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Executive summary

Executive summary

Aims and methodology

Arup and Volterra were contracted by Transport for London (TfL) and the Department for Transport (DfT) to carry out a Crossrail (Elizabeth line) Baseline Evaluation Study. This report covers the qualitative findings from a series of case study interviews, and is part of a suite of documents that additionally address wider economy, planning and regeneration aspects, the transport baseline, the construction impacts, and the pre-opening property impacts.

The aim of this qualitative research was to understand perceptions of the extent to which development, property and wider economic impacts are a result of the new line, to complement the data-led approach in other workstreams.

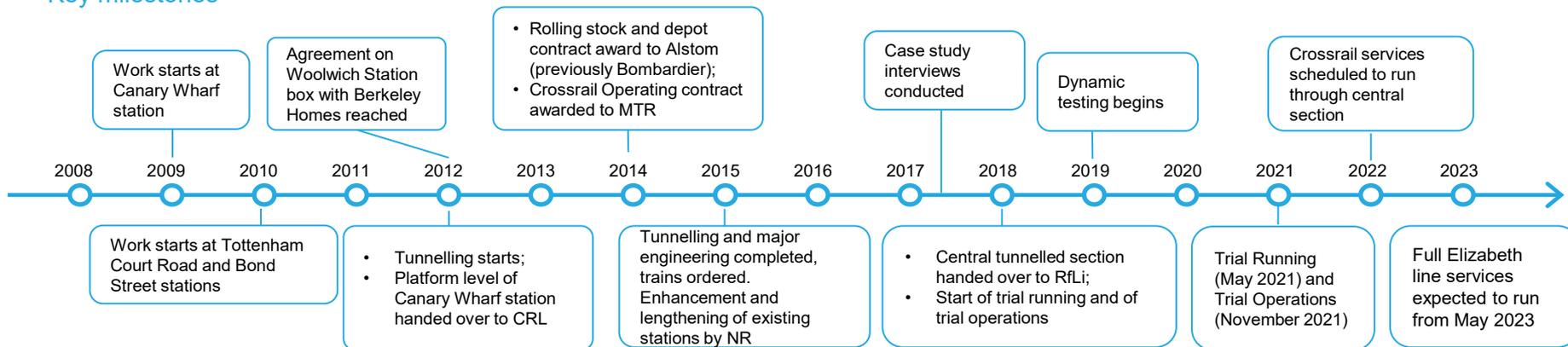
The interviews were conducted with 70 local participants representing a range of interests such as local businesses, developers and local organisations (such as business improvement districts) at eleven locations along the route, between the end of 2017 and the beginning of 2018, more than four years before operations started. Passengers and non-business stakeholders were not interviewed. It is expected that a similar quantitative study will be undertaken after the opening to the Elizabeth line to explore stakeholders', and passengers' perceptions of what impacts it has caused.

The findings are presented in this report according to the sub-themes identified.

No further interviews have been conducted since the delays to the delivery schedule, so there is a possibility that some perceptions may have changed over time.

Throughout this report, 'Elizabeth line' will be used when referring to the future operational railway, and Crossrail will be used when referring to the construction project as a whole. The exception to this is in direct quotes, where participants' comments have been preserved with the terminology they originally used.

Key milestones



Source: NAO (2019) *Completing Crossrail* and NAO (2021) *Crossrail – a progress update*.

Executive summary

Summary findings

Expectations of transport impacts

- Participants felt that the Elizabeth line will significantly improve city-wide connectivity, especially for outer London stations.
- The increased connectivity provided by the Elizabeth line was perceived as a strategic benefit, enhancing London's domestic and international competitiveness.
- The perception is that the Elizabeth line will provide capacity relief and reduce crowding in the short term but there are concerns this will not be enough in long term. Many participants in 2017 and 2018 considered that it would not be sufficient alone, and that the new capacity created would rapidly be filled by new demand resulting from developments around the line.

Perceptions of pre- and post-opening development

- There was a general feeling that that the Elizabeth line has been a contributing factor to the level and rate of house building in the vicinity of many case study stations. However, some participants believed that development was not only due to Crossrail, but that it was inevitable in most case study locations, as London was perceived to be a thriving, growing city. In some cases, it was thought that the confidence of investors and developers to choose certain areas had been boosted by the arrival of the new line.
- There were mixed reviews among respondents regarding the effects of Crossrail on planning activity and new supply. Several participants observed that the actions of developers and investors were aligned with the project timeline, and were expecting that there would be an increase in planning activity and new supply immediately before and after the line opening. Others did not expect property markets to be impacted any further by the Elizabeth line.

- Participants felt that prices in residential and commercial markets had been impacted positively by the prospect of improved connectivity. However, it was acknowledged again that Crossrail was one of many factors acting on prices and that London was perceived to be a thriving, growing city for both commerce and residents, and that strong market prices reflect that.
- Crossrail is perceived to have already played a key role in focusing the attention of investors in particular areas and strengthened confidence in the property market generally.
- Participants believed that Crossrail has built a strong international brand reflected in foreign-led investment.

Expectations of wider economic impacts

- The expectations of the wider economic impacts of the line changed according to the location, with impacts differing between central London stations and those stations located in outer London boroughs. Generally, most participants believed that the reduced journey times will effectively “shrink” London and the city's boundaries, putting more outer London stations on the ‘map’ and making outer London neighbourhoods ‘feel’ more central.
- There was difficulty in determining causality Crossrail's impact on regeneration. There were some views that the line had spurred local authorities to make complementary investments in areas, and that there had already been a wave of regeneration efforts in an area as a result of ‘natural’ economic change and background needs, as local plans had been shaped by Crossrail for many years.
- There were expectations of large impacts on the food and drink sector which includes entities such as

restaurant, cafes, pubs and bars. These industries were perceived as being most likely to benefit from journey time savings, increased dwell time, larger catchments and thus greater passenger volumes.

- The potential for displacement and gentrification of neighbourhoods was discussed by the majority of participants. The extent that associated changes brought by gentrification were welcomed varied between different participants and locations. Opinions were divided between those that suggested it is necessary to support economic growth, and those that feared it would be negative.

Construction impacts

- There has been significant disruption to roads and transport routes during construction, but participants felt that the level of disruption at and around stations was less than they had anticipated. Impacts were also station specific, with participants from Tottenham Court Road and Whitechapel generally holding the most negative views on the disruption. Although, if there had been disruption, some people reported that it had been managed well by Crossrail and its contractors.
- There was a particular perception of a negative impact of construction on smaller businesses near work sites due to road disruptions and reduced footfall.
- There were mixed views regarding Crossrail's engagement and communication with local stakeholders. The engagement with schools and local organisations impressed certain participants, and the clear messaging about transport options during station closures was appreciated. However, at certain stations, some felt that more could have been done to engage with the general public especially at central stations. Overall, the range of views regarding Crossrail's stakeholder engagement indicates that opinions were highly site-specific.

Executive summary

Conclusion

Impact of Covid-19

- [The interviews were conducted before the Covid-19 pandemic.](#) At the time of writing, London's rail-based transport demand has decreased substantially, and is recovering slowly, with demand set to be at 70-80% of 2019 levels by the start of the year 2022/23, and significantly below its pre-pandemic trend.
- [It is challenging to predict the long-term impact of the pandemic.](#) Even if people will commute less often valuing decreasing travel times less, they may appreciate less crowded travel conditions. Unknown if increased working from home for white collar workers, will change where people want to live/shop/work in a way that will impact the scale and type of development built around Crossrail stations. Nevertheless, the overall property market appears to have remained strong throughout the pandemic period. The post-opening study may provide an update on the findings of the current report.

Conclusion

- [The economic and property market impacts of Crossrail were challenging for interviewees to fully distinguish from the range of other factors at play.](#) While attempts can be made to calculate the scale of impacts, it is only by combining quantitative data with qualitative findings, such as those presented in this report, that a more rounded and complete picture will emerge.
- [Crossrail was constructed in the context of significant other drivers of development and wider economic impacts.](#) These include: the growing population of London and the South East, historically low rates of house building, increasing modal shift towards public

transport, the UK leaving the European Union, and the relative strength of London's reputation among international investors.

- [These findings give a sense of the perceived impacts of the Crossrail project at this point in time;](#) the full impacts will not be clear for some years. By reconnecting with similar participants in the future, it may be possible to analyse the differences between expectations of pre-opening impacts, and the subsequent views of what actually changed.

1. Introduction

Summary of hypotheses and tests

Transport impact

Hypotheses	Test
<i>Qualitative analysis reveals an expectation that workers will commute from further away as a result of the connectivity provided by the Elizabeth line.</i>	Subsequent quantitative analysis can look at commuting patterns to establish whether there has been a change in average distance travelled to a particular station. This could be established using station surveys carried out as part of the evaluation, or by looking at census travel to work data.
<i>Interviews suggest the expectation of a shift from other rail modes to the Elizabeth line.</i>	This will be examined in the ex-post analysis through the bespoke transport surveys and, to the extent possible, through Oyster data records.

Development impact

Hypotheses	Test
<i>There may be knock-on effects on house prices in areas further from Elizabeth line stations in the future.</i>	The quantitative analysis of pre-opening property impacts tests this by looking at different distance 'rings' around stations. The bespoke accessibility matrix allows us to analyse the accessibility benefits of the Elizabeth line to stations not directly on the route that nevertheless are better connected after opening. This analysis can be replicated for the post-opening period.
<i>There has been, or will be, a greater number of office buildings being changed to residential use near Elizabeth line stations.</i>	Quantitative analysis can assess whether there has been more change of use near Crossrail stations where there has been a planning application. However, because of the 2011 change to planning law that allowed change of use from office to residential without planning permission under some circumstances, this is an issue that will not be fully picked up in quantitative analysis. It will be an important point to return to in future qualitative analysis.
<i>The Elizabeth line has made (or will make) areas near stations more attractive to developers of commercial property, including for speculative development.</i>	The overall level of new office space developed (or planned), total office space occupied and office vacancy rate can all be tested through the quantitative analysis of commercial property transactions. However, the issue of whether that development was speculative is likely to be best explored through future qualitative research.
<i>Office typologies are changing in certain areas to accommodate new businesses, influenced by the arrival of Crossrail.</i>	Post-opening quantitative analysis might test whether there has been a change in average floorplate size (using commercial rental transaction data) and analysis of businesses located near the station may reveal changes in the number or proportion of SMEs located in an area. Given these are slightly indirect data indicators, it will be important for the qualitative analysis to further assess this.
<i>The retail offer close to Elizabeth line stations is changing as a result of the new passengers and residents.</i>	Whether or not the overall retail space occupied or vacant has changed can be tested through quantitative analysis. Whether the nature of the businesses that are located around Elizabeth line stations changes will be harder to test. For example: a café being taken over by an expensive restaurant will not be easily visible in the data (although rent levels may be a proxy for this). Whether there is gentrification or change in the nature of these businesses will be an issue best explored through qualitative analysis.
<i>The timing of property developments was linked to Crossrail milestones.</i>	If the perception is true, one would expect future analysis to be able to identify these fluctuations by looking at trends in new housing supply around and just after the opening of the Elizabeth line.

Summary of hypotheses and tests

Wider Economic Impact

Hypotheses	Test
<i>There will be increased footfall in areas close to Elizabeth line stations.</i>	There is no existing regularly collected and publicly accessible source of footfall data. There are precedents for this type of data being gathered however, including area-specific technical studies carried out on behalf of developers and Business Improvement Districts. Mobile phone data offers a potential alternative source, but would need to be purchased or commissioned.
<i>There will be increased footfall in areas close to Elizabeth line stations.</i>	Without bespoke data collection the post-opening analysis will not be able to consider footfall impacts and this will need to be pursued through the qualitative analysis, or by using any information that can be made available through third parties on an as-available basis.
<i>There will be increased competition between areas along the Elizabeth line route.</i>	Quantitative analysis can show where areas are becoming relatively more and less successful in terms of employment and business location, or on birth/death rates of business. Qualitative analysis will need to pick up changing perceptions in different areas of which locations are considered competitors.
<i>Public realm has improved near stations as a result of Crossrail and this has led to economic benefits to the area in question.</i>	Quantitative analysis can test whether areas around Elizabeth line stations with significant public realm investment have out-performed those that have not made a similar scale investment. The definition of public realm investment is hard to make quantitatively, though, and most areas have seen some change. For that reason, it will be important to use post-opening qualitative analysis to understand perceptions of the extent to which this has impacted economic outcomes.
<i>The local economies and job markets near Elizabeth line stations will be strengthened.</i>	This is one of the central hypothesised impacts that can be tested by the quantitative analysis using similar approaches to those used to test for pre-opening property impacts. Post opening analysis could look at employment and business numbers, property values and deprivation levels amongst other outcomes. The findings of this analysis should be tested and validated through qualitative research to gain a better understanding of the likely mechanisms of change.

Introduction

This report is one of a series of technical studies that collectively comprise the Crossrail (Elizabeth line¹) Baseline Evaluation study, carried out between 2016 and 2021.

As part of the baseline, Arup and Volterra were contracted by Transport for London (TfL) and the Department for Transport (DfT) to deliver qualitative research, based on a series of semi-structured interviews which took place between 2017 and 2018.

The purpose of this workstream is to explore perspectives on the construction and pre-opening impacts experienced at different stations along the Elizabeth line, and to record perceptions of likely future impacts, so that these can be compared with perceptions of impact once the line is operational. We acknowledge that these findings are likely to have changed today, considering the travel impacts and other behavioural changes that Covid-19 has caused across London, and beyond. However, the study provides a useful insight into people's original perceptions of Crossrail, and their pre-Covid expectations of its impacts.

The scope of the qualitative research interviews was to broaden the understanding of the impacts of the line beyond that which can be derived from quantitative analysis. These interviews have allowed an exploration of perceived variation and complexity in the impacts on different areas and to develop a narrative around the impacts of the Elizabeth line.

They have provided value in the following ways:

- Helping to frame the interpretation of area typologies and what effects businesses, people and councils are observing or anticipating;
- Helping to understand how the Elizabeth line's impact varies between different areas;

- Providing contextual detail to support the understanding of the way in which impacts are perceived, and to compare against the expected impacts outlined in the Crossrail Business Case; and
- Producing supporting evidence to corroborate the quantitative analysis in terms of scale of impact.

The interviews were carried out with participants at selected case study station locations. These locations were selected to be broadly representative based on several area-based characteristics which are laid out in the methodology. Their selection has been supported by statistical clustering analysis. The case study locations (listed west to east) are as follows:

- Slough
- Southall
- Ealing Broadway
- Paddington
- Tottenham Court Road
- Farringdon
- Whitechapel
- Canary Wharf
- Custom House
- Abbey Wood
- Romford

Interview candidates included a mix of local authorities, large and small local employers, developers, property agents, and other local organisations. A framework was developed to analyse the findings from the interviews and identify key themes and trends.

This report begins by explaining the methodology used to

conduct the research in more detail. It then provides a brief overview of each case study station, with a description of the changes happening at that location, as well as some contextual information about the local area.

The findings are then presented, divided into the following themes:

- Transport impact;
- Development impact;
- Wider economic impact;
- Construction impact; and
- Additional cross-cutting issues

Within each of these sections, the findings are further divided by sub-theme. A summary of the findings, and the hypotheses suggested by analysis of the interviews, is provided at the end of the report.

2. Methodology

Methodology

The following steps were taken to carry out this qualitative research:

- Selecting case study stations;
- Selecting participants;
- The interview process; and
- Analysing the findings.

Selecting case study stations

The iterative selection process had two dimensions – expert selection and supportive selection based on clustering analysis. The general aim was to choose a subset of stations which are a good representation of all 41 stations which the Elizabeth line will pass through. Bearing that in mind, we wanted particularly to select case studies in areas considered challenging to understand through quantitative analysis alone, either because the counterfactual is likely to be particularly difficult to define (such as Canary Wharf or Stratford which have undergone substantial change) or because there are multiple overlapping transport infrastructure investments whose effects would be challenging to isolate (such as Farringdon). Furthermore, we wanted to analyse a substantial number of case studies that would allow for the conclusions and “lessons learned” to be applied to a wide range of other locations.

To focus the expert discussion and clustering analysis, we assessed the characteristics of each Elizabeth line station using 13 categories. These categories covered factors such as station location, transport interchanges, surrounding developments, local designations, and local authority coverage, but the development potential for sites around the station was not factored in. A full list of these

categories is provided in Appendix I.

A table presenting station coverage can be found in Appendix I. Some of the variables are self-explanatory – for instance whether or not a station is a terminus or is an interchange with other rail modes, however, there are some which required supportive data analysis – these are described below.

Deprived area: The definition of “deprived area” was based on the distribution of the 2015 Index of Multiple Deprivation in LSOAs within 500m of a station. For the analysis, we assumed that a station is in a deprived area if:

At least 50% of LSOAs within 500m radius of it are in the lowest two deciles of the IMD distribution (a distribution for the whole country, provided by ONS); or

At least one LSOA within 500m of the station is in the 2nd IMD decile and all of the LSOAs within 500m are in 5th or lower decile.

It is worth noting that the classification described above results in the Canary Wharf area being classified as deprived, and Woolwich area as not deprived.

By this method, the stations which are classified as located in deprived areas are as follows: Abbey Wood, Action Main Line, Canary Wharf, Custom House, Forest Gate, Hayes and Harlington, Ilford, Manor Park, Paddington, Romford, Seven Kings, Southall and Whitechapel.

Labour attracting area: The definition of a “labour attracting area” was based on the difference between resident and workplace population around the stations, according to the 2011 Census. Based on the ONS’ borough categories, for inner London we took into account LSOAs within 500m of stations, however for outer London and stations outside

London we analysed figures for LSOAs within 2km of the stations. This resulted in the following station areas being classified as labour attracting: Farringdon, Tottenham Court Road, Bond Street, Canary Wharf, Paddington, Stratford and Liverpool Street.

Methodology

Selecting case study stations (cont.)

Major station upgrade: Stations which are seeing major upgrades (i.e. required construction of new stations and platforms) are all the central and south-east sections. Having analysed the scope of works at other stations, we included Ilford, Romford and West Drayton in this classification; Ilford station is being completely rebuilt, Romford station's entrances and façade are being significantly improved and West Drayton will benefit from a station building extension with an additional entrance. With regard to other stations, the works can be considered as significantly less extensive, with most stations having platform extensions, new lifts, new signage, information screens, CCTV etc.

Areas with new development over and around the station: This classification included twelve stations specified by Crossrail as having integrated property development and key infrastructure designs. We didn't distinguish a separate variable relating to public realm provision, as each Elizabeth line station will benefit from some improvements to public space around the station.

Station coverage matrix

Tables in Appendix I show the stations characteristics in terms of criteria described on page 12, including coverage in terms of local authorities.

Two local authorities have more than one case study station, LB Ealing and LB Tower Hamlets.

Some areas have Crossrail stations, but are not included in the selection. These are: Brentwood (2 stations), Hillingdon (4 stations), Reading (1 station), South Bucks (2 stations), Windsor and Maidenhead (1 station) and Wokingham (1 station).

Clustering analysis

Statistical clustering analysis allows us to group stations into a number of groups in which stations are similar to each other (based on assumed similarity measures). In this study it is used to check that the case studies selected represent as many different groups as possible.

Clustering techniques are designed to create groups of objects which are as similar as possible to each other within each group and as different as possible to objects from other groups. The (dis)similarity is usually defined through Euclidian distance¹. Data points are then clustered based on similarity criteria, which vary slightly across different clustering methods.

The method used is a k-means clustering algorithm. The algorithm does not provide the most optimal number of groups in the dataset, but requires the desired number to be provided. This is an important reason for using it, since we are targeting eleven case studies.

Intuitively, the process takes the population of groups (all the Elizabeth line stations) and their known characteristics (see Appendix I 'Station Coverage Matrix') and asks the question "If these eleven stations are selected as case studies, how representative are they of the population of all Elizabeth line stations?"

Technically, the process runs as follows:

1. The analyst specifies the way in which first potential centroids of the k groups are chosen – for instance pick randomly, pick first k observations in the dataset or specify the exact centroids (in this case – stations).
2. For each remaining object, the algorithm finds the closest centroid and assigns the object to its group.
3. After Step 2, in each group the centroids are reassigned to be as close as possible to all objects in

the group.

4. The iterative process is continued until all the objects remain in the same group as in the previous iteration or till the number of iterations specified at the beginning is achieved.

It is important to note that the final clustering is highly dependent on the centroids chosen in the first step. For this reason we run cluster analysis ten times with randomly specified groups' centroids – to avoid bias resulting from specifying the exact centroids. We used the 'matching' similarity measure.

In ten runs of the clustering, there was one which reduced the number of groups unrepresented by our selection studies to two, and allowed to choose a case studies from each of three specified pairs:

- **Romford over Ilford;** Ilford was clustered with Custom House, but Romford was not clustered with any other case study so Romford was chosen;
- **Custom House over Woolwich;** Woolwich was clustered with Abbey Wood, which had already been selected, while (after choosing Romford) Custom House was in a cluster on its own, so Custom House was chosen; and
- **Slough over Reading;** Reading was clustered with two stations already chosen as case studies, while Slough was in its own cluster, so it was selected.

¹A Euclidean distance is the straight-line distance between two points.

Methodology

Selecting case study stations (cont.)

Please refer to Appendix I to see a table with all the clusters.

The unrepresented groups of stations were:

- Heathrow stations; and
- Iver, Taplow, Twyford and West Drayton.

Regarding the Heathrow stations, for now the scale of impacts at Heathrow is unclear, mainly as its operation as an international airport restricts the volume of development that is feasible in the area. In addition, when the case study selection process took place, there were no plans to serve Terminal 5. Since then, following an announcement in July 2017, the Elizabeth line will now serve Terminal 5.

The airport is already a significant employer and it is doubtful that the Elizabeth line will impact that to any great extent. Heathrow is objectively quite a specific and unique location (similarly to Stratford) and therefore lessons learnt at in this case will not be particularly applicable to other areas. Given the nature of land use (operational airport and associated uses) the Elizabeth line is not expected to change much immediately around the station, although the links to Heathrow have been picked up through interviews at the other case study stations. For these reasons, none of the Heathrow stations were selected as a case study.

Regarding the second group (Iver, Taplow, Twyford and West Drayton), it comprises four suburban stations on the Western section, none of which

- were classified as 'deprived' by our method;
- were located in an Opportunity Area (defined in the London Plan);
- had a special policy designation; or

- had an interchange.

Only West Drayton is undergoing a major station upgrade. It could be argued that it would have been helpful to include a case study with these characteristics, to see the spectrum of impacts between complex and more straightforward stations. The impacts of Crossrail might have been easier for participants to identify at these locations. However, such clear impacts would be similarly easy to identify through quantitative analysis. For this reason we decided not to choose any case study from this group and decided instead to focus our qualitative investigation on more complex cases.

Final list of case studies selected

- Slough
- Southall
- Ealing Broadway
- Paddington
- Tottenham Court Road
- Farringdon
- Whitechapel
- Canary Wharf
- Custom House
- Abbey Wood
- Romford

Methodology

Selecting participants

Local authority candidates were identified according to whichever borough or council the station sat in. In some instances, such as Farringdon and Abbey Wood, more than one local authority is affected by Crossrail due to borough boundaries. When this occurred both councils were invited to take part. Participants were invited from senior officers in departments such as Planning, Regeneration and Economic Growth. The individuals fielded varied from organisation to organisation.

Desk based research was carried out to identify other stakeholders around each station. Significant developments (commercial, residential and mixed-use) within 1km were identified, and the developers or agents approached. Generally speaking, developments were those which had either been completed in the last two years, or were still under construction.

Property agents were identified using internet searches. Businesses close to the stations were also identified using this method. In both instances, a radius of approximately 500m was adopted.

The CoStar database¹ of commercial property transactions and occupiers was also used to identify business participants within 500m of a case study station. In this way, significant employers could be picked out, as CoStar captures the estimated number of employees of each commercial tenant in many cases.

Professional networks were investigated to locate further candidates. A number of Business Improvement Districts and other Local Organisations were also contacted.

For the purpose of anonymity and analysis, the types of participant can be broken down into the following categories:

- Local Authority;
- Developer;
- Business;
- Property Agent; and
- Local Organisation.

The candidates were contacted by email or phone and the purpose of the study was explained to them, as well as the types of questions the interview would cover. In total, more than 200 entities were contacted, resulting in 70 interviews.

There was no specific group identified for commuters as it was hard to predict who may become an actual commuter of the Elizabeth line. At the same time, all of the selected participants are potential commuters and future users of the Elizabeth line.

¹ The CoStar database is an online source of commercial real estate data

Methodology

The interview process

A structured question guide was developed which varied according to industry type. When interviewing local authorities, it was decided that face-to-face interviews were preferable. This was particularly the case when more than one representative was taking part in the interview. Generally speaking, participants from the other groupings preferred phone interviews. Five members of the project team carried out interviews on various occasions, though the majority of interviews were conducted by two team members in particular. This meant that there was consistency in the interview format. The interviews were carried out between July 2017 and March 2018.

Having gained permission from participants and their organisations, interviews were recorded and subsequently transcribed.

Anonymity was key to ensuring that participants felt comfortable in sharing their views freely. As such, the findings are attributed according to the participant type, the station which they cover, as well as a numerical identifier for the analysts' use. In a few cases, the station and the participant number has been redacted in order to protect anonymity.

Analysing the findings

An analytical framework was devised in order to analyse trends in the interview findings. In order to begin developing the framework, a workshop was held within the project team after approximately half of the interviews had been completed. Based on individuals' experience of their own interviews and with reference to transcript notes from those they had not attended, findings were compared and analysed to identify key themes. Themes were merged and separated in an iterative process as analysis progressed. Interview notes were then transferred into an analytical framework based around themes to allow an analysis of patterns across and within themes.

Given the interview questions had been devised around certain topics, it was not surprising that the findings were largely grouped around four overarching themes:

- Transport;
- Development;
- Wider economic; and
- Construction;

Beneath these, more specific sub-themes were then identified. For a full list of the themes, please see Appendix III.

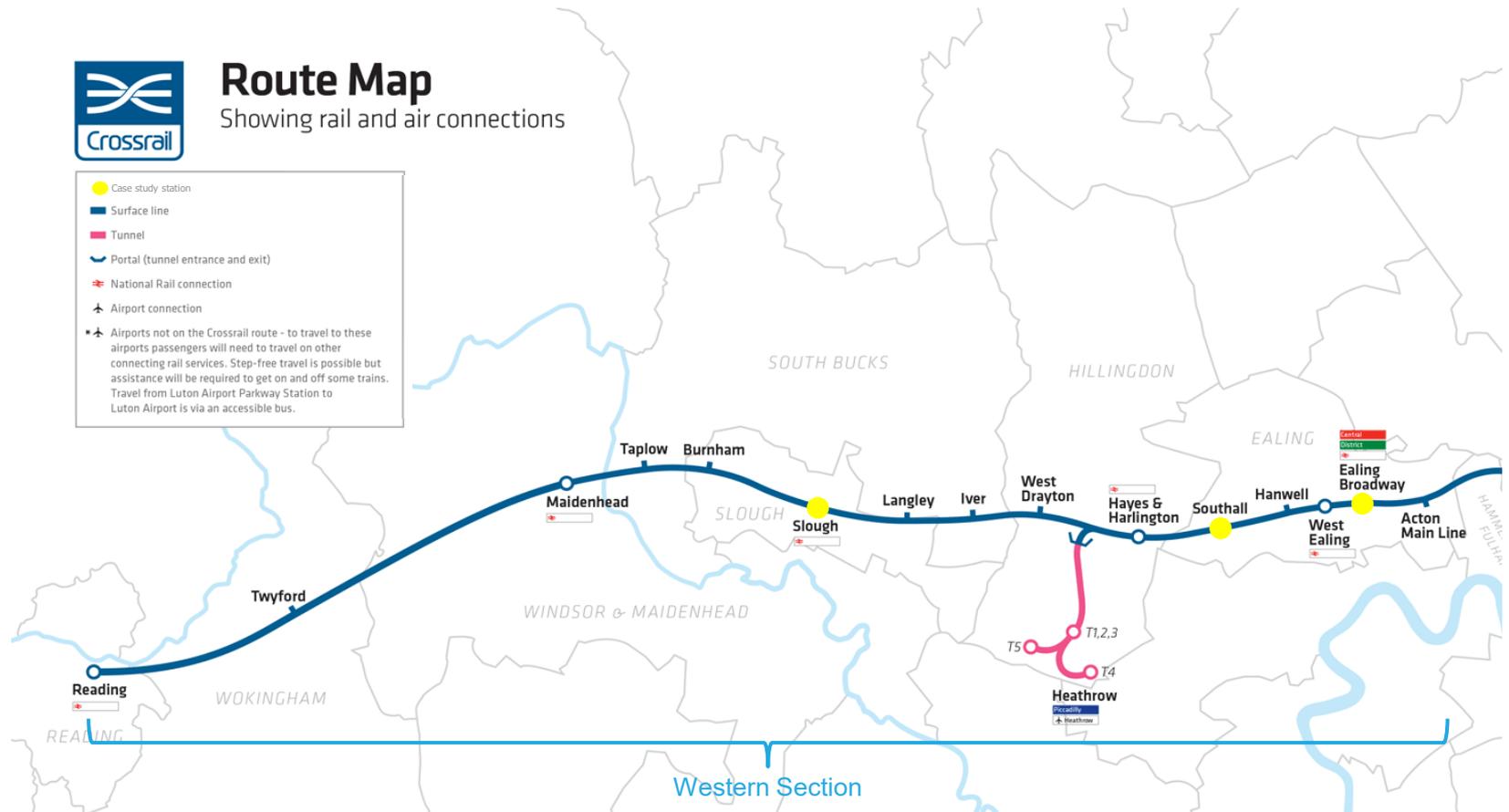
If a particular comment from a participant did not align with any of the principal themes, it was still recorded, so an 'additional cross-cutting issues' category was established.

3. Case study area profiles

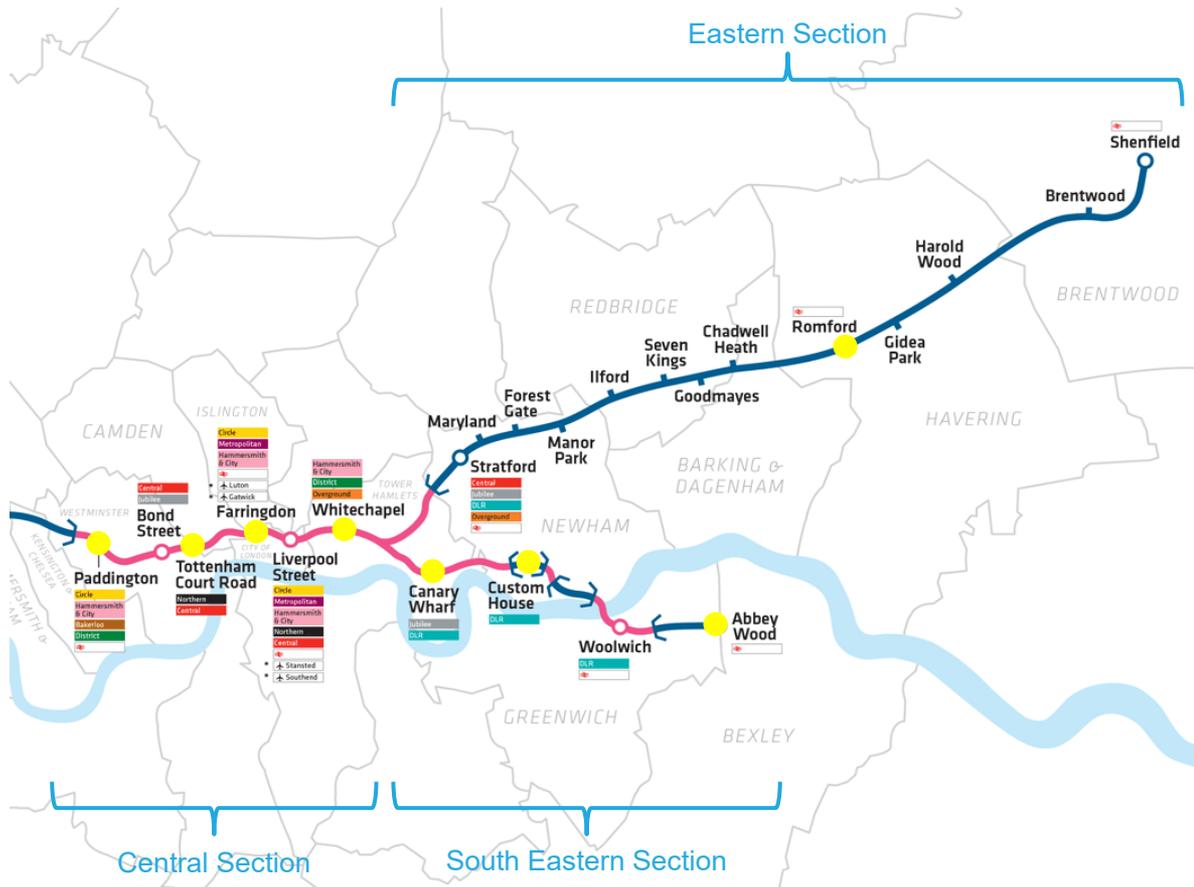
Case study area profiles

This section will introduce the eleven case studies examined in this report. The context of each location will be summarised, including aspects such as local socio-economic factors, site history, and a description of Crossrail development at the site. This will provide a foundation for the forthcoming analysis provided later in the report.

Case study area profiles



Case study area profiles



This map shows the case study location on the Crossrail Route Map. The yellow pointers mark the case study stations.

The route is divided into four sections, which will be referred to later in the 'Findings' section of this report. These route sections have been indicated as such on the map. For the purposes of this report, the case studies will be examined west to east.

In order to provide greater context for the purposes of analysis, the case studies have been further categorised by employing a London Underground classification system used for planning purposes. Where findings can be linked to these categories, this will be indicated in the analysis. The categories and associated case studies are as follows:

Terminus	Paddington
City	Farringdon, Canary Wharf
Shopping	Tottenham Court Road
Inner Suburb	Whitechapel, Custom House
Outer Suburb	Slough, Southall, Ealing Broadway, Abbey Wood, Romford

Source: Crossrail Ltd

Case study area profiles

Slough

Considerable potential for economic change; also designated as an Opportunity Area.

Network Rail is carrying out improvements to Slough Station to prepare for the Elizabeth line including improved ticketing, platform extension, and improved customer service and wayfinding. Overhead line equipment has been installed allowing electric trains to travel, as well as track and signalling improvements to increase capacity and reliability for other types of train (Crossrail, 2018).

Crossrail Ltd are working in partnership with Slough Borough Council to improve the area beyond the station boundary, including new public realm and pedestrian access. The new line ties in to the borough's wider regeneration project known as Heart of Slough which includes many new developments, a new bus station and a major new highway (ibid.).

Slough sits at one end of the M4 corridor, an area known for its technological industry specialisms (Ahmed, 2016). The Slough Trading Estate lies just to the west of the station and is home to around 350 companies, including multi-national companies such as Mars, O₂ Telefonica and Ferrari (Segro, 2018). Recent ONS data found that in 2018, Slough had the highest Gross Value Added per worker in Britain, and more than that of London. In 2019, out of the other 64 'Primary Urban Areas', Slough had the 4th highest number of start-ups per 10,000 population. Compared to other British cities, relatively few jobs are funded by the public sector (ONS, 2020). In October 2021, the claimant count for the town was 6.6% (NOMIS, 2021).

Slough is known for its diversity; according to 2020 ONS data, around 55% of the population was born outside the UK. It also has a very young population, with around 31% between the age of 0 and 19, and around only 10% over the age of 65 (Berkshire Observatory, 2021.) Education standards are particularly high at GCSE level, with around 74% of pupils achieving five 9-4 grades in 2019 (Centre for Cities, 2019).

Slough Borough Council have been working to improve transport and connectivity throughout the area, with a February 2018 report showing that the area ranked 33 out of 34 compared to London boroughs for Public Transport Accessibility Level (PTAL). The Elizabeth line will therefore play a highly important role for improving connectivity and the overall development of the area. Besides connectivity, the council is also implementing other wide-ranging changes with the £600 million Heart of Slough masterplan commencing in 2022, a partnership with Morgan Sindall, which includes the development of 1,300 homes, community and leisure centres across 12 buildings, and school improvements (Department for International Trade, 2017).



(Source: Crossrail Ltd)

Case study area profiles

Southall

Identified in Arup research with Future of London as one of the areas on the Elizabeth line route with most unrecognised potential for change.

As part of the Crossrail works, Southall will benefit from a new ticket hall, a new footbridge across the tracks, which will also provide step-free access to all platforms, platform extensions and improved customer services and way-finding. These are being delivered by Network Rail, who have kept the station open throughout, but the station is now operated by TfL (Crossrail, 2018).

The new line will mean the journey time between Southall and Heathrow Terminals 2 and 3 will halve, to eight minutes, and it will take just over half an hour to reach Canary Wharf (ibid.).

At the moment, the public space clustered around the station is of poor quality. Crossrail is expected to have a strong impact on the entire area. Some £200 million of public realm improvements outside the station will be made, including better infrastructure for cyclists and pedestrians, aiming to create a high quality public space (LB Ealing, undated).

However, the new line is not the only significant driver of change in the area. The Southall Gas Works is a 33 hectare site parallel to the Great Western Main Line with the Grand Union Canal running to the west of the site. An estimated 3,750 homes will form the basis of a 25-year redevelopment, which will also include office and retail opportunities, a hotel, an energy centre, and leisure and healthcare facilities (The Southall Gasworks, 2018).

In the Southall Broadway ward which surrounds the station, there are high levels of diversity. Around 94% of residents in 2011 considered themselves as BAME¹ compared to the London average of 40% (NOMIS, 2018). The rate of new registrations of migrant workers in 2011/12 in the ward was around three times that of London (GLA, 2018).

Based on ONS estimates in 2020, the population of Southall was 385,000 and the population density was 3,600 per square kilometre (ONS, 2020.) If one was to include the new Gasworks development, and assuming an average 2.5 persons per home, density in the ward will increase to 157.6 persons per hectare by 2040.

¹Black, Asian or Minority Ethnic



(Source: Crossrail Ltd)

Case study area profiles

Ealing Broadway

An area with a significant amount of new development planned or already taking place, widely anecdotally attributed to Crossrail.

Ealing Broadway station is benefitting from major changes in preparation for the Elizabeth line. The improvements are being delivered by Network Rail but the station is now operated by TfL. The new façade will double the size of the station entrance and ticket hall. New lifts and staircases will ease passenger flows and platforms will be extended to accommodate the new trains, while customer way-finding will be enhanced throughout the station (Crossrail, 2018).

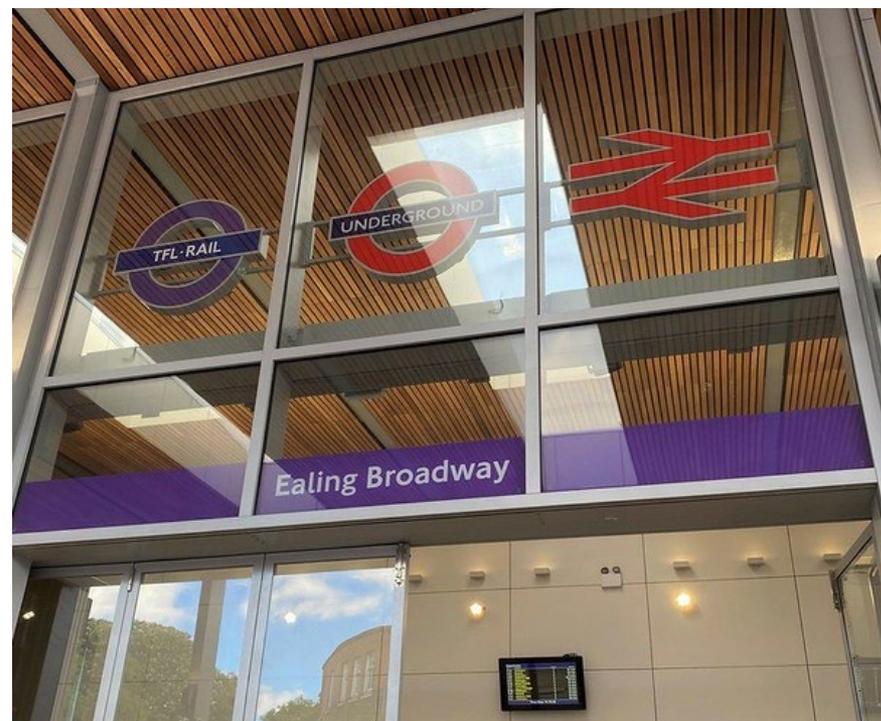
The station sits at the centre of the Ealing Broadway transport interchange which has seen significant improvements since 2014 with spending by TfL of around £906 million. This includes rationalisation of bus operations and improvement to the civic environment at the forecourt to the station (LB Ealing, undated).

Ealing Broadway is also due to benefit from better transport links and reduced travel time, leading to an overall improvement of the area's prospects.

A GVA report¹ published at the beginning of 2018 highlighted increases in the overall permitted floorspace, which includes residential, office and retail floorspace, in Ealing Broadway between 2013 and 2016. However, the floorspace permitted between 2008 and 2016 remains surprisingly limited when one considers Ealing Broadway's accessibility. According to GVA, one reason for this is the maturity and strength of the residential market in the area.

However there are some large-scale commercial developments within walking distance of the station, including Filmworks, Perceval House, Dickens Yard and changes to Ealing Broadway Shopping Centre. These developments are expected to have a strong impact not only on the new station, but on the entire area, making Ealing Broadway a more attractive area.

As a ward, 73% of Ealing Broadway residents were of working age in 2015, 5% more than LB Ealing. The employment rate is also relatively high, at around 78%, and the claimant count is correspondingly low (ONS, 2021). There are a high number of employment opportunities for residents, and in 2013 the employment per head of working age population was 1.1, more than double the borough average (GLA, 2018). It is expected that this development will only be further strengthened by Crossrail. Ealing Broadway is not as ethnically diverse as other parts of the borough, with a BAME population of 30%.



(Source: Crossrail Ltd)

¹Crossrail Ltd commissioned the property consultancy GVA to carry out analysis on the impact of Crossrail on the property market as well as regeneration trends along the route. Two reports have now been published, one in 2012, and the latest in 2018.

Case study area profiles

Paddington

This major local, regional and national railway terminus and underground station in London will see significant changes as a result of Crossrail.

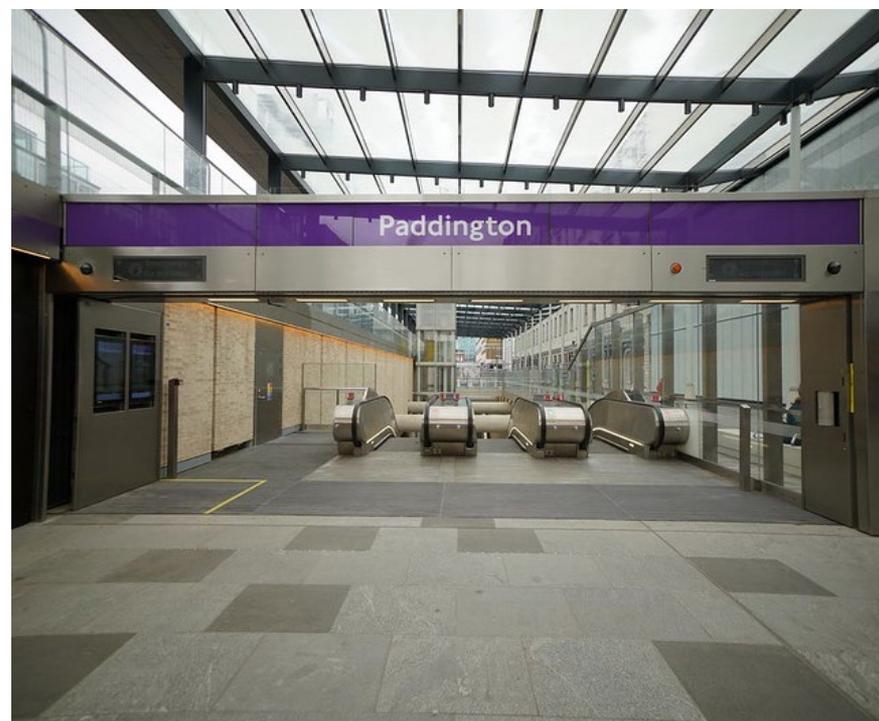
According to Crossrail, Paddington station is undergoing its most significant transformation as part of Crossrail since the building was originally completed in 1853. The new station will be laid out over three floors, with two entrances (Crossrail, 2018). The Elizabeth line will considerably improve the connectivity of Paddington and will function as a major interchange. Paddington station already provides transport connections to the Great Western Railway, Heathrow Express, Heathrow Connect, and the Bakerloo, Circle, District, and Hammersmith & City lines.

In addition to improved connectivity and station improvements, Crossrail Ltd. has been working with Westminster Council on proposals for improvements to the area around the station (ibid.).

The upgrade and transformation of Paddington Eastbourne Terrace has already included the relocation of the taxi facility and aims to transform this area into a high quality arrival space. Security measures and socio-environmental elements such as several benches and new trees are also fully integrated into the design (ibid.).

Another major development around Paddington station includes the Paddington Canal-side project. This urban realm project supports the new entrance and is intended to create a vibrant and high quality space with soft and hard landscaping. The long-term urban realm scheme aims to redevelop the waterside public space within the Paddington Basin, aiming to make the entire area cluster around the station into a high quality urban space (ibid.). These undertakings in combination with better transport links are expected to have a strong impact on Paddington as the area will serve a wider catchment area.

Paddington is in the London Borough of Westminster; a borough that experiences huge contrasts in deprivation. Westminster ranks as the 134th most deprived area in the country (out of 317) and has the second highest unemployment rate in London after Waltham Forest (MHCLG, 2019; London Poverty Profile, 2021). Despite this, education levels are high in the area, with 82% of pupils in Westminster achieving grades 9-4 in GCSE English and Maths compared to 75% across London as a whole (ibid.). In the Hyde Park borough where Paddington is situated, the local economy hosted 5% of the borough's jobs in 2018 and Paddington experienced constant growth rates of numbers of new start-ups between 2008 and 2016 (City of Westminster, 2018). Paddington's economy traditionally supports local economic development through local recruitment, apprenticeships, education and trainings (Paddington Now, 2017). The arrival of the Elizabeth line is expected to strengthen this trend.



(Source: Crossrail Ltd)

Case study area profiles

Tottenham Court Road

One of the largest and busiest stations on the network. Anecdotally understood to be catalysing development on the eastern fringe of the West End.

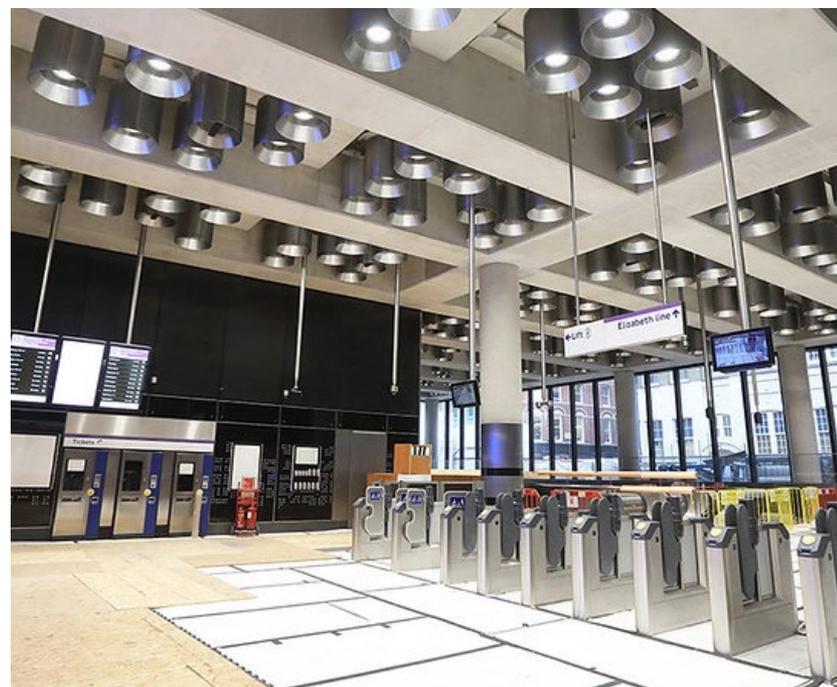
Crossrail is playing a key role in transforming and upgrading the existing Tottenham Court Road station in order to meet growing demand and improve connectivity of the area. In collaboration with Transport for London, Crossrail has been working on a £1 billion upgrade of Tottenham Court Road Station. This upgrade will include the new Elizabeth line eastern ticket hall, which will provide an interchange with the Northern and Central lines, and an integrated ticket hall, which is six times the original size. Other major improvements include the new public plaza and station entrances outside Centre Point next to the station. Connectivity of the area will also be significantly improved by reducing travel time between Tottenham Court Road and other major destinations such as Canary Wharf, which will be seven minutes closer, and Farringdon, ten minutes closer (for further indicative journey saving times, please see page 33).

The entire transformation of Tottenham Court Road, involving Crossrail, the London Underground, Derwent London, TfL, Design for London and Camden and Westminster City Council, includes several developments above and around the new station. As part of this transformation, there will be a new residential development offering 92 units in two buildings (105,000 square feet) next to the new western ticket hall and a further 12,000 square feet of retail space will be available on basement, ground and mezzanine levels facing Oxford Street (ibid.).

In addition, another eight-storey building on a landmark site at One Oxford Street on the corner with Charing Cross Road, has been permitted for a 380,000 square feet mixed-use development. This development provides 300,000 square feet of offices, 40,000 square feet of retail and a new 350-seat theatre. These developments will be complemented by a new pedestrian area between the two buildings (ibid.). The works at the station have meant that a heritage theatre, the Astoria, had to be demolished in 2009.

The overall area around Tottenham Court Road has been experiencing development of newly permitted residential and commercial floor space, both increasing at similar rates to one another. It is expected that the station upgrade will only strengthen the demand from businesses.

Tottenham Court Road is widely known for its bustling retail and hospitality businesses in the area. The station is situated in Fitzrovia, a neighbourhood with a mix of homes, commercial premises, medical and educational institutions. Furthermore, in 2021, the London Plan identified Tottenham Court Road as an Opportunity Area, with capacity for 300 new homes and 6,000 new jobs by 2041. According to the Fitzrovia Neighbourhood Association, the area has a high student population, and around half the residents are white British and 15% of Asian background. Similarly to other parts of inner London, there are wide disparities in deprivation in the area.



(Source: Crossrail Ltd)

Case study area profiles

Farringdon

Expected to surpass Stratford Station as Britain's busiest railway station once both the Elizabeth line and Thameslink are fully operational.

The new Elizabeth line station at Farringdon will be connecting with Thameslink and the London Underground to provide links with outer London, the Home Counties, the City of London, Canary Wharf as well as good links to most of London's airports. The arrival of the Elizabeth line will make it one of the busiest transport hubs in Britain, with 140 trains per hour (City of London, 2015). Travel times between major business hubs will be significantly reduced. For instance, the journey time to Canary Wharf will be reduced from 20 minutes to eight minutes (see page 33). Farringdon station is located primarily in LB Islington, but also partly in the City of London. The City is an important part of the station's catchment area.

A public realm scheme has been designed to accommodate increased footfall, and specifically to allow for different uses throughout the day, such as delivery vehicles, commuters and night-time leisure users (Crossrail, 2018).

Estimates suggest that the scale of the Crossrail construction works at the station meant the displacement of between 800 and 1,100 retail and office jobs (City of London, 2015).

Farringdon is considered a creative hub; it is home to many architectural practices and built environment professionals, and Hatton Garden is dedicated to jewellery industry. Bartholomew's Hospital is located just to the south of the station, and studies have found that there will be a 21% rise in the number of households within 30-60 minutes of the hospital (ibid.). The station is located in the north west corner of the 'Cultural Mile' – a burgeoning area around the Barbican Centre which is set to become a vibrant cultural hub for the city over the next decade.

In 2021, the London Plan identified Farringdon and Smithfield as specialist clusters of cultural and creative activities, which contribute towards the city's international and national roles. A 2016 report published by LB Islington described a number of impacts expected at Farringdon as a result of the new line, including boosting its status as a key office sub-market and increasing attractiveness to developers, increasing project viability.



(Source: Crossrail Ltd)

Case study area profiles

Whitechapel

A unique, culturally diverse and historic area – very close to both the City of London and Canary Wharf.

The new Elizabeth line station in Whitechapel will open 2022 and will transform accessibility to and from the district. Whitechapel will be a short journey away from key employment centres and major growth areas, such as Canary Wharf, Liverpool Street and Stratford. Whitechapel station is already a key interchange for the London Overground and two London Underground lines; Hammersmith & City and District. A range of bus routes offer services to several parts of London and the area is connected to the national road Network by the A11 and A13.

The Elizabeth line station is one of the more ambitious architectural projects along the line. It will preserve the existing heritage station. A new ticket hall and concourse will appear above the London Overground tracks. All services will be accessible from the new concourse via step-free interchanges.

Alongside the refurbished entrance on Whitechapel Road, a new entrance to the concourse will be provided at the northern end of the station. There will be a pedestrian route, connecting people from both sides of the station.

Crossrail Ltd. has also set out plans to develop the public spaces around Whitechapel. Court Street – where the temporary ticket office is located – which will be pedestrianised, with the current carriageway raised and the existing railway bridge canopy removed to create a safer route. The works at Durward Street will reduce the car parking and remove the bus stand to create a more exciting public environment (Crossrail, 2015).

Situated within the London Borough of Tower Hamlets (LBTH), Whitechapel is an area with a rich history that is culturally diverse and close to the City of London and Canary Wharf. At the local level, SMEs play a significant role in supporting the borough's business and economic growth (LB Tower Hamlets, 2020). Yet it suffers from high levels of deprivation (IMD, 2019) and has a high crime rate, higher than the borough and London average (Metropolitan Police, 2021).

Whitechapel has a growing, diverse population: the 2011 Census recorded that 59% of White Chapel residents were from black and minority ethnic groups, with residents of Bangladeshi origin accounting for 38% of the population (LB Tower Hamlets, 2014). There is also a high proportion of young people (LB Tower Hamlets, 2015a). The area is home to a range of cultural attractions which has been "*influenced by the waves of migrants that have lived and continue to live in the area*" (ibid., p.4). Key attractions include Brick Lane, Whitechapel Art Gallery and the Royal London Hospital Museum. Significant residential development is planned close to the station.



(Source: Crossrail Ltd)

Case study area profiles

Canary Wharf

One of London's major employment locations. An area which is expected to be both a supplier and attractor of labour.

The new Canary Wharf station is scheduled to open in 2022 along with other stations on the central part of the Elizabeth line, though the non-operational part of the station is already open. When the Elizabeth line fully opens in 2022 journey times between Canary Wharf and the City of London, the West End and Heathrow will be cut.

The station at Canary Wharf will be one of the largest stations on the route (Crossrail, 2015), and is one of two stations being delivered by the private sector (the other is Woolwich). It sits below a new five-storey development known as Crossrail Place surrounded by the water of the West India Quay dock (Crossrail, 2018). The station will be located between Whitechapel and Custom House and will provide an interchange with the Jubilee line, as well as linking to Poplar station on the Docklands Light Railway (ibid.).

Canary Wharf is a major business district and one of London's major growth areas, having experienced significant transformation over the last 30 years. Located on the Isle of Dogs and also in LBTH, it is a major financial district and home to the European headquarters of some of the world's biggest professional services firms. The borough's economy is concentrated in Canary Wharf and the City Fringe (LB Tower Hamlets, 2015b). Further development of Canary Wharf could be threatened without the additional transport capacity offered by the future Elizabeth line (ibid.).

LBTH is one of the fastest growing local authority areas in the UK with a rapidly growing population and significant development interest (LB Tower Hamlets, 2015b). Employment projections published by the GLA estimate the number of jobs in the borough to increase from 383,000 in 2021 to 437,000 by 2036; the 2020 Local Plan expects the area to need to accommodate an additional 125,000 jobs between 2015 and 2031, using enhanced transport capacity to unlock major development potential (LB Tower Hamlets, 2020).

The 2021 London Plan set out a new housing target for LBTH, to deliver 34,730 additional dwellings by 2028/29; in order to meet such ambitious housing delivery targets, the emerging Local Plan supports increasing site capacity and density in areas of high PTAL, and ensuring the provision of appropriate supporting infrastructure.



(Source: Crossrail Ltd)

Case study area profiles

Custom House

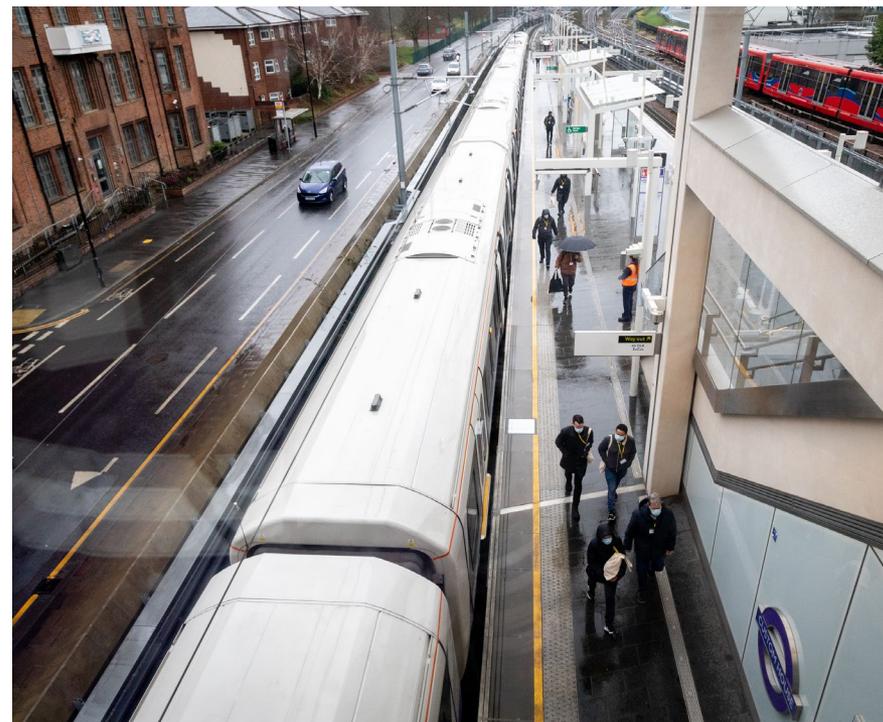
Serving an area long identified with development potential which has been realised more slowly than expected. Additionally serving London City Airport.

The new Custom House Elizabeth line station is being built on the site of the former North London Line station. The last update on cost for the station (2021) is an aggregated £65.7million and includes designing a new ticket hall, an interchange with Docklands Light Railway (DLR) and step-free access between the street and Elizabeth line platforms (SACR, 2019; Crossrail 2012; Crossrail 2018). Connecting the Elizabeth line to Custom House also aims to improve links between central London and the ExCeL exhibition centre, City airport and the large scale mixed-use developments at Asian Business Port and Silvertown Quays. Custom House station will be served by twelve Elizabeth line trains per hour and will reduce travel times to and from the Royal Docks considerably (Crossrail, 2018). For instance, the journey time from Custom House to Paddington will be cut almost in half to just 20 minutes (ibid.).

The upgrade of the station itself includes urban space improvements such as a new landscaped area with planting, cycle parking, wayfinding and improved lighting (Crossrail, 2018). It is also planned to improve the local bus system to further enhance local connectivity. The council is focusing its efforts on the public realm, and community facilities to connect the station to the local environment.

The council is using the arrival of Crossrail to increase its role in the development of Custom House, publishing a Supplementary Planning Document in 2008 for Canning Town and Custom House (Crossrail, 2015).

Custom House station aims to act as an anchor for economic renewal in an area of longstanding deprivation and slow development (Aston Mansfield, 2017). According to London's Poverty Profile, 50% of children in Newham live in poverty, much higher than the London average, and jobs density (number of jobs / population aged 16-64) was 0.53 in 2019- much lower than London's 1.03 and Great Britain's 0.87 (ONS, 2019). Developing a stronger local economy and increasing employment opportunities in Custom House and Newham is critical.



(Source: Crossrail Ltd)

Case study area profiles

Abbey Wood

An area expected to benefit from better transport links to London, improving severance, connectivity and deprivation in the Thamesmead.

The Elizabeth line station is expected to play a key role in transforming Abbey Wood, offering the prospect of significantly improved transport, attracts new residents, businesses and investment.

Currently, the railway line and the Harrow Way flyover dominate the environment around Abbey Wood station. This has severed the area and made it very difficult for pedestrians to get around. The Elizabeth line station not only aims to improve transport links but also to improve the urban realm around the station and permeability (Crossrail, 2015)

Central to the design of Abbey Wood station is a granite-paved pedestrian concourse which will connect the station with the flyover, thereby significantly improving transport links with local bus services. From here the new Abbey Wood station is structured to access either the platform level below, or the improved public spaces at both sides of the station at ground level (Crossrail, 2018).

There has already been some development near the station in the last few years, including planning permission for 220 new homes, a new Sainsbury's supermarket, and a new library and public square clustered around the station (Crossrail, 2018).

Abbey Wood will also be the overnight depot for trains. This is expected to have an impact on the local economy. It is estimated that it will bring an additional 170 jobs to the area (Mansfield, 2017).

Additionally, Peabody has commenced construction of 1,500 new homes as well as new retail units and open spaces, connecting the South Thamesmead estate with Abbey Wood station (Your Abbey Wood, 2018). Beyond this, there are wide aspirations for the area, with Peabody and Berkswell proposing to transform 17 acres of vacant and inaccessible land adjacent to Plumstead station with high-quality homes and workspaces. Peabody has also identified a North Thamesmead site with the potential for 15,000 new homes. By linking Abbey Wood station with Plumstead and Thamesmead estate - an area of longstanding deprivation - further benefits for the redevelopment of this region are expected.

The area of Thamesmead and Abbey Wood is home to over 50,000 people, with a high proportion of families (GLA, 2020). The 2011 census reported that the BAME population is around 53%, and around 30% of residents are from Black ethnic groups (Royal Borough of Greenwich, 2011). The average age in Abbey Wood is 33, while the median age is lower at 32 (ibid), which is low compared to the London average of 35.8. The area has an extensive amount of greenspace and a diverse and growing population (GLA, 2020).



(Source: Crossrail Ltd)

Case study area profiles

Romford

A major suburban commuter origin station to the east, and one of the few eastern branch stations in outer London with substantial deprivation.

Romford station is seeing significant upgrades as a result of Crossrail, including improvements to the station façade, enlargement of the ticket hall and new lifts. A major suburban rail station for commuting to the centre of London, travel times will be reduced significantly. Additionally, the station will have the key interchange with rail and London Overground (Crossrail, 2018).

Improved transport links are expected to have further benefits for the local area. Although considerable improvements along South Street, Romford's main shopping street, have been undertaken in recent years, the immediate area clustered around Romford station suffers from insufficient pedestrian space and poor quality urban realm (Crossrail, 2015). New urban design proposals have been submitted to address these issues.

At present the street outside the new northern station entrance, The Battis, is solely used for parking and delivery traffic. Proposals include turning this space into a high quality and enjoyable pedestrian space. The space to the southern entrance to the new station is currently used for standing buses. This bus stand will be relocated and the area will be given widened footways. This redevelopment will include a comprehensive “palette” of street furniture, paving and lighting to provide a modern high-quality pedestrian experience (Crossrail, 2018).

It is expected that the combination of the council's new vision for the town centre, the improved connectivity, and the access to the London Underground network will bring several wide-ranging opportunities to Romford.

Despite the LB Havering having low deprivation scores and higher employment rates compared to other London boroughs, the median household income (£29,549 in 2019) was around 4% lower than the London average (£30,700 in 2019) (LB Tower Hamlets, 2019). New residential developments as well as improved commercial opportunities aim to attract higher quality jobs, strengthen the local economy and the development of the area.



(Source: Crossrail Ltd)

4. Findings

Findings

This section of the report presents the findings of the interviews, and draws conclusions on the perceived impacts of Crossrail and the Elizabeth line. Recommendations are also made as to which impacts might be worth investigating in the future post-completion, analysis.

Findings

Transport impact

This section examines how the Elizabeth line will impact the wider transport network. This will be explored in five distinct sub-themes which were identified through analysis of the interview results:

- Connectivity within London;
- Connections to Heathrow;
- Capacity and network resilience;
- Change in travel mode choice; and
- Parking and the risks of railheading¹

As illustrated by the chart to the right, the Elizabeth line is expected to reduce journey times at the majority of locations along the line. The perceived impacts of these shorter journeys was explored within the ‘Connectivity within London’ and ‘Connectivity to Heathrow’ sub-themes. The congested state of the current public transport network in the capital was discussed, and participants considered that the Elizabeth line will generally improve the situation, particularly in certain locations such as inner or outer suburb areas that previously had poor transport connections. Furthermore, participants felt that while the Elizabeth line may help to reduce crowding, it may not be sufficient to keep up with increasing passenger numbers in London. Participants also identified that people will be inclined to shift the type of transport they utilise, although the perception tended to be that the shift will be from other public transport, as opposed to from highways (as suggested in the Montague Review). An expectation of shift from car to Elizabeth line was not often raised.

When asked about their perceptions of what would have happened if Crossrail had not gone ahead, most participants spoke of wider economic and property impacts. The majority of participants did not express a clear perception of how the transport outcomes would have been different in the absence of Crossrail. This may have been because it is not something that the participant felt was important enough to mention, or they did not hold an opinion on the matter either way. Additionally, commuters (not specifically targeted), may have stronger views on this matter. Therefore, future analysis conducted will consider commuter’s views on this matter.

Please note that the research was completed before the Covid-19 pandemic, and as such, the findings may not reflect views on Crossrail in the 2022 context. Additionally, the project was delayed by 4 years since the interviews were conducted, therefore, the findings will reflect perceptions held at the time of the research.



¹Railheading is where rail passengers drive beyond their local station to catch a train, in order to reduce journey changes and/or journey time.

Findings

Transport impact

Connectivity within London

A primary objective of the Elizabeth line is to increase connectivity between east and west London, as well as stations outside the capital by allowing through travel. The new line, once it is fully operational will run from Reading in the west, to Shenfield and Abbey Wood in the east, as well as a branch serving Heathrow. When asked about journey times, most participants spoke of them in terms of impact on connectivity and catchment rather than benefits to existing passengers. Participants spoke about journey time savings, the ability for greater connectivity to unlock cultural and leisure opportunities, as well as economic development (which will be discussed in greater detail in the Development theme), the differences in impact at different locations, competition between areas, and the importance of connectivity within areas, not just throughout the city.

Whilst all of the stations that the line passes between are already on either the London Underground or on a mainline railway, the Elizabeth line will create a more direct route for many passengers. The new electric trains and supporting infrastructure will increase speeds between stations. As the figure on the previous page demonstrates, journey times between some locations will be significantly reduced as a result of the new line. This theme was picked up by many participants, and on the whole, the shorter, and more direct journeys were seen overwhelmingly as a positive.

Value of time benefits for employees

Many participants, and particularly those at City and Outer Suburb locations, suggested that those who work near an Elizabeth line station will be able to commute from further away, in less time. Connected to this point was that of

labour market catchment – in other words, being able to draw employees, and job applicants, from a wider area who might otherwise not have been able or willing to commute to a certain area due to journey time.

“We’ll get applicants for roles...which we wouldn’t otherwise have got because of the better transport links”

(Canary Wharf, Business, 006)

“[With Crossrail] you [can] whizz very quickly across London, which is hugely beneficial and opens up other living and working opportunities”

(Paddington, Local Authority, 021)

“Jobs will be available... potentially to people commuting from further afield, who may not have considered a commute into London as doable, either practically, or desirable.”

(Tottenham Court Road, Local Authority, 027)

“If you’re living in the Heathrow area it’s cheaper and then they can work in central London, get back really easily ...it probably will bring more people into the City because then they won’t need to just get a job locally.”

(Canary Wharf, Business, 008)

Another point raised by businesses was that improvements to journey times could help not only in terms of employee commutes, but also travelling between meetings. Some participants had heard that clients and employees are already moving or thinking about moving to an Elizabeth line station.

The ease of the journey was another factor of perceived importance. Participants from across all the stations highlighted that direct routes are often favoured over those

with interchanges, even if there are time savings associated with the latter.

Hypothesis:

Qualitative analysis reveals an expectation that workers will commute from further away as a result of the connectivity provided by the Elizabeth line.

Future quantitative analysis can look at commuting data patterns to establish whether there has been a change in average distance travelled to a particular station. This could be established using the station surveys carried out as part of the evaluation, or by looking at census travel to work data.

Value of time benefits for customers

Other businesses saw the new route as beneficial to their customers from a ‘value of time’ perspective. They explained that as people are ‘time poor’, ensuring they can spend less time on a train will bring other benefits:

“We get a lot of our students already travelling from east and west, but they’re spending a couple of hours doing so. Now if a couple of hours is going to go down to an hour and a half or less, then we should be seeing an uplift in demand”

(Western Section, Local Organisation, 041)

Findings

Transport impact

Connectivity within London (cont.)

Connectivity unlocking cultural and leisure opportunities

In addition to the connectivity improvements for commuters and businesses, the Elizabeth line also offers the potential for more cultural offerings and night-time economy improvements because of the shortened journey times.

"To be able to keep that captive audience in the event for longer will be a big benefit."

(Custom House, Business, 031)

"That's one of the other benefits that Crossrail will bring generally to London, that it will bring vibrancy, night-time economies and other stuff, where people will be happy to come into London, dwell, spend money, socialise and all the rest of it"

(Paddington, Developer, 032)

"They all come to [the area] to work but disappear at the end of the day. It may well now, with Crossrail and things improving there may be an after-work economy start to pick up, and people spend a few hours, and a few shekels here as well."

(Slough, Business, 060)

This sense of optimism was not shared by all of the participants, some of whom felt that improved connectivity may actually have a detrimental effect on their area, or indeed areas outside the city centre. For example, one business at Ealing Broadway was worried that the community and economic vibrancy of its area might be affected if the station became known simply as an interchange.

"One of the things that...was a big concern...is that if [the station] becomes somewhere that people just pass through and not disembark [they won't] become part of the community [or be] spending money ...so

...the vibrancy of Ealing Broadway [may be] negatively impacted"

(Ealing Broadway, Business, 070)

This point was echoed by a participant from a more central station. A Local Organisation at Tottenham Court Road suggested that reduced journey times might have negative impacts on town centres outside the capital, as people might favour spending evenings in the city when the journey home is easier, to the detriment of their local economy.

"The fact [Crossrail is] opening [will] be an added draw to coming into the West End, where in the past they might have gone into the local pub or to the local cinema"

(Tottenham Court Road, Local Organisation, 039)

Differences in impact between locations

A recurring point of discussion during the interviews was how the impact the Elizabeth line may differ between locations. For example, in the Central Section, opinions were generally that it will improve an already good, albeit sometimes overcrowded service. However, at the more peripheral stations, it was seen as more transformational. There was also the perception that the ability to reach central London faster will have a greater impact in those areas further from the city centre

Particularly in the more centrally located stations, many participants made the point that as their station was very well connected already, the arrival of the Elizabeth line will only slightly improve connections. One stated that the Elizabeth line will be the *"icing on the cake, and it will make us one of the best-connected venues in the world"* (Custom House, Business, 031).

A number of participants felt that connectivity impacts of the Elizabeth line may be felt more strongly in places starting from a lower base position.

"Residents in the Abbey Wood and Thamesmead area are extremely isolated from the labour market...So, it will give them much improved travel choices and journey times. There will also be marginal improvement from [the area] to other nearby local centres."

(Abbey Wood, Local Authority, 028)

"I've been told that the uplift in public transport accessibility at [this station] is the highest of any station on the network"

(Abbey Wood, Local Authority, 038)

"Then you're looking elsewhere on the other stations: places like Langley and Burnham. I think it will have a much bigger impact upon those because they will have the same sort of service as [a bigger urban] centre."

(Slough, Local Authority, 042)

Journey times to and from Slough

Slough presents an interesting example when compared to other locations as the Crossrail project does not necessarily improve journey times. For example, some participants observed that certain trips, notably Slough to Paddington and Paddington to Heathrow, will not be improved. At Slough in particular, there were mixed feelings about the relative benefit of the Elizabeth line, with one pointing out it will make journeys to Paddington slower, but others noting that those wanting to travel beyond Paddington will no longer have to interchange.

"What you've got to remember is we've already got a very good train service...To some extent it's going to be worse in that it'll be slower...I think people would still want to pay the premium and catch the express trains to Paddington, rather than sit on the slower trains of Crossrail."

(Slough, Local Organisation, 042)

Findings

Transport impact

Connectivity within London (cont.)

It is important to note here that a journey between Slough and Paddington will take 27 minutes on the new line, where currently the fastest trains, operating only during peak times, take 17 minutes. While the participant is correct, there are other factors, such as journey comfort and crowding, and ease of interchange to consider too. Another participant at the same station explained that:

“You can get to Paddington quickly but then you have to change and that whole process is both time-consuming and inconvenient.”

(Slough, Developer, 045)

“When the new service does arrive, the fact that you don't have to change at Paddington...is going to be very advantageous.”

(Slough, Developer, 061)

Connectivity within an area

It was identified that, although the Elizabeth line is doing much to address issues of inter-connectivity across the capital, intra-connectivity within certain areas remains a issue. Some Local Authorities seem to have made efforts to ensure the new services can be accessed as easily as possible by local people, but still recognised it as a challenge.

“The area to the north of Abbey Wood is bounded by the Thames and there are no vehicular or public transport crossings in that area and so there will still be severance between that area, Abbey Wood and Thamesmead, and north of the river where, again, there are emerging employment opportunities. So, Crossrail is essentially a radial movement in this part of London whereas the orbital movements are still

constrained and they will remain.”

(Abbey Wood, Local Authority, 028)

The Crossrail project appears to have acted as an influence on local planning by encouraging investment in additional local infrastructure provision. For example, in Ealing the local authority has been looking at cycling plans and other measures to improve connectivity with the Elizabeth line station.

“Our local plan is around densification, and more people living in each of those town centres and the areas around, but then there's a lot of people that still need to connect into that. So we've been looking at cycling and walking plans; making sure, in particular, cycling connectivity into the Crossrail stations [as that] is going to be pretty critical.”

(Ealing Broadway, Local Authority, 030)

“There are still significant improvements to be made...to local transport links so we continue to develop a local bus network and pedestrian and cycle links as well. There's still work to be done...to maximise the impact [of Crossrail]”

(Abbey Wood, Local Authority, 038)

At Romford, one participant suggested that while the Elizabeth line could help to alleviate congestion on other transport networks, there are already good east/west train connections in the area, and it is the north/south ones which are limited. They did, however, acknowledge that while the new line will not be able to address these issues, this was never its original purpose.

Findings

Transport impact

Connections with Heathrow

Though not prompted by any specific question in the interview, many participants brought up the Elizabeth line's links to Heathrow. This was particularly noticeable with interviews at Paddington, Farringdon, Canary Wharf and Custom House (see table below).

Global city and foreign interest

Most of the responses centred around the international business opportunities as a result of the improved connections to Heathrow that the Elizabeth line will provide. Indeed, some felt that the connection was a key factor in driving up foreign-led investment in the property market in their areas, with one business at Canary Wharf describing how the link to Heathrow was consistently used in international marketing material.

"[It's] just a game changer for Canary Wharf. It really is"

(Canary Wharf, Property Agent, 004)

"I think what it really does is it connects London to every global city in a way that we haven't been...before...it becomes not just about the area you're in or the city you're in, but actually it becomes about the world."

(Farringdon, Local Organisation, 036)

"Being able to talk to a Chinese or a Malaysian investor in a buy-to-let property....now being able to...say 'You can get to Heathrow in 39 minutes,' they get that. They get that suddenly this has shrunk London east to west"

(Canary Wharf, Developer, 002)

Connections with other airports

The improved link to Heathrow was discussed by some in

relation to other airports in the region. Some suggested that the improved connections might create competition with London City Airport, while on the other hand, a Local Authority suggested that it might make inter-airport connections simpler, to the benefit of both airports, by allowing people flying into London City Airport to use the Elizabeth line to reach their next flight out of Heathrow, and vice versa.

"I know getting access to Heathrow is going to be good. That's going to be a real bonus because City doesn't fly to all places"

(Canary Wharf, Business, 006)

At Farringdon, participants felt that the station already had very good links to London airports including Gatwick, City and Luton, so improved access to Heathrow may be less important for Farringdon than other stations.

Connectivity with Heathrow

There were a range of perspectives regarding how improved connectivity with Heathrow will impact areas around Elizabeth line stations. For example, participants around Paddington, were divided as to the benefit of the improved link with Heathrow. One suggested that that the Elizabeth line connection will be important despite the existing service, and another suggested that Paddington will be key in supporting the growth of Heathrow Airport.

However, one hospitality business in Paddington is concerned that many passengers will now bypass Paddington where before they might have come to the area enroute to or from the Heathrow Express, spending money in the meantime. The participant did acknowledge that increased passenger numbers as a result of the Elizabeth line might help to offset this.

"We are probably the only area in London that it will have a slight negative impact on or no impact at all [because] our status as the transport link into Heathrow being totally diluted and taken away, which is one of our biggest selling points."

(Paddington, Business, 054)

The same participants suggested that if the Crossrail project had not happened, there would have been a requirement for a new public transport option to Heathrow. They thought it was therefore important that the Elizabeth line is coming to Paddington as another solution may not have, which would have worsened Paddington's relative connectivity to Heathrow.

Current journey times, in minutes, from selected stations to Heathrow Terminals 1 to 3, and journey times after the Elizabeth line opens (Source: Crossrail Ltd; City Mapper. Based on arrival on a Monday at 11.50am)

Station	Current	With the Elizabeth line	Difference
Slough	27	15	-12
Paddington	16	22	+6
Farringdon	38	31	-7
Canary Wharf	44	40	-4
Custom House	55	44	-11

Findings

Transport impact

Connectivity with Heathrow (cont.)

There was a general consensus from participants at Paddington that there will be a significant shift in those travelling on the Heathrow Express, with most feeling that as the Elizabeth line will be cheaper to use, people will favour it.

At Slough, one participant suggested that the connection to Heathrow in particular, will have greater impacts on the area than links to the wider London area. This may be because, (as previously described), the transport links from Slough to London are already relatively fast.

“We think a much bigger factor will be the link to Heathrow, which really will make a much bigger difference than Crossrail [connections to other parts of London]. Crossrail’s a marginal improvement on a very good service...the Heathrow one being a significant change, the game changer.”

(Slough, Local Authority, 042)

Findings

Transport impact

Capacity and network resilience

An important outcome of the Elizabeth line will be to ensure that London's transport network is resilient to the population growth the capital is expected to experience over the coming years. Projections published by the GLA suggest that trips made by public transport will increase between 50-60% by 2050, and up to 80% increase in rail trips, due to both population increases and a greater demand for public transport (see graph opposite).

In July 2018, Crossrail Ltd stated that the new line will increase the capacity of central London's rail transport system by 10%, with a reduction in congestion on other lines, even those that are not on the Elizabeth line route, such as Oxford Circus.

A recurrent theme was capacity benefits. Analysis suggests that participants tended towards the belief that while the Elizabeth line will help alleviate pressure on the transport system in the short to medium term, population growth in the region is such that in the long term, other options will need to be investigated.

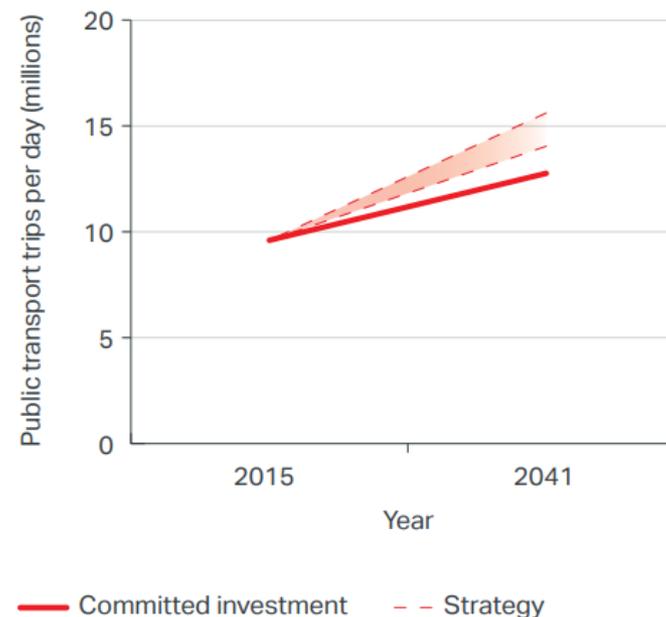
Notwithstanding this, capacity and network resilience was not something discussed in great detail by many participants in the Western Section. This could potentially be because there has not been as rapid housing growth over the baseline period as in East London, or because there are more public transport alternatives in the Western section of the Crossrail route.

Much needed solution for an over-crowded network

There were a spectrum of views regarding the extent that the Elizabeth line will provide relief for an overcrowded and over-worked network. Some participants felt that the new line will not be a long-term solution, though it was suggested that continued maintenance and upgrading of the current network could have negated the need for the Elizabeth line.

The broadly held view on the state of the existing network and need for the Elizabeth line, was summarised by one participant, who said that an alternative solution would still have been needed, and that without it *"the transport system would be falling apart"* (Custom House, Developer, 043).

Similarly, it was pointed out in some other interviews that the resilience of the rest of the network, described by one participant as *"creaking and ageing"* (Tottenham Court Road, Local Organisation, 039), needed to be addressed, something that the Elizabeth line alone will not solve.



Forecast Growth in Public Transport Trips to 2041 (Source: GLA, 2018)

Observed trips across all modes of public transport in London are already outstripping forecasts in the 2011 Mayor's Transport Strategy (Source: GLA, London Infrastructure Plan 2050: Transport Supporting Paper, undated)

Findings

Transport impact

Capacity and network resilience (cont.)

Indeed some felt that the decision to go ahead with the Crossrail project had arrived at just the right time, before the capacity constraints of the current network prompted businesses to locate elsewhere in the city.

“So, fast forward five or ten years...in the absence of the Elizabeth line, [businesses] may have chosen to go to...Victoria or somewhere.”

(Tottenham Court Road, Developer, 065)

Various participants expressed the view that the Elizabeth line will help to reduce pressure on other lines, and the Central Line in particular, as well as reducing overcrowding at other nearby stations.

“Anything to take the strain off the Central Line would be very welcome obviously. I think the Central Line is really hammered at the moment and I think maybe that will be good”

(Paddington, Business, 059)

“I think taking the pressure off of Holborn Underground Station will be welcomed”

(Tottenham Court Road, Developer, 065)

“If everything is signposted well, and the wayfinding is done really well, not only above ground, but underground, [it] could definitely relieve some of the Covent Garden destination stations”

(Tottenham Court Road, Developer, 057)

On the contrary, some stated that they believed the current network could have been sufficiently upgraded over time in order to cope with demand without the Elizabeth line:

“[Without Crossrail] I think...you'd get around okay...I

think ultimately there'd be a continual upgrading of the transport networks.”

(Canary Wharf, Business, 008)

Increased capacity will soon be absorbed by higher demand

As well as absorbing passengers from other overcrowded lines, there was a common perception that the increasing population of London and the South East will outstrip the capacity of the Elizabeth line. Many, though not all, felt that in the short to medium-term, the new line will help relieve pressure on the transport network, but over time, as passenger numbers grow, there will again be overcrowding.

A few participants were not convinced that the Elizabeth line will be able to keep up with future demand, and saw it more as a stopgap:

“It will buy us a bit of time, no doubt about that...but ...it's like building a road, it doesn't take long for that capacity to be full up”

(Custom House, Local Authority, 024)

Another concern raised by several participants was that the development spurred by the Elizabeth line may cause a feedback loop, where any additional capacity that the line provides will inevitably be completely taken up by residents of the “several thousand new dwellings coming forward” (Romford, Local Authority, 020).

“There's so many homes being built and so many people living and working around here, it's not going to stop, that sort of growth. You need that new transport to share the load.”

(Whitechapel, Property Agent, 011)

“The plans for Silvertown Quays is going to be 12,000 people working there on a daily basis, 3,000 people living there...and then, hopefully, a lot of people going to Asian Business Port working, so again there's going to be 1,000 homes...I think they're looking at 3,000, 4,000 people working there...You could argue that, maybe, Crossrail may not be sufficient”

(Custom House, Business, 051)

Various participants envisaged that the Elizabeth line will see the same capacity issues as many other lines in the city, and one discussed the notion that another new line is needed.

“When the Jubilee line first opened, the trains came in empty in the evening, pretty much completely filled up and left. Now they come in half full. We only have half the capacity available to us on the Jubilee line per train, that we had previously. It's clear that we're going to need additional capacity to get up to the theoretical future size of Canary Wharf, of 200,000 plus people working here...Crossrail doesn't do that...so we're going to need another railway line, which we're talking to people about at the moment.”

(Canary Wharf, Developer, 002)

“Crossrail [is] perceived as a huge benefit...[but] if it becomes just another line that is full up, perhaps there's some pullback...to some of those benefits...it's another alternative and obviously it's got a faster trajectory...I think the jury's out a little bit about how long it will be a net benefit for.”

(Paddington, Local Authority, 021)

Findings

Transport impact

Capacity and network resilience (cont.)

A participant at a Central Section station explained that demand on trains into the capital from the west was already inexorable and believed that by the time Elizabeth line trains reached them from the west, the trains might be full already.

On the other hand, some participants felt more optimistic about the Elizabeth line's ability to address current network capacity issues. For example, one participant from Custom House cited the Olympics as being important in improving transport infrastructure investment in the past decade. This participant believed that once the new line opens, there will no longer be any residual transport constraints. This view might be specific to inner east London, the participants location, which has received a level of investment in recent decades that is not representative of transport infrastructure investment across the city.

Impact on road network

Concern was raised that the Elizabeth line may also become a source of congestion on surrounding road networks. As the employment and property markets in the area strengthen, and more residents and businesses arrive, more services will be required, predominantly served by surface traffic. Some participants expressed concern that this possibility had not been given adequate attention.

“How do you manage the increase in road traffic to supply the offices and the shops and the bars and everything else there? That, for me, is probably one of the biggest issues“

(Canary Wharf, Property Agent, 004)

It is true that in the forecasts developed for the business

case it is expected that there will be a passenger modal shift to public transport, resulting in less road congestion overall. However pre-opening appraisal has not identified an expected increase in service delivery transport to an extent that would outweigh the benefits of the passenger modal shift.

Pressure on streets surrounding stations

In certain locations, the Elizabeth line may put additional pressures on the above-ground public realm by hugely increasing levels of foot traffic. This was expressed particularly at Tottenham Court Road, classified as a 'shopping' station) and Farringdon, who stated that they understood that the Elizabeth line will naturally increase passenger numbers, and indeed retail customers, but were not convinced that sufficient attention had been given to what will happen to these numbers once they disperse from the station, or that the area's retail offer had been fully considered. Both locations represent particularly historic parts of the city, and as such the streetscapes are slightly more compact than recently planned areas, which might go some way to explain their concerns.

“It could be seen as having a good and positive economic impact for the area and bringing people to the area who may well be spending money...On the other hand... if it's not managed well, there's a bit of a reputational risk for the West End....The public realm is going to be the same size as it always was! It's got to deal with more activity and intensification... whether there are going to be congestion and public order issues, I don't know...It's very regrettable that there are no toilets on trains...as Tottenham Court Road is on the north-east edge of Soho, which is famed for its hospitality, food and drink, bars... there is immediately

a late-night urination, street-fouling problem“

(Tottenham Court Road, Local Organisation, 039)

“[The] station is already incredibly busy, it gets jammed with people, and in a year's time...it becomes a major destination and an arrival point...Nobody's thought about it...the streets will get jammed with people, there'll be people jams“

(Farringdon, Business, 069)

“[Crossrail will] do nothing but provide a significant boost; increased footfall...combined with other initiatives such as public realm improvements, place improvements in the vicinity [will] encourage probably a better dwell time, maybe higher spend per head...but I think it does come with its challenges, because we absolutely need to be able to accommodate that increased footfall, because if it's all too crowded and horrible, people [will] quite rapidly alter their patterns and not dwell there too long.“

(Tottenham Court Road, Local Authority, 022)

Findings

Transport impact

Capacity and network resilience (cont.)

Capacity of trains

The designs of the new Elizabeth line trains will help those travelling to and from Heathrow, making it easier for luggage to be manoeuvred and stored, and allowing for more people to use the train. This point was raised by a participant from Ealing Broadway, who stated that:

"We have lots of passengers with lots of baggage and that kind of thing which can create a bit of a bottleneck in terms of getting onto the train or getting to the seats or getting out again at various stops, so I think having a different type of carriage that adds capacity, but also different design will really help to move more people around."

(Ealing Broadway, Local Organisation, 050)

number of people coming off the Jubilee line...We are entirely reliant on the two pieces of transport we have.(Canary Wharf, Developer, 002)

Resilience during network disturbance

The additional capacity provided by the Elizabeth line may improve resilience of the wider network in the event of severe disruption. This was raised by several participants, including one from Canary Wharf who explained that there they rely on relatively few methods of transport, specifically the Jubilee Line and DLR, so diversifying the offer can only improve the resilience of the network at this location.

"I remember speaking to a banker years ago who said that there's no way he would ever locate his office in [this area] because all that somebody would have to do is blow up the Jubilee line and it's completely isolated... You stick the Elizabeth line in there, and all of a sudden you've just got another method of getting there that doesn't rely on a single point of access"

(Canary Wharf, Property Agent, 004)

"Resilience, that is particularly a problem now, where if something happens to the Jubilee Line, they actually close the DLR because the DLR can't cope with the

Findings

Transport impact

Change in travel mode choice

It is expected that the Elizabeth line will result in some substantial modal shifts. In 2011, demand forecasts underpinning the Crossrail Business Case predicted a modal shift towards the Elizabeth line will alleviate congestion on many other lines, including the Bakerloo, Central, District, Jubilee and Southeastern trains.

An internal survey was conducted by a participant organisation in Farringdon (Business, 046) which aimed to quantify how the Elizabeth line will change the commuting patterns within their workforce of 1,500 staff. The survey found that between 15 and 20% of their staff may use the new line at some stage in their journey to work. This expectation of a change in mode and therefore route choice was brought up by many participants, and covered walking, buses, cars, cycling and other rail. Baseline transport surveys undertaken for this Baseline Evaluation are designed to understand where and to what extent this has occurred after the Elizabeth line opens.

The Elizabeth line's impact on reducing road vehicles

A few participants mentioned the potential the Elizabeth line has to reduce car use in Central and Outer London;

"It should reduce vehicular movements a bit...it makes it that much easier to get to from so many more different places from so far away, it should massively stimulate pedestrian activity."

(Whitechapel, Property Agent, 010)

"People who choose to drive into work...they might say, 'You know what, I don't need to drive anymore, driving's a pain in the arse, I sit in traffic all the time. Let's use Crossrail.'"

(Whitechapel, Property Agent, 011)

One participant was of the view that the modal shift

towards rail had already started in the capital, making finding additional evidence for the Elizabeth line more complicated:

"It's going to open up the rail network. Travelling around London by cab, by car, making a delivery, has now become horrendous. The introduction of the super-cycle highways, and taking away road space for motorists...that's had an impact on travelling around London. You just see more and more people deserting cabs and their own cars to use the rail network."

(Farringdon, Business, 048)

Elizabeth line's relationship with other public transport

The Elizabeth line will likely have a substantial impact on other modes of public transport. For example, at Tottenham Court Road, a Local Authority thought that over time the Elizabeth line could reduce the number of buses along the primary routes which overlap with the new line, though they did acknowledge that buses will still be required in order for people to reach the stations.

"[This] has beneficial impacts for central London, in terms of less 'red wall of buses' and, hopefully, has more beneficial impacts for Outer London, in that some of that resource can be redistributed into the outer districts."

(Tottenham Court Road, Local Authority, 027)

"It may be some who would previously have used the Central Line and possibly buses [will now use Crossrail instead]."

(Tottenham Court Road, Local Organisation, 039)

The enhanced journey time and convenience provided by the Elizabeth line for trips to Heathrow may result in passengers changing their preferred mode of transport to reach the airport. A participant in Canary Wharf stated that:

"Looking at the timings, getting to Heathrow sounds like a bit of a dream... you're zipping across to Heathrow in short order as opposed to going on the Piccadilly Line or driving even."

(Canary Wharf, Business, 008)

On the contrary, other participants were less optimistic about the Elizabeth line's relationship with other types of transport. For example, another participant suggested that the buses might become busier with people travelling to take the Elizabeth line:

"I don't know whether the capacity on those bses will be adjusted accordingly. They are generally pretty packed actually at the best of times."

(Ealing Broadway, Local Organisation, 041)

Taxis were also touched upon by a participant in the Central Section:

"Dare I say it, it might take some pressure off local buses...and probably taxis as well...Crossrail will give you the fastest route across London, so I don't see why people wouldn't use that option."

(Paddington, Developer, 053)

Hypothesis:

Interviews suggest the expectation of a shift from other rail modes to the Elizabeth line.

This could be examined as part of the post-opening evaluation analysis through the bespoke transport surveys and, to the extent possible, through Oyster data records.

Findings

Transport impact

Parking and the risks of railheading

Parking was a topic mentioned by only a few participants, all of whom were from outer London.

The issue of 'railheading' – where peripheral stations attract commuters from further afield that drive to the station and cause a problem with parking – was raised by several participants in 'outer suburb' areas. These participants stated that they felt that insufficient attention has been paid to either the need for parking provision or for the risk of places becoming park and ride destinations:

"One of the big dangers [of] being the end of the line is of railheading...It's absolutely essential that Crossrail isn't seen in isolation [and] it isn't just a single transport intervention [where] everything else...happens around it. [The Elizabeth line should] form...a transport network [that] makes...functional connections into the station from the outlying area...The railheading impact could be all the way down the North Kent line if we're not careful...It's really important it's seen as part of a bigger network."

(Abbey Wood, Local Authority, 038)

"I think the most frustrating thing about Crossrail is that it has failed to address car parking [and] how all these extra thousands of people are actually going to get onto the Crossrail system. I understand why they might ignore that in London [but] in an area like [ours] it's very important. We've been incredibly frustrated in trying to sort out what the approach to parking is: there doesn't seem to be any new parking...We're already highly congested [and] we have air quality problems...We think, in somewhere like [the town] centre, that actually [the Elizabeth line] will have a negative impact"

(Local Authority)

"Yes, I would say there's a lack in [the area] of a comprehensive parking strategy in the light of the changes that will be coming as a result of Crossrail."

(Slough, Developer, 045)

Another participant from Ealing Broadway station felt that, because of the slightly older demographic in the area, which they believed has a higher propensity to use a car to get to the station, there was concern amongst locals about providing enough parking at the station. The participant therefore saw the need for authorities to encourage people to change their travel behaviour, such as supporting cycling routes to the station.

Findings

Development impact

The case for the Elizabeth line was made not only to improve the transport network of London and the South East, but in so doing, enable greater economic growth and unlock development along the route. Through improving public transport capacity and capability in already strongly growing locations, and opening up new areas of the city for both homes and offices, it was seen that private sector-led development and investment would be likely to follow (Crossrail Ltd, 2011). There has been a significant amount of press activity and discussion around the extent of development activity around station locations during the construction period, even before the Elizabeth line starts to operate.

Some 17 out of the 70 interviews that were conducted for this study were with property developers, and 11 were with property agents. These 28 participants were often able to provide first hand evidence of development at their various stations. All 70 of the interviews carried out covered both residential and commercial development so that a range of opinions could be gathered.

Having analysed the interviews, six sub-themes related to development emerge:

- Crossrail's impact on pricing and supply of housing;
- Unlocking development potential through transport;
- Driver of business location decisions and commercial development;
- How Crossrail's schedule influenced development;
- The Elizabeth line's relationship with existing regeneration initiatives; and
- The Crossrail "brand" and overseas interest.

The findings presented here suggest that development around some Crossrail stations is often happening rapidly, though this is not the universal experience and opinions vary on the extent to which the new line was a causal factor. This is arguably to be expected as causality is difficult to confidently identify, and there will always be a number of driving factors.

Similar to previous sections, Covid-19 has inevitably had an effect on development, directly through delays and obstacles to development, but also indirectly through changes in Crossrail's 'brand' and overseas interest, as well as the drivers of business' decisions and the housing market. The departure from the EU has also had an impact on these areas and is likely to continue to have so in the medium to long-term.



Crossrail has integrated the designs for twelve development schemes near to, or on top of stations (Source: Crossrail Ltd)

Findings

Development impact

Crossrail's impact on pricing and supply of housing

An important predicted indirect impact of the Elizabeth line is to unlock areas that have the potential to deliver the new homes needed to support the growth of London. Various studies have tried to quantify the number of houses which have been built along the route, though it is harder to say for certain what proportion of these houses would have been built without the expectation of the future Elizabeth line.

In order to delve more deeply into these issues, interview participants were asked specifically about residential developments near the stations. The notion that the Elizabeth line has been a contributing factor to the level and rate of house building in the vicinity of many case study stations was supported by most of the participants.

The Elizabeth line as a contributing factor to rising house prices

For the most part, participants were in agreement that house prices have been rising near the route stations. Some participants felt confident that the forthcoming Elizabeth line was the primary driver of this boost to house prices. This view was not shared by all, with some suggesting that given the strength of London's house market as a whole, the Crossrail project is only a contributing factor.

"I mean, you've got other things happening, but I think it's been the main driver because the others are still some way down the line."

(Slough, Business, 060)

"You announce a statement, the land values go up, it's hand in hand without a shadow of a doubt; and with increasing land values comes increasing rental levels...You deliver a Crossrail station anywhere and land values and rental levels will increase."

(Paddington, Local Authority, 052)

Generally speaking, participants had witnessed the rate of house-price increasing near Elizabeth line stations outstripping that of London prices as a whole. Many expect that this trend will continue as the line opens. The table opposite summarises some estimates of change reported by participants. Developers and Property Agents generally felt they had benefitted from the 'Crossrail effect' in the housing market. This finding was not limited to any one area, or station type.

Station and participant type	Reports of price rises
Ealing Broadway, Property Agent	30% increase in house prices
Whitechapel, Business	33% of the price rises attributed to normal growth and the remainder to the Elizabeth line
Whitechapel, Property Agent	Up to 50% rise in house prices in the last 3 years
Custom House, Local Authority	10-20% increase in house prices
Custom House, Developer	£550/600 per sq ft to £700 per sq ft
Custom House, Property Agent	10% increase in house prices
Slough, Business	Starter home 2 years ago was £250,000, now £390,000
Slough, Developer	19% increase in residential sales
Abbey Wood, Property Agent	House prices have increased by between £100,000-150,000 in last 4 years
Abbey Wood, Property Agent	30% increase in house prices

Examples provided by participants that illustrate Crossrail's impact on real estate prices

Findings

Development impact

Crossrail's impact on pricing and supply of housing (cont.)

"All the prices of everything has gone up. Now they were going up anyway...but Crossrail sort of super charges that effect."

(Canary Wharf, Developer, 002)

"We have benefitted from the ability to market residential properties saying, 'Because Crossrail's coming...' It has meant that [asking prices] have been supported by mortgage lenders and their surveyors."

(Slough, Developer, 061)

"It has an influence, yes...we are in residential development, so we are looking for locations that are attractive to people to commute to and from place of work and the better the infrastructure, the more likely it is for people to choose that as a place to live"

(Whitechapel, Developer, 013)

Impact on house prices may depend on change in supply

The extent to which the Elizabeth line has impacted house prices may have been influenced by additional factors. Many participants discussed the relationship between supply and prices, as well as discussing external factors which may suppress the market.

"I think there's going to be a lot of people...who own a property locally who have been waiting for Crossrail to come to town before they put their properties on the market in anticipation of prices rising again...but I think the increase of supply of properties that come on the market will have a counteraction against the demand, and I don't know if prices are going to go up by as

much as people are hoping."

(Abbey Wood, Property Agent, 068)

"There's a potential sentiment that prices may come down further during Brexit negotiations, and perhaps after as well. There's also another factor which is there's a very strong supply of properties, probably an oversupply of certain types in certain areas."

(Canary Wharf, Property Agent, 005)

"I don't think [Crossrail will] push demand for people living here but it might bring [rents] down if people move out [to more peripheral areas]"

(Canary Wharf, Business, 008)

Differences in house price rises in different areas

While the view that the Elizabeth line had contributed to rising house prices was widely held by participants, it was also acknowledged that the line's influence may not be equal at all locations along the line. Many participants discussed the differences in property market impacts between locations, with a general feeling that the opening of the Elizabeth line is more likely to cause an increase in house prices in outer or outside London than in the centre.

For example a Local Organisation was unsure whether the price rises will be limited to houses in the central areas. The participant said that, given that the Elizabeth line will make the City more accessible from outer London, more people might choose to live further out and this could lead to an increase in property prices in those locations. This point was reiterated by a Developer who posited that both the connectivity, and relative affordability of the new residential developments in their area when compared to London, will encourage people to live outside the city centre.

"It's only anecdotal but I was given some pricing information [in Ilford] the other day and I was shocked, and I'm told it's Crossrail."

(Canary Wharf, Developer, 003)

"I think increased public transport access will drive additional development on sites that are outside of central London, that may not have happened without it. There's a very good example of that at Kensal, I think another good example at Southall. I think it will support additional homes and jobs which I don't think you would argue are displacement from elsewhere, I think they are as a direct result of Crossrail."

(Paddington, Local Authority, 052)

A few participants from Central Section stations explained that because prices are already strong in the city centre, the Elizabeth line had had little to no effect on the housing market:

"From the late '80s – [the value of] residential property has gone up tenfold...it's just been a steady increase over time."

(Farringdon, Business, 048)

Findings

Development impact

Crossrail's impact on pricing and supply of housing (cont.)

Local variation in pre-Crossrail house prices may influence how its impact is perceived. Some participants suggested that higher house prices are being felt most in areas starting from a lower base, but that these areas are already in a 'catching up' phase so the Elizabeth line could not be considered the only factor. This was particularly true in more easterly stations, where house prices have been relatively low compared to central and western areas of the city, and where there has been a strong policy focus on growth.

"I would say that there has been, obviously, a general trend upwards, anyway, because it was the last sort of area people could buy things at a reasonable price...once Crossrail opened up, things started to go a little bit crazy, yes."

(Whitechapel, Business, 017)

"I think, because we had such a low average house price in general, and [Crossrail] just boosted it more than maybe other areas"

(Abbey Wood, Property Agent, 064)

A knock-on impact to the housing market beyond the station area

While the impact of Crossrail will no doubt be felt closest to where the station is actually located, it will likely be nearby areas will also experience a knock-on effect in terms of the property market. For example, one participant stated that:

"It's obviously going to have the biggest effect in E16 [the postcode surrounding Custom House station], but it's kind of like dropping a stone in the ocean; it's going to have the biggest effect wherever you drop it. I'd say surrounding areas, up until probably Barking and Dagenham...are going to feel the impact of it because

they're not a million miles away. I think it's going to make a difference to there."

(Custom House, Property Agent, 037)

Hypothesis:

There may be knock-on effects on house prices in areas further from Elizabeth line stations in the future.

The quantitative analysis of pre-opening property impacts tested this by looking at different distance buffers around stations. It found consistent evidence that the Crossrail announcement had on average a positive 2% impact on residential house prices in the areas closest to the stations (0 – 500m). Residential properties in the locations further away from the line (between 1 km and 2 km from the stations) experienced a slower value growth by around 2%, than they would have if the project had not been announced. This analysis can be replicated for the post-opening period.

Changing use-types to residential

Several participants made reference to buildings being changed from employment and commercial use, to residential. There was no clear consensus on the extent to which this has been caused by the expectation of the Elizabeth line. A participant in the Western Section believed that change of use was a significant element of increased housing supply associated with the Elizabeth line, which had enabled employment land to be unlocked for residential uses.

"A lot of the sites around [the area] are existing employment land...I think if you took away Crossrail I just don't believe a lot of those existing employment

functions would have been released."

(Southall, Property Agent, 067)

"I think that there's been quite a lot of activity in the...area in terms of conversion of offices to residential under the permitted development rights."

(Slough, Developer, 045)

At a Central Section, a Local Organisation had seen the pressure that hotels were being put under to change use:

"Some [hotels] are under pressure to go back to residential because they can make more money by selling to residential at the moment."

(Paddington, Local Organisation, 023)

Another participant at a Central Section suggested that the trend of commercial to residential conversions and the number of new developments in the city centre was due to more people wanting to live in central London, combined with property speculation - it was not because of the Elizabeth line.

Hypothesis:

There has been, or will be, a greater number of office buildings being changed to residential use near Elizabeth line stations.

Quantitative analysis can examine whether there has been more change of use near Crossrail stations where there has been a planning application. But, because of the 2011 change to planning law that allowed change of use from office to residential without planning permission under some circumstances, this is an issue that will not be fully picked up in quantitative analysis. It will be an important one to return to in future qualitative analysis.

Findings

Development impact

Crossrail's impact on pricing and supply of housing (cont.)

Differing reactions by different market players

The interview process highlighted how reactions towards the Elizabeth line differed between different parties. This was identified by a number of participants who commented that reactions varied between developers and property agents, between the rental and purchase sector, and between property investors and end-user buyers. A local organisation felt that Developers had been able to react more quickly to the new line than Property Agents, however one Property Agent suggested that they had only opened their branch in Ealing Broadway because of the new line. These mixed views could be due to their locational differences, with one being an inner and one an outer London station. It is possible that large developers focused on more central areas such as Paddington to begin to capture greater land value uplifts.

"I think there is a sort of local estate agent bandwagon that's very late to respond, whereas you've got big resi developers responding now, very early, so that's quite interesting."

(Paddington, Local Organisation, 023)

"I opened this agency [in 2010] just because of Crossrail...I knew the effect that Crossrail would have on the borough."

(Ealing Broadway, Property Agent, 025)

"We had a huge demand from buy-to-let investors [but now] it's gone a little bit pear-shaped for the buy-to-let investors with regards to stamp duty changes and tax changes...so the demand has certainly slowed down."

(Abbey Wood, Property Agent, 068)

"There's been an influence around house prices from Crossrail, and local estate agents would talk about that, 'This is where you'll get the most house price growth,' and therefore buy-to-let investors and all of those small investors have - there's been a real drive in the house market as a result of that."

(Ealing Broadway, Local Authority, 030)

Around a Western Section station, a Property Agent made the distinction around purchases versus the rental sector, suggesting that they felt that the impact on the rental market was still to come.

"Buy-to-let investors want to buy at these prices in anticipation for the demand to go up on the rental prices. I think rental prices will go up once Crossrail is here...because there's been no benefit for any tenant to rent somewhere until Crossrail is here."

(Abbey Wood, Property Agent, 068)

Findings

Development impact

Unlocking development potential through transport

Along with residential development, the scope to increase commercial development and jobs near to Elizabeth line stations was an important part of the business case. Projections published by Crossrail Ltd estimate that when the line is fully operational, there will be 1.5 million more people who will live within 45 minutes of central London (Crossrail, 2018).

GVA's January 2018 report attributes 4.44 million square metres of new commercial floorspace built between 2008 and 2016 as being partly influenced by the forthcoming Elizabeth line; enough to accommodate around 362,000 jobs. The same report suggests that the Elizabeth line has played a part in unlocking around 450,000 square metres of retail floorspace. However, the report does not demonstrate that this scale of development would not have happened without the Elizabeth line.

Another key attribute of the project was the integration of Elizabeth line stations with developments nearby, a key component of their funding strategy. According to Crossrail Ltd, the designs of twelve major property developments have been integrated into the project across central London. The 2018 GVA report found that the new line was enabling the development of sites not only in central London, but in areas previously considered peripheral such as Woolwich/Canary Wharf and Southall.

Findings from this study suggest that commercial development across the route has in part been motivated by the new line. The reasons for this were varied and the extent to which the expectation of future benefits of the Elizabeth line played a part in investment decisions seemed to vary from place to place.

The observations presented in this sub-theme are

important because they represent factors which cannot be easily isolated in quantitative analysis, such as the massing and rate of development, as well as the calibre of occupant.

The rate and scale of development increased due to the Elizabeth line

Others also felt that development in their area was inevitable, but it was the rate of development that had increased due to the Elizabeth line.

"You probably wouldn't have seen the level of investment in this area as quickly [without Crossrail]. I think it would have come, but it's probably accelerated it...I think it would have still got there."

(Whitechapel, Developer, 013)

"I think there's not a lot of places in London now that are there available for development so you'd like to think eventually it would have happened [without Crossrail] but at a much slower pace."

(Abbey Wood, Local Authority, 038)

Particularly in the West, the view was that areas had always been ripe for development and investment but the additional future connectivity provided by the Elizabeth line had allowed a step-change in scale and massing:

"I think [the area] has always seemed to be a good location and well connected."

(Slough, Developer, 061)

"I think [the area] would have boomed anyway, just because it happens to be in the right place at the right time."

(Slough, Local Authority, 042)

"[The area] was very limited...in development...I think

the knock-on effect was the designation as a Crossrail station and then in turn the GLA then allocated it an opportunity area on the back of that...I think [Crossrail is] absolutely fundamental, and it unlocked...density of such a scale."

(Southall, Property Agent, 067)

"I don't think development plans that are currently coming forward would have come forward in anywhere near the density that's being proposed, without Crossrail...there's no doubt [the area] would...eventually have got developed, because there's not much left in London to develop. I just think what Crossrail's done is brought forward that development and brought forward the scale of development."

(Southall, Local Authority, 029)

"I think it's brought hope value to the table as much as anything else...I don't think it would be such large-scale development [without Crossrail]. I think there will always be development...but I would politely suggest it probably wouldn't be the blue-chip companies that are doing it."

(Ealing Broadway, Business, 034)

"I think for Ealing it's been a massive driver for all 5 station areas for new development. We've seen lots and lots of development proposals, lots of land changing hands, lots of land changing hands to increasing prices, and lots of very ambitious proposals for height and density within the 15-minute walk across the Crossrail stations"

(Ealing Broadway, Local Authority, 030)

Findings

Development impact

Unlocking development potential through transport (cont.)

Transport as the main driver for development

The Elizabeth line is perceived to be an important catalyst for new developments. For example, at Custom House, one participant said that their own development would not have come about without the Elizabeth line, as the area, which had been slow to develop for 30 years, “*felt so remote*”. They also commented that other developments nearby were also “*totally dependent*” on the future Elizabeth line (Custom House, Developer, 043).

“I think it’s the accessibility, the regeneration of the Thames Gateway and London’s been talked about for decades...Now with Crossrail coming in, that’s opening up the East and it is all about that transport stuff. If you haven’t got the transport, people won’t want to invest”

(Custom House, Local Authority, 024)

A number of those along the South Eastern Section mentioned the Silvertown and Asian Business Port Developments, saying it was likely they were catalysed in some way by the Elizabeth line:

“I think, certainly for the new development site, Asian Business Port, and also for Silvertown Quays, they’re definitely using - well, Crossrail was definitely a key factor in them actually going ahead with the schemes”

(Custom House, Business, 051)

This same participant debated whether the local level connectivity offered by the DLR would have been sufficient for the Silvertown Quays site, which is across the docks and therefore further from the station.

“I guess there’s a question whether Silvertown would have progressed, because for them you’ve only got the

DLR link...So whether they would have invested 3.7 billion... [however] Asian Business Port, maybe they would have gone ahead anyway [without Crossrail]”.

(Custom House, Business, 051)

Close proximity to Elizabeth line stations important in central London

In central London, transport connectivity was seen as important by developers, but the scale of benefits are dependent on walking distances and immediate proximity to the stations. This was particularly the case with Developers and in many ways it appeared to be linked to the marketing of their new buildings - a way to attract interest from potential occupiers.

“If you look at our portfolio we’ve got I think a very, very substantial amount of our portfolio, something like 70 or 80 per cent, close to Crossrail hubs. It’s been a strategy of ours to get close to them”

(Paddington, Developer, 032)

“It does amuse us in the office, there is a kind of competition of [which developer] can be the closest to the Crossrail station...everyone says they’re the closest to the Crossrail station; they’re right next door, they’re on top of...or they’re linked to...there’s a real competition on the language about who’s closest.”

(Paddington, Local Organisation, 023)

Scale of development restricted by planning laws

Planning laws, particularly those restricting building heights, may limit the scale of development in certain locations. This was identified as a concern by several Central Section participants, who stated that there are restrictions on development, with building heights in particular, which are hindering development in their area.

The feeling among Developers in particular seemed to be that had planning laws allowed for greater densities, the developments built on the back of the Elizabeth line might have been more significant. A Local Authority saw this as suppressing supply and resulting in higher prices.

“The viewing corridor from Alexandra Palace to St Paul’s means that it’s quite tightly limited what can be built ...the actual development of [the area] is going to be quite tricky and you may well see the pattern of development reflecting the protection elements like that viewing corridor.”

(Farrington, Local Authority, 035)

“We can’t build up, and we can’t build down because of hydrology issues. We’re going to struggle to find capacity...We’re looking at some creative ideas, but Crossrail isn’t going to help that at all.”

(Tottenham Court Road, Developer, 065)

“We don’t have many tall buildings...and I think that’s a constraint clearly, but it’s one that we accept and we live with because it also gives [the area] much of its own atmosphere which is so important to the values that we derive from it.”

(Tottenham Court Road, Developer, 066)

“[In terms of increasing] property prices, I think it’s going to be huge, just simply because there isn’t a huge amount of supply...I think developers will also be looking in the next sort of 20 to 30 years...at where they can get height as well to kind of intensify the developments a bit more.”

(Farrington, Local Authority, 035)

Findings

Development impact

Unlocking development potential through transport (cont.)

Local Authorities had not all taken advantage of the opportunities presented by the Elizabeth line

The interviews identified a variety of perspectives regarding the extent to which Local Authorities had or had not been able to take advantage of the Crossrail project. At Slough, for example, many participants spoke about the local authority's targeted regeneration scheme, but this was not the case at all stations. One participant in the Central Section did not think that their local authority had done enough:

"There's plenty of opportunity here...to develop office space, upgrade the whole area...That's the local authority, it will not do it...I haven't seen anybody taking advantage of this...Nothing, in my opinion, would have been different [without the Elizabeth line]...[It's been a] massively wasted opportunity."

(Whitechapel, Business, 018)

A Farringdon-based business thought that local authorities had lost out by not been able to take advantage of the land value uplifts associated with the Elizabeth line:

"[At the beginning of the Crossrail project] many of the local authorities which Crossrail was going to serve had not the slightest interest in it whatsoever...this is particularly in the outer reaches...they didn't understand the enormous impact of it in uplifting the nature of their place."

(Farringdon, Business, 069)

Other factors besides connectivity have driven investment

Improved connectivity was not the only identified as factor influencing new developments. It was also discussed how the new retail environment and public realm improvements, brought about by the Elizabeth line had been a huge factor in their development decision. Providing the right sort of services and retail for a changing market was also discussed by a handful of participants.

A Local Authority had seen increasing diversity in the types of retail on offer, not just catering to office workers, but residents too:

"A lot more ground floor activity is going to follow and it won't just be late night drinking, it's going to be basic retail, things that people need to live...it's not just restaurants."

(Farringdon, Local Authority, 035)

"Would we have had the big Sainsbury's that's been built recently if Crossrail wasn't coming here? ...I think [it] is an anticipation of the more demand for living around here, you know, apartment blocks, there's going to be more retail."

(Abbey Wood, Property Agent, 068)

Impacts felt more in less central locations

The changes brought about by Elizabeth line-related development may be felt more in the outer areas of London. This was identified by several participants, particularly those from inner suburb locations.

"Ilford, Seven Kings, Chadwell Heath, certainly Brentwood...you can see a bit more of a change in terms of people wanting to buy brownfield sites in

those locations because Crossrail's going there. In [this area], because it's City fringe almost, it's always in higher demand and...I wouldn't say it's because of Crossrail. Crossrail has helped, but I wouldn't say people say, 'I want to actually buy a flat or building, a development site in [this area], because the transport links are already good. The values are already strong, the demand's already there because it's nearer central London. So I think it's not quite as tangible, the effects of Crossrail in Whitechapel as it would be further out."

(Whitechapel, Property Agent, 011)

Over station development

Good station design may be an important factor in maximising potential for development, and over-station development in particular. This was identified by participants at Farringdon and Paddington.

"If you have well designed stations that are integrated with the surrounding area and are designed with the right capacity and are designed in a way to stimulate growth, you will get additional development around those stations."

(Paddington, Local Authority, 052)

Findings

Development impact

Driver of business location decisions and commercial development

The expectation of the Elizabeth line may have made areas around new stations more attractive as a location for developers of office space and for business location decisions. Some of this demand has already been witnessed but much of it is yet to come.

Development felt inevitable but the Elizabeth line boosted confidence in the location

The Elizabeth line has acted as a catalyst for development in areas surrounding the new stations. Participants stated that they felt that there had been a rise in the demand for office space at locations that will be connected by the line.

It was also apparent that the Elizabeth line was a key driver behind boosted investor confidence, and that developers were more confident than other groups that the line was an important consideration in their investment decision.

“Without Crossrail they wouldn’t be able to generate the office content and get people to come.”

(Canary Wharf, Developer, 003)

“Clearly it’s going to be a stimulus for development activity...It already has been...the acceptability of the location for office occupiers has increased...They would not have [invested] if the Crossrail association hadn’t been there.”

(Whitechapel, Property Agent, 010)

“We’ve more recently seen another speculative consent given earlier this year to a company...they’re going to knock that office block down and build a new one...they see Crossrail as being the driver to bringing a new occupier.”

(Ealing Broadway, Local Authority, 030)

“You’re seeing tenants being attracted to the area already. If you look at tenant requirements in London generally...top of their list is transport.”

(Paddington, Developer, 032)

“The better the infrastructure the more attractive this part of London becomes; there’s no doubt about that...we are seeing strong, strong demand for our commercial buildings...These are people coming to us...and in the forefront of their mind, will be Crossrail.”

(Tottenham Court Road, Developer, 065)

The Elizabeth line may be influencing businesses’ decisions to move out of or remain in certain areas. There were mixed views on the direction of this movement. Some suggested that businesses might choose to remain in central London, some suggested they might choose to locate further from the centre of the city, but there was a consensus that the Elizabeth line and the improved connectivity it will offer was a factor in these decisions.

Hypothesis:

The Elizabeth line has made (or will make) areas near route stations more attractive to developers of commercial property, including for speculative development.

The overall level of new office space developed (or planned), total office space occupied and office vacancy rate can all be tested through the quantitative analysis of commercial property transactions. However, the issue of whether that development was speculative is likely to be best explored through future qualitative research.

“We looked at a number of factors because we originally had the office here. We then took X number of floors next door, to allow us to bring all of our people together and obviously having better transport links and the context of Crossrail... It wasn’t the only factor, but it was a factor.”

(Canary Wharf, Business, 006)

Differences in size and type of businesses being attracted

There was a perception that the new commercial offerings and transport connections were attractive not only to larger companies, but smaller ones too.

“If you’ve got businesses in their infancy or lower-margin businesses who can access their clients within ten minutes... all of a sudden the cheap rents down there start looking like a really, really good option.”

(Canary Wharf, Developer, 004)

“[The area is] seen more now as a location similar to Dalston and Shoreditch, there’s lots of tech companies going there, lots of start-ups.”

(Whitechapel, Property Agent, 010)

Other Central Section stations, notably Farringdon and Tottenham Court Road, seemed to be stimulating larger office development.

“I think we’re also seeing businesses getting a bit bigger; so rather than the possibility of a start-up or someone maybe just with a tiny office space, I think both the floor plates of commercial space and also the scale of operations of businesses is starting to change.”

(Farringdon, Local Organisation, 036)

Findings

Development impact

Driver of business location decisions and commercial development (contd.)

“As a result of the interest in Crossrail I think that’s...begun to change maybe the mix with an increased interest in providing office space maybe for larger businesses.”

(Farringdon, Local Authority, 035)

“What is very clear is that, for example, the advent of Crossrail significantly increases the attractiveness of the very substantial mixed use building that we are erecting...it’s the kind of site that a major institution could see as its headquarters, which would be ideally close to a really important strategic piece of infrastructure.”

(Tottenham Court Road, Developer, 066)

Hypothesis:

Office typologies are changing in certain areas to accommodate new businesses, influenced by the arrival of Crossrail.

Post-opening quantitative analysis might test whether there has been a change in average floorplate size (using commercial rental transaction data) and analysis of businesses located near the station may reveal changes in the number or proportion of SMEs located in an area. Given these are slightly indirect data indicators, it will be important for the qualitative analysis to return to this there.

Conflicted opinions over whether residential or commercial markets had seen more of an impact

Across the entire route, the price of commercial floor space was thought to have risen, though there were mixed opinions about which market had experienced a greater rise – commercial or residential.

“I’ve seen in the last few years that office rents have gone mad... I think you’ll see that the commercial property prices will rise and continue to rise, maybe more at a rate than residential, because of Crossrail.”

(Whitechapel, Property Agent, 011)

This was different to a Developer’s opinion at the same station, who said that it was residential prices that will have experienced more of an increase, compared to office prices. The reason behind these differing opinions is not clear. The property agent focuses on residential property, while the developer builds commercial offices, though each is saying that their market is doing less well than the other.

At another Central Section station, a Developer explained:

“[Without Crossrail] I don’t think you would’ve seen a substantial increase in values of the retail, particularly.”

(Tottenham Court Road, Developer, 033)

Ability of the Elizabeth line to reverse the decline of the outer London office market

The arrival of the Elizabeth line may help to reinvigorate the commercial offering of some outer London areas. Various participants at stations outside of central London discussed the changing nature of, and demand for, office space in their local areas.

At one Western Section station, for example, a Developer suggested that the Elizabeth line will help to reverse the

trend they had witnessed of businesses moving away from the area:

“Maybe Crossrail could start to reverse that trend of people moving into London because they can locate themselves in places [outside of London] and have the accessibility that they need, both for their staff and for their connecting with other businesses”

(Slough, Developer, 045)

On the other hand, another Developer at the same station was not as convinced that businesses will be leaving central London:

“There has been an improvement on rental levels, but I don’t think that’s due to Crossrail. We’ve singularly failed to get anyone to move their business that is based in central London to us, at the moment.”

(Slough, Developer, 044)

Again, given both participants are Developers, and both have developments in Slough, the reason for these differing opinions is not clear. The implication is that it is still unclear as to the direction that businesses might take when locating. Linked to this, are the findings in the ‘Timing’ sub-theme, which suggest that there might be another wave of impacts after the line opens. It might also be the case that other factors, besides connectivity, are influencing these decisions.

Findings

Development impact

Driver of business location decisions and commercial development (contd.)

Some Local Authorities in areas outside of Central London view the Elizabeth line as an opportunity to re-configure their commercial offering. According to one authority, in the past they had had a good stock of office buildings, but gradually the demand fell as they were not “*well suited to what our office occupiers wanted, in terms of the sort of footprint and footplate of the buildings*”. The hope is that with the Elizabeth line, they can bring that sort of development back to the area, “[*providing*] a more positive environment for business investment” and in doing so increase footfall, boost retail and improve job opportunities (Romford, Local Authority, 020).

This was also felt to be the case at a Western Section station:

“[There is a] mix of retail park and industrial estate on strategic investment land...I think what we’d like to see...is a lot more flexible workspace, work hub-style things that are appropriate to a town centre and somewhere very close to a Crossrail station.”

(Southall, Local Authority, 029)

Changing the leisure and retail offer

In some areas, the Crossrail project provided an opportunity to re-invent an area. The participants who discussed this felt that the new office spaces should be complemented by an improved cultural and leisure offer.

“Because [it] is the best-connected station in London it just means that you can have ventures like the Museum of London or other art galleries or cultural events here, which will be really wonderful as an uplift for that soft value rather than just boring offices.”

(Farringdon, Business, 069)

“I think that the provision of leisure and retail is more to do with the population, and the ability of the population to support that, but that is therefore is a consequence of Crossrail ultimately, the more businesses that are attracted to Slough the better the amenity mix will be.”

(Slough, Property Agent, 040)

At Canary Wharf, a few participants saw it becoming more of an all-round destination, but particularly from a retail perspective:

“For retail, I think it’s going to be quite big as well...The ability to probably get to quite a major shopping destination within ten minutes, that’s massive....”

(Canary Wharf, Developer, 004)

There were a range of views regarding the extent to which Crossrail played a part in changing the character of a local area’s retail offer. One Business at Canary Wharf felt that at their station in particular, there had already been a natural improvement in the quality of the retail and leisure offer, and did not think this was a result of the project.

“It’s a fantastic destination...It used to be if you left at 5.00pm here, you’d be in busy-ness. Actually the busier time is sort of 6:00pm/6:30pm, it’s a little bit later now, you can see as people are spending a little bit more time... I don’t think, necessarily [Crossrail, or the anticipation of Crossrail’s had an impact on that]...It does feel more like a community now than it has previously albeit probably more so in the last two years.”

(Canary Wharf, Business, 006)

Retail was brought up by almost every participant at

Tottenham Court Road station, highlighting how the sector is perceived as an important part of the area’s identity. However, there was a sense that retail in their part of the West End had been lagging behind neighbouring areas, and recent increases in retail values represent a step change in demand.

One mentioned the associated rental increases:

“The retail in [the] east end of Oxford Street historically has been lagging very much behind the west side of Oxford Street. Undoubtedly you can see retail rents have been picking up substantially...Historically there’d be £300 or £400 per square foot in terms of Zone A. They’re now £600, £650.”

(Tottenham Court Road, Developer, 033)

Hypothesis:

The retail offer close to Elizabeth line stations is changing as a result of the new passengers and residents.

Whether or not the overall retail space occupied or vacant has changed can be tested through quantitative analysis. Whether the nature of the businesses that are located around Elizabeth line stations changes will be harder to test. For example: a low cost café being taken over by an expensive restaurant will not be easily visible in the data (although rent levels may be a proxy for this). Whether there is gentrification or change in the nature of these businesses will be an issue best explored through qualitative analysis.

Findings

Development impact

Driver of business location decisions and commercial development (cont.)

Tourism demand being met by the Elizabeth line

The additional capacity provided by the Elizabeth line will play an important role in transporting the rising number of international tourists visiting London.

For example, various participants at Tottenham Court Road explained that the retail rents had been growing not only because of the prospect of the Elizabeth line, but also due to the rising number of tourists. It was felt that the Elizabeth line will be essential in carrying these visitors to the area.

"It's not solely attributable to Crossrail. London, and the [area] in particular, is a very prosperous place, and a lot of people want to visit London. You see the tourist numbers picking up, and that's a real driver."

(Tottenham Court Road, Developer, 057)

Existing businesses divided over the impact of the Elizabeth line

There were a range of perspectives regarding how the Elizabeth line will impact existing businesses located close to the stations.

A few businesses and organisations discussed their attitudes regarding being based near the Elizabeth line. Some felt that the new line will positively impact their business, though others were not as convinced it will be beneficial for them.

A Business in the South Eastern Section was excited about the possibilities the Elizabeth line will bring:

"[We have] been a very successful business without Crossrail. But we just see the opportunity with Crossrail as hugely positive and sort of the next chapter in our story."

(Custom House, Business, 031)

The tension between existing business and new arrivals was explained by one Local Organisation:

"I think there'll probably be a bit of a tension, if you like, between people who are already there and potentially can stay or are doing deals to stay, and people moving in because they're understanding actually where that area's heading."

(Farringdon, Local Organisation, 036)

Some businesses spoke about their experience as an existing tenant. One discussed the opportunities they believed their landlord hoped to gain from in the future:

"Our lease will be finished in...2025...I've got a sense that the landlord will not renew the lease...he's got a plan, maybe, to do something else, like demolition, make a big flat. Because he's thinking some new things are coming."

(Whitechapel, Business, 015)

Findings

Development impact

Crossrail's schedule's impact on development

It became apparent in the findings that participants perceive distinct patterns in the supply and demand for development linked to the Crossrail timeline. Given the length of the Crossrail project and the phased approach to planning, construction, and operation, this finding was probably to be expected. Crossrail Ltd was first established by TfL in October 2001, but it was not until July 2008 that the Royal Assent for the Crossrail Act was granted in order for the works to commence. The construction of the route has also been broken down into various phases, and the scale and timings of station redevelopments have been similarly staggered. A timeline of the project, is shown in the figure below.

Please note that the interviews were taken before the delays of the construction were announced.

Visibility of construction gave developers confidence

The majority of participants, and developers and property agents in particular, commented on the visible signs of construction having a far greater impact on the development market than the 2008 Crossrail Act itself. Most felt that this was because developers were reluctant to act until they knew the project was definitely proceeding. Whilst there was some speculative investment, there is a perception that visible signs of construction were the turning point in many cases.

"They hear that you've got powers and that there's an Act and that sort of thing but they don't really understand what that means or they don't really believe that it's going to happen. Certainly I think there's been an acceleration...with the start of construction work."

(Abbey Wood, Local Authority, 038)

When speaking about when they first noticed rent rises they thought were attributable to Crossrail, one Developer said:

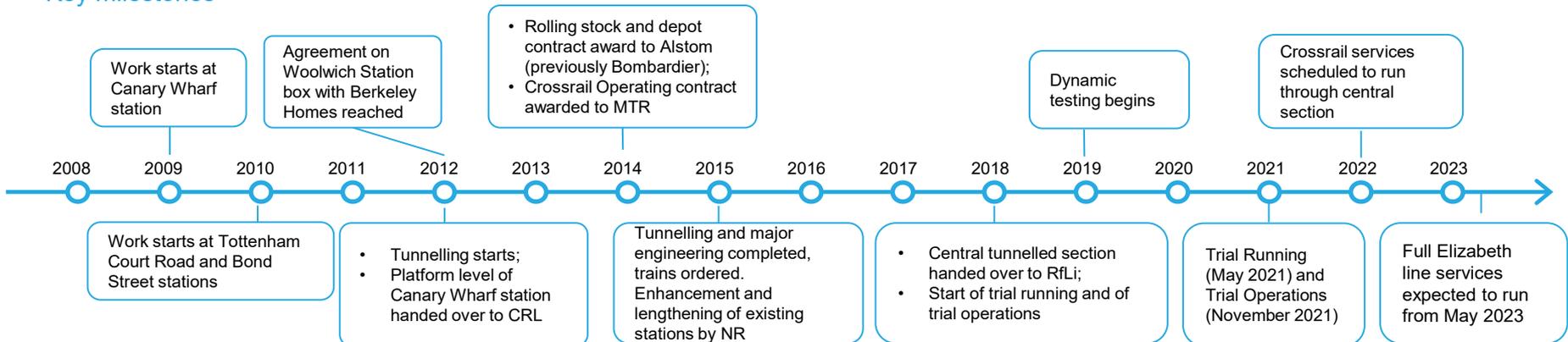
"Whenever the Act was announced, and then I think everything goes quiet, because you also can't quite believe it's going to happen until you see a spade in the ground, can you? I think people have probably been reacting more since the construction work started."

(Tottenham Court Road, Developer, 057)

"About five or six years ago, maybe even longer...[there was] a turning point I think. There was very much a period of time initially when Crossrail was in the planning stage where...office let values were quite stable and there wasn't a lot of movement, and then as Crossrail sort of heated up and got going those values started to rise in anticipation."

(Farringdon, Local Authority, 035)

Key milestones



Source: NAO (2019) *Completing Crossrail* and NAO (2021) *Crossrail – a progress update*.

Findings

Development impact

Crossrail's schedule's impact on development (cont.)

"Before the main station was being built, they closed the old station and they started to build the temporary station. That's where we noticed a rise in house prices and demand."

(Abbey Wood, Property Agent, 064)

One participant mentioned the significance of the 2012 GVA report undertaken for Crossrail Ltd, as playing a key part in influencing the property market.

"The other big impact in the area is the 2012 Crossrail Property Review, done by GVA. Which, I don't think it was incidental, ended up with the property industry taking Crossrail seriously."

(Tottenham Court Road, Local Authority, 027)

Operation will result in a further price rises and development according to property developers and agents

There were a range of views regarding how the opening of the Elizabeth line will impact property prices.

Many Developers and Property Agents expect a further price rise in the future as the line goes into operation, once people can experience its connectivity benefits. Whilst most participants felt that there would be a spike in property prices once the Elizabeth line opens, there were mixed views across property agents and developers over both the extent and timing of when this would occur.

"I think the next price jump will be once Crossrail's open. I think we've sort of plateaued off...over the last six months."

(Abbey Wood, Property Agent, 064)

"There's nothing quite like actually seeing it, and using it to really crystallise [it] in people's minds. I'm sure there will be a little bit of a bump [in prices] as a result of that, when it finally opens and all of a sudden it's real."

(Whitechapel, Property Agent, 010)

"I think there's still more to come, personally. I think people have started to factor it in...but I think it's again subject to the caveat of Brexit and other matters...I think once people see it working and they see how good it is and see a number of people can get on the train and speeds and all the rest of it."

(Tottenham Court Road, Developer, 033)

One property agent in Ealing Broadway felt that the post-opening boost may a short-term spike upon property prices:

"I think the minute the Crossrail is actually here I think you'll have a boom, but I do think that will be a very temporary boom...18 months maximum and I think it will level out."

(Ealing Broadway, Property Agent, 025)

Some property developers took a longer-term view on the market impact of Crossrail, believing that the impact on development activity will occur multiple years after the opening of the line:

"We don't think it's all priced in...I think you don't see the full impact of a big piece of public transport infrastructure like this...[until] probably for two or three years after it's opened."

(Tottenham Court Road, Developer, 066)

"Over the next five years you'll see strong growth in office rentals as businesses realise the benefits of the connectivity that Crossrail will provide."

(Slough, Developer, 045)

"If we're having this conversation in two or three years' time...I would be amazed if we're not reporting substantial development activity directly stimulated by its existence."

(Whitechapel, Property Agent, 010)

On the contrary, there were some developers, notably in

the Central Section, who believed that as the market had already been boosted, there may not be any further significant price rises:

"Once they're announced that's where local property markets, both residential and commercial, start to react and the closer you get to the point of opening...the lesser sort of benefits you'll see because it's already been priced in over the...15-odd years it takes to actually build the thing."

(Central Section, Developer 053)

"I think it's probably already had the impact that it was likely to have in terms of the values of property...I think it's probably already had its major impact."

(Whitechapel, Developer, 013)

This view held by property developers suggests that property prices and development activity will now remain stable.

Development timelines linked to Crossrail milestones according to property developers and agents

Milestones in the Crossrail project may have had an impact on the demand and supply of commercial property. This was identified by several property developers from inner and outer suburb areas.

"They started probably around twelve months ago and they're going to start completing up until I'd probably say end of this year. They all coincide pretty well with the sort of time frame that Crossrail is here, so I don't believe that is a coincidence."

(Custom House, Property Agent, 037)

"Have people been encouraged to develop sites, and bring forward planning applications so that they are progressing things nearer that period of time when Crossrail arrives? I should think so."

(Slough, Developer, 061)

Findings

Development impact

Crossrail's schedule's impact on development (cont.)

A property developer in the Western Section of the line suggested that because of all the construction and the fact the area is still in a “*Transient period...if somebody was to take a commercial unit they wouldn't take a commercial unit now; they would take a commercial unit perhaps in a year when...all the commercial units are released.*” (Ealing Broadway, Property Agent, 025)

Other property agents may also share this view that commercial development activity may happen in the longer term rather than now.

Hypothesis:

The timing of property developments was linked to Crossrail milestones.

If the perception is true, one would expect future quantitative analysis to be able to identify these fluctuations by looking at planning applications, land values, and supply of developments.

scale investor, buy-to-let person, I think we've probably been seeing for six or seven years in and around Ealing and West Ealing.”

(Ealing Broadway, Local Authority, 030)

“Even though there are a lot of...property developers speculating at the moment, I do think that Joe Public won't actually take the plunge until Crossrail has been open for a little while.”

(Whitechapel, Business, 017)

“For the man or the woman in the street, I'm not sure whether they're taking a long-term view...From an investor's point of view, [Crossrail's] been factored in.”

(Slough, Local Authority, 042)

Individuals, developers and investors reacting at different times

There were a range of perspectives regarding the pace at which different parts of the market were reacting to Crossrail, with developers and investors having already acted, and individuals thought to be waiting until the line was in operation.

“All the big development decisions by the big landowners, were all taken before Crossrail funding was confirmed, but in the expectation it would follow.”

(Paddington, Local Authority, 026)

“I think the whole sort of developer and amateur/small-

Findings

Development impact

Crossrail's relationship with existing regeneration initiatives

The link between the Crossrail project and regeneration was made across all locations. Understandably, the participants could not say for certain whether Crossrail was the primary cause of development, or whether regeneration would have come about anyway. While some participants, particularly in the Central Section, felt that Crossrail had not influenced regeneration activity, for the most part, the impression was that renewal in areas had been naturally occurring over many years, and that Crossrail had either just sped up the development, resulted in higher volumes of development, or had enabled Local Authorities to develop more ambitious Local Plans.

Crossrail has resulted in higher volumes of development

There was a common perception that while Crossrail may not have been the only driver for regeneration, it had certainly boosted the volume of development in many areas.

"The planning system is based on the infrastructure and the connectivity...I think the densities that will be developing [on] the site are just unthinkable...these sites with such a strong connection into central London and to Heathrow really should be taking large volumes."

(Southall, Property Agent, 067)

"Crossrail probably gave [property developers] the opportunity to reduce car parking...that would have enabled higher densities to come forward. So it's the pace [of development] but it's [also] the quantity."

(Abbey Wood, Local Authority, 038)

One participant suggested that it was the developments brought about by the future Elizabeth line which had in turn led to the regeneration of the area, as opposed to any

local public-sector led strategy, however it is worth noting that local public sector would have been involved in helping to make the case for the Elizabeth line in its broadest sense.

"If Crossrail hadn't developed there might not have been quite so much property investment in this area and therefore there might not have been so much urban regeneration."

(Whitechapel, Business, 016)

Local Plans tied to the Elizabeth line

The Crossrail project has been proposed in some form for so long that local government spatial plans and Crossrail are now inextricably intertwined.

Many Local Authority participants discussed specific policy interventions including local plans, opportunity areas and intensification zones designed to encourage development, some of them explaining how decisions had been taken on the back of the Elizabeth line.

"We've pushed...promotional planning policies based on the availability and opportunity provided by Crossrail."

(Romford, Local Authority, 020)

"10 to 15 years ago, [it] was a sort of sleepy place, and there were question marks about the vitality of the town centre...Crossrail coming has been a huge impetus in terms of development in [the] town centre."

(Ealing Broadway, Local Authority, 030)

"[It] is a urban renewal area...and has been the focus of quite significant...mixed use development ...because of that renewal status and the Crossrail project, it's been the subject of significant construction over the last ten years."

(Paddington, Local Authority, 021)

"I think it's fair to say that the arrival of Crossrail...was the catalyst for regeneration and the housing zone in so far as I don't think [the developer] would have felt confident enough to go forward with their regeneration plans...if they hadn't have had the prospect of Elizabeth line coming in and what that promised to the area."

(Abbey Wood, Local Authority, 038)

Impacts on planning applications and site development

As the Economy, Planning and Regeneration report showed, Crossrail had a noticeable impact on both the volume of planning applications submitted to local authorities and the scale of development that was being proposed.

Various participants on the South Eastern Section described how, where before developments had been predominantly in fill sites, the scale and pace of the development had been intensified due to Crossrail. Furthermore, some Local Authority participants reported that they had been receiving a higher volume of development applications than they had seen a few years ago :

"Changes haven't been that significant...I think it would be fair to say that the...larger scale changes are kicking off now and going forwards over the next five years."

(Abbey Wood, Local Authority, 028)

"It's been very much, 'We have to get this done ASAP, it needs to be done.' It's been kind of full steam ahead with not just one development going up, but loads at a time."

(Custom House, Property Agent, 037)

Findings

Development impact

The Crossrail “brand” and overseas interest

One topic that was mentioned fairly frequently by participants was that of the marketing of ‘Crossrail’ and the influence that it had not only on local investors, but with overseas investors too.

Various participants raised this issue from across the range of participant types and locations, although most were from the South Eastern Section.

Using ‘Crossrail’ as a marketing tool

Participants have been using Crossrail (not yet ‘the Elizabeth line’) as an element of their development branding for many years. One Property Agent had had a map of the route on their office wall since 2012. At one Central Section station, a Local Organisation had been using Crossrail in their own marketing material for two decades:

“[It] has been a key tool in the marketing of [residential] and commercial for a very, very long time...so very, very old brochures and things from '98 and 2000, talk about Crossrail in the copy.”

(Paddington, Local Organisation, 023)

The connectivity of Crossrail, and its potential to reduce journey times across the region appeared to be the primary factor that was pitched:

“We give them the connectivity type stuff, it's all things that they are interested in, because you're going to move 10,000 people in to a building...you need to know that they are easily accessible.”

(Canary Wharf, Local Authority, 001)

“We had a marketing campaign which obviously focused heavily on the improved connectivity that the

area was getting with Crossrail”

(Paddington, Developer, 053)

Some businesses used the Elizabeth line to promote themselves by emphasising their proximity to a Crossrail station:

“We do follow the news quite closely with relation to Crossrail [which] we [share] through our own social networks.”

(Custom House, Business, 031)

At a Western Section Local Organisation, they were hoping to use Crossrail in forthcoming promotional material in order to attract new clients.

Crossrail boosting foreign interest and investment

Although London has always been seen as good for investment, the future benefits of the Elizabeth line have intensified the interest from overseas investors.

“The impact of Crossrail, generally, has actually been felt worldwide... they've all heard of Crossrail and they're aware of it, they're aware of its impact and they will ask how close is it to the Crossrail.”

(Canary Wharf, Developer, 003)

“It's a particular attraction for foreign buyers when they're buying, because...when you don't know the areas...you're looking at something which is going to boost an area, there's a strong belief that Crossrail is going to do that.”

(Canary Wharf, Property Agent, 005)

“They just see London as a dot on the map, but the one thing they do know is Crossrail, so they always bring up Crossrail”.

(Custom House, Property Agent, 037)

At the same station, another participant said that a big part of the attraction for the Asian Business Port was the Elizabeth line and its links to Heathrow:

“That's an amazing sales pitch for them to Chinese businesses. We're building this thing, you probably don't know where Newham is but it's opposite an international airport, it's going to have Crossrail, you can get to Heathrow in 40 minutes'...Crossrail is absolutely part of that story.”

(Custom House, Local Authority, 024)

Findings

Wider economic impact

When proposals for Crossrail were initially developed they were focused on reducing journey times and catering for expected growth by providing extra system capacity. However, the Elizabeth line is also widely believed to have the potential to drive housing delivery and development and those expected wider benefits played an important part in the final business case. It will especially be relevant and accurate to examine and understand this area of analysis in a post-Covid context given the uncertainty involved around economic growth, especially in the housing, transport and labour market.

For Crossrail, the wider economic case was predicated on two hypothesised impacts:

- a positive relationship between employment density and productivity, defined by agglomeration elasticities; and
- the role of the Elizabeth line in overcoming transport capacity constraints that would otherwise have prevented growth.

Under the theme Wider Economic Impact, four sub-themes were identified:

- Crossrail has been developed in a challenging economic and political context;
- The Elizabeth line and London's changing economic geography;
- Mixed views regarding higher footfalls; and
- Gentrification and displacement.



Tottenham Court Road station and its wider environs (Source: Crossrail Ltd)

Findings

Wider economic impact

Crossrail has been developed in a challenging economic and political context

There was a perception among many participants that Crossrail, a sizeable project in its own right, as well as the related investment into London and the South East region, was acting to counter-balance the uncertainty of the economic and political climate in wider financial markets. While participants felt Crossrail might help to reduce such impacts, they did not feel it had, or would, outweigh them entirely. Discussion of this sub-theme was not limited to any one type of participants or location.

Crossrail and the recession

Given the duration of the Crossrail project, and the length of time some participants had been involved with it, some took a more long-term view. Some participants discussed how the project had helped soften the impact of the recession when the Crossrail Act was first announced in 2008.

“Even when we had the downturn in the economy...prices didn't fall...I'm guessing Crossrail was buzzing around in the ether at that time, so that may have [been] a factor.”

(Ealing Broadway, Local Organisation, 041)

However, there seemed to be some uncertainty as to the extent of the cushioning impacts of Crossrail. This was particularly the case in terms of rent rises:

“We've had a very good ride over the last kind of ten years or so, as pricing has corrected post-financial crisis, and I think it's hard to discern what's pushing things up again now. Is it Crossrail or is it just a market correction? I think it's probably more market correction than Crossrail, to be honest.”

(Farringdon, Business, 046)

Crossrail and the impacts of Brexit

Interviews were conducted between September 2017 and March 2018. During this time, the UK was negotiating its departure from the European Union. As a result, it was unsurprising that many participants mentioned 'Brexit' during their interview.

Some felt that the benefits of Crossrail might have been more apparent had it not been for Brexit, and the fact that many developers and investors are acting more cautiously until they know the outcome of the negotiations.

“Considering the closeness to completion and opening...in a normal market, even two years ago, we'd be singing and dancing about this, but it's taken a backseat because of...the current economic process that we're going through with Brexit.”

(Whitechapel, Property Agent, 019)

“Brexit and other uncertainties within the market are probably having quite a suppressing effect...it's going to be high-end stuff and it's that part of the market that's particularly suffering at the moment.”

(Farringdon, Local Authority, 035)

To what extent any boost provided by the Elizabeth line might stop future market fluctuations was not clear:

“It will be interesting to see whether the arrival of Crossrail ...helps sort of defend local areas... from any sort of rental decreases that the rest of London are experiencing.”

(Paddington, Developer, 053)

“The only thing that's really holding things back is this whole Brexit thing, just the uncertainty of it.”

(Custom House, Property Agent, 037)

On the other hand, it was seen as strengthening both local and city-wide resilience to market pressures.

“If we're saying the last two years, two and a half years prices have gone down in this area. They might have down less rather because of Crossrail, very difficult to tell.”

(Canary Wharf, Property Agent, 005)

“Would development have happened without Crossrail? Probably. Does it add to London's resilience? Yes, absolutely and its role in London being an increasingly competitive city in a global market, especially with Brexit.”

(Paddington, Local Authority, 052)

Competitive advantage of London

Considering the wider economic climate, Crossrail may be an opportunity to maintain London's competitive advantage, by encouraging development and reducing the risk of pricing out businesses. This was raised by a developer from a Central station, who stated that:

“If you don't increase supply, and demand continues to increase, you know what happens to price. If price then becomes unaffordable, people desert the area and go looking elsewhere and the danger of course, in the case of central London, is not that they go to other places in London, but that they decide to go to Frankfurt or Paris or Dublin or somewhere else all together.”

(Tottenham Court Road, Developer, 066)

Findings

Wider economic impact

The Elizabeth line and London's changing economic geography

This theme was less tangible than others, but there were a range of observations that could be broadly categorised as reflections on how the Elizabeth line will change the economic geography, or perceived functional areas, of London and the South East. Broadly, the topics that arose can be split into two. Firstly it was felt that in reducing journey times, the Elizabeth line will reduce the effective 'size' of the city making outer London neighbourhoods 'feel' more central. Secondly, stations beyond the central section of the route who have previously felt more isolated, are getting more attention from investors and visitors.

Faster journeys will reduce the 'size' of London

The improved connectivity provided by the Elizabeth line may effectively "shrink" London, and city's boundaries may be redefined outwards to include previously peripheral areas. This was discussed by several participants from both central and suburban areas.

"Certainly, if you look at [one of the new buildings] just being redeveloped outside of the railway station, that is advertising itself and [the area] as a London borough."

(Slough, Local Authority, 042)

"Canary Wharf, with Crossrail has effectively moved in transport time terms, to somewhere around the Southbank."

(Canary Wharf, Developer, 002)

"What Crossrail will do is more than halve journey times...It just becomes a game changer in terms of people's view of London."

(Southall, Local Authority, 029)

"Effectively, when you think about those kind of journey times, you're putting yourself into a Zone 1 category of connectivity...So that's what we're marketing ourselves on, really."

(Ealing Broadway, Local Authority, 030)

"[Without Crossrail] Slough might well have become more of a suburb of Reading, perhaps. It's come more into Greater London if you like."

(Slough, Business, 060)

"[We've seen] big impacts with Crossrail, obviously bringing in more interest to the area for people who want to live here because the rest of London is all of a sudden a lot more accessible to [the area] and you can get to it in a short amount of time, and which has obviously put us on the map."

(Abbey Wood, Property Agent, 068)

As detailed in the findings for Transport Impact, faster journeys mean that there is a wider labour market catchment for businesses to draw employees and job applications from. Reductions in journey times also reduce travelling times for business meetings, attracting more clients and employees near Elizabeth line stations. Therefore, businesses located nearby to the Elizabeth line route are better placed to connect with each other, and their employees.

Crossrail has helped put certain stations 'on the map'

There was a general perception that the stations outside the city centre have already benefitted from greater recognition as a result of the Crossrail project, possibly to the detriment of areas in the centre of London.

"Oh yes...[eight years ago] none of the large [property]

agencies, large central London corporates weren't here at all. It's certainly put [the area] on the map, definitely."

(Ealing Broadway, Property Agent, 025)

The rising interest in more peripheral areas was seen as a threat to central London by one Developer:

"There is some question about whether it would water-down us as a location... There's a whole agenda around the more peripheral areas being built up. The London Plan and so on, and it urges the suburbs to become more desirable places and the centre could potentially lose out."

(Tottenham Court Road, Developer, 065)

Besides putting some stations 'on the map', various participants at Whitechapel and Farringdon spoke about the changing nature of the 'map' itself. Some perceived the City of London boundary shifting in recent years, partly due to Crossrail:

"Well, certainly over recent years the City of London...seems to have shifted further eastwards and is now definitely within the [station] environs...[new] offices and homes are now part of the...landscape...in a way that they weren't before...I would say before Crossrail was announced, that boundary was probably slightly further west...It's moved half a mile to a mile up the road"

(Whitechapel, Developer, 013)

Findings

Wider economic impact

Increased labour and customer catchment

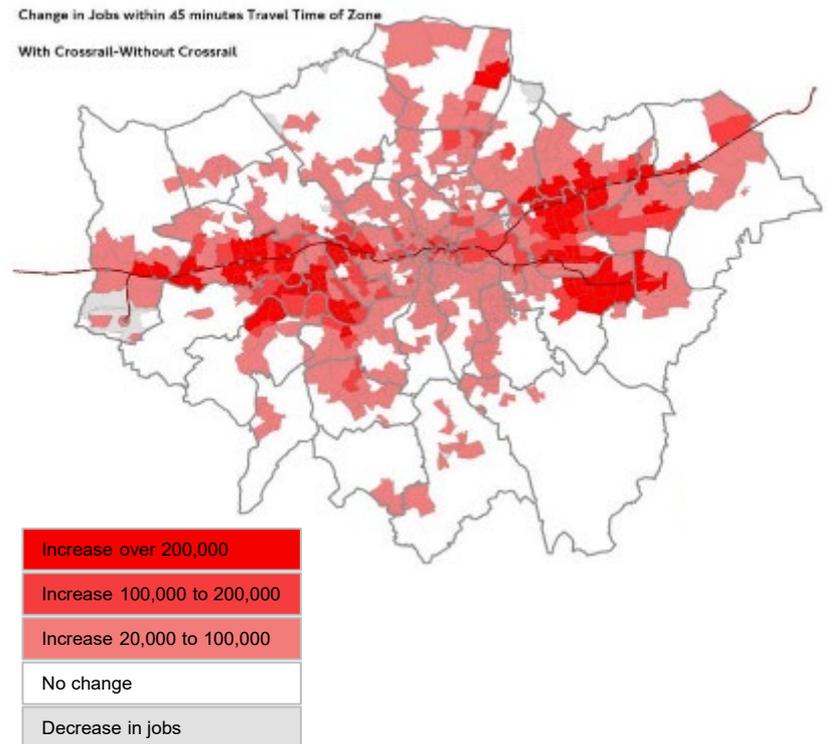
When the Elizabeth line is fully operational in 2022, the line will add 10% capacity to the rail network in the city (Crossrail Ltd, 2018). The map opposite demonstrates the increase in the number of the jobs in London which will, with the arrival of the Elizabeth line, be brought within 45 minutes travel time of the existing major employment centres of the City, the West End and Canary Wharf. Many participants described how this will increase the catchment of their area, and as a result increase the size of their employment pool, make travelling easier for existing employees, and make them more attractive to customers. As mentioned in the findings for Transport Impacts, improvements to journey times also quicken both employee commutes and travelling between business meetings, with some participants stating that clients and employees are moving or thinking about moving to an Elizabeth line station. Many participants also argued that this increase in footfall will then bring further economic benefits to the area, particularly through retail intensification. Participants in both inner and outer London locations were worried about greater competition between areas.

Mixed views regarding higher footfalls, retail and leisure spend

Many Business participants saw the link between the arrival of the Elizabeth line and the potential for new clients and customers. There were mixed views on this point. Through increased accessibility, footfalls are expected to rise, bringing higher levels of retail and spending. At Ealing Broadway, a participant also mentioned the potential for connectivity with HS2:

“If the Crossrail intersection with HS2 up at Old Oak Common comes off...it's going to have a station there the size of Waterloo...that will give a big boost to this particular area.”

(Ealing Broadway, Local Organisation, 041)



The Elizabeth line's predicted impact on access to jobs: The increases in the number of jobs within 45 minutes of the West End, the City and Canary Wharf (Source: Crossrail Ltd)

Findings

Wider economic impact

Mixed views regarding higher footfalls, retail and leisure spend (cont.)

A few participants discussed how these new customers will be coming not only from London, but that it might also encourage people from the rest of the UK to visit areas linked by the Elizabeth line. Similarly one Business discussed how the line might open up new areas on the edge of the city to tourists, which have historically not been as popular with visitors.

“If you're a tourist you don't stay in Reading when you come - say you're an American tourist and you come to London. You're not going to stay in Reading, are you, or Shenfield, but you might do when Crossrail opens.”

(Paddington, Local Organisation, 023)

Hypothesis:

There will be increased footfall in areas close to Elizabeth line stations.

There was no existing regularly collected and publicly accessible source of footfall data available; however, GLA's access to mobile phone and mastercard data could be used for the post-opening study. Individual areas, often led by developers or Business Improvement Districts, are carried out for specific technical studies. Mobile phone data offers an potential alternative source, but would need to be purchased or commissioned.

Without bespoke data collection the post-opening analysis will not be able to consider footfall impacts and this will need to be pursued through the qualitative analysis, or by using any information that can be made available through third parties on an as-available basis.

Increases in employment provision through local multiplier effects

At Custom House, a Developer expected a knock-on impact of a rising population, and a stronger local economy, brought about by Crossrail. The participant said that, because the Elizabeth line will lead to lots more people working and spending in the area, it will also generate more local jobs than there would otherwise be. The participant said that there was currently a lot of deprivation in the local area, and that this job creation “can help those people have better life chances.” (Custom House, Developer, 043)

A Local Authority mentioned the potential of the Elizabeth line, when open, to be a source of employment for local residents, and specifically at the station itself.

“I think if the way the station is actually managed and operated is looked into carefully it could have quite a beneficial impact on the community... it could provide local employment, people who are actually from the area who are able to guide people, so it would give it a local feel...I think something that's missing in London is having some local knowledge.”

(Farringdon, Local Authority, 035)

More economic competition within London

Having identified the benefits of greater connectivity, time savings and spending boosting turnover and possibly employment, some participants identified possible downsides too, in terms of increased competition with other areas of the city. This concern was raised by participants in both central and outer locations – both worried that the other areas will benefit more, a point also picked up on in the Transport findings, within the

‘Connectivity within London’ sub-theme.

There appears to be no consensus on where the ultimate ‘winners’ of this competition will be. Whilst recognising that the Elizabeth line will be beneficial in terms of accessibility, one participant from the Western Section could see that this may work both ways and so it could actually see business taken away from their area. They did acknowledge that they might be better able to compete in their market than those without an Elizabeth line station.

“Competition from neighbouring boroughs...That's probably the single biggest factor that affects my business...I think [Crossrail could benefit my business] yes, but on the other hand, if [my competition is] on the same line, then possibly not.”

(Ealing Broadway, Business, 034)

“The downside for [local] businesses...is that people will be able to get the West End in 12, 14 minutes; why not just go straight into London, rather than shop locally?”

(Ealing Broadway, Business, 070)

Hypothesis:

There will be increased competition between areas along the Elizabeth line route.

Quantitative analysis can show where areas are becoming relatively more and less successful in terms of employment and business location, or on “birth/death” rates of business. The qualitative analysis will need to pick up on changing perceptions in different areas of which locations are considered competitors.

Findings

Wider economic impact

Mixed views regarding higher footfalls

Contrary to this, at another Central Section station, a participant expressed the view that of course while the new line will benefit the area, it is also going to be benefitting other places too. The participant felt that the stations in the Western Section will benefit the most, with big benefits to the Eastern and South Eastern branches as well.

“It hopefully will be a real positive thing. There’s a question I don’t know; whether the negative aspects may be that because you can now get to places very quickly, people will choose other areas...Reading is a big winner here, right.”

(Whitechapel, Property Agent, 019)

Another angle that some people picked up on was that the stations themselves will have a greater catchment in the wider area. A participant in Canary Wharf believed that as overall journey times will be shorter, people might be more willing to walk further to reach an Elizabeth line station.

Gentrification and displacement

As prices rise in certain areas as a result of improved connectivity, there is a risk that existing businesses and residents are unable to afford to remain in an area. As such, a new population with different consumer needs homes the area, displacing existing residents. This concept of gentrification and displacement was discussed widely by many participants.

Regeneration not purely a result of Crossrail

There were a range of views regarding the extent to which areas were developing and gentrifying as a direct result of Crossrail.

At some Central Section stations, a number of participants had perceived the gentrification of the area over the past decade or so, though with an intensification in the last five

years. Most suggested that Crossrail had been a factor in changing the price and quality of the retail offer, though there had been many other factors at play; the perception was that the areas were ripe for regeneration even without Crossrail. Other participants attributed the regeneration to other major projects in their area, though it is possible that these schemes were unlocked by Crossrail.

At Whitechapel, the rising rents in neighbouring areas and encroachment by the City was described as a key factor for the regeneration witnessed in the area.

“There has been a gentrification...over the last 18 years. Very slow. I would say probably the last five years it has really changed. I suppose when Shoreditch really picked up it started to spread out.”

(Whitechapel, Business, 017)

“I think even without Crossrail the [residential development’s] just going [up]...it’s just ridiculous...Thousands and thousands of [homes] being made here...I don’t think they’re doing it because of Crossrail.”

(Canary Wharf, Business, 008)

“The continued investment around the Olympic Park area and what’s been done with that since the Olympics has again been a key area for us. Also things like the Asian Business Park [sic] and the Silvertown Quays development.”

(Custom House, Business, 031)

“I mean [the Local Authority] have invested £450 million in the... public realm in the [area]...How much has any increase in land value attributed to that or to Crossrail? I don’t know.”

(Slough, Developer, 049)

Whether this Local Authority-led regeneration might have been indirectly prompted by Crossrail was not discussed by this participant.

Attitudes and perceptions of gentrification and displacement is location specific

Participant’s views towards gentrification appeared to be location-specific. For the most part, gentrification was perceived more negatively by participants from central London stations. At Slough and Ealing Broadway however, participants were more inclined to speak positively about the changing nature of their areas.

Some participants, notably those in the Eastern and South Eastern Sections, had not yet seen any evidence of displacement. One participant supposed that this might be because prices are not yet comparable to central London house prices.

“I don’t think so yet, I don’t think there’s any evidence of that, no, it’s too early in the day.”

(Custom House, Local Authority, 024)

“The risk of residents and their children being priced out in the future is relatively limited but there is a risk, yes.”

(Abbey Wood, Local Authority, 028)

Displacement and gentrification are inevitable as cities grow

Displacement from certain areas may be unavoidable as areas naturally grow and develop. A number of participants, and specifically in the Central Section, felt that some displacement was inevitable as rents increase (for reasons discussed in the ‘Increases in catchment and footfall’ sub-theme). This was considered to be likely both for commercial and residential markets.

Findings

Wider economic impact

Gentrification and displacement (cont.)

“That food and leisure offer may change, because of the nature of the spend that’s coming in, but again it’s that balance between what’s there now and what needs to be there in future for that influx. In terms of I think some of the social elements, that will cause a debate somewhat about gentrification and populations being forced out.”

(Whitechapel, Local Authority, 009)

“The improved transport links means higher prices, generally. Higher prices for private housing means you get a different demographic coming in...That pushes out lower-income people and brings in more wealthy, more affluent people...and everything changes, the shops change, the coffee shops open, even like a Costa to like a nice trendy sort of hipster local place.”

(Whitechapel, Property Agent, 011)

“One classic example [is] of the Indian sweet shops ... they’d been [a] very good...business [but] then, suddenly Holland & Barrett made an offer to the landlord... [The shopkeeper] told me, “Because of this, I had to come to this side road and my business is down now.”

(Whitechapel, Business, 015)

There was a broadly held perception that the prices in central London are so high already that Crossrail will do little to effect any major change; *“it’s a London-wide issue and it’s not just about Crossrail”* (Ealing Broadway, Local Authority, 030). Others pointed out that most longer-standing residents have already been priced out, and Crossrail *“will, unfortunately, probably further accelerate that trend”* (Tottenham Court Road, Local Organisation, 039).

“It is inevitable and there will be people who say, ‘Well I used to have an office in Soho where I was paying £40 a foot but now they want £70 and I just decided I wasn’t going to stay.’ But I think then that’s true of so many areas in London.”

(Tottenham Court Road, Developer, 066)

Changes brought by gentrification have been welcomed by some

The extent to which the changes associated with gentrification were welcomed varied between different participants and locations. For example, some participants from the Western Section expressed the view that displacement was unfortunate, but necessary:

“I suppose there’s always going to be some displacement isn’t there? Ultimately. That’s the price of progress.”

(Slough, Developer, 045)

“It’s certainly gentrified somewhat. There is a bigger restaurant sector than there was previously. More of a night time economy than we’ve had for some time.”

(Ealing Broadway, Local Organisation, 050)

“Apart from [making it harder to get on the property ladder] I don’t think there’s an adverse effect. It’s made it a more desirable place to live.”

(Slough, Business, 060)

However, a large proportion of participants disagreed, and felt that gentrification and rising property prices are changing the characteristics of their area too much, and one said there is already resistance to this change in the established community:

“There is a counter reaction to the commercial advantage that the borough may gain, i.e. people who

live in the area are generally becoming more and more resistant to the impact of large buildings, not just in terms of their physical impact, but they accommodate a lot of people, some of whom may need educating, some of them will need healthcare. These are the residential occupiers and local people feel that the [area] has been under-invested in and that the new communities are taking away what is already there.”

(Canary Wharf, Local Authority, 001)

“I’m personally concerned about the market, I really hope it stays...it’s really important that the residents that have been here for generations are not displaced, and are heard, and have a voice...that is a concern for me.”

(Whitechapel, Local Organisation, 014)

“This area’s great for all the little independent places, and we celebrate that. Lots of entrepreneurs in the East End, so it will be a shame if...local independent businesses were being forced out by your bigger chains.”

(Whitechapel, Business, 017)

A few participants at one Central Section station are concerned that the area will become more corporate due to the Elizabeth line, moving away from the independent retailers, and small, creative, design businesses that it currently has.

“There has been already a change in the street where... we’ve lost all our interesting shops like the bookshop and the shoe shop and so on, it’s now all this fast food which pays twice the rents, or three times the rents.”

(Farringdon, Business, 069)

Findings

Wider economic impact

Gentrification and displacement (cont.)

Unequal distribution of economic growth impacts

The economic benefits of the Elizabeth line may only be felt by some of the local population. This was discussed by a local authority, who mentioned that the new jobs coming to the area, possibly as a result of the Elizabeth line, may not be accessible to some of the lower skilled members of the community.

“Crossrail will bring loads of people in to the borough, they will be competing for the jobs with local people, but actually the other side is it will also mean that there’s an avenue for local people to expand their traveling area to work, which may or may not work for some of the population.”

(Whitechapel, Local Authority, 009)

In contrast, another Local Organisation saw a strengthening economy as having broader benefits for the whole borough.

“So it’s a very split locality, [in terms of income]...I think, all things being equal, if the economy is stable and grows, I suspect there’s going to be more wealth creation in this area, because we have [Crossrail] on our doorstep, and that’s really attractive.”

(Canary Wharf, Local Organisation, 007)

This was also discussed by a Property Agent in the Central Section, who observed that previous waves of economic development in the borough had not benefitted everyone:

“Well, there’s a local population, which is a pretty low-income population. There’s a good old mix of nationalities, and when money arrives in an area, and development, that isn’t always popular. [In other areas

of the borough] there has been friction when there has been development activity, and economic improvement, from one perspective. It’s not necessarily economic improvement from everyone else’s perspective, so you could see some social tension.”

(Whitechapel, Property Agent, 010)

Hypothesis:

The local economies and job markets near Elizabeth line stations will be strengthened.

This is one of the central hypothesised impacts that will be tested by the quantitative analysis using similar approaches to those used to test for pre-opening property impacts. The post opening analysis will look at employment and business numbers, property values and deprivation levels amongst other outcomes. The findings of this analysis should be tested and validated through qualitative research to give a better understanding of the likely mechanisms of change.

Findings

Construction impact

The construction of Crossrail began in 2010, with preparatory works starting in the year before, mainly at Canary Wharf and Tottenham Court Road. TfL Rail has already taken over operation on the Shenfield section of the route, and the Heathrow Connect and Great Western Rail services from Reading to Hayes and Harlington. The new Elizabeth line trains have been brought into service along some parts of the route. The first trains start running in the first half of 2022.

In terms of the stations, many have seen changes to some extent, either renewals, reconstruction, or total re-builds.

Along with the stations, the main construction element has been the 26 miles of tunnelling, particularly in the Central Section. The image below shows where tunnelling has taken place in inner and central London.

The resultant impact of this construction on local businesses, residents, and other local stakeholders was a

key consideration for Crossrail Ltd. Consultation consisted of local exhibitions at over 30 locations, setting up public liaison panels, meetings with local authorities, residents' associations and businesses. Furthermore, as part of the Baseline Evaluation Study, a separate report investigating Construction Impacts of the railway infrastructure, stations, rolling stock and depots was completed.

Given this effort, findings on the perception of the construction impact of the project was important to this study. Specific questions about construction were asked in each interview. The findings can be broken down into four sub-themes:

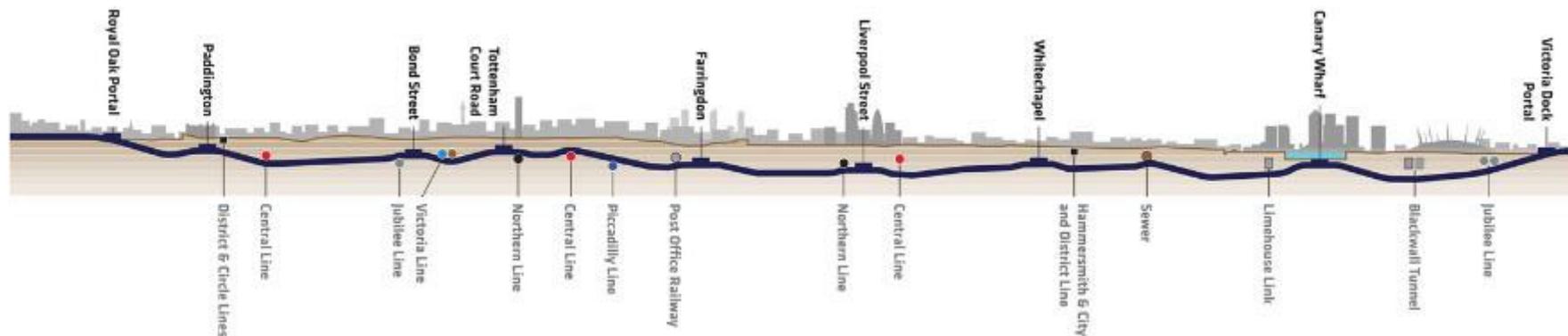
- A range of views on road and station disruption;
- Community engagement with and by Crossrail Ltd;
- Economic impact of construction; and
- Environmental impacts were perceived as lower than

expected.

One participant from a Central Station made an interesting comment regarding the overall construction period.

"[The construction] timescale is an interesting thing to reflect on, in terms of the impact of these major infrastructure projects on the lives of those who live in and around them. So, ten years, 15 years is the time from a child starting school to finishing university. That's a real significant period of time for people to be...living in and around development and construction sites. You need to dig up bits of London, in order to deliver infrastructure, to continue to allow it to be a world city that should be done with a focus on making it as efficient and acceptable as possible, during that phase."

(Tottenham Court Road, Local Authority, 027)



Source: Crossrail Ltd

Findings

Construction impact

A range of views on road and station disruption

In terms of construction impact, road and station disruption were most frequently mentioned during interviews. It was found that the level of disruption experienced by participants varied depending on location. On the whole, findings suggest that people felt that they had not experienced as much disruption as a result of construction at and around stations as they had anticipated. If there had been disruption, some people reported that it had been managed well by Crossrail and its contractors.

Disruptions were station specific

An overarching finding for this sub-theme was that the construction impacts on roads and stations was site specific. Participants from Tottenham Court Road and Whitechapel generally held the most negative views on the disruption impacts, though on the whole, the perception was that the issues in Whitechapel had been largely resolved. However, at a few stations where the construction works had been more limited, notably those outside of the city centre, participants reported that the road and travel disruption in the area had been minimal.

“There’s no great physical development taking place [at the station] because of Crossrail, and most people wouldn’t know it was going on.”

(Slough, Local Authority, 042)

Road disruptions impacting on other travel modes

A few Central Section stations in particular had experienced some problems caused by the works. Some participants described how the works impacted on other modes of transport;

“The disruption of the streets being closed and therefore the changes that have been necessary for

taxis, delivery traffic and also changes in terms of people movement, pedestrian movement.”

(Tottenham Court Road, Local Organisation, 039)

Concern was raised regarding pavement congestion as a result of the hoardings that had been erected at the construction sites. Two participants from Ealing Broadway noted how this resulted in a narrowing of the space for pedestrian flow and passengers waiting at the bus stops.

Changing road closure plans

One participant said that in their area, a major road had initially planned to remain open throughout the construction, but then Crossrail Ltd decided it would need to be closed after all. This caused a lot of aggravation among the local community.

“In the original Act, Crossrail had committed...to keep [the street] open, and then not long afterwards came back to Westminster and said, ‘We need to close [the street], we can’t build the station unless we close [it].’...I think businesses felt really sort of let down, ‘What you say in the bill has been very different to what happens once they’ve got your permission.’”

(Paddington, Local Organisation, 023)

Disruptions have impacted on visitor experience

There was a perception that the construction work had impacted on the number of shoppers coming to the area due to the disruption to the streetscape. These street-level disruptions were particularly noted at Tottenham Court Road. Participants did, however, acknowledge that not all of this was due solely to Crossrail.

“I think there would be certainly people who might have wanted to visit specific locations in and around

[the district] and close to it, that would probably be...a bit deterred from the amount of building works and activities.”

(Tottenham Court Road, Local Organisation, 039)

“In the...junction itself [where the station is located], it has been really disruptive. It’s limited people’s ability to wander around in that area, and to reach the place they want to.”

(Tottenham Court Road, Developer, 057)

A couple of participants felt that more could have been done to minimise the sense of disruption in the area:

“During construction, there were some fairly unpleasant impacts in and around the surrounding area. Be that temporary relocations of buses and other vehicles and diversions, to allow for infrastructure replacement. But also, just things like hoardings and so on, made the area feel pretty crummy. It wasn’t always as well managed as it could have been.”

(Tottenham Court Road, Local Authority, 027)

Findings

Construction impact

A range of views on road and station disruption (cont.)

Disruptions would have been worse for residents

It is worth noting that the majority of those interviewed did not reside near the stations they were representing and the research did not specifically target resident of community participants. Some of the participants noted that the local residents and communities would have been the worst affected by construction and station closures.

“When Custom House is closed, those residents have to schlep quite a long way to get to another station”.

(Custom House, Developer, 043)

“In terms of the construction works, I think it's been fairly disruptive to the local community. Everybody realises it's a huge construction project but it has impacted on the residential properties around the area.”

(Abbey Wood, Local Authority, 028)

Poor wayfinding during construction works

Those stations which had experienced significant works within the station building itself, and specifically changing entrance and exit points, found that signage was not always as clear as it might have been and that the approach to ensuring accessibility for mobility impaired people during construction was insufficient.

“The way they've closed off the main entrance, and then you have to walk past it, around the back, and then actually walk back right along the platform to get to the Overground, is a bit of a pain...It wasn't particularly well signed, initially. I think it's much better now.”

(Whitechapel, Business, 017)

“I guess you had to go out of different exits in the station for a period of time and it's not really straightforward to get here any more. You have to go round and back on yourself sort of.”

(Paddington, Business, 058)

“One of the things we really struggle with [is] pedestrian wayfinding, in the area generally. That has suffered, definitely, as a consequence of the changes.”

(Tottenham Court Road, Developer, 065)



The hoardings surrounding Tottenham Court Road's Western Ticket Hall entrance on Dean Street and Oxford Street, June 2017 (Source: Crossrail Ltd)

Findings

Construction impact

A range of views on road and station disruption (cont.)

“I’ve yet to understand the approach to wheelchair uses. Something I was quite disappointed in is that even the temporary build didn’t have level access...I was quite disappointed there wasn’t a temporary lift put in...The new station will [have a lift].”

(Whitechapel, Local Organisation, 062)

Crossrail’s management of disruptions

Overall, there was a perception that the disruption caused by the Crossrail works was well managed. Participants from both central and outer locations stated that they felt that there were fewer disruptions than they had expected given the scale of the project, and as with the environmental impacts, Crossrail works did not seem to make the disruption any worse than usual in London:

“Existing public transport was disrupted, probably no more than one would expect given the nature of the project, bus routes were changed and so on, but major construction traffic was pretty well managed.”

(Whitechapel, Local Authority, 009)

“Obviously there’s areas where the construction project is accessed and that has restricted some streets in and around London and the area, but generally speaking it’s been pretty well publicised, pretty well managed...you would say pro rata it’s pretty minimal impact.”

(Whitechapel, Developer, 013)

Some Developers noted their admiration for the project management, with one noting the procurement and delivery as being “pretty exceptional” (Paddington, Developer, 032).

“It all looks as if it’s been done pretty well. Yes, I’ve seen some vey large deliveries going down some very small roads! So, yes, but it all seems to me that it’s been pretty well managed.”

(Slough, Developer, 061)

One Developer held a perception that Crossrail was not as disruptive as people thought it would be initially:

“I think the property sector was particularly worried about the level of disruption during building and I think it’s been pretty negligible.”

(Paddington, Developer, 032)

At one South Eastern Station, participants felt that the transport and traffic disruptions were no worse than usual for the area, and any closures had been managed very well.

“It’s not stopped anybody getting in and out of [the area] to work and it’s not made their life more difficult, so I think, yes, of all the central stations it’s the one that’s see the least disruption, I think.”

(Canary Wharf, Property Agent, 004)

Findings

Construction impact

Community engagement with and by Crossrail Ltd

This sub-theme of engagement was brought up in a lot of the interviews, particularly businesses and Local Authorities. Opinion was divided within, as well as between, station locations, perhaps illustrating the different experiences at different locations. There also seemed to be a difference of experience between stakeholders, with Local Authorities and Local Organisations generally considering engagement efforts made by Crossrail were very good, and businesses feeling more could have been done. For example, a business in Ealing Broadway felt that there had not been particularly good engagement, versus a local organisation who felt the opposite. This may suggest that a range of communication methods need to be employed to reach all concerned. Or that different types of organisations had genuinely different levels of engagement with - and information from - Crossrail.

Mixed views regarding engagement and communication

There were a variety of views regarding Crossrail's engagement and communication with local stakeholders

Some participants were of the view that the communications they saw from Crossrail Ltd were not particularly clear or adequate. This seemed to be particularly the case with businesses, and those near more significant station development sites. There was a sense from participants that any information that had been published had been disseminated in a somewhat sporadic way.

A business at Whitechapel said there didn't seem to be any reliable source of information, and they are still unsure as to what is happening going forward:

"There was a lot of different stories coming out, and yes, I think there was a bit of unease, really, about the whole thing, and still is. I think no one's really sure

what's going to happen. As well as the station what's actually going to happen with the surrounding structures?"

(Whitechapel, Business, 017)

"The communication at the start of this, which is probably about two years ago, was extremely poor, and the involvement of the local community was extremely poor...Really, apart from a flurry probably about a year ago, where there was some stuff in the paper, we're very much in the dark as to exactly what's happening and when."

(Ealing Broadway, Business, 070)

Another participant, who owns a business near Farringdon, explained that at the beginning of the Crossrail project the communications regarding work sites had been quite poor from Crossrail, and sometimes worrying.

"They were very...remote 'We had the rights, we're going to take it from you', so we would have been killed off by what they were saying...it was one of the most worrying months that I had at the beginning...Clients of ours... were absolutely up in arms about the horrendous way in which they were dealt with to begin with, and also the very poor communication when they got hold of engineers who are notorious for making people scared."

(Farringdon, Business, 069)

A Local Authority participant perceived that Crossrail did an "acceptable minimum" in terms of mitigating issues of construction.

On the other hand, some participants were impressed by the lengths Crossrail seemed to go to in order to share project information, particularly at the beginning of the works. This finding tended to be from Local Authorities and Local Organisations who had been in direct contact with

Crossrail representatives, or in areas where Crossrail engagement staff had established a physical presence.

"There was a shop front information service available for some time explaining what the works were and viewing plans and that kind of thing. I guess at this point it's slightly faded into everyday life"

(Ealing Broadway, Local Organisation, 050)

A few participants mentioned that while station closures had caused disruption, they had been well publicised by the project team.

"It's very clear that the station's closed. They explain why it's closed and where you need to get off [the train] so I think the messaging, the public information has been handled pretty well actually."

(Custom House, Local Authority, 024)

A few participants noted the effectiveness of the engagement methods undertaken by Crossrail and its contractors. At Custom House, a Developer was impressed by the efforts made to send staff into local schools to teach them about the scheme and what it entailed, and the participant had a sense that some schoolchildren had also been able to visit a station. The participant felt that this involvement of the local community was a positive. Another participant had also been very impressed by Crossrail's school engagement programme:

"Crossrail set up a science club at the local school, they ran it really successfully for two or three years on a Friday afternoon, even some of the project directors as well would go down to [the school] and...run science workshops which were really successful, we won some prizes, it was really good."

(Paddington, Local Organisation, 023)

Findings

Construction impact

Community engagement with and by Crossrail Ltd (cont.)

The same participant believed that Crossrail had been good at getting local businesses 'on-side':

"I think Crossrail have managed the impacts really well. I think they do things like open doors...the station box visits for lots of our businesses, things like that, and our board have been invited to walk through tunnels and go to Bond Street and Tottenham Court Road, and I think they've been extremely good at helping people feel part of it and special, which I'm sure stops complaints, if we're all honest."

(Paddington, Local Organisation, 023)

Overall, the range of views regarding Crossrail's stakeholder engagement indicates that opinions were highly site-specific. For example, one Local Authority explained that their station had produced the highest number of complaints, but attributing this to the difficult nature of the central London site:

"I think the Complaints Commissioner's last report said 40 per cent of all Crossrail complaints emanate from Whitechapel and that's not untypical of central London stations in the sense it's a very confined site. Unfortunately, the station is being built on what was an old brewery, it's a deep station, but they found things in the ground they didn't know were there... so it's been disruptive."

(Whitechapel, Local Authority, 009)

Working with Crossrail to overcome challenges

Some groups had the opportunity to work with Crossrail Ltd to overcome local challenges or issues. Examples of this ranged from communications and marketing, to

geotechnical engineering. One participant noted that *"Crossrail...have been very receptive to the issues that have arisen and I think done the best that they can to deal with them"* (Abbey Wood, Local Authority, 038).

An issue with the size of the refurbished Ealing Broadway station has resulted in the Local Authority working with Crossrail to come up with a suitable alternative:

"We're beginning to question whether the station box is going to be big enough, the ticket hall and things, and so we've focused on working with Crossrail to create a big forecourt at the front of the station, because some of the typical things that one might do in a ticket hall, there isn't going to be that much space, because the station itself is quite constrained."

(Ealing Broadway, Local Authority, 030)

A similarly mutual working relationship has been developed by some businesses with Crossrail.

"The courtyard outside, they thought that was a car park... so they are saying, 'We're taking this over from you for our work site and grouting and chambers, you'll have to give that up to us,' well that would have closed us down... we were involved as a professional firm ... by Crossrail to look at the impact on all the listed buildings at the surface...so we got all the people in the Crossrail engineering team... round and talked about what they actually needed...We got at the issue from a technical aspect, and bit-by-bit we got a solution where we could accept some wells in the courtyard...without closing us down."

(Farringdon, Business, 069)

While Custom House station being closed for a significant period did impact the customers of this business, the

company used information given to them by Crossrail to market the long-term benefits of the new station and trains:

"We have a relationship with the Crossrail Marketing team...So they have shared quite a bit of information with us and we in turn have created our own materials in order to promote Crossrail."

(Custom House, Business, 031)

Findings

Construction impact

Economic impact of construction

The purpose of this workstream was to provide a richer and deeper understanding of the kinds of economic impacts of Crossrail's construction observed by participants to support the data analysed in the construction impacts report.

The findings of this sub-theme can largely be grouped into three parts, those who believed local businesses had suffered as a result of the disruptive nature of the works, those who felt business had either not been impacted negatively or had experienced benefits, and those who discussed the benefits of local employment and the efforts made by Crossrail with apprenticeships. A few participants in the Central Section also discussed how Crossrail had impacted on their own construction works.

Negative impact on local businesses

In terms of negative economic impacts, the general consensus was that construction of Crossrail had caused a fall in footfall in some local areas. Some explained that this was not just the case with Crossrail, but any sort of construction work in an area.

"Yes, definitely [road closures have caused disruption to business], again speaking with the rest of the traders in the village, it just means there's not as many people coming into the village to use what's on offer in the village."

(Abbey Wood, Property Agent, 068)

"[The public realm construction took time] to build and get sorted, so it had a knock-on effect on the local shops. Like there's a card shop, there's a few newsagents and things like that, and I know [there were] some complaints about the level of work that

were going on."

(Abbey Wood, Property Agent, 064)

It was also identified that proximity to the construction site itself may be an important factor in the negative impacts felt by local businesses:

"The West End itself is quite resilient, but, if you were to ask businesses in [the area around the work site] how it's been going, having a construction site outside their front door for the last ten years, I think they'd probably say it's had quite a lot of impact, and [the wider district], itself, is, as you know, characterised by smaller, independent business that will definitely have seen an impact on their takings for the last few years. I'm sure they're looking forward to seeing the back of it."

(Tottenham Court Road, Developer, 057)

Whilst acknowledging the impact that the construction will have had on local businesses, one business considered this inevitable with projects of this nature.

"I think as soon as you put scaffolding up around somewhere, or hoarding, there are some people who don't tend to want to go there. They think somewhere is shut, and it's not shut, and that's one of those things, unfortunately."

(Whitechapel, Business, 017)

A Local Authority at Farringdon discussed, with the benefit of hindsight, the changes they would have made to Crossrail's preparation process to mitigate any negative economic impacts. An example given included incentivising contractors to use local restaurants to make up any shortfall in demand caused by disruption:

"If we were rerunning Crossrail...we'd talk to the

contractors about some kind of local incentive scheme to get construction workers to fill the gap that might be created by people who are not coming to that area because they just think it looks awful. So, you know, using those restaurants and just keeping them going during that period of time."

(Farringdon, Local Authority, 035)

Neutral impact or net benefits to local businesses due to the construction

There were a variety of perspectives regarding how local businesses were impacted by Crossrail's construction. A few participants expressed the view that those businesses closest to the worksites, and in particular food and beverage establishments and newsagents may well have benefitted from the business from construction workers, though this was only ever speculation:

"There's a few businesses immediately around the [construction area], probably ten restaurants...I'd imagine...they would have had more footfall because of all of the construction workers."

(Ealing Broadway, Property Agent, 025)

Some participants had mixed views about the net benefits for the wider economy. In some specific locations participants raised the possibility that parking suspensions had reduced turnover for local businesses, equally there were other factors at play. There was a perception that whilst the construction works will have caused some road disruption, either it had not be directly caused by Crossrail, or that a reduction in footfall due to construction disruption may have been counterbalanced by an increase in footfall from Crossrail workers.

Findings

Construction impact

Economic impact of construction (cont.)

"I think in [a] small road that leads away from the station businesses have said that they've seen...a drop in business because people couldn't park there or access it very easily. Then equally you could say that was attributable to Sainsbury's coming in. You could blame Crossrail for that as well I suppose because of the catalyst effect. On the other hand there were some local businesses benefited from the workforce being there."

(Abbey Wood, Local Authority, 038)

"If you've got a big construction yard, then you're going to pick up a load of business if you're selling coffees and teas and morning newspapers...There's been disruption and maybe some of the shops around [the station] have been adversely affected...but that's probably been compensated for by just having hordes of construction guys who all need feeding and drinking, so I think it's probably swings and roundabouts really."

(Custom House, Local Authority, 024)

One felt that mitigation measures had been effective in helping local businesses:

"They had a limited amount of funding but funding nevertheless, I think it was £150,000...to improve the public realm in front of the shops to give business support to the shop owners...so that they could be a bit more resilient with the onset of Crossrail; and shop front improvements as well. So yes, absolutely there's been some effort to try and mitigate the sort of negative impact."

(Abbey Wood, Local Authority, 038)

Construction providing education opportunities

Crossrail's effort to create training opportunities and apprenticeships in local areas was discussed by several participants. These participants discussed the long-term economic impacts of the construction as a result of upskilling local people.

"[The area] is part of the bigger picture...[Crossrail] has facilitated local employment, increased the number of apprentices in the area, I don't think it would necessarily have influenced the supply chain very much."

(Abbey Wood, Local Authority, 028)

"There was a certain amount of local contracting that took place. Certainly there was a sense that there was an open door to Crossrail on apprenticeships and so on...They were seen to make the effort to try and recruit locally."

(Canary Wharf, Developer, 002)

"Actually we've trained and placed a lot of local people in to jobs with Crossrail...and again that's something we sought in the parliamentary stages. We always like to get local people and of course, the Tunnelling Academy was a result of a joint borough action to secure training opportunities for local people."

(Whitechapel, Local Authority, 009)

Crossrail impacting on other development projects

Crossrail's construction had knock-on impacts on other development projects in surrounding areas. A few participants in the Central Section mentioned how their own construction was impacted by Crossrail. One participant noted that it was hard to find a suitable location for the base of their scaffolding in particular, due to the

construction of Crossrail the nearby station. They also believed that Crossrail had as a result negatively impacted the timing and cost of their development, however they thought it had been no more disruptive than any other construction scheme of that scale.

Another Developer explained that their construction costs had risen as a result of resource scarcity, but was not confident in attributing this directly to Crossrail:

"Being selfish, it's pushed costs up a bit for us - because I think there's been lack of labour...but whether that's a Crossrail effect - I suspect it's been the strength ...of the economy and the commercial property market, mostly. Undoubtedly, building costs are very expensive in central London. Crossrail would have had an effect upon that given the fact that the sheer number of people working on it and cost of concrete and steel, working enforcement and stuff and stuff like that. I think that's a secondary effect, but undoubtedly it's taken capacity out of the market but I don't think anyone can complain about it."

(Tottenham Court Road, Developer, 033)

A Local Authority also discussed delays to regeneration schemes and highway works caused by the protection of haulage routes. The 2008 Crossrail Act meant that certain routes were allocated for the movement of lorries to and from Crossrail worksites.

"The requirement to protect the haulage routes has been a significant factor...So, when those things are protected that in effect freezes our ability to do either regenerative style work or improvement schemes to highways."

(Farringdon, Local Authority, 035)

Findings

Construction impact

Environmental impacts were perceived as lower than expected

A range of attitudes were given regarding the project's environmental impacts, with some participants not expressing concern, whilst others spoke of factors such as dust, noise, vibrations, air quality and congestion.

Amongst those that did not observe negative impacts, some of participants suggested it was because they were not based in and around the station vicinity itself. Others believed that it was because Crossrail Ltd had managed the impacts well, either through adjusting working methods or times, or communicating in advance.

Some participants perceived few or no noticeable environmental impacts

When asked about environmental impacts, some participants stated that they had not perceived them to be frequent or significant.

"I'm not aware of a great deal of impact... I've not had any sense from conversations with [a colleague from Public Protection] about frequent and significant issues linked to noise or disturbance of air quality issues."

(Romford, Local Authority, 020)

Other participants felt that any environmental impacts were not as noticeable in certain locations, where there is always a lot of construction and road traffic:

"I don't think it was overly intrusive...It hasn't affected anything...People know that [the area] is still synonymous with lots of cranes...[it's] no more dusty than it always is here."

(Canary Wharf, Developer, 003)

"The reality is that...there's building sites across the

whole of London and East London in particular. It's very rare that I can find a street where there's not noise going on."

(Whitechapel, Property Agent, 019)

"Not somewhere like Ealing Broadway where you're chock-a-block with traffic et cetera anyway, so I can't see how air quality would be impacted at all."

(Ealing Broadway, Business, 034)

Some perceived negative environmental impacts

The participants that spoke of negative environmental impacts explained how, while there were negative impacts during the peak of the construction phase a few years ago, now appear to be less significant:

"So the impacts have been negative in the sense of noise, nuisance, temporary housing, compensation for vibration...they've calmed down a lot, because obviously the main works are finished now."

(Whitechapel, Local Authority, 009)

Other participants discussed how road closures had resulted in heavier traffic in the area, and more noise and air pollution as a result. One explained that this had been a concern for business owners.

"You've got buses queuing down small roads, and some of the smaller businesses, particularly, which have things like outside seating or have got a shop front, if you've got a queue of traffic and you've got noise and you've got dust, you lose your customers, and I think that was the concern from the smaller businesses."

(Paddington, Local Organisation, 023)

"If you ask a few taxi drivers, they'll say that it's been a

nightmare travelling around! Some of the little streets in Soho have been chock-a-block with taxis. I suppose that's not very good for air quality."

(Tottenham Court Road, Developer, 057)

Mitigation efforts and improved outcomes

Participants from all parts of the route acknowledged that while there had been some inevitable environmental impacts, such as noise, air and traffic disruption, they had been mitigated quite successfully, or otherwise communicated well.

"I think the impact at street level in terms of where their site compound and where their hoardings are is very well managed. I think it's as tight as it can possibly be and I think there will always be HGV impacts when they're above ground, moving spoil, et cetera, but that's part and parcel of trying to grow a big city."

(Paddington, Local Authority, 052)

Findings

Construction impact

Environmental impacts were perceived as low, and lower than expected (cont.)

“It’s inevitable that...there will be some disruption although what I must say is that communication from these guys has been really good. We’ve managed for them to install an extra layer, an extra window pane in [the building] and they’ve been very gracious in doing that, so it has limited the impact quite significantly.”

(Paddington, Business, 054)

“Issues like vibration, noise, were dealt with very sensitively and, of course, the dock itself provided an opportunity to import and export materials by water.”

(Canary Wharf, Local Authority, 001)

Similarly, a participant explained how Crossrail had reacted to complaints by local stakeholders. In one instance, at the start of the construction period, residents close to the work site complained that the work started very early in the morning and was too noisy for that time of day. To address this issue Crossrail altered the timing of the work conducted at the site.

“Instead of doing it early in the morning, they [were] going to do it kind of around midday, but that was about it really.”

(Custom House, Property Agent, 037)

Findings

Additional cross-cutting issues

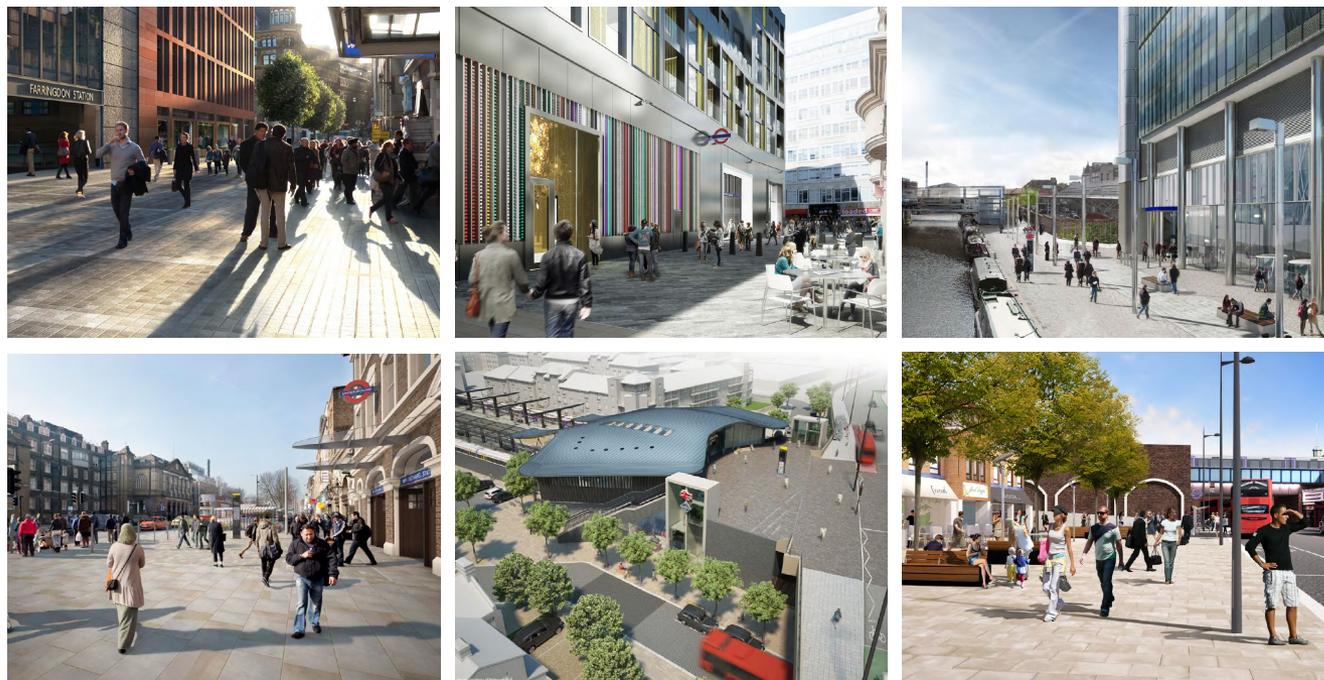
The findings presented in this section of the report cut across several different themes, and their inclusion would not have been appropriate in a preceding chapter. Nevertheless, they raise important points and are included here to provide a wider perspective to the report's analysis.

Physical place and station improvements

Improvements to public realm and station environs have been integrated into the Crossrail design strategy from the beginning, at a total cost of around £130 million (Crossrail Ltd, 2018). As a result, many stations are seeing associated improvements to the public spaces outside the stations. There are also those stops which are having entirely new station buildings constructed (though many of these stations fall outside the Crossrail funding envelope).

Crossrail Ltd have also considered incoming and onward journeys that passengers will make, so have tried to improve pedestrian, cycling, bus and taxi accessibility too.

Generally speaking, participants spoke positively about the lasting visual and placemaking impact that they felt Elizabeth line stations and public realm schemes will have. Various individuals discussed how their area had been changed by Crossrail, either influencing the make up of the retail and leisure offering, or simply improving the appearance of the streetscape.



Artists' impressions of various Crossrail stations; clockwise from top left, Farringdon, Tottenham Court Road, Paddington, Romford, Abbey Wood and Whitechapel.
(Source: Crossrail Ltd, July 2015)

Findings

Additional cross-cutting issues

Physical place and station improvements (cont.)

Improved public realm, to an extent as a result of Crossrail

Crossrail has provided an opportunity to improve the public realm in the areas surrounding the new stations. Several participants described seeing their areas tidied up, they believe, as a result of the new line. One participant felt that even during the construction phase, there had been an improvement in the appearance of the area.

“Obviously, as the new station frontage and interior is redone it will look more pleasant and it will work better. It will be more functional, which means that it will feel like a nicer space to be in. I think when the new parade of shops opens by the station it will really change the types of businesses there are coming into that area.”

(Ealing Broadway, Local Organisation, 050)

“I think it's had quite a positive effect on the south side of [the] station...before they started construction...it was quite worn, it was a bit of a rougher area. Since the construction has happened they've re-done the whole of the other side of the...station.”

(Custom House, Property Agent, 037)

“I think [Crossrail] can do nothing but make it look nice...[the area is] scruffy, with a bit of luck, people – I'd like to think as well that the local authority – will want to look after that area a little bit more.”

(Whitechapel, Local Organisation, 062)

“[Crossrail] has had, clearly, a very strongly positive effect on the presentation of the buildings in the immediate environment, because they've all been tidied up.”

(Whitechapel, Property Agent, 010)

“The impact of the Crossrail station I believe has had a good effect on making [the area] a more interesting place to live. Not singlehandedly, but that has definitely changed over the years from a place that was purely functional, where people...lived and worked, to somewhere that people would consider living in because they like it, because there's a lot going on...The shops and the quality and range of things that have gone in there has really helped, I think.”

(Canary Wharf, Property Agent, 005)

According to one Local Authority, the design of the station had gone down well in their local community:

“I think I'm right in saying most people seem to be really positive [about the station]. They love the design and I think that the fact it was such a bold design just gave people a sense of pride.”

(Abbey Wood, Local Authority, 038)

A Central Section participant felt that with the arrival of the Elizabeth line, the station and associated public realm changes will help to establish a 'town centre' that previously didn't exist:

“Most outer London boroughs, have town centres. We don't...It's a natural hub and having the station there will reinforce that.”

(Whitechapel, Local Authority, 009)

Public art, and the way it had been used to engage local communities and provide employment along the new line was something mentioned by one participant:

“As an aside, our students at Redbridge did a lot of the artwork for the Elizabeth line. The posters and things,

yes. So we like it, and they got paid for it, so that's good.”

(Canary Wharf, Local Organisation, 007)

This was also felt to be the case by a participant in a South Eastern Section station; they discussed how some shops have received new shop fronts due to a grant, and there will be a new town square. They expect this to be beneficial to the area, making everything look “new and fresh” (Abbey Wood, Property Agent, 064).

At another Central Section, a participant felt that public art could be used to emphasise local character, and encourage people to discover new areas of the city:

“I think there's more that can be done to...see the area celebrated when you come into the station...Maybe we could look at local artists, maybe we could celebrate some of the things that those areas have to offer, so if people do get down at any station they begin to get an idea of what's going on at the surface and what might interest them, what might get them out and get them looking around and visiting the area.”

(Farringdon, Local Authority, 035)

Findings

Additional cross-cutting issues

Physical place and station improvements (cont.)

Placemaking opportunities presented by Crossrail had not been exploited fully

Contrasting with the views previously discussed, at some locations participants felt that Crossrail had not fully exploited opportunities for better placemaking. For example, at one Central Section station, there was some disappointment in the public realm changes, though it was unclear as to who they felt was to blame for this.

One participant explained that they felt the contribution to public realm by Crossrail Ltd had not gone far enough:

“The Crossrail contribution to public realm is not generous, to the project overall. I’m worried about what it means across the whole of the route because of other things to do with Crossrail. Certainly not in the West End - it’s been parsimonious. You’d have got a much better deal out of any other commercial developer carrying out a major scheme in the area.”

(Tottenham Court Road, Local Authority, 027)

On the other hand, a Developer felt that more action should have been taken by local businesses, Crossrail Ltd and the local authority:

“I think it’s really disappointing, the amount of investment in local public realm, by Crossrail and by the local authority, with a view to accommodating these predictions in numbers, and also...the new gateway to the world that Crossrail presents...I don’t think the most has been made, in some businesses, of what is to come...which is just because of lack of investment.”

(Tottenham Court Road, Developer, 057)

Public realm impacts can’t yet be observed

A few participants are reserving judgement on whether the physical appearance of the station and surrounding streets had improved, as there is still a fair amount of construction going on. At another Central Section station, one participant felt that the public realm improvements hadn’t yet started. Similarly, a couple of participants explained that in their areas there will be some major changes to the public realm which haven’t yet begun which, whilst possibly encouraged by Crossrail, will in themselves be a significant change in the area.

“If you go down the full pedestrianisation route, you create public realm and spaces where things other than shopping will take place and I think in due course, over probably quite a long period of time, you’ll get a different look and feel to that main artery there.”

(Tottenham Court Road, Local Authority, 022)

Hypothesis:

Public realm has improved near stations as a result of Crossrail and this has led to economic benefits to the area in question.

The quantitative analysis can test whether areas around Elizabeth line station with significant public realm investment have out-performed those that have not made a similar scale investment. However, the definition of public realm investment is hard to make quantitatively, and most areas have seen some change. For that reason, it will be important to use post-opening qualitative analysis to understand perceptions of the extent to which this has impacted economic outcomes.

Findings

Additional cross-cutting issues

Unintended negative consequences for local authority finances

One of the local authority respondents explained that an unintended consequence of Crossrail may be that it increases costs for local authorities – even though this could also make development more viable and increase potential for developer contributions. Still, the respondent explained that as property values increase in their area, any Compulsory Purchasing Orders (CPOs) needed to develop the area further, will cost the council, and ultimately the public, more money than originally planned for.

“We’re putting £112 million of our money, council money, into buying back the properties which have been sold under Right to Buy...If we can’t reach agreement, then we’re going after CPOs. CPOs take a couple of years and, of course, Crossrail will be open by then, so there is a potential that some of the owners will say, ‘Your valuation says my house is worth £400,000, I actually reckon it’s worth £500,000’. It’s all right for one house but when you’ve got £112 million worth of houses that you need to acquire, add 10, 20% on top of that, that is big sums of public money... So in terms of the impact on the public purse, that could be a massive negative.”

(Local Authority)

Crossrail as a model funding approach

The success of Crossrail’s funding approach may enable future large-scale infrastructure projects to go further down this funding route, possibly with Central Government support.

This was discussed by a Local Authority participant who

explained how Crossrail had been innovative in using land value capture to fund the project.

“Crossrail itself has been incredibly innovative in that, it’s the first big community infrastructure city wide, almost TIF [Transport Innovation Fund] drawn mechanism to support funding that, so I think that’s been very, very innovative... I think there’s now opportunity to think more boldly, but I don’t think it’s something that the mayor can do on his own. I think it needs... an ability to take a more radical or a more aggressive approach, which is things that are constrained by say, national legislation or financing abilities...I think Crossrail have set a bold benchmark.”

(Paddington, Local Authority, 052)

5. Conclusion

Conclusion

The interviews that were conducted provide a rich source of qualitative data on the perceptions of various types of stakeholder regarding the impact of the Crossrail project, and expected impacts of the future operational Elizabeth line, before it opens. This is important because it preserves data that would be difficult to collect in hindsight.

It is important to note that this study provides insights from one point in time (2017-18); therefore, naturally some findings may seem less relevant at the time of the opening of the Elizabeth line. The impact of the Covid-19 pandemic makes this assessment even harder as at the time of the publication of this report (2022) it is impossible to understand how the 'new normal' in Greater London and the United Kingdom may look like.

Although there was a range of views discussed, overall the evidence presented in the report demonstrates the perception that Crossrail has already had wide-ranging impacts along the entire length of the route.

It appears that the improved connectivity and reduced journey times that the route will create are the most widely agreed-upon benefits of the Elizabeth line. These vary between locations, particularly between inner and outer London, with those stations that are currently less well-connected anticipating a step change in connectivity benefits. The increased competition between previously peripheral areas, now connected by the new line, was discussed by many participants and will provide an interesting topic for future research.

Since its inception, the Crossrail project has been expected to play a substantial role in boosting development in London and the South East. Our findings suggest that while Crossrail is not seen as the sole influence supporting commercial and residential building

near the stations, it is perceived to have (already) played a key role in focusing the attention of investors in particular areas, and underpinned confidence in the property market generally.

The topic of gentrification and displacement was particularly divisive, with a range of perspectives discussed by participants. Whilst some perceive gentrification as already occurring in areas surrounding future Elizabeth line stations, participants were unsure of the extent it can be attributed to Crossrail. There was a perception among the participants that London will change dramatically over the coming years anyway, through general population growth and changing demographics, the rising value of land and property, and the shifts and fluctuations between traditionally commercial centres (in the city centre) and areas historically associated with housing (suburban outer London).

The extent to which impacts have been felt during construction, was to a large degree, dependent on the volume of work being undertaken at each station, and how successful Crossrail and its contractors were in mitigating the negative effects.

The interviews also attempted to draw out from participants to what extent they believed these outcomes would have been seen without Crossrail, that is to say: counterfactual perceptions. The economic and property market impacts of Crossrail are, and will continue to be, impossible to fully distinguish from the range of other factors at play in the city, and indeed country. While attempts can be made to calculate the scale of impacts, it is only by combining quantitative data with qualitative findings, such as those presented in this report, that a more rounded and complete picture will emerge.

It is not possible to observe Crossrail or quantify its impact in a vacuum and participants recognise this. The growing population of London and the South East, historically low rates of house building, increasing modal shift towards public transport, the unknown ramifications on the political and economic stability of the UK that may result from leaving the European Union, and the relative strength of London's reputation among international investors were all cited as drivers for economic growth and development in the region that are, to differing extents, largely independent of the Elizabeth line. The quantitative analysis attempts to control for many of these factors to the extent possible.

It is important to remember that, as a baseline study, these findings can only give a sense of the perceived impacts of the Crossrail project at this point in time; the full impacts will not be clear for some years. Reconnecting with similar participants in the future may provide an understanding of stakeholders' perceptions of the project's impacts after it has opened. This baseline analysis throws up a number of perceived current or future impacts which will be important to test through post-opening quantitative and qualitative evaluation. These are summarised in the table overleaf.

6. Appendices

Appendix I Station Coverage Matrices

Table A.1 – Station characteristics matrix

Station name	Study Location	Route section	LAD	Located on LAD boundaries	Terminus	Interchange with LU	Interchange with LO or DLR	Interchange with NR	Major station upgrade	New development over or around	Deprived area	Labour attracting area	OA in CAZ	Other policy designation
Abbey Wood	✓	Inner	Greenwich	0	1	0	0	1	1	0	1	0	0	1
Acton Main Line		Outer	Ealing	0	0	0	0	0	0	0	1	0	0	0
Bond Street		Central	Westminster	0	0	1	0	0	1	1	0	1	0	1
Brentwood		Non-London	Brentwood	0	0	0	0	0	0	0	0	0	0	0
Burnham		Non-London	Slough	0	0	0	0	0	0	0	0	0	0	0
Canary Wharf	✓	Inner	Tower Hamlets	0	0	1	1	0	1	0	1	1	1	0
Chadwell Heath		Outer	Redbridge	1	0	0	0	0	0	0	0	0	0	0
Custom House	✓	Inner	Newham	0	0	0	1	0	1	0	1	0	0	0
Ealing Broadway	✓	Outer	Ealing	0	0	1	0	1	0	0	0	0	0	0
Farringdon	✓	Central	Islington	1	0	1	0	1	1	1	0	1	0	1
Forest Gate		Outer	Newham	0	0	0	0	0	0	0	1	0	0	0
Gidea Park		Outer	Havering	0	0	0	0	0	0	0	0	0	0	0
Goodmayes		Outer	Redbridge	0	0	0	0	0	0	0	0	0	0	0
Hanwell		Outer	Ealing	0	0	0	0	0	0	0	0	0	0	0
Harold Wood		Outer	Havering	0	0	0	0	0	0	0	0	0	0	0
Hayes and Harlington		Outer	Hillingdon	0	0	0	0	1	0	0	1	0	0	1
Heathrow T123		Outer	Hillingdon	0	1	1	0	0	0	0	0	1	0	1
Heathrow T4		Outer	Hillingdon	0	1	1	0	0	0	0	0	1	0	1
Ilford		Outer	Redbridge	0	0	0	0	0	1	0	1	0	0	0
Iver		Non-London	South Bucks	0	0	0	0	0	0	0	0	0	0	0

Station name	Study Location	Route section	LAD	Located on LAD boundaries	Terminus	Interchange with LU	Interchange with LO or DLR	Interchange with NR	Major station upgrade	New development over or around	Deprived area	Labour attracting area	OA in CAZ	Other policy designation
Langley		Non-London	Slough	1	0	0	0	0	0	0	0	0	0	0
Liverpool Street		Central	City of London	0	0	1	0	1	1	1	0	1	0	0
Maidenhead		Non-London	Windsor and Maidenhead	0	0	0	0	1	0	0	0	0	0	0
Manor Park		Outer	Newham	0	0	0	0	0	0	0	1	0	0	0
Maryland		Outer	Newham	0	0	0	0	0	0	0	0	0	0	0
Paddington	✓	Central	Westminster	0	0	1	0	1	1	1	1	1	1	0
Reading		Non-London	Reading	0	1	0	0	1	0	0	0	0	0	0
Romford	✓	Outer	Havering	0	0	0	1	1	1	0	1	0	0	0
Seven Kings		Outer	Redbridge	0	0	0	0	0	0	0	1	0	0	0
Shenfield		Non-London	Brentwood	0	1	0	0	1	0	0	0	0	0	0
Slough	✓	Non-London	Slough	0	0	0	0	1	0	0	0	0	0	0
Southall	✓	Outer	Ealing	0	0	0	0	0	0	0	1	0	0	1
Stratford		Outer	Newham	0	0	1	1	1	0	0	0	1	1	0
Taplow		Non-London	South Bucks	0	0	0	0	0	0	0	0	0	0	0
Tottenham Court Road	✓	Central	Camden	1	0	1	0	0	1	1	0	1	1	0
Twyford		Non-London	Wokingham	0	0	0	0	0	0	0	0	0	0	0
West Drayton		Outer	Hillingdon	0	0	0	0	0	1	0	0	0	0	0
West Ealing		Outer	Ealing	0	0	0	0	1	0	0	0	0	0	0
Whitechapel	✓	Inner	Tower Hamlets	0	0	1	1	0	1	0	1	0	0	1
Woolwich		Inner	Greenwich	0	0	0	1	1	1	1	0	0	0	0

Table A.2 – Clusters

ID	Cluster	Station name	Stations selected	Cluster characteristics
1	1	Abbey Wood	✓	Two most south-east stations, both with major station upgrade, both quite deprived.
2		Woolwich		
3	2	Bond Street		Two central stations in policy designation area (Bond Street in CAZ, Whitechapel in OA), both with interchanges with LU, both with major station upgrade.
4		Whitechapel	✓	
5	3	Brentwood		Eastern stations usually in deprived areas, predominantly with no major station upgrade; no interchanges with other rail services (except for Custom House).
6		Chadwell Heath		
7		Custom House	✓	
8		Forest Gate		
9		Goodmayes		
10		Ilford		
11		Manor Park		
12		Maryland		
13	Seven Kings			
14	4	Acton Main Line		Ealing stations plus Reading, Maidenhead and Hayes and Harlington; most with National Rail interchange, a few deprived, two with a policy designation City in the West (Southall and Hayes and Harlington).
15		Ealing Broadway	✓	
16		Hanwell		
17		Hayes and Harlington		
18		Maidenhead		
19		Reading		
20		Southall	✓	
21	West Ealing			
22	5	Heathrow T123		Heathrow stations.
23		Heathrow T4		
24		Heathrow T5		
25	6	Iver		Suburban Western stations with no particular characteristics, almost all in different local authorities.
26		Taplow		
27		Twyford		
28	7	West Drayton		Central, LU and NR interchanges, major station upgrades, labour attracting areas, with new development over and around the stations.
29		Liverpool Street		
30	8	Paddington	✓	Stratford and Shenfield plus three other stations in Eastern section, in predominantly undeprived areas.
31		Gidea Park		
32		Harold Wood		
33		Romford	✓	
34	8	Shenfield		Central station with NR interchange, in Area for Intensification.
35		Stratford		
36	9	Farringdon	✓	
37	10	Burnham		Western stations, all in Slough.
38		Langley		
39		Slough	✓	
40	11	Canary Wharf	✓	Two central labour attracting areas, both in Opportunity Area, no interchange with NR.
41		Tottenham Court Road	✓	

Table A.3 – Local Authority district coverage

ID	Station name	Local authority district	Stations selected
1	Brentwood	Brentwood	
2	Shenfield	Brentwood	
3	Tottenham Court Road	Camden	✓
4	Liverpool Street	City of London	(N.B. Farringdon serves City of London)
5	Acton Main Line	Ealing	
6	Ealing Broadway	Ealing	✓
7	Hanwell	Ealing	
8	Southall	Ealing	✓
9	West Ealing	Ealing	
10	Abbey Wood	Greenwich	✓
11	Woolwich	Greenwich	
12	Gidea Park	Havering	
13	Harold Wood	Havering	
14	Romford	Havering	✓
15	Hayes and Harlington	Hillingdon	
16	Heathrow T123	Hillingdon	
17	Heathrow T4	Hillingdon	
18	West Drayton	Hillingdon	
19	Farringdon	Islington	✓
20	Custom House	Newham	✓
21	Forest Gate	Newham	
22	Manor Park	Newham	
23	Maryland	Newham	
24	Stratford	Newham	
25	Reading	Reading	
26	Chadwell Heath	Redbridge	
27	Goodmayes	Redbridge	
28	Ilford	Redbridge	
29	Seven Kings	Redbridge	
30	Burnham	Slough	✓
31	Langley	Slough	
32	Slough	Slough	
33	Iver	South Bucks	
34	Taplow	South Bucks	
35	Canary Wharf	Tower Hamlets	✓
36	Whitechapel	Tower Hamlets	✓
37	Bond Street	Westminster	
38	Paddington	Westminster	✓
39	Maidenhead	Windsor and Maidenhead	
40	Twyford	Wokingham	

Table A.3 Station characteristics used to focus the expert discussion and clustering analysis

Station characteristic
Station location on the route
Whether the station is a terminating point
Whether there is an interchange with London Underground
Whether there is an interchange with London Overground or Docklands Light Railway
Whether there is an interchange with National Rail
Whether there were major construction works needed
Whether there will be new development over or around the station
Whether it is in an area that is expected to benefit from increased labour supply catchment
Whether it is located in an area of deprivation
Whether it is located in other Opportunities Areas or areas with other policy designations for a wider major regeneration or growth initiative (Areas for Intensification, City in the East, City in the West, Potential Strategic Outer London Development Centres or Legacy Development Corporation (Stratford))
Local authority coverage
Whether it is located at the boundaries of two local authorities, in which case potential varying policy approaches might impact the area's performance

Appendix II

List of Interviews

Participant type	Count
Local authority	15
Developer	17
Property agent	11
Business	18
Local organisation	9

Station (West to East)	Count
Slough	7
Southall	2
Ealing Broadway	6
Paddington	9
Tottenham Court Road	9
Farringdon	7
Whitechapel	12
Canary Wharf	8
Custom House	5
Abbey Wood	4
Romford	1
TOTAL	70

ID no.	Station	Participant type
1	Canary Wharf	Local Authority
2	Canary Wharf	Developer
3	Canary Wharf	Developer
4	Canary Wharf	Property Agent
5	Canary Wharf	Property Agent
6	Canary Wharf	Business
7	Canary Wharf	Local Organisation
8	Canary Wharf	Business
9	Whitechapel	Local Authority
10	Whitechapel	Property Agent
11	Whitechapel	Property Agent
12	Whitechapel	Developer
13	Whitechapel	Developer
14	Whitechapel	Local Organisation
15	Whitechapel	Business
16	Whitechapel	Business
17	Whitechapel	Business
18	Whitechapel	Business
19	Whitechapel	Property Agent
20	Romford	Local Authority
21	Paddington	Local Authority
22	Tottenham Court Road	Local Authority
23	Paddington	Local Organisation
24	Custom House	Local Authority
25	Ealing Broadway	Property Agent

ID no.	Station	Participant type
26	Paddington	Local Authority
27	Tottenham Court Road	Local Authority
28	Abbey Wood	Local Authority
29	Southall	Local Authority
30	Ealing Broadway	Local Authority
31	Custom House	Business
32	Paddington	Developer
33	Tottenham Court Road	Developer
34	Ealing Broadway	Business
35	Farringdon	Local Authority
36	Farringdon	Local Organisation
37	Custom House	Property Agent
38	Abbey Wood	Local Authority
39	Tottenham Court Road	Local Organisation
40	Slough	Property Agent
41	Ealing Broadway	Local Organisation
42	Slough	Local Authority
43	Custom House	Developer
44	Slough	Developer
45	Slough	Developer
46	Farringdon	Business
47	Tottenham Court Road	Developer
48	Farringdon	Business
49	Slough	Developer
50	Ealing Broadway	Local Organisation

ID no.	Station	Participant type
51	Custom House	Business
52	Paddington	Local Authority
53	Paddington	Developer
54	Paddington	Business
55	Tottenham Court Road	Developer
56	Farringdon	Business
57	Tottenham Court Road	Developer
58	Paddington	Business
59	Paddington	Business
60	Slough	Business
61	Slough	Developer
62	Whitechapel	Local Organisation
63	Farringdon	Local Organisation
64	Abbey Wood	Property Agent
65	Tottenham Court Road	Developer
66	Tottenham Court Road	Developer
67	Southall	Property Agent
68	Abbey Wood	Property Agent
69	Farringdon	Business
70	Ealing Broadway	Business

Note: A list of participants (position and organisation) has been stored for the purposes of establishing a comparable ex-post sample of participants, but those details are not published here to preserve the confidentiality of opinions expressed.

Appendix III

Sample of Interview Questions

Interviews were semi-structured; therefore, this sample is only a selection of the questions asked to participants.

Interview Questions
When did you first become aware of Crossrail?
What is your understanding of activities related to Crossrail that have happened so far?
What is your understanding of activities related to the Crossrail projects that are planned for the future?
What do you think the key impacts will be once Crossrail opens?
What other changes, specifically from a transport or economic perspective, have been taking place in the area?
What impact, if any, has the construction activity associated with Crossrail had?
Has the Crossrail construction had any environmental impacts, such as impacts on noise and air quality, in the area?
Would you say that any disruptions of the construction of Crossrail have been managed and communicated well?
Moving more onto the transport side, how will Crossrail effect transport capacity and travel options in the area?
How do you think Crossrail will impact transport demand and travel behaviours in the local area? Do you think it'll generate more trips either to or from [relevant station]?
In the context of the economy, what do you think will be the impact of Crossrail on property markets?
Do you think Crossrail has had an impact on house prices? What other factors other than Crossrail have impacted house prices?
Has development activity been more commercial or residential?
In terms of the increase in house prices and rents, do you think there's a potential for anyone to be priced out of the area because of that happening?
Are there any constraints on developments in the area, or anything else that would hold the area back from being able to reach its potential?
Has Crossrail had any other impacts, now or in the future, that we haven't mentioned so far?
How do you think that things may be different had Crossrail not been developed?

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