER ANALYSIS

This part of the study divides the borough into a number of character areas, character corridors and central nodes.

A Character area is an area with a distinctive character that derives from the layout of its urban fabric, its typical building typologies and architectures, its predominant uses and activities and its public realm qualities.

Character corridors are linear areas that follow a particular route, a waterway or a major piece of infrastructure. Their character usually is determined by the transport and movement function of the corridor, associated activities and adjacent uses, and the design of the corridor. The character along a corridor may change depending on spatial organisation and the type, interaction and density of activities. Therefore single corridors may be subdivided into a number of different character segments.

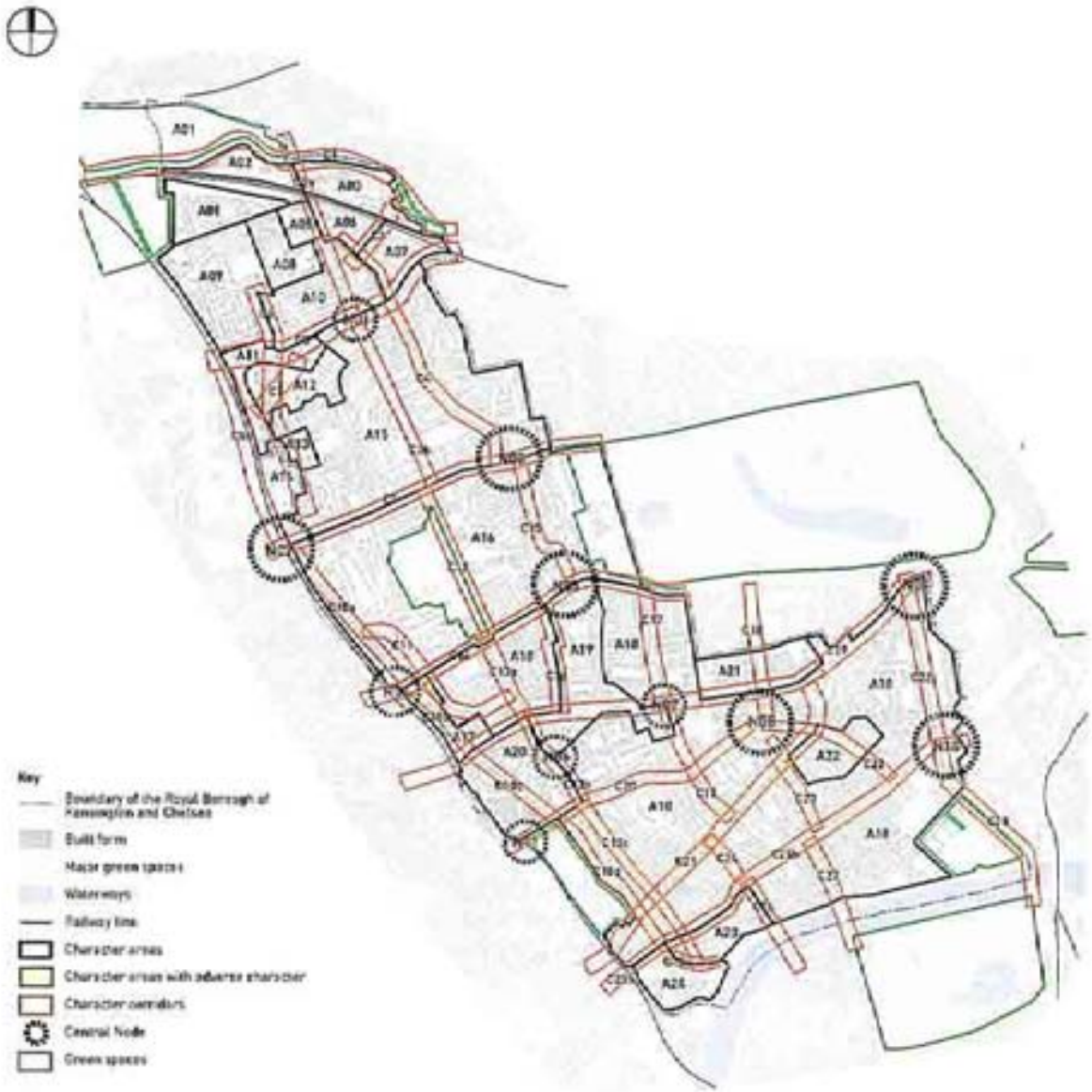

FIGURE 15: Character areas, central nodes, special corridors.

A central node is a zone focused around a transport infrastructure hub, which is particularly characterised by its centrality and associated movement and land use patterns. As with character corridors its character may depend on the spatial organisation and the type, interaction and density of activities. These places often perform as gateways into the Borough, and their character and image will have an impact on how attractive and inviting the surrounding areas and the Borough as a whole are perceived.

The conservation areas have already been the subjects of character assessments. Therefore, for the purpose of this character analysis the conservation areas will not be covered in detail except for those parts, which form part of a character corridor or central node. Most of these areas are summarised under the following broader umbrella groups: Notting Hill Area, Holland Park Area and Kensington, South Kensington and Chelsea.

Particular emphasis is given instead to identifying the different character areas, corridors and nodes that are not covered specifically by conservation area designation. These areas are identified and cross-examined via map-based surveys and site visits.

Figure 15 shows the identified character areas, corridors and central nodes. Yellow marks character areas with adverse character.

The following table lists the identified character areas, gives a brief description of them and highlights key issues.

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A01	Kensal Green Cemetery, located between the Grand Union Canal and Harrow Road	▪ Conservation area ▪ Enclosed space with limited number of entrance points located off Harrow Road ▪ Difficult to reach from RBKC ▪ Cemetery use limits scope of recreational activities
	A02	Site enclosed by Grand Union Canal and Paddington Railway Line, accommodates two gas storage tanks and a superstore surrounded by surface car parking	▪ Brown field site that offers long term development potential ▪ Difficult to reach without linkages to neighbouring areas, the only access point is off Ladbroke Grove
	A03	Kensal Town - Residential Area with a few light industrial units locked between Grand Union Canal and Railway Line to Paddington.	▪ Inward looking and fragmented, ▪ Weak definition of street spaces, ▪ Lack of connectivity to neighbouring areas, ▪ Poor legibility
	A04	Site north of Dalgarno Gardens and Barlby Road - Predominant residential area with poorly linked estates ranging from dense tenements blocks (Peabody Estate), over medium rise developments, to a crescent of Edwardian Terraces.	▪ Inward looking with poorly designed public spaces, ▪ Lack of linkages between separate estates, ▪ Lack of immediate retail facilities ▪ Poor provision with public transport

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A05	Balfour of Burleigh & Treverton estate between Exmoor Street and Ladbroke Grove - Residential estate with standalone developments of up to nine storeys	■ Poor permeability across site ■ Lack of clear defined streets, ambiguous green spaces and lack of supervision and sightlines deter non-residents from passing through
	A06	Medium rise residential estate at Wornington Road north of Golborne Road	■ Poor connectivity across site with developments disregarding historic street patterns ■ Poor street enclosure ■ Underused poor quality public spaces
	A07	Medium rise residential estate with cul-de-sacs south of Golborne Road	■ Poor connectivity across site, ■ linkages towards the Westway and across are particular in direct and illegible
	A08	Street block comprising of Pall Mall Deposit converted warehouse, St. Charles Hospital, Carmelite Monastery and a number of schools	■ Large scale partly fenced developments with poor relation ship to and enclosure of street space, ■ Lack of connectivity across the site and links between single institutions

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A09	Northwest Kensington - area with residential terraces and town houses centred around Quintin Gardens	▪ Part of Oxford Garden conservation area ▪ low public transport accessibility ▪ enclosed by major barriers with limited number of access points
	A10	Oxford Gardens area - Victorian town houses on a set of parallel streets off Ladbroke Grove	Part of Oxford Garden conservation area
	A11	Latimer Road Employment Zone / Westway - area below and adjacent to the West Way and West Cross Route characterised by large scale light industrial, leisure and mixed use developments	▪ poor legibility and enclosure of street space ▪ lack of linkages to neighbouring areas ▪ adverse impact of highway infrastructure, in particular noise, pollution and visual impact
	A12	Area comprising housing estates located on both sides of the Hammersmith and City Line, consisting of medium to large scale residential developments including four tower blocks	▪ site enclosed by infrastructure, which acts as physical barrier and seperates area from neighbouring sites ▪ poor definition of the public realm throughout the area and partly segregated walkways, which make it difficult to find your way around ▪ large areas given over to green space and surface car parking lack of central place ▪ poor provision of retail uses

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A13	Henry Dickens Court - Residential estate off St. Ann's Road comprising tenements blocks of up to 9 storeys	■ poor enclosure of street space and lack of active frontage towards St. Ann's Road
	A14	Housing estate centred around a neighbourhood green, comprising a mix of 70s' council housing including three residential towers and recent residential developments	Area within the Borough of Hammersmith and Fulham ■ towers have an impact on the skyline of RBKC ■ the estate accommodates in future the only pedestrian link with White City across the West Cross Route, ■ the approach into and through the estate is not legible
	A15	Notting Hill - large affluent residential area characterised by grand streets, garden squares and a large stock of good quality Victorian terraces, town houses and villas	Covered by the Norland, Ladbroke and Pembridge conservation areas.
	A16	Holland Park area – affluent residential area surrounding Holland Park, predominant Victorian and Edwardian terraces, town houses and mansion blocks, partly mixed with more recent residential and institutional development	Covered by the Holland Park, Kensington and Kensington Palace conservation areas.

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A17	Warwick Road area, comprising a number of retail, commercial and institutional developments	▪ large scale developments with dead frontages and poor street enclosure ▪ left over spaces and surface car parks dominate and create adverse pedestrian environment
	A18	South Kensington and Chelsea, diverse and largely residential area composed from a variety of historical estates with grand streets and garden squares	Area covered by the Conservation Areas Edward Square, Scarsdale & Abingdon, Kensington Court, De Vere & Cornwall, Queensgate, Courtfield, The Boltons, Thurloe/Smith's Charity and Brompton, Hans Town and Sloane Square, The Billings, Sloane/ Stanley, Chelsea Park/Carlyle, Chelsea, Cheyne, Royal Hospital, Thames, Brompton Cemetery, The College of St. Mark & St. John
	A19	Railway Triangle - fragmented area above the underground railway triangle between Kensington High Street, Gloucester Road and Earl's Court Station, accommodates a diversity of residential, commercial, retail and other developments of varying scale and height	Area is partly covered by the Kensington Square, Lexham Gardens and Earl's Court Village conservation areas. ▪ parts of the area act as barrier with only a few links across in East-west direction ▪ Small scale developments stand in stark contrast to single buildings of large mass and height ▪ Segregation of sub-parts by railway line with poor permeability and legibility
	A20	Earls Court Area – residential area with high proportion of hotel uses, locked between West London Railway Line and Earl's Court Road, Cromwell Road and Old Brompton Road, divided in northern and southern half by Earl's Court Station, west of it lies Earl's Court Exhibition Centre	Area includes the Earl's Court Square, Nevern Square and Philbeach conservation areas. ▪ Area is fragmented and segregated by major routes and railway infrastructures ▪ Links to neighbouring areas are poor and involve the crossing of major roads ▪ Setting of exhibition centre is poor and lacks an appropriate public space

CHARACTER AREAS

Image	Area Code	Area Description	Key Issues
	A21	Museum Quarter – home of the Victoria and Albert Museum, Natural History Museum and the Science Museum, lies adjacent to the Imperial College and Albert Hall, which are in the in neighbouring City of Westminster	Area lies within the Queensgate conservation area ▪ major visitor attractions ▪ large scale and mass with limited entrance points ▪ traffic dominated environment on Cromwell Road and Exhibition Road
	A22	Ixworth Place and Sloane Avenue – area of high density comprising of large scale mansion and tenements blocks, retail and warehouse uses	▪ strong contrast in scale between neighbouring developments ▪ in parts poorly defined street space, blank frontages and lack of overlooking
	A23	Worlds End – residential housing estate built in the 70s, comprising seven interlinked towers	▪ very impermeable area ▪ leftover green spaces, blank walls and illegible routes determine pedestrian environment ▪ underused and poorly designed public space
	A24	Lots Road area, low density residential area in the shadow of Chelsea Power Station, mixed with a number of employment uses.	▪ Fragmented ▪ Opportunity for intensification of uses ▪ Poor linkages to neighbouring quarters

CHARACTER CORRIDORS

The following character corridors are identified in the Borough. Some longer corridors were subdivided in relation to changes to their character.

- C1 Grand Union Canal
- C2a Ladbroke Grove North
- C2b Ladbroke Grove South
- C3 Golborne Road
- C4 Portobello Road
- C5 Westway
- C6 Latimer Road
- C8 West Cross Route
- C7 Hammersmith and City Line
- C9 Holland Park Avenue
- C10a Holland Road
- C10b Warwick Road
- C10c Warwick Road
- C10d Finborough Road & Gunter Grove
- C10e Cremorne Road

C2a Ladbroke Grove North

C3 Golborne Road

C04 Portobello Road

C10a Holland Road

C12 Holland Walk

C15 Kensington Church Street

C19 Cromwell Road

C13b Earl's Court Road

- C11 Addison Road & Warwick Gardens
- C12 Holland Walk
- C13a Earl's Court Road
- C13b Earl's Court Road
- C14 High Street Kensington
- C15 Kensington Church Street
- C16 Marloes Road
- C17 Palace Gate & Gloucester Road
- C18 Exhibition Road
- C19 Cromwell Road
- C20 Old Brompton Road
- C21 Fulham Road
- C22 Pelham Street & Sloane Avenue
- C23 Sydney Street
- C24 Drayton Gardens
- C25a King's Road
- C25b King's Road
- C26 Battersea Bridge
- C27 Albert Bridge
- C28 Chelsea Bridge

The following central nodes are identified in the Borough. All of them centre around major underground stations of the District, Circle or Hammersmith&City Line.

- N01 Ladbroke Grove
- N02 Shepherd's Bush Central
- N03 Notting Hill Gate
- N04 Kensington Olympia
- N05 Kensington High Street
- N06 Earl's Court
- N07 Gloucester Road
- N08 South Kensington
- N09 Knightsbridge
- N10 Slone Square
- N11 West Brompton

N01 Ladbroke Grove Station

N03 Notting Hill Station

N08 South Kensington

N06 Earl's Court

Book Hatchards
PUBLIC
SUBWAY
UNDERGROUND

06

TRANSPORT ANALYSIS

The good location of the Royal Borough of Kensigton and Chelsea at the edge of central London, as shown in figure A, places great pressure on the borough's transport system, with many people both passing through and travelling into the borough. Destination traffic is high overall, due to the borough's significant amount of commuters [more than 100,000 people working in the borough], and- its shopping, recreational and cultural attractions. Furthermore, the borough's high density land use is resulting also in high amounts of generated traffic.

The road network is saturated with high levels of congestion. Buses tend to get stuck in vehicle congestions and rail services are overcrowded, especially during peak hours.

In order to ensure that a holistic accessibility to the borough is gained, it is necessary to integrated further land use development with transport capacity issues and transport strategies. In order to ensure a sustainable transport system, it is essential to locate high trip-generating activities within good accessibility of public transport, walking or cycling. Furthermore, concentrating new mixed-use developments in appropriate locations can reduce the need to travel.

Therefore, the following section reviews the overall accessibility of RBKC for all transport modes, both in the context of London and borough-wide. An understanding of these issues will help identify suitable areas for development as well as revealing transport opportunities for the area.

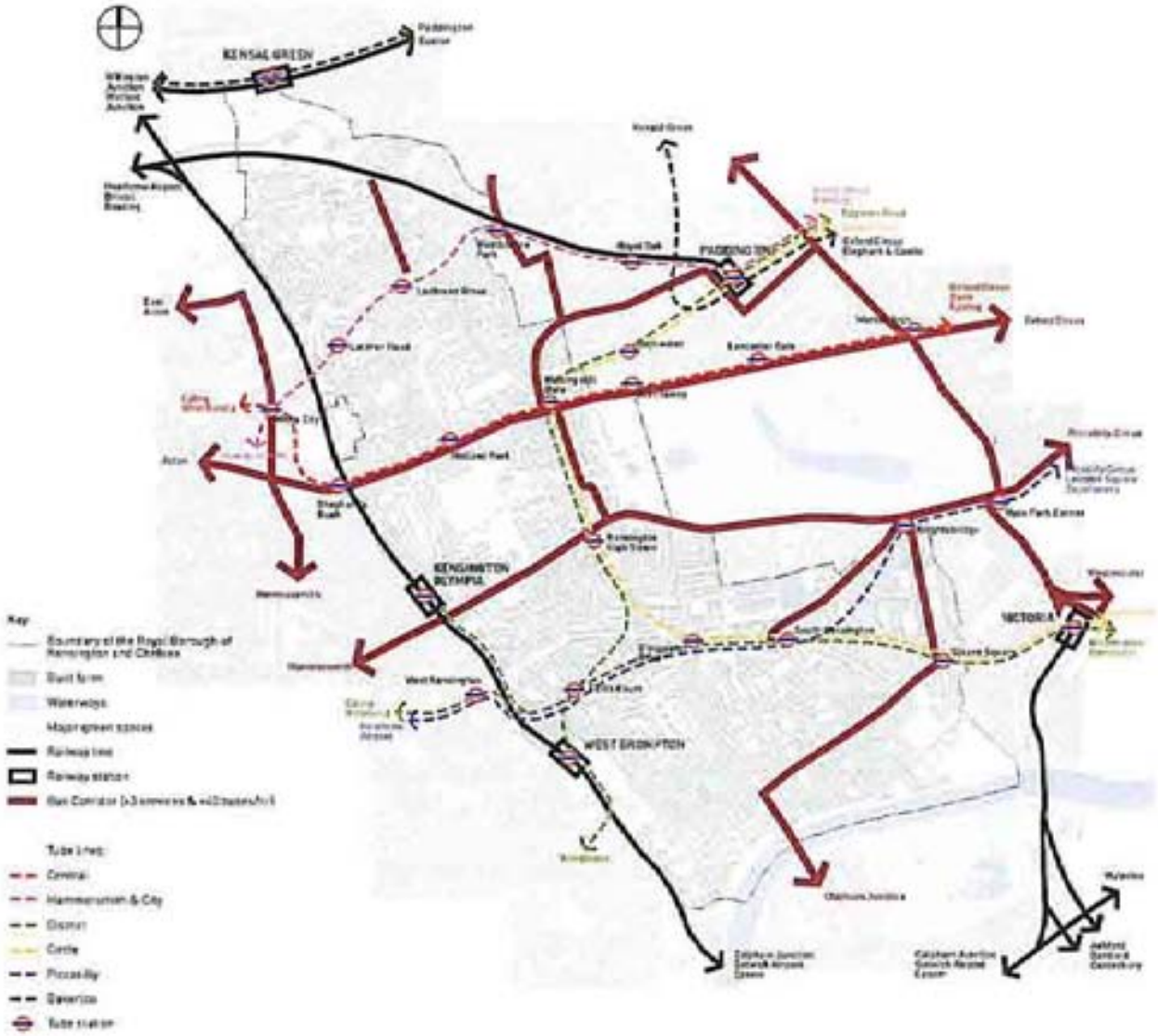

FIGURE 16: Public transport – wider context

PUBLIC TRANSPORT ACCESSIBILITY

ACCESSIBILITY FROM LONDON – NETWORK ACCESSIBILITY SURFACE AND UNDERGROUND RAIL

RBKC is well served and connected to both underground and surface rail.

Victoria Station and Paddington Station are two major transport hubs in the proximity of the borough linking national, regional and local public transport. These stations connect London with South England and West England / South Wales respectively.

Major destinations from Paddington and the frequency of service during morning peak are:

- Reading – 8/9 services per hr
- Oxford – 4/5 services per hr
- Swindon / Bristol – 4 services per hr
- Bath – 2 services per hr
- Birmingham – 2 services per hr

From Victoria services during morning peak provided include:

- Brighton – 4/5 services per hr
- Ashford International – 3 services per hr
- Eastbourne – 2 services per hr
- Worthing – 3 services per hr
- Canterbury / Dover – 4 services per hr

Notting Hill Gate	Circle, District, Central
Holland Park	Central
Ladbroke Grove	Hammersmith & City
Latimer Road	Hammersmith & City
Kensington High Street	Circle, District
Earl's Court	District, Piccadilly
West Brompton	District
Gloucester Road	Piccadilly, Circle, District
South Kensington	Piccadilly, Circle, District
Knightsbridge	Piccadilly
Sloane Square	Circle, District

TABLE 1
Underground stations and services within RBKC

Furthermore, Heathrow Airport can be reached from Paddington Station within 15 minutes and there are trains from Victoria to Gatwick Airport in 30 minutes. Both stations are well served by buses and tube. Paddington can be reached from everywhere within the RBKC within a maximum tube trip of 17 minutes and an underground trip to Victoria takes less than 30 minutes from everywhere within RBKC.

West Brompton and Kensington Olympia train stations within the RBKC are only served by local trains. Service has been improved since 1994, when operation was extended from peak-period only to an all-day Monday to Saturday half-hourly service between Clapham and Willesden junctions. The station in West Brompton was opened in June 1999. An hourly long distance service between the north-west and Brighton via Gatwick also operates on this line.

Another local train stop is Kensal Green just north of RBKC. Euston Station can be reached from there 3 times an hour, while service between Kensal Green and Willesden Junction and Watford Junction runs about every 5 minutes.

These local train stations provide important interchanges between the surface rail and the underground services. At both West Brompton and Kensington Olympia, interchange with the District Line is provided.

RBKC is highly accessible by underground rail with eleven stations located within the borough and five different lines servicing the borough as shown in table 1 and figure 16. The underground service is mostly east-west orientated and links RBKC with the city centre and west London. Services run roughly between 5 a.m. and 12 p.m. with a frequency of less than 10 minutes between 6 a.m. and 10 p.m. on all lines. Service details are given in table 2.

	Peak hour headway (mins)	Off-peak hour headway (mins)
Circle	5-9	6-10
District	3-7	9-13
Central	6-10	5-11
Hammersmith & City	4-11	4-9
Piccadilly	3-6	3-6

TABLE 2
Service details*

Both the surface and the underground rail services are of significant importance to the borough since they are the main means of high capacity transport at peak hours. Overcrowding of the existing services is a major issue for the borough and it is crucial for a future transport strategy to ensure sufficient capacity for both the trains and the stations.
Most of the rail services are east-west oriented with the exception of the local train service between Clapham and Willesden Junction. Thus it is more difficult to access the borough from south or north London than from central or west London.

BUS CORRIDORS

RBKC is highly served by buses. Similarly to the underground service, the major bus services operate east-west-wards connecting the borough well with the centre and west London.
Major bus corridors as illustrated in figure 8 run along the following routes:

- Shepard's Bush – Holland Park Avenue – Notting Hill Gate – Bayswater Road – Oxford Road
- Hammersmith Road Kensington High Street – Kensington Road – Knightsbridge Road – Piccadilly
- Kensington Church Street – Pembridge Road – Westbourne Grove – Eastbourne Ter. – Pread Street
- Battersea Bridge Road – King's Road – Sloane Street
- Landbroke Grove
- Brompton Road

Along these corridors at least four different services operate and there is a peak hour flow of more than 40 buses in both directions.
Important destinations in the centre frequently served include Marble Arch, Oxford Circus, Hyde Park Corner, Piccadilly Circus, and Westminster, as well as the public transport hubs Paddington Station and Victoria. Furthermore major bus routes run to Clapham Junction in the south and to Acton and Hammersmith in the west.
Due to the high traffic flow as well as the traffic congestion levels in the borough, bus services sulfers from increasing delays and unreliability. A reduction of the overall traffic levels along with traffic management measures and strict parking controls would therefore greatly benefit the bus services, along with dedicated bus priority measures.

BOROUGH WIDE ACCESSIBILITY

The overall public transport accessibility of the whole borough is comparatively high. With regards to underground services, almost the whole borough is within a reach of 800m respectively 10 minutes walking distance from a tube stop. Only North Kensington and South Chelsea are less well accessible by tube. Analysing the 400m catchemnt area of the tubes the lack of underground access in the north and south of RBKC becomes even more obvious as illustrated in figure 17 with the tube stops clustering around routes north and south of Hyde Park.

Figure 18 shows that the whole borough is served well by bus routes. As highlighted previously though, there are corridors with a considerably higher frequency and number of different services. It is noted that the 400m catchment area of these bus corridors is rather similar of those of the tubes. This adds an extra quality to these areas in that buses are usually used for shorter trips than tubes, yet it fails in providing improved quality to those areas of the borough poorly served by underground service.

Overcrowding of both underground and bus services reduces quality of service. Similarly, some of the stations, such as High Street Kensington, Knightsbridge, Sloane Square, and South Kensington are highly overcrowded at peak periods.

Another issue determining the quality of public transport service is the need to interchange. Accessibility to bus service is available in most of the borough, yet due to the fact that buses do not only serve the major destinations / centres but need to cover also the neighbourhoods, the connection between certain areas of the borough and desired destinations might still be poor. Interchange might be required which increases journey times.

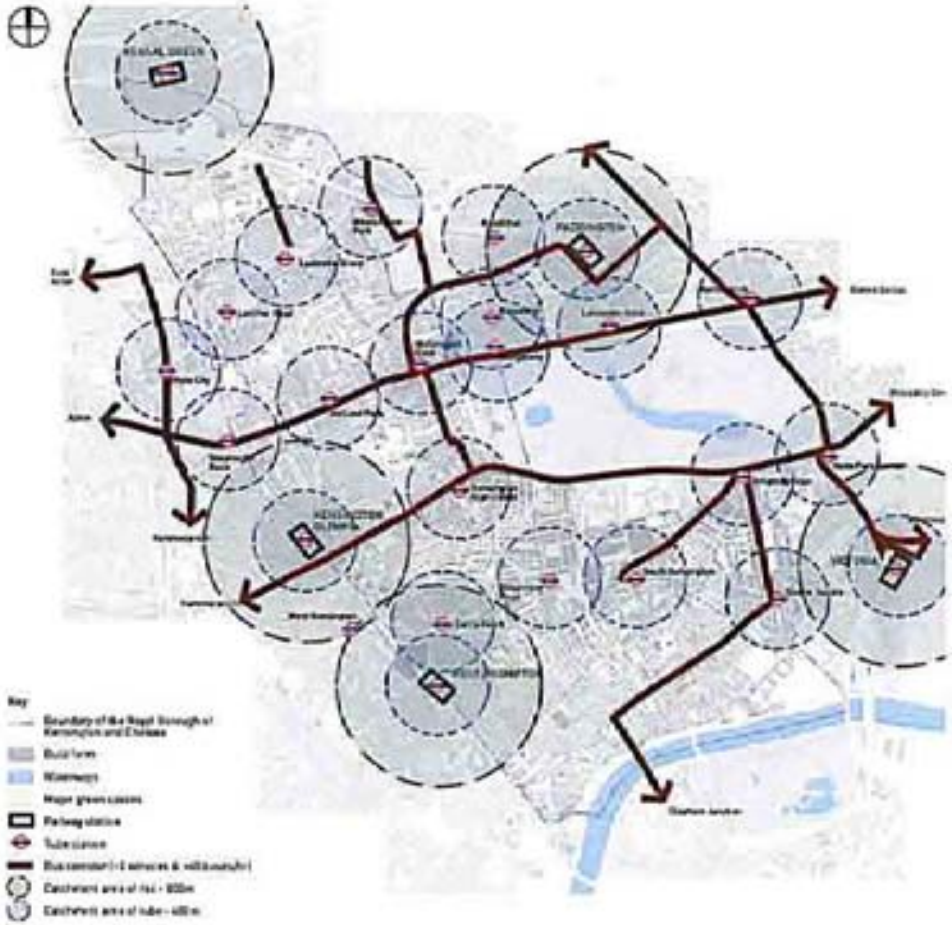

FIGURE 17: Public transport – borough-wide rail accessibility

FIGURE 18: Public transport – borough-wide bus accessibility

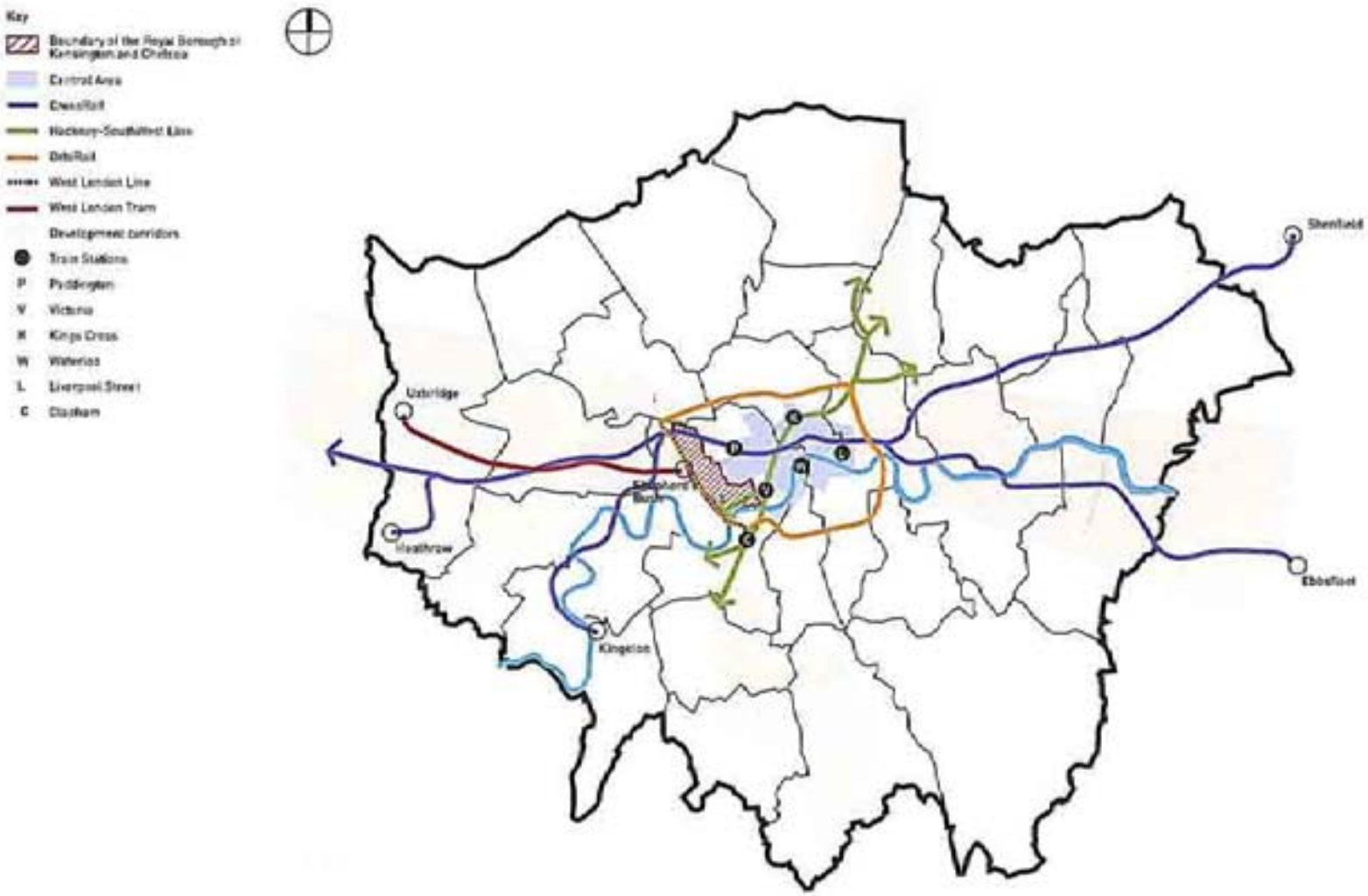

FIGURE 19: Public transport – indicative improvements

Furthermore, the quality of the access ways to the public transport stations is another aspect to be considered. This involves the permeability of the urban pattern and barriers for pedestrian movements such as main roads or rails tracks. However, also aspects such as social security of routes (especially during evening hours) or perception of the environment are to be considered, i.e. trips along active frontages are often perceived shorter and more pleasant than trips along neighbourhoods.

PLANNED PUBLIC TRANSPORT IMPROVEMENTS

In the following, future strategic public transport projects are briefly outlined as far as they are of relevance for the borough.

- **CrossRail**
  CrossRail would provide a high capacity east-west rail link across London with the capacity of carrying at least 150,000 passengers during the morning peak period. It will also reduce the need for many rail passengers to interchange with National Rail services providing direct access to the central area instead. Therefore, CrossRail will help reducing overcrowding on several underground lines and reduce congestion at stations. Furthermore, accessibility between east and west London will be improved, as trains run directly from suburban areas across London resulting in up to 50% reduction of journey times.

- **The Chelsea/ Hackney Line**
  This project would run between Wimbledon and Leytonstone, being in a bored tunnel for the whole route through Chelsea. Providing capacity for approximately 125,000 passengers during the three hour morning peak period, this line would generally relieve traffic congestion in the central area and help reduce overcrowding on the District Line, particularly through Earl's Court. New stations within the borough are proposed near Chelsea Old Town Hall and in South West Chelsea to interchange with the West London Line and to improve access to west Chelsea and south Fulham, which are poorly served by rail public transport. A route across the central area has been saleguarded.

- **Core OrbiRail**
  This project envisages a wider orbital network, the core of which would form an orbital network from the North, West, South, and East London Lines by extending the existing lines and expanding services operated over the core network. Services operating largely within that network would be supplemented by overlapping services from connecting lines. Such a network would ease journeys both from inner and outer London by providing an alternative for cross-London journeys. The network would thereby help to relieve congestion by enabling people to bypass London.

- **West London Line**
  Additional stops are planned on the West London Line between Willesden Junction and Clapham Junction that runs via Kensington Olympia and West Brompton. It is the RBKC's objective to secure at least two further intermediate stations and the provision of stations at Shepherd's Bush and Chelsea Harbour are being pursued. These proposals are in line with the Mayor's Transport Strategy that seeks further local improvements on the West London Line to ensure its contribution to OrbiRail and incorporation in the London Metro.

- **West London Tram**
  The West London tram is proposed to link Uxbridge with Shepard's Bush. It is designed to meet the growing demand for high quality public transport in west London and it is planned to take 4 to 8 million car trips per year off the roads.

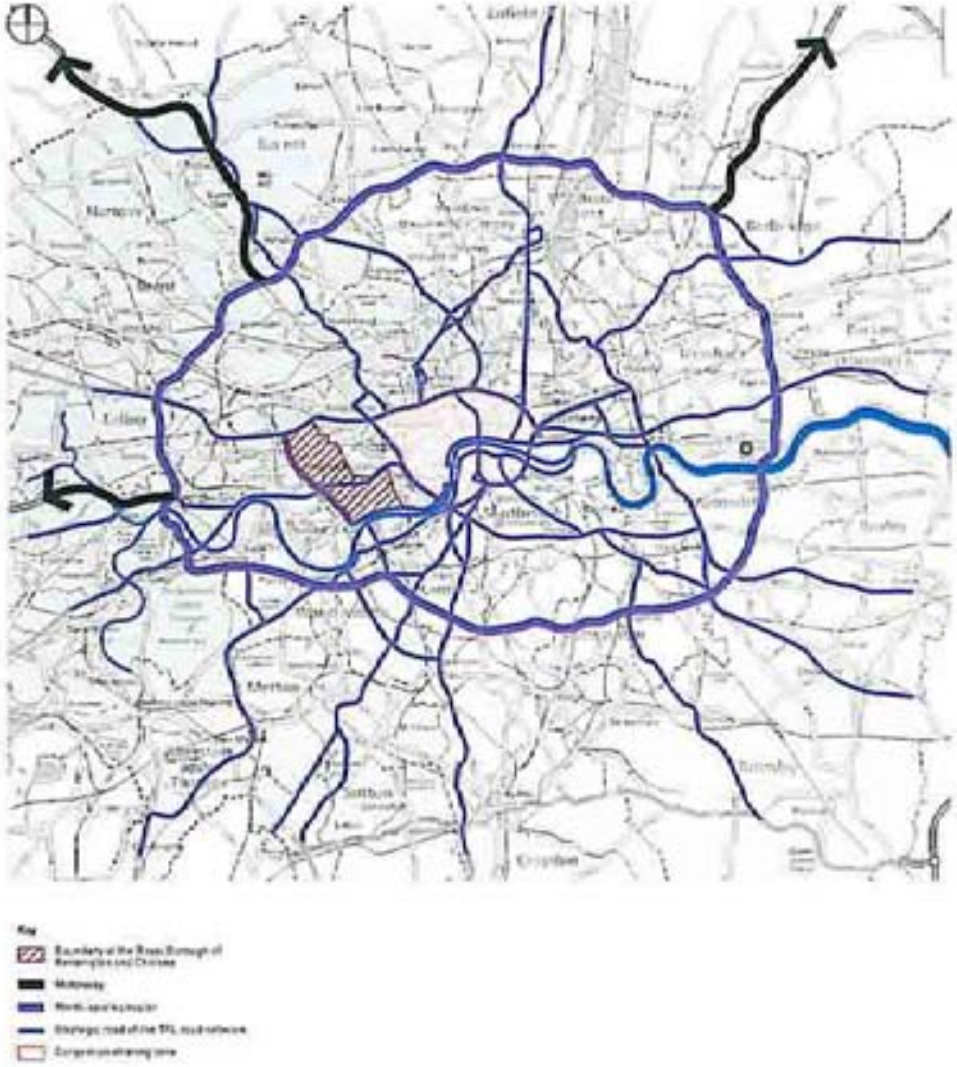

FIGURE 20: Private motorised transport – network accessibility.

FIGURE 21: Private motorised transport – borough wide accessibility.

ROAD NETWORK
STRATEGIC ROAD NETWORK

ACCESSIBILITY FROM LONDON – NETWORK ACCESSIBILITY

The borough is well accessible for motorised traffic and well connected to the regional road network. TfL Strategic Roads connect the borough north-, west- and southwards (A40(T), A3320, and A3212 respectively), while A40 runs right through the borough. These major roads link the borough directly with the north-south circular, as Figure A illustrates.

Much of the traffic entering the RBCK from the west is making through trips to the centre.

BOROUGH WIDE ACCESSIBILITY

Besides the Strategic Routes, the borough's road hierarchy system also comprises of London Distributor Roads, Local Distributor Roads, and Local Roads.

Strategic Road and London Distributor Roads are intended to carry the main traffic flows and longer distance movements. Heavy goods vehicles and coaches are directed to use these roads.

The London Distributor Roads are the links between the Strategic Roads and the Local Distributor Roads and form the main bus routes. Any proposals transferring significant amounts of traffic from the London Distributor Roads to Strategic Roads would be approved by Transport for London.

Local Distributor Roads and Local Roads provide access to residential and commercial properties. While Local Roads serve merely the function of providing access, the Local Distributor Roads have additionally an important traffic distribution function. The capacity of the Local Distributor Roads in the Borough varies considerably according to their particular character.

The road network hierarchies for RBKC are illustrated in figure 21.

CONGESTION CHARGING ZONE

EXISTING ZONE AND ITS EXTENSION

In February 2003 the Congestion Charging Zone (CCZ) was introduced to the central area of London. The zone is bounded by the Inner Ring Road, i.e. Marylebone Road, Euston Road, Pentonville Road, Tower Bridge, Elephant Castle, Vauxhall Bridge and Victoria. The scheme was introduced with an initial daily fee of £5 and an increase to £8 came into effect in July 2005.

CCZ has proven very successful since introduction with a reduction of car traffic of 20% during the first few months. Consequently, traffic speeds increased by 37% within the zone from 13km/hr to 17 km/hr during peak period.

The CCZ has substantially enhanced public transport. Bus ridership increased by 14% and tube ridership by 1%. In contrast, bus congestion delays declined 50%. Net revenues from the system are used to improve public transport service, including more buses and major renovations to the underground system.

Due to the success of the current congestion charging zone, it is now planned to extend the charging zone towards the west by the so-called 'Variation Order'. A major public and stakeholder consultation was carried out between 9 May and 15 July 2005. The implementation for the western extension of the Congestion Charging Zone is scheduled for February 2007 and a single charge will apply across the whole area.

The extension will be bounded in the north by Harrow Road and Scrubs Lane, in the west by the West Cross Route, Holland Road and the inner southbound arm of the Earls Court One Way System, and by Chelsea Embankment and Grosvenor Road in the south (see figure 21). These boundary routes are free of charge and so are the elevated section of the Westway Road A40 (with a number of deviations) and the western arm of the inner ring road, namely Edgware Road, Park Lane, Grosvenor Place, and Vauxhall Bridge Road.

Charging hours will be from 7am to 6 pm Monday to Friday with no charge on public holidays or between Christmas Day and New Year's Day. Residents discount is provided as in the existing scheme and there would be only one charge for the whole combined area.

The framework of the charging zone will further be kept under review to respond to requirements and retain the overall objective of reducing traffic congestion.

Accompanying improvements and expected impacts of the extended Congestion Charging Zone
With the western extension to the congestion charging zone, a number of public transport and traffic management improvements are planned. TfL expects up to 7,400 extra bus passengers to travel into the western extension area within the morning peak period, including approximately 3,700 extra passengers in the morning peak hour. Therefore, it is planned to enhance the existing bus network before 2007 including an improved north-south connection.

In the extension area of the congestion charging zone, congestion is forecasted to reduce by 15% to 22%. Traffic is projected to decrease by 10-14% and traffic speeds are expected to increase by 10-14%. In the existing charging zone though, traffic is projected to increase by some 2% and congestion is likely to rise by 4-5% due to some residents of the western extension zone driving more in the existing charging zone due to the discount they receive, as well as some east-west traffic at present diverting round the central zone which will choose to pay to drive through the extended zone. The traffic at the boundaries of the western extension are expected to increase by 3% to 5% overall. Yet greater increases are forecasted along the southern boundaries and smaller increases along the northern side.

However, benefits of the extension are certainly outweighing the disbenefits by contributing to reducing congestion, encouraging greater use of public transport, and improving the reliability of bus services.

PARKING

Parking demand in the RBKC is high. In order to reduce traffic, the Council has imposed restrictions on the use of public on-street parking spaces by implementing a Controlled Parking Zone (CPZ) on all public highways within the borough. Parking permits are issued to residents only, while pay and display parking spaces cater for a limited visitor's parking demand. Parking spaces are designated as residents' parking bays, pay and display bays, and waiting restrictions. According to the UDP, there are around 27,000 on-street resident parking spaces available in the Borough and about 41,000 residents' parking permits issued. With increasing residential developments it is expected that pressure on parking spaces will intensify alike.

Parking demand is highest in the evenings and at night time.

The availability to residents of on-street parking anywhere in the borough at no additional charges encourages extra journeys to destinations in the borough and places an additional parking stress in popular areas such as shopping centres. On the other hand, residents are encouraged to make their trips inside the borough rather than longer trips to other destinations.

On major streets on-street parking can impair traffic congestion and reduce the quality of bus services, since it reduces efficiency. This might result in car traffic switching to minor roads, which will worsen the environment and local amenity of the residential areas.

Parking pressure is likely to increase in the future due to the extension of the congestion charging zone, which might result in fewer residents taking their cars out of the borough during the day. On the other hand, less people might visit the borough by car.

STRATEGIC CYCLING NETWORK

The borough is introducing the London Cycle Network (LCN) as part of the strategy to increase cycling. It aims to provide a network of safe and convenient cycle routes linking residential areas with all major centres of the borough. LCN routes within RBCK are mainly formed from minor roads. The cycling network is illustrated in figure 22.

However, many cyclists use the main roads despite heavy traffic and therefore dangerous conditions for cyclists, as they are often the most direct links. On these main roads, measures are introduced to improve safety for cyclists such as advisory cycle lanes and advanced stop lines at signal junctions.

According to the Local Plan high amounts of cyclists occur on Holland Park Avenue / Bayswater Road and Kensington High Street / Kensington Road. Generally speaking east-west routes seem to be higher frequented than north-south routes.

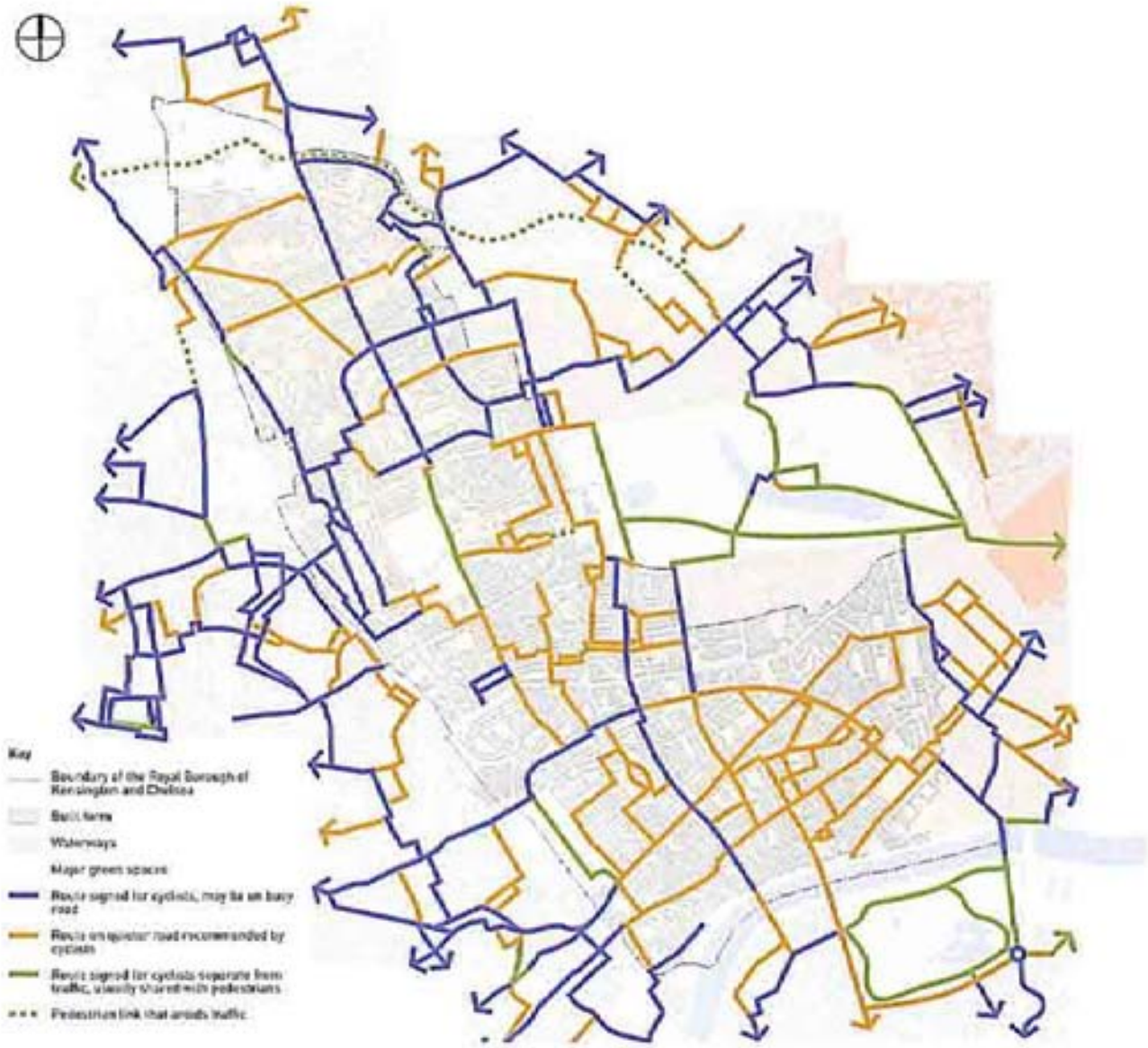

FIGURE 22: Cycling network.