

# Stage C Report



## FUTURE BRIXTON: Somerleyton Road Project

JUNE 2013

# FUTURE BRIXTON: Sommerleyton Road Project

## Stage C Report

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This report has been reviewed and approved for issue by the following members of the PTEa project team:

- Kaye Stout      Pollard Thomas Edwards architects
- Tim Atwood     Conisbee Consulting Engineers
- Phillip Murphy   PRP

## Executive Summary

The Somerleyton Road project is a unique opportunity for the council to work with communities living and working in Brixton to bring about positive change to this exciting part of the borough.

The ambitious plans include: bringing Ovalhouse and all their expertise in engagement and community participation to Brixton, building new homes, a significant proportion of which will be affordable to local people and providing a mix of community and commercial spaces which will support local communities and potentially be managed by a community development trust.

The report focuses on three design options for the development of the site and reflects the council's position that whilst there are very clear and definite aspirations for the site, there is also flexibility in how those aspirations can be achieved.

The council is looking for a development partner who shares our passion and vision for Brixton and this report represents the first step towards creating something very different and very exciting for the future of Brixton.

# Introduction

section 1

## Introduction

### PURPOSE OF REPORT / POTENTIAL FOR LEAD MEMBER TO INTRODUCE THE REPORT

Lambeth Council's Future Brixton programme is about positive change to the lives of local people.

The Somerleyton Road project is one of the first to come forward as part of Future Brixton and is being developed in partnership with the local community and in particular two local organisations; Brixton Green and Ovalhouse. The project represents an outstanding opportunity for local people and local groups to work alongside the Council to bring about major change to this exciting part of Brixton.

The report represents a key milestone for the project and contained within are a series of design proposals which have been worked up in partnership with local people.

The report provides guidance to potential development partners who wish to work with the Council and our partners in delivering Future Brixton: Somerleyton Road.

### BASIS OF REPORT

This report has been prepared by the PTEa team for Lambeth Council, and guided in part by the feedback from Brixton Green, Ovalhouse and relevant stakeholders.

The initial brief provided by the Council in November 2012 has been developed over a series of workshop meetings involving the London Borough of Lambeth, Ovalhouse, Brixton Green, the project team and local stakeholders including Southwyck House TRA, Moorlands Community Trust, Brixton Society, Carlton Mansions, and the Mural Preservation Society over a period from January to March 2013.

The report focuses on the site referred to as Somerleyton Road, which is a 1.5ha site located in the Coldharbour Ward of the London Borough of Lambeth. Approximately 75% of the site is within the ownership of the Council. The site is bordered by Somerleyton Road and the Moorlands estate on the eastern side, Coldharbour Lane on the northern side, the overland railway to the west and the Guinness Trust estate to the south.

Ovalhouse has held a long term aspiration to relocate to Brixton and after assessing a number of locations within Brixton they identified the northern end of Somerleyton Road as their preferred location and one which lends itself to their local offer. The services they deliver would complement the cultural and social heritage of Brixton. Consultation carried out as part of the Brixton Masterplan in 2009 indicated local support for a theatre on the corner of Coldharbour Lane and Somerleyton Road. To this end the Council has been working in partnership with Ovalhouse to explore development options for the Somerleyton Road site as part of a wider masterplan on the site. In addition to the arts and cultural facility the development on Somerleyton Road will comprise a mix of uses including residential and some retail/ commercial or Community uses on the site.

This report sets out three options for developing a mixture of uses across the site. The studies have been developed in partnership with the Council, Brixton Green, Ovalhouse and their stakeholders. The resulting outcome of this dialogue is this report and an exhibition held in Windrush Square, Brixton on the 2 May 2013.

### LIMITATIONS OF REPORT

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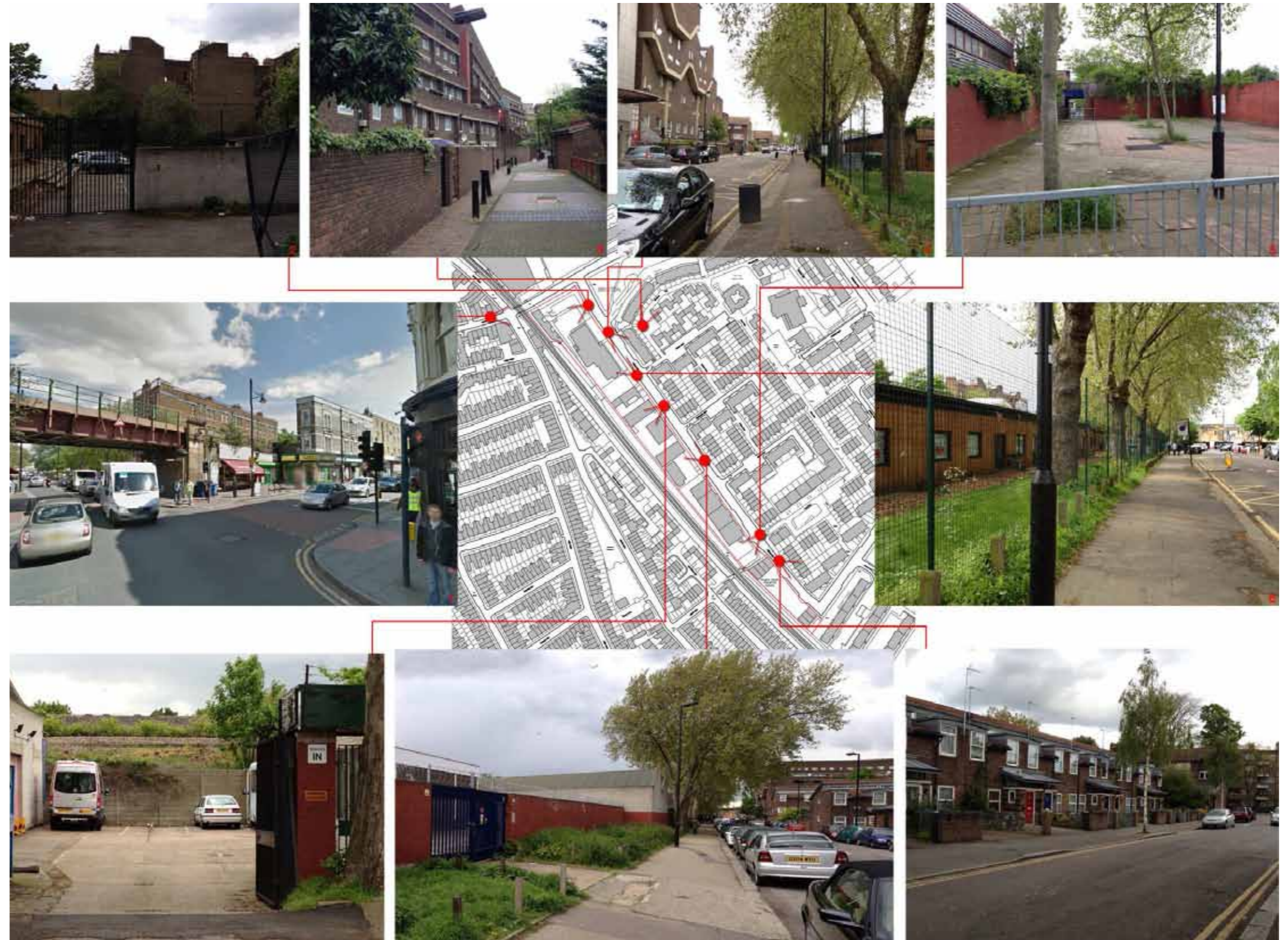
# Scheme overview

section 2

## Scheme overview

In 2009 the Council finalised the Future Brixton Masterplan; whilst the Masterplan was never adopted as a formal planning policy document it did set out the vision for Brixton. Further work has been undertaken more recently on the Brixton SPD and this was adopted by Cabinet in June 2013. The Brixton SPD provides a planning policy framework for the Somerleyton Road project.

The majority of the site is within Council ownership. On the north western edge of the site is a building known as Carlton Mansions which is owned by the Council on a long lease. There is mention within this report as to how the development options could incorporate Carlton Mansions and how that building could be used in the future. On the eastern flank wall of Carlton Mansions is the Nuclear Dawn mural that is locally listed. The Council would like to see it preserved and there is an opportunity to repair and remediate the mural as part of this project to ensure its survival.



### SITE CONSTRAINTS

There are a number of constraints around the site.

#### Network Rail Arches

In the railway viaduct adjoining the site on the south side of Coldharbour Lane are 6 no. arches. There is the potential for working in partnership with Network Rail to include some or all of these arches within the proposals for the new development. Options for the railway arches have been briefly explored, but are not discussed within this report.

#### Victoria Line Tunnel

Running under the Somerleyton Road site is a tunnel forming part of the Victoria Line tunnel system. This portion of the tunnel system is not part of the running tunnel. London Underground have advised that their standard conditions for building adjacent to and above tunnels will apply.

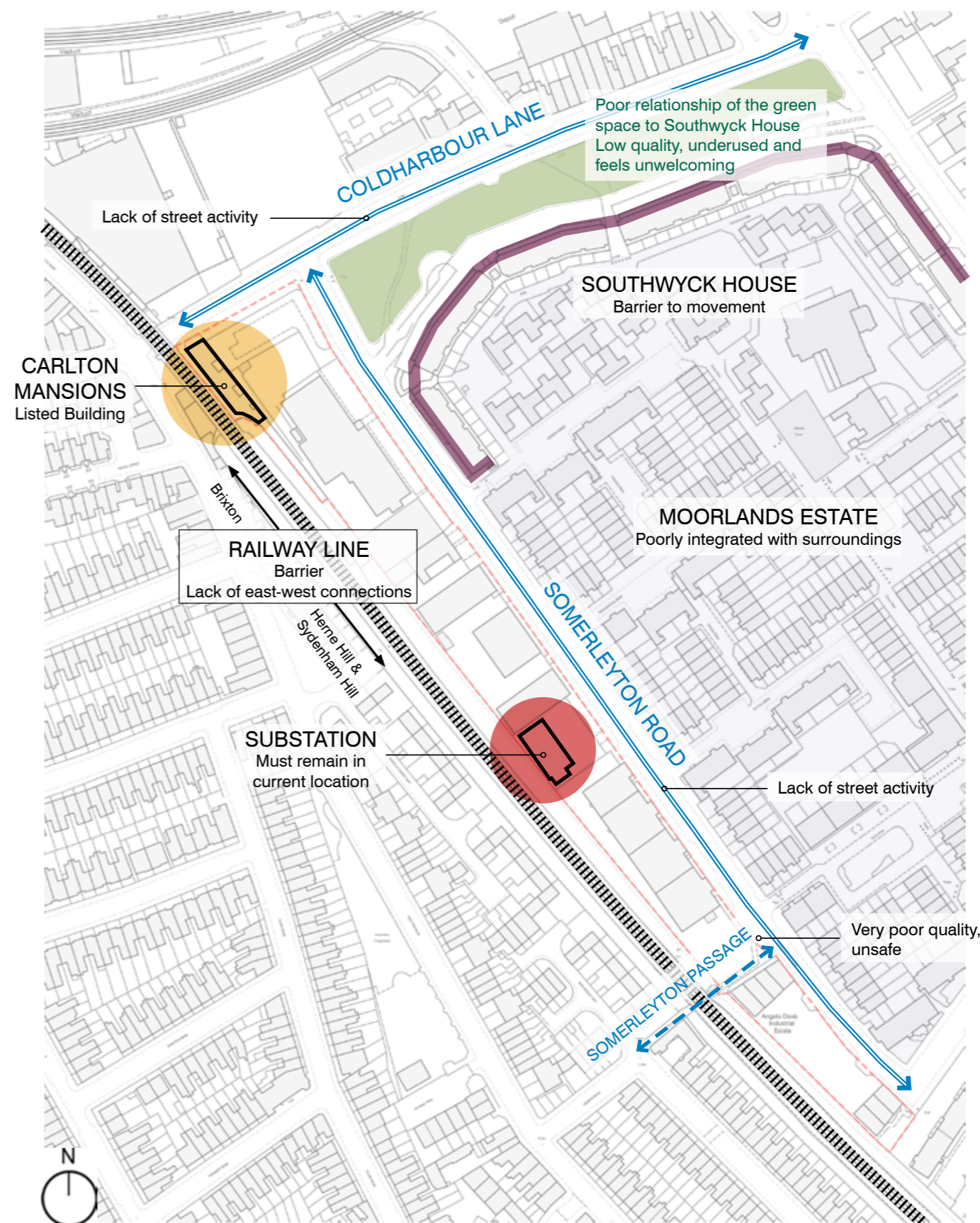
Other site constraints include:

- Both Carlton Mansions and its mural are locally listed;
- Carlton Mansions sits within a conservation area;
- The site sits opposite Brixton Village which is Grade II listed;

The trees along the Coldharbour Lane frontage are well established and there is a desire to see at least some of these trees retained.

#### Network Rail land to the west

To ensure safe manageable maintenance of the retaining wall supporting the Network Rail land to the southwest of the site, a gap of 1m has been created between the retaining wall and all development proposals in each option. Further liaison will be required with Network Rail to establish a workable solution.



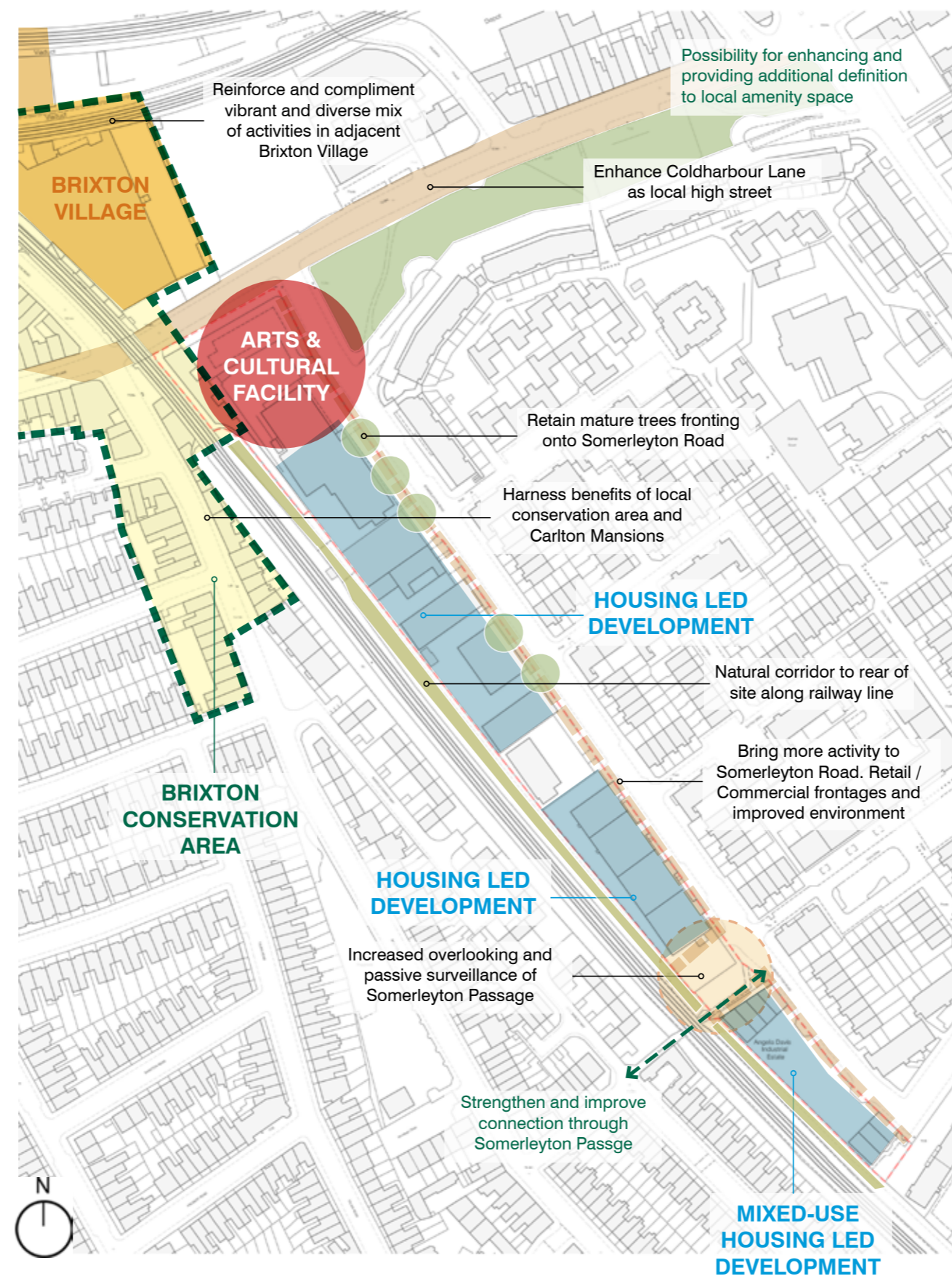
CONSTRAINTS DIAGRAM

## AIMS AND OBJECTIVES

The Council's aims and objectives for the scheme are as follows:

**A truly mixed development to support and respond to community life along Somerleyton Road. Adding to Brixton's attractions, it could include new homes, work spaces, and possibly health and education facilities. It could also include a new cultural facility on the corner of Coldharbour Lane that would bring theatre performances and activities for all ages, along with training and community spaces.**

- Bring Ovalhouse, with its full range of cultural and young people's activities, training, and provision for Cultural Industries to a key site in Brixton as a community resource and destination building;
- Ensure that a significant proportion of the new homes are truly affordable to local people – this means social rents;
- Reflect the needs and aspirations of the local communities in how the community and commercial spaces are used;
- Provide a long term stewardship role for the local community through a Community Development Trust which will manage some of the community and commercial space;
- Create a safe and welcoming neighbourhood.



# Design response

section 3

## THE BRIEF

In January 2013 Pollard Thomas Edwards Architects were commissioned to carry out a capacity study on the site at Somerleyton Road to explore development options for building uses and building heights alongside a new Theatre Building for Ovalhouse. The design options were presented to a Working Group organised by the Council and discussed to explore together the full range of opportunities on the site.

Whilst three options for redevelopment have been prepared and presented within this report (Options 1, 2 and 3), it is the footprint, heights and development uses in Option 1 that have been discussed with The Council and the Working Group.

In addition to the workshops with the Working Group, Option 1 was also presented to a CABE Design Workshop in April 2013. Feedback gathered over this period lead to a further two options (Options 2 and 3) being created to address some of the feedback and demonstrate different approaches to design on the site. Each of the Options within this report creates the same amount of accommodation, but different height buildings and dwelling types are used within each option.

In parallel to the design proposals, a development appraisal has been completed by cost consultants PRP to test the development viability. A desk top study has been carried out to assess the viability in line with the structural constraints below ground (this is covered later on in the report) including the construction recommendations to take into account the below ground requirements.

Each of the options was presented to the public in an exhibition held in Windrush Square on the 2 May 2013. Feedback demonstrated that there is support for development on the site and this is outlined later on in this report.

## PLANNING GUIDANCE

Planning Guidance affecting development on the site is outlined within the following Council documents:

- Brixton Conservation Area Statement 2012
- London Borough of Lambeth saved UDP policies January 2011
- Draft Brixton SPD December 2012

It is assumed that any residential development proposed on the site will achieve at a minimum the following design requirements:

- The Mayor's London Housing Design Guide
- Code for Sustainable Homes level 4
- Breeam Excellent – for non residential uses (excluding refurbishment)
- Current Life Time Homes requirements
- Secure by Design requirements

The northern half of the site sits within the Major Town Centre Boundary and adjacent to Brixton Conservation Area 26. Carlton Mansions, containing flatted accommodation sits in the top west corner of the site and is also part of the conservation area. The building is locally listed. On the east elevation of this building is a mural known as the Nuclear Dawn, painted during the 1980's which forms part of the listing and is protected.

The northern end of the site, within the Town Centre boundary has been identified as being suitable for a Theatre or Leisure use and as such, the Ovalhouse arts and cultural facility is ideally suited to be located here. By virtue of the protection of the Mural on the eastern elevation of Carlton Mansions, an active Civic Square is automatically formed in front of the proposed Theatre and the mural. This space could also serve visitors to Brixton Village across the Road on Coldharbour Lane. It would also facilitate the proposal for a tree lined Boulevard with active fronts, linked to and improving the open space in front of Southwyck House, outlined in the saved UDP Policies.

Given the Town Centre location (Central London) of the northern end of the site, a suitable density is outlined within Policy 4 of the saved UDP as 650-1100hrh. The remainder of the site is considered to be Urban in location and as such a density of 450-700hrh is considered appropriate

The three options presented in this report on the site create an average of 3hr per dwelling and a density of 636 hrh. This is towards the higher end of the Urban location but slightly below the range outlined for a central location.

## PTAL RATING

The northern end of the site has a PTAL rating of 6a. The remainder of the site has a PTAL rating of 5. With good levels of public transport and easy walking distance to the tube and over ground stations, the three options presented within this report do not include any parking beyond the requirement for wheelchair parking for visitors to the Theatre, residents or residents' of wheelchair housing.

## BUILDING HEIGHTS

Saved UDP policy 4 defines that site settings that are Central are suitable for building development with a large footprint and building heights of 4 to 6 storeys and above – particularly at the northern end of the site. The proposals within this report range in height from 3 to 6 storeys with a landmark building proposal in one option of 10 storeys.

## PUBLIC OPEN SPACE

There are a number of mature trees along the northern end of Somerleyton Road as well as the frontage to Coldharbour Lane. Within this report the design proposals takes into account the approximate location of the mature trees, setting the building line back slightly at the northern end of Somerleyton Road.

Shared amenity space is to be provided as follows;

Minimum 50sqm plus 10sqm per flat - this additional area can include balcony space.

## TENURE MIX AND AFFORDABLE HOUSING

The Council's policy on tenure mix is for developments where there is no grant funding to provide 60% private accommodation and 40% affordable with the 40% affordable split 70% social rent and 30% intermediate. Whilst there is an identified shortfall in affordable homes of all sizes in terms of meeting the housing needs of priority groups, the shortage relative to supply is likely to be greater for larger (3 bedroom+) family homes. The reasons are set out in the London Borough of Lambeth Housing Needs Assessment 2012.

All the options outlined within this report are indicative and will require further design development to gain further cost certainty. A cost report which provides initial cost estimates for Option 1 is presented in a separate report prepared by PRP.

Each of the options outlined within this report are subject to planning approval and any option to be developed should be discussed with Lambeth Planning Department before an application is submitted. Lambeth Refuse Department, Highways Officer, Fire Brigade and Secured by Design officer would also need to be consulted prior to a formal application. A tree survey is also required to be undertaken along with a full measured survey of the site.

## DESIGN PROPOSALS

The constraints and opportunities diagram are illustrated on the following pages. Whilst the report outlines three options for the development on the site, the following common constraints and opportunities apply to each of the options;

### CARLTON MANSIONS

Carlton Mansions is located on the Coldharbour Lane end of the site and has the locally listed Nuclear Dawn mural on one side. The Nuclear Dawn mural and the façade of Carlton mansions will both be renovated and refurbished as part of the development. The proposal is to transform the building into workspace units which could house artist studios and small business units with a focus on local creative industries.

Each of the following design proposals assume that the Theatre for Ovalhouse is located directly against Carlton Mansions, with the creation of a new Civic Square at the entrance to the Theatre, adjacent to the existing Mural. The scale of the theatre would be similar to that of Carlton Mansions. Access and servicing will occur to the rear of the Theatre, off Somerleyton Road, for the delivery of scenery, materials and refuse.

No survey information has been provided for Carlton Mansions and therefore there is no information regarding the internal arrangement of the building. During the workshops with the Working Group the Planning Department advised that the external fabric of the building, being locally listed, should be retained, but that there might be scope for the inside to be demolished and re built. Further investigation is required to understand what potential exists within this building.

### ELECTRICITY SUBSTATION

Halfway down Somerleyton Road is a substation that sits on land owned by LUL. The desk top study has identified that there are significant cables running into the substation at a shallow level below Somerleyton Road. To this end and for reasons of access the Council have been advised that no development should be proposed on this land.

### SOMERLEYTON PASSAGE

The passageway known as Somerleyton Passage has long been identified as an area that attracts antisocial behaviour. During the Workshops, the group heard stories about people walking out of their way along Atlantic Road from the western side of the railway tracks rather than walk through the passageway. Creating a safe, active, well used, over looked development immediately to the east of the Passage way will be key to the success of any development on Somerleyton Road.

Non residential uses, community or retail, which are referenced in the 2009 Masterplan and the Brixton SPD, were discussed at length in the workshops. Whilst a final ground floor non residential use was not concluded during the workshops, it was agreed that a combination of flats and other ground floor uses would work well in that location. Flats were agreed over houses, given that the limited number of houses would not create the critical mass of activity required to ensure good levels of passive surveillance.

Each of the following options assumes flattened accommodation in this area with the option for the ground floor to be a non residential use – the final use classification is to be determined.

### THE ANGELA DAVIES DEPOT

This site, at the southern end of Somerleyton Road is currently used for maintaining and servicing refuse vehicles. It requires the option for refuse trucks to drive in and out of the site. Initially during the workshops PTEa looked at the option of retaining the use at ground floor level, with residential accommodation on a landscaped podium above.

The discussions in the workshops indicated a lack of support for this dual use on the site. It was thought that the uses whilst being incompatible, would also impose unnecessary height on the development to the lower scale houses on the opposite side of the road.

The Council have looked at finding a new location for the Depot and the three options proposed in this report all assume a single residential use on the Angela Davies Depot Site.

### NETWORK RAIL LAND TO THE REAR OF THE SITE

The western boundary of the site is entirely taken up by the railway embankment for the overground owned by Network Rail. The embankment rises from approximately 1.8m above ground level and provides what is often referred to as a 'Green Corridor' along the western edge of the site. The railway line sits at approximately two storeys above the ground level of the site.

Advice from the desktop study, recommends that no development takes place within 1m of the retaining wall of the embankment. This will allow maintenance access along the retaining wall by Network Rail.

Each of the three options within this report assumes a 1m set back for any building from the retaining wall along the western edge of the site.

### OPTION 1

The first option creates a mixture of flats with large family houses. This option has been used as the benchmark to test the viability of a development on the site, from the aspect of:

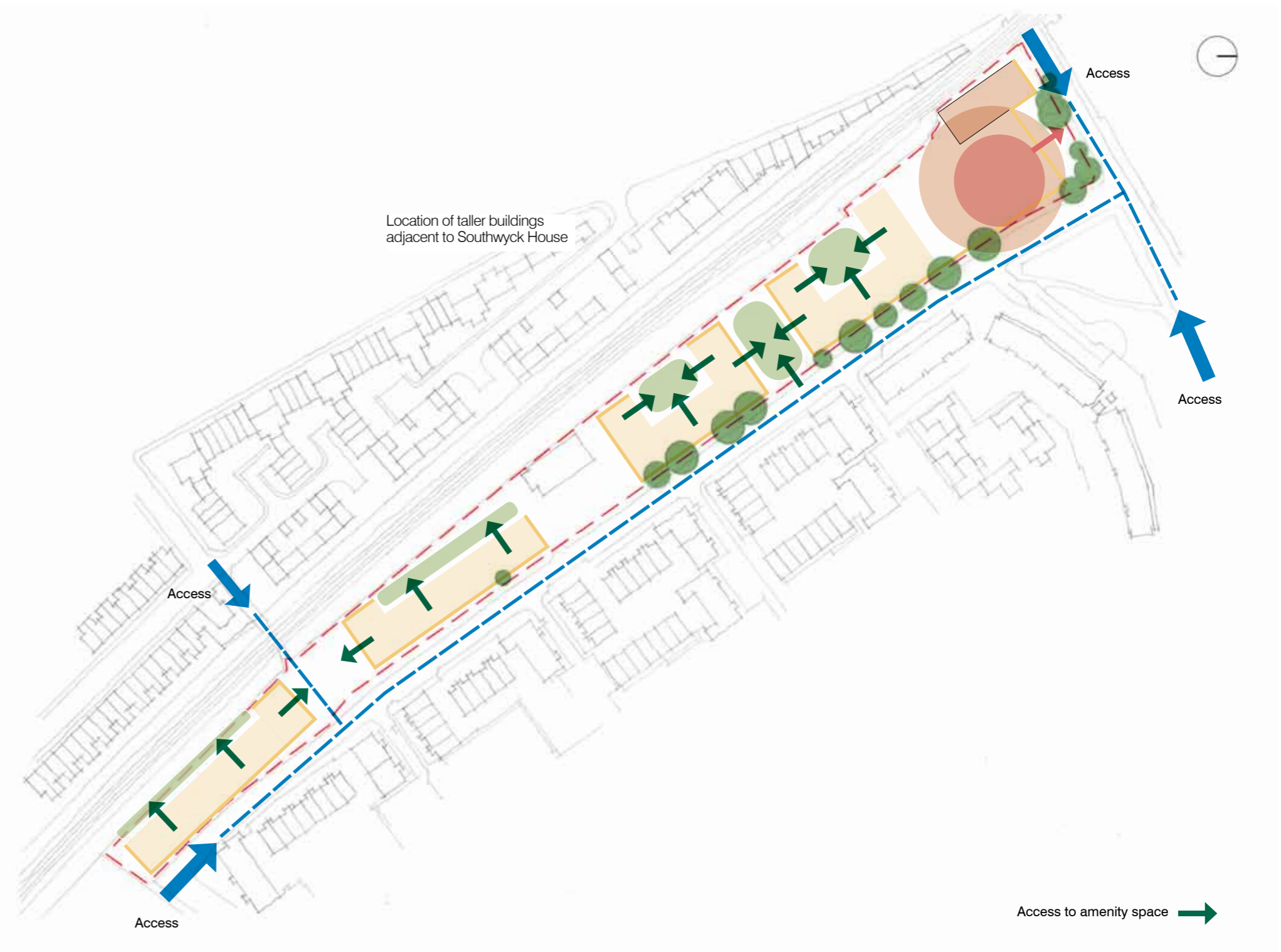
- Local opinion
- Planning viability
- Financial viability
- Technical constraints

The development is split up along Somerleyton Road, to create a series of open spaces that are events along Somerleyton Road. The open spaces occur at the junctions with the feeder roads from the Moorlands Estate, creating spaces that are easily accessible to the immediate neighbourhood. These spaces could be used for food growing and wider community use. Entrances to flat blocks and houses looking onto the open spaces are located from the open space to ensure sufficient activity and passive surveillance.

Each urban block is made up of a combination of flats and large family houses. The pattern runs along the length of Somerleyton Road and the difference in scale between the houses and flats, creates a rhythm along the length of the road. To the rear of houses are private gardens. To the rear of the flats a communal garden for residents. All flats will have their own private garden at ground floor level or a balcony, in accordance with the size requirements of the London Housing Design Guide.

At the northern end of the site, the flats start against the southern elevation of the Theatre building. The flats here are single aspect, facing south onto the Resident's Garden. The flats create a polite front to the Theatre, which might otherwise have been a very closed and blank elevation.

Adjacent to the substation there is a row of large family houses that look out onto the communal green area and have smaller south facing private gardens to the rear.



**DESIGN PRINCIPLES DIAGRAM**







PROPOSED SITE LAYOUT



VIEW TO OVALHOUSE ARTS AND CULTURAL FACILITY

To either side of Somerleyton Passage there are flats that have the potential to have non residential uses at ground floor. Entrances to the flats will be from either side of the passageway, to ensure sufficient foot fall and activity in this area. Passive surveillance is created by over looking of dwellings. A hard landscaped area is created at ground level outside the non residential uses and entrances to the flats.

A series of 4 flat blocks sit on the Angela Davies Depot with the outlook primarily onto the Green Corridor of the railway. Further sound and overlooking studies as well as train use frequency will be required to fully understand the constraints of building this close to Network Rail land on this site.

### ACCOMMODATION

This development option demonstrates that in addition to the new Ovalhouse arts and cultural facility, 282 new homes could be created, made up of a combination of flats and large family houses.

The development heights would range between three storey town houses to five storey apartment blocks along Somerleyton Road. At the northern end of the site, immediately adjacent to the Theatre, the apartments would be seven storeys. The taller height at this end of the site is in line with Southwyck house which sits at approximately 8 storeys.



FLATS OPT 1	Floor	1B2P WCH (50sqm)	1B2P (50sqm)	2B4P WCH (77 sqm)	2B4P (70 sqm)	Total no. of Hab. Rooms	Total no. Of Units
	Hab. Rms	2	2	3	3		
BLOCK A	0	1		4			
	1		1		5		
	2		1		5		
	3		1		5		
	4		1		5		
	5		1		3		
	6		1		3		
Units		1	6	4	26		37
Habitable Rooms		2	12	12	78		104
BLOCK B	0	2		1			3
	1		2		2		4
	2		2		2		4
	3		2		2		4
	4		2		2		4
Units		2	8	1	8		19
Habitable Rooms		4	16	3	24		47
BLOCK C	0			4			4
	1		1	4			5
	2		1	4			5
	3		1	4			5
	4		1	4			5
	5		1	4			5
	6		1	4			5
Units			6	28			34
Habitable Rooms			12	84			96
BLOCK D	0			3			3
	1			4			4
	2			4			4
	3			4			4
	4			4			4
Units				3	16		19
Habitable Rooms				9	48		57
BLOCK E	0			3			3
	1			4			4
	2			4			4
	3			4			4
	4			4			4
Units				3	16		19
Habitable Rooms				9	48		57
BLOCK F	0			3			3
	1			4			4
	2			4			4
	3			4			4
	4			4			4
Units				3	16		19
Habitable Rooms				9	48		57
BLOCK G	0	2		1			3
	1		2		2		4
	2		2		2		4
	3		2		2		4
	4		2		2		4
Units		2	8	1	8		19
Habitable Rooms		4	16	3	24		47
BLOCK H	0			3			3
	1			4			4
	2			4			4
	3			4			4
	4			4			4
Units				3	16		19
Habitable Rooms				9	48		57

BLOCK J	0			3			3
	1				4		4
	2				4		4
	3				4		4
	4				4		4
Units				3	16		19
Habitable Rooms				9	48		57
BLOCK K	0	2		1			3
	1		2		2		4
	2		2		2		4
	3		2		2		4
	4		2		2		4
Units		2	8	1	8		19
Habitable Rooms		4	16	3	24		47
BLOCK L	0	2		1			3
	1		2		2		4
	2		2		2		4
	3		2		2		4
	4		2		2		4
Units		2	8	1	8		19
Habitable Rooms		4	16	3	24		47
BLOCK M	0	2		1			3
	1		2		2		4
	2		2		2		4
	3		2		2		4
	4		2		2		4
Units		2	8	1	8		19
Habitable Rooms		4	16	3	24		47
<b>FLATS TOTAL</b>							<b>720</b>
							<b>261</b>
HOUSES OPT 1	4B7P				Total no. of Hab. Rooms	Total no. Of Units	
	Hab. Rms	6					
No. Of Houses	21						
Units							21
Habitable Rooms	126						126
<b>HOUSES TOTAL</b>							<b>126</b>
							<b>21</b>
<b>GRAND TOTAL</b>							<b>846</b>
							<b>282</b>

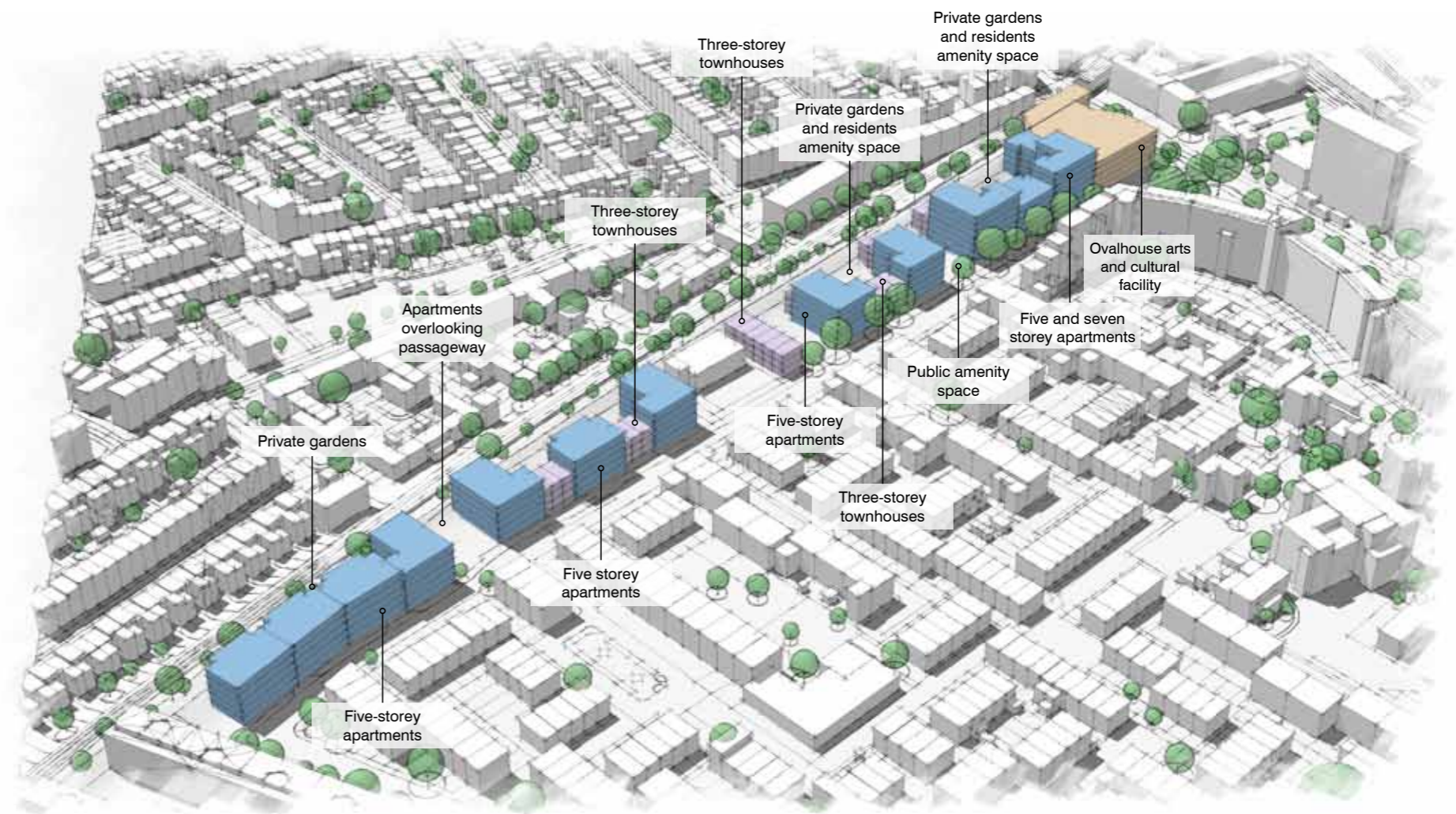
**BUILDING HEIGHTS**

- 1 storey
- 2 storeys
- 3 storeys
- 4 storeys
- 5 storeys
- 6 storeys
- 7 storeys
- 8 storeys
- 9 storeys
- 10 storeys



**BUILDING TYPES**

- Theatre
- Maisonettes
- Townhouses
- Apartments



**MASTERPLAN BUILDING ARRANGEMENT**

- Theatre
- Maisonettes
- Townhouses
- Apartments

## OPTION 2

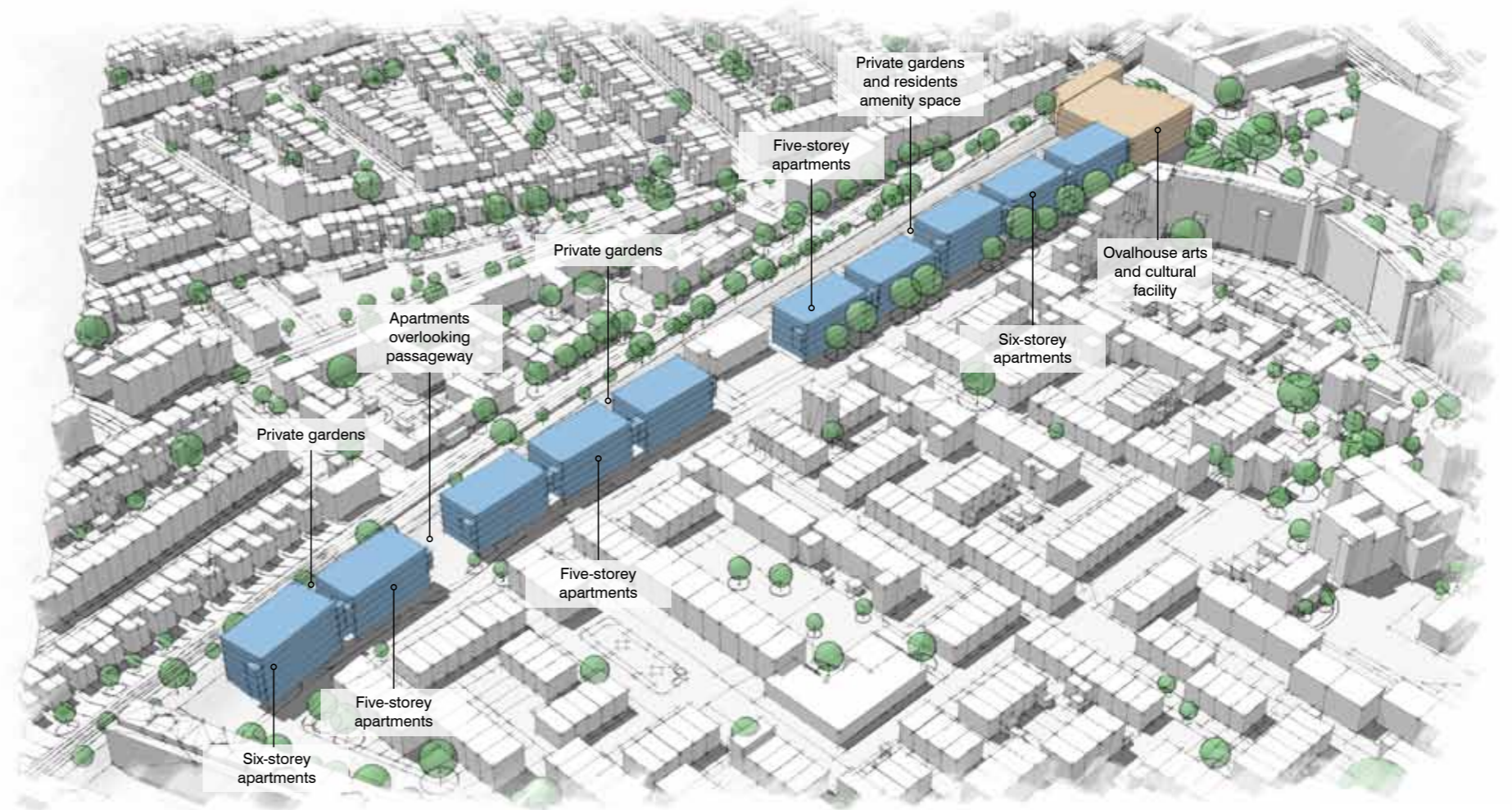
Option 2 takes a different approach to the development. It assumes a development entirely made up of flats – the mix of one two and three bedrooms can be amended to suit the required policy and tenure mix. The height of the development is a steady five storeys, with three blocks at the northern end (adjacent to Southwyck House) at six storeys. All of the blocks address Somerleyton Road directly, creating a continuous active street front. The blocks create 6 flats per floor plate and are linked by a two storey bridge containing accommodation. Beneath the bridge link it is possible to see beyond the flat blocks and behind into an open amenity space. It is not the intention that the open space would be for General Public use.

At the northern end of the site, adjacent to the Theatre and to the rear of the flat blocks a communal or public open space is created. This provides the theatre with a south facing outlook that can address and acknowledge the homes beyond its own site, could potentially create a destination for employees from the rear of Carlton Mansions and could link the theatre site to the remainder of the development. The open space runs along the rear of the development creating actual and visual amenity space for residents to look onto.

At Somerleyton Passage, the option of creating non residential uses is created at ground floor level, as per Option 1. The aim to create sufficient activity and passive surveillance to improve personal safety remains

Flat blocks are proposed on the Angela Davies Depot, as per Option 1.

As in Option 1 the development creates 282 new homes.



**MASTERPLAN BUILDING ARRANGEMENT**

- Theatre
- Maisonettes
- Townhouses
- Apartments

APARTMENTS



Option 2	
Apartments	284
Total Units	284



### BUILDING HEIGHTS

- 1 storey
- 2 storeys
- 3 storeys
- 4 storeys
- 5 storeys
- 6 storeys
- 7 storeys
- 8 storeys
- 9 storeys
- 10 storeys



### BUILDING TYPES

- Theatre
- Maisonettes
- Townhouses
- Apartments



### OPTION 3

Option 3 is a further development of Option 2, but it also acknowledges The Council's desire to create a range of housing types. In addition the design responds more directly to the surrounding context. Keeping the taller buildings to the northern end of the site, adjacent to Southwyck House and lower rise houses to the southern end, which is less urban in feel.

To the north of the electricity substation the development retains the flat blocks of Option 2. The blocks are five and six storey in height linked with the two storey bridges of accommodation. Through the gap below the bridge links, there is access to the rear of the site and some lower three storey blocks that contain wheelchair or large family flats at ground floor level with maisonettes above. The flats and maisonettes look out onto a communal Resident's Garden.

The relationship to the flats relative to the Theatre is also as per Option 2, with the Theatre afforded outlook onto a communal garden. This is also the location for a ten storey apartment block. The landmark building highlights the theatre in front and relates to the eight storeys of Southwyck House.

South of the Electricity Substation sits a terrace of maisonettes (four storey), with front doors off Somerleyton Road to serve the lower maisonettes directly and access to stairs and lifts, serving the upper maisonettes. There are small private gardens to the front of the lower maisonettes and large sunny private gardens to the rear, running back to the network Rail land. The Upper Maisonettes have generous terraces. The terrace of maisonettes is terminated by flat blocks that sit either side of Somerleyton Passage, in much the same way as in options 1 and 2. The terrace of maisonettes then continuous along the Angela Davies Depot.

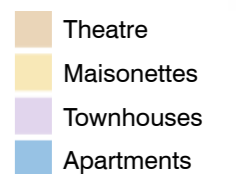
The change in scale from 10 storeys at the northern end down to four storeys on the Angela Davies Depot is a more sympathetic response to the reduced scale of the two to three storey houses at the southern end of Somerleyton Road on the Moorlands Estate. The form of development also lends itself well to this site given its set back from the Network Rail land, relative to Options 1 and 2.

Creating the same 282 new homes as Options 1 and 2, this proposal ranges in height from four storey to ten storey, creating a range of dwelling types in the form of flats and maisonettes

The three Options described above have been set out in parallel with the desk Top Study carried out by Conisbee Associates. The following Structural Feasibility Study looks at the technical constraints of developing on the site, assuming the development model of Option 1. It should be noted that having assessed options 2 and 3, there would be no significant changes to the outcome of the Structural Feasibility Report.



**MASTERPLAN BUILDING ARRANGEMENT**



**APARTMENTS AND  
MAISONNETTES**



Option 3	
Maisonettes	57
Apartments	223
<b>Total Units</b>	<b>280</b>



### BUILDING HEIGHTS

- 1 storey
- 2 storeys
- 3 storeys
- 4 storeys
- 5 storeys
- 6 storeys
- 7 storeys
- 8 storeys
- 9 storeys
- 10 storeys



### BUILDING TYPES

- Theatre
- Maisonettes
- Townhouses
- Apartments





# Structural Feasibility Report

section 4

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## Somerleyton Road and Oval House Sites

## Structural Feasibility Report

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## 1.0 INTRODUCTION AND BRIEF

We have been appointed by Pollard Thomas Edwards Architects to provide structural feasibility advice for the redevelopment of two sites in Lambeth, South West London.

The purpose of the study is to advise on the main impacts of the site on the proposed development particularly with regard to the known presence of tunnels and utility assets under parts of both sites.

The study is based on the following information

- A full Envirocheck search of historic and environmental records
- A full utilities search of the sites
- Conisbee archives and other databases of subsoil information.
- A visual inspection of the site from the streets and aerial photographs.
- Initial discussions with London Underground and Network Rail

Although not exhaustive it is anticipated that the above will have uncovered all significant general information that is readily available from public records.

Only significant constraints have been included in this report. Full search information is available on request.

## 2.0 SOMERLEYTON ROAD

### 2.1 Existing Site

The site comprises a long strip of developed land running northwest to southeast between Somerleyton Road and the Network Rail (Kent and Sussex area) embankment. The site is bounded to the north by Coldharbour lane and to the south by communal gardens backing onto the Loughborough Park Estate.

The site is cut through by a pedestrian right of way Somerleyton Passage, but is otherwise occupied by, (from north to south) Carlton Mansions, a locally listed tenement block, a car park and recently constructed or converted Children's Centre, and a series of industrial and storage units all accessed from Somerleyton Road. Amidst these is an LUL substation serving the Victoria Line. The Network Rail Assets comprise a viaduct where the line backs onto Carlton Mansions, and an embankment along the rear boundary along the remainder of the site.

### 2.2 Site Features

The site is relatively flat but is bordered by a large number of mature trees mainly along Coldharbour Lane and the northern end of Somerleyton Road. There is also significant vegetation in the form of semi mature trees along the bottom of the railway embankment, particularly at the northern end.

### 2.3 Site History

The site was undeveloped until the late nineteenth century when terrace housing was built backing onto the embankment of what was then the London Chatham and Dover Railway. Given the development of the area it is highly likely the site was used for 'borrow pits' where the natural ground was removed to make building materials, principally bricks.

The terrace housing remained until the 1960's when it was demolished presumably as part of the general redevelopment of the area to the northeast. It appears the school (although previously an adult education centre) and all the industrial warehouse units were constructed in the later part of the twentieth century.

There appears to have been no significant contamination risk usage until the post war industrial/warehouse units were built. Depending on use these may represent a potential source and will need looking into in detail at the investigation stage.

### 2.4 Ground Conditions

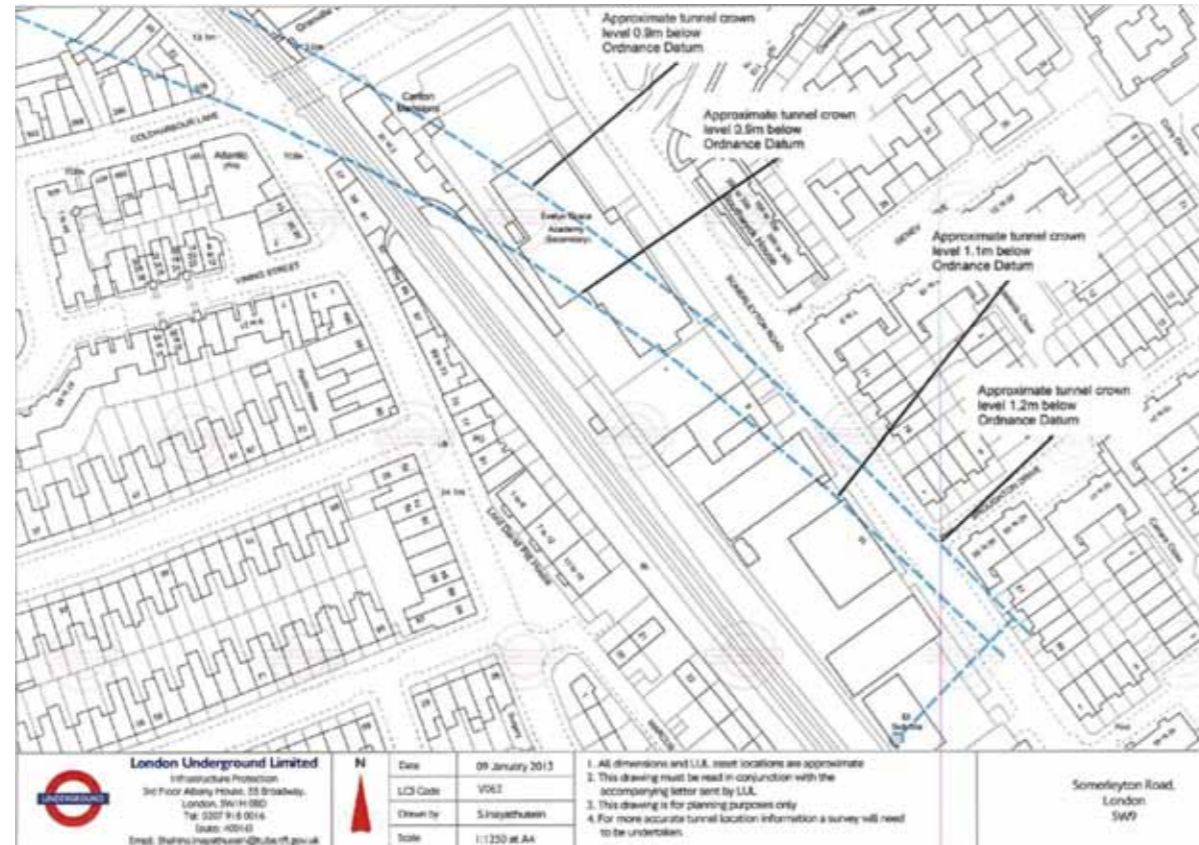
The ground conditions are expected to be made ground and sandy clay overlying a thin stratum of sand and gravel over London Clay at 2.1m depth. In significant areas of the site, expect the granular material to have been worked off to leave up to 3m of made ground.

The mature trees at the northern end of the site may have affected the underlying clay which, if that is the case, traditional foundations would have to be extended down to below the zone of influence from the trees.

Ground water levels aren't know but expect there to be perched water in the base of any gravel layer

## 2.5 Below Ground Constraints

### 2.5.1 London Underground



The site is underlain by the run off tunnels of the Victoria Line after Brixton Station at approximately 14m below the surface. There is also a feed tunnel from The Brixton substation running under the site at the same depth providing power to the network.

The presence of the tunnels limits imposes restrictions on the effect of any new buildings built over them. This will include physical restrictions on the increase in load on top of the tunnels as well as in the type and position of substructures.

### 2.5.2 Other Services

Close to the site particularly along Somerleyton Road in both the carriageway and pavement contains numerous services including all the utilities, telecoms and cable.

The only recorded services crossing the site are summarised below



The red lines indicate main electric cables crossing or on the edge of the site. (Individual supplies to existing buildings are not shown.)

The green line shows BT or other cables crossing the site

## 2.6 Proposed Development

There are two options for the site. Much of the options are similar, the main difference being at the Oval Theatre end of the site, where the theatre is either a separate building or built with residential accommodation above.

### 2.6.1 Foundations in relation to below ground issues.

The two blocks at the south end of the site are fine in terms of foundations in that standard piled foundations are likely to be used.

The proposed block around the substation is three storeys. The feasibility of these foundations will depend on the actual extent and depth of services to the substation. Diversions are unlikely to be possible, so the worst case would be a requirement to leave a clear zone over the width of the services plus a way leave over the mains cables if they are at shallow depth. Services within a deep duct can probably be built over as with the main running tunnels. At the next stage utility detection will be able to determine the extent of this as a constraint.

The next block up is partly over the running tunnels and is shown as five stories with a three storey linking block. The overall weight of this is unlikely to cause a problem for the tunnels but depending on the ground conditions, is likely to require some form of special foundations. At best if there is natural ground at shallow depth, a raft will be possible. At worst we will need a piled raft with short settlement piles.

This leaves the theatre and the first residential block.

For option 1 the residential block is up to seven storeys and built over both running tunnels. This is a more extreme version of the previous block. Whilst the overall impact is probably acceptable; it is likely that more measures to reduce weight by using lighter construction or a voided raft will be necessary.

The theatre with its integral eight storey tower is probably achievable by founding the tower on deep piles (its position suggests it is just away from the northern running tunnel) however if within the exclusion zone may require some cantilevering of the foundations on that side.

The main theatre would then wrap around the tower on independent foundations. If the ground conditions are good these could be shallow traditional foundations, if not then deep traditional foundations!

For option 2 the theatre becomes relatively straightforward. The theatre is positioned over the tunnels. The overall weight isn't a problem, so apart from standard piling all other foundation solutions are possible. Consequently shallow or deep traditional foundations will be best depending on the actual ground conditions.

The main issue with option 2 is the adjacent residential block. It would need to be split into the lower (five and seven storey) sections and these founded as the adjacent block. The ten storey section is likely to be an issue and will probably need to be built in lightweight construction to reduce the weight and in addition, the likely special foundations measures already noted.

At the next stage, detailed site investigation together with specialist geotechnical input is likely to be required to determine the most appropriate and economic solution.

### 2.6.2 Proposals in relation to rear boundary

The proposals show a number of blocks built up against what appears to be the rear boundary. However the red line is shown part of the way up the embankment, and it's not clear where the fence line is.

If the fence is part of the way up the embankment but the intention is to cut into it to increase the footprint this will be a significant issue for Network Rail. This comment applies to all the blocks as they follow a similar arrangement. Ideally, to reduce the impact and the consequential negotiation issues with Network Rail, the blocks should be at least a 1m from the fence line and 1m away from the bottom of the embankment.

### 2.6.3 Trees

Root protection zones around the retained trees will impact on building locations and location of services and drainage.

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