# Cambridge North Masterplan

Proof of Evidence *APP/W0530/W/23/3315611* 

## acme

Friedrich Ludewig - Dip Arch, RIAI 9<sup>th</sup> May 2023

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## 1.0 / Scope of Evidence

- I, Friedrich Ludewig, am instructed by the Appellant, Brookgate Land Limited on behalf of The Chesterton Partnership ["the Appellant"] in respect of Land to the north of Cambridge North Station, Cambridge ["the Appeal Site"].
- The appeal is made by the Appellant against the failure of South Cambridgeshire District Council ["the LPA"] to determine an application for planning permission reference 22/02771/OUT. At the meeting of the Joint Development Control Committee on 22 March 2023, the Council resolved that had it been able to determine the application it would have refused the application.
- My evidence is structured as follows:
  - Section 1: Scope of evidence
  - Section 2: Sets out my experience, qualifications, summary of my evidence and the experience of ACME as a masterplanning and design practice.
  - Section 3: Sets out the Site and context. It includes an overview of the surrounding conservation areas and listed buildings, the Site history, and its surrounding developments.
  - Section 4: Sets out the Brief and Consultation. It outlines the principles that have underpinned the Masterplan brief, and outlines how the brief has changed and adapted in response to consultation. Changes to the planning strategy are outlined, insofar as they informed and affected the evolution of the design.
  - Section 5: Sets out the Masterplan design principles for urban design, commercial buildings, residential building and sustainability, which have provided the design guidelines for all plots in the Masterplan.
  - Section 6: Sets out the Masterplan Design for the Appeal Site as a whole.
  - Section 7: Sets out Detailed Design for the Mobility Hub, Plot S4.
  - Section 8: Sets out the Outline Design for the Triangle Site, Plots S8/9.
  - Section 9: Sets out the Outline Design for the Residential Buildings, Plots S11-21.
  - Section 10: Sets out my conclusions

In this evidence, I shall refer to:

- 1. Design and Access Statement CD1.01 -CD1.15b: and
- Strategic Masterplan (Illustrative Only) CD2.90
- 3. Strategic Masterplan Emerging NEC AAP (Illustrative Only) - CD2.91



## 2.1 / ACME - Friedrich Ludewig



Fig. 1 Friedrich Ludewig - Founding Director, ACME

- 2.1.1 My name is Friedrich Ludewig. I am a registered architect (Berlin BE-13159) and founding director of ACME, an international design practice based in London, Berlin and Madrid.
- 2.1.2 I studied Architecture at the Technical University Berlin and the Academy of Fine Arts Berlin (1995 1999) and the Architectural Association School of Architecture in London (1999 2001) where I received my Diploma in Architecture with Distinction (Honours).
- 2.1.3 Prior to founding ACME, I was Associate Director at Foreign Office Architects (FOA) from 2000 to 2007. I was responsible for a wide range of projects including Ümraniye Meydan in Istanbul, Watermark Southampton, the JLP Store and Cinema complex in Leicester, Ravensbourne College and the BBC Music Centre. Between 2004 and 2007 I led the FOA team delivering the London 2012 Masterplan, Olympic Park and Infrastructure commission.
- 2.1.4 I have taught and lectured widely, at The Academy of Fine Arts in Vienna (2003-05), Harvard University Graduate School of Design (2005), Darmstadt University (2009), Berlage Institute in Rotterdam (2007-08), The Bartlett UCL (2008-11), Royal College of Art in London (2016) and the Architectural Association.
- 2.1.5 I founded the Architectural Practice ACME in 2007, which has grown under my direction to employ 75 staff in three offices, London, Berlin and Madrid. Since its inception, I have taken a strategic design role across all projects in the office. I review all design work at key project stages, guiding the direction of projects to ensure integrity and quality of outcome.

- 2.1.6 I have extensive personal experience in masterplanning across complex scales and continents, often involving highly significant historic townscapes including:
  - Umraniye Istanbul (completed 2007)
  - Highcross Leicester (completed 2008)
  - Olympic Masterplan, Lea Valley (completed 2012)
  - Sheffield Sevenstone (2007-2012)
  - Chester Northgate (2016-2020)
  - Eastgate Quarter, Leeds (2007 to 2025, ongoing)
  - Copr Bay, Swansea (2007-2028, ongoing)
  - Dublin Central (2018-2032, ongoing)
  - Euston Over-Station Development, London (2020-2056, ongoing)
  - Melbourne Southern Cross OverStation Development (2020-2038, ongoing)
  - Flingern Masterplan, Düsseldorf (2021-2036, ongoing)
- 2.1.7 I have worked on the Cambridge North project with Brookgate since 2019.

#### 2.1.8 Declaration of Truth

I confirm that I have made clear which facts and matters referred to in this Proof of Evidence are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Signed:

Friedrich Ludewig 9th of May 2023

#### 2.1.9 Evidence Summary

My evidence, as set out in the following Sections of this Proof, is that the Appeal Site is an urban brownfield location with excellent new transport infrastructure, designated in policy as a major new employment-led expansion of Cambridge. The proposals for the Appeal Site are embedded in a resilient, long-term Masterplan vision for the wider site, and well considered in their use, density, configuration and townscape impact.

I will argue that the design of the site has developed in close consultation with the Local Planning Authority and has incorporated a significant quantum of design change in response to feedback received. I will argue that the townscape impact of the Masterplan as a whole has been considered under its three constituting aspects.

- 1. It is of a very high quality and would create an excellent new place within the city of Cambridge.
- It has been designed to create good new townscape, including a carefully-considered new eastern edge to this part of the city, and interesting high quality interfaces to the south, north and west.
- 3. It is in character with the townscape of Cambridge, and builds on the spatial qualities, materiality and ethos of the city to create a vibrant new quarter.

I will therefore argue that the proposed mix, its visual appearance and the configuration of the build form & open space has been designed with heights, density and distribution of uses consistent with best urban design practice, supported by precedent studies. Lastly, I will argue in review of individual areas of the Masterplan that the configuration of hard and green open spaces and residential spaces creates a rich tapestry of character areas, diverse in play and leisure opportunities, rich in wildlife and habitats, and well considered in its residential configuration. In my professional opinion, the scheme will become a beautiful, sustainable new quarter for Cambridge that will enable wider development around it and deliver much needed spaces for science & research and housing.

## 2.2 / ACME - Previous Work



Fig. 2 ACME work: Eastland Town Square, Melbourne



Fig. 3 ACME work: Swansea Arena, Swansea



Fig. 4 ACME work: REWE Green Farming, Wiesbaden

- 2.2.1 ACME is an architecture practice based in London, Berlin and Madrid. With current projects throughout Europe, the Middle East and Asia; the scale of our work ranges from architecture and masterplanning through to interior and product design for public, private and third sector clients.
- 2.2.2 ACME is known for our track record of delivering regenerative masterplans and landmark architecture. To do so requires a great team of designers in our offices, and a great team of collaborators to work with. We promote a culture of communication and exchange in our design development. Masterplanning and architecture does not exist in isolation; we passionately believe that structure, services, lighting and landscape are integral to what we do. For this we look to work with the best consultants, local partners and experts in their field and have a noticeable track record in delivering together. We take collaboration seriously and we strive to ensure that each project is consistent and rigorous in the integration and expression of all disciplines.
- 2.2.3 Since 2019, ACME Operations are Net Zero Carbon. The annual carbon audit enables us to target annual reductions in the way we work and manage the office. The carbon audit also assesses active projects, from competition to construction, allowing us to compare projects across the office, lessons learnt, and promote the best examples, both internally with our clients. The carbon involved in the construction of our projects dwarfs the carbon emitted by the operation of the office, emphasising our responsibility as designers to design and advocate for zero carbon design.
- 2.2.4 ACME has extensive experience working on ambitious sustainable buildings, including timber framed office buildings with LendLease and Argent in London, timber framed supermarkets in Germany, to low carbon hotels and offices in Dublin. This diversity of client, use and location allows for cross fertilisation from different construction industries and provides a breadth of experience, which we bring to each new project. By systematically tracking key data from each project we are able document each building through design, construction and operation, learning at each stage and informing new projects. This ranges from strategic decisions on the use of timber frames to incremental improvements in material specification.



## 2.2 / ACME - Previous Work



Fig. 6 ACME work: Stratford Pavilion, London



Fig. 7 ACME work: Stratford Pavillion, London

- 2.2.5 Consultation, engagement and effective communication with stakeholders and the public are key to delivering projects successfully. We enjoy communicating with client teams, local authorities and working in partnership with the private and public sector to deliver the best possible outcomes.
- 2.2.6 ACME has won a significant number of awards for its work, including the following:
  - 2023 The Pineapples Award: Infrastructure Finalist
  - 2023 Exemplary Buildings in the State Of Hesse Award: Social Infrastructure - Shortlisted
  - 2022 Red Dot Awards: Grand Prix Winner Architecture Category
  - 2022 German Stores Of The Year Awards Winner
  - 2022 New York Gold Key Awards 2022: Hotel Guest Room - Winner
  - 2022 International Award for Wood Architecture -Finalist
  - 2022 Prix Versailles: Europe Special Prize for Exterior - Winner
  - 2021 Structural Timber Awards Overall Winner
  - 2021 RIBA South East Award Winner
     2021 Surface Design Awards: Housing Exterior Winner
    - 2021 Surface Design Awards: Housing Interior Winner
  - 2020 Prix Versailles for Exterior Retail Africa and West Asia, Winner
  - 2019 Prix Versailles 2019 for the Best Shopping Mall. Asia
  - 2018 Europe Prix Versailles, Shopping Malls
  - 2018 Worldwide Prix Versailles, Shopping Malls
  - 2018 Schueco Awards, Commercial Building
  - 2017 RIBA National Award
    - 2017 RIBA Yorkshire Building of the Year
  - 2017 MIPIM Award, Global Best Shopping Centre 2017 WAF Award, Commercial Project Of The Year 2017 Creativity In Concrete Award 2017 Mapic Award For International New Project Of The Year
  - 2017 Brick Awards, Best Commercial Building 2017 Brick Awards, Best Innovative Use Of Brick And Clay Products
  - 2017 Leeds Architecture Award Best New Building
     2017 Irish Concrete Society - International Project of the Year
  - 2010 RIBA Manser Medal
  - 2010 Archdaily Building of the Year Awards -Winner, Houses
- 2.2.7 ACME's work is regularly published in publications such as Financial Times, ICON Magazine, Wallpaper, RIBA Journal, Building Design, Bauwelt, Architects Journal, Architecture Today, Construction Enquirer, Forbes and Dezeen. Our projects have been featured in most mainstream UK media including on BBC, ITV and Channel 4.



ACME work: Copr Bay, Swansea



ACME work: Hunsett Mill, Norfolk Fig. 10



Fig. 12 Friedrich Ludewig work: London 2012 Masterplan



Fig. 9 ACME work: Canopy by Hilton, London City



ACME work: Canopy by Hilton, London City Fig. 11



Fig. 13 ACME work: Bumpers Oast, Kent

## 2.3 / ACME - Masterplanning Experience

Much of ACME's work is focused on long-term urban regeneration. This chapter sets out ACME's masterplanning experience that I consider relevant for Cambridge North, through five projects:

- Dublin Central, Dublin;
- Euston Over-Station Development, London;
- Southern Cross, Melbourne;
- Copr Bay, Swansea;
- Eastgate Quarter, Leeds.

#### 2.3.1 Dublin Central - Dublin



Fig. 14 Dublin Masterplan, Ireland

Dublin Central is an ACME Masterplan in development since 2018, and scheduled to be completed in 2030. The site spans several urban blocks in the heart of Dublin North, bound by O'Connell Street, Moore Street, Henry Street and Parnell Street. Over the past 300 years, it has been shaped by the affluence of Georgian Dublin, the emergence of the Market Quarter, the 1916 Easter Rising, the war of Independence, 1970s redevelopments and the Celtic tiger boom. In recent decades, the area has declined, suffering from vacancy and dereliction as several regeneration schemes failed. The new Masterplan creates an urban mixed-use guarter based on old streets and patterns and retaining historic buildings that recall the memory of the founding events and sacrifices of 1916. The Masterplan shows a careful balancing of townscape consideration. In particular the treatment of the very linear frontage of the scheme on O'Connell Street, visually mediated through the use of steps in massing, variations in materials and architectural language shows experience particularly relevant to Cambridge North.

#### 2.3.2 Euston Station - London



Fig. 15 Euston Masterplanning, London

Euston Over-Station Development is an ACME Masterplan for the Department of Transport (DfT), Network Rail, HS2 and its delivery partner Lendlease, in development since 2019, and scheduled to be completed in 2056. It is a vision for a fully integrated transport hub connecting London to its regional centres. 27 hectares of railway land transformed into a sustainable and vibrant neighbourhood, providing thousands of new homes, jobs, up to 1 million sqm of development, and many acres of new green and public space. Proposals are rooted in the city's original urban fabric and aim to break down the usually impenetrable urban blocks created by train stations by developing over the tracks and the station.

The Masterplan addresses the complex relationship of crucial transport hubs with their immediate neighbouring environment. A comprehensive national railway projects to benefit both the nation as a whole but also improve local people's lives, economic opportunities, physical and mental health.

#### 2.3.3 Southern Cross - Melbourne



Southern Cross, Melbourne

The Melbourne Southern Cross Development is an ACME Masterplan for Victoria Transport and the City of Melbourne and Infranexus, in development since 2019, and scheduled to be completed in 2036. Melbourne was originally laid out as a square grid by the river, surrounded by green. However, the western edge of the city quickly developed into a very hard industrial edge. The last 30 years have seen docklands regeneration and the transformation of the rail tracks into Southern Cross, Australia's largest transport hub. The Masterplan is centred on three scales of intervention, in 5, 10 and 15 year timeframes.

The first stage is shaped to ease congestion and provide more daylight and ventilation to the station hall. The second phase reconfigures the western and eastern edges of the station by creating new bus terminals and development over adjacent motorways and sidings. The final phase builds over the current train tracks to deliver connections, streets and buildings surrounding a major new urban park.

## 2.3 / ACME - Masterplanning

#### 2.3.4 Copr Bay - Swansea



Fig. 17 Copr Bay, Swansea

The Melbourne Southern Cross Development is an ACME Masterplan for Victoria Transport and the City of Melbourne and Infranexus, in development since 2019, and scheduled to be completed in 2036. Melbourne was originally laid out as a square grid by the river, surrounded by green. However, the western edge of the city quickly developed into a very hard industrial edge. The last 30 years have seen docklands regeneration and the transformation of the rail tracks into Southern Cross, Australia's largest transport hub. The Masterplan is centred on three scales of intervention, in 5, 10 and 15 year timeframes.

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#### 2.3.5 Eastgate Quarter - Leeds



Fig. 18 Victoria Gate, Leeds

The Leeds Eastgate Quarters development is an ACME Masterplan for Hammerson, in development since 2007, and scheduled to be completed in 2025. The Masterplan transforms 4-hectares of central Leeds into an active mixeduse area. The first phase delivered a John Lewis Store and a new retail arcade, delivering the long-standing vision of the Council to complete the retail core of Leeds City Centre. The building facades evolve from the 19th and 20th Century language of the surrounding Blomfield and Victorian brick and terracotta buildings, and consist of sculpturally pleated brick elevations, changing in rhythm and scale to respond to the context.

The last phase is centred around four remaining historic buildings, Templar House, Lyon Works, Templar Hotel and the Eastgate Terrace, which form the anchors of the network of streets and squares. The Masterplan addresses the notorious inaccessibility to the site. Four key connections are proposed and a finer grid of passages and courtyards. The public realm is enhanced with the introduction of two public squares: Lyon's Square, a green, large space equipped to support cultural life; and Templar Square, a buzzing urban plaza in the east of Leeds. The quarter will have a distinct character, closely related to the Leeds context. Working with a single material, with different sculptural articulations and architectural innovation with a traditional and versatile material.

## 2.4 / ACME - Office Experience

ACME has extensive experience in the design and delivery of office buildings. This chapter sets out ACME's office experience that I consider relevant for Cambridge North, through four projects:

- 60 Aldgate, London
- SAB Bank HQ, Leipzig
- H1 Elephant Park, London
- Nollendorfplatz, Berlin

#### 2.4.1 60 Algate - London



Fig. 19 60 Aldgate, London

The 60 Aldgate development is an ACME workspace in the City of London for the 4C Hotel Group, in development since 2011, and scheduled to be completed in 2025. The net zero-carbon 24,000sqm scheme received final planning approval in 2022. The scheme illustrates how ACME worked in close collaboration with the planning authority to sculpt the building in regards to sensitive townscape considerations. Situated in the backdrop of the White Tower of the Tower of London, and thus affecting a UNESCO World heritage setting, the building was carefully modelled to create a roofscape that complements the reading of the White Tower silhouette when seen from the Southbank.

ACME's workplaces are designed with a focus on sustainability, flexibility and well-being, and carefully sculpted urban form to fit well into their townscape context. Structural timber, external terraces, public ground floors, openable windows and staircases create adaptable office buildings - low carbon, embracing landscape and outside spaces on every level with simple, low-tech building services that will age well and allow for future change.

#### 2.4.2 SAB - Leipzig



Fig. 20 SAB Bank HQ, Leipzig

The SAB Bank HQ in Leipzig is an ACME workspace building in the City of Leipzig for the Federal Bank of Saxony, in development since 2013, and completed in 2021. The building addresses a complex urban context of inner ring roads and the train station, and creates a new urban public space at its heart, well used by families and children in the wider area, and a new public icon for the city of Leipzig, in a previously soulless void in the centre of Leipzig without identity and purpose. It illustrates well the experience that ACME has in creating new workspaces and to ensure these buildings activate the public realm and deliver more than just workspace, in how they activate space around them, and create places for everyone.

#### 2.4.3 Nollendorfplatz - Berlin



Fig. 21 Nollendorfplatz, Berlin

The Nollendorfplatz Office is an ACME workspace building in the City of Berlin for the Developer Bauwens. The building illustrates ACME's innovative approach to reducing the use of Carbon in Construction. The interior parts of the structure are built in timber for columns, beams and slabs, with the exterior building in structural solid stone, to create a Zero Carbon Building with lowest possible embodied energy. Steps in the massing are used to create outside spaces and balconies for every level to create a workplace of the future that celebrates its unique context and its daily life through its public sculpture facade to the square.

#### 2.4.4 H1 Elephant - London



H1 Elephant Park, London

The H1 Elephant Park is an ACME workspace building in Southwark for Lendlease, in development since 2016, and scheduled to be completed in 2025. Located on the final plot of the Masterplan, the 17 storey building structure is shaped as a steeply terraced volume, with south-facing outdoor gardens on every level. An active ground floor welcomes people in from the park with open lobby, cafes, workshops and event spaces. The H1 building illustrates a complex process of Townscape considerations across scales to deliver a well considered building in its context. Careful sculpting of the building was required to ensure it sits well in the urban silhouette and protected vista from St. James Park, as well as its more immediate context in Wandsworth Road, which were resolved through careful kinks and steps in the massing across urban and architectural scales.

## 2.5 / ACME - Residential Experience

ACME has extensive experience in the design and delivery of residential buildings. This chapter sets out ACME's residential experience that I consider relevant for Cambridge North, through two projects:

- Shoreline Crescent, Folkestone
- The Haydon, London

ACME's residential projects are designed with a focus on sustainability and well-being. How we live together in cities, and different notions of collective spaces to foster community building are a core focus when designing shared residential amenities. The sensitivity of design ensures that the buildings provide a significant benefit and positive impact to their local area and in turn are instrumental to the place's growth and regeneration.

#### 2.5.1 Shoreline Crescent - Folkestone



Fig. 23 Shoreline Crescent, Folkestone

The Shoreline Crescent Development is an ACME residential building in Folkestone for the Folkestone Harbour Development Company, in progress since 2016, and completing in 2023. The building is the first building of a larger residential Masterplan along the shore in Folkestone, and delivers a quantum of 1000 residential units with a mixture of tenures. In a similar way to Cambridge North, the development articulates its identity differently towards the outside and the inside, with a more urban facade to the outside and a courtyard facade around a shared green space on the inside. Careful townscape considerations were incorporated in the massing, to ensure the development is articulate but subservient to the urban setting of Folkestone as a city on the cliffs, with defined low and high points within the massing itself, to create urban corners and habitable terraces.

#### 2.5.2 The Haydon - City of London



Fig. 24 The Haydon, London

The Haydon Gardens Development is an ACME residential building in the City of London for the 4C Group, in progress since 2013, and completing in 2023. The building delivers a quantum of 82 residential units in a dense urban context. In a similar way to Cambridge North, the development carefully crafts the urban form to create the maximum of double aspect units, to ensure best possible daylight to all habitable rooms. Careful wider townscape considerations were incorporated in the upper parts of the massing, to work with the UNESCO Heritage protected vistas from the White Tower of London, and ensure the development is articulated through steps to give pre-eminence to the White Tower in the foreground.

## 2.6 / ACME - Mobility Hubs

ACME has extensive experience in the design and delivery of Mobility Hubs and Parking Structures. This chapter sets out ACME's Mobility Structure experience that I consider relevant for Cambridge North, through three projects:

ACME's mobility projects are designed with a focus on beauty and safety, and with an increasing focus on sustainability and adaptability, and carefully sculpted urban forms to fit well into their townscape context.

- Robina Town Centre
- Leeds Victoria Gate
- Eastland Melbourne

#### 2.6.1 Robina Town Centre - Brisbane



Fig. 25 Robina Town Centre Carpark, Gold Coast

The parking structure developed for Robina Town Centre is an ACME Mobility Project in Queensland, Australia for QIC, completed in 2016. The expansion of Robina transforms the shopping centre into an open and urban town centre with a marketplace destination that combines fresh food shopping, cooking, tasting, learning and eating. In a similar way to Cambridge North, the development at Robina Town Centre required an durable and low maintenance solution to its Multi Storey Car Park. A parking structure was needed to replace existing surface car parking, in a similar context as the existing and proposed situation at Cambridge North. The new parking structure is a direct replacement building for the previous wasteful parking arrangement, providing sheltered car parking in 1/3 of the space previously used. The new carpark façade is a joyful coloured screen, composed of laser-cut and folded metal panels, revealing swathes of colours and creating vivid variations in transparency and opacity as one moves along it.

#### 2.6.2 Victoria Gate - Leeds



Victoria Gate Carpark, Leeds

The parking structure developed for Victoria Gate is an ACME Mobility Project in Leeds for Hammerson, completed in 2018. The site was previously used as a surface car park for Leeds market. To intensify the use of the central plot in Leeds City Centre a parking structure was needed. The resulting Multi Storey Car Park is located in a prominent position and visible from the main vehicular routes into the scheme. The MSCP design allows for natural ventilation and creates an interesting facade delivered within the budget constraints. Anodised aluminium twisted fins create a sculptural facade with a visual effect relating to the John Lewis facade language. The light weight fins are supported off the slab edges and have a separate guarding and vehicular restraint behind it. Lighting enhances their lightweight appearance at night and creates a glowing landmark at night. In a similar way to Cambridge North, the parking structure at Victoria Gate is integrated into the surrounding townscape identity, and brings interest and intrigue to the Masterplan.

#### 2.6.3 Eastland - Melbourne



Fig. 27 Eastland Carpark, Melbourne

The parking structure developed for Eastland is an ACME Mobility Project in Melbourne for QIC, completed in 2018. Eastland is located in the outer suburbs of Melbourne. The development combines transport infrastructure with workspace, medium density housing, culture, leisure and retail use. Similar to the situation in Cambridge North, the Melbourne site was previously used as a surface car park. The new buildings along Maroondah Highway contain a large new department store and 1,600 additional parking spaces over 5 levels. The building is covered with a ribbon-like façade created with two repetitive types of fins, used in different densities and rotations to create intrigue along the length of the highway. In a similar way to Cambridge North, the development at Eastland is sensitive to the understanding that the majority of surrounding residents use vehicles as their primary mode of transport. Situating the parking structure by the train station promotes and encourages hybrid methods of commuting into city centres.