Day To Day Needs

Lawley Square, Telford – Architects: Stephen George & Partners

Site area:0.82 ha
Net density: 73 DPH
Units: 60
Heights: 2-4 storeys

Project overview

Designed by Stephen George & Partners as part of a larger urban extension, this development in Lawley Square includes a Morrisons supermarket, retail units with residential apartments above. The scheme illustrates how ‘big box’ uses can be wrapped with smaller uses to become more compatible with fine grain settings.

Other land uses

Land use	**Floorspace (s**qm)
A1 Supermarket	3715 sq m
A3 / A4 / A5 Retail	222 sq m
Car parking spaces	220

Precedent for:

- Provision of residential alongside retail
- Wrapping of large format supermarket with other close grain uses
- Integrated service corridor for ‘high street’ shops

Image credit: Stephen George + Partners

De Leir, Westland, Netherlands – Architects: Roeleveld-Sikkes Architects

Site area: 1.9 ha
Heights: 2-3 storeys

Project overview

The Albert Heijn (AH) supermarket forms one end of this wider site development. The residential aspect is buffered from the busy car park and basement car parking accesses by a rooftop garden and a set-back which allows the apartments to front the main street creating 2-storey facades on the high street.

Land use

Land use	Floorspace (sqm)
A1 Supermarket	1900 sq m
A3 / A4 / A5 Retail	1115 sq m
Surface-level car parking	465 sq m

Precedent for:

- Co-location of residential and retail
- Capping large format uses with residential
- Manipulating facades of mono-use to give the appearance of a close grain plot subdivision.

Image credit: Roeleveld-Sikkes Architects

Diagrammatic cross section (bottom) illustrating layering of different uses and functions

Wider site plan showing scheme in context (Roeleveld-Sikkes Architects

Sainsbury's Lot 1, Eddington, Cambridge – Architects: Wilkinson Erye & Mole Architects

Site area: 2.4 ha
Units: 117
Heights: 3-5 storeys (excluding energy centre)

Project overview

Forming part of the new local centre at Eddington, Lot 1 is a mixed-use scheme including a foodstore, energy centre, doctor's surgery, offices and residential units. Large footprint uses of the foodstore, associated service yard and Energy Centre are 'wrapped predominantly by duplex units, which creates active edges on the majority of streets. The Sainsbury's supermarket provides parking beneath the foodstore.

Accommodation schedule

Typology	Number of units
1-bed flat (key worker)	41
2-bed flat (key worker)	76
Total	117

Other land uses

Land use	Floorspace
A1 Suprtmarket A1/A4 Retail	2,000sq m

Precedents for:

- Wrapping large format supermarket with residential
- Delivery of active street-frontages
- Integrated energy centre

Image credit: Jack

Sainsbury's, Fulham Wharf, London – Architects: Lifschutz Davidson Sandilands

Site area: 3.15 ha
Net density: 446DPH
Units: 645
Heights: 3-17 storeys

Project overview

This development from Barratt London and London Quadrant demonstrates the success of mixing retail alongside residential. The ranging residential typologies are stacked on top of the supermarket and restaurants and cafes are centred around a shared courtyard space. Car park has sensors to reduce vehicle circulation looking for an available space.

Accommodation schedule

Typology	Number of units
1-bed flat	153
2-bed flat	205
3-bed flat	84
4-bed flat	22
5-bed flat	8
Total	**472**

Other land uses

Land use	Floorspace (sqm)
A1 Supermarket	9395 sq m
A3 / A4 Restaurant & Cafe	731 sq m
D1 / D2 Community facility & Gym	398 sq m

Precedent for:

- Co-location of residential and retail
- Wrapping and capping of large format supermarket with residential and amenity space.
- Use of smart technology in car park.

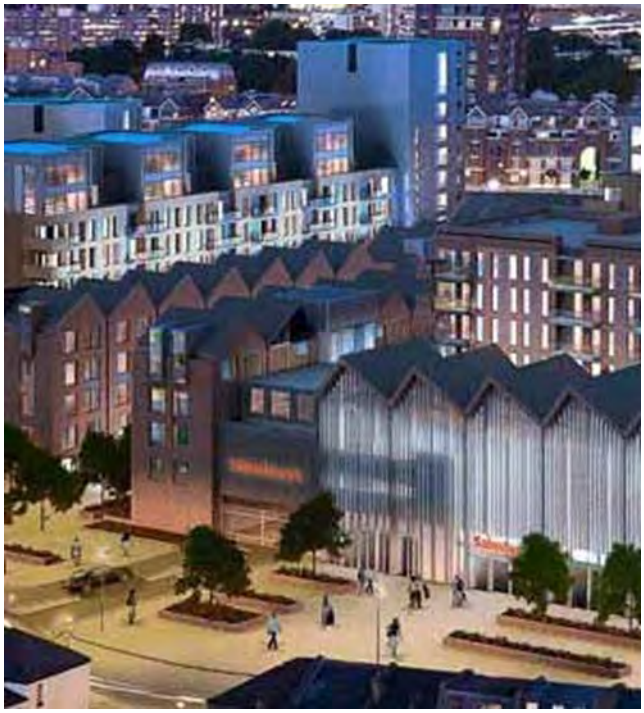


Image Credits: Barratt London

Laindon Town Centre, Essex - Architects: C.F. Møller Architects and Pollard Thomas Edward

Site area: 5.66ha
Units: 244
Heights: 2-5 storeys

Project overview

When completed the scheme will provide a vibrant mixed-use town centre with a new High Street. The site will allow for users to work, shop and live with flexible retail units, supermarket and a health centre.

Accommodation schedule

Typology	Number of units
One-bed flat	57
Two-bed flat	81
Two-bed house	13
Three-bed house	54
Four-bed house	19
Total	**244**

Precedent for:

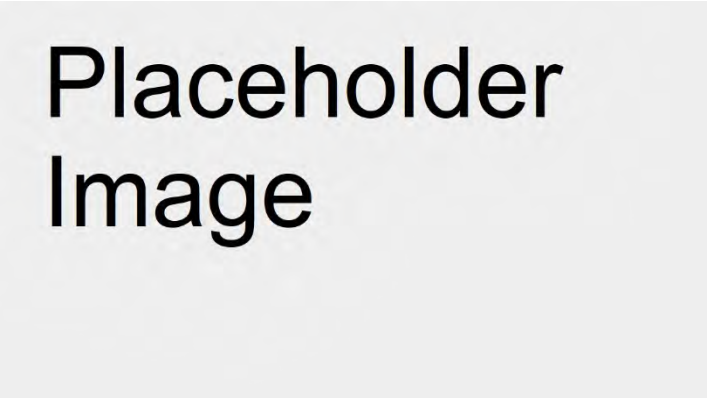
- Town centre + high-street redevelopment
- Variety of heights and roofscape

Landmarks

The Culture House Sunderland – Architect: Faulkner Brown

Project overview

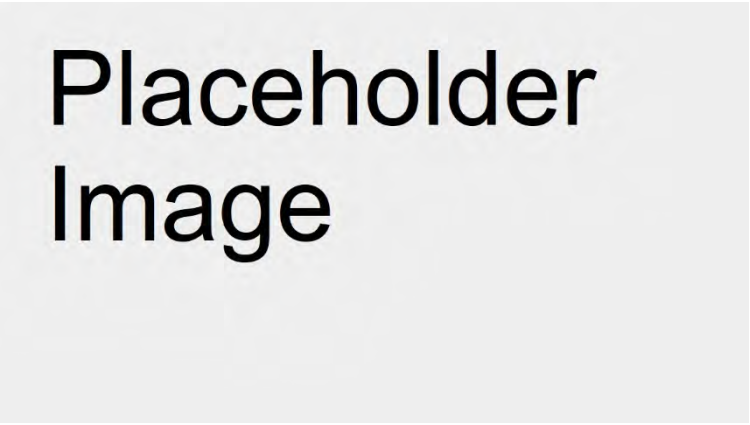
Cultural arts centre and library
Sunderland Riverside regeneration
Brick built



Waldron Health Centre, London – Architect: Henley Halebrown

Project overview

Civic square framed by a health centre, shops, café and housing
Amersham Vale, Deptford, London
Veneered rainscreen with central 5 storey foyer



Lambeth Palace Library, London – Architect: Wright & Wright Architects LLP

Project overview

Library and Archive (to house all Church of England records)
Lambeth Palace Road, London
Red brick building with central 9 storey tower crowned with a viewing platform

Image credit: ©Hufton+Crow

Cambridge Central Mosque, Cambridge – Architect: Marks Barfield

Project overview

New Central Mosque for Cambridge
Mill Road, Cambridge
Brick and timber building

Image: Greater Cambridge Planning Service

Newport St Gallery – Architect: Caruso St John Architects

Project overview

Private gallery for the artist Damien Hirst
Newport Street, London
Brick building with distinctive saw-tooth roof form

Image credit: ©Hélène Binet

UCH2, University of Brighton – Architect: Proctor & Matthews Architects

Project overview

Educational use on a key corner site
Priory Quarter, Hastings
Textured red brickwork pod set into reconstituted stone frame

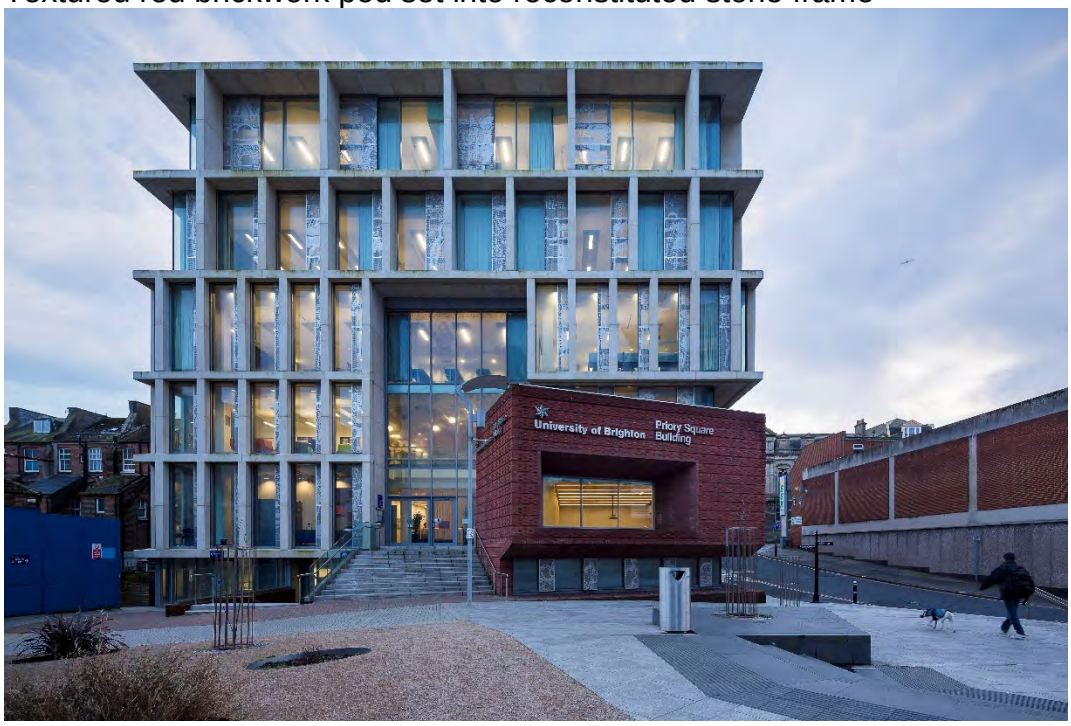


Image credit: Proctor & Matthews /Tim Crocker.

Open Space

Sonder Boulevard, Copenhagen, Denmark – Architects: SLA Architects

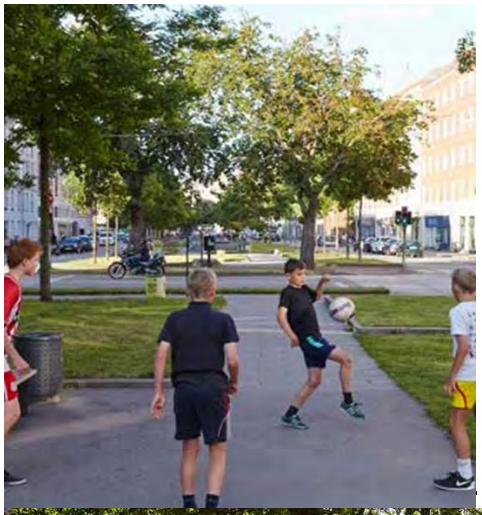
Site area: 1.6 ha

Project overview

Located within Sonder Boulevard, the Copenhagen City Council developed a scheme to revitalise the under-utilised area on the street. They created a linear park with multi- functioning spaces for uses such as meditation gardens and open-air cafes and a BMX park. The scheme provides example of how to incorporate green infrastructure and activate public realm within urban built environments. The site also uses a SUDs strategy to deliver its sustainable approach.

Precedent for:

- Use of SUDs
- Provision of play areas and public realm
- Revitalisation of under-utilised space
- Innovative design of small spaces



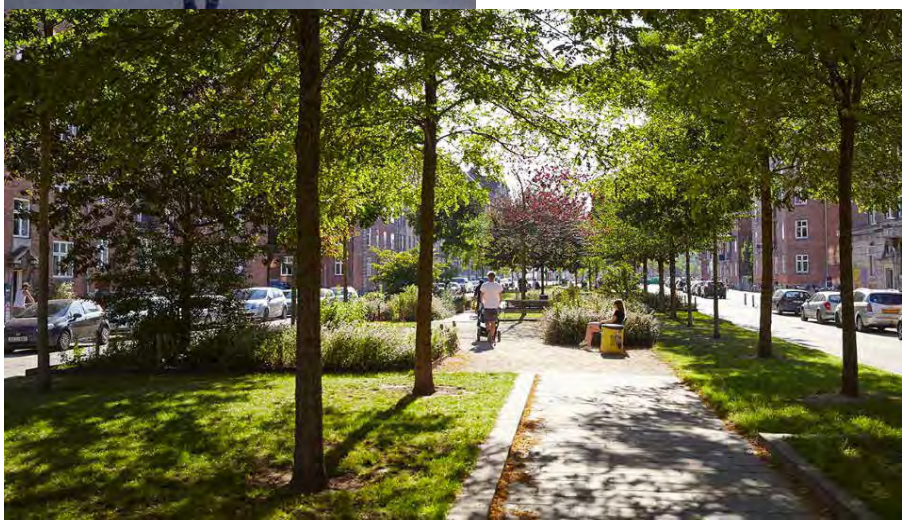


Image credit: SLA Architects

Kidbrooke Village wetland and green corridor, London - London Wildlife Trust in partnership with Berkley Homes

Project overview

Kidbrooke Village is being developed by Berkely Homes, that will see over 4,800 homes being built over the next 20 years along with 20 hectares of parkland to create a multi-functional green corridor. New landscaping was implemented in 2018 to ensure biodiversity net gain and includes rich meadows and wetlands that benefits both wildlife and residents.

Precedent for:

- Implementation of SUDs
- High quality, multi-functional public open spaces
- Delivery of biodiversity and urban wetland

Image credit Rosie Whicheloe - London Wildlife Trust

Eastern Curve Gardens, Dalston Junction, London

Site area: 0.25 ha

Project overview

The Eastern Curve Gardens are located in Dalston Junction on a piece of disused railway land. The space provides community gardens and demonstrates the opportunity to create biodiversity in small urban spaces. The scheme encourages local residents to participate in events at the gardens such as wellbeing workshops, education programmes and music events. The gardens also hosts a café where users can eat and socialise in this small and creative community space.

Precedent for:

- Community-led spaces
- Disused railway development
- Delivery of biodiversity

Image credit: J&L Gibbons

Tassinge Square, Copenhagen, Denmark – Landscape Architect: GHB Landscape Architects

Site area: 0.7 ha

Project overview

Tassinge Square is a re-development of the existing under-utilised space in the centre of an urban residential street. The scheme demonstrates the successful use of SUDs to mitigate flooding from extreme rainfall through sculptures used to collect rainwater. The project also highlights the success of community participation in developing the space into an innovative and active green hub

Precedent for:

- Implementation of SUDs
- High quality public open spaces
- Innovative community-led design

Image credit: GHBLandskabsarkitekter - Steven Achiam

Tumbling Bay Playground, Olympic Park, Stratford – Architects: Erect Architecture

Project overview

The Tumbling Bay Playground accommodates play areas, sensory experiences and is connected to a cafe and community hub. The scheme demonstrates the success of re-developing previously used sites such
as this from the 2012 Olympic Games with the legacy incorporated into the innovative design.

Image Credit: David Grandorge

Image credit: Alexander Hug

Promenada Velenie, Slovenia – Architects: Enota Architects

Site area: 1.7 ha

Project overview

The scheme transforms an unwelcoming thoroughfare by the river into an active public space. The project incorporates paths connecting community amenities surrounding the scheme demonstrating permeability for users. A bridge also connects the spaces either side of the river and enables local residents to host events in the community space provided.

Image credit: Miran Kambic

Swales, phase 1 Eddington, Cambridge – Design Team: AECOM

Project overview

Native flower rich swale planting included within Eddington primary street and busgate street.

Precedent for:

- Sustainable urban drainage
- Natural landscape area
- Biodiversity

Madrid Rio, Spain - Architects: West 8, Burgos & Garrido Arquitectos Asociados, Porras La Casta Arquitectos & Rubio & Álvarez

Site area: 1740 ha

Project overview

Madrid Rio is a series of large green spaces along a seven kilometre length of the River Mansanares. Designed on behalf of the Municipality of Madrid, the parkland hosts multiple functions with six designated districts formed of leisure, culture and sports facilities. New bridges are incorporated to increase pedestrian and cycle use. The interconnected series of green spaces with 25,000 newly planted trees provides example of integrating green spaces within city developments.

Precedent for:

- Provision of play areas and public realm
- Delivery of pedestrian and cycle routes
- Riverside development
- Green infrastructure delivery

Image credit: Municipality of Madrid

Hobson's Square, Cambridge – Landscape Architects: Place Design and Planning

Project overview

The square is located at the heart of the new development on Clay Farm that forms an extension to the village of Trumpington. It creates a new shared space approach to provide a significant public space. The design concept is based on Bronze Age field boundaries found on the site with one boundary running diagonally through the new square and linking through the Clay Farm Centre community building. It marks a dynamic transition between the flexible plaza space on one side and quieter garden areas on the other. Planting, rain gardens and high-quality paving dominate whilst motor vehicles are allowed to circulate and park in a low-speed pedestrian friendly environment.

The 25-ton timber sculpture, 'The Bronze House', was designed by Studio Morison and fabricated by Castle Ring Oak Frame and informed by the depth and location of Bronze Age post holes found near the site. Hand scorched and rubbed down with wire brushes to produce its final finish, the sculpture is made from misshapen chestnut wood.

Growing Spaces

Brooklyn Grange Rooftop Farm, New York City

Site area: 1.5 ha
Heights:11 storeys
4,082 m 2 of the roof space is covered with soil underlain by a drainage layer.

Project overview

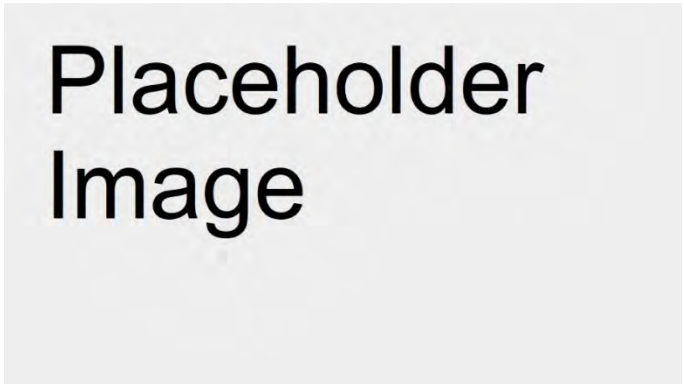
Text to follow.

Image credit: ©Anastasia Cole Plakias

Urban growing space at Elephant Park , London

Project overview

Text to follow.



Edible Eastside, Birmingham

Project overview

Text to follow.

Image credit: Edible Eastside

Edible Bus Stop (The Kerb Garden), Landor Road, London

Project overview

Text to follow.

Image credit: ©2021 The Edible Bus Stop®

St Ann’s Community Orchard, Nottingham

Project overview

Text to follow.

Image credit: St. Ann’s Community Orchard /STAA

Saunders Park Edible Garden, Brighton

Project overview

Text to follow.

Image credit The Brighton & Hove Food Partnership

Meanwhile uses

Re:START Christchurch

Project overview

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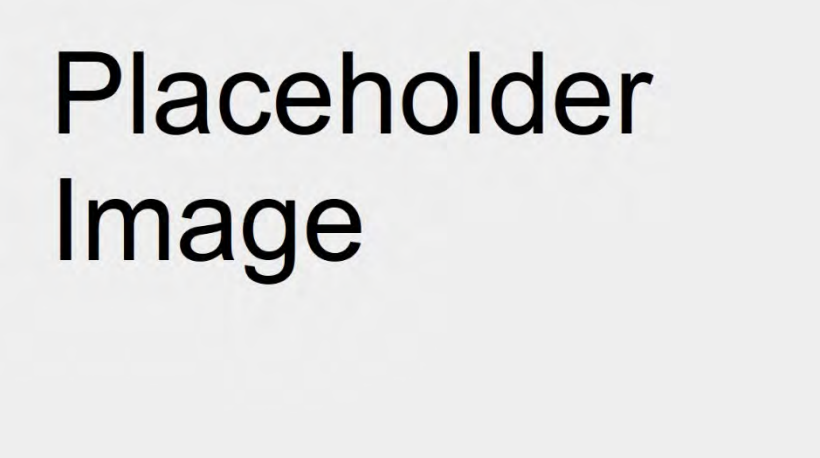


The View Tube Community Hub, London

Project overview

Text to follow.

Image credit: View Tube (Source- Theviewtube.co.uk)

Reshaleøen, Copenhagen, Denmark

Project overview

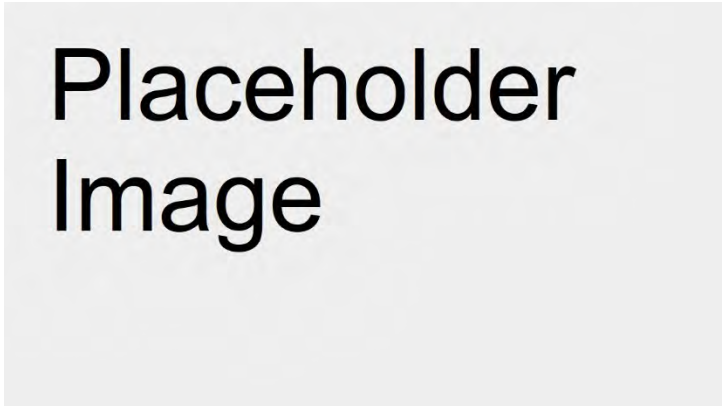
Text to follow.

Image credit: Reshaleøen

Platform project

Project overview

Text to follow.



Making The Connections

Solutions for under and over barriers

The Green Bridge, Mile End, London – Architects: CZWG architects

Project overview

Designed to join two halves of Mile End Park, the green bridge is structured in a way to allow trees and grass to grow on top, and is wide enough to create a safe park link for cyclists and pedestrians over the busy Mile End Road. Shops and restaurants contain and activate the belly of the bridge. The commercial rents of the retail units helps to provide income for the maintenance of the park.

Image Credit: David Fisher/ CC BY-NC-ND 2.0

Image credit: Philip Lane Photography.

Dafne Schippersbrug, Utrecht, Netherlands - Architects: Next Architects

Project overview

This innovative suspension bridge was designed to remove barriers between two sides of the river and connects the city centre to the new residential housing scheme Leidsche Rijn. The curved ramp is surrounded by green space and provides access for pedestrian and cyclists along a stretch of 110 metres. The bridge also cleverly integrates the local primary school roof.

Image Credit: Next Architects - Mastum Daksystemen & Maurice Iseger

Image credit: Next Architects – Marcel

Van Gogh Path, part of the SMART HIGHWAY project, Eindhoven, Netherlands

Project overview

Text to follow.

Image credits: Studio Roosegaarde

Other ‘over and under’ precedents

Bouldering underpass, Schiedam Centrum, Netherlands

Bouldering wall under Schiedam’s Centrum Station has transformed the connection into a usable space.

Image Credit: Modacity

Cuyperspassage, Amsterdam, Netherlands – Architects: Benthem Crouwel Architects

A new underground tunnel, provides cyclists and pedestrians with a connection from the old city centre to quays on the IJ River waterfront. Since the end of 2015 it has been used by large numbers of cyclists, some 15,000 daily, and pedestrians 24 hours a day.

Image credit: Benthem-Crouwel

Lime Avenue/Hobson Avenue, Cambridge

Project overview

Text to follow.

Parking

Bicycle parking garage, Utrecht central station, Netherlands – Architects: Ector Hoogstad Architecten

Project overview

Utrecht's Central Station area is currently being transformed to include the world's biggest cycle park. Situated under the square, the three level 'bike through' garage allows users to cycle conveniently all the way to their parking spaces which are signposted electronically. The scheme also includes a bike repair shop and rental service.

Image credit: Ector

Cycle point CB1 – Architects: Formation Architects and Oxford Architects

Project overview

The building is an unusual combination of a 231 key Ibis Hotel above the largest cycle park in the UK which accommodates over 2,800 bikes and includes a related cycle hire, repair and sales shop.

The building is located next to the Grade 2 Listed Railway Station and rises to a total of 6 storeys. The ground floor onto the square not only provides the main pedestrian entrance and exit to the cycle park but also accommodates a bar/restaurant use as well as the entrance into the IBIS hotel.

Image credit: Formation Architects


Plan showing site in wider context

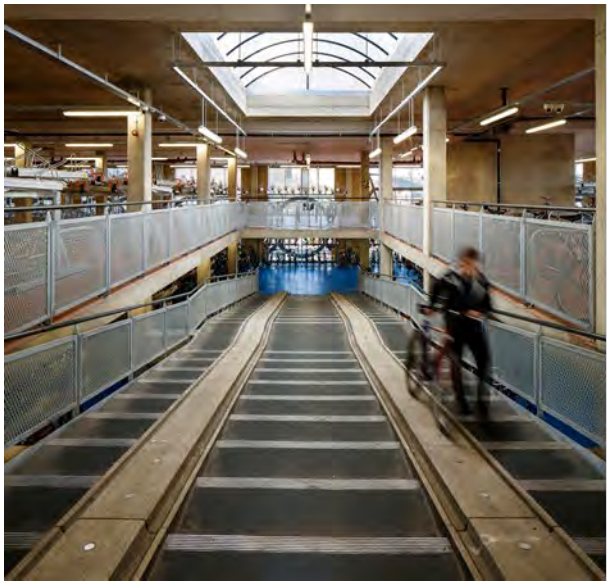


Image credit: Formation Architects

Bircham Park & Multi Storey Car Park, Derriford Hospital, Plymouth – Architects: S333 Architecture + Urbanism

Site area: 0.5ha (footprint 50m x 80m)
Car parking spaces: 627
Heights: 3storeys

Project overview

Located in the North West Quadrant of Plymouth City Centre, Bircham Park combines office and retail space with a multi-storey car park for Derriford Hosptial. Built on a site ranging in topography, the site consists of 3-storey offices, retail and cafes, with six-storeys of car parking in the valley of the sloping site.

Land use

Land use	Number of units
B1 Commercial	670 sqm
Car and bicycle storage	20,000 sqm

Image credit: S333 Architecture + Urbanism

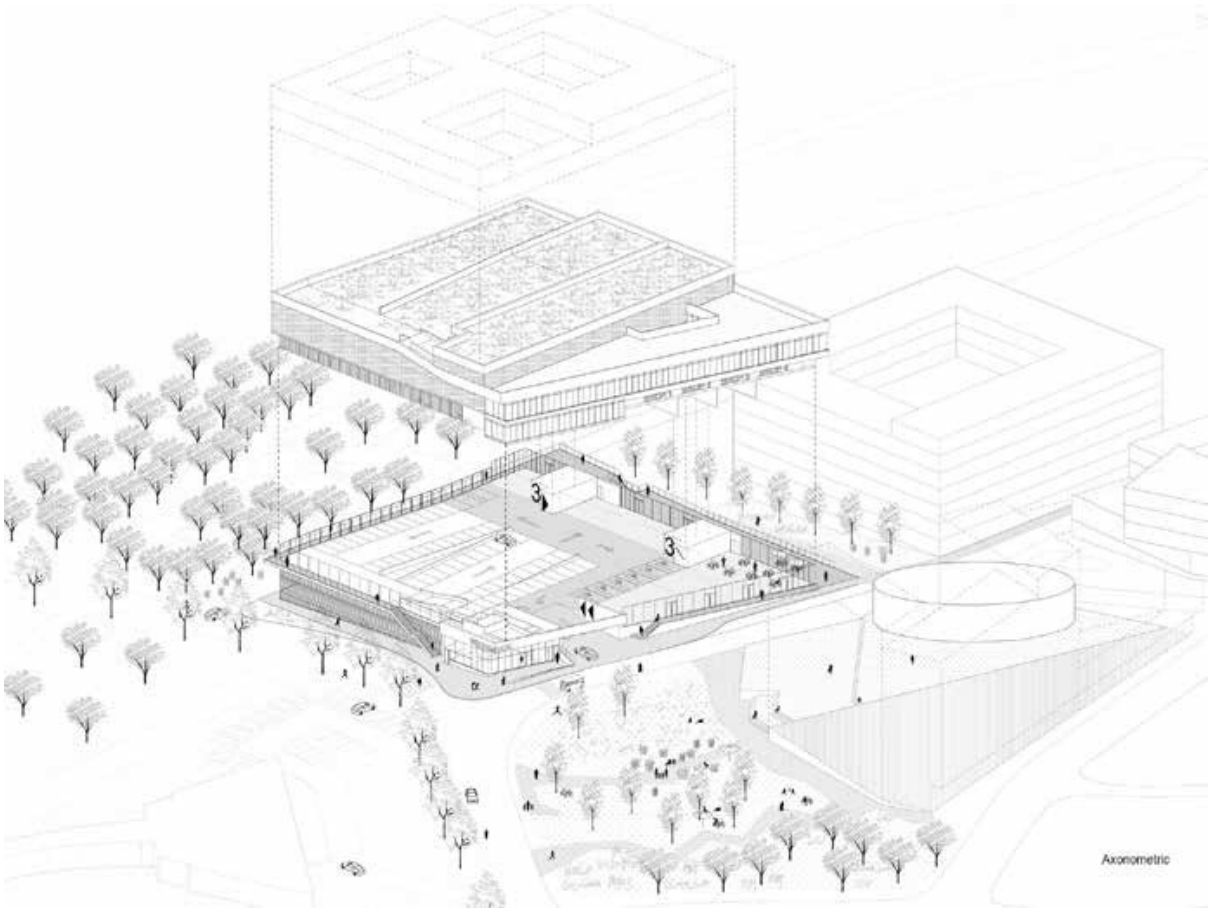


Image credit: S333 Architecture + Urbanism

Peripheral Park, Greenwich Millennium Village, London

Project overview

Greenwich Millennium Village is a sustainable community of approximately 3000 mixed tenure homes, which adopted a new approach to accommodating the car. Cars have been removed to the edges of the development. Parking is located away from housing units and is provided in two off plot buildings:

- A/ Multi-storey car park wrapped on one side to form a street by ground floor commercial units and residential duplex units, and
- B/ Podium car park, capped with residential apartments above.

This peripheral parking approach in addition to providing limited through-streets for cars, has facilitated car free open spaces and reclaimed the public realm for people rather than vehicles. A network of cycle and pedestrian paths is provided throughout

Section showing multi-storey car park wrapped with commercial and residential units (Image source: Source: www.spacetopark.org)

Image source: www.spacetopark.org

Park’n’Play, Copenhagen – Architects: Jaja Architects

Project overview

Hybrid form combining multi-storey car park with rooftop playground, 24 metres above the ground.

Image credits: JAJA Architects, Rasmus Hjortshøj – COAST

Development Capacity Methodology

Development Capacity Assessment Introduction

The Development Capacity Assessment (DCA) fulfils the role of a Housing and Economic Land Availability Assessment as required by the Planning Practice Guidance (PPG). The DCA does not allocate sites for development. It identifies sites within the North East Cambridge Area Action Plan area with development potential for housing and economic land uses and sets out an indicative trajectory for deliverable (0-5 years) and developable (6 to 20 years) sites, to be monitored through annual reports and managed and assessed through the development management process. This includes through pre-application discussions and through the determination of planning applications.

The DCA is based on best available knowledge at time of writing for the purposes of supporting the Proposed Submission North East Cambridge (NEC) Area Action Plan (AAP) (November 2021). It makes realistic assumptions about the availability, and suitability of land to meet the identified need for housing and economic uses over the plan period, taking account of the proposed NEC AAP Spatial Framework, any constraints and landowner engagement.

How does the DCA relate to the existing adopted Local Plans for the area and the emerging Greater Cambridge Local Plan?

Policy 15 of the Cambridge Local Plan (2018), and Policy SS/4 of the South Cambridgeshire Local Plan (2018), allocate the area for high quality mixed-use development, primarily for employment uses such as B1, B2 and B8, as well as a range of supporting commercial, retail, leisure and residential uses (subject to acceptable environmental conditions).

The local plans do not specify the amount of development, site capacities, or timescales for development, deferring such matters to the preparation of the joint AAP. This is because the planning of the area is affected by the Anglian Water Waste Water Treatment Plant (WWTP), which covers a significant part of the area and is a significant constraint on development of adjoining land.

Since the local plans were adopted funding has been secured through the Housing Infrastructure

Fund (HIF), to assist with the relocation of the Waste Water Treatment Plant (WWTP) off-site. The vacated WWTP site, together with land around Cambridge North station, Cambridge Business Park, St John's Innovation Park, Cambridge Science Park and other land, will, in accordance with development plan policy, provide the opportunity for the creation of a new city district which can make a significant contribution to the future housing and employment needs of Greater Cambridge. The consenting route for the relocation of the WWTP is through a Development Consent Order that is separate to the AAP plan-making process. The decision and timing of the relocation of the WWTP has a major bearing on the phasing of development across much of NEC.

The outcome of the DCA is not being relied upon to meet the current housing and employment needs identified in the current local plans but will inform the contribution North East Cambridge could make to meeting identified housing and employment needs in the Greater Cambridge Local Plan.

In assessing the availability of land within NEC, the DCA has regard to the supporting evidence base studies prepared to date that have informed the draft North East Cambridge Area Action Plan (June 2020). However, further evidence is being prepared and this DCA may require updating to take account of these and to inform future iterations of the NEC AAP as appropriate.

In assessing the availability of land within NEC, the DCA has regard to the supporting evidence base studies prepared to inform the Proposed Submission North East Cambridge Area Action Plan (November 2021). In particular, the assessments concerning typologies, landscape, townscape, views and heritage, as well as identified constraints or that impose standards, such as those for open spaces provision.

What is the methodology?

The National Planning Policy Framework (NPPF) sets out the requirement for local planning authorities to carry out an assessment to establish realistic assumptions about the availability of land to meet the identified need for housing and economic uses over the plan period. The PPG (PPG 006 Reference ID: 3- 006-20140306) sets out a clear methodology to meet this requirement. In summary this comprises the following 5 stages:

- Identifying sites and broad locations with potential for development;
- Assessing their development potential;
- Assessing potential for windfall sites;
- Reviewing the assessment; and
- Assessing the core outputs to form the evidence base for the North East Cambridge Area Action Plan.

The DCA is structured to follow these stages. Figure 1 provides an overview of these.

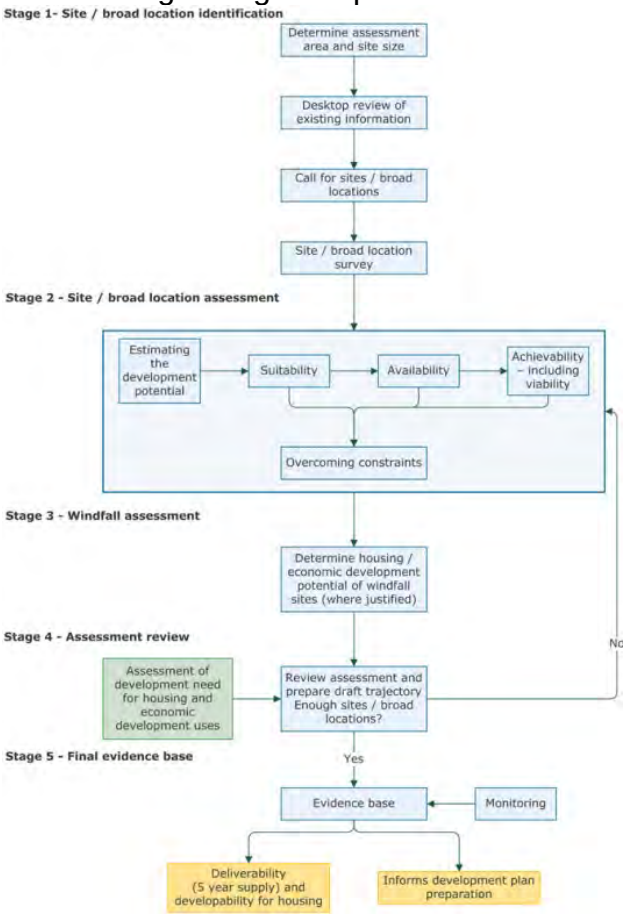


Figure 1: PPG Methodology for HELAAs used to develop the DCA

Stage 1: Identification of sites

What geographical area does the assessment cover?

The assessment area is the Proposed Submission North East Cambridge Area Action Plan area, shown in Figure 2.

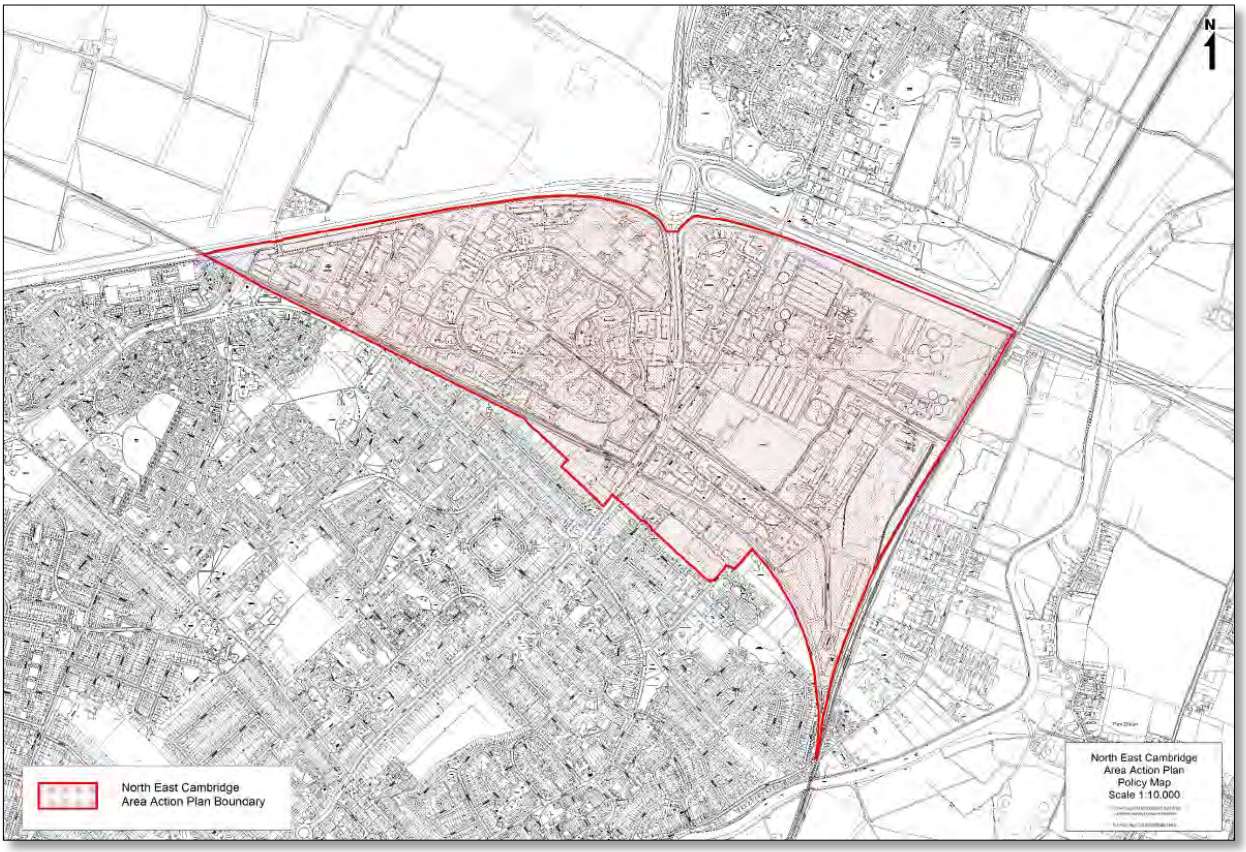


Figure 2: North East Cambridge Area Action Plan area

Who have the Greater Cambridge Shared Planning Service worked with in determining the assessment area?

During the process of preparing the North East Cambridge Area Action Plan, the councils have worked closely with public sector stakeholders, including Cambridgeshire County Council, statutory bodies, local communities, interest groups and other organisations through formal consultation and informal engagement.

Private sector stakeholders, namely landowners and developers within the Area Action Plan area, have been involved through various forums, design workshops and the development management process of pre-application and application discussions.

What site/broad location size threshold has been considered for assessment?

The assessment has considered all sites and broad locations within the Area Action Plan area. It is important that the regeneration of the Area Action Plan area occurs across the whole area, including on sites with greater constraints than others.

How have the sites been identified?

The majority of land proposed for inclusion within the Area Action Plan is already allocated in the current local plans of the respective authorities. The North East Cambridge AAP Issues and Options consultation (February 2019) extended the AAP boundary to include Cambridge Science Park following an earlier consultation in 2014. The draft NEC AAP (June 2020) further amended the site boundary to incorporate Cambridge Regional College (CRC) and the Milton Road Garage site, the latter being a site allocation for mix-use development within the current adopted Cambridge Local Plan (allocated site M1). The Proposed Submission Area Action Plan boundary us consistent with the draft AAP boundary as shown in Figure 2 above.

With the exception of Cowley Road and Nuffield Road Industrial Estates, the majority of land across the NEC area is held in several larger land-ownership parcels. These landowners have

confirmed their land is ‘available’ and have been engaged in the preparation of the AAP through the Landowner and Developer Forum, the purpose of which is to bring these parties together to promote joint working. This has included regular monthly meetings and a series of workshops in summer 2019, aimed at understanding site constraints, existing planning permissions, and landowner/developer aspirations that have helped informed both the draft and Proposed Submission NEC AAP Spatial Framework, development mix, distribution and phasing.

Have any sites been excluded?

Exclusions from the assessment are limited reflecting the aspirations of the two local authorities and stakeholders to see comprehensive regeneration of the NEC area, and to address area constraints and optimise development potential. However, some sites are considered appropriate to be excluded for housing and/or economic use development. These are:

- Existing publicly accessible open spaces such as the open space within Cambridge Science Park – to accord with Local Plan policy (Cambridge Local Plan Policy 67 and South Cambridgeshire Local Plan Policy SC/8)
- Existing waterways and bodies including The First Public Drain
- Sites recently developed (in the last 10 years), such as the North Cambridge Station and surrounding public realm
- The Cambridge Guided Busway – with the exception of promoting further managed crossing points to support enhanced accessibility to NEC
- Railway tracks and embankments – to support the functioning of the railway network and reflect the need for further feasibility studies to explore potential over track development

Within NEC there is land currently safeguarded within the County Minerals and Waste Local Plan (2021). These sites, and why they have not been excluded for the purposes of this assessment are:

- The existing Waste Water Treatment Plant – the off-site relocation of which is the subject of approved Housing Infrastructure Funding and a separate Development Consent Order process;
- The Waste Transfer Station on Cowley Road – considered a ‘bad neighbour’ use

incompatible with the North East Cambridge AAP Spatial Framework and a constraint to optimising development but capable of relocation within the AAP area (see site assessment in Stage 2); and

- The Cambridge Northern Fringe Aggregates Railheads site at Chesterton Sidings – considered a ‘bad neighbour’ use and a constraint to optimising development but for which currently no alternative and feasible relocation strategy exists.

Stage 2: Assessment of sites

The relocation of the WWTP provides a major opportunity to deliver sustainable development on a major brownfield site within the urban area that incorporates successful business parks for knowledge-based and other businesses. Reflecting the existing and planned accessibility of the area by public transport, cycling and walking, North East Cambridge is considered suitable for higher density development, including intensification of business uses and retention and consolidation of industrial uses.

As stated previously, the existing local plans do not specify the amount of development, site capacities, or timescales for development at NEC, deferring such matters to the preparation of the joint AAP. Policy 14 of the Cambridge Local Plan states that development should be of higher densities around key transport interchanges (including Cambridge North Station), whist having regard to the protection/provision of landscape and other environmental requirements. Policy H/8: Housing density of the South Cambridgeshire Local Plan states that housing development will achieve an average net density of 40 dwellings per hectare in urban extension to Cambridge and new settlements. However, the net density on a site may vary from this where justified by the site and surrounding area character and circumstances.

The Planning Practice Guidance states that the development potential of each identified site should be "guided by the existing or emerging plan policy including locally determined policies on density. Where the plan policy…does not provide a sufficient basis to make a judgement then relevant existing development schemes can be used as the basis for assessment, adjusted for any individual site characteristics and physical constraints" (PPG paragraph 17 Reference ID: 3- 017-20140306).

The development typologies outlined earlier in this study provide precedents of the mix and form of the different types of development proposed with North East Cambridge. The mix and densities within these relevant schemes have informed the densities and site capacities for this assessment. A broad plot ratio of 70% has been used to inform the net developable area for each development parcel / site, reflecting higher density development typologies from other examples elsewhere.

Constraints

A number of high-level development constraints have been considered in the preparation of the DCA. These include physical, environmental and planning policy constrains. These are set out in Table 1. This table will be updated to reflect any changes in development constraints during the preparation of the AAP.

Constraint type	Development constraint
Environmental	Noise (e.g. A14, railway, other roads, industrial uses) Odour Vibrations Light pollution Air pollution Surface Water Flooding Land contamination
Physical	Existing land uses Site assembly Townscape context Landscape context Airport Safeguarding Zone Green and blue infrastructure Transport Infrastructure (e.g. railway, A14, Guided Busway) and road capacity
Planning Policy	Heritage designations Biodiversity/environmental assets (e.g. SSSIs/SACs/Ancient Woodland) Green Belt Other planning policy designations (inc. Minerals and Waste policies)

Table 1: North East Cambridge AAP high level development constraints

Indicative housing density range

Drawing upon the relevant typologies, an indicative density range for housing of 70 to 300 dwellings per hectare has been defined that responds to the position of sensitive locations, the proposed distribution of development established within the NEC Spatial Framework, and to existing and future public transport services / access. The identified schemes in Table 2 have been used as the basis for Stage 4 of the Development Capacity Assessment.

For the purposes of development management processes, these do not represent pre-determined densities for sites as consideration will need to be given to the wide range of policies within the Area Action Plan, the existing Development Plans and other material considerations. As such,

through the development management process, densities and resultant capacities of sites may vary.

Typology example	Location	Density (dwellings per hectare)	Relevance to NEC AAP area
Mill Road Depot	Cambridge	70	Range of unit sizes and tenures including houses. Building heights within parameters of AAP evidence.
King's Crescent Estate	London	180	Range of unit sizes and tenures. Building heights within parameters of AAP evidence.
CB1	Cambridge	240	Residential development in close proximity to railway station (Cambridge Station). Building heights within parameters of AAP evidence.
CB1 Ceres	Cambridge	300	Residential development in close proximity to railway station (Cambridge Station). Building heights within parameters of AAP evidence.

Table 2: Residential Typologies

Indicative employment floorspace density ranges

For economic uses, the PPG (PPG 017 Reference ID: 3-017-20140306) suggests using floorspace densities for certain industries. Within the NEC AAP area, for the purposes of the DCA, economic uses can be broadly divided into business (Class E(g)) uses and industrial (Class B2 and B8) uses.

Based on local relevant typologies, an indicative density of 65% plot ratio to define the floorspace density has been considered appropriate, taking into account off-site car storage requirements within Car Barns and open space/landscaping and SuDS requirements. The plot ratio responds to the location of sensitive locations, the proposed distribution of development established within the NEC Spatial Framework, and to existing and future public transport services / access. The identified schemes in Table 3 have been used as the basis for Stage 4 of the Development Capacity Assessment.

Intensification of industrial sites can be delivered in multiple ways in order to maximise their floorspace efficiency. A number of developments of this nature are being progressed within the UK and have been explored further within this document. To inform the DCA, the following B2 and B8 development assumptions have been used:

- B2 - light industrial uses arranged over four storeys (‘intensification’) relating to a ‘multi level’ logistics and stacked industrial model
- B8 – storage and distribution arranged over two storeys (‘intensification’) relating to a more urban logistics model

For the purposes of development management processes, these do not represent pre-determined densities for sites as consideration will need to be given to the wide range of policies within the Area Action Plan, the existing Development Plans and other material considerations. As such, through the development management process, floorspace densities and resultant capacities of sites will vary.

Typology example	Location	Relevance to NEC AAP area
Maurice Wilkes Building	St Johns Innovation Park, Cambridge	Building heights within parameters of LCVIA evidence. Example of high-density office development.

Table 3: Office Typologies

Job capacity

The potential economic floorspace capacity (for both retail and commercial floorspace) for the plan period provides an indication of potential employment capacity. Assumptions for job densities based on floorspace for various sectors is currently derived from the government's Employment Density Guide (3rd Edition).

Suitability of sites

The PPG states that a site's suitability for development for housing and / or economic land uses should be assessed against the factors set out PPG paragraph 19 Reference ID: 3-019-20140306. All sites identified in the DCA have been assessed against the factors set out in the PPG to give an indication of each site's potential suitability for development. The assessment drew on detailed knowledge of individual sites through site visits, pre-application discussions and landowner engagement.

The site assessment is supported by the general Greater Cambridge housing and office markets and also demonstrated by the strong industrial sector, both within Greater Cambridge and specifically within North East Cambridge, resulting in low vacancy rates. The NEC Viability Study (2021), NEC Overcoming Barriers to Mixed-Use Development paper (2020) and the NEC Commercial Advice and Relocation Strategy (2021) have considered these matters in further detail.

Availability of sites

The PPG considers a site to be 'available' for development when, on the best information available, there is confidence that there are no legal or ownership problems, such as unresolved multiple ownerships, ransom strips, tenancies, or operational requirements of landowners

(Paragraph: 020 Reference ID: 3-020- 20140306). Generally, this means that land is controlled by a landowner or a developer who has expressed an intention to develop, or the landowner has expressed an intention to sell.
Land within North East Cambridge is considered to be available for development following engagement with landowners through various forums and design workshops. As noted above, the majority of the land within North East Cambridge is already allocated for development in the existing adopted Local Plans.

Achievability of sites

The PPG defines that a site is considered achievable for development where there is a reasonable prospect that the particular type of development will be developed on that site at a particular point in time (Paragraph: 021 Reference ID: 3-021-20140306). This is essentially a judgement about the economic viability of a site and whether development on that site will be delivered within a certain time period.

NPPF paragraph 174 states that "…Evidence supporting the assessment should be proportionate, using only appropriate available evidence". Landowner engagement generally agrees that North East Cambridge is attractive location for development which is supported by the Greater Cambridge housing and office market and also demonstrated by the strong industrial sector resulting in low vacancy rates in this area. It is therefore broadly assumed, through the NEC Viability Study, that sites are capable of being viable for development.

As stressed earlier in this DCA, the redevelopment of significant parts of the NEC AAP area, and for a wider range of uses, is dependent on the relocation of the existing Waste Water Treatment Plant (WWTP), which is subject to a separate Development Consent Order process. As such, the AAP and therein, this DCA, is predicated on the consent being granted and the WWTP being relocated, with respect to the assessment of land being 'achievable' for the types of development prescribed through the AAP.

Defining timescales for delivery

The PPG states that the timescale and rate of development should use the information on suitability, availability, achievability and constraints to assess the timescale within which each site is capable of development (as set out in Stage 2 above) (Paragraph: 023 Reference ID: 3-023-20140306). This may include indicative lead-in times and build-out rates for the development of different scales of sites.

Based on the guidance contained in the PPG and the NPPF regarding the assessment's deliverable and developable sites, the timescales set out in Table 1 have been assigned to each site and has been informed through landowner engagement. Again however, it must be stressed that these timescales are predicated on the successful granting of and relocation of the WWTP.

The delivery rate of new homes at North East Cambridge have also been informed by the Housing Delivery Study (2021) which identifies the typical rate of housing delivery on sites such as North East Cambridge in order to provide a localised account of housing delivery rates.

DCA Phase	Deliverable/developable	Definition
0-5 years	Deliverable	These sites should be available now, offer a suitable location for development now, and are achievable with a realistic prospect that development will be delivered on the site within 5 years.
6-10 years 11-15 years 16-20 years	Developable (6-15 years as defined by the PPG)	These sites are considered to be in a suitable location for development and are considered to have a reasonable prospect that the site is available and viable development could be achieved within the next 6 to 20 years.

Table 2: Definition of deliverable and developable sites

Stage 3: Windfall sites

The geographic size and the intention to optimise the development of land within the North East Cambridge AAP area has enabled an extensive analysis to be undertaken to identify developable land within the AAP boundary. This is aided by large areas being in single landownerships that enables the majority of the area to be defined as deliverable or developable outside of excluded locations.

Cowley Road and Nuffield Road Industrial Estates however contain fragmented land ownership. The NEC Commercial Advice and Relocation Strategy (2021) has engaged with some of the landowners in these areas of the AAP, some of which have indicated that redevelopment is broadly achievable subject, in some instances, to finding an alternative suitable site upon which to relocate the existing occupier. Nevertheless, where 'availability' is not confirmed, the strategy outlines the policy interventions and more direct actions the Council's could take in order to facilitate development. Further to this, the Councils, as part of the Duty to Cooperate, have engaged with various bodies such as Cambridgeshire County Council, to set out an agreed process by which safeguarded or ring-fenced uses may be relocated to suitable off-site locations in time including, in some cases, potential interim solutions.

Stage 4: Assessment Review

Individual risks were assessed for each of the sites within Appendix B. A high-level assessment of key risks/challenges has been carried out for the delivery and development of sites. It is considered that these key risks/challenge can be managed to enable development during the plan period.

The site assessments were subject to an internal review to cross reference and fact check the amount and phasing of development. This resulted in some minor amendments to update the figures alongside consideration further updates to the AAP Spatial Framework and the evidence base studies.

Stage 5: Final Evidence Base

The final evidence base is provided within two tables set out in the appendices. These are:
Appendix A: Site assessment – sets out the results of the site assessment in terms of the judgement on the suitability, availability and achievability of each site for development.
Appendix B: Development potential and trajectory – sets out the potential capacity (for homes, economic uses floorspace and jobs) and timescales for each site considered to be deliverable or developable.

Summary of final evidence base

The site assessment considered 53 sites in total which are shown in figure 3 and set out in detail in Appendix A.
The potential housing capacity for the plan period is:

Phase	Capacity
0 to 5 years (deliverable)	0
6 to 20 years (developable)	3,900

The potential economic floorspace capacity (for both retail and commercial floorspace) for the Area Action Plan is 201,100 sqm. This equates to approximately 15,000 commercial jobs and a further 760 retail jobs. Due to the phasing of the residential development and the pipeline (circa 127,000 sqm) and build out rates for the already consented commercial floorspace, it is not anticipated that any additional commercial or retail development will be deliverable in the next 0 to 5 years of the Plan.

Phase	Capacity
0 to 5 years (deliverable)	92,000
6 to 20 years (developable)	177,250

Risk management

The DCA has set out a trajectory of deliverable and developable housing sites that are expected to come forward over the plan period. The trajectory is based on best available knowledge at point of writing including taking into account representations received as part of the Regulation 18 consultation (2020), and the evidence to support the North East Cambridge Area Action Plan. Other external unforeseen circumstances such as economic conditions as a result of COVID-19 have also been taken into consideration as much as possible at this time.

Monitoring

Ongoing monitoring of development capacity and phasing will be important to ensure future Plan reviews and potential updates of the North East Cambridge Area Action Plan are supported by a robust evidence base. Monitoring of the Plan has been set out in the Monitoring Indicators section within the Area Action Plan.

Appendix A Site Assessment Table

[To be updated]

Appendix B Development Capacity And Trajectory Table

[To be updated]