100 Chalk Farm Road

Retention & Redevelopment Options & WLC Comparison

Prepared by DSDHA

Submitted on behalf of Regal Chalk Farm Limited

February 2024

Rev	Date	Purpose	Document Ref	Comments

DSDHA

357 Kennington Lane
London, SE11 5QY

T 020 7703 3555
F 020 7703 3890
E info@dsdha.co.uk
W www.dsdha.co.uk

Contents

Introduction
Purpose of the Report
Team
Executive Summary

1.0 Development Context and Principles
1.1 Site Context
1.2 Planning Policy Context
1.3 Carbon and Climate Emergency Context
1.4 Development and Design Principles

2.0 Existing Condition Appraisal
2.1 Existing Condition
2.2 Existing Structure
2.3 Summary of challenges and their implications

3.0 Development Options
3.1 Options Investigated
3.2 Criteria for Evaluating Options
3.3 Summary of Assessments to date
3.4 Summary Overview

4.0 Redevelopment Options Investigated
4.1 Option 1
4.2 Option 2
4.3 Option 3 (proposed planning submission)

5.0 Development Options Sustainability Assessment
5.1 Assessment Criteria
5.2 Appropriate use of land
5.3 Space Quality
5.4 Ground Floor Activation
5.5 Public Realm Enhancements
5.6 Heritage Impact
5.7 Circular Economy, Future Flexibility, Adaptability & Resilience to Climate Change
5.8 Long-term Economic Sustainability and Planning Benefits Housing offer
5.9 Construction Impacts
5.10 Carbon assessment
5.11 Sustainability Consultant's Analysis

6.0 Key Findings & Conclusions
6.1 Overview
6.2 Key Findings
6.3 Conclusion

THIS PAGE IS INTENTIONALLY LEFT BLANK

Introduction

Purpose of the Report

The purpose of this report is to provide a holistic and robust analysis of the possible retention/redevelopment scenarios for the 100 Chalk Farm Road site, part of the planning application under the same name.

The report incorporates the context and existing building analysis, the options considered and assumptions underlining these, the associated assessments, - including carbon and other relevant sustainability considerations - and a summary of the planning submission.

This report has been prepared by DSDHA, Whitecode, Pell Frischmann and Gerald Eve to support the planning application being submitted by the Applicant 'Regal Chalk Farm Limited', hereafter referred to as 'the Applicant'. This document should be read in conjunction with the Design and Access Statement, the Sustainability Statement, the Circular Economy Statement, and the Whole Life Carbon Assessment Report submitted as part of this application.

The report is split into six sections as follows.

1.0 Development Context and Principles
This section sets the wider context underlying the development, focusing on the site itself, the planning context, the carbon and climate emergency context and the development brief.

2.0 Existing Condition Appraisal
This section includes the analysis of the existing building set out by its different components and summarises it's main challenges and known implications.

3.0 Development Options & Assessment Criteria
This section introduces the three development options considered along with the evaluation criteria used to assess them.

4.0 Redevelopment Options Investigated
This section outlines the approach towards each redevlopment option.

5.0 Development Options Sustainability Assessment
Detailed assessment of the options against each individual criteria as set out on section 2.0. This section includes the carbon assessment comparing the carbon emissions for the redevelopment options considered and details on the scope and methodology used for the assessment.

6.0 Key Findings & Conclusion

Introduction

Team

Regal London
The Applicant & Development Manager

Regal London is one of the capital's leading privately owned mixed-use developers with a focus on unlocking value from complex urban settings to transform London's landscape. Regal London has delivered successful developments across London over the last 25 years, from Brent to Tower Hamlets, Barnet to Lambeth. Its developments are characterised by bespoke design and exceptional quality and are built to unlock value, enhance the local environment, and respect and engage local communities.

Unlike many other developers, Regal London is a fully integrated business operating across the entire lifecycle of the asset, which means that it put the customer at the centre of everything it does.

Regal London is committed to playing its part in tackling the climate crisis, and to delivering better outcomes for the environment and its local communities through creating positive social value.

Regal London's sustainability strategy focusses on four areas: transitioning to net zero carbon; investing in innovation; going beyond biodiversity net gain and helping disadvantaged groups into employment in real estate and construction through the Regal London Real Estate Academies.

Wembley Waterside, Brent

DSDHA
Lead Architect

Founded by Deborah Saunt and David Hills in 1998, we're an architecture, urban design and research practice, with the persistent search for new forms of beauty through active design, research and agency at the heart of everything we do.

For us, architecture isn't about bricks and mortar and cities aren't about buildings, they're both about people.

By adopting a people-centred approach, we deploy our spatial intelligence across a broad range of scales – from infrastructure to intimacy - to produce spatial strategies and designs that tap into each project's latent potential to foster positive change, in balance with nature and the planet.

Our work in Camden spans the last decade and includes both built and ongoing architectural, urban and public realm projects – Corner House, Suffolk House and working with Camden Council on the West End Project and Central Somers Town Masterplan.

Our work has been recognised with 17 RIBA Awards, and has twice been nominated for the European Union Mies Van Der Rohe Prize for Contemporary Architecture, and shortlisted for the RIBA Stirling Prize. But more than that, it's been taken to the hearts of communities.

Central Somers Town masterplan, Camden

Whitecode
Sustainability and MEP Consultants

At Whitecode Consulting, we pride ourselves on going the extra mile for all of our clients, whether new or longstanding. As Building Service Consultants, we are motivated by providing a solution to our clients' challenges, which we deliver to the highest possible standard. With 28 years of experience in the Mechanical, Electrical and Plumbing (MEP) engineering sector, we are well positioned to provide support on complex projects.

The sustainability team at Whitecode Consulting has a wealth of experience in dealing with all aspects of sustainable design from concept to completion. We pride ourselves on our linked services approach to designed engineered solutions. At Whitecode Consulting we are at the forefront of using pioneering technologies to continuously ensure we improve efficiency and future proof the building systems that we design.

Whitecode's Sustainability Team provide pre-application, planning, and early design stage advice for all types of new developments requiring energy and sustainability reports. We have experience in producing reports which show compliance with local and national planning policies, ensuring your project meets its sustainability objectives and gains planning permission.

PellFrischmann
Structural Consultants

We listen and respond to our client's values and commercial and programme drivers; understanding their aspirations and the needs of owners and occupants.

The breadth of our building design consultancy skills enables us to provide clients with early-stage strategic advice on development opportunities and risk, land and property acquisition propositions, and financial modelling. as well as supporting all stages of projects through to execution.

We do not shy away from technical challenges and innovation and find through rigorous research, optioneering, and close engagement with our partners, supply chain and external stakeholders more creative engineering, lean, low-carbon, circular and cost-effective solutions, naturally evolve. We implement extensive uses of digital technologies to deliver efficient structural engineering solutions reducing cost and associated carbon footprints.

Where appropriate we embrace simplicity in developing our structural solutions, avoiding complexity and over-engineered outcomes, and working with market-friendly available solutions. We believe this creates better value for our clients by ensuring lean engineering responses to targeted briefs, driving up value and efficiencies in cost and programme.

Introduction

Executive Summary

Report purpose

This report has been prepared to provide a robust analysis and comparison of the holistic sustainability performance of various scenarios for bringing the 100 Chalk Farm Road site back in to viable and optimal use as part of the wider area.

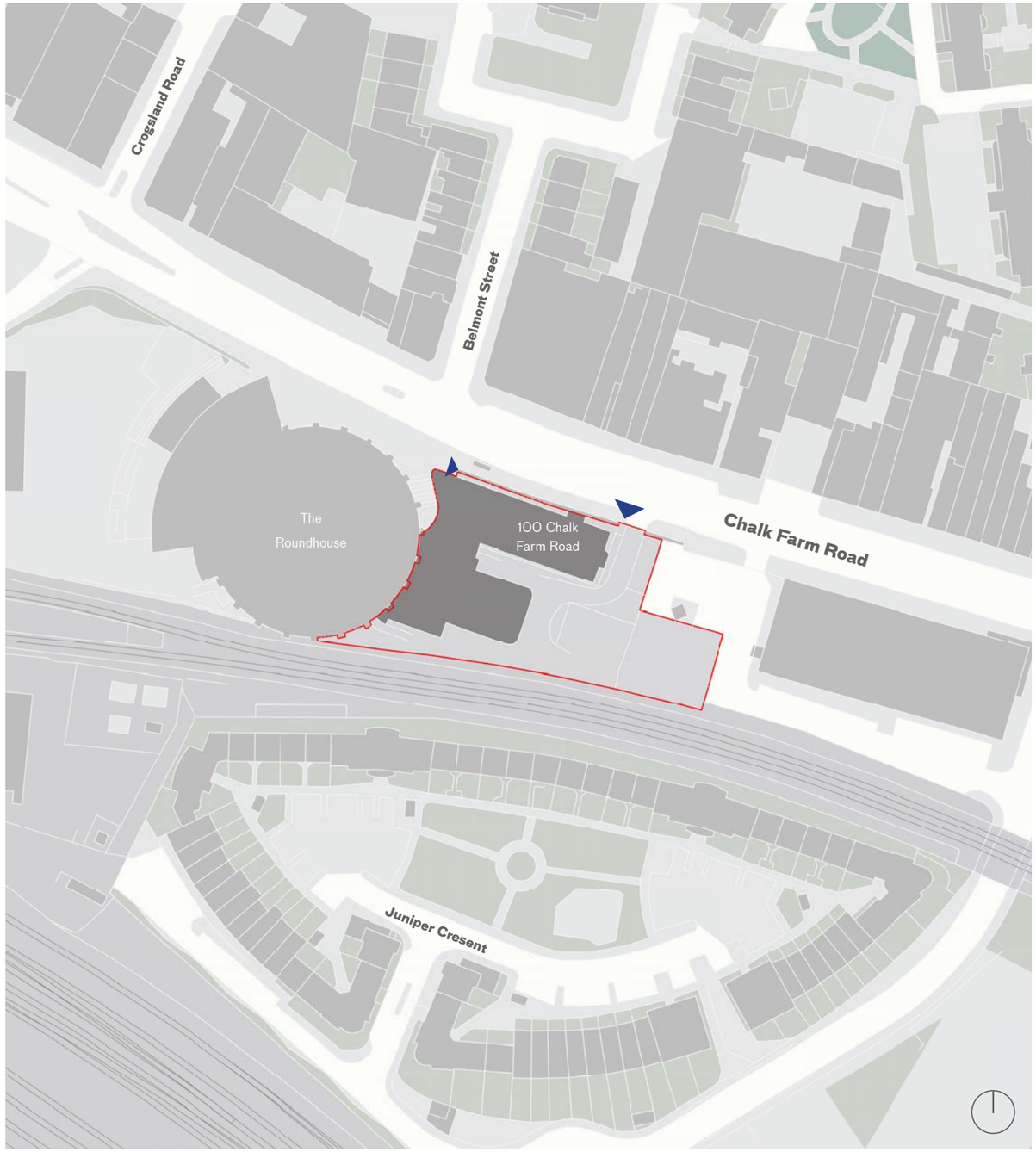
Three scenarios are compared, from a light-touch refurbishment to a complete new build. It incorporates analysis of the site context and brief, establishes potential development options and the assumptions underlining these. The options are assessed against relevant sustainability factors including carbon. The report has been prepared by DSDHA, Whitecode and Pell Frischmann to support the planning application for 100 Chalk Farm Road.

The Planning application

A planning application will be submitted in February 2024 for the site located at 100 Chalk Farm Road. The proposed development involves demolition of existing buildings and redevelopment of the site to provide two buildings ranging in height from [6] to [12] storeys containing purpose-built student accommodation (PBSA) with 265 rooms, associated amenity and ancillary space (Sui Generis), 24 affordable residential homes (Class C3), 824 sqm GIA ground floor commercial space (Class E) together with with public realm improvements, new areas of landscaping, amenity and play space, and improved accessibility to the site.

A listed building consent application accompanies the application for works to the adjacent Roundhouse, which is a Grade II* listed building.

Full details and scope of the planning application is described in the submitted Town Planning Statement, prepared by Gerald Eve LLP.



Site Outline

Introduction

Executive Summary

Report structure and methodology

The report firstly sets the context for the development exploring the site and planning policy and regulatory drivers. It then sets out brief criteria and establishes the development principles that underpin the three development options established in chapter 3.0.

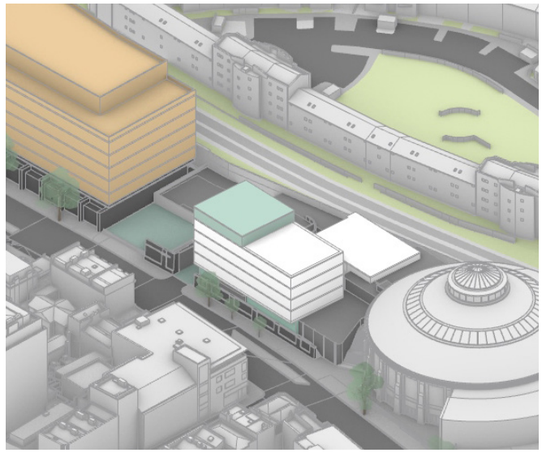
The assessment criteria are established, along with a summary of the quantitative and qualitative analysis and comparison of relative performance of the five options. A detailed assessment of the existing building condition and the detailed sustainability analysis, including a thorough technical analysis of the comparative carbon performance of each option. The report conclusions are summarised in this Executive Summary.

Development options explored

In order to undertake an assessment, three potential development scenarios where established, informed by the development context and principles established.

This report and analysis has been undertaken on the basis of a commercial development on the site of 100 Chalk Farm Road. This enables a consistent methodology for the Whole Life Carbon Assessments of the options in the report allowing direct comparison to the planning application. This also takes advantage of the greater level of design to provide a more robust modelling of factors such as materials and operational performance across all options.

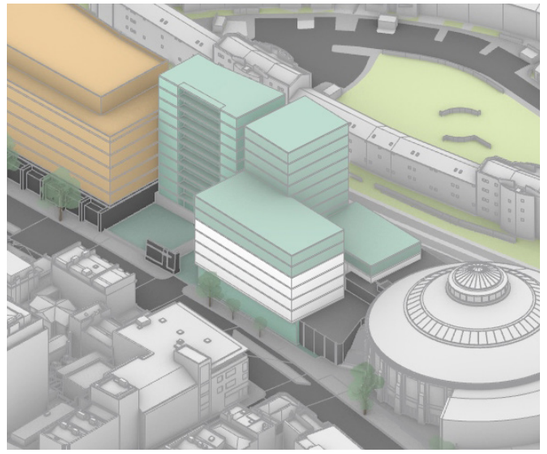
The comparison and issues affecting the existing building and their implications, as set out in chapter 4.0 & 5.0, would apply equally, though in slightly different degrees, to alternative uses of the building.



Option 1

Retention & Retrofit with Extension

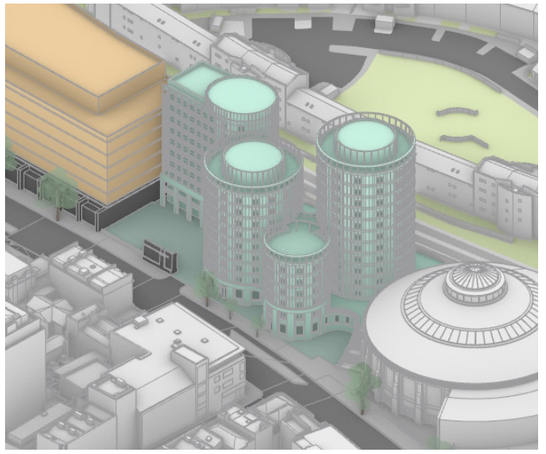
Retrofit & extend as commercial office space with necessary upgrades to meet current regulations.



Option 2

Retention & Retrofit with Extension & New Build

Deep retrofit & extend for reuse as student accommodation plus new build affordable housing.



Option 3

New Build (proposed planning submission)

New build PBSA, commercial and affordable housing buildings ranging in height from six to twelve storeys.

Introduction

Executive Summary

Key Findings

When seeking to assess the sustainability of development options for a site such as 100-100a Chalk Farm Road, **a host of factors** including carbon emissions, economic and social contributions such as affordable housing delivery and contribution to the urban environment and experience **should be taken into account.**

On top of this, local and regional Planning policy establishes a framework for a holistic approach to sustainability. Moreover, recent London Plan Planning guidance seeks that developers to fully consider retaining buildings before demolition is proposed.

The 100-100a Chalk Farm Road site sits in an area with high public transport connectivity (PTAL rating 6B) and in an area identified for growth in local planning policy.

A drive to optimise use of land in sustainable locations is reflected in both local, regional and national planning policy. This is in part due to the high carbon impact of travel to less well served locations.

New build development options offer more efficient land use through an uplift in both floorspace quantum and quality.

These options are also able to more fully deliver public and operational benefits such as public realm design improvements, affordable homes (both through improved viability and optimising the site plan) and direct and indirect economic uplift by accommodating a higher number of workers and residents. The scale and design of the new-build options also enables them to be operationally energy efficient.

The existing building has significant design and structural limitations.

These include low floor to ceiling heights across the buildings located on site which would result in 2.30m or lower head height, well below the minimum BCO guidance for office refurbishments. In option 2, the existing floor to ceiling heights would result in low quality accommodation.

The existing structure's limited loading capacity means that additional strengthening - with associated carbon from construction and materials - would be required to enable the building to meet modern standards and tennant expectations.

The inflexible structure and layout at floors 0-1 presents a key challenge.

The elevated entrance level, sitting roughly 2m above Chalk Farm Road, ensures accessability will remain a major problem with Option 1. Option 2 looks to bring the entrance down to match street level but will require substantial underpinning and temporary works to support the existing building while its lower structure is removed and reconstructed. Despite greater carbon associated with the works, Option 3 is the only option which provides a fully accessible ground floor and streamlined entance sequence.

Option 1 has been assessed for completeness, however it leaves the site under-developed at less than half the density of a comparative site.

This constraint severely limits the potential commercial success of the project as well as limiting prospective tennents willing to rent the refurbished building - making it economically unsustainable. It also increases the likelihood that the site will require additional investment at a sooner date than Option 2 or 3.

Option 2 has been included as a retention baseline which achieves a comparative uplift in GIA to Option 3.

These proposal however faces a number of drawbacks such as the large temporary works to acheive the design, a negative impact on the heritage setting of the adjacent Listed Roundhouse and failing to address the developng pressure on public realm along Chalk Farm Raod.

Option 3 represents the planning application scheme which delivers 24 affordable housing units, 265 student rooms, two high quality commercial units and new accessible public realm.

This option delivers good floor to ceiling heights when considered for PBSA use, has flexible and adaptable floorplates for conversion to a fully residential offering and compliments the heritage setting of the Regents Canal Conservation Area and Listed Roundhouse music venue and theatre.

Active ground floors are supported in planning policy and key to creating enjoyable, safe spaces.

Options 1 offers no improvement to the current, poor street level, experience. Option 2 provides limited ability to improve the inactive frontage but does provide some public realm benefits. Option 3 offers substantial benefits to the public realm.

Active frontage is greatly increased in Option 3 which offers the most holistic ground floor improvement through enabling the creation of high quality additional public realm, commercial spaces and entrances along the length of the site and passive surveillance down the street.

Demolition of existing buildings and replacement with new buildings incurs a meaningful upfront embodied carbon impact when compared to options that retain existing structures.

This is to be expected given that the building structures typically represent a substantial proportion of the upfront embodied carbon associated with construction. This is reflected in the carbon assessment which finds that Option 1 and 2 represents less upfront embodied carbon than Option 3.

When taking in account the overall embodied carbon associated with a building across a standard 60 year lifespan, the gap between the level of emissions of retained and new build options per m2 of space narrows substantially.

When compared to industry benchmarks the overall embodied carbon emissions per m2 associated with **Option 3 is 1,088 kgCO2e/m2, below the GLA benchmark of 1,400.**

Retaining the existing structure significantly impacts the capacity, quality & flexibility of the final building.

These factors contribute to additional embodied carbon that is not captured by RICS methodology. Poorer quality workspace is let on shorter leases to less stable tenants.

The resulting anticipated turnover frequency increases likelihood of regular major refurbishment to keep up with market demand and a greater frequency of tenant fit-out activity.

Introduction

Executive Summary

This incurs additional embodied carbon across the buildings' lifetime. The impact on a substantially shorter average tenancy) Options 1 compared with Option 2 and 3 results in higher level of associated carbon per m2 over a 60 year period from the increased quantum of Cat-B fit-outs. Taking into account the more frequent refurbishment cycles anticipated with Options 1, the difference in WLC emissions between retention and redevelopment narrow further.

When comparing operational energy, the options present broadly similar results with the new build options performing marginally better.

The opportunity to further improve this performance through detailed design and while in use is significantly greater for Option 3 due to the design flexibility offered by a new build and the economic viability of incorporating higher performing systems.

Option 2 performs reasonably well against some of the sustainability factors and provides a significant uplift in area. **However, this option fails to address some of the existing limitations of the building.**

Both Options 1 and 2 result in a compromised outcome that would generate additional embodied carbon through their life-span and are not able to secure the majority of the wider benefits of Options 3.

When taking holistic sustainability factors into account Option 3 – the planning submission – represents the best outcome against the criteria for redevelopment of the 100-100a Chalk Farm Road site.

This report sets out to assess whether it is appropriate to retain the existing 100 Chalk Farm Road building in full or in part, or whether a new build scheme represents a better use of the site. It distils a huge amount of work by the design team over an extended period of time to review a far wider range of options and individual decisions and it represents these in the form of three options. The criteria against which theses should be judged are set out, and a rigorous and transparent methodology adopted for their assessment.

Whilst carbon emitted in creating the development and in use is given appropriate focus, wider considerations must be taken into account to assess holistically the environmental price and the resulting benefits of the scheme. The carbon accounting for the production of the building does not consider how and by how many people the development will be used, nor how they will get there and use it. It does not consider the quality and enduring appeal of the resulting product and therefore its utility and inevitable adaptation over time.

Whilst the planning application scheme (Option 3) is not optimal in every category, on holistic review of all the measures it provides the majority of benefits whilst minimising impacts, including carbon as measured by RICS. Importantly though, in delivering a higher quality, more flexible building with the urban benefits of public realm and active ground floor, it best meets the tests of utility and enduring appeal. This therefore represents the best investment of carbon. Arguably over time, taking into account additional factors such as travel connectivity, and the way it is likely to be adapted and refitted in use, this will result in the lowest carbon option of all over its life.

A review of the site shows that the existing building has a number of significant limitations, even before considering the age of the structure and the modifications that have taken place over time.

The compromised ground floor level elevated approximately 2m above street level means that it is not possible to bring the building back into use without major modifications and temporary support.

Option 1 is therefore not a workable option.

The analysis finds then that inevitably new build results in greater carbon invested up front, but that the difference between the options on a square metre basis, even on the relatively narrow RICS criteria is modest on a Whole Life Carbon basis.

In absolute terms the carbon emitted is materially greater for the larger options, but this is principally the result of creating more built area. This is supported by planning policy, and it is this additional density on the site that allows a number of the benefits to be delivered. Those most closely linked being housing (including affordable) and employment. If we consider there is a growing demand for space, the strong conclusion of planning policy and of the application team is that doing this on previously developed sites well served by public transport is far preferable to more remote or greenfield sites. Whilst it is outside the scope if this report, the carbon emitted for occupier journeys to and from any development through its life are material to the wider sustainability of our built environment.

Whilst the carbon emitted in development is significant, the report shows that all the options perform well against benchmarks and the ability to reduce carbon in use for the new build schemes is greater. The project team have a commitment to minimise carbon through the development.

Another point central to the discussion is the quality of the space created. The impacts on its utility over time and the likely cycle of adaptation and re-invention of poor quality space all has a carbon price. The report shows that when these scenarios are taken into account the new build option perform better over time.

There are a number of other benefits identified in the report that can only be delivered through the new build, reconfiguring of site, public realm, and street activation. These are more difficult to quantify, but are certainly material to the consideration of the options.

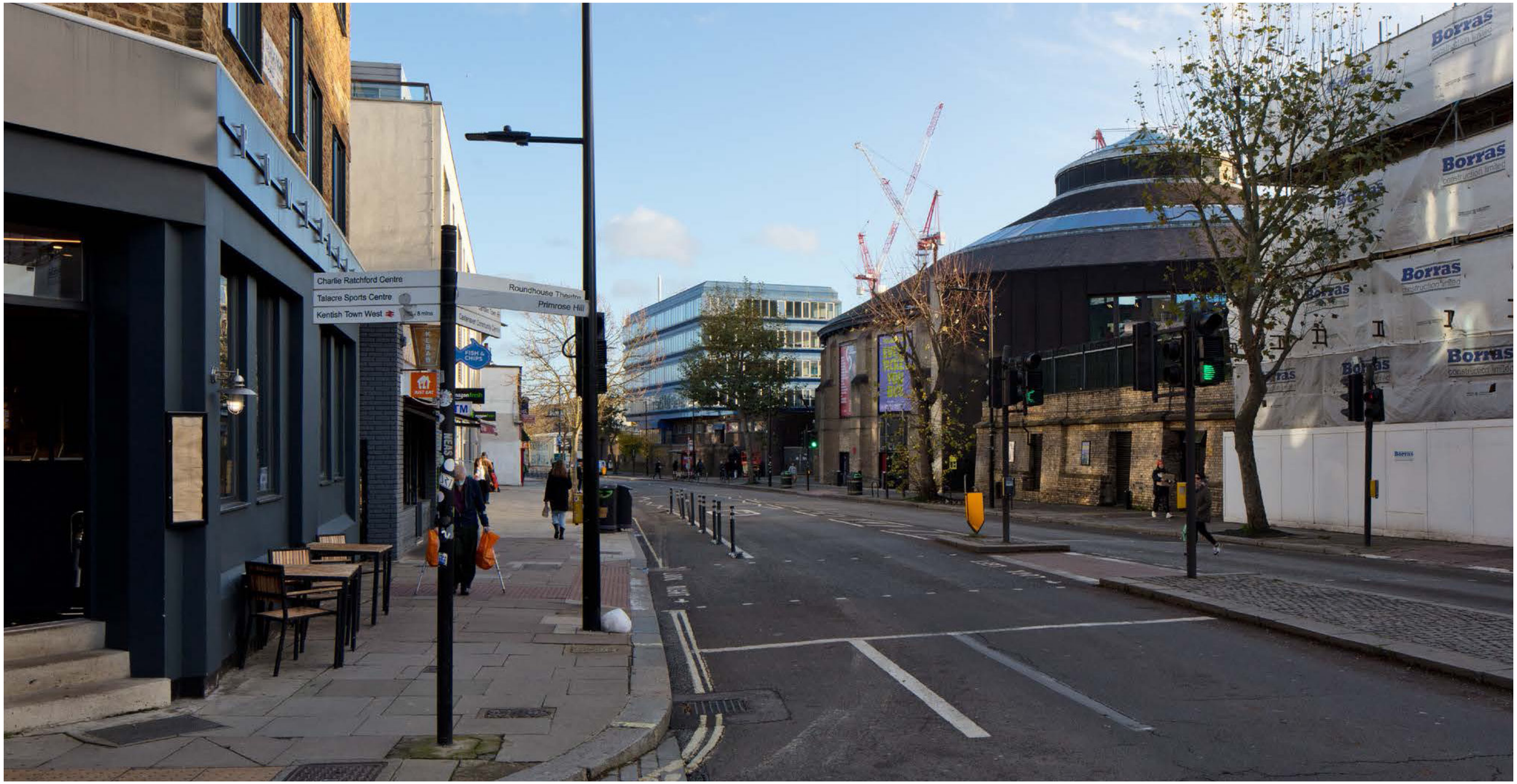
The planning application scheme is targeting BREEAM excellent (based on actual energy inuse) and the applicant is committed to seeking improvements in both embodied and operational carbon performance from the baseline established in the WLC report submitted.

Amongst the public benefits delivered by the scheme are the 24 new affordable homes, and a substantial improvement in public realm including a new public space on Chalk Farm Road.

The proposed building would accommodate 265 students and provide up to 80 jobs, as well as significant expenditure and thus provide a substantial economic uplift from a currently vacant site. The scheme addresses the ecological emergency by creating a valuable local addition of biodiversity in an Area of Deficiency in public access to nature and an Urban Greening Factor of 0.3. The scheme will also lower CO2 emissions by replacing existing on site car parking spaces with cycle facilities.

Subject to planning, the next stage of detailed design and advances in technology offer the opportunity to improve the scheme further in regard to operational and embodied carbon, while retaining the wider benefits that the proposals are able to deliver.

1.0 Development Context & Principles



1.0 Development Context & Principles

1.1 Site Context

Overview

The Site is located north west of the Stables Market and adjacent to Chalk Farm Road in the London Borough of Camden. To the rear, the site is bounded by a surface level railway line with a circa 1.5m boundary wall running along the length of the site. Beyond that is the Juniper Crescent Housing Estate. It lies within the Regents Canal Conservation Area, to which the existing building on the site is a neutral contributor. To the west, the site is adjacent to the Grade II* listed Roundhouse theatre and live music venue. Beyond that is Chalk Farm Underground Station. To the east is the Petrol Filling Station site, which forms part of the Camden Goods Yard development and is currently in use as a temporary supermarket.

The Site covers an area of approximately 2,800 sqm and benefits from a PTAL rating of 6b being close to three underground and overground stations, namely Camden Town to the East, Kentish Town West to the North, and the previously mentioned Chalk Farm station to the West.

This area of London is very well served by bus routes and Chalk Farm Road road experiences high levels of commuter traffic, particularly cyclists, because of its designation along the London Cycle Network. This key route into the city also allows for high levels of pedestrian movement along its length, be that commuters travelling for work, tourists visiting Camden Market or Primrose Hill, or children who study at Haverstock School.

1.0 Development Context & Principles

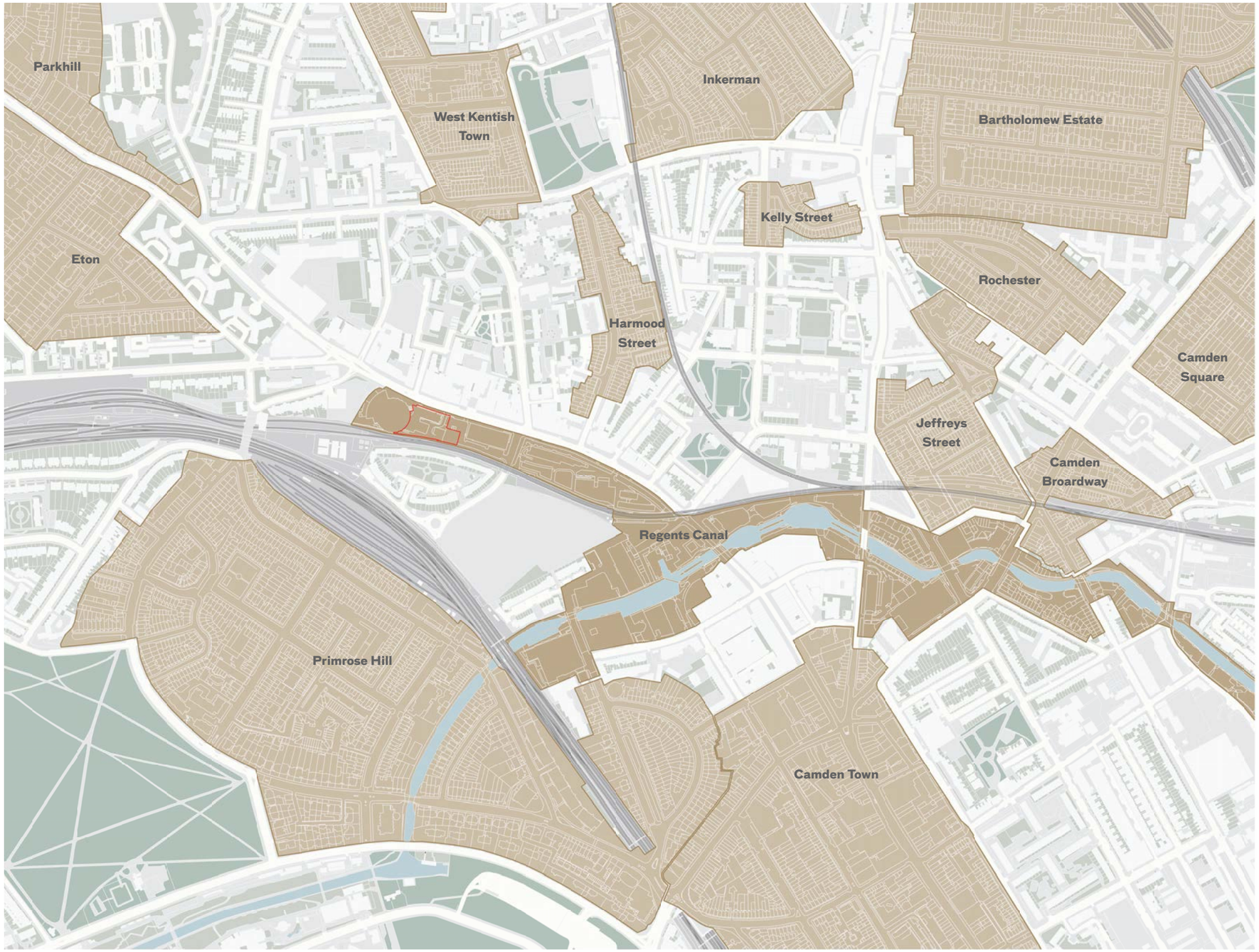
1.1 Site Context

Conservation Areas

The Regent's Canal, part of the Grand Union Canal, winds its way through the London Borough of Camden on its way to joining the river Thames, forming a corridor of unique character.

The Canal is linked to a 3,000 mile network of waterways. The concentration of industrial archaeology along the Camden section of the canal, with its associated railway features is of exceptional interest and quality, unparalleled in London. It is an important feature of historic and visual interest in the wider townscape and, following the decline of traditional canal-related commercial activities, has been increasingly recognised as a valuable resource for water-based leisure activities, for its tranquil seclusion, for its ecological value and its potential for transportation and informal recreation.

It is the Council's intention to conserve and enhance the existing character of the canal and to improve its potential for recreation, transportation and wildlife.



Conservation Areas

1.0 Development Context & Principles

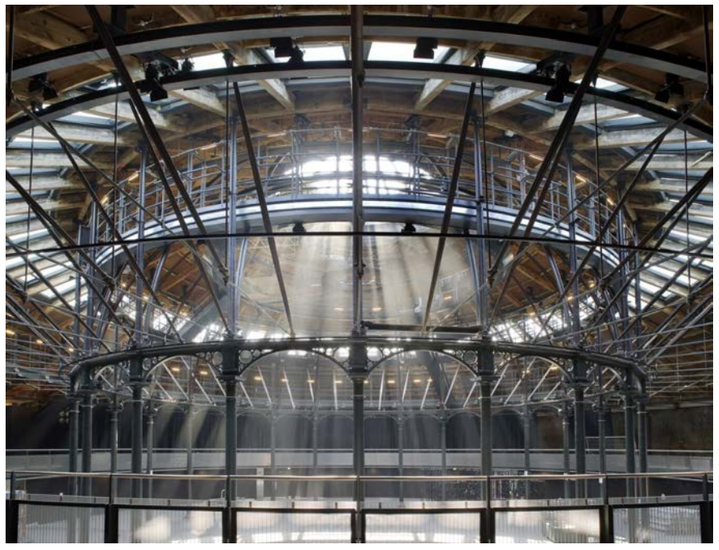
1.1 Site Context

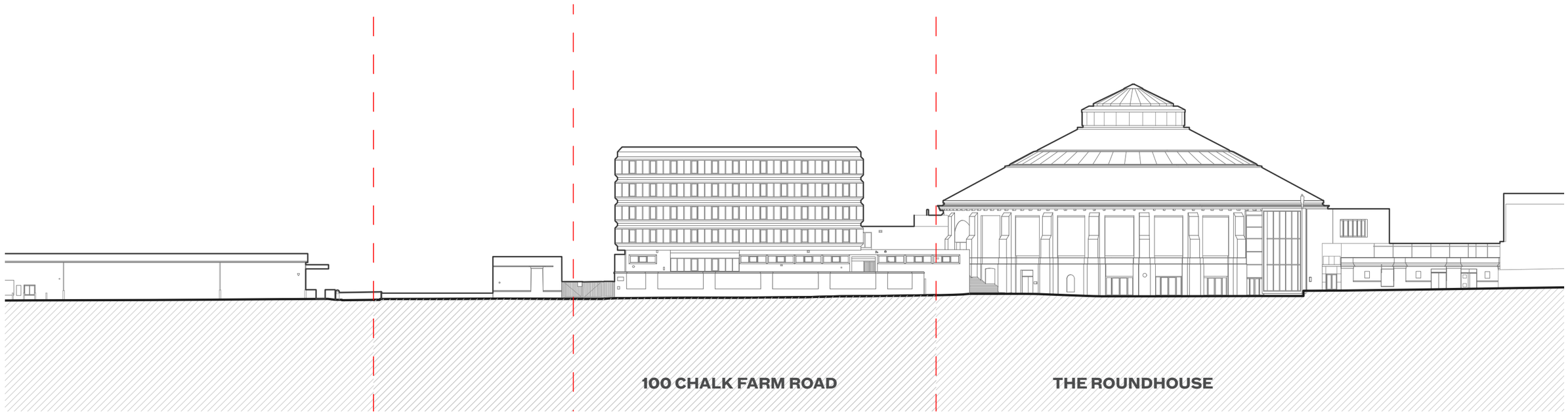
The Roundhouse

Adjacent to 100 Chalk Farm Road is the Grade II* Listed Roundhouse muisc venue. A building which and defines the immediate context of site.

The building was originally constructed in 1846 to aid in the servicing and maintenance of steam locomotives travelling to and from the Camden Goods Yard. Following the end of its use in the railway industry, the building was used as a warehouse before being converted for use as a music venue in the 1970's after many years of vacancy.

The Roundhouse underwent a substantial renovation and extension in 2004 and has in turn grown to become one of the capitals most significant and widely recognised performance venues. It is also integral to the industrial heritage of Camden and acts as a key contributer to the Regents Canal Conservation Area.





Existing Chalk Farm Road Elevation

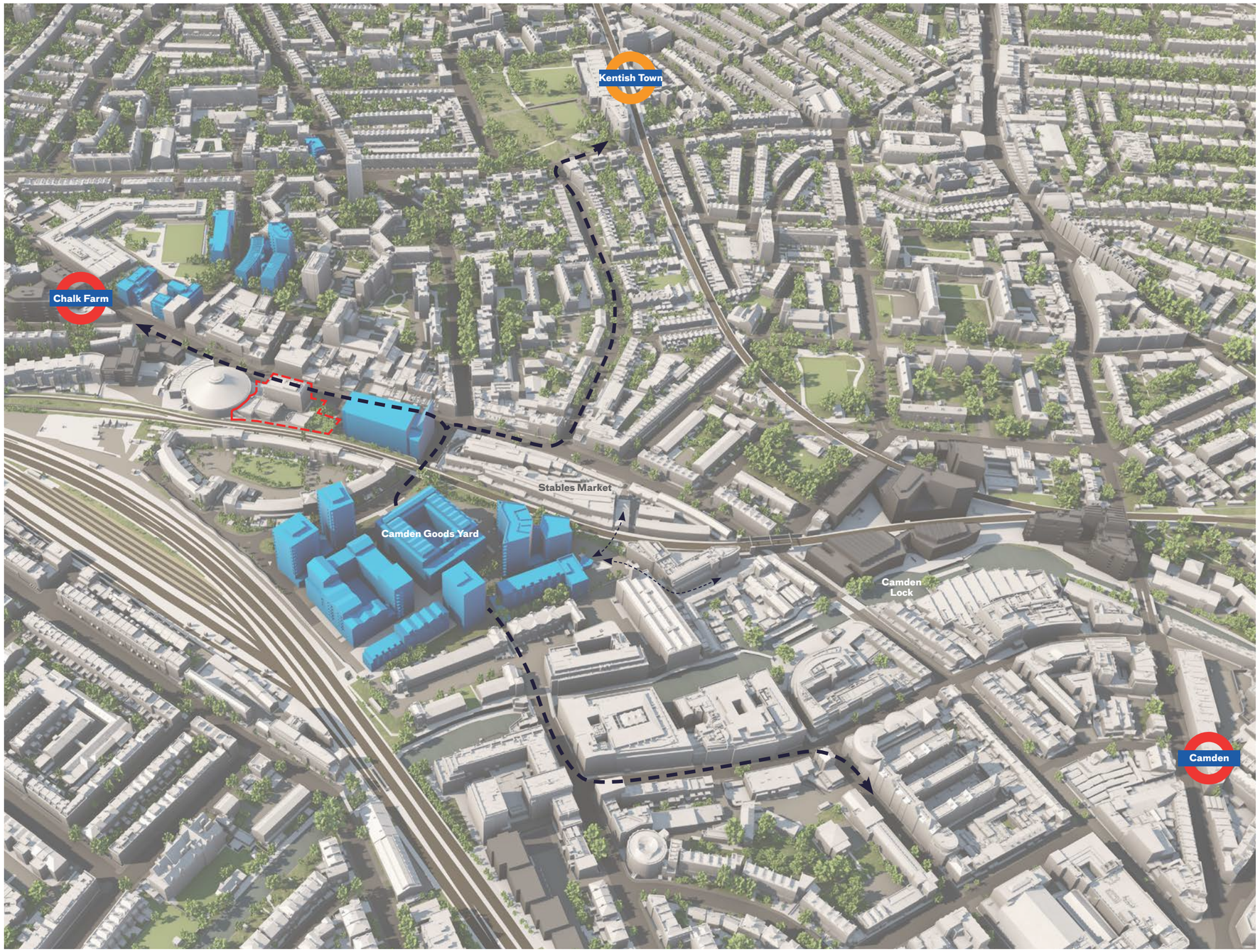
1.0 Development Context & Principles

1.1 Site Context

Local Development

The local area is undergoing a period of substantial change thanks to a number of large scale developments in the area. These developments will re-shape the context in which 100 Chalk Farm Road sits as well as increasing the number of people visiting and travelling through the area.

To the west is the former Morrisons petrol filling station (PFS) which is being redeveloped as part of a wider development known as Camden Goods Yard (CGY). The wider development is currently under construction through a joint venture between St George Homes and Morrisons. The adjacent site is currently in use as a temporary supermarket but has planning permission for a 6-storey building with replacement PFS and ground floor retail with circa 8,000 sqm of office floorspace on upper floors. There is also a Section 73 approval to provide an electric vehicle charging facility and to undertake various design changes to the approved scheme, including extending the building towards the boundary with the application site.



Key:

- Site
- Buildings under construction
- Key Pedestrian Routes
- Train Stations

3D showing the Site within the wider emerging context

1.0 Development Context & Principles

1.1 Site Context

Need for Public Realm

The existing public realm located in the immediate vicinity of 100 Chalk Farm Road will be placed under increasing pressure as the local built environment intensifies. The subsequent increase in population will require an increase in public areas of rest, play and social interaction which the current condition does not support.

Sitting adjacent to the Roundhouse music venue, the public realm also experiences periods of intense demand during events and shows. As the images highlight, these render the current public realm offering inadequate.

Improving the public realm along 100 Chalk Farm Road along with understanding how it adapts for periods of high demand should be a key principle in developing proposals.

1.0 Development Context & Principles

1.2 Planning Policy Context

Local, national and regional planning policy establishes the framework within which development proposals are considered for planning permission. A high level summary of the relevant planning policy is provided below.

Development Plan

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that applications are determined in accordance with the development plan unless material considerations indicate otherwise.

The statutory development plan for the London Borough of Camden, and in turn the application site, consists of:

- The London Plan (2021)
- London Borough of Camden Local Plan (2017)
- Local Plan Policies Map (March 2019)

There are a number of other relevant adopted and emerging planning policy documents published nationally, regionally and by Camden Council that represent material considerations:

- The National Planning Policy Framework (NPPF)
- The National Planning Policy Guidance (NPPG)
- London Borough of Camden Supplementary Planning Guidance
- London Borough of Camden Draft Site Allocations Plan (2020)

Local Designations

- Located in the Regents Canal Conservation Area and the designated Camden Town Centre.
- The adjacent Roundhouse is a Grade II* listed building.
- Located within Flood Zone 1.
- Adjacent to (but not within) the Parliament Hill summit to the Palace of Westminster London View Management Framework (LVMF) Viewing Corridor.
- Within the Regent's Canal Tier 2 Archaeological Priority Area.

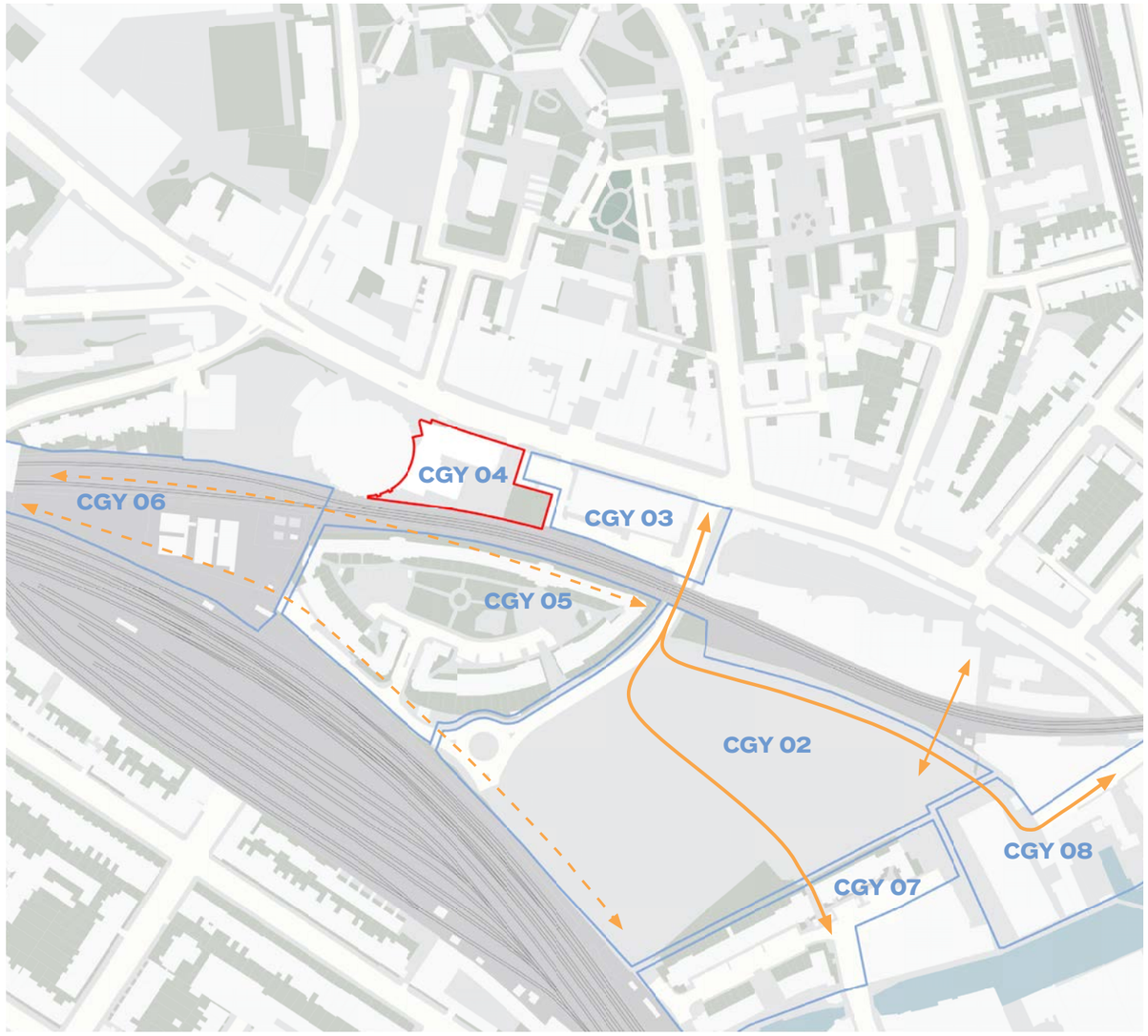
- 'Chalk Farm Road' Area within Camden Goods Yard Planning Framework Supplementary Planning Document (SPD) 2017.
- 'CGY4' within Camden draft Site Allocations Local Plan (SALP) 2020.
- 'Site Allocation C9' in the Regulation 18 Draft Local Plan

Site

Routes

CGY Zone

Future Routes



Source: Camden Goods Yard Planning Framework SPD 2017

1.0 Development Context & Principles

1.3 Carbon & Climate Emergency Context

With an emphasis on the global climate crisis, the GLA and the Council have declared a 'Climate Emergency'. There is a growing commitment to achieving Net Zero Carbon buildings by 2030, meaning many new developments need to consider now how far they can go in enabling the lowest carbon performance possible.

The applicant and the project team are acutely aware of the impact that construction has on Carbon emissions. The built environment currently accounts for 25% of the UK's greenhouse gas emissions. 'The thrust of Strategic and Local Plan Policy has therefore resulted in a focus on reducing the operational energy and embodied carbon relating to the construction industry. As part of planning applications, prospective developments now need to quantify their carbon impact.

80% of London's 2050 stock is likely to be comprised of buildings already standing today - adapting this stock is a huge challenge for the industry. However, retrofit is not always feasible or viable for those with poor architectural quality, inflexible layouts, limited accessibility and insufficient loadbearing capacity.

A number of industry benchmarks and aspirational targets established for the development industry. These focus on the embodied carbon emissions associated with construction and can be found in chapter 5.0.

NPPF

The National Planning Policy Framework, the planning system has three overarching objectives: economic, social, and environmental. Paragraph 8 says that to achieve sustainable development these three interdependent pillars need to be pursued in mutually supportive ways so that net gains are secured for each objective.

Therefore, in determining an application, the range of benefits a development offers in addition to carbon savings must be considered in the balance. These benefits include delivery of high-quality new homes (including affordable homes), an uplift in employment floorspace, new public realm, urban greening, increased site permeability and significant long term economic benefits generated by the higher quality and flexible space which will appeal to a wider range of operators. At the heart of the NPPF is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.

NPPF Paragraph 119 encourages development that makes as much use as possible of previously developed or 'brownfield' land. NPPF Paragraph 152 sets out that the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change.

NPPF Paragraph 153 states that plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes and the risk of overheating from rising temperatures.

London Plan (2021)

Introduced in March 2021, the currently adopted London Plan places a strong focus on the lifecycle carbon impact of new development.

London Plan Policy SI 2 (Minimising Greenhouse Gas Emissions) states that major development should be netzero in terms of operational carbon. This means reducing greenhouse gas emissions in operation and minimising energy demand. London Plan Policy SI 2 also seeks to achieve a minimum operational carbon reduction from part L of 10% for residential development and 15% for non-residential development through energy efficiency measures. Where it is clearly demonstrated that the zerocarbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough by a carbon offset contribution secured via a S106 legal agreement.

London Plan Policy SI 7 (Reducing Waste and Supporting the Circular Economy) focuses on reducing waste and supporting the circular economy. The policy seeks to achieve resource conservation, waste reduction, increases in material re-use and recycling and reductions in waste going for disposal.

London Plan Policy GG6 (Increasing Efficiency and Resilience) seeks to improve energy efficiency and support the move toward a low carbon circular economy. The policy seeks to ensure that buildings are designed to adapt to climate change and its impacts.

In support of the London Plan, the GLA have also released London Planning Guidance (LPG) for Whole-Life Carbon Assessments. Importantly, in line with London Plan Policy SI 2, the guidance requires developers to fully consider options for retaining existing buildings before substantial demolition is proposed, as this is typically the lowest-carbon option. Whole Life Carbon Principle 1 from the guidance states that "retaining existing built structures for reuse and retrofit, in part or as a whole, should be prioritised before considering substantial demolition." The London Plan Guidance carries no specific statutory weight; however, it is capable of being a material planning consideration enabling the implementation of adopted London Plan policies.

The GLA has established a benchmark and aspirational targets for the upfront and overall embodied carbon of new developments. More information on these can be found in chapter 5.0. Developments are therefore required to calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment (WLCA) in order for their performance against these benchmarks to be assessed. The WLCA must demonstrate actions taken to reduce life-cycle carbon emissions.

Camden Local Plan (2017)

Camden Local Plan Policy CC1 requires all development to minimise the effects of climate change and encourages developments to meet the highest feasible environmental standards that are financially viable during construction and occupation. Moreover, all development is required to reduce carbon dioxide emissions in line with the targets set out within the London Plan.

Local Plan Policy CC2 requires all development to be resilient to climate change through the adoption of appropriate climate change adaptation measures. Local Plan Policy CC2 also promotes the incorporation of sustainable design and construction measures within developments.

In January 2021, the Council published the Energy Efficiency and Adaptation CPG. The CPG has been prepared to support the policies of the London Plan (2021) and the Camden Local Plan (2017).

In 2020, LB Camden published the Camden Climate Action Plan (2020-2025) which sets out the Council's ambition for a zero carbon Camden by 2030.
National Planning Policy Framework (2021)

Planning submission approach

The proposed development has been designed to also consider the key policies relating to sustainable design and construction, focusing primarily on the following documents:

- Camden Local Plan 2017
- Camden Planning Guidance (CPG) Energy efficiency & adaptation, January 2021
- CPG Planning for Health & Wellbeing, January 2021
- CPG Biodiversity, March 2018
- The London Plan 2021

The carbon impacts of the submitted scheme have been fully considered through the Whole Life Carbon Assessment, Circular Economy Statement, Energy Statement and Carbon Comparison Documents which can be found on the planning portal.

Further information on the sustainability aspirations targeted by the planning submission scheme can be found in chapter 6.0 of this report and in the planning application documents.

1.4 Development and Design Principles

In briefing the development of the 100 Chalk Farm Road site a number of areas were taken into consideration and aspirations set. These have informed the development and design approach taken and project decision making to enable the development and submission of a planning application. These areas take into account both external and internal project drivers.

This section summarises the development considerations and brief. These factors provide a base against which the redevelopment options can be assessed, alongside the Carbon Assessment and are reflected in the analysis in section 5.0.

Existing wider context
As set out above, the site is very well positioned when looking to provide transport options into central London. It also benefits from access to local parks and green space alongside the restaurants, bars and tourist attractions of Camden. This should inform the proposals for the site acknowledging the economic, social and cultural activity that should be supported through development. The proposals should aim to achieve this whilst respecting and complementing the heritage and character of their immediate context.

The exceptional transport links to tube, bus and cycle in immediate proximity allow sustainable transport for building users and support maximising density on the site. There is also the opportunity to create a “car free” development and removing the car park from the site which is currently un-used.

The Regents Canal Conservation Area, high quality buildings and heritage assets are to be understood and addressed in the proposals, as is the opportunity to integrate into the street pattern and improve permeability of the site and how it relates to the surroundings. Fundamentally, development proposals for the site should re-establish this site as an active contributor to the local and wider area. Further study of the context that helped inform the understanding of the context and response can be found in the Design and Access Statement document part of the planning application. (including DSDHA “100 Journeys study”).

Planning policy
The proposals should be set in the context of national, regional and local planning policy as a pre-requisite. Local Camden Planning policies seek efficient use of land and highest quality architecture.

Existing buildings and site constraints
Detailed review of the existing buildings with a preference to retain where possible to minimise cost and carbon intensity of the development and contribute to character in the completed development.

- Clear opportunity to improve or replace buildings of low architectural quality and improve the grain of the site and activation at ground floor.
- Dead ends and blank frontages to be designed out.
- Full review of further site constraints, physical and legal to ensure deliverability of proposals.

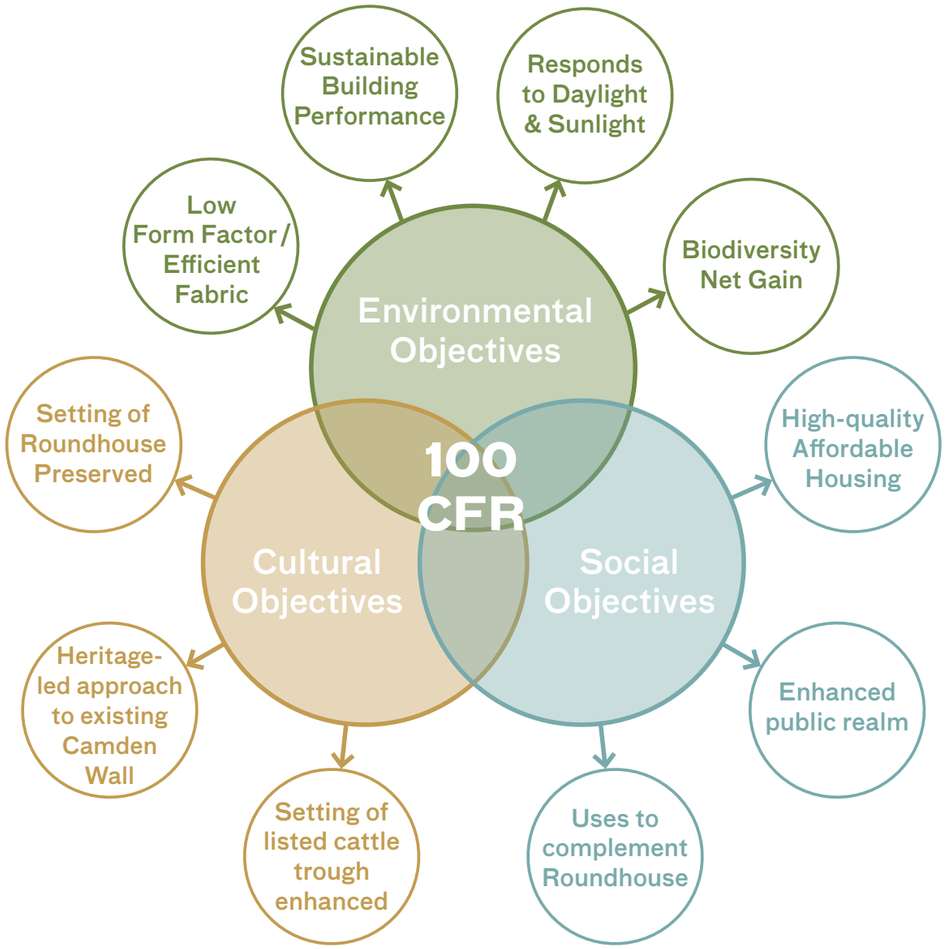
Sustainable economic use
For the quality and longevity of the scheme it is imperative that the site is developed with uses that have a strong business case. This is also necessary to ensure it is managed to a high standard in use with continued investment. The architecture should allow for future change of use where possible though flexible column grids, good slab to slab heights, and access to daylight.

Environmentally sustainable
Deliver a sustainable development fit for the future, which meets our ambitious environmental and social sustainability targets utilising a circular economy approach. Produce a car free development and encourage more sustainable forms of transport to and from the site. It is therefore imperitave to design for long life and flexibility of use to ensure maximum benefit from embodied carbon “invested” in the redevelopment.

Key metrics to pursue:
- Very low carbon development in use and embodied
- Target BREEAM outstanding rating
- Adaptable and flexible structure to enable future adaptability

People Focussed
Create a safe and inviting environment for building users, residents and visitors to the area. Focus on high quality thoughtful public realm and active ground floor uses to create the place. Provide users and residents with generous outdoor spaces and openable windows for access to fresh air. Incorporate active design and provision of facilities to encourage active travel.

Summary
These factors have been used to inform the assessment criteria used to analyse the development options for 100 Chalk Farm Road. As such the proposal is to produce a high quality, adaptable space that meets occupier needs now and is able to do so in the future. Achieving this will only be possible by considering in parallel the Social, Cultural and Environmental ambitions which drive development of the site.



THIS PAGE IS INTENTIONALLY LEFT BLANK

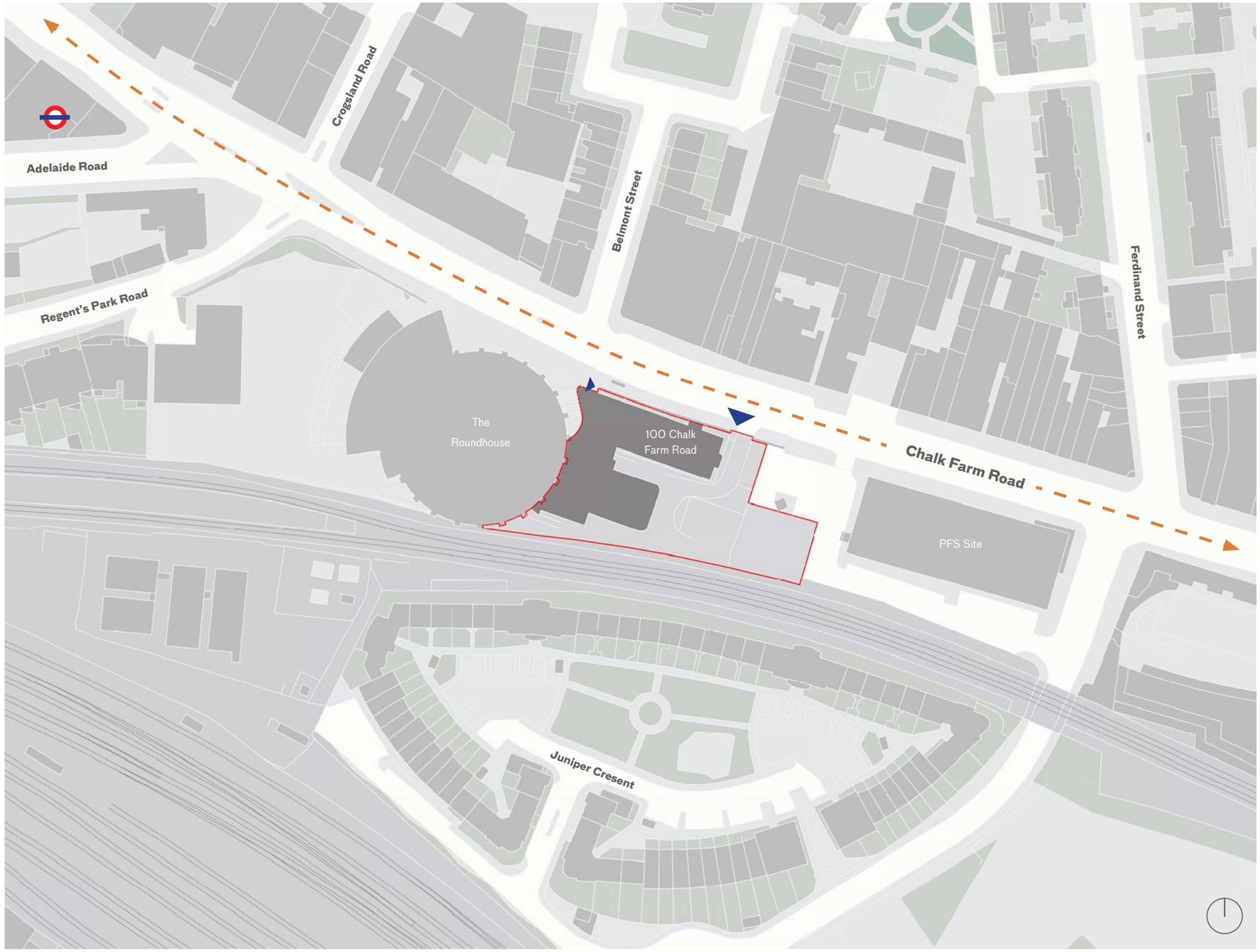
2.0 Existing Condition Appraisal

2.0 Existing Condition Appraisal

2.1 Existing Condition

The site is located on the south-western side of Chalk Farm Road and borders the mainline railway into Euston, with the Juniper Crescent Housing Estate to the south. Acting as a key route to and from the city, the road facilitates high volumes of traffic on a daily basis.

Significantly the site lies within the Regents Canal Conservation Area, to which the existing building on the site is a neutral contributor. To the west, the site is adjacent to the Grade II* listed Roundhouse theatre and live music venue. Beyond that, to the north-west is Chalk Farm Underground Station. To the east is the Petrol Filling Station site, which forms part of the Camden Goods Yard development and is currently in use as a temporary supermarket.



Site Outline

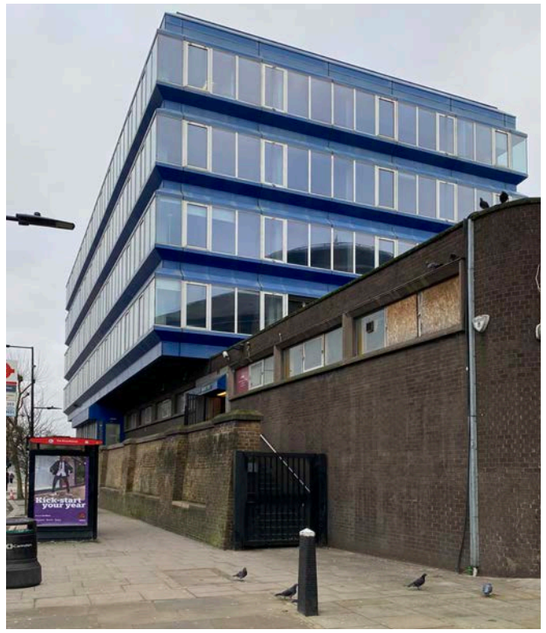
2.0 Existing Condition Appraisal

2.1 Existing Condition

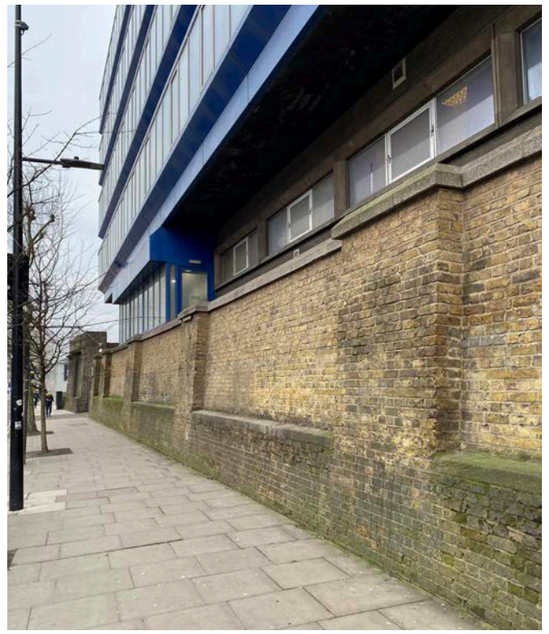
Public Realm

Currently, the site consists of three 1970s commercial buildings: the main six-storey office building fronting Chalk Farm Road; a two-storey link building which adjoins the Roundhouse; and a three-storey office building to the rear of the site. There are surface and subterranean car parks at the rear.

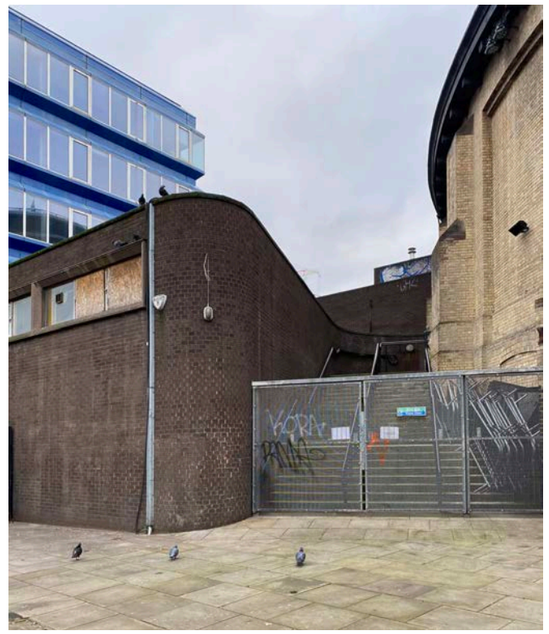
At street level the building currently offers no benefit to Public Realm and creates a defensive fortress like environment.



The existing condition highlights the inaccessible entrance and absence of any ground floor activiation.



Solid brick facade at ground level does not contribute to the public realm



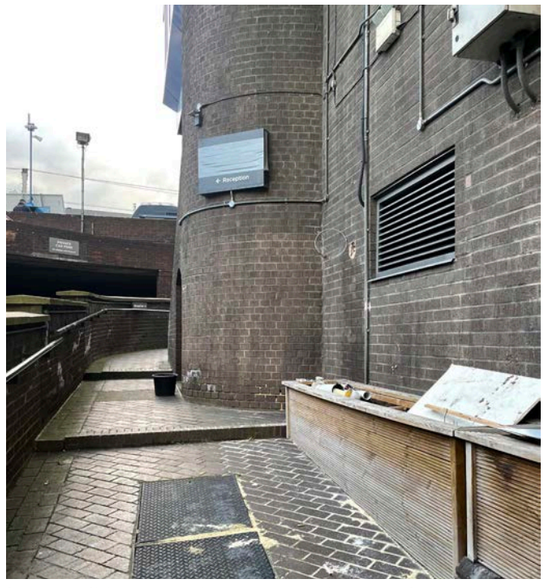
The current relationship to the Roundhouse highlights the lack of any positive ground floor public realm.

2.0 Existing Condition Appraisal

2.1 Existing Condition

Accessability, Design & Condition

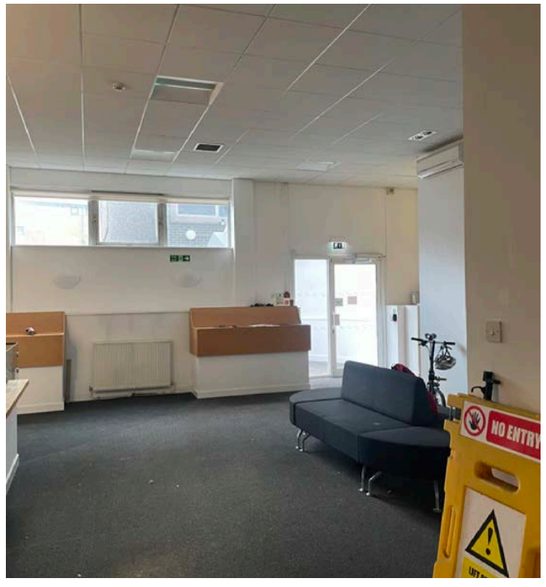
Having entered the site, a number of challenging conditions become clear. Firstly the inaccessable stepped ramp which leads to reception and has no visual connection to the street. Varied levels are also a theme both externally and internally which further inhibits circulation around the site. Furthermore, low ceiling heights and subsequent poor natural lighting is an issue in multiple areas of the current building.



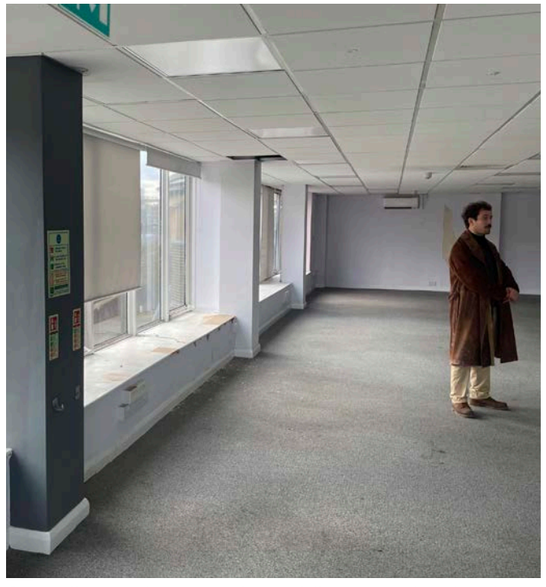
Inaccessible stepped ramp towards reception space. Entrance is set approximately 2m above CFR.

A disparity between slab levels with the current buildings on site limits potential redevelopment.

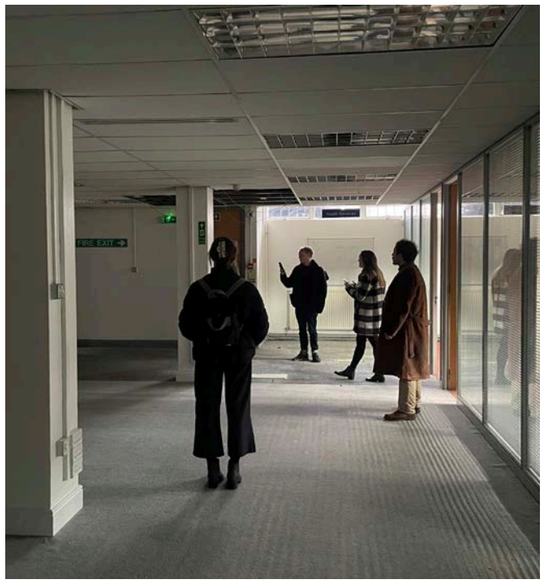
Varied slab and floor finish levels within each individual building or room.



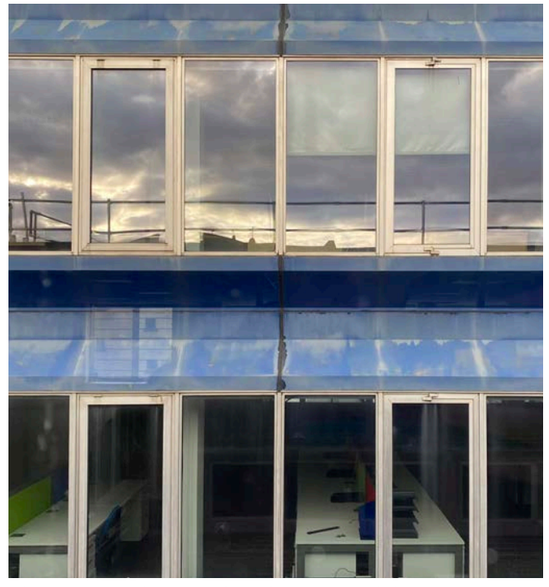
Existing reception space has no direct visual connection to external entrance space and little natural daylight.



Some floors a have very limited floor to ceiling height which compromises future fit-out and MEP.



Lower levels recieve poor natural daylight and do not provide a healthy working environment.



The poor condition and performance of the existing facade means it will be replaced in all three scenarios.

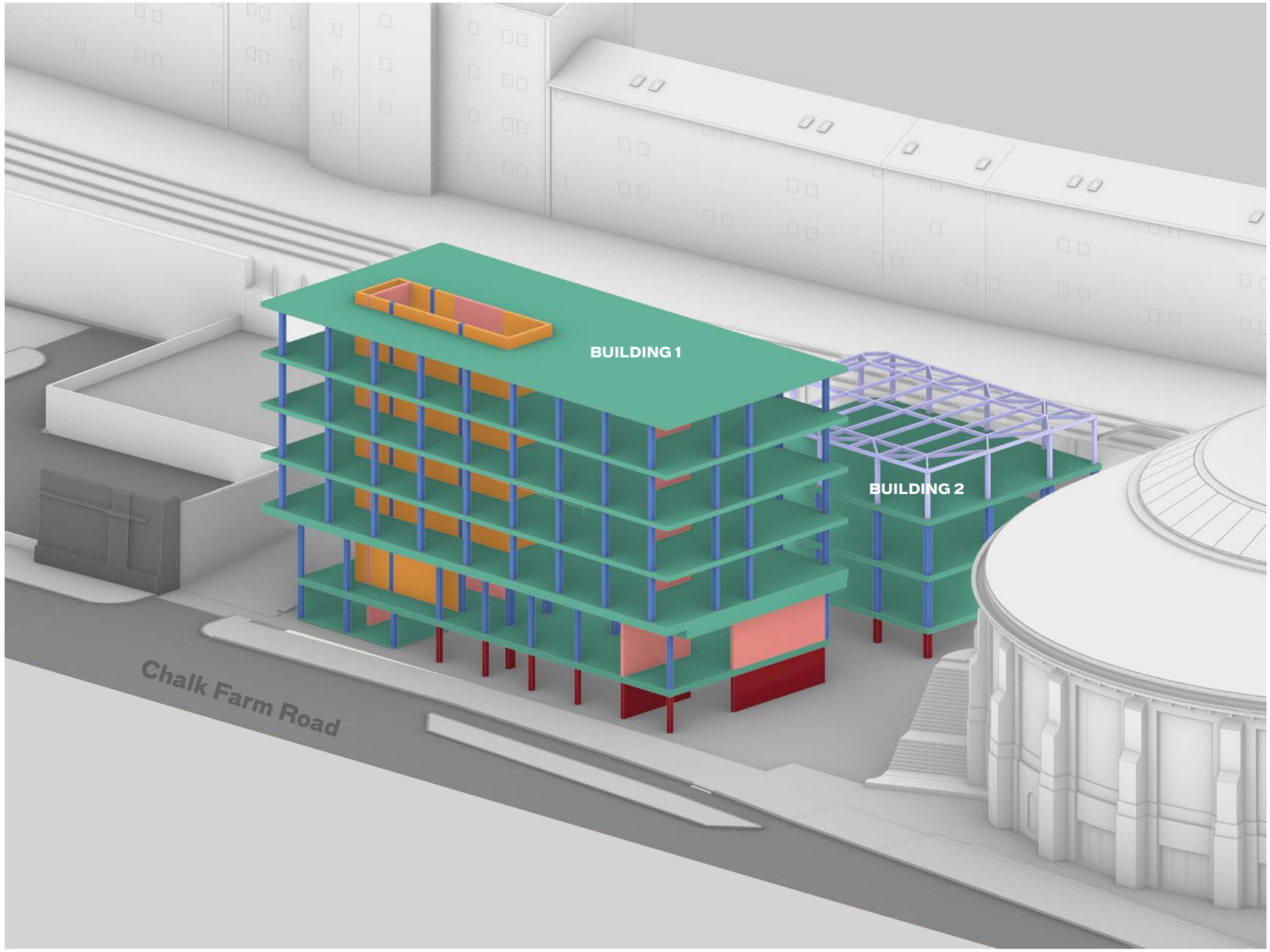
2.0 Existing Condition Appraisal

2.2 Existing Structure

Structural Elements

The existing 100 Chalk Farm Road building is formed of a number of structural elements which provide several oportunities and constraints.

- Concrete Slab
- Concrete Column
- Core Wall
- Shear Wall
- Metal Structure
- Below Ground Structure



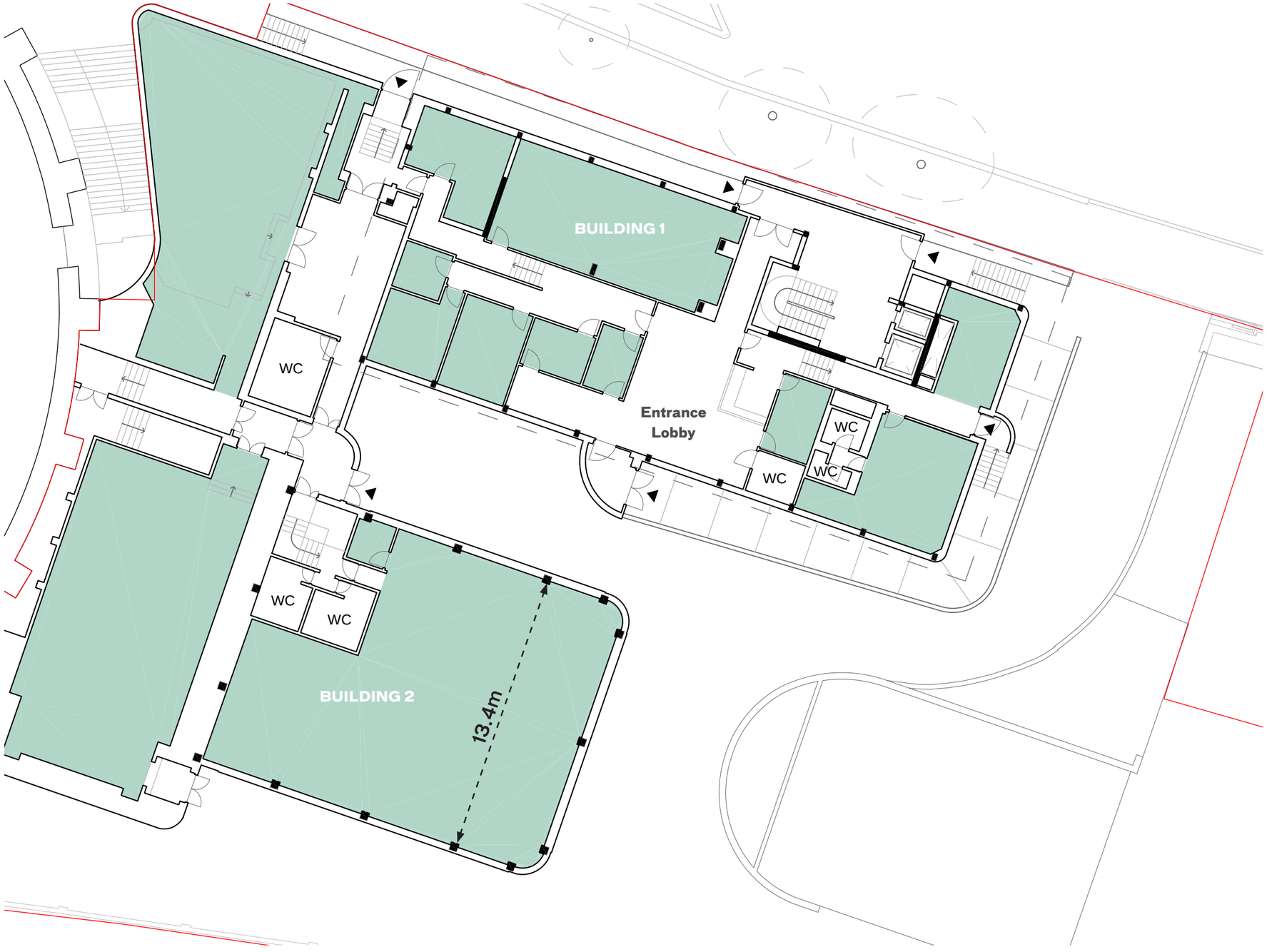
2.0 Existing Condition Appraisal

2.2 Existing Structure

Entrance Level Floor Plan

Structural Element

Entrance



2.0 Existing Condition Appraisal

2.2 Existing Structure

Typical Plan

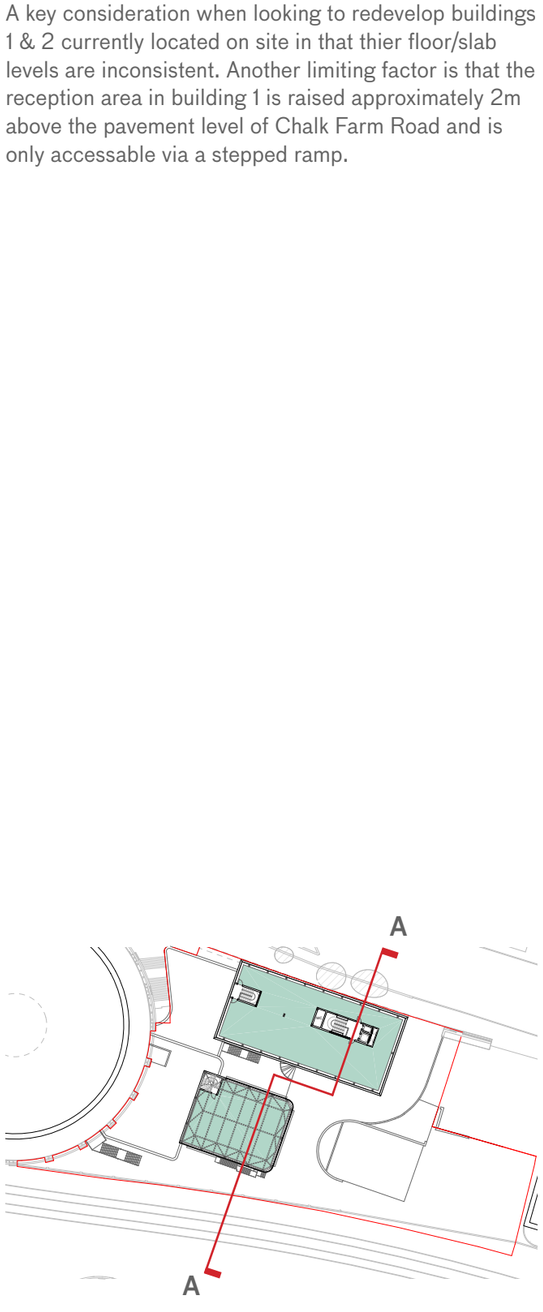
Structural Element

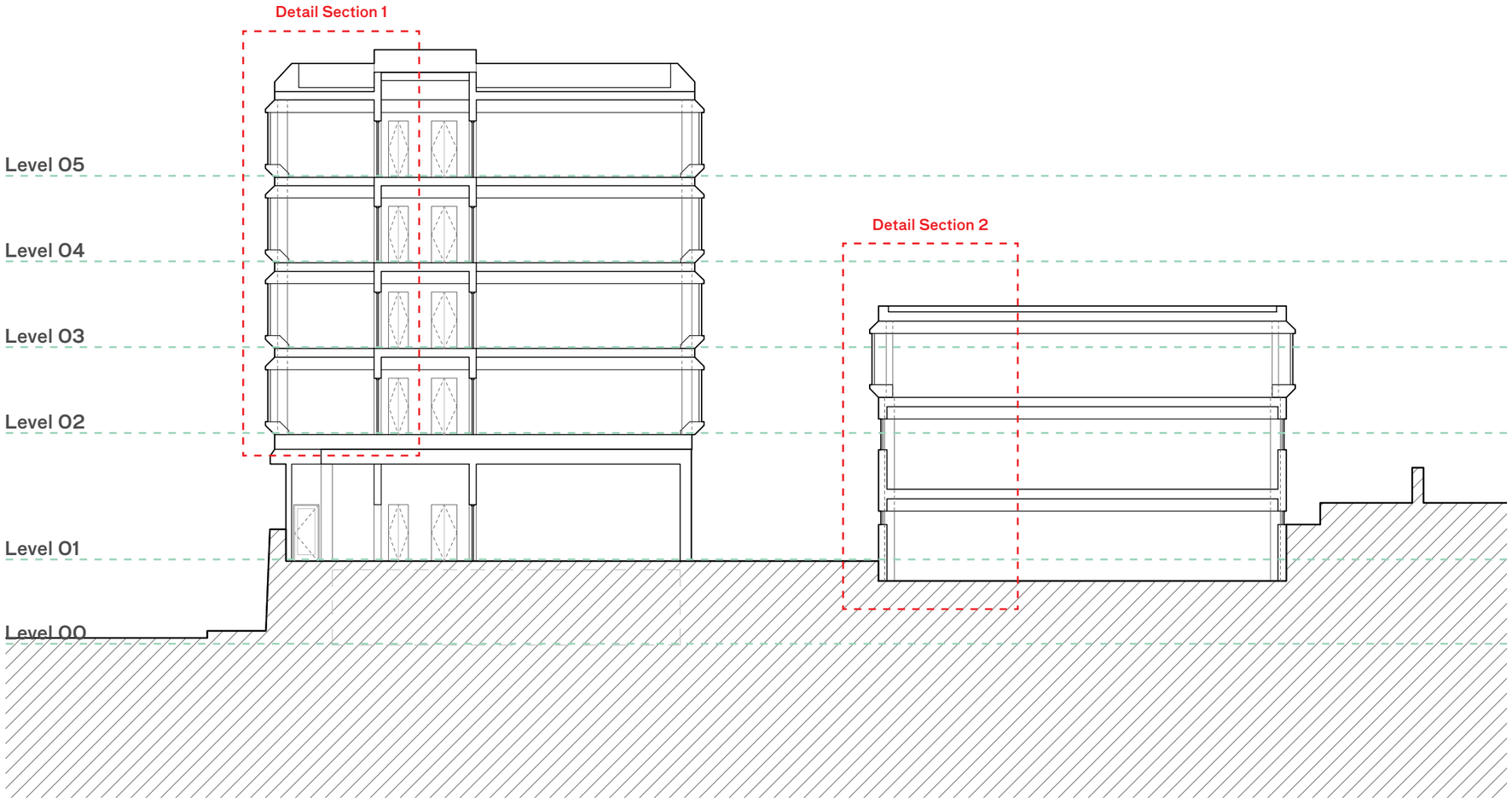
3.0 Existing Condition Appraisal

2.2 Existing Structure

Section A-A

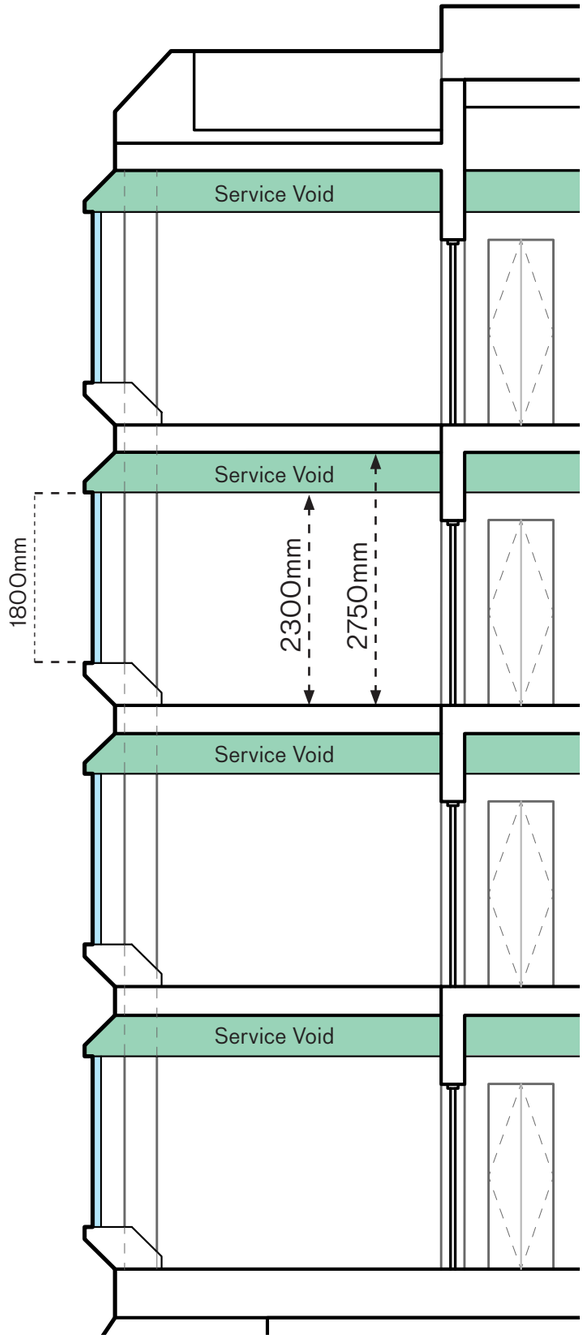
A key consideration when looking to redevelop buildings 1 & 2 currently located on site in that thier floor/slab levels are inconsistent. Another limiting factor is that the reception area in building 1 is raised approximately 2m above the pavement level of Chalk Farm Road and is only accessable via a stepped ramp.





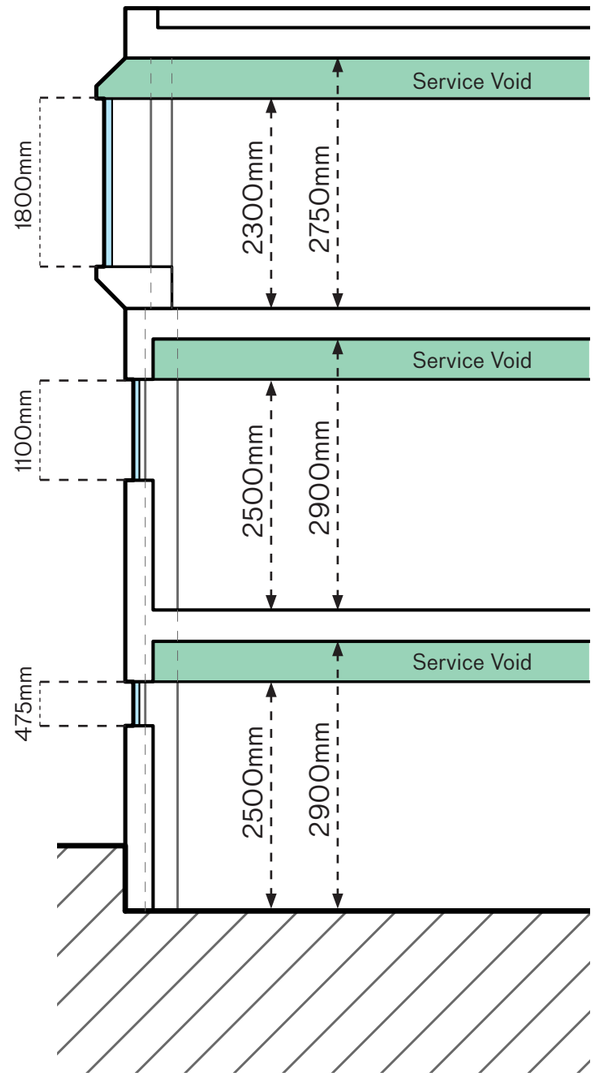
3.0 Existing Condition Appraisal

2.2 Existing Structure



Detail Section 1

Within its office floors, building 1 has clear heights of 2300mm along with large areas of glazing.



Detail Section 2

Building 2 has clear heights ranging from 2300-2500mm. While its top level of space provides an environment with similar characteristics to building 1, its remaining levels have a greatly reduced level of glazing.

2.0 Existing Condition Appraisal

2.3 Summary of Challenges & their Implications

There are a number of issues with the existing 100 Chalk Farm Road building which, as summarised in the previous pages, currently makes the building unlettable.

The building has significant physical constraints with small floorplates, low floor to floor heights and inconsistent slab levels. The physical characteristics of the existing structure, namely sub-optimal floor plates and the inaccessability from street level, make it unattractive to other office occupiers.

This existing situation will continue to worsen as time goes on thanks to the expectations employers and employees expect of their working environment. Issues with the existing building are summarised in table below as well as the predicted and/or known consequences or implications.

	Challenges	Implications
Public Realm	• Existing retaining wall which travels the length of the CFR site. • Raised entrance level and lack of street level ground floor. • Building currently shares poor relationship to neighbouring heritage asset (the Roundhouse).	• Wall condition prevents any increase in public realm provision without its removal. • Wall condition prevents GF activation or passive surveilance of Chalk Farm Road. • Wall condition prevents public interaction through F&B or retail tennants. • Opportunities to improve UGF are challenging and little increase in biodiversity is possible. • The heritage setting of the Roundhouse is detrimentally impacted by 100 CFR.
Accessability	• The entrance is raised approximately 2m above the Chalk Farm Road pavement and is only accessable via the use of steps. • Internal floor levels vary locally and between floors.	• With no level access, those unable to walk or stand will find it extremely difficult to visit the building without assistance. • To allow use of building 2 a seperate new core will need to be introduced. • The development will also need to maintain vehicular access in order to service the building.
Ground Floor	• Convoluted ground floor layout with multiple level changes and access routes.	• Will require significant reconfiguration to provide suitable lobby space and occupant experience.
Typical Floor	• The typical floor has very shallow floor plates, ranging from 3 to 7.4m deep. • Compromised core position and layout.	• Shallow floor plates provide no flexabilty for tennants and would hinder their ability to vary layouts. This will limit the desireability of the office space when looking to let. • Current core position and layout prevents any subdivision of floors with multiple tennants, again limiting the desireability of the office space.
Levels	• Mis-matched floor levels locally and across the two main buildings currently on site.	• Those unable to walk or stand will find it extremely difficult to travel through or move between buildings.

2.3 Summary of Challenges & their Implications

	Challenges	Implications
Entrance	• Existing reception space has no direct visual connection to external entrance space and little natural daylight.	• This will limit the desireability of the office space when looking to let.
Ceiling Height	• The clear heights on a typical floor are 2300mm once services are added to the ceiling.	• Current heights do not meet BCO requirements (2.45m) which would create an unsuitable office environment and could affect occupant wellbeing. • Low ceiling heights will affect occupant wellbeing and limit the desireability of the office space when looking to let.
Daylight	• Reduced daylight in multiple areas of the existing building.	• Sub-standard lighting will affect occupant wellbeing and limit the desireability of the office space when looking to let. • Sub-standard natural light will also reduce environmental performance because of a reliance on artifical lighting.
Structure	• Existing structure exists as a hybrid between concrete columns and slabs in Building 1 and concrete and metal framework in Building 2. • Existing shear walls loctated within building 1. • The load-bearing capacity of Building 1 will be reliant on its condition. • The load-bearing capacity of Building 2 is limited by its lightweight metal frame.	• Building 2, with its lightweight metal upper levels, will require complete redevelopment in order to retrofit or provide any additional loading capacity. • Existing shear walls limit layout opportunities and the position of any new core. • The expected life-span of the structure is relatively unknown with some elements already unsuitable for future use.
Existing Condition	• Poor condition and performance of existing facade. • Condition of existing services. • Unknown condition of existing structure.	• The current facade will fail thermal and environmental building regulations. Any retrofit will rely on the introduction of a new facade. • All services and equipment require replacement throughout which will involve the introduction of new shafts and openings in the structure.

THIS PAGE IS INTENTIONALLY LEFT BLANK

3.0 Development Options

3.0 Development Options

3.1 Options Investigated

Development Principles and Assumptions

Upgrading the building stock to achieve net zero carbon standards presents both challenges and opportunities, and each building presents a unique set of location based, physical and historical characteristics.

Taking the Development and Design Brief summarised in chapter 1.0 as a starting point, and informed by a detailed analysis of the existing condition and challenges of the site and existing buildings (chapter 4.0) the following assumptions were made to all development options explored:

- Reuse the existing cores as much as possible and upgrade as needed to suit current building standards to provide future flexibility
- Renew all MEP services throughout
- Remove existing cladding and replace with new to meet current building regulations requirements and extend the building's lifespan
- All options assume a ceiling servicing zone due to the operational and user experience limitations of perimeter servicing

Establishing the Scenarios

In line with the Waste Hierarchy, first the condition of the existing site must be considered for any opportunities for a refurbishment in order to prevent waste prior to a new building being developed.

All development options have been designed with considerations for the state of the current building, and associated issues. Further details relating to the development options, including design assumptions, can be found in section 2.0.

This study investigated a series of development options for the 100 Chalk Farm Road site, with a starting point of the retention and retrofit of the existing building. These options vary in the scope of their proposed development. This study was used to establish the scope of development required in order to address the problems of the existing site. These options have been informed by the design team.

The report establishes and assesses three development options for the site. The options considered and assessed as part of this report are listed here:

- Option 1 - Retention & Retrofit with Extension
- Option 2 - Retention & Retrofit with Extension & New Build
- Option 3 - New Build (proposed planning submission)

A comparison of each of the options and design assumptions is set out in the following page for clarity. It is important to note that an indicative design has been established for options 1-2, while option 3 reflects the developed design of the planning application scheme. Therefore there is a greater extent of detail available for option 3.

Alternative uses

This report assesses three options for a commercial development on the site of 100 Chalk Farm Road. The planning application scheme for the site is for a commercially-led mixed use development, with the existing building being replaced by a Purpose Built Student Accomodation (PBSA) building alongside a residential building; this use is in line with the Council's Draft Site Allocations Plan (2020) which helped inform the brief for the site.

The methodology for the Whole Life Carbon Assessments of the options within this report requires a level of design, performance specification and materiality information for each of the options in order to enable factors such materials and operational performance to be accurately measured and modeled. The assessment within this report therefore utilises the design for the planning application scheme as a basis for these inputs.

Earlier proposals for the site - while in previous ownership - have explored alternative uses, such as a predominantly residential scheme. However residential or office, the existing building does not meet the wider brief requirements. Therefore have not carried out a design exercise to enable us to assess this option with a level of accuracy to enable comparison.

However the issues affecting the existing building and their implications (chapter 4.0) and analysis (chapter 5.0) apply equally, though in different degrees, to any alternative repurposing of the building for residential or office use – for example the limitations of the existing structure to the upper floors, the quality of space provided by the existing structure, deep floorplates on the lower levels and the existing raised access.