BARKING RIVERSIDE – LAND FRICTION

1. SCHEME SUMMARY

Summary

Barking Riverside is a 170ha brownfield site under development adjacent to the Thames in Barking, East London. Site preparation is costly because of unusually high land remediation costs and legacy utilities. Planning permissions for more than a small amount of development were conditional on the provision of a new public transport link, and a restriction on the amount of car parking, as the plans featured high density housing on a site with limited road access. In July 2022, an extension to the London Overground Gospel Oak to Barking line opened at Barking Riverside (the Barking Riverside Extension).

In the early 2000s, plans for an extension of the Docklands Light Railway (DLR) were developed, but the scheme was cancelled in 2008 due to lack of funding. Alternative options were developed and considered, but it was not until 2017 that planning permissions for an extension to the Gospel Oak to Barking Overground line were approved. Development was slow until the extension opened, and it is anticipated it will take around a decade to complete the build out from now.

The history of the development turns on two points where the ownership of the site changed. In 2004, Barking Riverside Limited was formed as a joint venture between Bellway Homes and the Homes and Community Agency (later replaced by other public sector housing funding bodies). Then in 2017 Bellway sold out their stake to L&Q, a not-for-profit developer of social and affordable housing. In each case, this facilitated major progress over agreeing the transport infrastructure provided. Ultimately the first failed because of the global financial crisis, but it appeared solved at that point. The time leading up to these reorganisations involved extended stasis, and the potential that such delay could have been avoided in part if the reorganisations were made sooner.

We set out how these delays are consistent with modern theories of land development which focus on a real options approach. It is often rational for land-owners, with limited ability to predict the future, to wait and see rather than commit themselves early, because of potential up-sides in their profit. This effect is exaggerated when there is increased land market volatility, as occurred in the global financial crisis, and when there is potential for non-market gains, such as government schemes benefiting development potential.

We set out how the site specific issues, requiring coordination between the transport infrastructure, land remediation, utilities and developing sufficient amenities to attract residents act as an impediment to development, both in the past and still now. We also set out how constraints and considerations in the financing of development have slowed development, and continue to do so.

2. SCOPE

The Department for Transport (DfT) has commissioned CEPA to carry out a study on the effect of uncertainties in the delivery, scope and timing of major transport infrastructure, on land development that is substantially contingent upon that infrastructure. This study is delivered substantially through the delivery of a number of case studies. It has subsequently commissioned CEPA to extend one of those case studies to develop a deeper understanding of the effect of land market frictions on development.

The aim is to develop a clearer and fuller picture of what may have contributed to the delay or cancellation of a chosen property scheme, better to distinguish it from the effects of uncertainty in infrastructure development. Specific questions the case study should address are:

- The parties involved – how did they interact and what were their incentives?
- The role of information – did concealed or asymmetric information affect the outcome?
- The history of the site, the decisions, institutional and legislative background.
- The role of government at various levels.
- The role of contextual factors.

In a preparatory stage, we agreed the selection of Barking Riverside as the case study to extend, having considered the potential it provided to address these questions usefully against available alternatives.

3. INTRODUCTION

The basic facts and timeline of the Barking Riverside (BR) site and the Barking Riverside Extension (BRE) to the Gospel-Oak Barking Line (GOBL), are set out in our main Barking Riverside case study. We refer to that, but set out a few reminders of the more salient facts for this study of land frictions.

The aim of this case study is to assess the extent to which various frictions in the land market can inhibit development. We have set out a taxonomy, description and understanding of various relevant frictions in the literature study which precedes this case study. We will be setting out the objectives, and interactions of the main parties involved, to try and understand their motivations. These main parties are the developers, governmental bodies at local, London-wide, and national level, and the transport agencies.

The Barking Riverside development site comprises 170ha of brownfield land alongside the Thames. The heavily used A13 trunk road lies somewhat to the north, and presents a bottleneck in terms of road access to the site, as there is no access except via the A13. The former industrial use of the site, including in particular a coal power station, has left behind one of the most contaminated former industrial sites in the country. This history has also led to there being extensive utility services on the site, many of them unmapped, which require identification and relocation where necessary. An operating power station still lies on the western boundary of the site.

It is easy to think that development of industrial land for housing in London will generate a large surplus, especially with present day property prices. But Barking is one of the least attractive housing locations in all London, with the lowest property values. The extent to which BR could potentially be a relatively attractive location for housing even by the standards of Barking, depends upon what infrastructure and services are provided to the site. Then the costs of site decontamination, utility relocation, and other preparation activities are unusually large. The site was purchased for development in 1994. There had been a property market crash starting in about 1989, and average house prices would not begin to grow again, in inflation-adjusted terms, until around 1997. Even though house prices are now more than double that time, in real terms, we will see that even today developing homes on this site is far from financially straightforward.

We have been able to talk with the London Borough of Barking and Dagenham (LBBD), Barking Riverside Limited (BRL), L&Q, Transport for London (TfL), Homes England (the present housing funding agency, in succession to earlier bodies which were involved at previous times), Barking and Dagenham Borough Council (BDBC) and the GLA. Some of the individuals previously worked for other parties involved in the project, and so we were fortunate to get a long view. The LBBD representative had involvement over 40 years. We have been unable to obtain an interview from Bellway Homes, and have had to infer their view from parties dealing with them. We also put questions to other developers on other case studies, who had some knowledge of the general points we wished to understand, and in some case some knowledge of the specific case.

Table 3-1 below presents a selective timeline of the development.

Table 3.1: Barking Riverside timeline

Date	Event
1994	Bellway Homes acquire 170ha Barking Riverside site. They obtain permission for, and build out, around 1,000 homes by around the end of the decade, on the northern edge of the site.[1]

[1] Mair, L. (2014), *Rail holds the key to 11,000 homes at Barking Riverside,* Construction News. Available online (accessed on 15 December 2022).

Date	Event
2004	Barking Riverside Limited formed as a joint venture between Bellway Homes Limited and the Homes and Communities Agency (later replaced by GLA Land and Property, GLAP).[2]
2005	First Barking Riverside masterplan drawn up, with expectations that a DLR extension would connect the development.[1] DLR extension presented as a potential future project (subject to available funding) in TfL Business Plan.[3]
2006	Mayor of London instructed DLRL to further develop the plans for the DLR extension.**Error! Bookmark not defined.**
2007	Bellway Homes and Homes and Communities Agency receive outline planning permission for 10,800 (further) homes at Barking Riverside,[2] but with the restriction (a section 106 agreement) that only 1,200 homes could be built until transport links were delivered.**Error! Bookmark not defined.**
2008	DLR extension cancelled due to shortage of public funds, as a result of the Global Financial Crisis.[4]
2009	Detailed planning permission granted for first 4,000 homes.[1]
2010	Bellway starts (again) slowly building homes at Barking Riverside.[5] BRE first proposed as alternative option to provide sustainable public transport for Barking Riverside.**Error! Bookmark not defined.**
2011	Homes and Communities Agency transfers its share in Barking Riverside Limited to GLA Land and Property.[6]
2016	L&Q buy out Bellway Homes' stake in the partnership with the Greater London Authority (GLA). Bellway retained an option to deliver a significant proportion of the homes on the site as development partner, and as a supporting contractor for affordable housing units.[7] GLA Land and Property and L&Q form the Barking Riverside Ltd JV,[8] with 49% and 51% share interest, respectively.[9] Funding package agreed in principle between TfL and Barking Riverside Limited to fund the BRE.[10]
2017	Secretary of State grants Transport and Works Act Order, giving planning permission for the London Overground extension.[8] Amendments approved to outline planning permission for the Barking Riverside development, including the replacement of the DLR extension with the BRE scheme.[11]

[2] Greater London Authority (2013), *Barking Riverside Ltd – continuation of support and statutory accounts*. Available online (accessed on 14 December 2022).

[3] TfL (2005), *The TfL business plan 2006/7-2009/10.* Available online (accessed 15 December 2022).

[4] BBC News (2008), *TfL scraps projects and cuts jobs*. Available at: http://news.bbc.co.uk/1/hi/england/london/7712002.stm (accessed on 13 December 2022).

[5] Hill, D. (2014), *The Osbornomics of Barking Riverside,* The Guardian. Available at: https://www.theguardian.com/uk-news/davehillblog/2014/mar/23/barking-riverside-budget-2014-london-overground (accessed on 15 December 2022).

[6] Interview with Homes England.

[7] Morby, A. (2015), *L&Q buys out Bellway at 11,000 home Barking Riverside*, Construction Enquirer. Available at: https://www.constructionenquirer.com/2016/03/11/lq-buys-out-bellway-at-11000-home-barking-riverside/ (accessed on 14 December 2022).

[8] TfL (2022), *Barking Riverside station is open, helping unlock thousands of new homes in east London*. Available at: https://tfl.gov.uk/info-for/media/press-releases/2022/july/barking-riverside-station-is-open-helping-unlock-thousands-of-new-homes-in-east-london (accessed on 14 December 2022).

[9] Greater London Authority (2016), *Request for Mayoral Decision – MD1625 London Overground Extension to Barking Riverside.* Available at: https://www.london.gov.uk/decisions/md1625-london-overground-extension-barking-riverside?ac-92471=92463 (accessed on 16 January 2023).

[10] Greater London Authority (2016), *MD1594 Barking Riverside Rail Extension TfL Agreements*. Available at: https://www.london.gov.uk/decisions/md1594-barking-riverside-rail-extension-tfl-agreements?ac-94341=94340 (accessed on 15 December 2022).

[11] Bellway (2020), *Planning Statement and Affordable Housing Statement Barking Riverside Plot 209B.* Available online (accessed on 15 December 2022).

Date	Event
2022	Barking Riverside station opens**Error! Bookmark not defined.**

4. THE PARTIES AND THE HISTORY OF DEVELOPMENT

The London Borough of Barking and Dagenham Borough Council (LBBD) has had the objective, at varying levels of formality, of developing BR for housing from at least the mid-1980s. It recognised that the site would not be attractive for housing, except on a small scale, unless suitable infrastructure, probably in the form of a fixed link could be provided. It also recognised that it would be implausible for a developer to fund that, given the cost of remediation of the site and value of housing. Its early objectives had in mind housing on a smaller scale than is now intended, but probably this was not a well-informed position recognising the requirement for sufficient density to justify the investments which could make it a plausible development zone. It recognised that there would be a large hurdle in making the site sufficiently attractive to develop housing. But it suspected, as in many prior cases, that as the site began to be developed, this would create momentum and hence funding and finance for further development.

BDBC has thus long sought to obtain a transport links into BR that could facilitate the development of the area. The difficulty in the early stage has been creating interest in other parts of government and transport agencies to facilitate that.

Bellway Homes purchased the BR site in 1994. It purchased other sites in the general area, conveniently located to take advantage of the new transport infrastructure then being extended into that area, such as the DLR, and developed them. It was also able to gradually develop around 1000 homes on the northern edges of the BR site that are more accessible to the road network, and that it got early permission for. This development took place mainly in the late 90s, but may have extended into the following decade. It obtained grants to pay for the remediation of the part of the site that was developed at that time. These initial 1000 homes are often not included in the understanding of the BR site that is difficult to develop. It had been hoped by Bellway and LBBD that this initial development would create the momentum for the gradual further development of the site. But this did not happen, and instead these parties gained an appreciation of the size of the infrastructural impediment to further development of the site.

It is not usual in Britain for PLC housebuilders, such as Bellway Homes, to own sites like BR, i.e. large sites that require a long-run strategic approach to development. Usually such sites are purchased by specialist strategic developers, with a different capital structure suited to those activities. These companies are typically not directly involved in construction, but rather carry out master planning, carry through the activities that make development possible, and eventually sell development-ready sites to housebuilders and other development construction companies.

We can only speculate why Bellway Homes purchased this site, being unable to ask them (they declined to be interviewed). Clearly part of the site was suitable to the immediate development of around 1000 homes. But the greater part of it was not. Maybe, like LBBD, it also thought that momentum would be established as it expanded the development, and the authorities would see the sense in making the public investments necessary to continue its development. It would take several years to build out that first phase, and much can happen.

There was a recognition of the significance of the site in government during this period, and the need for a transport link. We understand that there was a disagreement in government whether it would primarily be a transport project funded by the transport budget, or a development project funded by the housing budget.

In 2004, Bellway formed BRL in conjunction with the Homes and Communities Agency. By then, development would have been clearly stalled. Bellway had by then recognised it could not succeed on its own to motivate the public sector to cooperate in delivering the infrastructure needed to make the site developable. Bellway identified the need for a strategic approach to the site, and hence a strategic partner that would be in a better position to achieve these things. The strategic partner would be in a better position to obtain progress for suitable transport infrastructure, and have access to a wider range of funding opportunities.

This kicked off a sequence of events that resulted in an understanding that the DLR would be extended into the site. A masterplan was developed based on the assumption of a DLR extension, backed by an agreement to fund that extension. On the back of that, BRL obtained outline planning permission for a (further) 10,800 homes. Of the 10,800, 1,200 could be built immediately, and a further 4,000 once delivery of a fixed transport link was committed. Parking was to be limited, to reduce the demand on the roads. Whatever misalignments had previously existed within government over who should fund it, they were now resolved. This apparent unlocking of the development evaporated when the Mayor of London announced that TfL funding was no longer available, a consequence of public sector spending reductions arising from the global financial crisis.

Bellway began building again within the 1,200 permitted, but only at a slow rate, because the market for selling these was weak, given the general location in Barking, poor public transport options, and limited local amenities.

With the DLR extension cancelled due to shortage of funds, the BRE was examined. This had the advantage of being rather cheaper than the DLR extension, albeit not as valuable to the development. It was potentially more fundable. One question I sought to examine is whether this trade-off had been examined earlier when the DLR extension was chosen. I have been unable to determine this. On the face of it, it seems possible that the BRE would have looked much less attractive when the DLR option was selected, than it did later when it was cancelled. This is because in the interim the Gospel Oak Barkling line underwent an upgrade. This was largely completed in 2008, though it was some time before further investments, for example rolling stock, were completed to enable today's passenger service of 4 trains per hour. Since the line is heavily used by freight, there are 4 additional paths per hour allocated to freight trains. Previously at most 2 passenger trains per hour ran on the line. At this level of service, the BRE would have seemed much less useful, and it seems unlikely this would have been attractive.

Bellway Homes sold out its share in BRL to L&Q in 2017. It did so because it realised that the BRE required some funding from BRL, and as a partner in BRL it would be unable or unwilling to provide funding on the scale available, while satisfying its shareholders. It retained rights to build and market houses, when BRL had feasible sites for such development.

TfL/GLA was unwilling to fund the BRE entirely itself, because it failed to demonstrate a strong transport case. It spends its money according to criteria that requires a good transport case for the investment. Rather, to the extent that the investment was promoted because there was a development case for it, so funding would have to come in part from other organisations which were willing to invest because of the development potential.

Sites like the former Battersea Power Station site, where the development potential is so large that an underground extension can be funded entirely by developers and contributions from local property owners are quite unusual. It is also relatively unusual for developers to be able to assemble investments on that scale for infrastructure that only enables development. Developers in the area of Canary Wharf were able to make large contributions to the transport infrastructure in that area. BR is clearly in a different category from these high value property developments.

L&Q was able to devote some of its own funds to funding the BRE, because it is a non-profit-making organisation financed through bonds. This enables it to take a longer term view than shareholders of a PLC housebuilder would accept, given the risk profile of such investments. L&Q builds social housing, but it can also raise funds for that by releasing a portion of the sites it invests in back to commercial housebuilders, after preparation, who pay it for that opportunity.

Although BRL had planning permission for 4,000 further homes before BRE opened, in practice it did not develop to anything like that extent before BRE opened. Even now, after opening, it is still well short of that level. We learn that it was not a commercial prospect to develop that 4,000 homes before opening.

BRL itself has had a number of impediments to developing out the site as fast as it would like. A major one is the recycling of finance as it develops in phases. BRL obtains grants to assist it with land remediation, and to develop social housing. It must nevertheless raise finance to cover the full cost of land remediation and site preparation, including basic infrastructure such as roads and utilities. Financing limits control the size of the phase it can finance, and then recycling the capital for the next phase of development. It is considering whether it might raise more capital to increase the size of phases, and whether larger phases built out quicker would ultimately reduce the long

term financing costs of its contribution to the funding of BRE and other early costs. But it also needs to consider the strength of the market for sales, and the present economic downturn and construction cost inflation are factors that can militate against speeding up development. The same issues would apply to commercial strategic developers as well as BRL.

Another impediment is that it has to subsidise amenities necessary to attract sales – supermarket, bar, restaurant, sports facilities etc. Without these, the accommodation is unattractive to sufficient buyers. Once there is a sufficient size of community, these will become profitable. But in the short run, these amenities require support from BRL. This, at least, is something BRL can do to increase the speed of development, because it can finance it. It would be harder for a commercial developer to finance that.

Currently, BRL sees itself continuing to develop the site, aiming for completion sometime in the early 2030s. It believes that once the size of the community there is sufficient to attract amenities, without the need for subsidy, then development will become easier, as it will be a more attractive place to live.

5. ANALYSIS OF LAND MARKET FRICTIONS

In the literature review, we set out a taxonomy of factors that might be considered frictions in the land market, and which have been identified in the literature as applying in some cases. We will first set out how we interpret the facts and history of the case, as is relevant to understanding the history in relation to the hypotheses. We will go through these hypotheses, and assess whether the present case study presents any evidence for such factors applying in this case, or indications that they might apply in other cases.

Hypotheses raised in the literature review

Market behaviour – real options explain delay. Theory suggests that participant actions in development land markets are better explained by the theory of real options than the classic theory of development. Real options suggests that often a wait-and-see approach can remain rational even once a decision is profitable, as there is rational hope of larger profits from later developments.

Market volatility can increase delay. Real options increase in value when the market is more volatile. An increase in the value of the real option increases the probability of waiting. Simply, when the market is more volatile, there is a higher probability of an up-side from wait-and-see.

Anticipation of non-market gains can increase delay. When developers see the potential of gains arising from non-market factors, this increases the value of wait-and-see and can increase delay.

Land-banking can increase delay. Some developers may have a policy of building up a portfolio of developable sites to smooth their activity, reduce risk and increase their options at any given time. This increases delay.

The land planning system can increase delay. This is one of the most cited institutional reasons for delay in development, that it takes a long time to get a planning permission. Developers often renegotiate planning permissions, claiming they are no longer feasible, and may even accept a planning permission intending to renegotiate it.

Non-rational behaviour in negotiation can cause delay or cancellation. Agents often vary from expected profit maximisation and minimise downside risk instead. This can frustrate negotiations where a gain from trade is available. It may be impossible to resolve hold-outs in some cases.

Site-specific issues can cause delay. The need to coordinate numerous specific issues at a site, and the multiple actors involved in solving those problems, and their own individual funding issues, can cause delay. Rolling out utility services, and coordinating domestic, commercial and public service developments can cause delay until they are aligned.

Financing constraints can cause delay. Developments have a requirement for large working capital, which can be unacceptable to financiers beyond a point. To reduce the size of this, sites are often developed in phases to recycle the capital. The financing of certain actors makes it harder for them to take long-term strategic expenditures.

On the face of it, the main issue affecting the delays at BR have been that most of the site is not feasible for development without a substantial investment in a useful fixed transport link. For a period of time, it looked like the

public sector was willing to fund the best and most expensive of the realistic options, an extension to the DLR. Then this fell through, because of the unpredictable external factor of the global financial crisis. Money for such large local transport projects has been in short supply ever since. Nevertheless, in due course an alternative, cheaper option was devised, and funding arranged for it, which has now been delivered.

Over the course of the period since the site was first acquired by a developer in 1994, the value of property in London has increased substantially, with only short interruptions to that continuing increase. The population has grown and housing shortages, especially in London and the SE, have become more acute. As the market changes in this way, so it becomes more valuable to unblock BR, and potential financial contributions from developers might grow. The financial feasibility of development has substantially improved. We might speculate that the previously lower financial feasibility was a contributor to why it was not unblocked solved earlier. But we have put this to stakeholders, and none identified it as a material factor.

One interpretation of the facts is that there were two periods of unnecessary delay. Each time there was a reorganisation in the ownership of the site, then quickly something happened. In each case, there was a long period of stasis before that reorganisation happened. Those periods of statis might be seen as unnecessary delays, each of perhaps around 4 to 5 years.

In particular, the public sector did decide it was willing to invest in the DLR extension as early as around 2005, once it had become clear that there was a coalition willing to back it. Had the DLR extension been agreed sooner, it would have been under construction when the global financial crisis hit, and probably continued to completion. Maybe that could have happened if the 2004 reorganisation of ownership had happened sooner. It should have been clear that there was no way forward to developing the main part of the site without some kind of arrangement like that well before 2004. Again we see the BRE alternative emerged quickly with the reorganisation in 2017, again when there was a coalition willing to back it. It seems possible that if these ownership reorganisations had happened sooner, if the need for them had been identified sooner, then these solutions might have emerged sooner. Raising any kind of large commercial finance for development became difficult during the main period of the financial crisis. But by about 2012 things were getting moving again.

Today, the fixed transport link has been built and opened. Yet it is still not plain sailing to develop the site, which looks like it will still take over a decade to reach completion. Despite the large shortage of housing in London, and current property values near historic highs, we see that still it can be difficult to build out a large development at speed.

5.1. Market behaviour – real options

Hypothesis raised in the literature review
Theory suggests that participant actions in development land markets are better explained by the theory of real options than the classic theory of development. Real options suggests that often a wait-and-see approach can remain rational even once a decision is profitable, as there is rational hope of larger profits from later developments.

The main factor identified in the literature survey leading to delays on the part of developers is the real option effect. Once you make an irrevocable decision, you have made it, and the potential profits that might result from alternative opportunities, if you wait and see, are lost. This is an informational effect. Information later revealed will determine what the best policy would have been, and might be wrong.

There does seem to be some indication that the developers were in a situation of wait and see, for extended periods during this process, in particular the periods leading up to the ownership reorganisation. At each of these points, the previous owner fixed its gain, or part of its gain, from the site. In doing so, it lost potential up-sides which might later arise, if it retained its equity in the gain, if something happened which made the site much more valuable to the developer. Typically, this might be the public sector deciding to facilitate development by funding the required infrastructure.

There were reasons to suppose that such gains might occur. The entire expansion of the DLR and North London Line, and discussions on the improvements to the Gospel Oak Barking Line, were all predicated on economic renewal and development of the derelict and underdeveloped regions of the East End and Thames Gateway to London. There were specific initiatives to enable this. Bellway themselves had several times obtained other sites in this region, and developed them profitably once infrastructure was built, and maybe taken advantage of other initiatives of economic regeneration in the area.

It is hard to be definitive that this is what has happened. We only have the appearance of it. But these periods of stasis leading up to the point where reorganisations were made have the characteristic of wait-and-see about them, that indicates at least a degree of market behaviour consistent with the real options description of the behaviour of developers.

5.2. Market volatility

Hypothesis raised in the literature review
Real options increase in value when the market is more volatile. An increase in the value of the real option increases the probability of waiting. Simply, when the market is more volatile, there is a higher probability of an up-side from wait-and-see.

The period when the market for development land was most volatile was during the global financial crisis. Specifically for BR, the experience was even worse, as the DLR extension was cancelled.

This coincides with what might be the longer of the two main delays we have identified. The initiation of the global financial crisis and its deleterious effect on the financing of large developments did not encourage the owners of BRL to sell out, rather they sat on it and waited, for a long time. They were not so financially distressed they needed to sell, and probably they would not have found it easy to sell for much money at that time. It may seem obvious that there is little point in selling something when it reduces to a small value, but retains a substantial hope value. But it perhaps makes clear that market volatility is a cause of increased delay in development decisions, and probably occurred here.

5.3. Anticipation of non-market gains

Hypothesis raised in the literature review
When developers see the potential of gains arising from non-market factors, this increases the value of wait-and-see and can increase delay.

The theory suggests that delays can be longer when the developer anticipates non-market gains. This seems a clear and evident factor in this case. Much of the course of events at BR has been the developer waiting for third parties to take action which would increase the value of its site. This is not exposed to the market, and hence is a non-market gain. In this case, it is an informational effect. Information later revealed will determine whether those gains arise, and what would have been the best policy.

The developer bought a large derelict site. A small part of it could be developed immediately. But most of it would require third parties to make large investments to make it happen. There were reasons to suggest that they might do that, indeed around a dozen years later they nearly did. Buying the site was clearly speculative in hope that it might become much more valuable later, with the changes and development in the region. The developer's hope for non-market gains were a substantial part of why it waited, and may explain in part why it did not sooner reorganise the ownership in ways where it lost some equity in future uncertain gains.

5.4. LAND-BANKING

Hypothesis raised in the literature review
Some developers may have a policy of building up a portfolio of developable sites to smooth their activity, reduce risk and increase their options at any given time. This increases delay.

Land-banking is the term given to developers buying a portfolio of development land, to ensure that they have a continuing flow of stable activity over time, and to help them choose the best time to develop each part. BR was not a developable piece of land which the developer could build out at a time of its own choosing. Land-banking is not a relevant factor on this occasion.

5.5. THE LAND PLANNING SYSTEM

Hypothesis raised in the literature review
The land planning system is one of the most cited institutional reasons for delay in development, that it takes a long time to get planning permission. Developers often renegotiate planning permissions, claiming they are no longer feasible, and may even accept a planning permission intending to renegotiate it.

On this occasion, the land planning system has mostly been cooperative to the developer's wishes, as there was a strong commonality of interest between developer and authorities in developing the land. There have not been the kind of delays to planning that commonly occur when there is strong opposition to the development from some quarters, as there has not been any such strong opposition. Bellway easily obtained planning permission to build out the first stage that was developed in the late 1990s, and did not require major infrastructure developments to support it.

To the extent that later planning permissions for further development of the main part of the site, planning permission did place limits on that development until certain infrastructure had been developed. But that was largely the commercial reality of the site. The planners gave the developers permission to develop 4,000 homes once the fixed link was committed, but they barely used this, as the reality was that this scale of development was only financially feasible with the fixed link in place. Even with it in place, it is taking time to get to 4,000 because of the difficulties of marketing the homes there.

A restriction on parking has been placed on the site, which would potentially make it less attractive to potential residents. But in reality, the road system would not be able to cope without some kind of restraint on road vehicle usage in the area. It was consistent with the general issues required to obtain development of the site.

Whilst the planning system is a consistent factor in the difficulty of development in Britain, it does not appear to have been a material restraint on development in this case. Nor has renegotiation of planning permission been a material factor.

5.6. NON-RATIONAL BEHAVIOUR IN NEGOTIATION

Hypothesis raised in the literature review
Agents often vary from expected profit maximisation and minimise downside risk instead. This can frustrate negotiations where a gain from trade is available. It may be impossible to resolve hold-outs in some cases.

Theory raises the issue that risk reduction by one side to a negotiation can lead to a failure to come to agreement. The specific issue that tends to be raised in relation to development is that the developer has higher appetite for risk than those smaller parties they seek to negotiate with. In fact, if anything here the problem has been that at times the developer did not have sufficient appetite for risk to put up long term finance to help fund the improvement of the site, that others would later put up when ownership changed. So the particular point raised in the literature does not seem applicable here.

5.7. SITE-SPECIFIC ISSUES OF INFRASTRUCTURE

Hypothesis raised in the literature review
The need to coordinate numerous specific issues at a site, and the multiple actors involved in solving those problems, and their own individual funding issues, can cause delay. Rolling out utility services, and coordinating domestic, commercial and public service developments can cause delay until they are aligned.

Clearly there have been large site-specific issues in the present case. It is a clear and evident case of site-specific issues presenting an impediment to development. Not only the need for transport infrastructure, and land remediation, there have been large issues with concealed networks of legacy utilities on the site serving the former industry, and maybe to some degree the power station that is still operating on an adjacent site.

It has been recognised from the start that it is unrealistic to expect developers to solve all of these issues with their own money. Some of this is what we would expect to pay for in the long term through utility bills. Some of this we would expect the public sector to fund. The public sector is sometimes able to tap into development gain and wider property value uplifts to help it fund the infrastructure. But asymmetric information acts as an impediment to negotiating the optimal deal with developers over obtaining funding from development gain. Tapping into wider property value gains can likely only tap into a small proportion of those gains, given the difficulties of setting up and calibrating a Community Infrastructure Levy (CIL) that is the typical instrument chosen for this. There was no CIL for the BRE, probably as there was little existing or wider population benefiting from it and which would be suitable for taxation.

It is difficult to resolve these site-specific issues, and this has clearly been behind most of the difficulties causing delay at this site. It is not unreasonable that the public sector and large utility companies should be expected to fund the kind of infrastructure that these parties normally fund to facilitate the existence of our towns and cities. But in the short run it can be difficult for them to fund them, and to organise them in the coordinated fashion required to facilitate the build-out of an area that it is in the public interest to build out. There can be mistrust between those who will ultimately develop the houses and commercial property, because of the suspicion that the commercial developers are making a lot of money and could contribute more.

A difficult factor of coordination in the present case has been creating a community that is attractive to residents. The site is somewhat isolated from general amenities, and needs to become its own community, with its own local amenities, to be attractive. That will not be a problem once the number of residents is large enough, provided that sufficient space is allocated for such commercial developments. That should not be difficult, because they will eventually be at least as profitable to develop as the housing. But presently it is a problem, as the amenities are not profitable with the present size of community, and BRL is having to subsidise them to ensure they are present. This is a somewhat curious situation. Ideally it resolves itself before too long as the community grows, though currently the economic situation is at risk of causing some slow-down in the development rate, rather than the speed-up that BRL would prefer, if it can finance it.

5.8. FINANCING CONSIDERATIONS

Hypothesis raised in the literature review
Developments have a requirement for large working capital, which can be unacceptable to financiers beyond a point. To reduce the size of this, sites are often developed in phases to recycle the capital. The financing of certain actors makes it harder for them to take long-term strategic expenditures.

Financing considerations and constraints have clearly been a large part of the present issues. Ultimately the present owners of BRL are able to promote the development of the site because they are able to make long-term investments in site preparation and infrastructure. PLC housebuilders typically do not make such investments, at least not at this kind of scale, and no one expects them to make them. That is not their core skill, nor is it consistent with their financial structure and the expectations of their financiers and investors.

There are strategic commercial developers, who more often own large sites requiring planning and investments to make the fit for development. Typically, they are not actually construction companies, rather they prepare the sites and sell them to constructor-developers. They have different sources of finance and expectations from their investors, than the constructor-developers. They are structured to be better able to make those strategic investments in development sites. Why this site ended up in the hands of Bellway Homes rather than such a commercial strategic developer, who mostly buy such sites in Britain, is unclear. Perhaps such developers could see it appeared difficult even by their own standards. Perhaps Bellway read the situation differently, and it did not turn out as it expected.

Financing remains an issue for all developers of large sites, that slows down their development, because of the mere size of the quantity of capital that would be needed for rapid build-out. So in practice developments are often phased, keeping the amount of working capital needed smaller, and allowing recycling of the capital as completed properties are sold or let. Such phasing of development also assists developers retime their developments, speed them up or slow them down, to respond to the market, or to external factors that can affect the course of development.

6. CONCLUSIONS

BR is an unusual development site. It is one of the largest and most contaminated brownfield development sites in the country. Despite being well within London, it is somewhat cut off from neighbouring areas due to the geography of the site, and the lack of sufficient and convenient public transport capacity before the BRE was completed. It needed a specific fixed public transport link to make it feasible. Large scale was necessary to justify the construction of such a fixed link, but it remains difficult even now the link is completed to expand to that scale. The consequence is that development there, beyond the initial easy phase, was not commercially feasible without at least substantial contributions from the public sector towards remediation and infrastructure development.

It was unfortunate for BRL when the DLR extension was apparently agreed to with full public sector funding, and then cancelled due to the exigences of public finance arising from the global financial crisis. A decade later, an alternative, cheaper, scheme was promoted with some funding from the new developer on the site. It would be easy to see this history of delay in delivering the public transport link as a misadventure. Yet each proposal only came to fruition after a reorganisation of the ownership of the land, and then it came about relatively quickly. So there was a potentially unnecessary delay in each case, which was the time it took to come to the recognition that a reorganisation of ownership was necessary for progress.

The literature review set out how in theory owners of development land often have a rational choice to wait and see, rather than commit immediately. It is often plausible that a better option will be available later. This is the real options model of development, and it better describes what we see in development decisions than the classic model of develop when sufficiently profitable. The reorganisations of ownership that catalysed those decision points were potentially delayed by precisely such considerations. The present owner could rationally hope that better things might happen, until time passed and they didn't. Only then did it do what it could have done earlier.

Sites which require large up-front expenditures to enable development are difficult to fund and finance. Some developers have the wrong capital structure to enable it as well as others, and the ownership of the site had to change to put it in the charge of organisations with the right kind of objectives and finance to enable it to happen. Financial constraints remain an important factor limiting the speed of development at the site, as finance has to be recycled with each phase. This can be avoided with larger financial facilities, but in practical reality that is often not attractive to financiers.

The delays in getting the core BR development started and moving towards completion, and continuing delays in carrying it out are also affected by a number of other factors, relating to the need to fund, finance, and coordinate all the matters that need to be in place for building to proceed, and for potential occupants to be attracted to take up the properties built.

The planning system has not resulted in much delay in this case, which is perhaps different from many large developments. Planners were supportive of development, and there was little opposition to it from stakeholders that can often result in delay. Whilst planners placed restrictions on development, those largely reflected commercial reality.

UK

Queens House

55-56 Lincoln's Inn Fields

London WC2A 3LJ

T. **+44 (0)20 7269 0210**

E. **info@cepa.co.uk**

www.cepa.co.uk

Australia

Level 20, Tower 2 Darling Park

201 Sussex Street

Sydney NSW 2000

T. **+61 2 9006 1308**

E. **info@cepa.net.au**

www.cepa.net.au

cepa-ltd @cepaltd