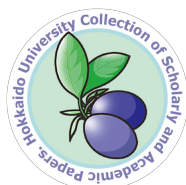




HOKKAIDO UNIVERSITY

Title	North West Cambridge
Author(s)	Topel, Heather
Description	大学改革シンポジウム サステイナブルキャンパス国際シンポジウム2013 : 地域と連携したサステイナブルキャンパスの構築. 2013年11月6日(水). 北海道大学学術交流会館講堂. 札幌.
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Type	conference presentation
File Information	03_Heather_131027.pdf, 発表スライド





NORTH WEST **cambridge**



International Symposium on the Creation of Sustainable
Campuses 2013

6 November 2013



- In top 6 of the World University Rankings
- First in The Complete University Guide, UK 2013
- More Nobel Prize Winners than any other institution – 85 since 1904
- 92% of permanent academic staff and 70% of volume were deemed ‘world-leading’ or ‘internationally excellent’ in the Research Assessment Exercise 2008
- Total income including University Press, Cambridge Assessment and Trusts exceeds £1 billion
- Research generates more income and employs more staff than teaching





- Over 300 buildings excluding the Colleges, some over 600 years old
- Over 600,000 m² (6,000,000 ft²) usable space
- Spread from the historic centre
- The City is full





The development of Cambridge's contribution to local, national and international economy and culture is currently constrained by a lack of adequate or affordable accommodation for:

- Postgraduate students
- Postdoctoral researchers
- Permanent staff
- Expansion space for research





- Many from outside UK
- Inadequate provision for students with families
- Academic pressure to increase numbers
- Many colleges lack capital and/or land to build additional accommodation



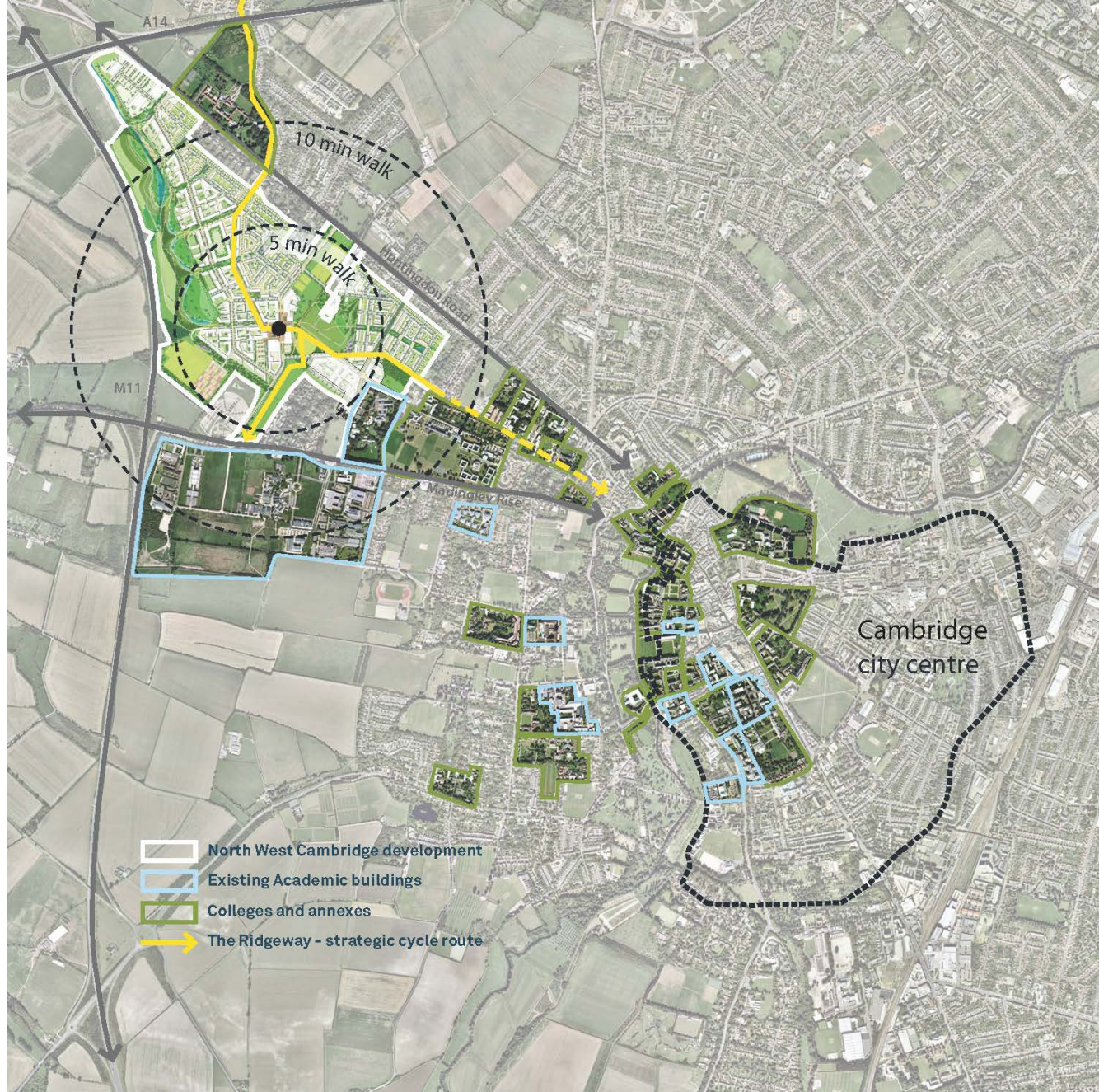


Post-Doctorate Researchers, our Key Workers

- Usually spend 1–3 working after PhD before obtaining permanent role in academic or other environments.
Paid from supervisor's grant or on a personal fellowship
- Currently 3500 and rising fast
Vital engine of our daily research success
- Very few in University or college accommodation
Accommodation in city is poor quality and expensive
- Mainly from outside UK
- Many with accompanying partners and children



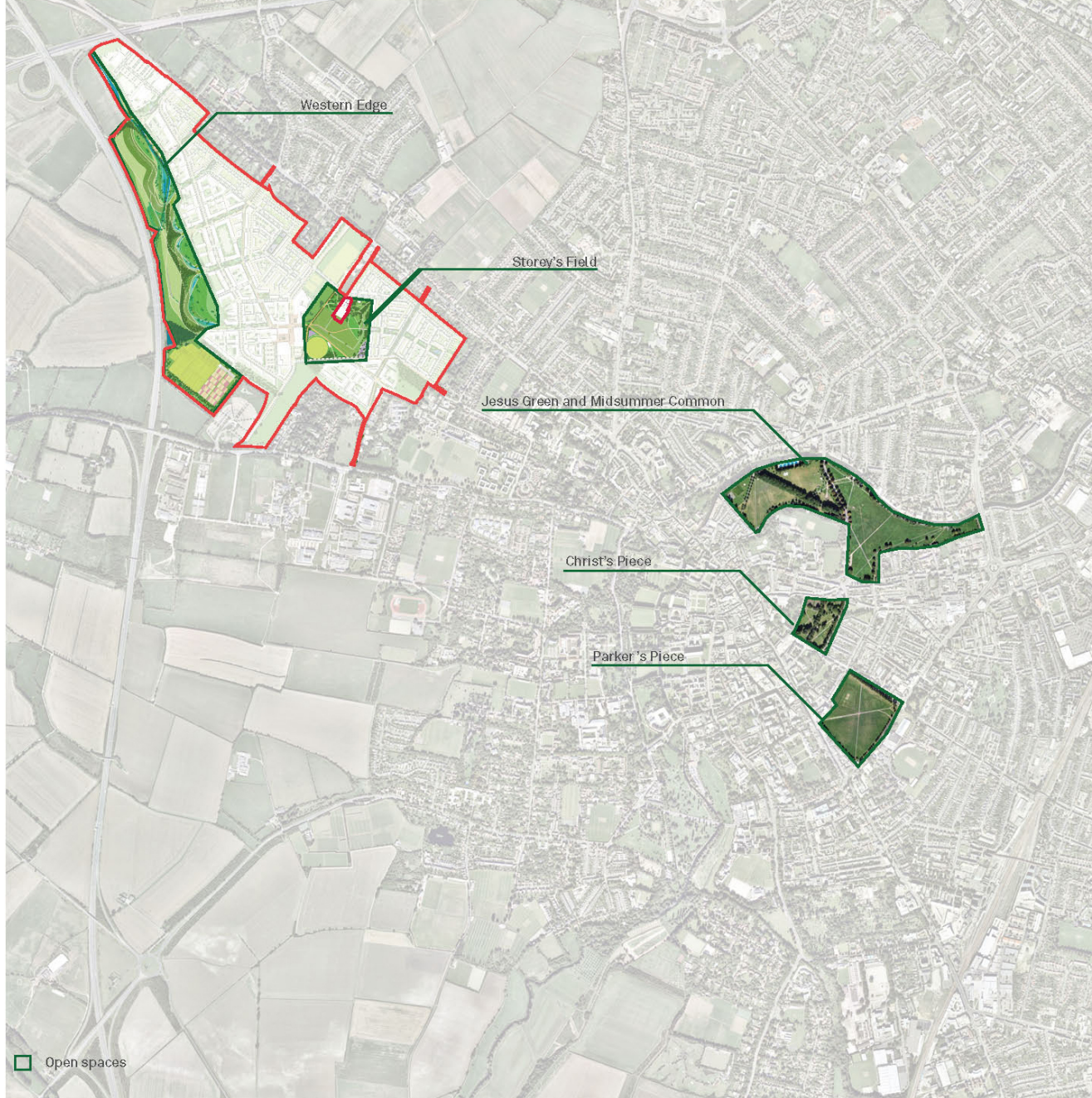
The vision for North West Cambridge is to create a new district and extension to the City, centred around a mixed academic and urban community: a place that is sustainable, long lasting and ambitious offering a high quality of life to enhance both the City and the University.



North West Cambridge - Location



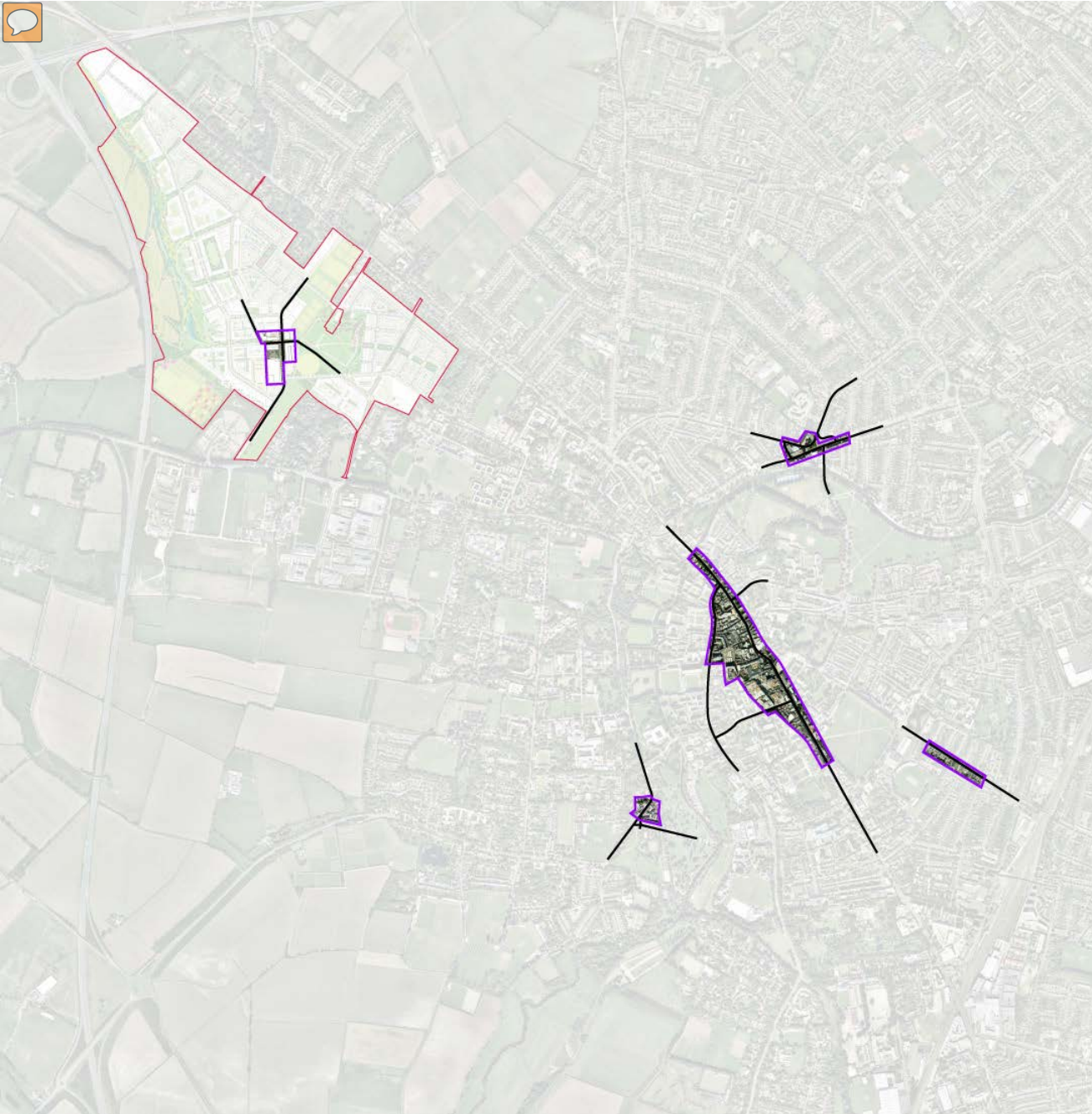
Creating a new, university-orientated urban quarter



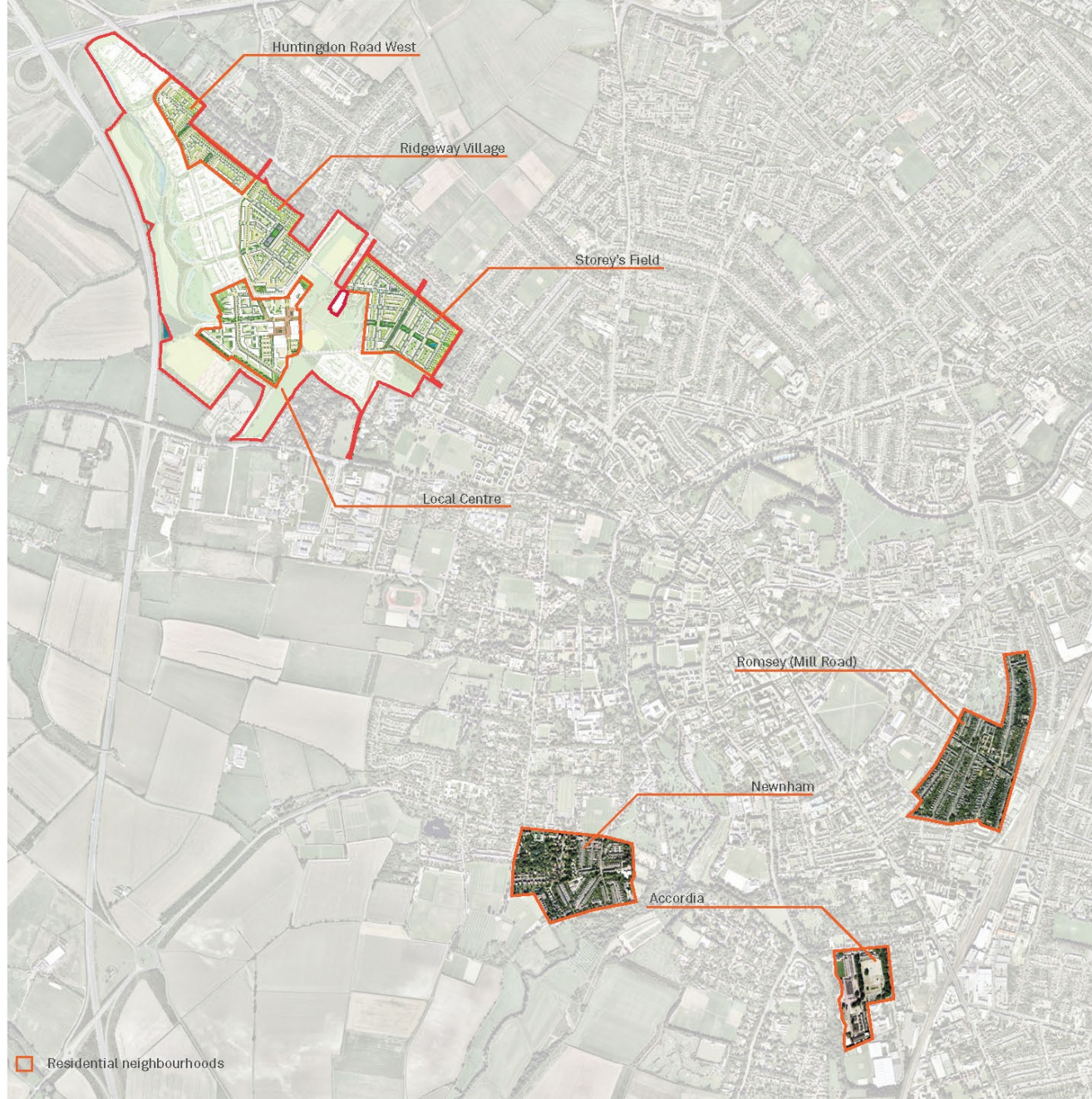
New landscapes and public open space



New landscapes and public open space



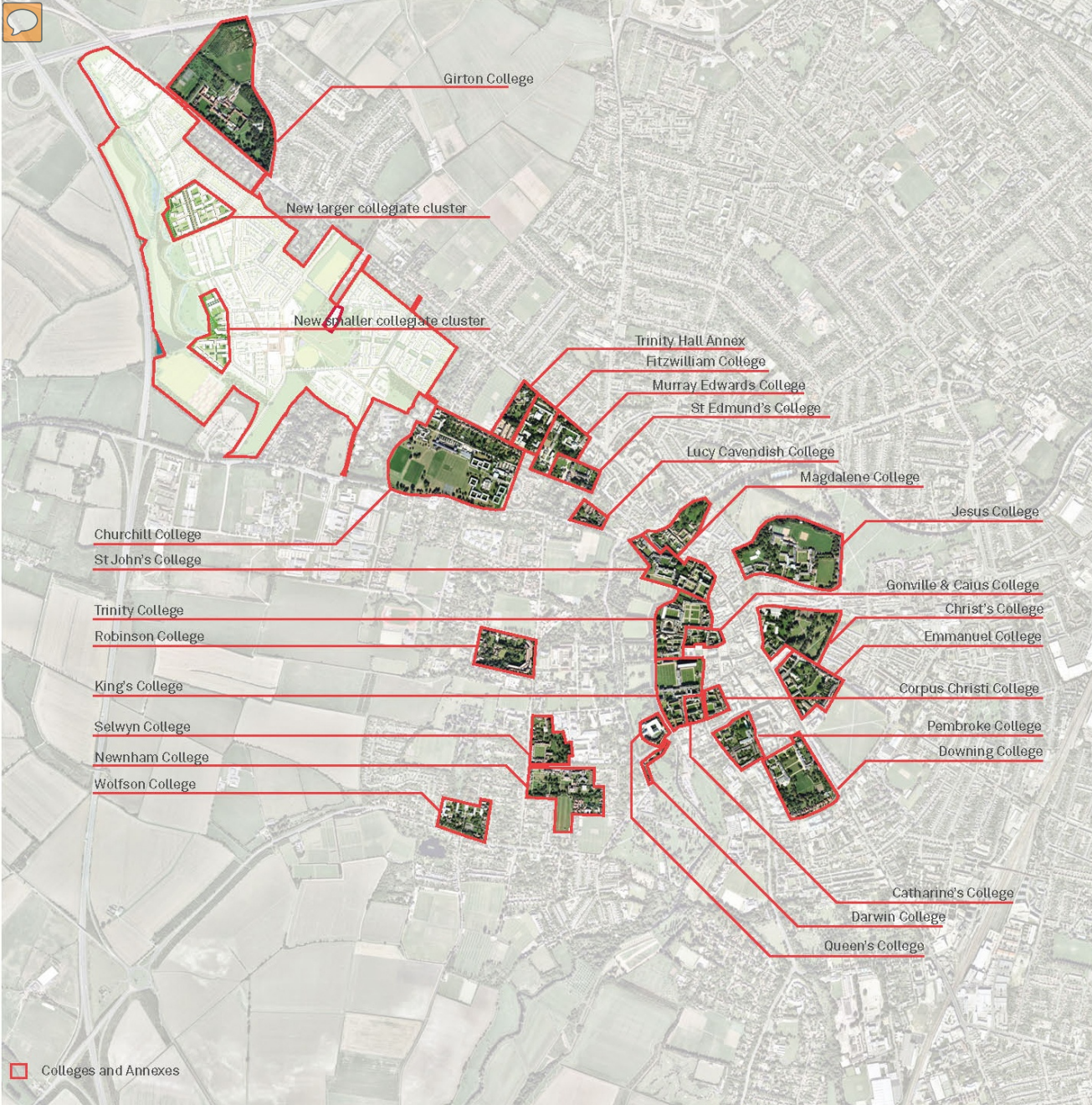
Local centre - shops, primary school, surgery, police, community centre, hotel



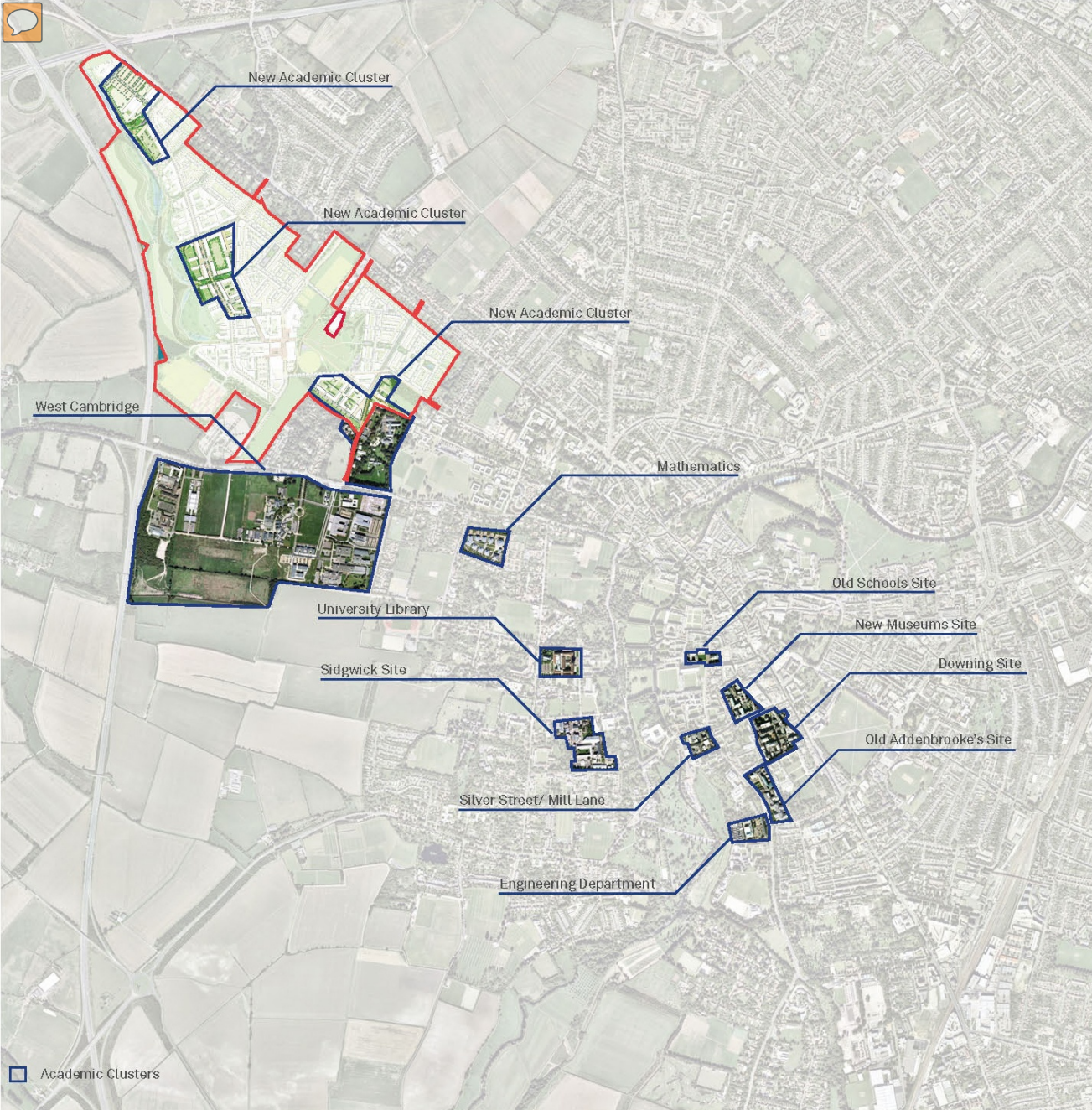
3 new residential neighbourhoods – 1500 units for sale + 1500 key worker



3 new residential neighbourhoods – 1500 units for sale + 1500 key worker



2 new collegiate clusters - 2000 post graduates



3 new academic clusters – 100,000sqm space or 20 years of academic R&D growth



Cambridge qualities and an urban character



Cambridge qualities and an urban character



Character - What kind of place?



CITY PARK



19

What kind of place? – A Public Place



STREET LIFE



What kind of place? – Everyday Life



COLLEGE COURTS



What kind of place? – Academic & Collegiate Life



BACKS



What kind of place? – a sustainable way of life



NORTH WEST **cambridge**



Sustainability



Sustainability

- Non-potable water recycling network
- Combined Heat & Power
- District Heating
- 20% renewable energy
- Extensive photo-voltaics
- < 40% journeys to work by car
(compared to national average of 71%)
- < 80 litres per person per day potable water consumption
(compared to Cambridge average of 150 l/p/d)

- Code for Sustainable Homes Level 5 (residential)
- BREEAM Excellent (non-residential)



- Government scheme assessing sustainability of residential development
- Measures performance beyond Building Regulations requirements
- Features Levels 1 to 6
- 9 Assessment sections

1. Energy and CO₂
2. Water
3. Materials
4. Surface Water run off
5. Waste
6. Pollution
7. Health and wellbeing
8. Management
9. Ecology

THE CODE FOR SUSTAINABLE HOMES

FINAL CERTIFICATE
(Issued at the Post Construction Stage)

ISSUED TO:
Test House, 1 Test Street,
Test Town, Test Country
TE1 1T1

The sustainability of this home has been independently assessed at the Post Construction Stage and has achieved a Code rating of 5 out of 6 stars under the April 2007 version.

★ ★ ★ ★ ★ ☆
Above Regulatory Standards Current Best Practice Highly Sustainable and Zero Carbon

The next page sets out how this home achieved its rating in the nine categories.

Licensed Assessor: Mr L. Assessor Assessor Organisation: The Assessors
Client: C L Ltd Ltd Design: D E Ltd
Assessed: 12th Feb 2008 Date: 12th Feb 2008

Communities and Environment

THE CODE FOR SUSTAINABLE HOMES

FINAL CERTIFICATE
(Issued at the Post Construction Stage)

Certificate Number: BRE-0000000-PC-000-00000 Score: 5/6

What Your Code Star Rating Means

Star	1	2	3	4	5	6
Score	16-21	22-24	25-27	28-30	31-33	34-36

The Code for Sustainable Homes considers the effects on the environment caused by the development and occupation of a home. To achieve a star rating a home must perform better than a new home built to minimum legal standards, and much better than an average existing home.

How this home scored

Category	Percentage of Category Score Achieved	What is covered in the category
Energy	88	Energy efficiency and CO ₂ saving measures
Water	75	Internal and external water saving measures
Materials	65	The sourcing and environmental impact of materials used in the home
Surface Water Run-off	55	Measures to reduce the risk of flooding and surface water runoff, which can pollute the sea
Waste	50	Measures to separate waste and encourage recycling, reuse and reuse of materials
Pollution	45	The use of insulation materials and heating systems that do not affect global warming
Health & Wellbeing	40	Provision of good design quality, sound insulation, good access, accessibility and usability
Management	35	A House Code Guide, designed to assist in the management and maintenance of the building
Ecology	30	Provision and enhancement of the ecology of the area and efficient use of planting and trees

A further detailed breakdown regarding the Code for Sustainable Homes can be found at www.communities.gov.uk/csh/homes

CO₂ Rating

The CO₂ rating is a measure of a home's Carbon Dioxide (CO₂) emissions. The rating is shown on your Energy Performance Certificate as the Environmental Impact Rating. The Certificate is available from the seller, and also includes information on how you can improve the home's performance.

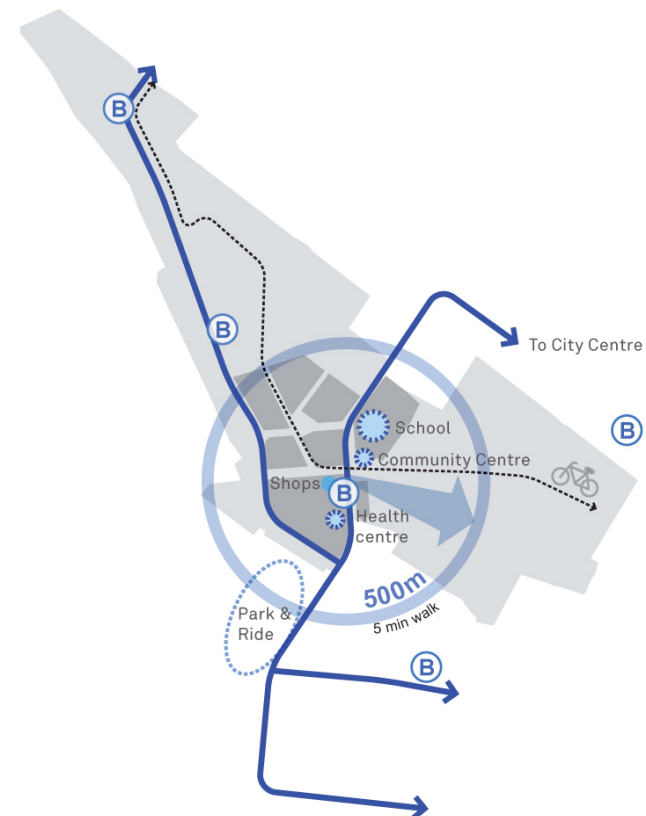
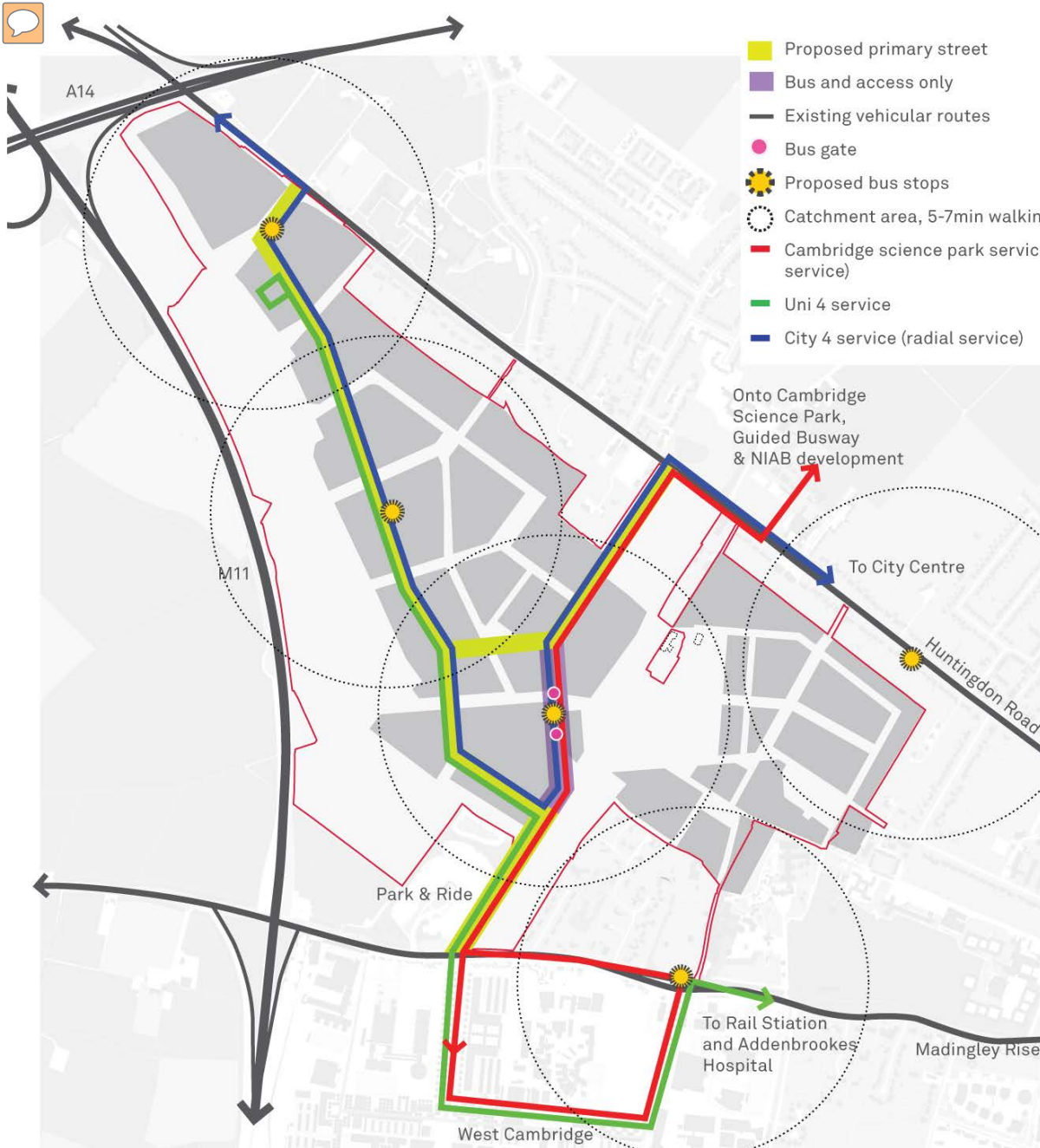
The Code measures the sustainability of a home as a complete package, not just the internal air quality or energy use as well as other sustainability issues, such as water and noise.

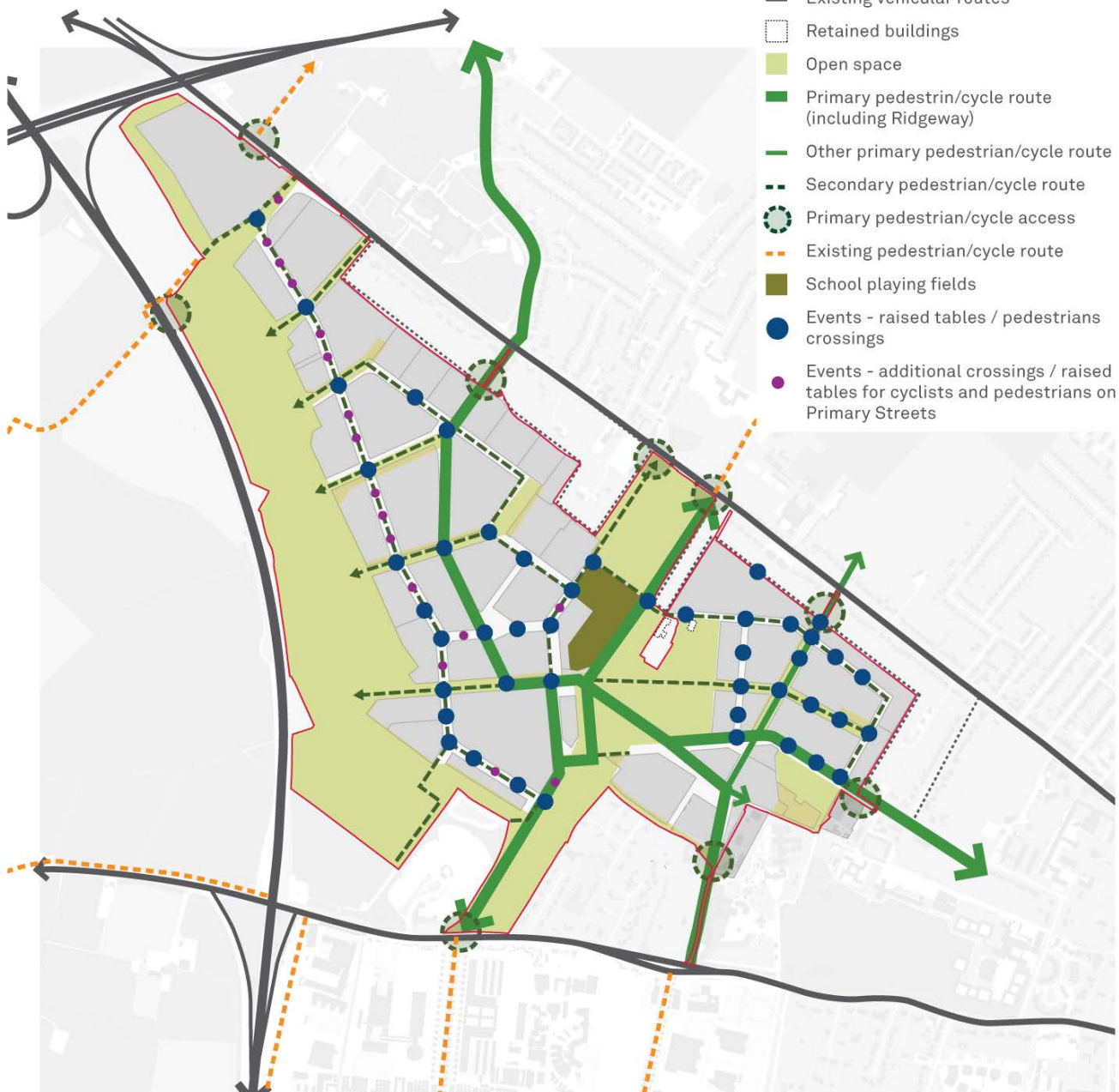
The CO₂ Performance Rating is a new home indicator only and does not take into account the building's energy use, which is covered by the Energy Performance Certificate. The rating is shown on the Energy Performance Certificate as the Environmental Impact Rating. The Certificate is available from the seller, and also includes information on how you can improve the home's performance.

The Code measures the sustainability of a home as a complete package, not just the internal air quality or energy use as well as other sustainability issues, such as water and noise.

EPC Number: 100-100-100-100-100

Communities and Environment Code Service Provider Logo







Connectivity - Approach from Madingley Road – View of Lot 9



Public Space Strategy



Western Edge



Western Edge



Western Edge

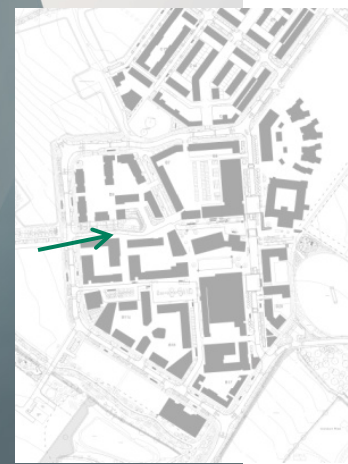


Ecology - Biodiversity





Key Spaces and townscape – Green Corridor



Key Spaces and townscape – Green Corridor



Key Spaces and townscape – Green Corridor



Key Spaces and townscape – Green Corridor



Western Edge



Western Edge





Number of rooms	RECAP guide (litres)	Cambridge City Council guide (litres)	Proposed volume for North West Cambridge
1 room flat	240	200	240
2 room flat	340	320	340
3 room flat	440	440	440
4 room flat	540	560	560
5 room flat	640	680	680
House	775	720	775

(note – City council figures exclude green waste for flats).

Table 3.24 Underground Bins Storage Requirements



Figure 3.130 Underground Bin Waste Collection System



Different design of Underground Bin Waster Collection Systems





- 
- An aerial photograph of a planned community development. The image shows a mix of green spaces, including a large central park with a winding path and several smaller green areas. There are also sports pitches, a large open space, and a river or canal on the left side. The development includes residential areas with houses and apartment blocks, a supermarket, a community centre, a health centre, a police station, a primary school, a nursery, and faith worker units. The overall layout is designed to be sustainable and community-oriented.
- **Open spaces and recreational amenities**
 - **Sports pitches and pavilions**
 - **Supermarket and local shops**
 - **Community Centre**
 - **Health Centre**
 - **Police provision**
 - **Primary School + early years provision**
 - **Nursery**
 - **High quality public realm**
 - **Faith worker units**



NORTH WEST **cambridge**



Phase 1 Proposals



Phase 1

400+ market homes

530 homes for qualifying University/College Key Workers

325 units of Graduate housing

Senior living / Extra Care (75 rooms)

Faith worker homes

Community facilities

- **1 Form of Entry Primary School** (or 3FE UTS)
- **Community Centre and Nursery facility**
- **University-run social spaces**
- **Doctors' Surgery**
- **Police 'touchdown' facility**
- **Sports pitches**
- **Open space**
- **Play areas**

Foodstore (2,000 sq.m. net floorspace)

Up to 8 local shops

130 room hotel

Energy Centre (incorporating a gas fired combined heat and power (CHP) plant)



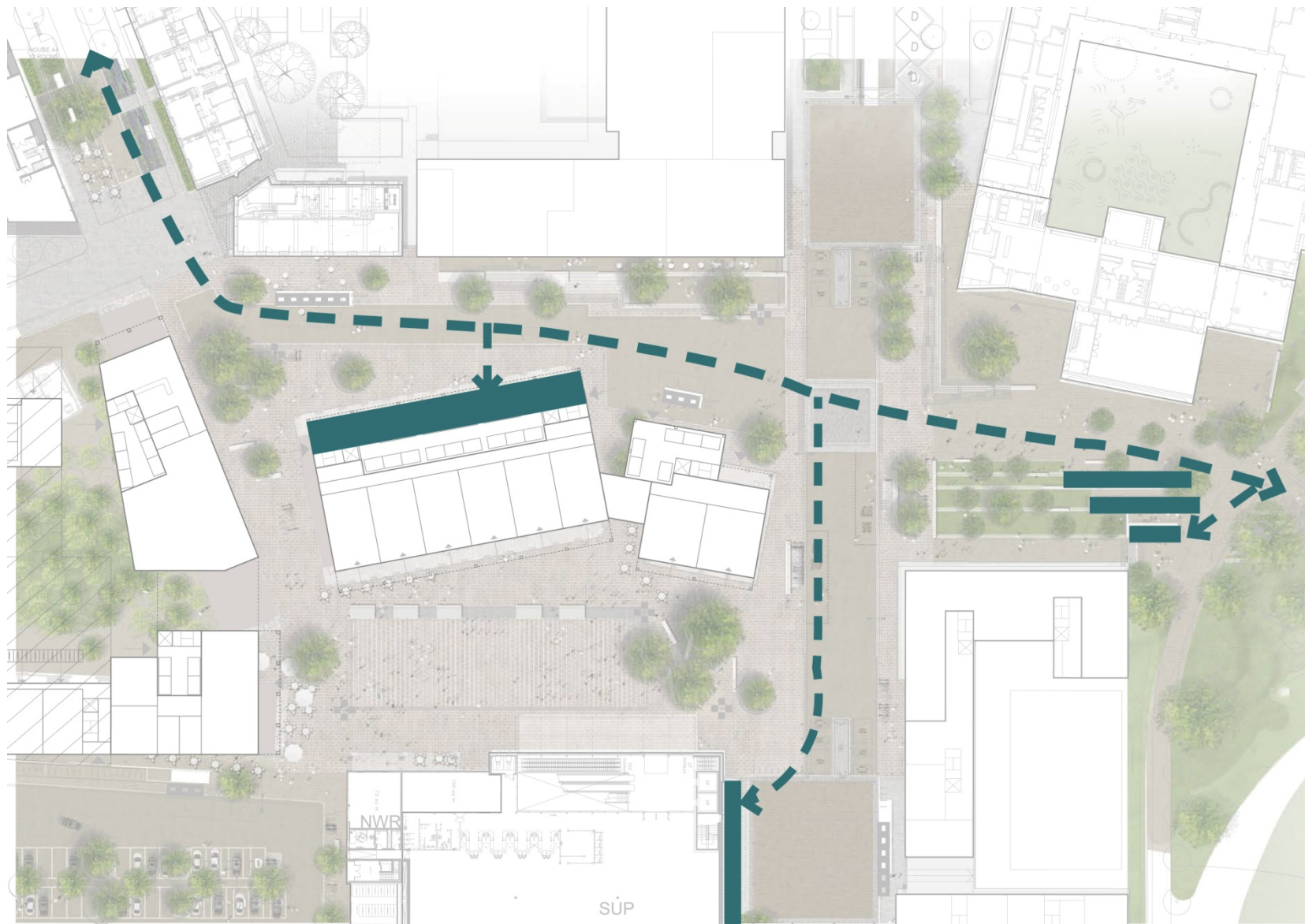
Phase 1 Proposals – Local Centre



- 1 Wilkinson Eyre + Mole
- 2 Stanton Williams
- 3 Mecanoo
- 4 Cottrell Vermeulen + Sarah Wigglesworth + The AOC
- 5 RH Partnership
- 6 Marks Barfield
- 7 MUMA
- 8 Maccreanor Lavington + Witherford Watson Mann
- 9 Alison Brooks
- A Aecom Landscape
- B Townshend Landscape Architects



Phase 1 Proposals – Land Use



Connectivity - Walking and Cycling





Local Centre – Land Use



Local Centre - Key Spaces and townscape



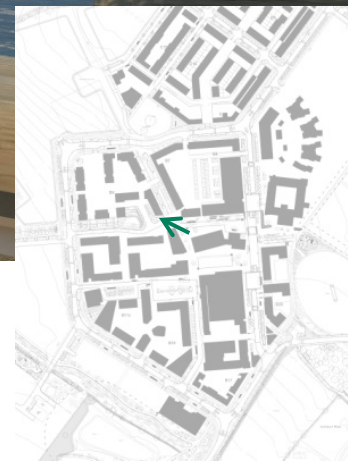
Key Spaces and townscape – Ridgeway Place



Key Spaces and townscape – Market Square



Key Spaces and townscape – Residential lanes and courts



Key Spaces and townscape – Ridgeway Corner



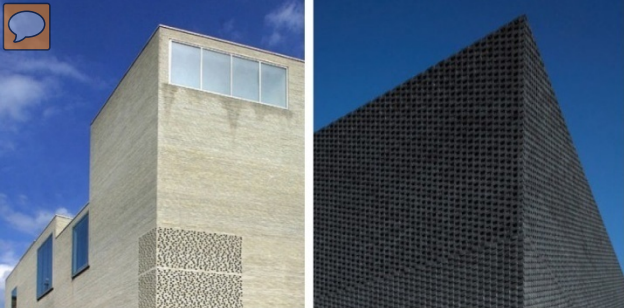
Key Spaces and townscape – Ridgeway



Key Spaces and townscape – Ridgeway



Character – Contemporary Cambridge



Brickwork - colours, texture and form



Natural materials in landscape setting



Character - Materials



Responding to sun and wind



Character - Technology



buildings in landscape



Character - Nature



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