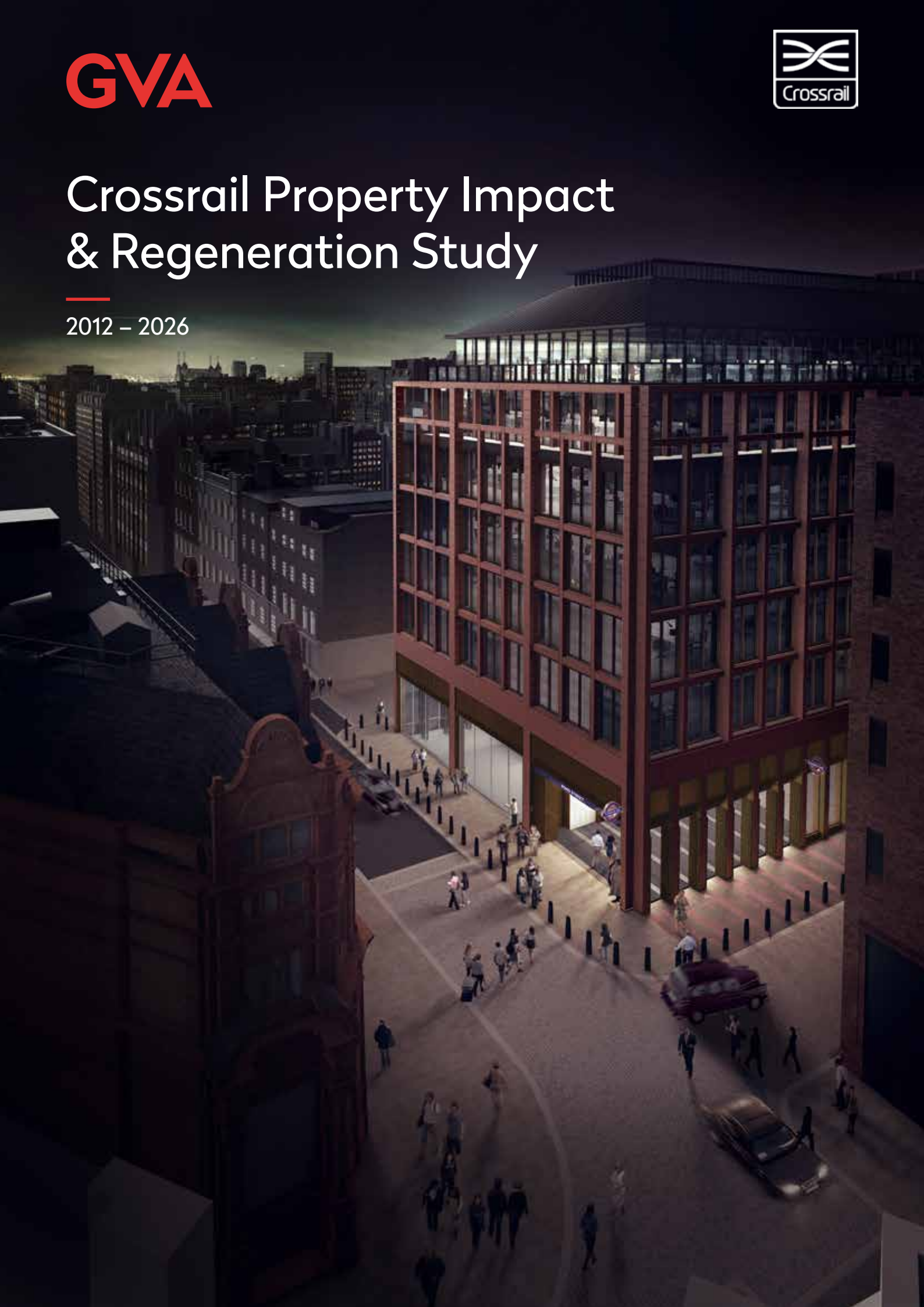
GVA

Crossrail

Crossrail Property Impact & Regeneration Study

2012 – 2026



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FUTURE OF LONDON

Crossrail

Cover image: Artist's impression of Bond Street station at Davies Street

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Foreword

The Crossrail project is delivering the Elizabeth line – a new railway for London and the South East. Running from Reading and Heathrow in the west, through 26 miles of new tunnels under central London to Shenfield and Abbey Wood in the east, it will cut journey times, reduce crowding on the existing transport network and provide passengers with more journey options.



Andrew Wolstenholme,
Crossrail CEO

In December 2018, the ten new stations and 26 miles of tunnels below the capital will open to passengers. The full route will open at the end of 2019, transforming the way that millions of people travel every day.

However, Crossrail is delivering more than just a railway. The improved transport links that the Elizabeth line will bring will help to reshape the areas through which it runs – driving development, attracting investment and jobs and acting as a catalyst for regeneration.

When the line opens fully in December 2019, it will add ten per cent capacity to central London's rail network and bring an extra 1.5 million people to within 45 minutes of central London. It will connect the city's financial and commercial districts more effectively with Heathrow airport, bring commuters closer to their jobs and make areas outside central London even more attractive places in which to live and work..

While the project has been busy creating the new railway tunnels beneath the streets of the capital, constructing ten new stations and upgrading the existing rail network in outer London, the regeneration of neighbourhoods right along the route is already well underway.

This report updates research that was carried out by GVA in 2012. What these latest findings show very clearly is that the Elizabeth line will have an even greater impact on development, regeneration and value creation than previously thought.

As the opening of the new line approaches, the number of developments that cite Crossrail as one of the main reasons for progressing has risen. GVA has increased its predictions on the development of new homes along the route by 2021 from 57,000 to 90,000 and expects this to double to 180,000 by 2026.

In central London, the Elizabeth line will reinforce London's status as a global city. It has created the capacity and conditions for major new headquarters for the likes of Facebook, Deutsche Bank and Societe Generale, allowing for the accommodation of more than 300,000 new jobs in key employment hubs including Liverpool Street and Canary Wharf.

Outside central London, with hotspots including Ealing, Woolwich, Ilford and Romford, GVA forecasts that the Elizabeth line will have a major impact. Better transport links will attract the construction of new homes and offices and make these areas even more attractive places for people to live, work, visit and set up business.

In addition to the broader development taking place along the Elizabeth line route, Crossrail is the first project in the UK to design the stations, surrounding areas and the oversite development opportunities at the same time. This integrated approach will knit the new stations into their surroundings, deliver over three million square feet of office, retail and residential space above new stations, and enhance the public realm outside, as well as capturing value for the public purse..

There are also valuable lessons to be learnt for future big transport programmes that are considered in the report. It is vital that all parties work closely together to make the most of the catalytic power of major transport upgrades and to spread the benefits well beyond the locality of the station. With planning for Crossrail 2 now well underway, it is important to capture this insight and ensure that it is passed on to future projects so the wider benefits of investment can be maximised for years to come.

Impacts within 1 km of an Elizabeth line station

2012 Predictions

Housing: Development of 57,000 new homes

Property Uplift: 18% uplift in property values

Property value: £5.5bn in additional value

Commercial: 3.25mn sq m of commercial space

By 2021 we forecast the following impacts:

Housing: Development of 90,599 new homes

Property uplift: 19% uplift in property values

Property value: £10.6bn uplift in property values

Commercial: 4.44mn sq m of commercial space

By 2026 we expect:

Housing: Development of 180,000 new homes

Rejuvenation: New residential and workspace opportunities

Property value: £20.1bn total uplift in propertyvalues within 1 km of a station



Key findings

Our headline findings show that the expectations from the 2012 study of what impacts would accrue by 2021 have more than been achieved. They also suggest that there are still opportunities linked to Crossrail that have not been realised yet and will occur once the Elizabeth line is operational.

To understand these impacts we have modelled forward beyond the 2021 period (to 2026). By modelling to 2026 we are not only updating the expected benefits from the 2012 study, but extending them. The property value impacts and permitted development pipeline impacts are then considered as combined outputs for the two studies, including the pipeline data over the period from 2008 to 2016.

Detailed analysis to support these findings is included in Section 5.

PROPERTY VALUE IMPACTS

Residential property
Based on permitted schemes alone, Crossrail could create up to £20.1bn in additional residential property value by 2026, and average value increases along the route of 29% above baseline forecasts.

In central London, by 2026, values could rise by 35%, and in outer London by 23% above the rising baseline projection.

Office property
Based on the permitted office pipeline from 2012 – 2016, Crossrail could create an additional £357.4m of office rental value, an average value increase of 14%.

Along the Elizabeth line route, core office markets (in 11 station locations) have experienced growth 26% higher than we predicted in 2012.

As set out above, Crossrail's value impact already exceeds 2012 forecasts, with stations along the route seeing values in 2016 on average over 30% higher than predicted.

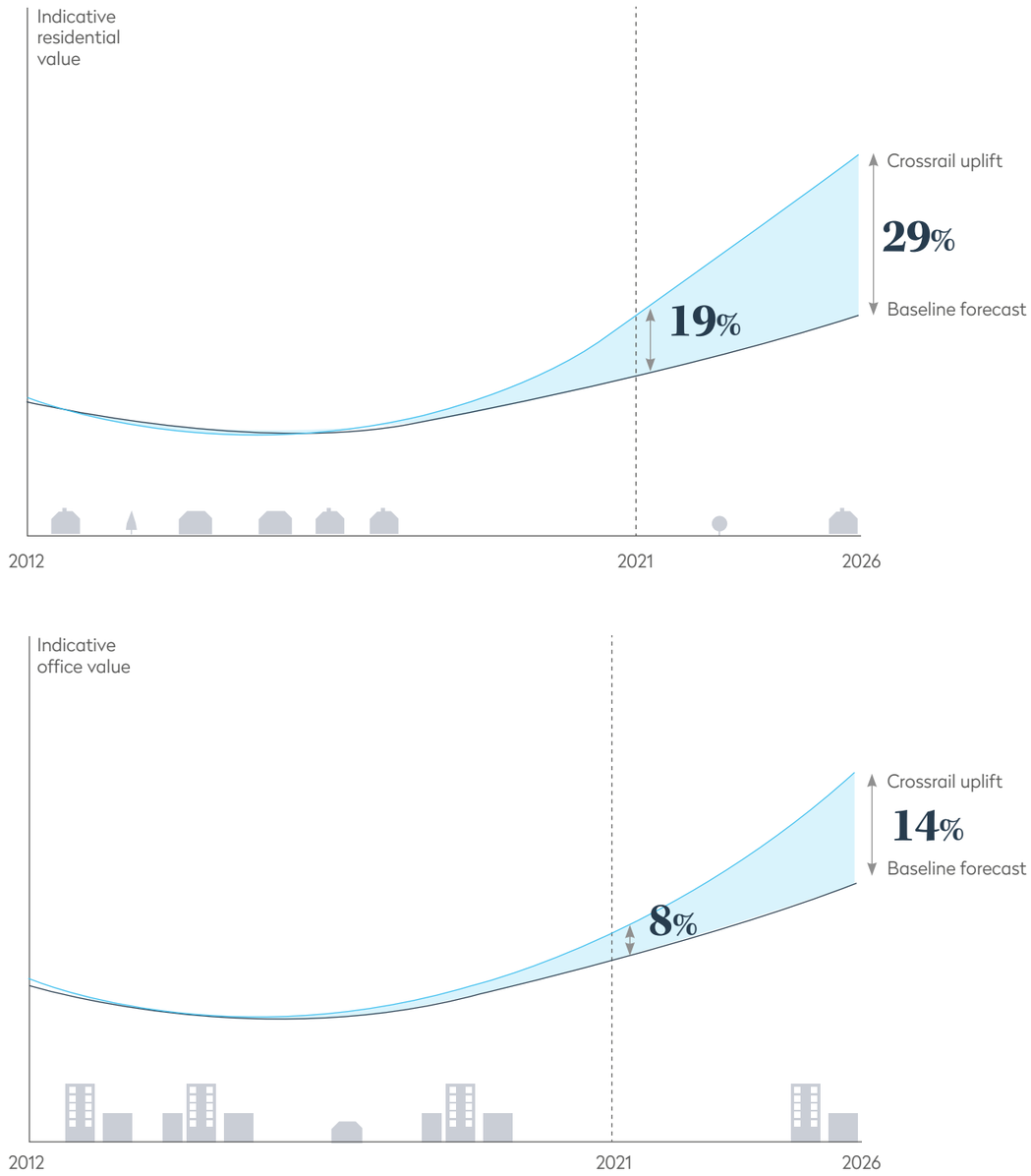
£20.1bn
in additional residential property value by 2026

35%
rise in values in central London by 2026

£357.4m
of office rental value, an average value increase of 14%

26%
Core office markets have experienced growth 26% higher than predicted

Crossrail's value impact already exceeds 2012 forecasts, with stations along the route seeing values in 2016 on average over 30% higher than predicted





PERMITTED DEVELOPMENT PIPELINE

The 2014 Development Pipeline Study identified the development pipeline over the period from 2008 to mid-2013. This Study extends this by identifying the development pipeline over the period from mid-2013 to 2016.

Over the combined period from 2008 – 16, significant development has been permitted around Elizabeth line stations, with Crossrail having had a potential influence on unlocking:

90,599
residential units

4.44m
sq m office floorspace (which equates to c.362,000 jobs)

446,646
sq m of retail floorspace

Between 2008 and 2016, 48% of permitted planning applications within 1km of new stations have highlighted the positive role Crossrail has played in supporting development. Recent years have seen the role of Crossrail more widely cited in planning cases, increasing to 58% between 2013 and 2016 from 40% in 2008–2013.

Since 2008, Crossrail has had a direct role in bringing forward planning consent for:

66%
of all residential units close to stations – almost 60,000 homes

68%
of all office floorspace – c.3.1m sq m of new space

58%
of all retail floorspace - 220,000 sq m of new shops and restaurants

These Crossrail-dependent developments create potential uplifts of:

£13bn
in residential value by 2026

£215m
in commercial value by 2026

DEVELOPMENT DELIVERY PROGRESS

The analysis of development delivery progress focuses only on development schemes permitted between mid-2013 and 2016 (the time period considered for this Study).

Crossrail is also driving development delivery over this time period. Along the Elizabeth line route residential development starts (as a share of total consents) are more than 10% higher in locations when compared to borough averages.

In total 70% of residential schemes permitted in station locations along the new route have commenced, as opposed to an average of 59% of schemes in the corresponding wider borough areas.

Almost two-thirds of stations along the Elizabeth line route are consistently seeing higher construction rates than the boroughs within which they sit.

This impact is most pronounced in the East where 79% of all permitted homes along the new route have commenced, compared to a borough average of 51%. This suggests that Crossrail is a critical factor in realising the Mayor's aspiration to unlock the "City in the East", helping bring forward capacity for London's expansion and growth.

For many central locations along the Elizabeth line route, affordable housing is not traditionally located wthin our study area, 1km around stations. This being the case, it may not be surprising that the proportion of affordable housing being delivered along the route is lower than borough-wide averages. However, Crossrail does appear to help secure higher levels of affordable housing along the Outer London parts of the route.

- In the West, permissions in the Elizabeth line locations achieve on average 26% affordable housing, compared to the 19% borough average
- In the East, permissions in the Elizabeth line locations achieve on average 20% affordable housing, compared to the 17% borough average
- Registered Providers are directly bringing forward more than 3,300 units on stand-alone sites within 1km of Elizabeth line stations (providing both direct and in direct support for affordable housing)

Economic impact

Crossrail is playing a key role in strengthening and shaping London's position as a world city economy.

- In central London, Crossrail is
  - » Creating the capacity and conditions for major new corporate headquarters for the likes of Facebook, Société Générale and Deutsche Bank
  - » Enabling 319,000 additional jobs to be accommodated in key locations such as Liverpool Street and Canary Wharf
- In outer London, Crossrail is
  - » Creating the capacity for 42,000 additional jobs
  - » Enhancing connectivity to help attract for example new tech firms to Hayes, cultural activities to Woolwich and office development to Ealing

In total 70% of residential schemes permitted along the Elizabeth line route have commenced

Lessons learned

To add depth to the figures and inform future infrastructure and regeneration programmes, Future of London and GVA conducted anonymous interviews with local authorities, the Greater London Authority and Transport for London, developers, occupiers and Business Improvement Districts. Findings are detailed throughout the report, and are summarised here.

In strong locations, Crossrail is seen as adding to the mix of attributes that make an area attractive for investment. It can be difficult to isolate specific influences, but the new route and stations are clearly regarded as catalysts for regeneration and development.

To maximise that catalytic power and to spread benefits beyond the station area, Crossrail must be part of a wider array of investments and cross-sector activities, including coordinated public realm, transport 'feeder' services, planning policy and regeneration strategy.

On the other hand, the attractiveness of Crossrail's impacts has created challenges in terms of land speculation, which may have held back delivery while landowners wait for value increases. Understanding and preparing early for the impacts of major infrastructure can help mitigate this risk.

Taking a larger stake in terms of land ownership can help to increase control over delivery and can therefore provide multiple benefits.

A stronger public stake in development for Local Authorities and Registered Providers – especially through early land-use masterplanning or site identification – could also increase affordable housing in future infrastructure megaprojects if infrastructure and housing policy can be more closely aligned.

This research doesn't capture developer contributions of off-site affordable housing beyond a kilometre from each station, so numbers are likely higher than reported. Still, Crossrail's highly central, high-value inner-London locations mean affordable housing tied to station proximity is lower than the borough average in Central London.

Although Crossrail is supporting a higher percentage of affordable housing than the borough average in Outer London, the pan-London numbers could be higher for future programmes, particularly given the new Mayoral focus on delivery of affordable housing which emerged only in the latter stage of the study period.

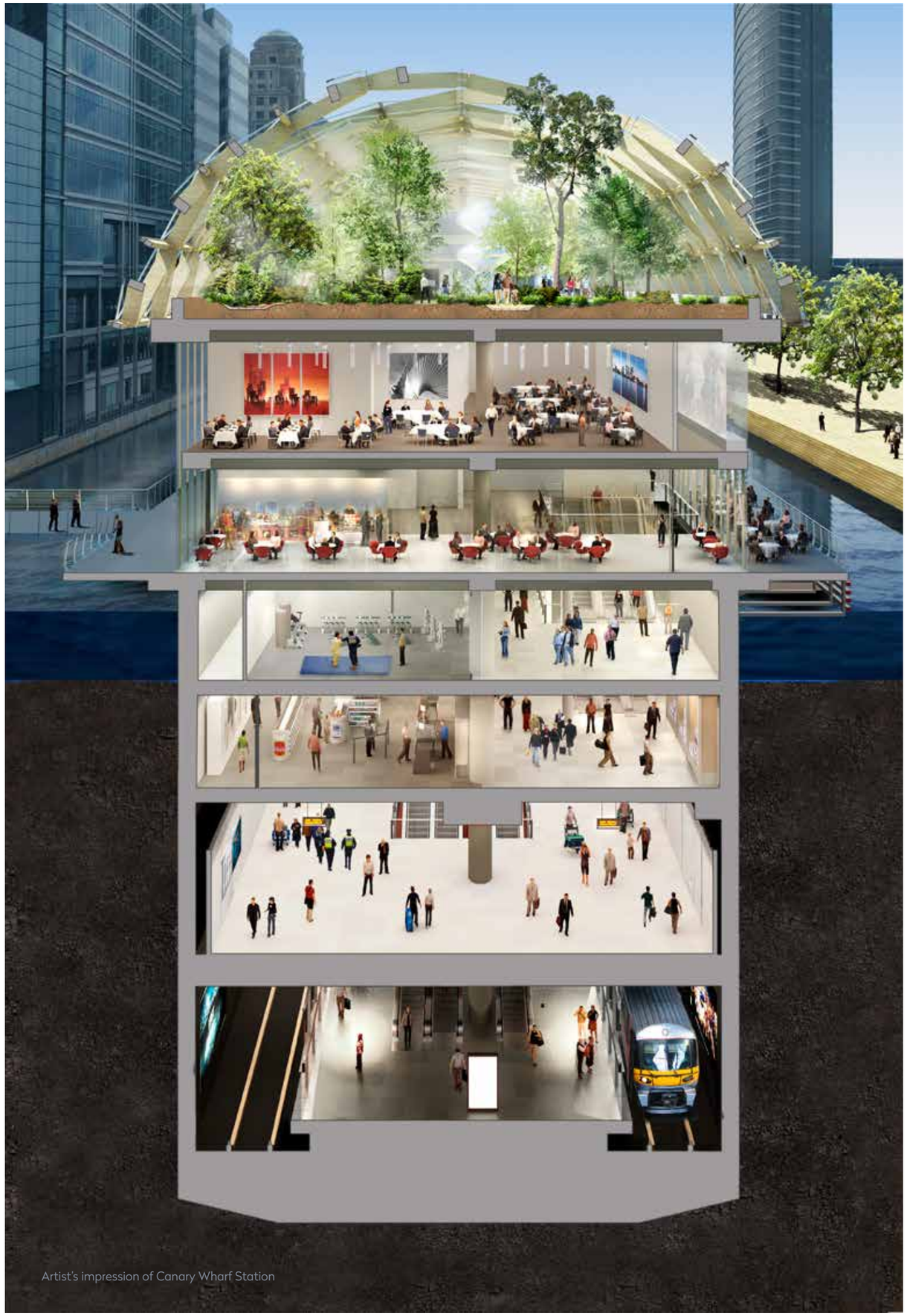
Town centre regeneration and commercial activity outside Central London is largely occupier, rather than investor, driven. As such, impacts are likely to come after opening, once the Elizabeth line can be properly experienced. Early town centre activity has been led by residential development, where improved connections can attract new (and often more affluent) markets.

Delivered well, this new housing should in turn help to develop or revitalise town centre offers. Plans now emerging indicate a 'second wave' of development that will bring forward new retail, leisure and office activity.

As locations become more attractive to larger corporations, there is a risk of crowding out SMEs, including independent retail and restaurants, stripping an area of what made it special. A number of local authorities are tackling this through planning.

As this report shows, there is a strong case for much more joined-up thinking around new infrastructure – especially on projects at the scale of Crossrail to enhance opportunities and manage risks. In the main, this does not require new delivery structures; it does require a clear, shared vision, appropriate resourcing, and commitment from and alignment between agencies over the life of the programme. Predicting and mapping influences and impacts would therefore be simpler, and benefits should be easier to grasp and track for all stakeholders.





Artist's impression of Canary Wharf Station

1

Introduction & Approach

Artist's impression of Tottenham Court Road Station

INTRODUCTION

1.1 GVA, supported by Future of London (FoL), have been commissioned by Crossrail Limited to undertake new research to update and test the understanding of Crossrail's impact on property and regeneration along the route. This comes at an exciting time when the first new trains have commenced passenger service between Liverpool Street Main line and Shenfield on the TfL Rail route, ahead of the Elizabeth line opening in phases through to December 2019.

1.2 This report provides a fresh take on the full range of impacts Crossrail is having, building on the strong base of research already undertaken to establish the quantitative benefits (using secondary data analysis), but also extending analysis to capture the qualitative influences the delivery of major infrastructure can have on London's places (using primary data collection through interviews).

1.3 The Study builds on GVA's earlier research presented in the Crossrail Property Impact Study (2012) and Crossrail Development Pipeline Study (2014). It refreshes the understanding of the property market benefits Crossrail continues to unlock as evidenced by the value, scale and nature of development along the route. This is organised around Crossrail's role as an agent for property value change, a tool for creating development capacity, and a catalyst for delivery, underpinned by extensive and robust quantitative data analysis.

1.4 The Study also takes Future of London's Crossrail as Catalyst report (2014) as another jumping-off point for the research. Crossrail as Catalyst sought and reported key qualitative responses to Crossrail's influence, with a focus on how it has affected placemaking, regeneration and consultation around stations and the reactions required from the public sector to harness the opportunities that new connectivity brings.

1.5 In addition to updating GVA and FoL's earlier work, we investigate the scheme's wider regeneration benefits through cross-sector interviews. This in-depth material provides a richer insight into impacts than quantitative analysis alone, provides lessons for future programmes, and links Crossrail's impacts directly to the Mayor's priorities for London. Our analysis therefore helps move forward the debate on the value of transport infrastructure as a tool to unlock regeneration and meet Mayoral objectives.

Figure 1: Elizabeth line route map



APPROACH & METHOD

1.6 The quantitative elements of this Study's analysis replicate the approach used in GVA's previous Property Impact Study (2012) and Development Pipeline Study (2014), using the same 500m and 1km zones of influence as previously defined (with the addition of Reading and Twyford stations, which were not confirmed when the previous studies were undertaken). It also draws on the same data sources (where possible) to update the value uplift assumptions, value benchmarking data and development pipeline data.

1.7 To support this quantitative analysis we have engaged with stakeholders across the property industry, to understand the impacts that cannot be revealed by data alone. As mentioned, this has been undertaken through targeted interviews with the private sector (developer, investors and occupiers), led by GVA, and the public sector led by Future of London.

1.8 Full explanation of the approach, including data sources, assumptions and benchmarking approaches, is provided in the Appendix. The key terminology used throughout this report is defined below:

- Zone of Influence: Refers to 1km radii around future Elilzabeth line stations which captures the principal geography of property and regeneration impact as a result Crossrail investment, which was adopted and used in the 2012 and 2014 studies. The Zone of Influence may be split into an inner (0-500m) and outer (500-1km) zone in accordance to evidence in support of Crossrail Community Infrastructure Levy (CIL). Further detail regarding these inner and outer zones and the rationale for adopting them is set out in Appendix I.
- Line Section: Splits the Elizabeth line route (shown below in Figure 1) into three sections which align with the Central London and Outer London property markets. The Central Section (Paddington to Canary Wharf) captures the Central London market and the West Section (Reading to Acton Main Line) and East Section (Stratford to Shenfield and Custom House to Abbey Wood) capture the Outer London market. As set out in the Appendix I, this facilitates benchmarking and consideration of the unique character of the London Central Activities Zone (CAZ).
- Benchmark Markets: Value and development pipeline trends in the Zones of Influence are compared to wider geographies, such as boroughs, to enable benchmarking of Crossrail investment impact. Benchmark market areas vary for different metrics and stations along the Elizabeth line route. Section benchmarks are also used when considering line section average findings; West Benchmark, Central Benchmark and East Benchmark. The method in Appendix I sets out how these correspond to stations, and provides more detail on how they are used throughout this report.
- Central London: For the purposes of this Study Central London refers to the area from Paddington to Canary Wharf.

2

What have others considered to be the impact?

Artists impression of Farringdon Station

This study will build on GVA's previous categorisation of the Crossrail influence on stations, in order to provide an updated view of how the Crossrail influence is evolving at each station along the new route.

2.1 There is a range of published research on Crossrail, which has a varied focus on the influence of Crossrail on the property market, and provides a platform for this Study to build on. A review of these determines commonalities and differences between findings, and aids to inform the approach to this Study. We also aim to tackle any significant unanswered questions raised by other work about Crossrail's influence, and provide a robust, transparent evidence base where this may help to resolve discrepancies between different findings.

2.2 The following studies have received significant media reference and comprise the core contributions to commercial research with regard to Crossrail's property related impact:

- Foresight: A global infrastructure perspective (44th edition – August 2016) – KPMG
- Crossrail: Identifying Opportunities (UK Research, January 2015) – JLL
- Crossrail: The Impact on London's Property Market (Winter 2013/14, updated March 2016) – CBRE
- Crossrail: Analysing Property Market Performance Along the Elizabeth line (2017) – Knight Frank
- Linking Housing Markets: The Effect of Crossrail on Housing Markets in London (March 2014) - Hamptons
- The Impact of Crossrail on Visitor Numbers in Central London (January 2014) - Arup
- Impact of Crossrail (April 2015) – City of London Corporation
- Crossrail Property Impact Study (2012) – GVA
- Crossrail Development Pipeline Study (2014) – GVA
- Crossrail as Catalyst (2014) – Future of London, supported by Crossrail, GVA, Arup, and London Communications Agency

2.3 It is worth noting, in the context of this Study, that Transport for London have commissioned a much broader assessment of Crossrail's impact. Led by Arup this project is still at an early stage of its research but will investigate the influence Crossrail has had (or will have) on a range of economic, social, deprivation and other indicators and measures.

INCREASED FOOTFALL IN CENTRAL LONDON

2.4 The Arup study focuses on Crossrail's impact on visitor numbers and flows in central stations (Bond Street, Tottenham Court Road and Farringdon) through the increased capacity created by the Elizabeth line. It does not focus specifically on the resultant property market impacts, as is the case for the JLL and CBRE research, instead demonstrating the increased passenger numbers which will result from the opening of the Elizabeth line. However this sets the scene for part of the focus of this Study, namely the changing dynamics of the Central London commercial property market underpinned by increased footfall, which is blurring boundaries between traditionally defined locations.

LESSONS LEARNED THROUGH DELIVERING THE CROSSRAIL PROJECT

2.5 The KPMG paper draws on findings from a Crossrail Case Study and focuses on the governance and project management of the delivery of this 'mega-project', rather than its property and regeneration impacts.

2.6 This provides useful context and understanding for the approach and strategy adopted to deliver the project, but does not provide any particular threads to explore as part of this Study.

VALUE GROWTH AND CHANGING DYNAMICS OF LOCATIONS

2.7 CBRE, JLL, Hamptons and Knight Frank research emphasise the value increases created in locations with Elizabeth line stations, which is supporting increased development activity and investment in these locations. Methods and timescales vary across each of the studies, producing the following findings:

- CBRE: Finds 31% average increase in house prices near stations along the route between 2008 and 2016.
- JLL: Expects 42% average increase in house prices near stations along the route between 2014 and 2020, outperforming the Greater London average by 6%.
- Hamptons: Finds 34% average increase in house prices near stations along the route between 2009 and 2013.
- Knight Frank: Finds that average increase in house prices near stations along the Elizabeth line route outperform the Greater London average by 7% between 2008 and 2016.

2.8 As a result of this house price growth, driven by the increased transport capacity delivered by the Ellizabeth line, particularly improving accessibility for outer sections of the new route, wider development and regeneration in station areas is identified. To extend the findings of these pieces of research, building on GVA's previous research, this study provides further value growth projections, adding to those produced in other research, but also aims to unpack the dynamics of this residential price growth in much greater detail. This is undertaken by seeking to understand how it supports housing delivery, and exploring whether it is enabling the provision of affordable housing, as well as determining the commercial market impacts, and the influence on placemaking and other regeneration factors.

2.9 The CBRE, JLL, Hamptons and Knight Frank studies identify particular stations where the influence of Crossrail is most significant, where it is supporting the most transformational change, and where there may be longer term plays in locations which see a step change in accessibility. This study will build on GVA's previous categorisation of the Crossrail influence on stations (Limited Impact, Reinforcing Directions, and Creating Change), bearing in mind how other research has considered the influence for different stations, in order to provide an updated view of how the Crossrail influence is evolving at each station along the Elizabeth line route.



PREVIOUS GVA STUDIES

2.10 The main foundations for this Study are the two previous studies undertaken by GVA; Crossrail Property Impact Study (2012) and Crossrail Development Pipeline Study (2014). As set out in the previous section, the same methodology is used to update the value growth projections for residential and commercial prices and rents, and to analyse the permitted development pipeline (through planning applications) in the 500m and 1km areas around stations along the route.

2.11 The 2012 and 2014 studies identified the influence of Crossrail on property market dynamics and on the nature and scale of development close to the Elizabeth line stations, including;

- Impacting investment decisions (therefore accelerating new development);
- Creating additional residential and commercial value (£5.5bn along the route from 2012-21);
- Supporting the delivery of new homes and commercial office space;
- Seeing urban realm improvements which are driving further development activity;
- Directly providing support for new development proposals (41% of applications referencing Crossrail), through improved transport capacity or wider place making and regeneration impacts
- Showing the significance of Crossrail in reinforcing the strength of Central London property markets; and
- The importance of its role in unlocking major regeneration opportunities in weaker locations where it provides a step change in accessibility to core markets.

2.12 Whilst it is important to update the metrics measured in previous research to develop the most up to date understanding of Crossrail's influence possible, the main aim of this Study is to extend the understanding of its influence as an agent for property value change, a tool for creating development capacity, and a catalyst for delivery, whilst also exploring the wider benefits Crossrail has brought / is bringing to station locations, and how this is able to unlock regeneration in order to meet Mayoral objectives.

Almost two-thirds of stations along the route are consistently seeing higher construction rates than the boroughs within which they sit.



Artists impression of Liverpool Street Station

3

Value, Development Pipeline & Development Delivery Impacts

Artists impression of Bond Street Station

3.1 This section considers in detail the value impacts experienced to date and updates future projections of value growth. The analysis uses the same methodology and builds on our previous research published in 2012; it therefore provides a consistent and comprehensive review of impacts since 2012.

VALUE IMPACTS

3.2 The impact of Crossrail on property value has been the focus of much analysis and debate. Research by a wide range of analysts, using a variety of methods, has suggested that the scale of impact will be considerable across both residential and commercial property.

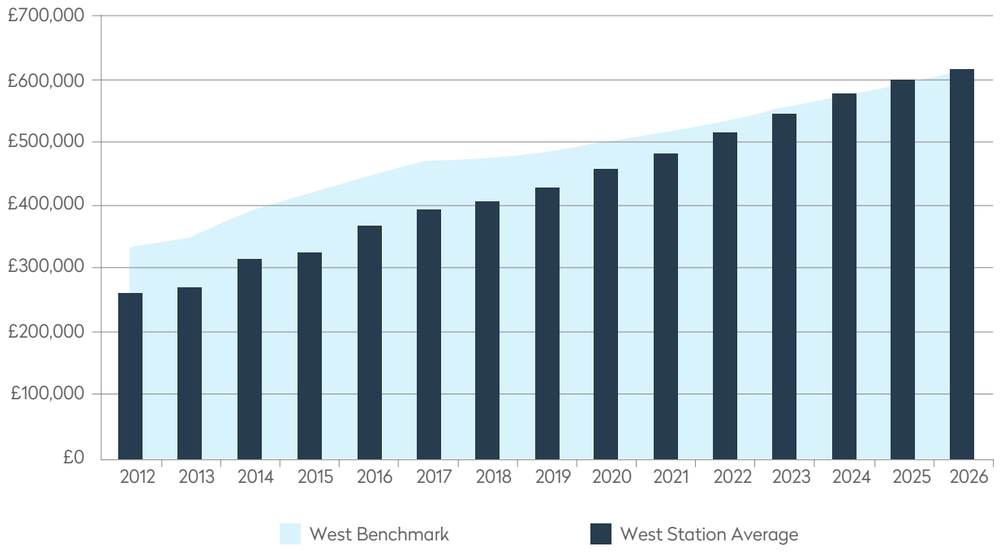
3.3 Our 2012 Study suggested that, on average, residential values would increase by between 20% and 25% over a rising baseline, whilst commercial values would rise by between 17% and 20%.

Residential Market

3.4 All locations along the route have already experienced positive value impacts as a result of Crossrail, with values in the West, Central and East sections expected to exceeded market benchmarks by 2026. Beneath this strategic trend there are some key distinctions in the timing of these impacts for each of the three line sections.

3.5 Within the West Section average values within station locations (West Station Average) start from a significantly lower base than the borough averages (West Benchmark) for that part of the Elizabeth line route, however as shown below by 2026 average values will be marginally above their benchmark.

Figure 2: Average annual achieved and forecast residential property prices in West Section Zones of Influence and benchmark market areas (2012-2026)



Source: HM Land Registry & GVA Analysis, 2017

3.6 Detailed value and locational dynamics underlying this strategic analysis provide an understanding of why there is a lag in relative values along the West Section until the end of the forecast period. Two key factors drive the relationship:

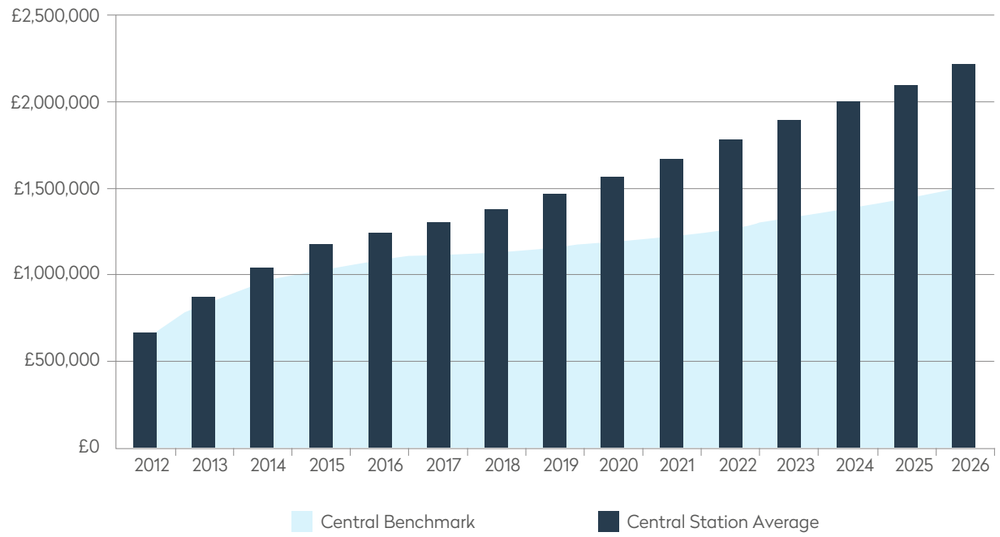
- There are significant value differentials between stations, with a high number of west London stations located in lower value locations such as Southall and Hayes.
- There are also significant value differentials between the station zones and the wider borough within which they lay, for example Maidenhead is one of the lower value parts of the wider RB Windsor and Maidenhead area.

3.7 Drilling down to the station specific level, and immediate areas of influence, key trends are as follows:

- **Stations whose relationship to the benchmark changes:** Maidenhead and Twyford both start at values below the West Station average but increase above it between 2017 and 2020. This suggests the timing of the Elizabeth line opening is particularly important for the performance of the residential market in these locations.
- **Strengthening and accelerating growth:** Ealing Broadway, Acton Main Line and Hanwell station areas show strong value levels from the start of the period. Once the Elizabeth line service opens from 2018, and over the remainder of the projection period, their level above the line section average continues to increase.
- **Moving closer to area averages:** a number of stations (such as Hayes & Harlington and Southall) have lower starting values, which do not appreciate sufficiently to exceed the area benchmark. However, Crossrail is important in narrowing the value gap, helping support development in these locations.

3.8 Within the Central Section, average values around the stations started above the benchmark and accelerate away from it over time, as shown below. This is largely due to stations occupying prime locations, with lower-value areas further away. This is reflected in the analysis for Liverpool Street, where the 1km values remain below the benchmark, whereas 500m values are above.

Figure 3: Average annual achieved and forecast residential property prices in Central Section Zones of Influence and benchmark market areas (2012-2026)



Source: HM Land Registry & GVA Analysis, 2017

All locations along the Elizabeth line route have already experienced positive value impacts, with values expected to exceed market benchmarks by 2026

3.9 Both Liverpool Street and Farringdon will see a significant change in their value relationship with the Central Section benchmark. Historically values here have tended to be below the benchmark but by the time of opening both will begin to see values that equal or exceed it.

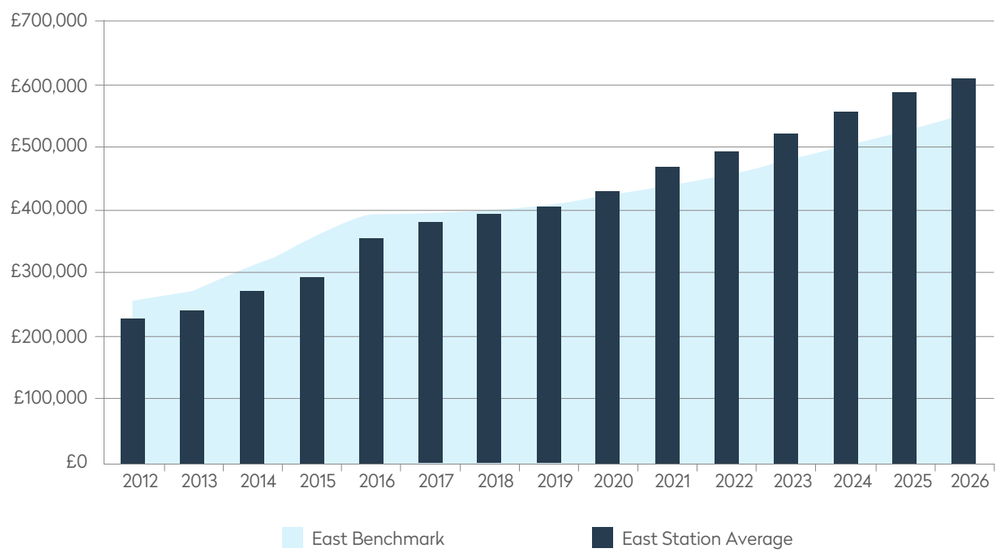
3.10 Across the whole Central Section major value impacts have occurred much earlier than the outer sections, reflecting the strength in value terms ofthese markets and the influence of a wider set of factors on property value.

3.11 Residential values in Canary Wharf and Whitechapel continue to be below the line section benchmark across the period. This is a departure from the 2012 findings which suggested Canary Wharf would 'catch up'; the continued lag appears to reflect stronger than expected growth in the benchmark rather than lower performance within Canary Wharf as well as limited capacity and opportunity to deliver new development at Canary Wharf until the Elizabeth line opens.

3.12 Residential market value performance is broadly consistent when comparing the 500m and 1km zones of influence, but the key difference when considering the 1km zone of influence is that Liverpool Street tracks just below the Central Section average rather than above it.

3.13 The most significant change and impact on residential values will occur within the East Section, where values will shift from significantly below the benchmark to significantly above it. The timing of this change is more closely aligned with the opening of the Elizabeth line route, suggesting Crossrail is a more critical driver in the East than the West or Central sections.

Figure 4: Average annual achieved and forecast residential property prices in East Section Zones of Influence and benchmark market areas (2012 – 2026)



Source: HM Land Registry & GVA Analysis, 2017

3.14 Key station-specific findings from 2012-16 achieved house price data and 2017-26 projected house price data – based on the 500m zone of influence around stations – are as follows:

- **Stations whose relationship to the benchmark changes:** Custom House, Abbey Wood, Stratford, Forest Gate, Ilford, Gidea Park, Harold Wood, and Brentwood all start at values below the East Section average, but increase above it between 2016 and 2024. These (alongside Shenfield, which is consistently above the benchmark) drive the value dynamics shown left.
- **Moving closer to area averages:** The majority of stations along the East Section have values below the benchmark, largely as a result of the significantly higher values achieved in some of the wider borough areas. However, by the end of the period, all stations achieve values closer to the higher benchmark.

3.15 For each line section, more detailed value projection charts which show the stations where strong values are being reinforced, weak values are continuing, and value change is transforming markets are provided in Appendix II.

3.16 By comparing the Crossrail enhanced value forecasts to a baseline forecast (drawing on Knight Frank's UK residential market forecast) it is possible to isolate the potential scale of the Crossrail impact. This suggests there will be an average value uplift of c.29% along the Elizabeth line route to 2026.

3.17 By comparing the 2016 achieved residential value for Elizabeth line station locations, with the value that was projected for 2016 in the previous GVA study (2012), it is evident that 28 out of 40 have on average already achieved or exceeded the anticipated value growth projected. The total achieved residential value in 2016, at £18,360,845, reached c.35% above the 2012 projection of £14,377,500.



Artists impression of Woolwich Station

Office Market[3]

3.18 For the office market, by comparing the rental forecasts for each station zone of influence and the forecast for average achieved rent across defined benchmark market locations, a stark difference in the performance between Central and Outer sections becomes evident.

3.19 The core influence of Crossrail in value terms appears to be that it reinforces the strongest markets and, whilst helping rents elsewhere, does not fundamentally alter the hierarchy of office markets or values already in existence. We explore some of the impacts of this in Section 7.

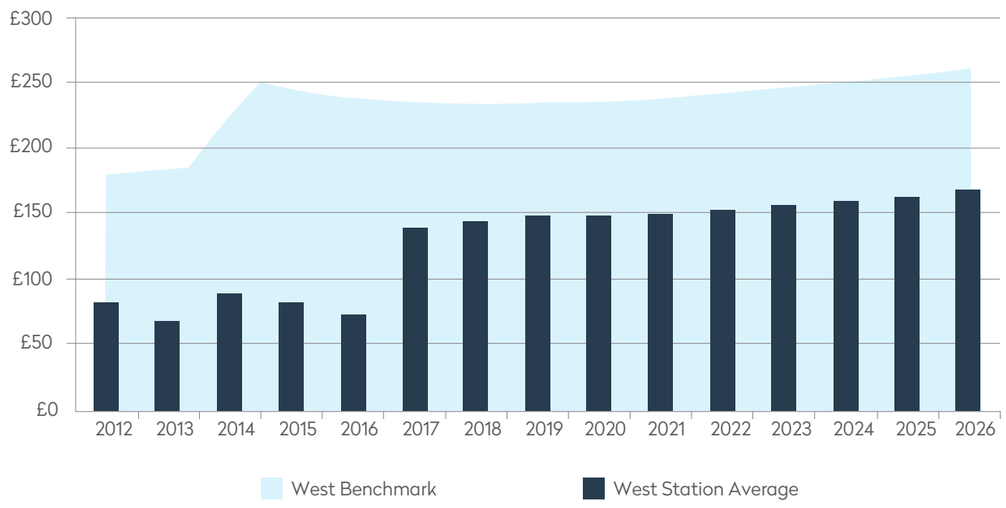
3.20 Within the West Section values close to stations, on average, are anticipated to remain below those of the benchmark markets, however the gap does close significantly over time. This reflects the lack of a significant office market in many locations in the West section, which tend to act as a 'drag' on average values.

3.21 However, despite this over-arching trend the strong markets do diverge. Locations such as Ealing Broadway, Slough, Maidenhead and Reading achieve parity and exceed the wider average, suggesting Crossrail will reinforce their role as key office centres.

3.22 As shown in the chart below, within the Central Section averages for station areas are below those for the benchmark; however by the end of the period the size of the gap has been significantly reduced.

Locations such as Ealing Broadway, Slough, Maidenhead and Reading achieve parity and exceed the wider average, suggesting Crossrail will reinforce their role as key office centres

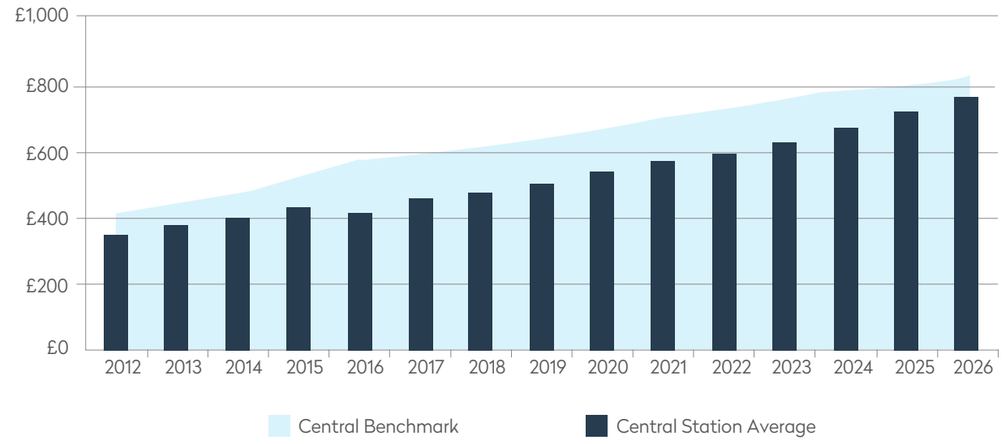
Figure 6: Average annual achieved and forecast office rents in West Section Zones of Influence and benchmark market areas (2012 – 2026)



Source: CoStar Focus & GVA Analysis, 2017

[3] *It should be noted that the analysis of office rental growth is limited by the availability of data in some locations due to the small scale of local markets and the lack therefore of transaction data. This can distort the value growth trend line of individual station locations, and the variation in values between different station locations.*

Figure 7: Average annual achieved and forecast office rents in Central Section Zones of Influence and benchmark market areas (2012 – 2026).



Source: CoStar Focus & GVA Analysis, 2017

3.23 The core influence in the higher benchmark figure is the inclusion of 'super prime' markets in Mayfair which drive the higher average, particularly when compared with the lower values in the Whitechapel and Isle of Dogs area. However individual station locations at Bond Street and Tottenham Court Road will exceed the section average and benchmark average levels (shown in the detailed charts in Appendix II), whilst Farringdon and Liverpool Street will become broadly equal to it. The improvement highlights another influence of Crossrail, which is to draw more areas fully into the Central London market, altering demand dynamics and reducing rent differential across Central London.

3.24 The East Section shows the greatest differential between the station locations and the Benchmark. This is unsurprising given that outside of Stratford there is little office activity or presence at significant scale. The performance of Stratford significantly distorts the line section average.

3.25 Individually Stratford is the only location that will exceed the benchmark over the period to 2026, along with Maryland (which captures some of the Stratford market area) and which will see values increase to a point where they almost equal the benchmark in the 500m zone of influence and exceed the benchmark in the 1km zone of influence.

3.26 The only other areas where there is expected to be a notable impact on office market rents are Custom House, Brentwood, Romford and Ilford – those locations where there is some scale of activity already - although these markets have experienced challenges over the past decade. These locations will see improvements to their own position relative to their individual benchmark.

3.27 Comparing the Crossrail location forecasts to GVA's in house office market forecasts it is possible to estimate the scale of additional value Crossrail itself creates along the route for station locations where there is sufficient activity to establish a robust base. On average the additional value created by Crossrail will be c.14%.

3.28 Comparing the 2012 forecast for values in 2016 to achieved values in 2016 provides an indication of how the markets have performed against expectation. Comparable data only exists for 11 stations, in the main these tend to show values outperforming expectations, with the exception of Canary Wharf, where value growth has been slower than expected. This is likely to be a result of limited new capacity to deliver additional stock prior to the opening of the Elizabeth line station.

3.29 For each line section, more detailed value projection charts which underpin the findings discussed above are provided in Appendix II.

For the key office markets along the route values tend to outperform expectations

DEVELOPMENT PIPELINE

3.30 This section considers in detail the impacts Crossrail has had on development capacity and delivery across the Elizabeth line route. The analysis uses the same methodology and builds on the previous 2014 Study; it therefore provides a consistent and comprehensive review of development since 2014.

3.31 This analysis is then extended to consider not only the scale of development permitted but whether Crossrail is helping to quicken the pace of delivery.

Consented Development

3.32 Unlike value impacts there has been a lower level of analysis of the impact Crossrail has on development capacity itself. Whilst a number of organisations have produced research that 'implies' a certain level of growth will come forward, very few have sought to quantify this.

3.33 In 2014 our research identified that in the period between 2008 and mid-2013 Crossrail had helped in the creation of new consents that would deliver over 65,000 new homes and 3.5m sqm of commercial floorspace.

3.34 Our new analysis shows that between 2008 and 2016 there has been significant development activity around Elizabeth line stations, in total these schemes have the capacity to deliver:

90,599
residential units

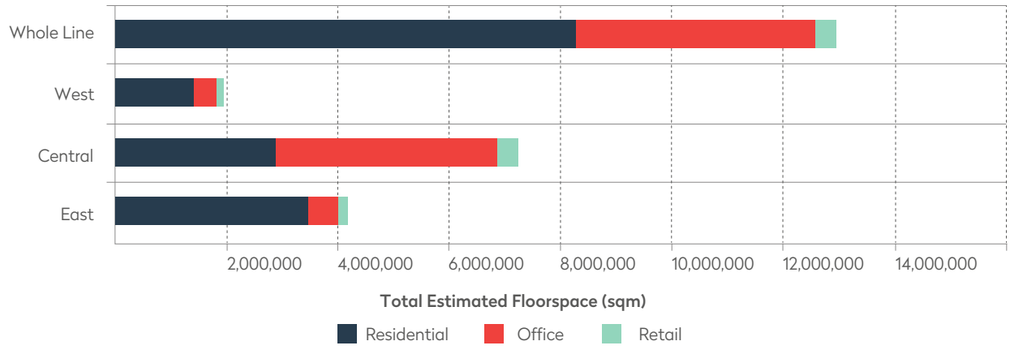
4.44m
sq m office floorspace (which equates to 369,055 jobs)

446,646
sq m of retail floorspace

3.35 In floorspace terms the floorspace split within each line section is shown in the chart below. It is clear that Crossrail is playing a major role in supporting residential development in Outer London with it being the dominant type of floorspace coming forward in both the West and East sections.

3.36 Residential development is still considerable within the Central section, however the commercial function and dominance is underlined by the scale of office and retail space permitted, representing a greater share of total floorspace than residential.

Figure 10: Residential, office and retail floorspace in major consented schemes in line section Zones of Influence and combined along the Elizabeth line route (2008 – 2016)



Source: EGi & GVA Analysis, 2017

3.37 At the station specific level there are even more stark differences in the scale and mix of development coming forward. Between 2008 and 2016 period the pipeline is dominated by Canary Wharf (largely a result of the Wood Wharf master consent), Custom House, Liverpool Street and Stratford (largely the Olympic Legacy projects).

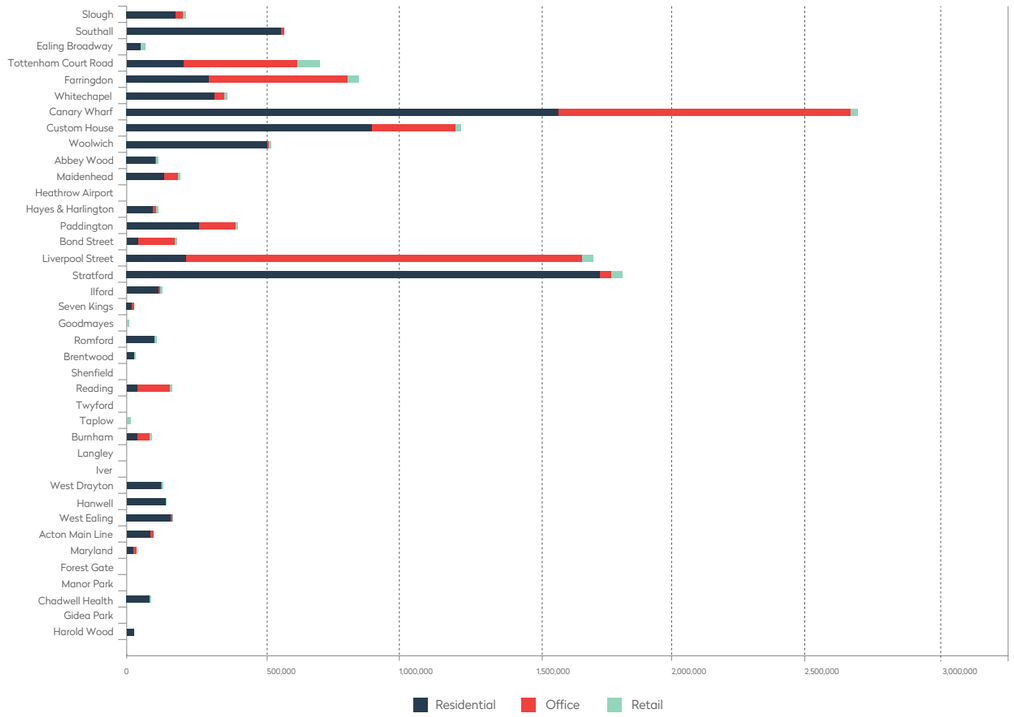


3.38 These results are shown in the bar chart below, which also allows comparison to the predicted scale and nature of impact established in the 2012 study.

3.39 Whilst there is some variation in broad terms a large number of locations have reacted to Crossrail in the manner expected, the main exceptions being Ealing Broadway and Abbey Wood where much more significant impacts were expected. However it is worth noting that whilst development has not yet been delivered in these locations both areas have benefited from significant value uplift. Factors influencing these locations are considered later in this report.

3.40 The majority of permitted development floorspace along the Elizabeth line route is residential. However, Liverpool Street, Bond Street, Farringdon, Tottenham Court Road and Reading are exceptions to this, reflecting the strength of the office markets in these locations. Retail floorspace is more limited and evenly spread across all stations, suggesting it may be much less influenced by transport accessibility.

Figure 11: Residential, office and retail floorspace in major consented schemes in Zones of Influence along the Elizabeth line route (2008 – 2016)



Source: EGi & GVA Analysis, 2017

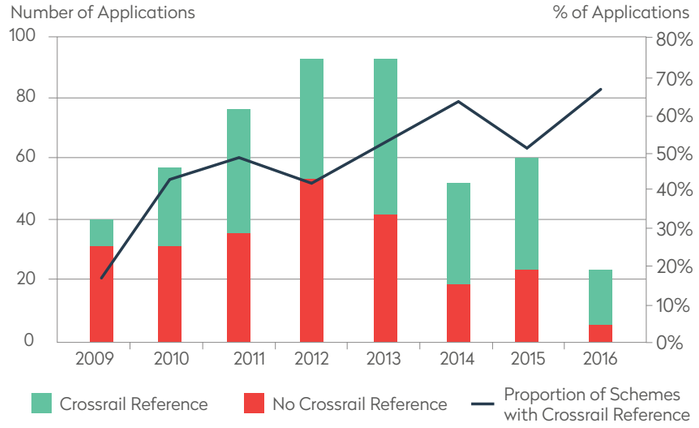
3.41 Over the 2008-16 period 48% of permitted planning applications within a 1km radius of Elizabeth line stations have made direct reference to Crossrail supporting their proposals in their planning application documents. This proportion has increased continually as the study period has progressed, as shown in the chart below.

3.42 Over the 2008 – 2013 period (used for GVA's previous study) 40% of applications made direct positive reference to Crossrail, whereas this increased to 58% over the 2013 – 2016 period (used for this study). Looking at the start and end of the combined study period, in 2009 15% of applications made direct positive reference to Crossrail, but by 2016 this had increased to a high over the period of 67%.

3.43 This reinforces the assertion that the influence of Crossrail has continually increased over time as we move closer to full route opening.

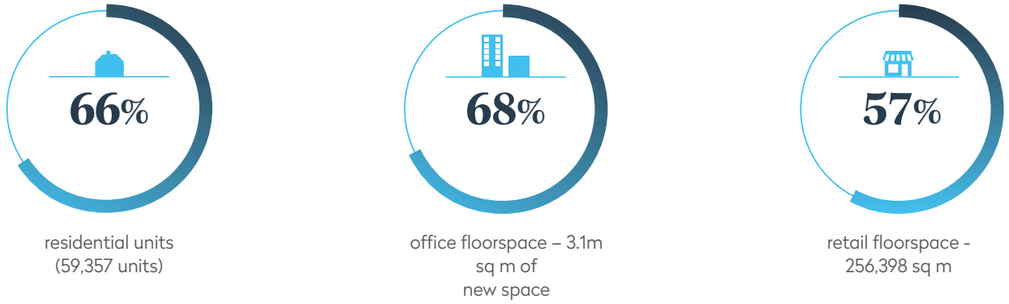
Our new analysis shows that between 2008 and 2016 there has been significant development activity around Elizabeth line stations

Figure 12: Annual count and proportion of major consented schemes in Zones of Influence along the Elizabeth line route with and without Crossrail reference (2008 – 2016)



Source: EGi, Local Authority Planning Websites & GVA Analysis, 2017

3.44 Within those schemes that use Crossrail as part of their justification there is the capacity to deliver:



3.45 Since 2013 there have been some significant trends. For example Southall, Abbey Wood, Hayes & Harlington, Ilford, Seven Kings, Goodmayes, Romford, and Brentwood, all have 100% of permitted schemes referencing Crossrail as important for the development. Conversely Chadwell Heath and Burnham have no proposals where Crossrail is used as a justification.

3.46 The 2012 Study, based on Local Plan policy based figures, indicated that Crossrail would help support 57,000 new homes and 3.25m sqm of commercial office floorspace. This Study's updated analysis of permitted schemes suggests that development capacity supported by Crossrail has increased to 90,599 new homes and 4.44m sqm of commercial office floorspace.

DEVELOPMENT DELIVERY

3.47 The analysis of permitted schemes provides a useful understanding of how Crossrail is influencing the development pipeline. However, it is limited in demonstrating that Crossrail is actually an agent for change on the ground. To do this, analysis of development delivery rather than planning consent is required.

3.48 For the majority of station areas along the route a higher proportion of schemes permitted between 2013 and 2016 have been started or completed, than have been permitted and are yet to begin construction – this suggests that Crossrail is helping create conditions where delivery is more certain.

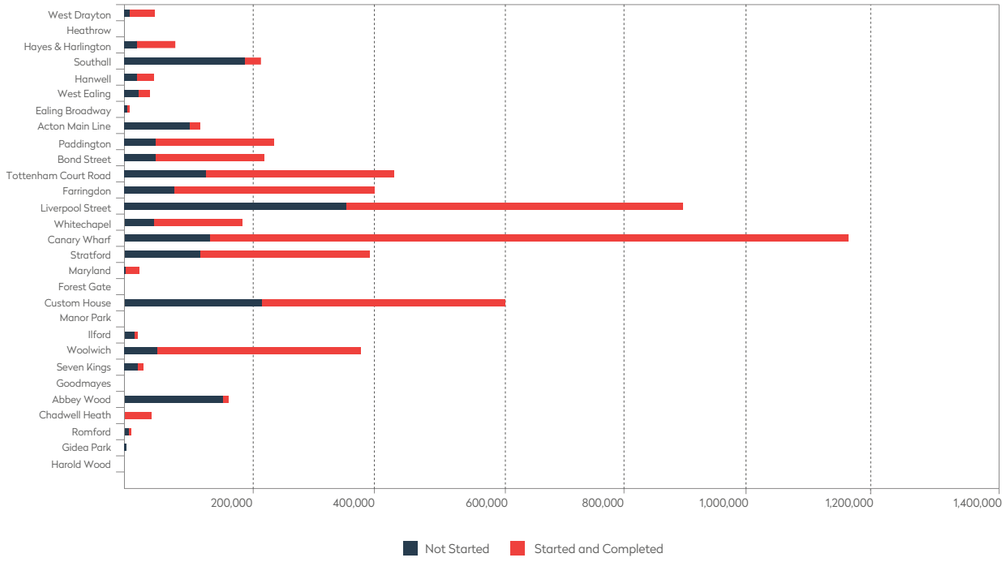
3.49 However there are some exceptions to the overall trend. Southall, Acton Main Line, and Abbey Wood are notable exceptions where there has been limited development activity when compared to permissions granted. In part this may reflect the complexities of bringing some of the opportunities forward, it may also reflect the less mature markets in these areas, which have taken longer to strengthen.

3.50 To estimate the specific influence Crossrail has (if any) we have compared the proportion of started schemes within 1km of a station to the borough average. Whilst this does not provide an entirely comparable benchmark[4] in terms of the time periods considered by the different datasets, it uses the best available data to give an indication of how the start rates in Elizabeth line station areas compare to borough wide performance.

3.51 Whilst we recognise Crossrail is not solely responsible for the commencement of development schemes along the route, there is evidence to suggest that there is some alignment between improving accessibility and development activity.

3.52 As shown below 16 of the stations show a greater proportion of permitted schemes which have started, compared to the proportions which have started at the wider borough level. These stations are shown in bold in the following table.

Figure 13: Delivery progress of residential, office and retail floor space in major consented schemes in Zones of Influence along the Elizabeth line route (2013 – 2016)



Source: London Development Database & GVA Analysis, 2017

[4] *In terms of comparability between datasets in this benchmarking exercise the following factors must be noted:*

- *The LDD data is for schemes permitted between July 2013 – Dec 2016, whereas the AMR data is for the total development pipeline (all permitted schemes which have not yet been completed, which could therefore include applications which date further back than July 2013)*
- *The LDD data is filtered to include significant schemes (at least 20 residential units) whereas the London AMR data has no size filter for permitted schemes.*



Table 2: % of residential units that form part of started/completed major consented schemes in Zones of Influence along the Elizabeth line route (2013 – 2016)

	% of started residential units within the 1km Zone of Influence	% of started residential units within the wider Borough Benchmark
West Drayton	86%	73%
Hayes & Harlington	89%	73%
Southall	13%	50%
Hanwell	53%	50%
West Ealing	35%	50%
Ealing Broadway	50%	50%
Acton Main Line	13%	50%
Paddington	79%	59%
Bond Street	62%	59%
Tottenham Court Road	36%	66%
Farringdon	68%	83%
Liverpool Street	33%	83%
Whitechapel	76%	74%
Stratford	70%	43%
Maryland	0%	43%
Forest Gate	0%	43%
Manor Park	100%	46%
Ilford	33%	46%
Seven Kings	38%	46%
Goodmayes	100%	46%
Chadwell Heath	87%	46%
Romford	55%	46%
Gidea Park	0%	46%
Harold Wood	100%	46%
Canary Wharf	86%	74%
Custom House	100%	43%
Woolwich	82%	54%
Abbey Wood	12%	54%

Source: London Development Database & GVA Analysis, 2017

3.53 Within the East line section 79% of residential units permitted within 1km of Elizabeth line stations have started, compared to only 51% in the relevant boroughs. In the Central and West line sections this relationship is reversed within 66% compared to 74% in the Central section and 37% compared to 56% in the West section. However, as a total along the Elizabeth line route 70% of permitted residential units within 1km of new stations have started, compared to only 59% in the wider boroughs.

3.54 As shown left, Crossrail appears to be having the largest influence in the East, which is unsurprising given the scale of the transport improvement it delivers for a number of locations. In the West, where connections are already perceived to be stronger (despite the West and East line sections actually having very similar transport accessibility when measured using Public Transport Accessibility Level (PTAL) scores), development has tended to come forward quicker and current lags may be as much a function of specific site conditions as a limited influence from Crossrail.

OVERALL QUANTITATIVE IMPACTS

3.55 **The value impact, development pipeline and development delivery findings from this Study, identified above, update the analysis from the 2012 and 2014 studies, however it is useful to draw comparison between findings to determine whether stations have performed as expected and predicted in 2012 and 2014, to identify any deviations from these expectations, and to highlight any spatial differences in the findings along the route which show that the nature of certain locations may have changed as development of the Elizabeth line route has progressed.**

3.56 Whilst broadly the conclusions of the 2012 study appear to be holding true, there are number of station locations that require a deeper understanding to be developed in order to understand their response to Crossrail:

- **Ealing Broadway** – has seen an increase in permitted floorspace in 2013-16, but the total floorspace permitted from 2008-16 remains modest considering its connections and accessibility. This may reflect the maturity of the residential market in the area and the fact that Crossrail is so far having limited impact on commercial sectors.
- **Stratford** – had the largest permitted development pipeline between 2008 and 2013, but has remained almost static since. This is unsurprising given the burst of permissions that occurred around the time of the 2012 Olympics and the legacy masterplan. This provided significant development capacity that has yet to be fully delivered or absorbed.
- **Whitechapel** – permitted floorspace in Whitechapel has been modest throughout the whole 2008 – 2016 period, and has not seemed to realise the potential for this location considering its site and regeneration opportunities. There are a range of potential reasons for this, which are explored in more detail in later sections.
- **Hayes & Harlington** – has seen a much lower level of permitted floorspace between 2013 – 2016 than over the earlier study period (2008 – 2013), this may reflect the nature of the development opportunities in the area which are, in the main, concentrated on a small number of very large sites such as the Old Vinyl Factory. There is continued development interest which is driven by the improving connectivity to Central London.

3.57 The most significant impact on development pipeline in the 2013 – 2016 data is for Canary Wharf, where further significant capacity has been unlocked, adding to the already high levels of capacity created by Wood Wharf. It is interesting to note the high proportion of floorspace permitted which is for residential use in what has traditionally been an office location.

3.58 Looking more closely at the type of floorspace being permitted from 2008-13 compared to 2013-16, there are several interesting shifts in the dynamics of station locations in the Central Section. For both Liverpool Street and Farringdon there is a significant increase in the amount of office floorspace being permitted; Liverpool Street permissions were initially retail led but the area is now becoming more dominated by office consents, and Farringdon was previously an even office-residential split but is now predominantly office dominated.

3.59 Based on the development pipeline data analysed, the greatest influence of Crossrail in underpinning new residential and commercial floorspace continues to be on the strongest existing market locations in the Central section of the Elizabeth line route. The West section, with the weakest existing markets, is seeing development activity supported by Crossrail but this continues to see the most modest development pipeline. In part this is a result of the lack (in most locations) of large scale development opportunities, with a finer grain approach to growth required in many locations. However, this does not mean Crossrail is not important in locations in the West and East line sections, instead it suggests that the Crossrail influence takes longer to be realised in weaker markets, which is explored further in a later section.

3.60 In the 2012 and 2014 Studies three different categories of 'Places to Watch' were identified to reflect the levels of transformational impact of Crossrail on the property market in key locations;

- Creating Change: where a substantial change in current development quantities and types of land use can be expected;
- Reinforcing Directions: where support is given to active, in-progress development programmes which reflect changing property values; and
- Limited Impact: where little change to the current development context can be expected.

3.61 This positioning of each Elizabeth line station, as identified in the 2012 Study is shown in Figure 14.

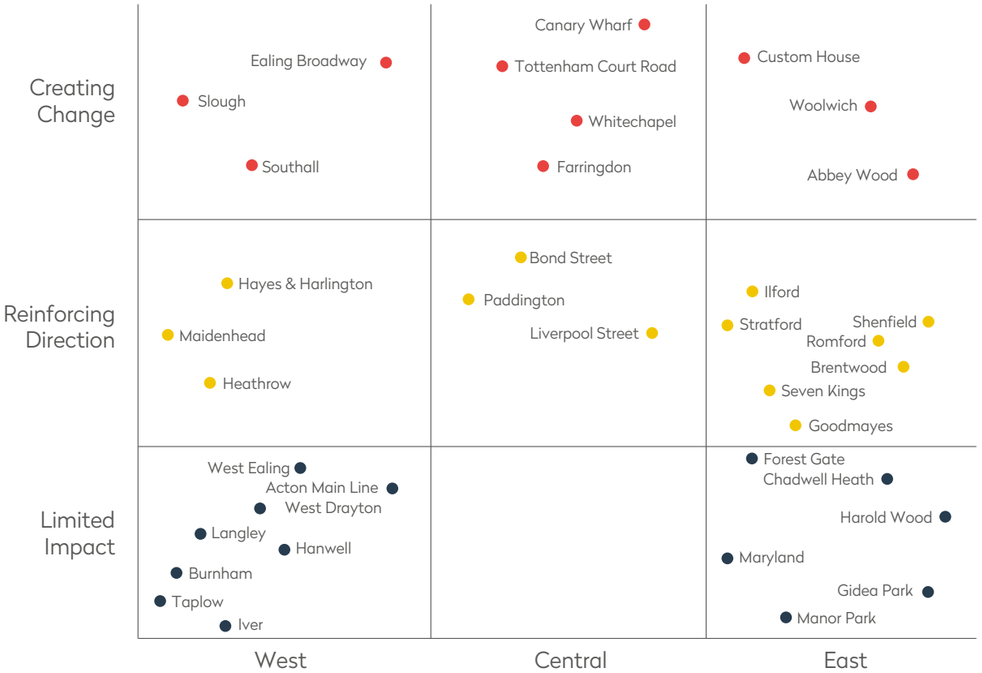
3.62 The 2012 analysis (based on the value uplift and permitted development pipeline from the 2012 Study) reflects that point in time, so to consider how the scale and nature of transformation impact at Elizabeth line stations is changing, we consider the same categories in light of the updated analysis in this Study. The findings largely hold true in light of this Study's findings, however there are four key moves for the following station locations (based on the updated value uplift and permitted development pipeline in this Study):

- Ealing Broadway (down)
- Acton Main Line (up)
- Whitechapel (down)
- Shenfield (down)

3.63 These moves are shown in the form of arrows in the following Figure 15.

3.64 The strongest performing stations (where value growth is strongest and the most significant pipeline is identified) are where Crossrail can be seen to be Creating Change. These locations include Farringdon, Canary Wharf, Abbey Wood and Custom House – this reflects the conclusions in 2012.

Figure 14: Crossrail Places to Watch based on value impact and development pipeline (replicated from 2012 Study)



Source: GVA Analysis, 2012

The most significant impact on development pipeline in the 2013 – 2016 data is for Canary Wharf, where further significant capacity has been unlocked



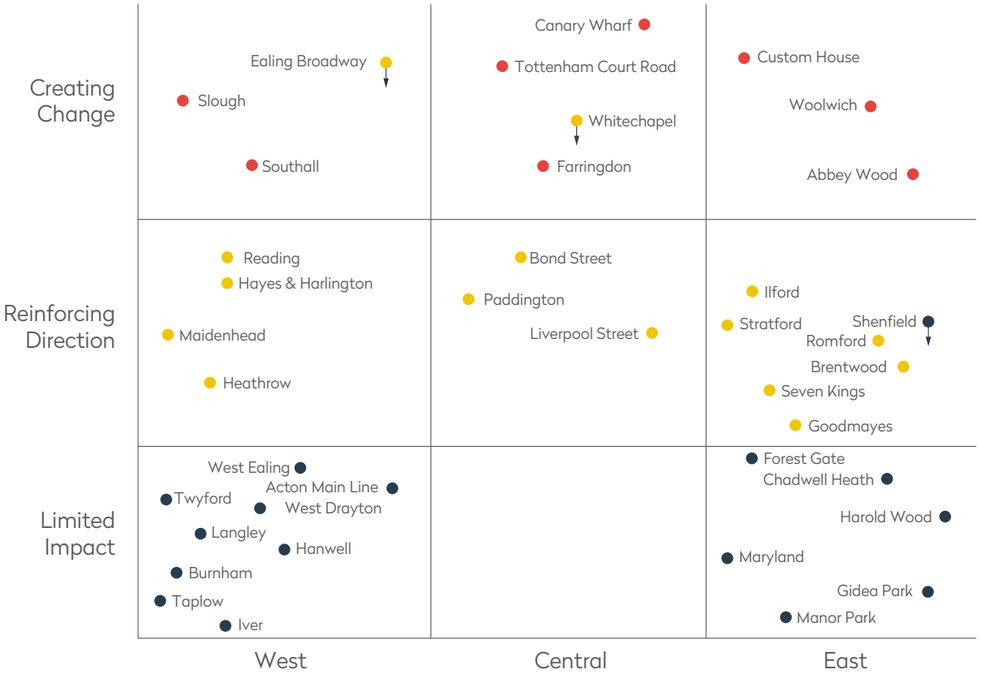
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- Ealing Broadway (down)
- Acton Main Line (up)
- Whitechapel (down)
- Shenfield (down)

3.66 These moves are shown in the form of arrows in the following Figure 15.

3.67 The strongest performing stations (where value growth is strongest and the most significant pipeline is identified) are where Crossrail can be seen to be Creating Change. These locations include Farringdon, Canary Wharf, Abbey Wood and Custom House – this reflects the conclusions in 2012.

Figure 15: Places to Watch based on value impact and development pipeline (showing 2017 Study update)

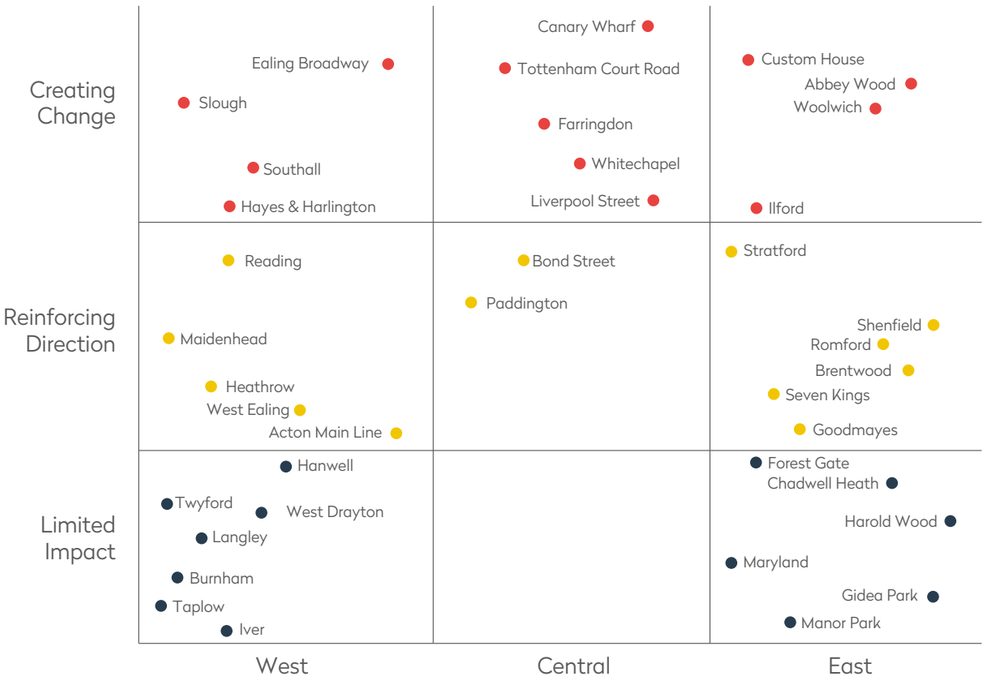


Source: GVA Analysis, 2012 & 2017

3.68 However, as shown in Section 9 there is still a significant scale of potential development that could come forward within the Elizabeth line station areas which does not form part of the permitted development pipeline. This constitutes uncommitted potential which could be realised, and if this is added to the analysis to reflect the full extent of the potential to 2026, whilst a number of 'positions' do not change, there are some potential key impacts that will enhance the overall influence of Crossrail in London. This is shown below in Figure 16.

3.69 Most notably in the Creating Change quadrant a number of locations have further capacity to become of broadly equal scale in permitted development floorspace to Canary Wharf, which has traditionally been seen as the largest benefactor from Crossrail. Abbey Wood sees a significant increase in development quantum supported by the improved accessibility from the new Elizabeth line station (underpinning development confidence for the substantial new development being brought forward by Peabody).

Figure 16: Places to Watch based on value impact and development pipeline (reflecting potential development to 2026)



Source: GVA Analysis, 2012 & 2017

3.70 Hayes & Harlington is a significant change, moving from Reinforcing Direction into the Creating Change quadrant as new development comes forward and changes the nature of the place in development type and value terms. Similarly Ilford and Liverpool Street also move up into the Creating Change quadrant as Crossrail has the potential to underpin a fundamental change in their development dynamics.

3.71 West Ealing and Acton Main Line also see a fairly modest shift into the Reinforcing Direction quadrant as the scale and value of development continues to increase post the opening of the Elizabeth line. Hanwell also shifts up within the Limited Impact quadrant to reflect additional value and capacity creation over the fullness of time.

3.72 At the time the original 2012 Study was undertaken Reading and Twyford stations were not included as part of the Elizabeth line route. The route was extended to include these two stations very shortly after the 2012 Study was published, and for this reason these two stations are not included within the original 'Places to Watch' analysis.

3.73 Reading station has been categorised within 'Reinforcing Direction' in this 2017 Study update, reflecting the existing office and residential market strength in this location. Reading station remains in the same position when considering potential development to 2026, because Elizabeth line is expected to have a more modest impact compared to other stations in the context of the existing commuting connections provided by the Great Western Railway services from Reading.

3.74 Twyford station has been categorised within 'Limited Impact' in this 2017 Study update, and remains in this position considering the potential development pipeline to 2026, which reflects the modest nature of its office and residential market, and the absence of any permitted floorspace in the zones of influence around the station.

Abbey Wood sees a significant increase in development quantum supported by the improved accessibility from the new Elizabeth line station





Artists impression of Abbey Wood Station



4

London's World City Economy

4.1 **Crossrail is playing a key role in contributing to and shaping London's position as a world city economy. On the one hand it is supporting the increased intensification and specialisation of Central London (defined for the purposes of this Study as the area from Paddington to Canary Wharf) as the UK's primary economic hub. On the other it is helping to support the diversification of 'secondary' locations, attracting a more diverse economic mix into these areas.**

SPECIALISATION AND INTENSIFICATION

4.2 New schemes supported by Crossrail in Central London are creating high quality, mixed use environments which are attractive to key commercial occupiers. This expands the city's ability to accommodate traditional and new sectors and, by helping to integrate fringe locations into the central economy is assisting London's ability to diversify its economic base into 'new' sectors and technologies.

4.3 The schemes supported by Crossrail have attracted a mix of occupier demands, in particular corporate office activity for global businesses such as Facebook and Deutsche Bank in the West End, financial services in Canary Wharf and the City, and fashion around Soho. It is also providing capacity for a more mixed occupier base in locations such as Farringdon (tech and creative), Tottenham Court Road (tech, creative, media and HQ presence), and Canary Wharf (HQ presence, tech and creative).

Figure 18: Facebook Headquarters, Rathbourne Square, Great Portland Estates



Source: EGi, 2017

Table 3: Current/future occupiers of major consented schemes in Elizabeth line stations Zones of Influence consented (July 2013 – 2016)

Building	Station	Occupier
1 Rathbone Place	Tottenham Court Road	Facebook (New London HQ)
The Copyright Building	Tottenham Court Road	Capita
1 Dean Street	Tottenham Court Road	Moneysupermarket
58-62 Newman Street	Tottenham Court Road	The Farm Group (Audio Visual Production)
21 Moorfields	Liverpool Street	Deutsche Bank
20 Old Bailey	Farringdon	Barings (Asset Management – consolidating London offices into one location)
Mitre House	Farringdon	DLA Piper
20 Farringdon Street	Farringdon	Indeed.com, Moo, Okta UK, The Trade Desk (Design / IT / Advertising)
Heron Quay West 2 (One Bank Street)	Canary Wharf	Société Générale (consolidating London offices into one location)
1 New Oxford Street	Tottenham Court Road	H&M (Cos – Global HQ)

Source: GVA Analysis, 2017



Bond Street Station CGI

Reading has the most notable amount of floorspace and therefore jobs expected beyond the Central section, with over 8,000 sq m (c.2%)

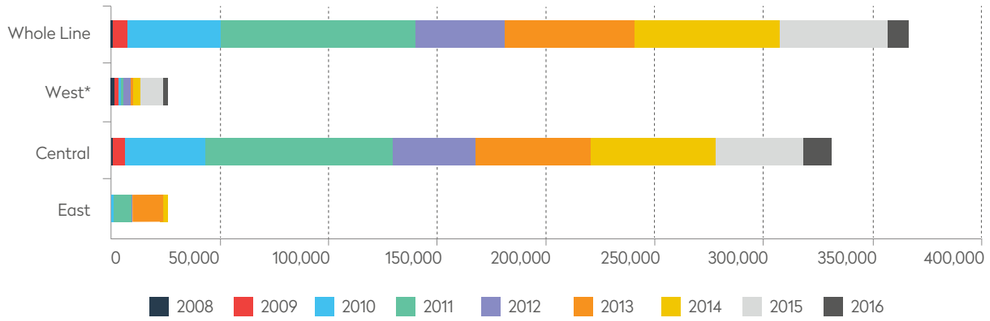
4.4 The strength of Crossrail's influence in supporting London as a 'world city economy' is also demonstrated through the number of jobs that can be created in developments close to stations. In total, the permitted floorspace offers the opportunity to accommodate over 350,000[5] jobs, 88% of these would be accommodated within the Central Section.

4.5 Liverpool Street and Canary Wharf make up the largest proportion of this floorspace, with more than 100,000 jobs over the period in Canary Wharf (c.27%) and more than 120,000 jobs over the period in Liverpool Street (c.33%). Farringdon, Tottenham Court Road and Bond Street also constitute substantial proportions (12%, 8% and 5% respectively).

4.6 Reading has the most notable amount of floorspace and therefore jobs expected beyond the Central section, with over 8,000 (c.2%), which builds on the existing office market strength in this location.

4.7 In terms of timing, it is interesting to note that office floorspace has been coming into the development pipeline much earlier in the Central Section compared to the East and West sections, as well as coming forward at a much greater scale. This reinforces the findings discussed in previous sections that the Crossrail influence is strongest where existing markets are strongest, where weaker markets may require the reliance on station opening to improve market confidence, or may not see any significant positive impacts as a result of Crossrail.

Figure 19: Potential job creation associated with the delivery of office floorspace in major consented schemes in Zones of Influence along the Elizabeth line route (2008 – 2016)



Source: EGi & GVA Analysis, 2017

[5] *This jobs figure is an estimate based on the permitted floorspace in each station location along the Elizabeth line route. The conversion from office floorspace to job numbers is made by assuming a 15% GIA to NIA conversion, and assuming a 10sq m per job allowance for the Central section schemes and a 12sq m per job allowance for the West and East section schemes (in line with the HCA Employment Density Guide and accounting for appropriate density considering existing conditions).*

N.B. Permissions within Reading station (West section) are only recorded from July 2013 onwards. This accounts for a large number of jobs in 2015.

4.8 This trend was highlighted by observations from private sector stakeholders, who suggested that in the central core activity is developer driven and therefore can happen earlier as developers have a longer time horizon for decision making and are seeking to capture the value uplift Crossrail creates. They also have the ability to invest over a longer timeframe to 'create a place' from scratch.

4.9 In Outer London it was felt that commercial development demand will be much more occupier led and therefore more likely to materialise once the Elizabeth line route is open and the benefits can be felt. These occupier decisions also tend to happen over a shorter timeframe so may not yet have materialised. Occupier location decisions tend to be based on demand for more 'readymade' places that offer the connectivity, amenities and quality of place to support business activity from day one (reinforced by the indication that some occupiers are considering investment decisions in roughly six month cycles).

4.10 Observations and decisions from private sector investment and development companies (Great Portland Estates, Almacantar and British Land), workspace providers (WeWork), and property advisors (GVA) reinforce the strength of Crossrail in attracting global occupiers to the City, and enhancing the global importance of Central London locations, as well as more general observations made by the public sector. It was recognised as an important part of the milieu that allows the city to function.

4.11 A number of these private sector stakeholders reflected the blurring of West End and City markets boundaries, with occupier moves from the West End to the City. For example, British Land suggested the role of Crossrail in enhancing this blurring with the connectivity improvements opening up cheaper investment and occupation opportunities.

This was described during private sector discussions as the 'shrinking of the city', which fits within the wider observation of Crossrail driving the opening up of the East to the West, and is seeing connections made between locations such as Canary Wharf and Paddington because of the direct connection between them which Crossrail delivers.

4.12 The changed perceptions of investors, developers and workspace operators about where to locate their commercial activity in the city is driven largely by the transport question, with investment, development and occupier decisions focused on clustering around major transport nodes. Whilst the transport factor is contributed to by a number of modes and characteristics "all acquisitions have a transport node story – the strapline around this is interchangeable". Crossrail is a crucial factor in this transport picture. From the occupier perspective three crucial transport factors are discussed; the quality of the transport user experience, simplified journeys (with no more than 2 parts i.e. one interchange) and the provision of stations as retail, leisure and convenience hubs, all of which are supported by Crossrail.

4.13 Whilst Crossrail is improving the accessibility of locations which makes them more attractive for commercial investment and development, the importance of product was reinforced by a number of private sector developers. Clearly regardless of accessibility if good quality places and property aren't delivered then there will not be demand. Crossrail is helping in this regard by producing high quality infrastructure, exemplar station environments and positive value impacts which support higher specification developments. Ultimately however the intensification and specialisation of activity which Crossrail can support will only be strong where physical development meets the needs and expectations of potential occupiers.

TOTTENHAM COURT ROAD

4.14 Tottenham Court Road is seeing a fairly equal mix of new residential and commercial office floorspace permitted in close proximity to Tottenham Court Road station, and the station's surroundings have seen both intensification of existing sectors and arrival of new ones, particularly around Holborn and Tottenham Court Road itself.

4.15 West of Tottenham Court Road, major global companies like Facebook and large British companies like Moneysupermarket are arriving, seeking to offer an experience for staff and visitors beyond the office building. The Crossrail influence on these moves was emphasised by Westminster Council:

"On Dean Street, Facebook is coming in through a plot attached to Crossrail, and Norge Bank, who takes different approaches to property is investing. Who would've thought Facebook would want a major W1 address? Older tech companies like IBM moved out to a campus-style setup. New tech businesses want to be central. They want to offer an experience for employees and visitors."

4.16 The arrival of new HQ locations is seen by Westminster Council as a positive in economic terms, but also more widely for regeneration and vibrancy in the area, suggesting that whilst in the past corporate headquarters were designed like fortresses with impressive atriums and office space, now people want more collaboration and opportunities to do business in local cafes and restaurants, with companies thinking more about how the neighbourhood will impress visitors and staff, not just the building they work in.

4.17 Supported by the influence of Tottenham Court Road station, Tottenham Court Road itself has transformed into an attractive shopping street with a diverse offer. Having been a furniture destination since the 1800s, several buildings have been refurbished, offering a more pleasant shopping experience and setting for its global retailers. Camden Council also suggests that some Holborn area property owners have renovated their buildings to make better use of floorspace and attract more activity and footfall, and contribute to a greater quality of place.

4.18 From the private sector perspective, a change in the rental tone in the Tottenham Court Road area has been observed as a result of Crossrail, which combined with the public sector recognition of the opportunity in the area and has helped to drive the strength of multi-level retailing. However, rental uplift is also seeing businesses being displaced further east.

4.19 However, Oxford Street East has not yet seen similar improvements. This may be partly due to steady market rates, which allow even part-vacant or unattractive buildings to deliver income. This would suggest property owners have no incentive to improve their buildings.

4.20 The view of Westminster City Council has been corroborated through interviews with private investor/developers who both recognise that Crossrail is helping to support the ongoing success of the West End markets. Whilst generally there was a sense that it hadn't been a sole driver of a particular demand, its brand and presence is helping the marketing of the opportunity and also providing greater accessibility, which is key to occupier decisions.

4.21 The core influence of Crossrail in Tottenham Court Road is of the intensification and strengthening of existing economic activities, however there is also some diversification evident in line with London's economic shifts. InMidtown BID suggests Holborn's transformation stems from its mix of uses, favourable rents compared to neighbouring areas, and high-profile strategic location.

"Tottenham Court Road station could become a decision point for lots of different London experiences: shopping to the west, theatres to the south, museums to the east. You can visit multiple times and get something different each time..."

4.22 This location was previously host to many civil service agencies, but Holborn is diversifying. As emphasised by LB Camden it is in a high-profile and strategic location between east and west, north and south, and surrounded by the Knowledge Quarter, financial area, legal area, West End, and in the wider context Southbank. Whilst tech industries are particularly visible in this area, it still accommodates a reasonable level of mix overall.

4.23 Despite this growth, Holborn is often quiet after business hours, however in Midtown BID hopes to enliven the area, and introduce a wider range of commercial activities that enhance its attractiveness as a global commercial occupier location.



Artists impression of Tottenham Court Road Station

CANARY WHARF

4.24 As well as the consolidation of its existing banking and financial district focus, there are signs of a more diverse range of occupiers being attracted to locate in the Canary Wharf station area, particularly tech, creative and R&D activities, which again reflects the wider economic shifts London is seeing from finance and business services to Technology Media and Telecoms (TMT).

4.25 Examples of this are schemes such as the Republic project, which aims to transform the East India Dock Campus into a highly desirable tech and creative business hub, diversifying the traditional financial services business offer in this area, by refurbishing and transforming existing office buildings into affordable, desirable co-workspace supported by a range of leisure activities (including events and gallery space and a rooftop bar).

4.26 This seeks to cater for the new residents being attracted to the area by the range of residential development activity, supported by Crossrail as part of a range of factors, and is targeting a low price point claiming to be cheaper than Shoreditch, and therefore potentially able to attract displaced economic activity from Shoreditch and other parts of the City.

4.27 Aside from this business diversification being supported by the Elizabeth line in Canary Wharf there are also broader cultural benefits evident in this location at the Museum of London Docklands. Supported by Crossrail's sustainability programme, the exhibition (Tunnel: The Archaeology of Crossrail) which opened in February 2017 displayed the range of objects discovered during construction, and proved to be one of the Museum's most popular exhibitions with more than 90,000 visits. The proximity of the Canary Wharf Elizabeth line station to the Museum is acknowledged as being a significant benefit for the museum in enhancing visitor attraction to this site in the future.

4.28 Liverpool Street and Bond Street are also showing signs of accommodating London's economic shifts, particularly considering the evolving nature of economic activity in Shoreditch and the city fringe, and the increasing prominence of Bond Street as a highly accessible strong commercial market location. From the perspective of British Land and their investment portfolio, their investment decisions in Broadgate have been most heavily influenced/ supported by the Elizabeth line, as a result of its proximity to Liverpool Street. However, it is difficult to evidence the direct influence of the Elizabeth line on this pattern and separate it from the range of other influential factors, noted by Westminster Council in their assertion that; "Growth in Westminster is a story spanning centuries through the Estates. This gives it a huge 'established value' and people will pay for this."

As well as the consolidation of its existing banking and financial district focus, there are signs of a more diverse range of occupiers being attracted to locate in the Canary Wharf station area

4.29 Private sector perspectives were similar, although there was a sense that the definitive timetable for Crossrail had helped focus investment across the property and public realm portfolio in the area. In turn this comprehensive uplift in the quality of the area has helped to attract new business occupiers and encouraged other land owners to bring sites forward.

4.30 The significance of job creation in Farringdon and the economic activities in its pipeline provides an example of the integration of 'fringe' locations into Central London, which is also evident in other central locations such as Paddington.



Canary Wharf Station

FARRINGDON

4.31 Farringdon is attracting more tech industries and accommodating a share of these shifting London wide trends, supported by the commercial development potential linked to Crossrail, which is reflected in the permitted commercial floorspace in the station area between 2008 and 2016 and the identified pre-let activity in this location.

4.32 The new combination of the Elizabeth line, Thameslink and the London Underground gives Farringdon direct access to Heathrow, Gatwick and Luton Airports, and St Pancras International station, which is something the inMidtown BID considers as key links which are helping to establish Farringdon as a destination and a hub. This reinforces the contribution of the Elizabeth line in this location to supporting London as a world city economy, which is well positioned to attract and accommodate businesses seeking international growth.

4.33 Islington Council reported an increase in development activity linked to the Elizabeth line (and Thameslink before it). Applications are mostly commercial, focusing on multimedia, fashion and start-ups. The council is expecting an increase in high-skilled, white-collar jobs (for example, in the tech sector). The Council expressed concern that smaller businesses may be forced out by this increased and diversified activity, although the nature of the built environment around Farringdon might shelter them from the effects (e.g. historic buildings unsuited to large occupiers). A similar concern was raised by Camden Council, in that despite council policies to secure affordable workshop space through Section 106, there may be a significant detrimental impact on Hatton Garden's jewellery industry being squeezed out of the area if rents rise.

4.34 The City of London Corporation reported the number of Small and Medium-sized Enterprises (SMEs) in Farringdon rising, as property owners become more comfortable within multi-let tenancies, and the City is also seeing new interest from hotel developers, which is in part linked with the further connectivity improvements provided by Crossrail.

4.35 Interviewees from City of London Corporation, Islington Council and inMidtown BID supported the expectation of changes in the local economy aligning with the general trend of diversification, with growth in creative and tech industries and a decreasing dominance of finance. This diversification trend is supported by the improved accessibility the Elizabeth line provides. Indeed some of the tech interest in Farringdon may be overspill from Old Street (or possibly related to growth surrounding Clerkenwell design industry), or spawned from government investment in the Urban Innovation Centre. All these incoming activities will take advantage of and benefit from the proximity to Tech City, Holborn and Farringdon's transport hub. This is an area where the Elizabeth line will be integrating into a vibrant and increasingly valuable cluster of neighbourhoods, reinforcing the relationship between central locations for work and leisure with outer London neighbourhoods, and therefore supporting the ability of young professionals to live and work in London.

4.36 Activity from other new sectors in this location beyond London-wide economic shifts is limited, although arguably the growth in creative and tech is spawning a greater food and beverage offer, catering to lunchtime and after work markets.



Artists impression of Farringdon Station

ECONOMIC DIVERSIFICATION

4.37 Crossrail's other influence for London as a world city economy is its fuelling of the diversification of secondary employment locations beyond Central London, using its transport improvements and the resultant increase in residents and footfall to bring a greater mix of activity (including creative, cultural and employment) to locations that had previously lost their economic function or struggled to attract new sectors. This diversification and the greater mix of activity it contributes to can help to achieve wider regeneration and placemaking improvements, and increase the vibrancy and activity levels in these locations.

HAYES & HARLINGTON

4.38 Hayes & Harlington is an example of a location which is experiencing significant change and revitalisation supported by Crossrail. It has traditionally been a strong industrial location underpinned by the presence of major manufacturers such as EMI and Nestlé, which took advantage of its strong strategic road network connectivity, proximity to Heathrow Airport and site availability. Whilst this economic function has long ceased a new economic future within more knowledge intensive sectors, underpinned by Crossrail, has emerged.

4.39 This economic future is being catalysed by the early delivery of the Central Research Laboratory within the Old Vinyl Factory. This multi-purpose workspace provides start-up, accelerator and co-working spaces alongside exhibition, demonstration and educational space. Its business plan relied on Crossrail to assist in bringing new talent and businesses to Hayes to make use of the space. This connectivity is now helping to attract larger commercial actors such as SITA, Sonas, CHAMP Cargosystems and GoDaddy EMEA.

4.40 U+I (as lead developer) have a corporate strategy to invest in well-connected suburban transport nodes and consistently stated that the delivery of Crossrail is the reason for them taking on the Old Vinyl Factory project (complementing other investments at Slough, Ilford and Abbey Wood). As recently as 23 June 2017, Matthew Weiner, Chief Executive at U+I, took part Bisnow's "London's Hottest Areas" conference and suggested that without Crossrail the Old Vinyl Factory wouldn't have happened.

4.41 As Crossrail nears completion and operation the pace of change at Hayes & Harlington will continue, with Barratt Homes and SEGRO submitting an application in 2017 for the mixed use redevelopment of the former Nestle site, which will incorporate new workspace, residential and industrial capacity.

4.42 LB Hillingdon expects these developments, unlocked by Crossrail, to continue to support the evolution of the economy in Hayes, in particular addressing the shortage of leisure and cultural provision in the existing town centre and supporting development of the evening economy and leisure offer in Hayes town centre.



Artists impression of Hayes & Harlington Station

WOOLWICH

4.43 In Woolwich there is evidence that Crossrail is helping to attract new creative and cultural activities to The Royal Arsenal. There has long been a desire to attract new economic actors to the area, particularly in the creative and cultural sectors, however demand to date has been low given the sustained perception of Woolwich as a peripheral location.

4.44 However, Greenwich Council and Berkeley Homes are now bringing forward the new 'Woolwich Cultural Quarter', which will see the transformation of a number of listed buildings within the Royal Arsenal site into flexible arts space. The Royal Arsenal is already home to the Academy of Performing Arts and the Greenwich Heritage Centre, however work by the Council has now secured Dash Arts as a major new occupier who will provide a performance centre in this location.

4.45 The RARE (Royal Arsenal Riverside Explore) is Berkeley's commercial and community vision for the Royal Arsenal Riverside area, offering a "creative and vibrant environment for work, rest and play in South East London"[7] . There is a range of different elements contributing to this vision including; the Academy of Performing Arts, the Greenwich Heritage Centre, Dash Arts, Building10 and the Creative District.

4.46 The Creative District is a current focus for Berkeley, supported by Greenwich Council to "deliver jobs through tourism as well as providing the local community with improved access to the arts"[8]. This will take the form of a 16,500sqm space which includes a 450 seat theatre, rehearsal rooms and courtyard performance area.

4.47 Berkeley Homes emphasises the importance of transport connectivity in supporting the attraction of this cultural activity. The improved links the Elizabeth line will provide to the West End (combined with the DLR's links to London City Airport) make it an attractive location for rehearsal space for West End theatres and wider 'supply chain' activities. Whilst Crossrail alone is not responsible for attracting these activities, without it the Royal Arsenal would not provide the transport and connectivity levels required to be considered a viable location by these creative and cultural occupiers.

Figure 20: Building10 and Royal Arsenal Creative District





Source: RARE website, 2017

[7] *http://www.rare.london/about-us*

[8] *http://www.rare.london/about-us*

FARRINGDON

4.48 Farringdon is already a diverse location, increasingly being seen as a melting pot of leisure, cultural and employment uses. However, even in this location, Crossrail is helping to change the dynamics of the area in terms of its economic and cultural offer.

4.49 The Elizabeth line, and more specifically the new Farringdon station, underpins the strength of 'Culture Mile' the new City of London led initiative announced in July 2017 to promote 'creative exchange' and 'cultural collaboration' in the area between Farringdon and Moorgate, shown below in Figure 22.

4.50 Barbican, Guildhall School of Music & Drama, London Symphony Orchestra and Museum of London are all partners supporting this City of London initiative.

The City of London suggested that the accessibility the Elizabeth line creates will be a key factor in the Culture Mile's success, a perspective reinforced by the City when announcing the initiative:

"..... With the arrival of the Elizabeth line, vastly increased numbers of people will have access to the area; Culture Mile is at the start of its journey and the partners will collaborate more closely, improve the environment, provide better access, enliven the area with outdoor programming, be more family friendly and celebrate learning at its core...."[10]

Figure 22: Map Showing Culture Mile Area



Source: Culture Mile Website[9] , 2017

[9] *https://www.culturemile.london/events/joy-and-peace-week/*

[10] *http://news.cityoflondon.gov.uk/culture-mile--a-major-destination-for-culture-and-creativity-in-the-heart-of-the-square-mile/*

4.51 One of the three major building projects associated with the Culture Mile initiative is the new Museum of London which will occupy the derelict General Market Building at West Smithfield. Discussion with the Museum of London undertaken as part of this Study confirmed the role of Crossrail as a key factor in the business case to re-locate the Museum. As part of a growing network of cultural institutions the Museum of London itself sees its new location as an "opportunity to reimagine, reinvent and transform the Museum of London" providing it with greater profile and capacity to exhibit.

4.52 A combination of its new (larger) facility and the significant increase in accessibility suggest that (as an estimate) the Museum could see an increase of visitors by up to 1 million per annum, at least 40% of which will arrive directly via public transport.

Critically Crossrail (by bringing an additional 1.5m people within a 45 minute commute of Central London) will broaden the Museum's catchment to visitors from the east and west of London. Via Farringdon it will also be within a 40 minute journey of five London airports, opening it up to a new international audience.

4.53 Increased visitor numbers and an increase in the general footfall within the Smithfield area will also support a wider range of food and beverage, retail and event space that the Museum will deliver to complement the core offer.

Figure 21: Winning Design for Museum of London West Smithfield



Source: Malcolm Reading Consultants Website [11], 2017

[11] *https://malcolmreading.co.uk/news/P30*



Artists impression of Farringdon Station

5

London's Housing Needs

Artists impression of Woolwich station



5.1 The importance of transport connectivity to people's housing choice in London is obvious, with greater demand (and hence values) in locations which offer high accessibility. As such, the introduction of a high capacity new route such as the Elizabeth line was always likely to have greatest impact within the residential sector, unlocking development opportunities in a range of locations, not least those which have previously been under-served by public transport.

5.2 In crossing London, the Elizabeth line improves the connections of a range of formerly peripheral and therefore lower value housing locations with Central London for the first time. As such it is having a positive influence on the delivery of substantial residential development in more affordable locations for house buyers.

5.3 In addition to enhancing residential values, Crossrail is also having a significant impact and role in helping London meet its housing needs by:

- Supporting a significant number of permitted residential units in areas along the Elizabeth line route, with the greatest scale of influence in Outer London in the areas which are relatively more affordable (in London terms);
- Enabling more affordable housing in the Elizabeth line station locations than the levels achieved at the borough level;
- Allowing Registered Providers (RP) to access locations where values are appreciating, securing new affordable housing and generating new funds for reinvestment.

In addition to enhancing residential values, Crossrail is having a significant impact and role in helping London meet its housing needs

CROSSRAIL IS ENABLING RESIDENTIAL PERMISSIONS ACROSS THE ROUTE

5.4 There is clear evidence in the data presented earlier this Report (and the 2014 Development Pipeline Study) that Crossrail is a critical factor in enabling residential development by enhancing connectivity. It is also notable that as the opening of the the Elizabeth line route nears, so too does its role in supporting development, with over 60% of applications between 2013 and 2016 indicating a major Crossrail influence compared to 41% between 2008 and 2013.

5.5 Crossrail appears to have a greater influence on the delivery of housing than it does on commercial space. Between 2013 and 2016 over 80% of residential applications used Crossrail as part of their justification, 20% higher than the average for all permission types, and supporting the opportunity to deliver almost 19,000 new homes across London.

5.6 Along the route it is clear that Crossrail is supporting some of the largest development sites within London and, as such, helping the city to deliver the housing it needs as a response to population growth. Crossrail has been seen as critical in unlocking the potential of Wood Wharf (at Canary Wharf) and Southall Gasworks which between them will deliver over 23,000 homes once complete – contributing 19% and 7% of the total homes unlocked by Crossrail respectively. Whilst not solely contingent on Crossrail given other connections, Stratford is another major contributor, with permission for almost 20,000 homes, some 22% of the total along the Elizabeth line route.

Timing of the Influence

5.7 The timing of these sites has a significant influence on when (in planning permission terms) the main Crossrail impact has been experienced. In the west it appears that much of the residential capacity was identified early, reflected in the permission date of the Southall Gasworks (2008).

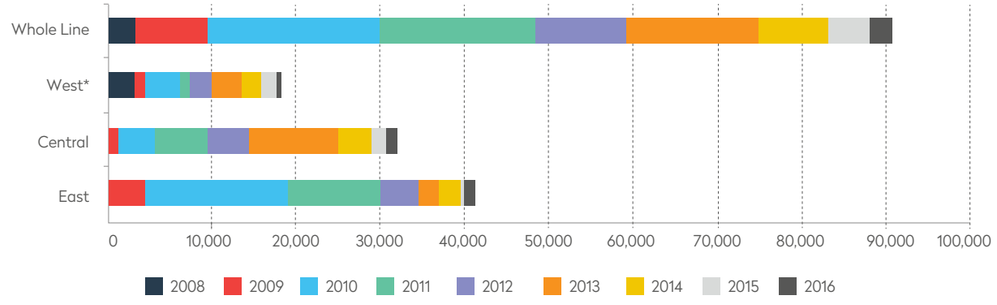
5.8 In the Central section permissions have been relatively evenly spread across the period, suggesting that Crossrail is reinforcing the continued strength and growth of these residential markets, but is not required to have the transformation effect which it plays in other sections of the Elizabeth line route. As such there is not a particular point in time where it has shown the strongest influence in Central London, although 2013 shows a notable proportion of permitted residential units contributed to particularly by 5,093 units permitted at Canary Wharf (53% of the 2013 total).

5.9 In the East section permissions have occurred most significantly in the first half of the period, from 2009 – 2011, with 74% of the total residential units being permitted between these years, largely as a result of the pre-Olympics development boom.

5.10 To further explore how Crossrail's influence on supporting residential development has played out over time, the following chart shows the proportion of residential units within applications which are permitted each year, with and without direct reference to Crossrail as a supporting factor.

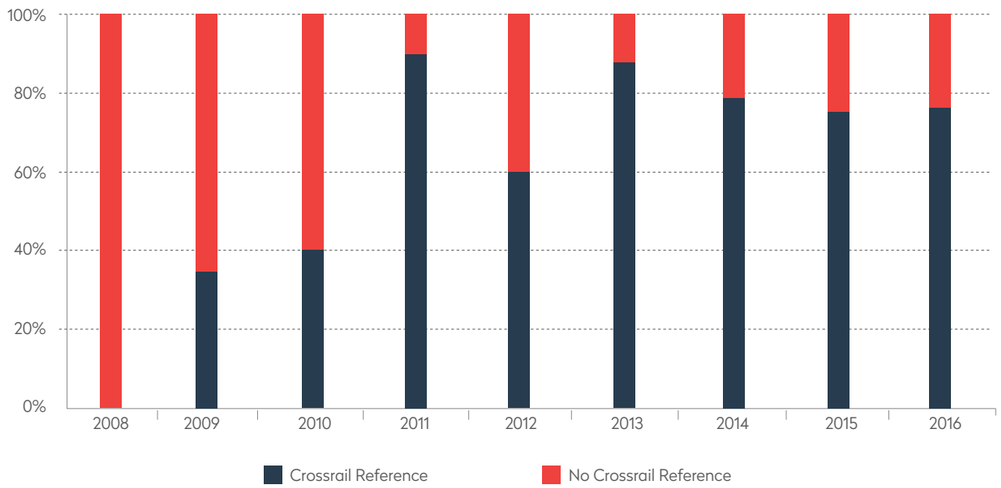
5.11 As a total along the Elizabeth line route there is a general trend of increasing reference made to Crossrail over time, which shows that the strength of Crossrail's influence in supporting residential permissions has increased as it has progressed closer to route opening and people are more aware of the benefits.

Figure 23: Annual count of residential units forming part of major consented schemes in Zones of Influence along the Elizabeth line route (2008 – 2016)



Source: EGi & GVA Analysis, 2017

Figure 24: % Comparison of the number of residential units forming part of major consented schemes in Zones of Influence along the Elizabeth line route, with and without Crossrail reference (2008 – 2016)



Source: EGi, Local Authority Planning Websites & GVA Analysis, 2017

5.12 The Central and East sections reflect this same clear trend of increasing reference to Crossrail (with some exceptions). However, for the West section the trend is slightly more mixed, but had shown consistently more than 50% of permitted residential units in applications which make direct reference to Crossrail as a supporting factor until 2016 when this level dropped below 50%.

5.13 When it comes to Crossrail's longer term influence in supporting more housing across the capital, one of its material benefits has been helping boroughs make a strong business case for Housing Zone funding. It was one of a number of factors securing the Romford housing zone, but for Southall, Abbey Wood and South Thamesmead it played a more critical role as reflected on during an interview with Peabody; "Crossrail put Thamesmead on the map and got it recognition from the GLA family as a development opportunity".

Residential Development Dynamics in Outer London – an opportunity and a challenge?

5.14 Outer London continues to benefit significantly from Crossrail in terms of residential development, both in immediate station locations and in wider areas served by the stations, underpinned by the value uplifts Crossrail supports. In some cases this influence can be enhanced and spread further by delivering a range of associated improvements that help people access the stations from further afield, such as cycle and pedestrian routes, taxi ranks and reconfigured bus services. This could be most effective where transport links to a station which are currently weak are improved. Some of the consultation reflected this point, suggesting that in areas where transport provision is relatively weak the Crossrail influence could be significantly extended beyond the traditional 1km zone of influence.

5.15 From the private sector perspective Berkeley Homes suggested that in relation to Woolwich, whilst Crossrail has not been able to immediately increase residential values prior to station opening, it has given them the confidence to push their residential product to a higher level in design and quality with the confidence that people will pay for quality where the development ticks the other boxes in terms of connectivity, access to local services and amenities.

5.16 The strength of the Crossrail influence for housing permissions and development activity has been emphasised during conversations with a number of Outer London boroughs. However, some boroughs engaged in the study have suggested that the Crossrail-led demand has had a number of unintended consequences that may challenge some of their objectives.

5.17 Blight was considered a particular issue. Whilst in its truest sense or sites being held back it was felt the impact was limited to the period pre-construction given the start on site created a level of certainty that could be planned for in the future, land speculation by private companies may have stalled sites that would otherwise have come forward. This was largely seen as a play by some landowners to hold their asset while values increased and then sell the site without any development being delivered, potentially frustrating housing delivery in the short term and creating longer term viability challenges. That being said, this has not prevented a significant number of residential units in the 500m and 1km zones of influence around stations from gaining planning consent.

5.18 Some concerns have also been raised by local authorities around the 'appropriateness' of some of the developments coming forward, with new connectivity enabling greater density and height to be sought which may be out of character in certain locations. Examples stated ranged from 10 storey blocks in West Drayton to a 30 storey tower in Abbey Wood as developers seek to maximise a site's potential. These 'isolated' sites provide a number of challenges for the creation of high quality places around Elizabeth line stations as they lack the critical mass present on strategic sites to deliver the entire package of public realm and other infrastructure required.

5.19 Some interviewees even suggested that station design/configuration may be missing opportunities to enhance development and delivery. For example, in Hayes LB Hillingdon identified an opportunity site with the capacity to deliver approximately 2,000 homes (plus). However, a direct connection between the station and development site is not being delivered which is reported as affecting the delivery of the site. This highlights a need for station designs to retain some level of flexibility in order to adapt to changes in the surrounding area and deliver accessibility to new sites as they are identified. In Romford, a second southern station entrance in Romford has been identified as a way to increase housing density opportunities, however this is yet to come forward, but is now being investigated.

5.20 Crossrail itself has sought to address some of these challenges through its own public realm works and the encouragement of station area masterplans that should seek to coordinate investment between multiple sites and ensure greater levels of development demand unlocked by Crossrail than may have otherwise been planned for, are able to be accommodated.

5.21 In some cases, a proactive policy approach is harnessing growing demand and using new housing development to address a range of challenges and issues. Both LB Redbridge and LB Hillingdon want to capture the increased demand for housing to help shift some of the focus in their town centres from dated (and under-utilised) employment space to new homes. They recognise that, over time, this will help underpin the health and vitality of their town centres and help diversify of the offer. Redbridge has also promoted the release of Green Belt land, in part as a reaction to the potential to accommodate more residential development once the Elizabeth line opens.





5.22 Another emerging challenge for meeting housing need in Outer London, and to a degree across London, is striking a balance between new residential development and the retention of employment activity near stations. The Crossrail-related interest in housing development is so strong in Hillingdon that the council is concerned about losing employment land and is now seeking to 'protect a core around the residential areas as employment zones'. For example, the council recently refused residential development on the edge of an employment estate near West Drayton, an area where this type of land use is disappearing.

5.23 Overall, the issues highlighted by local authorities in particular are a reflection of the need to manage a level of growth that, pre-Crossrail, was not envisaged, highlighting the impact Crossrail is having on the housing market across London. Private sector interviews highlighted the perceived importance of enhanced connectivity for making investment decisions, and reflect the wider quantitative analysis which shows housebuilders such as HUB, Berkeley, Taylor Wimpey and Galliard are all specifically targeting high accessibility locations, many of which are along the Elizabeth line route.

LOOKING FORWARD

5.24 The pipeline of permitted development schemes provides a good indication of the role of Crossrail and the Elizabeth line in supporting residential activity within 1km of new stations. But this is not the full picture. There are a number of active applications within the planning system, as well as pre-planning development opportunities which indicate significant residential development activity expected along the Elizabeth line route, particularly in Canary Wharf, Custom House, Southall, Farringdon and Whitechapel.

5.25 Combining permitted residential pipeline figures with potential residential pipeline figures, this provides an indication of the possible maximum number of residential units that could come forward in Elizabeth line station areas in London, which equates to 178,773.

5.26 Whilst there is no guarantee that all or any of the schemes within the potential residential pipeline will come forward, there is a good chance that a number of them will, and this shows continued influence Crossrail could have on meeting London's housing needs.

Private sector interviews highlighted the perceived importance of enhanced connectivity for making investment decisions, and reflect the wider quantitative analysis which shows housebuilders are all specifically targeting high accessibility locations, many of which are along the route of the future Elizabeth line.

[12] *As the potential pipeline data in the above table is sourced from Molior this only includes data for the London stations, which is why the total permitted residential pipeline total is 86,414 rather than the 90,599 total for the whole route.*

Table 5: Count of residential units forming part of pre-applications, active planning applications and consented planning applications for major schemes in Zones of Influence along the Elizabeth line route (2008 – 2016)

Station	Permitted Residential Pipeline (Units)	Potential Residential Pipeline (Units -within active applications or at pre-application stage)	Total Permitted and Potential Residential Pipeline
West Drayton	1,268	249	1,517
Heathrow	-	-	-
Hayes & Harlington	943	3,862	4,805
Southall	6,171	5,818	11,989
Hanwell	1,624	554	2,178
West Ealing	1,707	265	1,972
Ealing Broadway	537	1,298	1,835
Acton Main Line	920	1,382	2,302
Paddington	2,686	3,088	5,774
Bond Street	629	539	1,168
Tottenham Court Road	2,307	1,962	4,269
Farringdon	3,292	5,373	8,665
Liverpool Street	2,312	8,406	10,718
Whitechapel	3,779	5,317	9,096
Stratford	19,778	3,227	23,005
Maryland	206	732	938
Forest Gate	-	850	850
Manor Park	-	-	-
Ilford	1,354	4,809	6,163
Seven Kings	205	300	505
Goodmayes	31	-	31
Chadwell Heath	998	357	1,355
Romford	1,179	4,057	5,236
Gidea Park	-	-	-
Harold Wood	194	-	194
Canary Wharf	17,221	19,930	37,151
Custom House	10,473	16,131	26,604
Woolwich	5,588	3,087	8,675
Abbey Wood	1,012	766	1,778
	86,414[12]	**92,539**	**178,773**

Source: GVA Analysis & Molior Database, 2017

CROSSRAIL HELPS DELIVER AFFORDABLE HOUSING IN OUTER LONDON

5.27 Delivering more housing for London is a positive benefit of Crossrail, however as London becomes increasingly expensive the Mayoral focus has shifted from housing numbers towards the type of housing and, in particular, the amount of affordable housing being delivered.

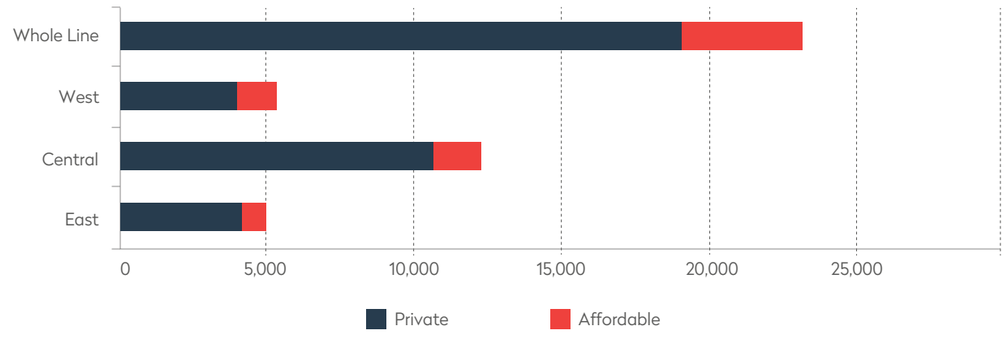
5.28 As such, for Crossrail to be considered a positive for all parts of London's community its ability to unlock new affordable housing is critical, especially as it is seen as contributing to higher house prices in many locations. Whilst in isolation higher prices could prevent access to housing (a concern raised by councils such as Ealing where the development activity and value increase observed in the area is causing concern about continuing to provide affordability) in a number of places they are addressing viability challenges and therefore enabling the delivery of residential schemes, including a proportion of affordable housing, that otherwise may not have been possible.

5.29 It has been noted earlier in the report that value impacts will have the most significant effect in terms of bringing values closer to market averages in places such as Southall, Custom House and Abbey Wood – which are a focus for regeneration and where major housing capacity has been identified but failed to be delivered.

5.30 Analysis of planning permissions suggests that, overall, the locations around Elizabeth line stations are delivering a smaller proportion of affordable housing than the boroughs through which it passes. Along the whole Elizabeth line route 17% of units permitted between 2013 and 2016 are affordable, i.e. they provide housing units which meet the borough's definition of affordable (which may vary from borough to borough) however, in general these are units that are offered to occupiers as social and affordable housing; either social rented or alternative tenures such as Affordable Rented or Intermediate Housing, all of which must be below market levels.

5.31 As shown in Figure 25 there is a significant variation in the number of affordable housing in each part of the line. In total the existing permissions within 1km of an Elizabeth line station will deliver 3,923 affordable housing units[13].

Figure 25: Count of private and affordable residential units forming part of major consented schemes in Zones of Influence along the Elizabeth line route (July 2013 – 2016)



Source: EGi, Local Authority Planning Websites & GVA Analysis, 2017

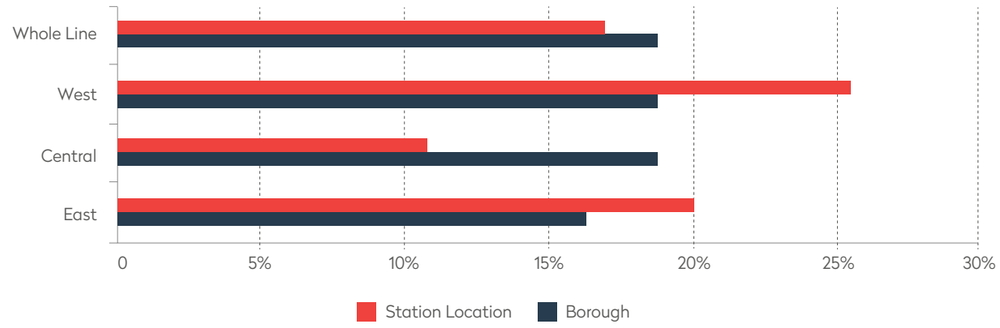
[13] *The caveat to this analysis is that the number of affordable units included within the permitted schemes may be subject to alterations between permission being granted and the scheme being developed, largely due to any changes in the viability position.*

5.32 By benchmarking the level of affordable housing in station locations against the permitted affordable housing at the relevant borough wide level, it is possible to interpret the scale of influence of Crossrail in supporting affordable housing, and whether it is helping to achieve levels that exceed the borough average.

5.33 In both the West and East affordable housing as a proportion of total units is higher within the Crossrail 1km zone of influence than for the relevant boroughs as a whole, suggesting a link between the value Crossrail creates and the ability therefore to provide affordable housing. From the public sector perspective it was suggested that affordable housing is easier to secure around western stations compared to eastern stations, which need more work on local transport infrastructure and/or placemaking; "affordable housing may be bumped down the list in favour of connectivity and public realm" when it comes to negotiations.

5.34 However, within the Central Section borough averages tend to be higher than the station areas. There are a number of potential reasons for this, the main driver will be the location of the Elizabeth line stations, which are situated in the most central parts of London and therefore are considered to be 'prime' markets.

Figure 26: % of total residential units considered affordable that form part of major consented schemes in Zones of Influence and benchmark boroughs along the Elizabeth line route, and in line sections (July 2013 – 2016)



Source: EGi, Local Authority Planning Websites & GVA Analysis, 2017

In general affordable housing delivery is lower in these locations than the borough as a whole given the potential for developers to use mechanisms such as payment of commuted sums or offsite delivery to maximise the value of prime sites and also maximise the level of affordable housing delivered. This 'offsite' delivery may lie beyond the 1km zone used for analysis in this study.

5.35 However, there is some variation in the general trends when drilling down to the individual station level. Some station locations show significantly larger affordable proportions than at the borough level, yet others show the reverse. This likely reflects individual contexts of station locations and particular residential schemes permitted in these locations. However, on balance, the trend seems to reflect the general observation that Crossrail has most influence in supporting affordable housing in Outer London locations (with the main exception being at Acton Main Line). This is also reflected in the actual number of affordable units permitted which are much lower for Central London station locations compared to Outer London locations.



Table 6: Disparities in % of total residential units considered affordable that form part of major consented schemes in Zones of Influence and benchmark boroughs along the Elizabeth line route (July 2013 – 2016)

	% of affordable housing in permitted schemes	
Station	**Station Location**	**Borough wide[14]**
Paddington	22% (269 units)	11% (352 units)
Whitechapel	32% (496 units)	19% (1,989 units)
Southall	40% (842 units)	24% (586 units)
Custom House	6% (86 units)	14% (310 units)
Acton Main Line	10% (75 units)	24% (586 units)
Bond Street	1% (4 units)	24% (352 units)

Source: EGi, Local Authority Planning Websites, Local Authority Annual Monitoring Reports & GVA Analysis, 2017

5.36 The depth of the support Crossrail can provide for affordable housing is bolstered further by the scale of development that is being led by Registered Providers (RPs) who themselves are gaining permissions for residential development in Elizabeth line station locations. Whilst the products within these permitted schemes are not necessarily 100% affordable housing, they do all provide a good proportion of affordable housing, in line with the RPs' core objective.

5.37 Crucially, even the private sale units delivered by RPs and unlocked by Crossrail will have an indirect benefit to affordable housing provision in London, given RPs financial models. With higher values on private sales the RPs can reinvest the surplus elsewhere to deliver other housing schemes.

5.38 Key RP players who have received planning permission for development schemes along the Elizabeth line route include Catalyst Housing Group, London & Quadrant Housing Trust, and Peabody Trust. Taking a geographical view, the most significant RP role is in the West section of the Elizabeth line route, contributed to most significantly by development in Southall (by Catalyst) which constitutes 58% of total permitted residential units.

In both the West and East affordable housing as a proportion of total units is higher within the 1km zone of influence around stations than for the relevant boroughs as a whole, suggesting a link between the value Crossrail creates and the ability therefore to provide affordable housing

[14] *It should be noted that the Borough wide benchmark figures are based on the latest available London AMR data at the time of writing, the 2014/15 period, so it is not directly comparable with the station data time period in terms of unit numbers. However this does not affect the comparability of the % of affordable housing permissions.*

Table 7: Registered Provider applicants for major consented schemes in Zones of Influence along the Elizabeth line route (July 2013 – 2016)

Registered provider	Future Elizabeth line station	Proposed development	Residential units	Office floorspace (sqm)	Retail floorspace (sqm)
Shepherds Bush Housing Association Limited	Hayes & Harlington	Golden Cross Public House	23	0	0
Catalyst Housing Group Limited	Southall	Havelock Estate (part of) 27-27a	922	0	840
Catalyst Housing Group Limited	Southall	Southall Village (Havelock Estate)	287	0	70
Catalyst Housing Group Limited	Southall	Land to the West Glade Lane	26	0	0
Family Mosaic	Hanwell	Drayton Place	44	0	1200
Affinity Sutton Group	West Ealing	Sherwood Close Estate	305	0	0
Family Mosaic	Ealing Broadway	Former Hanger Lane Nurseries	51	0	0
Notting Hill Housing Trust	Acton Main line	Western Avenue Sites	129	0	0
Triangle	Tottenham Court Road	New Oxford Street Estate	21	352	1055
London Borough of Islington	Farringdon	Telfer House	38	0	0
London & Quadrant Housing Trust	Whitechapel	Whitechapel Central (Former Safestore Site)	564	2845	0
London Borough of Tower Hamlets	Whitechapel	Park Between Jubilee Street	24	0	0
London Borough of Newham	Forest Gate	Development Site Opposite 4 McGrath Road	26	0	0
ASRA Housing Association Limited	Woolwich	Sunbury Lodge	48	0	0
Newlon Housing Trust	Goodmayes	Lord Napier 521a	31	40	0
Peabody Group	Abbey Wood	Sedgemere - Harrow Manorway	219	0	0
Peabody Trust	Abbey Wood	Caroline Walk	549	0	0
			3,307	**3,237**	**3,165**

Source: EGi & GVA Analysis, 2017

It should be noted that many of the schemes identified have benefitted from a combination of the Mayor's new policies on affordable housing and the availability of affordable housing grant (including via the Housing Zones programme) alongside the value uplifts created by Crossrail. Together these have helped to shift market perceptions and expectations in these areas to increase affordable housing levels.

6

Town Centres & Placemaking

Artists impression of Canary Wharf station

6.1 Several Outer London Elizabeth line stations are in designated town centres, and local authorities have seized the opportunity to strengthen or revitalise those centres, securing new development and accessibility upgrades to build footfall and improve area look, feel and economic potential.

6.2 Notably, Crossrail is helping councils re-imagine or recalibrate their town centres, adapting to changes in the retail landscape by welcoming a range of development interest.

6.3 As shown in Figure 27, the main focus of development has been on new residential schemes. This is in line with the push across London to deliver more homes within town centres, to maximise the connectivity benefits they offer. Critically, enhanced levels of town centre living are seen as an important way to increase the catchment of each centre, and therefore offer potential to attract new or enhanced levels of mixed activity.

6.4 What is clear from the data is that not all town centres are responding to the arrival of Crossrail in the same way. This may be partly a question of timing, with benefits to follow once the Elizabeth line service is active, initial residential development is delivered and the town centre benefits from enhanced footfall or recognition by being 'on the tube map'. To understand the factors influencing the scale and pace of impact of Crossrail in major town centres, we have considered examples with differing levels of response, identifying what has been achieved to date and where a second wave of benefits may be forthcoming in the future.

EALING BROADWAY

6.5 Ealing Broadway station, at the core of Ealing town centre, has seen limited development activity to date in terms of consented schemes, a surprising finding given expectations noted in the 2012 study. Ealing Council suggested that this more modest development impact may reflect the strength of existing connectivity, which already supported a strong residential market. It was also felt that there were some early impacts once Crossrail construction started, but that many landowners were holding on to sites for value increases.

6.6 That being said, Crossrail's enhanced connectivity to Heathrow (alongside increased capacity to Central London) is starting to influence the commercial property market. The council has recently noted a slowdown in office-to-residential conversion, which had been an early trend within the town centre.

6.7 This improvement to the office market was also noted by British Land. The developer is refurbishing International House to accommodate its flexible workspace product Storey and bringing forward a proposal for a new office development on a site between the station and the Broadway Shopping Centre, the first new office development in the town for some time, and, according to British Land, primarily enabled by the connectivity of Crossrail.

6.8 In turn, Ealing Council expects the increased level of commercial activity within Ealing to unlock an expansion in the food, beverage and shopping offer to cater for lunchtime and after-work markets. Combined with a substantial increase in residents, this evolution of the town centre offer is becoming evident through schemes such as Ealing Filmworks (to be completed in 2019) which will deliver a 1,000-seat cinema at the heart of a £100m mixed use development, including food and beverage.

6.9 Growth and development of Ealing town centre has largely been driven by the private sector rather than a coordinated planning strategy or broad masterplan. However, with the strength of the property market in the area, this has not been seen to hinder development interest.

ROMFORD

6.10 To date, the metropolitan town centre of Romford has experienced relatively little development impact as a result of Crossrail, but the proportion of developments that directly cite Crossrail to support them has been high between 2008 and 2016.

6.11 It appears in Romford that several opportunities are only now being identified and brought forward. The London Borough of Havering recently published a 5-10 year growth plan which, whilst potentially achievable without a station, says;

> "Crossrail brings more growth possibilities and gives us licence to be more ambitious with the plans."

6.12 At this stage, it appears that Crossrail's main influence has been to help bring forward sites that have stalled or been dormant for a long time. In time, the combination of the Council's new vision for the town centre; the Elizabeth line connectivity; and the town being on the Tube map may secure major new residential development which, in turn, will bring more commercial and retail opportunities. A council representative suggested this may help keep locals loyal to Romford rather than travelling to Bluewater, Lakeside or Stratford.

6.13 The prospect of Crossrail has also helped the Council take a strong stance on development quality and delivery, important for achieving meaningful and locally beneficial impacts:

"Crossrail [allows us to] demand quality. We won't let developers just come and build. We are trying to be proactive and work with developers through JVs or joint masterplanning. We want them to stay in Romford: don't just build and disappear, but take a long-term interest in [...] the area."

6.14 Havering Council suggests that there are a number of factors that may have inhibited early impacts. The initial design of Romford's station was felt to be a potential limitation, lacking a southern entrance despite 65% of passengers arriving from the south. It was felt this entrance would have attracted more development interest and helped achieve greater density. Havering Council and Crossrail are determining the feasibility of delivering a southern entrance, potentially providing further Crossrail-led growth opportunities.

6.15 Beyond the station, the Council considers orbital journeys to be particularly difficult and the Council wants to improve bus infrastructure to spread transport benefits more widely. The limitations of public transport and of connectivity within the town centre could be part of the reason for Romford's modest permitted development impact to date. However, TfL modelling and assessment indicated sufficient service and there are no plans to change Romford's bus services at this time.

6.16 TfL points out that these enhancements need to be funded, calling for much closer working between TfL, the borough and developers to unlock growth opportunities. To some extent, new outer London bus services will be funded by reductions to Central London services that are expected to see ridership reductions linked to mode shift to Crossrail.

"In TfL planning, we'll always work with major developments to contribute to bus routes if they have a major transport impact, and it's no different for Crossrail... TfL [will] also fund cycling and walking improvements for boroughs. Crossrail enables travel around London, but [we recognise that] local movements have to be tackled."



ILFORD

6.17 Redbridge has been one of the most proactive boroughs in recognising and planning for the impact of Crossrail, setting a direction through planning policy that will strengthen Ilford town centre.

6.18 For Ilford, the focus has been on diversifying the town centre offer. The council recognises the challenge posed by improved connectivity to retail centres in the West End and Stratford, and plans to reinforce the town centre offer by attracting new residents and leisure activities. The council anticipates thousands of new homes which will in turn create a more mixed town centre offering:

"When you need to put 6,000 homes on a high street, you're going to drastically change the balance of a place. [We are looking] at moving away from retail on the high street to things like health, leisure, education, food and drink; the town centre doesn't have to be all retail. Redevelopment around the town hall will support a new night-time economy."

6.19 Again, development to date has been fairly limited, but the council expects this pace to quicken once the Elizabeth line is operational, reflecting an occupier- rather than developer-led market within the town. It hopes that once improved connections are in place, it can attract new commercial activity, especially through the provision of competitively priced workspace.

6.20 Redbridge Council also suggested that the relatively low level of development activity also reflects the fragmented land ownership and the nature of developers the town has attracted. Whilst they report plenty of interest, this has tended to be from smaller developers and landowners who fail to recognise the benefit of a more joined-up approach to development, sometimes refusing to work with neighbouring owners.

6.21 This has been a real challenge for achieving high quality, well-integrated development that contributes to an improved sense of place in the town centre, and suggests that whilst the improved accessibility from Crossrail supports regeneration opportunities in town centres, it is important to work with this opportunity to ensure the right development interest and proposals are being attracted and pursued.

6.22 The physical and infrastructure conditions in the town centre have also been seen as a potential block on development and regeneration. Major changes are required to overcome severance issues (for example) and better connect the station to the wider town centre, but these are not coming forward alongside Crossrail. This impacts the ability to deliver high-quality public realm and secure high-quality development that integrates into the wider town centre. If these enhancements can be achieved in future, Crossrail would have a greater impact.

"When you need to put 6,000 homes on a high street, you're going to drastically change the balance of a place. We are looking at moving away from retail on the high street to things like health, leisure, education, food and drink; the town centre doesn't have to be all retail."

CUSTOM HOUSE

6.23 Custom House has a strong permitted residential and office development pipeline around the station, but has long been a regeneration area which has not realised its potential, and even today there appear to be relatively low levels of development activity.

6.24 There is some indication that Crossrail is helping to unlock the potential at Custom House. Newham Council reported accelerated activity at Custom House in recent years, including new opportunities to diversify the local economy.

6.25 Newham Council interviewees noted that though the area has had regeneration plans since 2003, the fixed timescale around the opening of the Elizabeth line has provided a focus that was previously lacking. Given the scale of the challenge, it may still be some time before comprehensive regeneration in this area is realised.

6.26 Crossrail has enabled Newham Council to take a more active role in development, combining its own budgets and investment with Crossrail-related works to maximise the delivery of high quality public realm beyond the station areas. This is expected to further support development delivery and change.

6.27 The Council hopes to develop places around stations that are not just transport interchanges, but social and community hubs knitting together existing and new residents. Other modes of transport are key to this, with buses in particular being popular throughout Newham. This again highlights the importance of local connectivity and the need to invest in it to fully realise the benefits of Crossrail across the widest area possible.



Artists impression of Custom House Station

PLACEMAKING AND PUBLIC REALM INTERVENTIONS

6.28 For the purpose of this Study, placemaking is defined as (a) the making and shaping of public spaces surrounding the Elizabeth line stations which people are moving through and spending time in, and (b) the quality of new residential and commercial development schemes and town centres around stations. Through placemaking and public realm interventions, there is an aspiration to use new stations to better connect different parts of the community.

6.29 The explicit influence of Crossrail in supporting placemaking and public realm interventions can be difficult to measure. However, there are instances where the development and regeneration activity supported by Crossrail is resulting in placemaking that improves the quality of station-area development and helps attract further development activity, as well as improving the quality of the visitor experience.

6.30 All boroughs thought that public realm was vital to spreading the benefits from new Elizabeth line stations, including supporting development. A minority of interviewees thought that Crossrail should fund more public realm work directly; however, most expected the costs of public realm improvements to come from multiple sources and are attempting to extend or complement Crossrail's public realm improvements, such as through planning agreements or other budgets.

6.31 Crossrail is already being cited for putting poorly served or weaker markets 'on the map'. In addition, TfL indicated that developers and boroughs have requested station name changes to give a sense of identity to places that have not traditionally been destinations, and/or to avoid issues around legibility/wayfinding. This could help to maximise the wider regeneration and placemaking benefits of Crossrail.

6.32 At Whitechapel, a different set of challenges has arisen with institutions and local landowners (including the council itself), where issues around engagement and coordination have slowed or stalled regeneration projects. Among other things, public and private owners of large sites have been reluctant to allow meanwhile activities; these 'meanwhile' activities were intended to complement and accelerate broader economic development activities, such as the development of the life sciences quarter.

6.33 Engagement with stakeholders in a station area is clearly crucial to maximising Crossrail's potential to unlock longer-term regeneration and good placemaking. In some cases, placemaking may not prove achievable until the service opens. It is also critical to work with local stakeholders to minimise disruption from public realm works and other Crossrail-related construction activity – at Whitechapel, Crossrail construction has temporarily created a fragmented public realm which is affecting retail and footfall, so that "it's not a pleasant place to be, do business, or socialise".

6.34 Another challenge for Whitechapel was the London Borough of Tower Hamlets unsuccessful bid for TfL funding to support the delivery of significant public realm improvements alongside Crossrail's own improvements (especially to the rear of the station); these costs could not be covered by other funding. This was felt to be a missed opportunity which would have supported increased regeneration activity earlier.

6.35 While the most significant town centre and placemaking impacts may be in Outer London, there are interesting findings which relate more to Central London, but whose lessons are applicable along the route.

6.36 From the private-sector perspective, much of the public realm investment around station-area development (e.g. Bond Street as cited by GPE) would not have happened without Crossrail and the confidence it generated for realising development value and increased footfall. It was suggested that the definitive opening date helped focus all stakeholders' activities on a single point and ensured that investments were made cohesively.

6.37 There are also indications that in Central London locations with few development sites, Crossrail's increased connectivity can help drive refurbishment and investment in existing properties. Better buildings in turn produce a more inviting investment environment, which can support public realm improvements and wider placemaking benefits.

6.38 Both the City of London and the London Borough of Islington are enthusiastic about public realm opportunities tied to Crossrail. For the Corporation, City-wide public realm improvements such as footway widening and traffic rearrangement will help accommodate the increased footfall from Farringdon and Liverpool Street stations, with funding to come partly through Section 106 and CIL sources. For LB Islington, there are plans to make Farringdon adjacent Clerkenwell Green more pedestrian and cycle-friendly and establish the Karl Marx Library as a destination. These are in addition to Crossrail's own public realm improvements which provide station forecourts outside each station entrance.

6.39 Particularly in Inner London, developers seem to be showing increased interest in longer-term placemaking opportunities. Local authorities favour this, associating long-view developers with the delivery of better-quality schemes and greater contributions to an area post-completion. This interest is not evident in Outer London, which suggests that in lower-value, relatively weaker markets, reduced competition and lower expected returns may not attract the same level of private-sector investment in public realm.

6.40 The London Borough of Camden and City of Westminster are using Crossrail to drive placemaking beyond the station. Crossrail has sparked new relationships to deliver public realm improvements, particularly the effective West End Partnership, and has also generated interest from TfL in rethinking Tottenham Court Road's one-way system. Indeed the City of Westminster has identified Crossrail as an opportunity to improve Oxford Street, and has been holding initial consultations to help to determine the options.

6.41 Similarly with regard to Farringdon station, the London Borough of Islington has indicated that Crossrail has facilitated a focus on placemaking, particularly on the areas between station entrances, which will also feature over-site development.

However, there are challenges to these wider improvement opportunities, even in Central locations. At Tottenham Court Road, for example, fragmented ownership calls for a pragmatic (site by site) approach to achieving regeneration and placemaking, rather than large-scale renewal plans. Change in contexts like this must be incremental rather than transformational on a large scale.

Crossrail has sparked new relationships to deliver public realm improvements, particularly the effective West End Partnership, and has also generated interest from TfL in rethinking Tottenham Court Road's one-way system.



7

Putting the Crossrail Influence in Context

Artists impression of Abbey Wood station

7.1 This Study has explored the property value, development pipeline and development delivery findings supported by Crossrail, as well as the influence it is having on shaping London's world city economy, meeting London's housing needs, and influencing town centres and placemaking. It is important to put all of this into the context of wider market and accessibility characteristics and explore how these affect the timing and scale of Crossrail's influence.

7.2 This section addresses why the Crossrail influence is happening faster in some station locations than others, whether that is the result of wider market characteristics, real or perceived accessibility, public realm, and/or the quality of and links with the town centre offer.

7.3 Two station examples, Hayes & Harlington (in the west) and Abbey Wood (in the east), demonstrate the variation in the Crossrail influence so far, and identify and explore the contributing factors. This addresses public transport accessibility, residential values, residential development activity, and the existing town centre offer. It allows lessons to be drawn more broadly to understand variations in development activity and value growth along the Elizabeth line route.

7.4 To provide an overview of the characteristics of the two station locations considered here;

- **Hayes & Harlington** is perceived as being comparatively better connected to Central London, with a journey to Paddington via Great Western Railway in 20 minutes, and with connections to the Central line at Ealing Broadway (a c.10-15 minute journey). In development terms it is characterised by large scale, former industrial sites close to the station which present complex opportunities but are generally in single or limited-party ownership. Further afield, the area is characterised by post-war suburban housing in fragmented ownership.
- **Abbey Wood** is not perceived as particularly well connected. Its options for getting into Central London are fairly limited, with a connection into London Bridge via Southeastern in c.35 minutes. The development pattern around the station is one of terraced and estate housing in multiple ownership, and there are few large opportunities close to the station. To the north the area is dominated by large scale post-war social housing estates (owned by Peabody) and to the south private post-war suburban housing.

7.5 These stations are both located in Outer London. They share similar levels of post-war housing stock and both have strong industrial markets supported by strategic road connectivity and site availability. The main difference is the nature of the area immediately around each station, which has knock-on implications for the ability to deliver comprehensive development linked to the arrival of the Elizabeth line. The complexity of development opportunity appears to be higher at Abbey Wood than Hayes & Harlington, given the former's fragmented ownership and the need for comprehensive estate renewal to upgrade the Thamesmead housing stock and surrounding public realm.

7.6 Transport services also differ, in terms of the nature, frequency and perception of connectivity to Central London and other hubs, and in terms of the quality and proximity of the station area to the town centre.

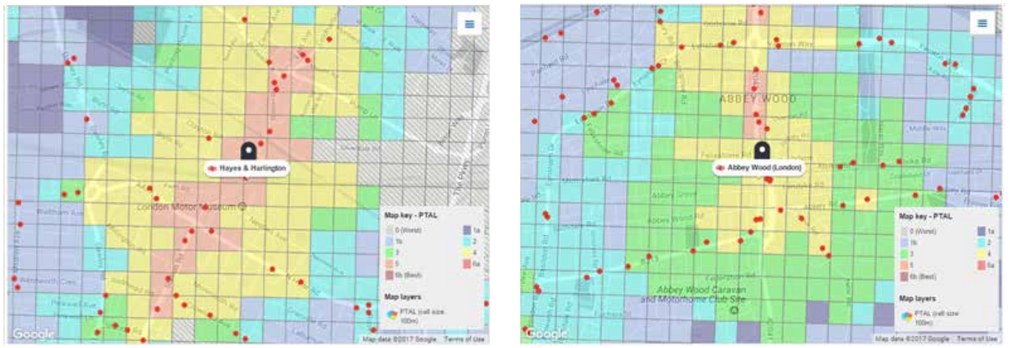
Hayes & Harlington is perceived as being comparatively better connected to Central London than Abbey Wood, with a journey to Paddington via Great Western Rail in 20 minutes.

CURRENT PUBLIC TRANSPORT ACCESSIBILITY

7.7 As shown in the figure below, Hayes & Harlington and Abbey Wood station locations have similar Public Transport Accessibility Level (PTAL) scores, with Hayes & Harlington station having a slightly higher score of 5 (out of 6), compared to the score of 4 for Abbey Wood station. It is also evident that the level 5 score for Hayes & Harlington stretches a fair distance from the station in the north east to south west direction (supported by bus routes).

7.8 As shown below the size of the high PTAL zone in each area is considerably different, with only the area immediately to the north of Abbey Wood station benefitting from a level 5 score, suggesting that feeder – mainly bus - services are inadequate. By contrast the PTAL 5 zone at Hayes & Harlington extends north and south of the station, reflecting the high number of services along the main road. At Abbey Wood PTAL values very quickly fall to 3 and below as you move south, east or west from the station.

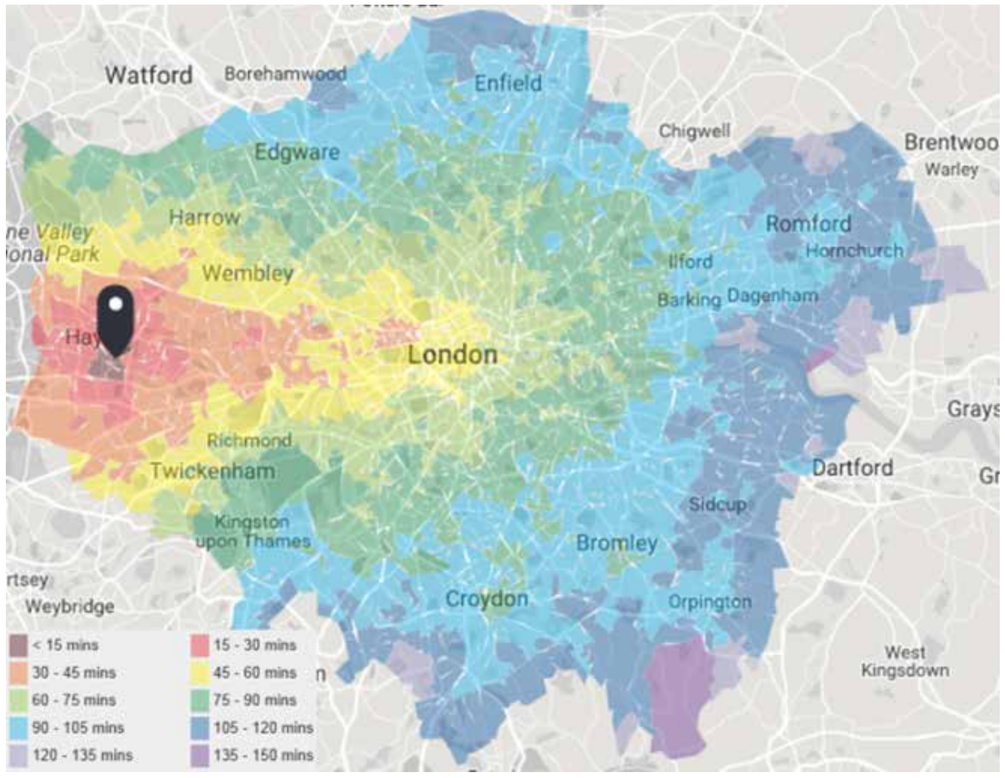
Figure 29: Access Level PTAL Maps for Abbey Wood and Hayes & Harlington Stations



Source: TfL Webcat Planning Tool, 2017[15]

7.9 PTAL scores are not the only consideration when seeking to understand accessibility as they do not (for example) incorporate the quality of services (i.e. levels of crowding), the speed of a service or the ease of interchange between services, nor do they reflect the end point of connections or the range of destinations reachable (for example, they are a relatively limited way of understanding the strength of accessibility to employment hubs).

Figure 30: Time Mapping of connections for Hayes & Harlington and Abbey Wood Stations



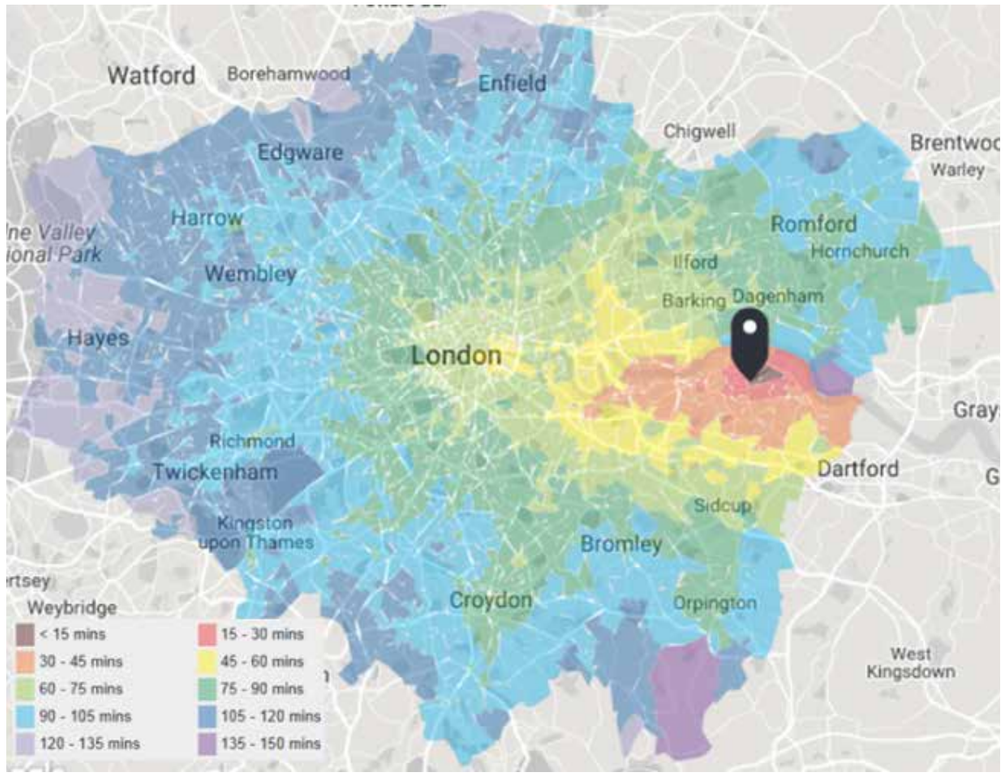
Source: TfL Webcat Planning Tool, 2017 [16]

7.10 The time mapping approach shown in Figure 30 provides a more practical indication of the wider accessibility of the two station locations, showing how far you can travel from each within set time brackets.

7.11 This clearly demonstrates the accessibility advantage of Hayes & Harlington compared to Abbey Wood. From Hayes & Harlington station you can travel further towards Central London in the 30 – 45 minute travel time bracket, and you can reach the majority of Central London within 45 - 60 minutes. This is in addition to the access to other economic hubs including Heathrow and Brunel University. Whereas from Abbey Wood the range of options available within 30-45 minutes and 45-60 minutes is more limited, largely requiring interchange at London Bridge.

[16] *https://tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat*

Figure 30: Time Mapping of connections for Hayes & Harlington and Abbey Wood Stations



Source: TfL Webcat Planning Tool, 2017 [16]

7.12 As well as the physical accessibility of each stationlocation, perceptions of its connectivity and accessibility are an important factor. At present Hayes & Harlington is perceived as being better connected with Great Western Railway and Heathrow Connect services, compared to Southeastern services running from Abbey Wood. Both actual and perceived accessibility could be influencing the timing of the Crossrail influence, which is likely to happen more slowly when starting from weaker existing connectivity, compared to a location which is already comparatively better connected.

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RESIDENTIAL VALUES

7.13 The residential values in these two areas will in part reflect public transport accessibility but also reflect the nature and quality of the surrounding area amongst other factors, shedding further light on how the timing of the Crossrail influence is playing out differently.

7.14 In residential value terms both stations start from a fairly comparable value base in 2008, however by 2012 the Hayes & Harlington average value increased by £42,949 (23%) compared to an increase of £18,795 for Abbey Wood (10%). From 2012 - 2016 Hayes & Harlington continues to benefit from higher values, with a greater difference to Abbey Wood than experienced in 2008. These values reflect the generally weaker residential market in Abbey Wood which has traditionally limited development. As shown over time the 'gap' between values at Abbey Wood and Hayes & Harlington grows from 3% to 10%.

7.15 The value increase charts below add further detail to the value picture. Whilst Hayes & Harlington has tended to have lower values than its benchmarks, by 2026 these differences have been overcome and the area aligns more closely with both the Hillingdon and West Section market averages.

7.16 In contrast, whilst Abbey Wood values are expected to surpasss the Bexley market average around the time Elizabeth line opens and continue to increase above the Bexley benchmark post opening. They are not expected to align with the East section average until the end of the projection period (c. 2026) and will not catch up with the Greenwich borough average.

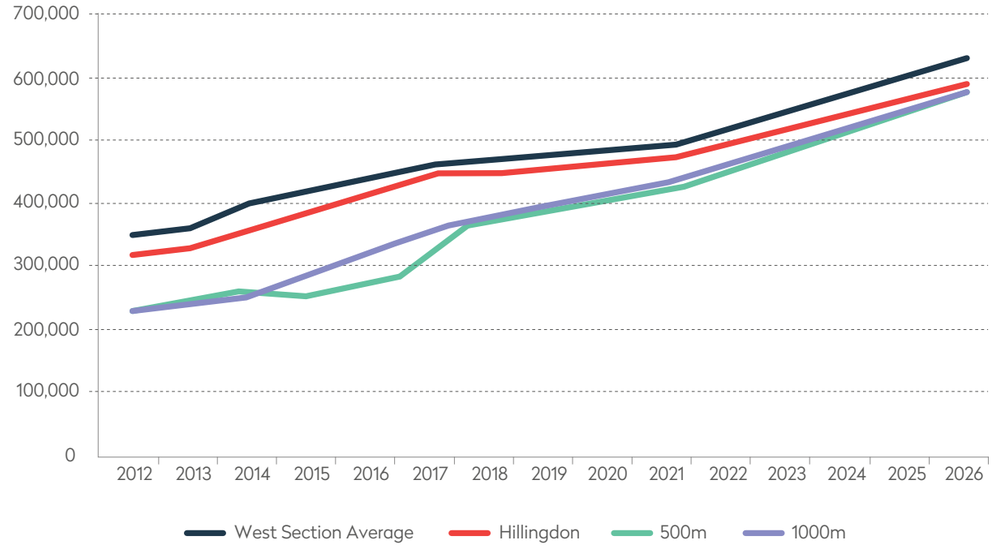
7.17 Comparing value growth trends for the two stations in the context of their borough and line section benchmarks shows further why the Crossrail influence is taking hold more slowly in Abbey Wood, with its weaker value growth relative to its surroundings.

Table 9: Average achieved residential property prices in Abbey Wood and Hayes & Harlington station Zones of Influence.

Station	2008	2012	2016
Hayes & Harlington	£184,665	£227,614	£339,953
Base	100	123	184
Abbey Wood	£179,583	£198,378	£321,709
Comparison to Base	97	107	174

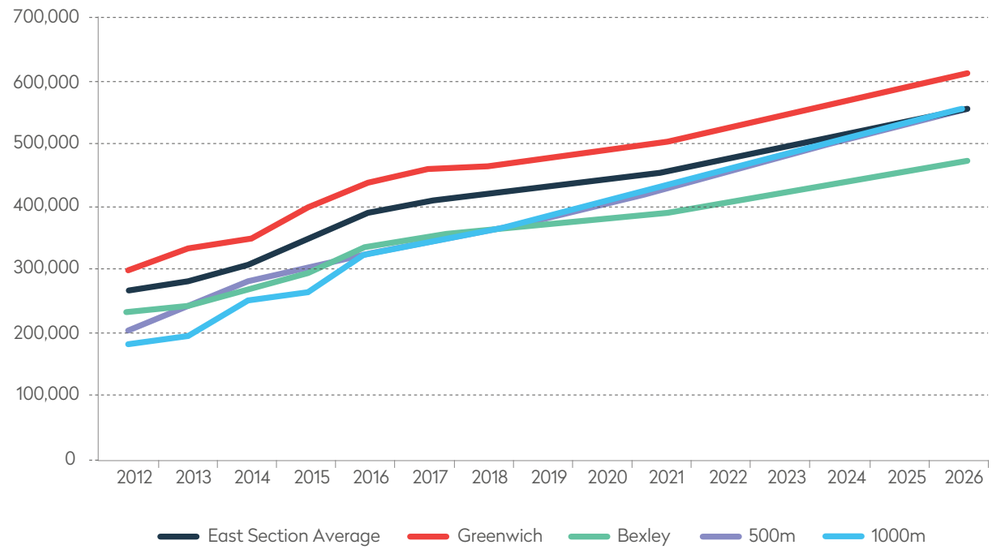
Source: HM Land Registry & GVA Analysis, 2017

Figure 31: Average annual achieved and forecast residential property prices in Hayes & Harlington station 500m and 1km Zones of Influence, LB Hillingdon, and the West Section Zones of Influence (2012 – 2026)



Source: HM Land Registry & GVA Analysis, 2017

Figure 32: Average annual achieved and forecast residential property prices in Abbey Wood station 500m and 1km Zones of Influence, LB Greenwich and LB Bexley, and the East Section Zones of Influence average (2012 – 2026)



Source: HM Land Registry & GVA Analysis, 2017

RESIDENTIAL DEVELOPMENT ACTIVITY

7.18 Turning to development activity, the difference in historic values and value growth trends explored above helps to explain why development activity has been lower in Abbey Wood, even where there are more schemes permitted in this location than in Hayes & Harlington.

7.19 Low anticipated longer term opportunities in Abbey Wood reflect the weaker value growth prospects, which suggest returns are not sufficiently high to overcome some of the delivery challenges in the area. Therefore other interventions are likely to be required to unlock growth, which have not been required in Hayes as the wider market had greater strength.

7.20 This need is recognised by the boroughs and Peabody, who have used the arrival of the new railway to secure funding to unlock development through a series of wider infrastructure and public realm improvements, including critical links to the area via Harrow Manor Way to Thamesmead. Therefore, the potential impact of Crossrail will extend beyond the current period as the Housing Zones at Thamesmead are delivered and confidence is instilled into the area. With such weak existing connections (in physical terms and with regard to perceptions of accessibility) it is likely that the true opportunity of Crossrail will not be realised at Abbey Wood until its benefits can be experienced.

7.21 In contrast, in Hayes & Harlington, where the knowledge of Crossrail coming was added to its existing transport network strength and stronger market context, growth has been unlocked earlier and is likely to persist over a longer period of time.

Table 10: Count of residential units that form part of pre-applications, active planning applications and consented planning applications for major schemes located in Abbey Wood and Hayes & Harlington station Zones of Influence (2008 – 2016)

Station	Permitted Residential Pipeline (Units)	Potential Residential Pipeline (Units within active applications)	Potential Residential Pipeline (Units at pre-application stage)	Total
Hayes & Harlington	943	1,402	2,460	**4,805**
Abbey Wood	1,012	208	558	**1,778**

EXISTING TOWN CENTRE OFFER

7.22 Another key factor influencing how quickly the Crossrail influence is becoming evident is the quality of the existing town centre offer, which provides the starting point for commercial growth and placemaking to deliver good quality public realm in station locations.

7.23 The weakness of Abbey Wood is a factor here considering the isolation of the town centre in North Thamesmead from the station, which is a very different context to Hayes & Harlington station which sits within the context of the town centre.

7.24 Abbey Wood itself is not currently an established town centre, but anticipating growth from Crossrail, LB Bexley has identified the area around Abbey Wood station as a future town centre. Crossrail has brought cooperation in focusing on regeneration in this area which was not previously in place, with the London Borough of Bexley, the Royal Borough of Greenwich and other partners now working together to deliver placemaking around the new station. It seems the value of placemaking and joint working to create a comprehensive, high quality gateway around the station has been acknowledged in this context as part of the approach required to deliver such large scale development and regeneration in an area which until now has not really been on the radar as an integrated part of London. However, this will understandably take longer to come forward than for station locations which already sit within an existing town centre context.

7.25 The London Borough of Bexley are already reporting an increase in the level of footfall and activity within the Abbey Wood local centre, with retailers reporting an increase in trade. In part this is thought to be linked to the ongoing investment in the public realm and shopfronts around the Elizabeth line station which are being delivered in advance of services commencing to make the area 'Crossrail ready'. It is expected that once Elizabeth line services commence this will be greatly enhanced.

7.26 However, the Council are also conscious that increased footfall and a new residential offer could threaten the existing retailers. Increasing rents may price out current independent traders whilst a new mix of residents demanding a different retail offer may also threaten he viability of the existing traders.

7.27 Interviewees stressed that connectivity is critical for building the town centre. The area needs bus, cycling, and walking routes, especially towards Thamesmead: "If we don't get quality public transport to Abbey Wood from North Thamesmead, which is very isolated, we'll see minimal benefit." A more integrated bus network, with better connections between Woolwich Arsenal and Abbey Wood, then Slade Green and Bexley, could also unlock more housing.

7.28 Car parking is already extensive at Abbey Wood, a situation which is expected to be exacerbated by the Elizabeth line as street parking near the station is already at capacity. Managing this existing demand and increased levels arising from Crossrail (if wider services do not reduce the need for park and ride) could limit the ability to fully integrate the station into the wider area and deliver stakeholders' ambitions for public realm and placemaking. This is an important issue to tackle, which is particularly pertinent in Outer London town centres where car use is more likely than in Central London. Clever design solutions will be required to incorporate car parking provision in a way that does not compromise public realm or commercial opportunities in the immediate station area.

7.29 Whilst there is scope for investment and regeneration for Hayes Town Centre, which Hillingdon Council is pursuing as a major schemes project, it provides a suitable core retail offer which is well connected with the station, and through improvement work further supported by the regeneration influence of Crossrail, is capable of providing a high quality gateway into Hayes from the station. In contrast, the lack of an integrated town centre offer around Abbey Wood station vicinity is a substantial challenge for attracting development and investment activity, which must be overcome before the Crossrail influence and placemaking benefits can be realised here.





UNDERSTANDING THE CROSSRAIL INFLUENCE SO FAR

7.30 Having explored the transport accessibility, residential value growth and development activity and town centre offer, this helps to better understand how the Crossrail influence has played out so far in Abbey Wood and Hayes & Harlington.

7.31 At Abbey Wood, Crossrail is a key factor in attracting new development in the immediate vicinity around the station, and to a lesser extent throughout the wider area through the broader confidence new development activity around the station brings. Yet current development linked to Crossrail is still quite low and activity is not expected to increase significantly until after the Elizabeth line opens. In this case Crossrail was seen as crucial to attracting GLA investment for the two Housing Zones. Partly this reflected the opportunity for enhanced demand as Crossrail would put this area on the London transport map, but it also reflected expectation of value uplift, unlocking the viability case for residential development in this location and suggesting that loans made by the GLA would be repayable via development receipts.

7.32 In contrast Hayes & Harlington is already seeing more development activity on the ground in close proximity to the station, within recent completions and schemes under construction including; Trident House (completed in 2015), Waterside (completed in 2015) and the Gatefold Building and the Boiler House as part of the Old Vinyl Factory area (under construction). This is in addition to new schemes being permitted and some indications of further pre-planning interest in development opportunities in proximity to the area. The development densities of these schemes are increasing beyond the traditional suburban 2-3 storey schemes, in favour of mixed use blocks with 8-10 storeys (which the London Borough of Hillingdon is mindful is reaching the upper limits of suitability for density in this area).

7.33 Crossrail seems to have sparked development interest which has facilitated the unlocking of harder-to develop sites, and Hillingdon Council hopes that Crossrail will support development of the evening economy and leisure offer in Hayes Town Centre, making it a more prosperous centre supported by the increased residential development being enabled, and therefore driven by market demand rather than being forced with policy or masterplanning approaches. The potential for Crossrail to help to establish a mixed economy in Hayes is seen as important for building its sense of community.

7.34 It has become clear that the combined influence of actual and perceived transport accessibility of the station locations, their existing market characteristics and strength (reflected in residential values and development activity), and the quality and connectivity with an existing town centre offer, has a significant impact on the timing of the development and regeneration influence Crossrail is having.

7.35 Where transport accessibility is better, residential value growth is stronger, and the station is well integrated with the town centre offer, the positive influence of Crossrail on development and regeneration can happen more quickly. This pacing can have important implications for how councils plan for the trajectory of the Crossrail influence on development activity and value growth, as well identifying the supporting interventions required. These lessons could also help stakeholders understand and plan for the development impacts of future infrastructure investment, like Crossrail 2. Lessons learned from the Crossrail experience are detailed in the conclusions Section.



Artists impression of Hayes & Harlington Station

8

Conclusions

Artists impression of Ealing Broadway station

8.1 Crossrail has already surpassed GVA's 2012 predictions, supporting significant uplift in the quantum and value of new residential and commercial development. At the same time, the programme has been key to unlocking stalled or highly complex regeneration opportunities, particularly in Outer London.

8.2 In terms of positive benefits there is clearly more to come. The permitted and potential planning pipeline combined with value forecasts, property market trends and sector intelligence show that Crossrail's contribution to development values, delivery and wider regeneration will increase in the run-up to – and years beyond – the opening of the Elizabeth line.

8.3 There are a number of findings from the experience to date that can help realise this untapped potential. They also provide valuable lessons for future transport investment seeking to deliver wider development and regeneration benefits.

CROSSRAIL ACHIEVEMENTS TO DATE

8.4 All public and private-sector stakeholders interviewed for this study agreed that Crossrail is enabling or catalysing development, even where that impact is hard to tease out of other initiatives or market trends.

8.5 As shown throughout this report, Crossrail has already created considerable value uplift. Delivery of the permitted residential schemes alone would create up to £20.1bn additional value by 2026 – £13bn of which is Crossrail-dependent (i.e. from schemes which cite Crossrail as a supporting factor in the planning application). Similarly, delivery of the permitted office schemes would create up to £357.4m additional rental value, with £215m from Crossrail-dependent development.

8.6 There is significantly more permitted residential and office development within a 1km radius of Elizabeth line stations than identified in 2012; 90,599 homes, 4.44m sqm of office floorspace (with the potential to accommodate 370,000 jobs), and 446,646sqm of retail floorspace has now been permitted between 2008 and 2016.

8.7 Crossrail has also supported greater development delivery around stations compared to wider areas, with residential development start levels of 70% compared to the benchmark borough average of 59%.

8.8 In addition to these value, development pipeline and delivery achievements, there are also common key economic impacts. By improving the capital's connectivity, Crossrail is strengthening and shaping London's position as a world city economy, notably reinforcing existing strengths, specialisations and international access for central London, particularly at key locations such as Liverpool Street and Canary Wharf.

8.9 Public-sector interviewees also identified subtle shifts in economic mix, either underway or planned. In central London, Holborn and Farringdon are welcoming a wider range of businesses, although there are some concerns that smaller businesses may be pushed out. Whilst this can have a negative local impact by eroding the character of certain areas, it may help nurture new activity centres in parts of the city poised for growth, including those on outer parts of the Elizabeth line route.

8.10 In Outer London, Crossrail is supporting growth and diversification in town centres such as Ealing, Woolwich, Hayes and Ilford – these places started from different levels of market strength, but their host boroughs are all encouraging economic diversification.

8.11 In terms of housing, a critical Mayoral priority, Crossrail unlocked permission for 90,000 new homes between 2008 and 2016 (66% of which are Crossrail-dependent development). As importantly, 17% of the homes permitted between 2013 and 2016 are affordable. Crossrail is also providing development confidence in station areas, where several permitted residential schemes are being led by registered providers.

8.12 One of the most marked benefits has been Crossrail's impact on Housing Zones along the route, where Crossrail has been cited as one of, if not the most crucial factor in securing funding.

CROSSRAIL POTENTIAL STILL TO BE REALISED

8.13 Based on this study's interview and data findings, the influence and benefits above will continue towards – and well beyond – the opening of the Elizabeth line.

8.14 Between 2008 and 2013, 41% of planning applications cited Elizabeth line connectivity; that nearly doubled to 80% between 2013 and 2016 – still before any stations were complete or any trains were operational. With the first leg open and new stations starting to emerge from their hoardings, it's likely that Crossrail's importance in supporting development will only increase further.

8.15 Whilst Crossrail has already supported substantial new residential development, and helped to realise significant residential value uplift, there is an uncommitted residential development pipeline of approximately 90,000 new homes which shows the scale of influence still to be achieved.

8.16 There are many positive impacts to come, particularly in outer London locations where benefits have come more slowly than in strong central London markets.

8.17 Of note, public-sector interviewees cited land speculation across the Elizabeth line route, especially in outer London, where some developers have worked to secure planning permission to support a land sale, rather than developing or releasing sites to improve the area. Authorities have begun to address the issue by inviting capable developers to see and understand station-area opportunities. That proactive approach, layered onto the growing interest in places at all stages of development, suggests that high-quality development will come forward across outer as well as central London once the Elizabeth line opens.

8.18 On the occupier side, private-sector interviewees highlighted that town centre regeneration and commercial activity beyond central London are largely driven by occupiers rather than investors. As the new service opens, connectivity and station-area improvements will whet occupier appetites, releasing more development and value potential in station locations once the Elizabeth line is fully opened and the transport and accessibility benefits can be experienced. In contrast, investor decisions incorporating the Crossrail influence have long since been made.

8.19 For local authorities, the key to realising the remaining value, development and wider regeneration potential of Crossrail is a wider set of accompanying investments – particularly to bolster local transport and connections between Elizabeth line and other services. A number of interviewees pointed out that Crossrail alone cannot regenerate areas:

"Crossrail is an enabler but not a sufficient condition of growth. It needs a lot of supporting effort from the public sector. In some places you need to do lots of new stuff. A new transport link isn't enough to make people want to live in a place; there needs to be local transport feeding the station and good public realm that builds a sense of place."





8.20 As another interviewee put it:

> "Crossrail is just one element of what we need. We can't just spend billions on a railway and expect growth to happen without doing anything else. There must be a package of supporting infrastructure."

8.21 To help get there, TfL and local authorities along the Elizabeth line route are improving walking, cycling and bus routes to Elizabeth line stations, especially in outer London, or using Crossrail to drive reconsideration of the local road networks, such as at Tottenham Court Road and Oxford Street.

CROSSRAIL LESSONS FOR FUTURE INFRASTRUCTURE SCHEMES

8.22 Beyond maximising the potential of Crossrail itself, lessons have emerged from this study that can inform future infrastructure projects.

8.23 Crossrail 2, designed to improve north-south cross-London connectivity, receives good levels of support but still faces challenges – not least to generate significant funding from London sources. Learning from its predecessor will help Crossrail 2 deliver value, development and wider regeneration benefits whilst avoiding some of Crossrail's challenges.

8.24 These Crossrail lessons fall into several key themes; stakeholder co-ordination, land ownership control, a forward-thinking and joined-up local authority approach, and public realm investment.

Stakeholder co-ordination

8.25 Stakeholder co-ordination has emerged as a crucial requirement across the public and private sectors and in all locations. There was consensus from public-sector interviewees that "all stakeholders in the railway industry need better co-ordination from the start to ensure infrastructure is designed to cater for growth and regeneration." Private-sector stakeholders also cited the need for joint working to maximise the opportunity around station locations, particularly where land ownership is fragmented.

8.26 The benefit of public sector assets around stations is striking, providing double benefits for the public sector with regard to the income opportunities from increased development activity, as well as the ability to exert control and shape the nature of regeneration and development coming forward.

8.27 A joined-up approach may be crucial, but the local authority perspective suggests that it doesn't require a development corporation model or other new structure. A well-planned and inclusive approach, which is locally specific and brings together all relevant interests at the earliest stage possible, will help to ensure all stakeholders are involved and working towards the same regeneration goals for their area.

8.28 In the case of Crossrail, LB Tower Hamlets provides a unique example, having appointed a dedicated borough-wide Crossrail manager. This role is proving valuable for co-ordinating activity and leading joined-up responses to issues across local authority departments.

8.29 With a broader brief, a role like this could serve as a much-needed facilitator for schemes such as Crossrail 2, with the remit of co-ordinating stakeholder engagement outside the local authority and across key departments. Future approaches could also consider (for example) Crossrail 2 teams within local authorities, if provided with adequate resources and skills.

Land ownership control

8.30 Private- and public-sector interviewees agreed that one of the largest barriers to realising development opportunities around stations, is the fragmented nature of land ownership and control in these areas.

8.31 The Crossrail experience suggests that taking stock of publicly-owned assets before construction can help identify opportunities to bring development sites forward in tandem with new infrastructure. Local authorities or delivery bodies such as Crossrail 2 should also assemble land in key development areas (e.g. around stations) to secure the strongest possible stake in development.

8.32 Control of land ownership and an appetite for land assembly (where required) were also identified as crucial to delivering high quality, meaningful placemaking around station hubs. In addition to 'top-down' policy or activity, that means co-ordination of land owners and key stakeholders at the earliest stage possible.

A forward-thinking and joined-up local authority approach

8.33 Tied to the land considerations above, local authority officers also cited developing a masterplan or policy to guide infrastructure-related development as essential for meaningful growth and new investment in station areas - even if the scheme is well underway.

8.34 To lay the foundations for good growth and regeneration once transport investment is on the horizon, boroughs can adopt new or adapted policies, area-wide planning frameworks or masterplans, depending on context. Still, it was emphasised that "planning doesn't stop once the Elizabeth line opens". Local authorities must plan for long-term positive and negative impacts of new infrastructure, with the understanding that growth will happen, but the "real challenge" is driving good growth.

Public realm investment

8.35 With the Elizabeth line on the horizon, all interviewees wanted public realm improvements around stations, but because this wasn't a major part of the original Crossrail proposals, most stakeholders had to source their own funding. This has included Section 106, Community Infrastructure Levy, partnerships, and internal budgets – and has proved more successful in some places than others. This supports the case for seeking more formal support, or setting aside a better-defined funding source for public realm improvements, which are so important in tying all elements of development and regeneration around transport hubs together.

8.36 To achieve this, it was suggested that local authorities be "bolder" and "savvier" about extracting benefits from infrastructure projects to deliver supporting public realm, connectivity, and housing. Interviewees from both the public and private sector agreed on the need to consider ways to feed value capture from increased density into further regeneration and placemaking, which in turn maximise the opportunities provided by infrastructure investment.

8.37 As noted, Crossrail is well ahead of target for value uplift and delivery, and there is more good growth to come. In embracing this massive endeavour, Londoners have navigated construction disruption, catch-up policy making, land speculation, economic uncertainty and all the value unknowns involved in a new initiative. Yet the opportunities that continue to unfold as these new stations emerge and Elizabeth line trains start to run along the route are exciting and far-reaching. The understanding and lessons gleaned from this study seek to help realise the remaining potential of this infrastructure project, and help chart a clear path for the next.



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