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DEVELOPMENT CAPACITY, INFRASTRUCTURE, PHASING AND DELIVERY

7.1 Development Capacity Study

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7.1 Development Capacity Study

7.1.1 Summary

The 2011 London Plan set out an indicative capacity of 25,000 homes and 14,000 jobs in the London Riverside OA for the plan period to 2031. In the December 2011 consultation draft, the London Riverside OA boundary was expanded to include East Beckton. The development capacity study therefore included the capacity figures for East Beckton, which was disaggregated from the Royal Docks OA, and its capacity added to London Riverside OA. The total capacity for London Riverside OA was therefore increased to 26,500 homes and 16,000 jobs.

The London Plan 2015 reflects that revision and sets out a capacity of 26,500 homes and 16,000 jobs in the plan period to 2036.

Previously, in the 2011 consultation draft, a development capacity study was undertaken to estimate the development potential of the London Riverside OA. That study set out a development capacity of 23,800 homes and 17,500 new jobs. The development capacity methodology used and the rationale for that exercise has been set out in further detail below.

After the publication of that draft in December 2011 and over the last few years, the boroughs in partnership with the GLA have identified additional sites for residential development. These are (see figure 7.2):

- Dagenham Stamping and Tooling Plant (DSTO) site: The 2011 study assumed that this site would remain in employment use. This site is now being considered for higher density residential development.
- Industrial sites along the A1306 including Rainham Steel: The 2011 study assumed that these sites would remain in employment use to comply with Havering Council's policy to maintain 33% of the sites along the A1306 as employment sites. That policy will be reviewed with the intention to change it to support residential development. The planning framework supports residential led development on these sites, which are now part of Havering Council's Housing Zone Bid and are in close proximity of the proposed Beam Park Station.
- River Road South: The 2011 study assumed that this area would remain in industrial use at the time of the study. However, Barking and Dagenham Council are now considering release of industrial land in this area for housing. There are three safeguarded wharves located in this area.
- Lyon Business Park: The 2011 study assumed this site to come forward for residential development. This site is now locally significant industrial land and is no longer being considered for housing.

Taking into account the additional number of employment sites released for housing, it is considered that the estimated number of residential units (23,800) would increase and the estimated number of jobs (17,500) would decrease, and bring these numbers from the 2011 development capacity study closer to the London Plan 2015 estimates of **26,500 homes** and **16,000 jobs**.

7.1.2 The 2011 Development Capacity Study Methodology: Typology approach

This approach was developed to address the potential difference in London Plan development thresholds and developer/local authority estimates of site specific development capacities. This GLA approach had been applied to estimate development capacity for Olympic Legacy SPG. It was used in this instance to provide an indicative development potential of London Riverside OA.

Key sites

The study identified a series of key sites within the OA and estimated the development capacity of each by applying residential and employment typologies to calculate the number of homes and jobs.

The key sites were those already identified has having potential to accommodate significant development in previous master plans, local authority Site Specific Allocation Documents (SSAD) and the 2009 Strategic Land Availability Assessment (SHLAA) Study. In many cases, the selected key-sites were included in all three sources. Although the SHLAA quantified development that could come forward on un-identified smaller infill sites, such sites were excluded from this capacity study. The capacity study acknowledged that these sites could come forward for development outside, i.e. in addition the identified key sites. The key sites are shown in Figure 7.1.

Residential capacity estimate

For estimating residential capacity, the study applied a residential typology from a pool of five typologies to the key sites. It should be noted that whilst these estimated capacities do not have the robustness of a masterplan or approved scheme, they provide a greater degree of certainty on housing numbers and offer a spatially tested estimate of site capacity, which is required to establish the principles of built form and estimate social infrastructure requirements.

Residential Typologies

These residential typologies were based on built schemes that were largely located in East London, the Thames Gateway or local centres within London Riverside OA, with the exception of one scheme (Granville New Homes), which was located in West London. These five typologies and the corresponding built schemes are listed below and Figure 7.1 shows the key sites to which these typologies have been applied.

Typology: 2-3 storey houses

Barking Riverside

Density: 86 dwellings per hectare
Setting: Suburban
Built form: 2 to 3 storeys
Details: 950 homes (10% affordable), a new school
Location: Greenhithe, Kent. Dartford UA

Typology: 4 storey maisonette

Granville New Homes

This is a Brent Council scheme brought forward as part of the South Kilburn master plan. It won a Building for Life Award for the London region in 2009 and is commended by CABE as 'a very striking development which responds successfully to its conservation area context at the same time as delivering attractive homes and high quality open spaces'. The scheme was designed by Levitt Bernstein Architects.

Density: 130 dwellings per hectare
Setting: Urban
Built form: Predominantly 4 storeys
Details: 110 homes (75% social rented)
Location: South Kilburn, LB Brent

Typology: 5 storey mixed use

Kings Wharf

This is a scheme from the Mayor of London's best practice guide 'Housing for a Compact City' (2003). It was designed by Davy Smith Architects.

Density: 328 dwellings per hectare
Setting: Urban / Town Centre
Built form: Predominantly 5 storeys
Details: 57 homes, commercial units on ground floor
Location: Kingsland Basin, LB Hackney

Typology: 6 storey mixed use

Adelaide Wharf

This scheme was brought forward by First Base (Lendlease/ Stanhope) in partnership with English Partnerships. CABE describe the scheme as 'a bright and functional block of apartments which surround a central landscaped courtyard with a children's play space'. The scheme was designed by Allford Hall Monaghan Morris.

Density: 501 dwellings per hectare
Setting: Urban / Town Centre
Built form: predominantly 6 storeys
Details: 147 homes (50% affordable), mixed use
Location: Regents Park Canal, LB Hackney

Typology: Tall building and perimeter block

Barking Central

This scheme won the Housing Design Award in 2010. The scheme was brought forward by Redrow Homes and designed by Allford Hall Monaghan Morris, and is within a short walk of the station. It comprises a tall building, the Lemonade building, located on the former R Whites Lemonade factory site, and 8 – 10 storey housing blocks with central courtyards. There are 500 dwellings with a high proportion of 1 and 2 bedroom units along with a library and mixed use ground floor units.

Density: 332 dwellings per hectare
Setting: Urban / Town Centre
Built form: 18 storey tall building and 8-10 storey perimeter block
Details: 500 homes, library, mixed use ground floor
Location: Barking Town Centre, LBBD

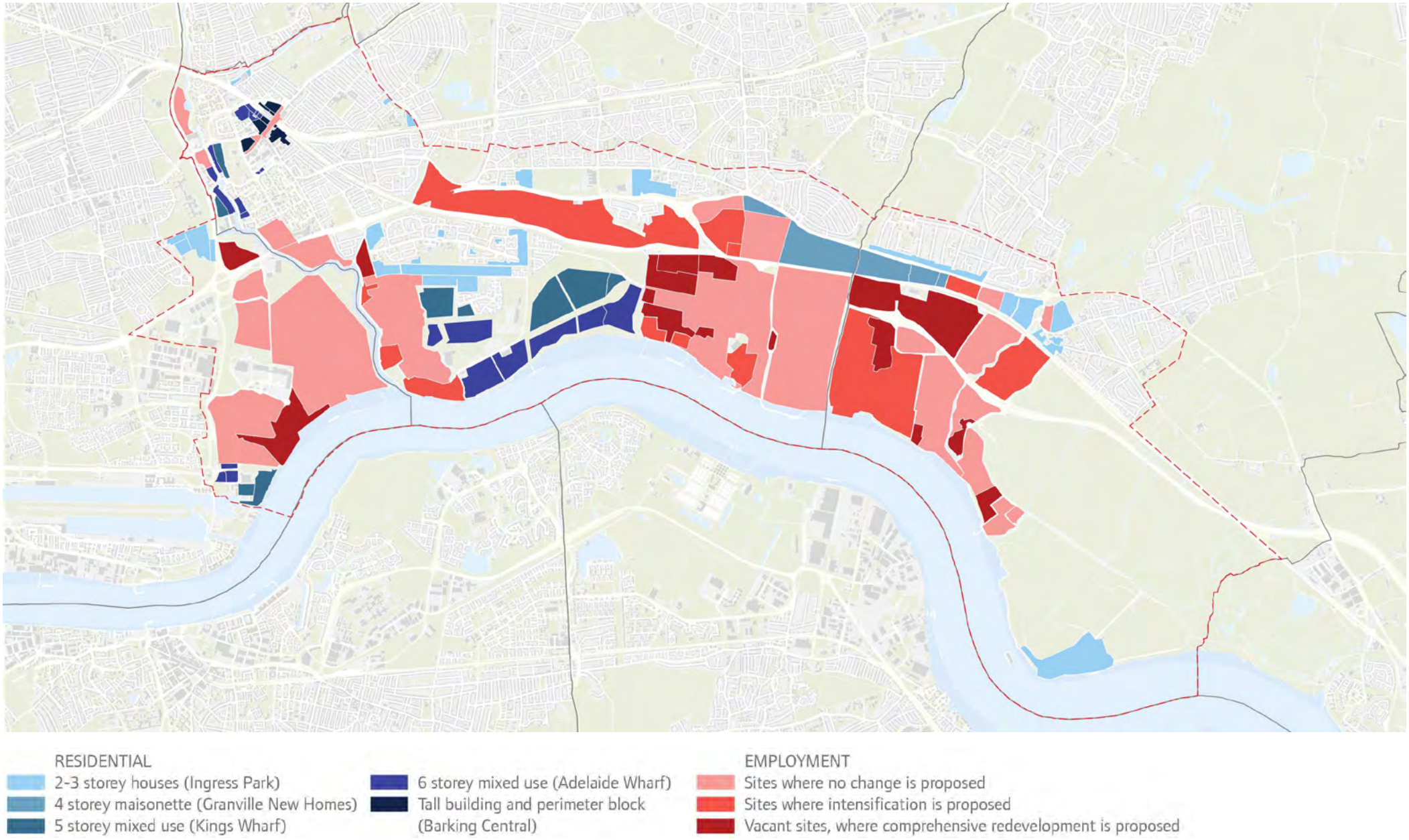

Figure 7.1 Development Capacity Study (2011) - Key sites, proposed landuse and applied residentil and employment typologies

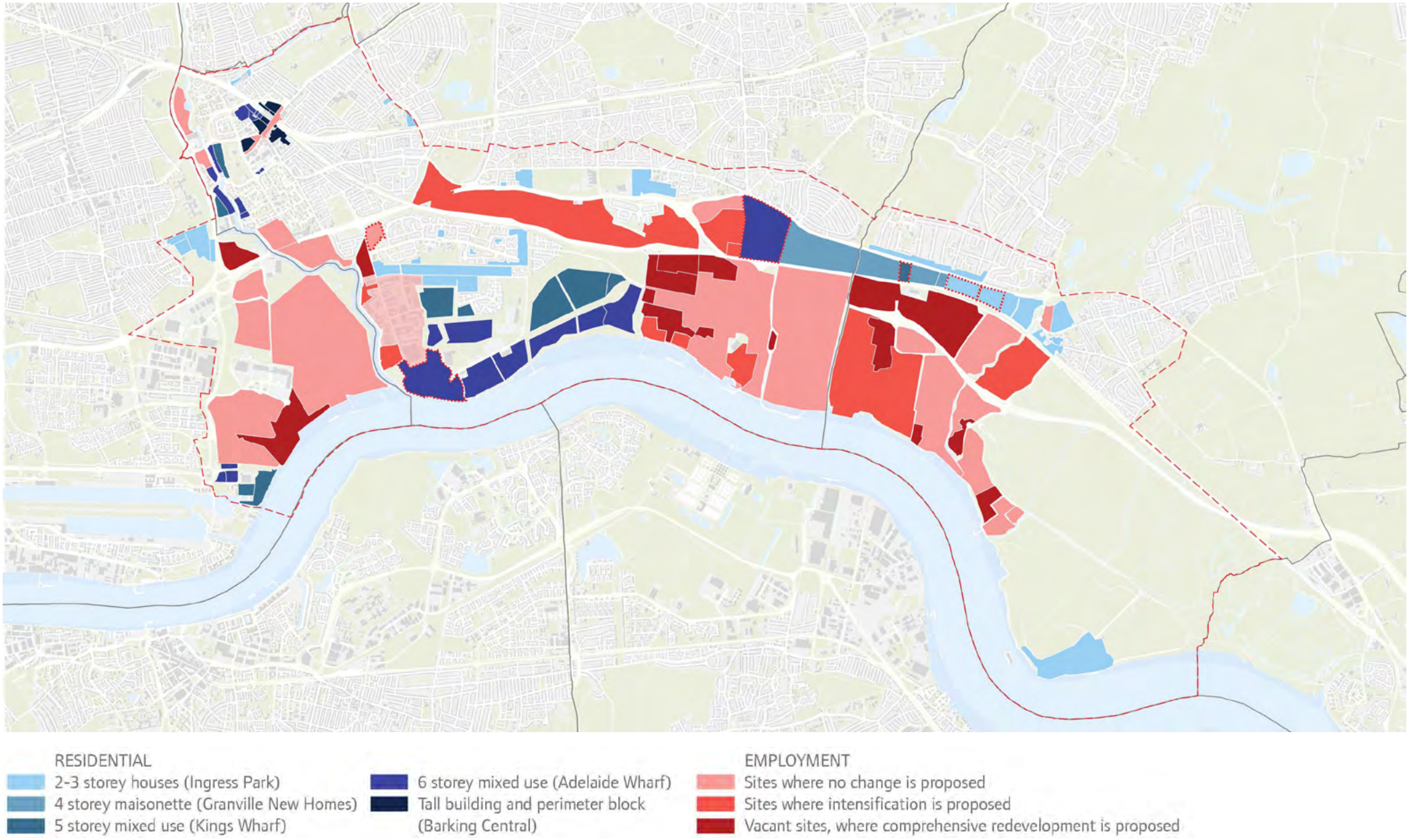

Figure 7.2 Curent landuse assumptions map (landuse change is shown with a red outline)

Employment Capacity Estimate

For estimating employment capacity, the study categorised employment locations into vacant, low intensity and in-use. These are shown in Figure 7.1.

A majority of employment sites were in-use and therefore without any development potential in terms of creating new jobs. The focus of the study was therefore on vacant land and large sites which were underused in terms of industrial capacity. The study applied job densities of grouped industrial typologies (Figure 7.3) to sites that were identified as vacant or low intensity sites. On low-intensity sites, the net uplift in jobs was calculated by deducting the estimated existing employment capacity from the potential estimated employment capacity. The existing employment capacity was estimated using data from the Annual Business Enquiry 2008, Census Data from 2001 and a desktop study using aerial photography and Ordnance Survey Master Map data. The potential employment capacity was estimated by applying a grouped industrial typology to the entire site.

Social Infrastructure Requirements

The development capacity study established a baseline for estimating social infrastructure requirements in the OA with the intention of using this starting point for discussion with the Boroughs in terms of the level of social infrastructure provision that maybe anticipated as a result of new housing delivery in the OA.

- Estimated resident population: 57,120
- Estimated child yield: 14,340
- Primary schools required: 5
- Secondary schools required: 2

The population estimate was calculated by multiplying the average household size (2.4 persons/unit) with the total number of residential units. Child yield was calculated on the basis of 60.26 children for every 100 housing units where 65% of housing units are private and 35% of housing units are affordable, as set out in the Mayor's SPG Providing for Children and Young People's Play and Informal Recreation, March 2008.

Typology	**Uses**	**Job Density** (jobs/ sq. m.)	**Fraction for weighting**	**Weighted job density** (jobs/sq. m.)	**Combined job density** (jobs/ sq. m.)
PIL	General Industry	29	0.33	9.67	37
	Small Business Units	32	0.33	9.67	
	General Warehousing	50	0.33	16.67	
PIL+	General Industry	29	0.17	4.83	59
	Small Business Units	32	0.17	5.33	
	General Warehousing	50	0.17	4.33	
	Large Scale/ High Bay	80	0.5	40	
IBP	High Tech R&D	29	0.25	7.25	35
	Small Business Units	32	0.25	8	
	General Warehousing	50	0.25	12.5	
	General Industry	29	0.25	7.25	
Logistics	Large Scale/ High Bay	80	0.5	40	65
	General Warehousing	50	0.5	25	
Large Scale/ High Bay	Large Scale/ High Bay	80	1	80	80
Waste	General Industry	29	0.5	14.5	40
	General Warehousing	50	0.5	25	
PIL + Waste	General Industry	29	0.125	3.625	59
	Small Business Units	32	0.125	4	
	General Warehousing	50	0.125	6.25	
	Large Scale/ High Bay	80	0.5	40	
	Waste	40	0.125	55	
General Warehousing	General Warehousing	50	1	50	50

Figure 7.3 Grouped Industrial Typologies - Job density ratios for employment generating uses (Source: Employment Densities: A full guide, ARUP 2001)

A general rule of thumb has been applied to calculate the number of primary and secondary schools using the assumptions below:

- Approx. 3000 children require 1 primary school
- Approx. 6000 children require 2 primary schools and 1 secondary school

It should be noted that these estimates do not take account of existing educational capacity or existing need for additional school places within existing communities, nor do they consider that education providers may wish to harness financial contributions to improve existing facilities instead of building new ones.

In addition to school provision other social infrastructure such as health centres, pharmacies, libraries, community centres and places of worship will also be required. Further detailed assessments should be conducted to comprehensively identify social infrastructure requirements within the OA.

The capacity study also identified areas where new social infrastructure could be located based on a walk zone analysis; it does not take account of capacity within existing facilities.

On that basis, the areas identified were:

- Barking town centre along the River Roding
- Barking Riverside (much of this has been planned as part of the existing consent but was still regarded for the purpose of this exercise as new provision)
- South Dagenham/ Beam Park along the A1306
- Rainham Village West

7.2 Phasing

Whilst the OAPF demonstrates that there is potential for 26,500 new homes, the GLA recognises that there has been a slow rate of delivery over much of the London Riverside area for some years. (see figure 10.1). However, there has been significant investment in the area for employment including a new distribution centre for Tesco, which is due to bring 1,200 jobs, and in the Sustainable Industries Park with 125,000 sq.m of business space.

7.3 Delivery mechanisms

A number of different delivery mechanisms exist to help bring about the planning and regeneration objectives the OAPF promotes. These include:

- Working proactively with the private sector and landowners to encourage investment and long-term involvement.
- Utilising public sector land and assets to achieve objectives.
- Determining planning applications promptly and ensuring they comply with all relevant policies and guidance and appropriately contribute to the wider needs of the OAPF area.
- Strategic land acquisition by the public and private sectors to deliver key projects.
- Compulsory purchase to acquire land to deliver comprehensive development and infrastructure. This is particularly useful where sites are difficult to assemble through private negotiations - for example where there are complicated freeholds and leasehold interests.
- Coordinating strategies and investment decisions by the wider GLA group such as the Mayor's Transport Strategy and affordable housing funding.

2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	Total	2009/10 estimate
292	165	383	501	655	123	620	280	3019	418

Figure 7.4 Housing delivery in London Riverside between years 2000 and 2010

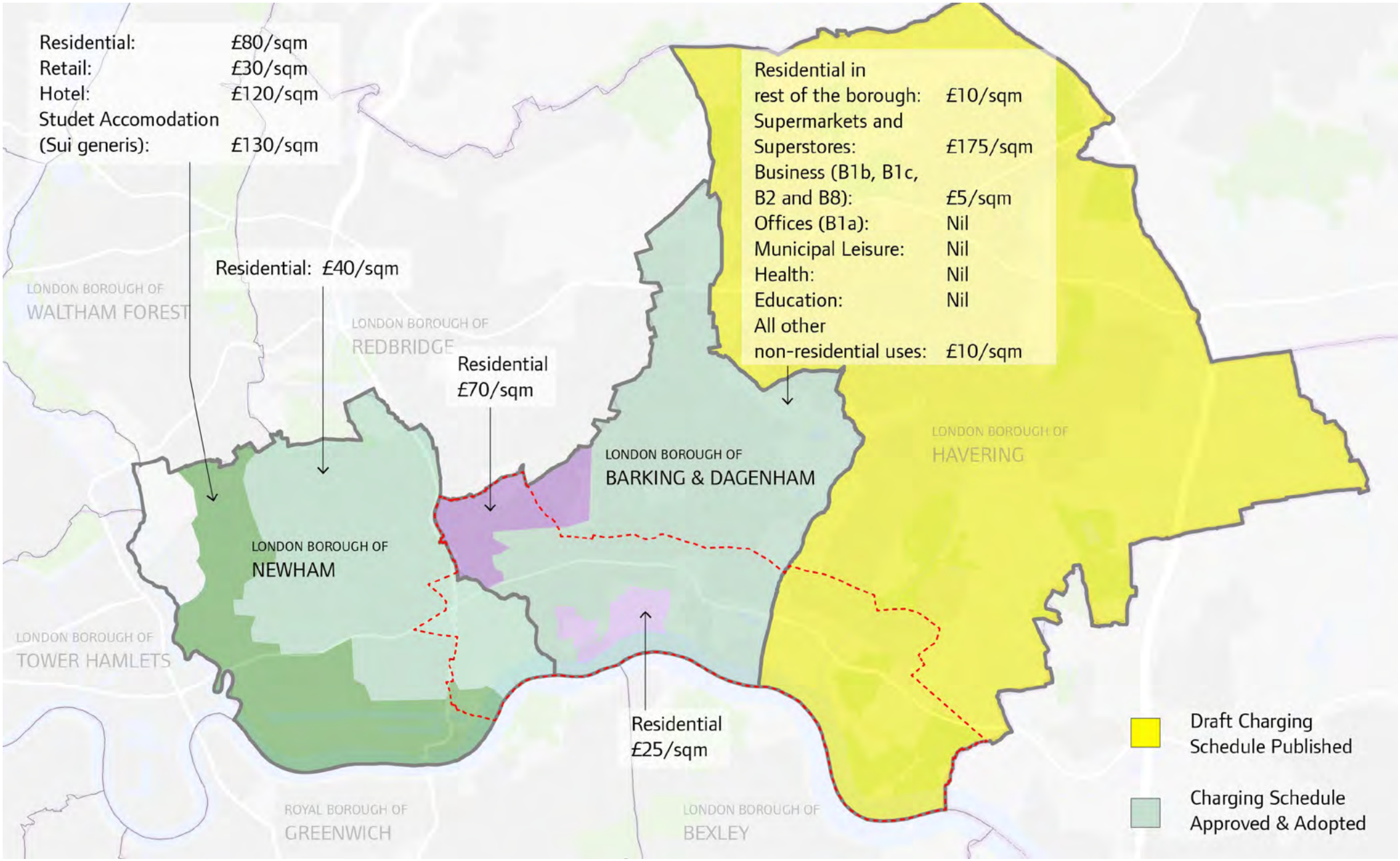

Figure 7.5 CIL charging schedules

7.4 Development Infrastructure Funding (DIF) Study

The GLA working with its partners intends to undertake a Development Infrastructure Funding (DIF) Study for the London Riverside Opportunity Area. Similar studies have been carried out for other Opportunity Areas including Vauxhall/Nine Elms/ Battersea and White City.

The study would build on work already carried out on behalf of Newham, Barking and Dagenham and Havering as part of their Community Infrastructure levy (CIL) process and would:

- Provide a viability assessment for the potential to support the delivery of strategic infrastructure.
- Assess, identify and quantify the social, public realm and transport infrastructure requirements of the development the OAPF envisages.
- Set out the overall cost of the infrastructure requirements so that the figure is known and the ways in which the 'funding gap' after monies generated by Section 106 contributions and CIL can be addressed.
- Assess the delivery and investment plans of land owners, agencies and infrastructure providers.
- Provide a commentary on the prioritisation of projects and where money would be most beneficially spent.

The DIF study would examine the following areas:

- Transport
- Public realm improvements
- Education
- Healthcare
- Emergency Services
- Community centres; libraries /archives and youth provision
- Arts and Cultural Centres
- Public open space, sport and play space
- Employment and training
- Utilities

The study would be informed by and complement the evidence base for the potential review of the boroughs' and the Mayor's Community Infrastructure Levies.

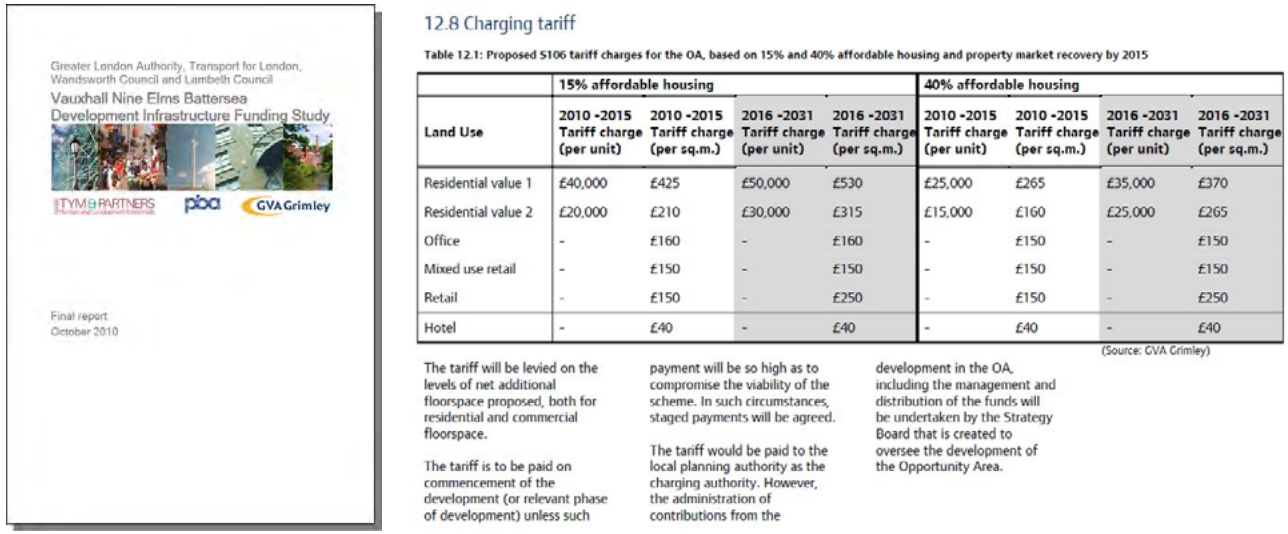

Figure 7.6 DIF Report for Vauxhall Nine Elms Battersea OAPF and table of charging tariff for the OA