

Wing Masterplan
Design Code
June 2018



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Revisions

Rev	Date	Notes
A	21.05.2018	Updated in line with comments from local authority
B	29.05.2018	Bridle path relocated to the south of Kingsley Woods
C	07.06.2018	Updated following comments
D	11.06.2018	Updated following comments

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MARSHALL

1 INTRODUCTION

1.1 BACKGROUND AND CONTEXT

Outline planning application

This Design Code has been prepared to guide development across the Wing masterplan in Cambridge East. The Wing masterplan was granted outline planning consent by South Cambridgeshire District Council (SCDC) and Cambridge City Council in November 2016 (ref: S/2682/13/OL).

The outline consent includes the following:

- Up to 1,300 homes.
- Primary school.
- Community hall.
- Flexible mixed use units.
- Replacement car dealerships (partially built).
- Petrol filling station (built).
- Public open spaces, including: playing fields, allotments and children's play space.
- Mixed use park pavilion building.
- Allotment clubhouse and sports pavilion.

As part of the outline planning application a Design and Access Statement (DAS) and Parameter Plans were prepared which set out the vision and established a series of principles for: land use; access and movement; building height; and open space. The Parameter Plans are included within the Design Code.

The outline consent includes a condition requiring the submission of a Design Code prior to, or concurrently with, the first reserved matters application.

Process of preparation of the Design Code

The Wing Design Code has been prepared in close collaboration with SCDC. The Code responds to the SCDC's Design Code guidance, 'Design Codes for Strategic Development Sites within the Cambridge Fringe Areas Informal Guidance Note (May 2012)'. At the outset of the project, the client and consultant team took part in a Design Code Inception Workshop facilitated by SCDC.

In the preparation of the Code, the client and consultant team had five pre-application meetings with SCDC. The team presented twice to the Cambridgeshire Quality Panel, at the start and the end of the coding process. Public consultation and an exhibition were organised by the team. Finally, a Design Code testing day was organised jointly by SCDC and the team.

1.2 PURPOSE OF THE DOCUMENT

The purpose of the Design Code is to provide a benchmark for quality and co-ordination across all phases of the Wing masterplan. The Design Code offers a greater level of detail on design than the outline planning application and Parameter Plans. The Design Code also brings together in one document information and guidance from various sources.

The Design Code has been drafted to assist the following:

- Local authority officers in assessing future reserved matters applications.
- Future phase developer and consultant teams in preparing reserved matters applications.
- The local community in understanding the expectations for design quality across the site.
- Achieving buy-in from key statutory undertakers, including the County Council highways, refuse collection, utilities and the fire service.

1.3 HOW TO USE THE CODE

The Design Code has been drafted to provide strategies, rather than specifying solutions that might be superseded. The pages in the Design Code follow a standard format. Text in a grey box at the start of each Design Code heading (e.g. streets or building materials) provides a 'performance specification', a short statement summarising the strategy. Thereafter is a set of written principles, images and precedents, expanding the strategy in more detail.

Guidance within the Code contains two levels of compliance:

- Where compliance is **mandatory**, the word '**must**' is used.
- Where compliance is **recommended**, the word '**should**' is used. If, in future reserved matters applications, developer / design teams do not follow recommended guidance, the departure **must** represent an improvement and be justified during pre-application meetings with SCDC and in the DAS.

2 CONTEXT

2.1 THE SITE IN THE REGION AND CAMBRIDGE

Chapter 2 sets out the physical context of the Wing site in the region, Cambridge and in the local area. The chapter also summarises site opportunities and constraints.

The Wing site is on the north-east edge of Cambridge, approximately two miles north-east of Cambridge City Centre. The site is located to the north of Newmarket Road and to the south of Fen Ditton.

Cambridge is well connected by rail with two train stations - Cambridge and the recently opened Cambridge North. Direct rail destinations include: London Kings Cross, London Liverpool Street, Stansted Airport, Ely, Newmarket, Bury St Edmunds, Ipswich, Norwich, Kings Lynn, Peterborough, Leicester and Birmingham.

Cambridge is well connected by road with the M11 to the west and the A14 to the north of the city.

National Cycle Route 51 runs through the site connecting Ipswich, Newmarket, Cambridge, Milton Keynes and Oxford.

The Chisholm Trail strategic cycle and pedestrian route will be located approximately 1 mile east of the site. The trail has been granted planning permission and will connect North Cambridge, Cambridge Station and Addenbrooke's Hospital.





2 CONTEXT

2.2 LOCAL CONNECTIVITY

The Wing site is well connected to Cambridge City Centre by road, public transport and cycle paths.

The site is located to the north of Newmarket Road, to the south of High Ditch Road, to the east of Ditton Lane and to the west of Newmarket Road Park and Ride.

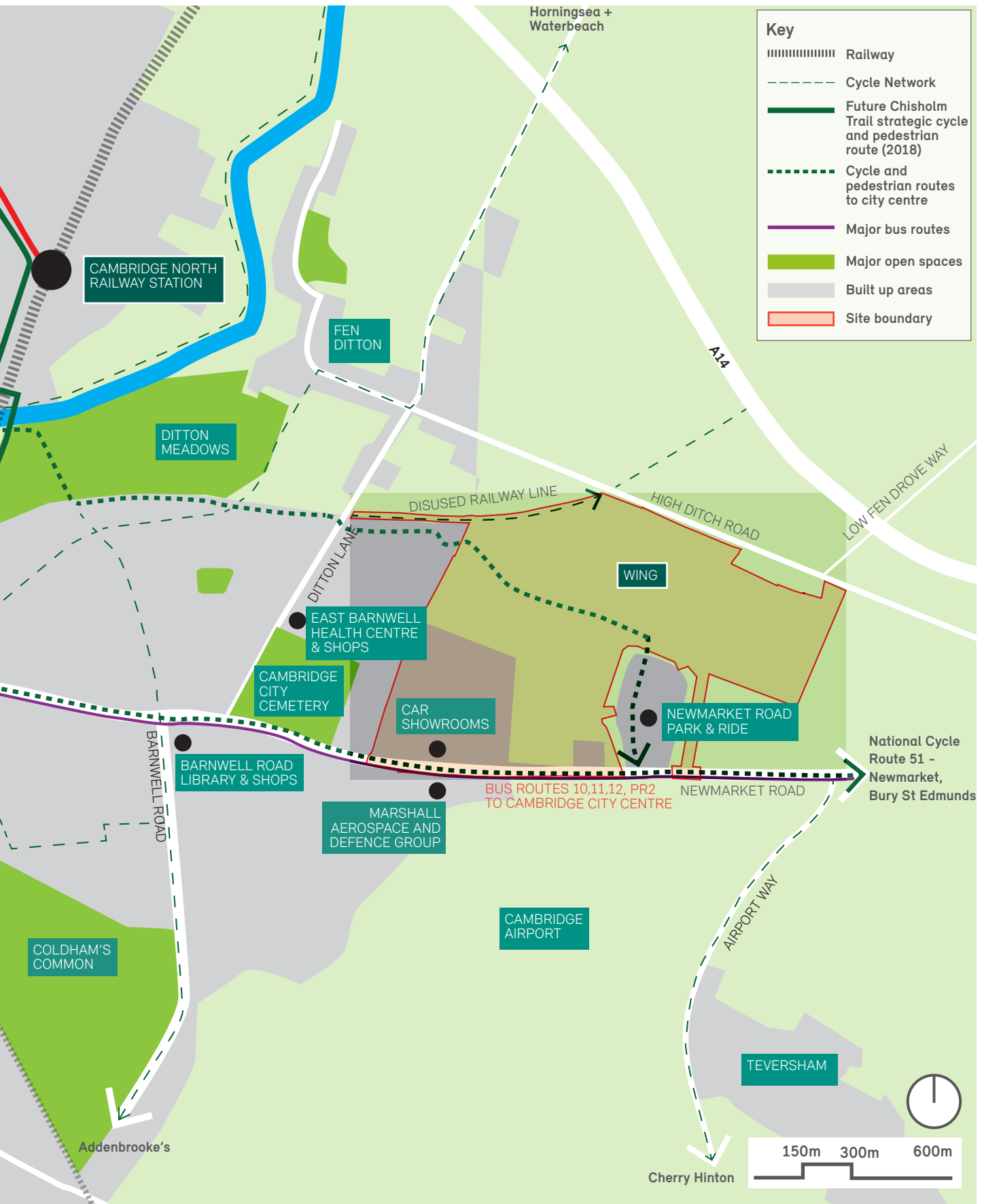
Several frequent bus routes connect Newmarket Road and the Park and Ride with Cambridge City Centre.

The most direct cycle route to Cambridge City Centre is via Newmarket Road. A traffic free route is provided for within a section of the National Cycle Route 51, through Ditton Meadows and along the River Cam to Midsummer Common; a journey of approximately 3 miles.

Cambridge North Station will be approximately a 1.5 mile journey from the Wing site, once the new bridge over the River Cam opens in 2018. The new station is served by a guided busway and is a short walk from Cambridge Business Park and Cambridge Science Park.

A number of local facilities are located within 0.5 miles of the site, including: Barnwell Road Library; East Barnwell Health Centre; two local shopping parades; and Ditton Meadows.





2 CONTEXT

2.3 SITE CONSTRAINTS AND OPPORTUNITIES

The Wing site is approximately 65 hectares in area. The site shares boundaries with the Fison Road Area to the west and Newmarket Road Park and Ride to the east, both of which offer opportunities for improved connectivity.

To the north of the site is a disused railway line which used to run from Cambridge to Mildenhall. Today the old railway line is a path enclosed by banks which present a barrier to the village of Fen Ditton, but also a potential connection between High Ditch Road and Ditton Lane.

Fen Ditton village centre is a Conservation Area and is connected to the site by a public right of way. To the north-east of the site is High Ditch Road, which is a single carriageway in each direction with no footway.

To the south of Newmarket Road is Cambridge Airport and the Grade II Listed Airport Control Building on Newmarket Road. On the north side of Newmarket Road there are a number of trees with Tree Preservation Orders (TPOs) and a petrol filling station / Marks & Spencer next to the Park and Ride.

The site is well screened to the north, east and west by a mature tree belt known as Kingsley Woods. A ditch and a thin tree belt runs east to west across the site and links through to an attenuation pond near the boundary with the Fison Road area.

The boundary with the Park and Ride is enclosed by mature trees. Cambridge ice rink is due to open in 2018 to the east of the Park and Ride.

An overhead power cable runs east-west across the centre of the site. An underground power cable, gas main and water main run north-south towards the east of the site.

The Civil Aviation Authority has identified a no build zone and maximum building heights to safeguard Cambridge Airport.





3 VISION

3.1 VISION STATEMENT AND DESIGN PRINCIPLES

Wing will be a new urban village for Cambridge East.

Wing will not be a dormitory, a housing estate or a suburb. The proposed new homes will be integrated with a significant range of community facilities and local shops. Residents will have ready access to new and existing employment opportunities, not least within the Marshall Group's own businesses. As such it will have all the ingredients of a proper community.

The ongoing business functions will be retained, partly in new buildings on site and partly through relocation to the airport side or other locations, whilst surplus land will be developed for residential use together with a school, community facilities and associated open spaces.

1. Town and country

Wing will offer the best of both worlds: an urban village integrated with the City of Cambridge, but with easy access to Fen Ditton, the River Cam and the Cambridgeshire countryside.



2. Respecting and enhancing the surrounding context

Wing will respect the surrounding landscape and the setting of Fen Ditton and East Barnwell, while transforming the character and appearance of Newmarket Road.



3. Sustainable connections

Wing will enhance the cycle and pedestrian connections to Cambridge City Centre, Cambridge North Station, Fen Ditton, the countryside and National Cycle Route 51.



4. A balanced community

Wing will provide jobs and much needed affordable housing. A variety of homes will be created, from apartments to larger family homes across a range of tenures, including private sale, shared ownership and affordable rent.



5. Landscape value

Wing will be a landscape-led development, where a generous quantity of outdoor space will be designed for recreation, sports, play and natural habitats.



6. A thriving centre

Wing will provide a local centre, providing a primary school, nursery, local shops, café, community centre and a flexible space for a farmers' market and other community events.



7. A place with its own character

Wing will be inspired by the distinctive character of Cambridge and by contemporary lifestyles and technology.



8. Long-term stewardship

The Marshall Group will retain a long term interest in the design, delivery and management of Wing.








3 VISION

3.2 COMPONENTS OF PLACE

In analysing the memorable qualities of towns and cities, the Urban Planner Kevin Lynch developed five 'components of place' - districts, nodes, paths, landmarks and edges - defined opposite. The careful organisation of the components of place produce memorable, easily navigable and successful places.

The five components of place for Wing are set-out on the following pages to explain and illustrate how the components combine to make a successful place. Each of the components of place is addressed in the Design Code under the headings of: Character Areas (districts); Public Open Space (nodes), Streets (paths and edges) and Landmarks, Key Groups of Buildings and Continuous Building Frontage (landmarks). The five components of place have also been used to build-up the Framework Plan on page 12.

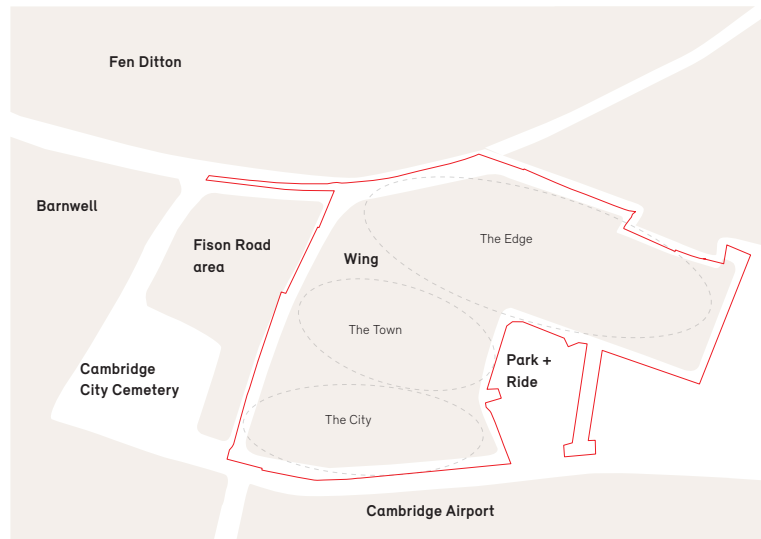
The five components of place are defined below:

-  **DISTRICTS:** sections of the city recognisable as having an identifying character.
-  **NODES:** focal spaces, such as the junction of paths or open spaces.
-  **PATHS:** channels of movement, such as streets.
-  **LANDMARKS:** identifiable points of reference, such as buildings or focal points.
-  **EDGES:** barriers to movement, such as major roads, railway lines or dense vegetation.

DISTRICTS

Wing will have its own character as a distinct district. Wing consists of three character areas: the City, the Town and the Edge, getting progressively less urban when moving away from Newmarket Road. Existing surrounding districts include:

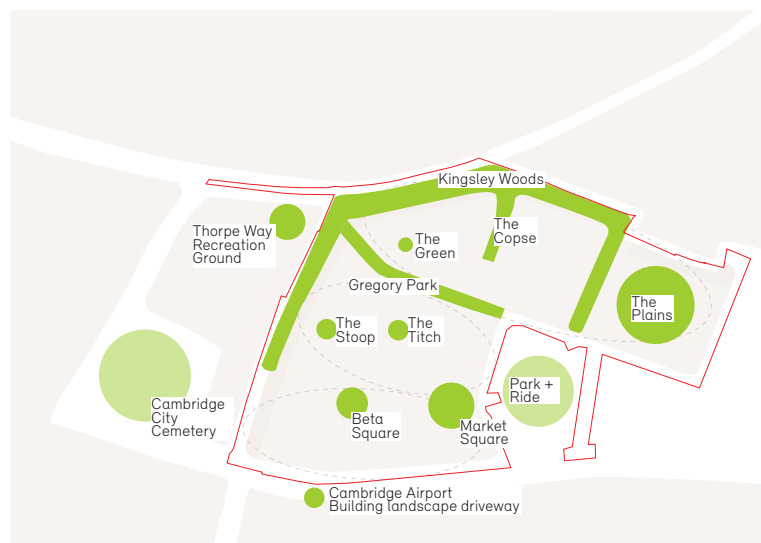
- Fen Ditton, a historic Cambridgeshire village.
- Fison Road area, a 1960s/70s housing estate laid out on cul-de-sacs.
- Newmarket Road Park and Ride.
- Barnwell, a reasonably uniform area consisting of semi-detached houses.



NODES

Wing includes a series of nodes / focal spaces to complement the existing nodes of the City Cemetery and the Park and Ride. New nodes in Wing include:

- Market Square is a strategic node for Wing at a key intersection and brings together a variety of uses.
- Beta Square is more residential in character.
- The Plains offers a node of sports fields.
- Kingsley Woods and The Copse allow the mature vegetation to permeate into the site.
- Gregory Park is a linear park with flood attenuation features.
- The Titch, the Green and the Stoop are small pocket parks.



←→ PATHS

A hierarchy of paths surround the Wing site, including Newmarket Road, High Ditch Road and the disused railway line.

Within Wing, paths connect the nodes across the site. The primary street provides a loop through Wing from Newmarket Road. A further network of pedestrian and cycle paths connect to the Park and Ride, Fison Road, Cambridge City Centre, Cambridge North Station, Fen Ditton, the River Cam and other local destinations.



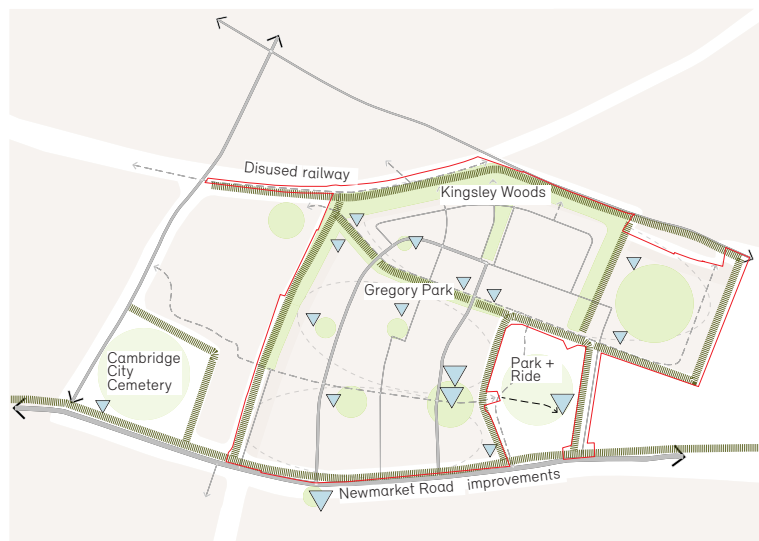
▼ LANDMARKS

Landmarks will help visitors and residents orientate themselves around Wing. New landmark buildings are positioned around nodes/open spaces and include the local centre buildings around Market Square.



▬ EDGES

A series of edges form borders and barriers within and around Wing. The boundary with Fison Road, the Park and Ride boundary, Newmarket Road and the disused railway are currently barriers which will enjoy a better level of permeability as part of the proposals. Kingsley Woods and Gregory Park are nodes that could also be classed as permeable edges.



3 VISION

3.3 FRAMEWORK PLAN

The Framework Plan is illustrated in the Design Code to ensure all parties maintain the overall vision for the Wing site.

The Framework Plan broadly illustrates how the five components of place - districts, nodes, paths, landmarks and edges - combine three dimensionally within the context of the surrounding area.

The Framework Plan also illustrates the location of key groups of buildings and areas of continuous building frontage; both of which are essential to place-making. Key groups of buildings shape and articulate the focal spaces that they address. They should aid legibility, contribute to place-making and align with key vistas and views. Continuous building frontage provides a predominately uninterrupted elevation at ground floor level with a generally uniform building line.

KEY

- (A) Car businesses
- (B) Allotments
- (C) Tennis courts
- (D) Beta Square
- (E) Market Square
- (F) School
- (G) The Titch
- (H) The Stoop
- (I) The Green
- (J) Gregory Park
- (K) Kingsley Woods
- (L) The Copse
- (M) Allotments
- (N) The Plains





Chapter 4 sets out the elements of the Code which relate to the entire site. The chapter is organised under five sub-sections: Land Use; Movement and Access; Urban Design Principles; Materials; and Landscape and Open Space. Each of the sub-sections begins with the relevant approved Parameter Plan.

4.1 LAND USE



LAND USE PARAMETER PLAN

PRINCIPLES (established at outline planning stage)

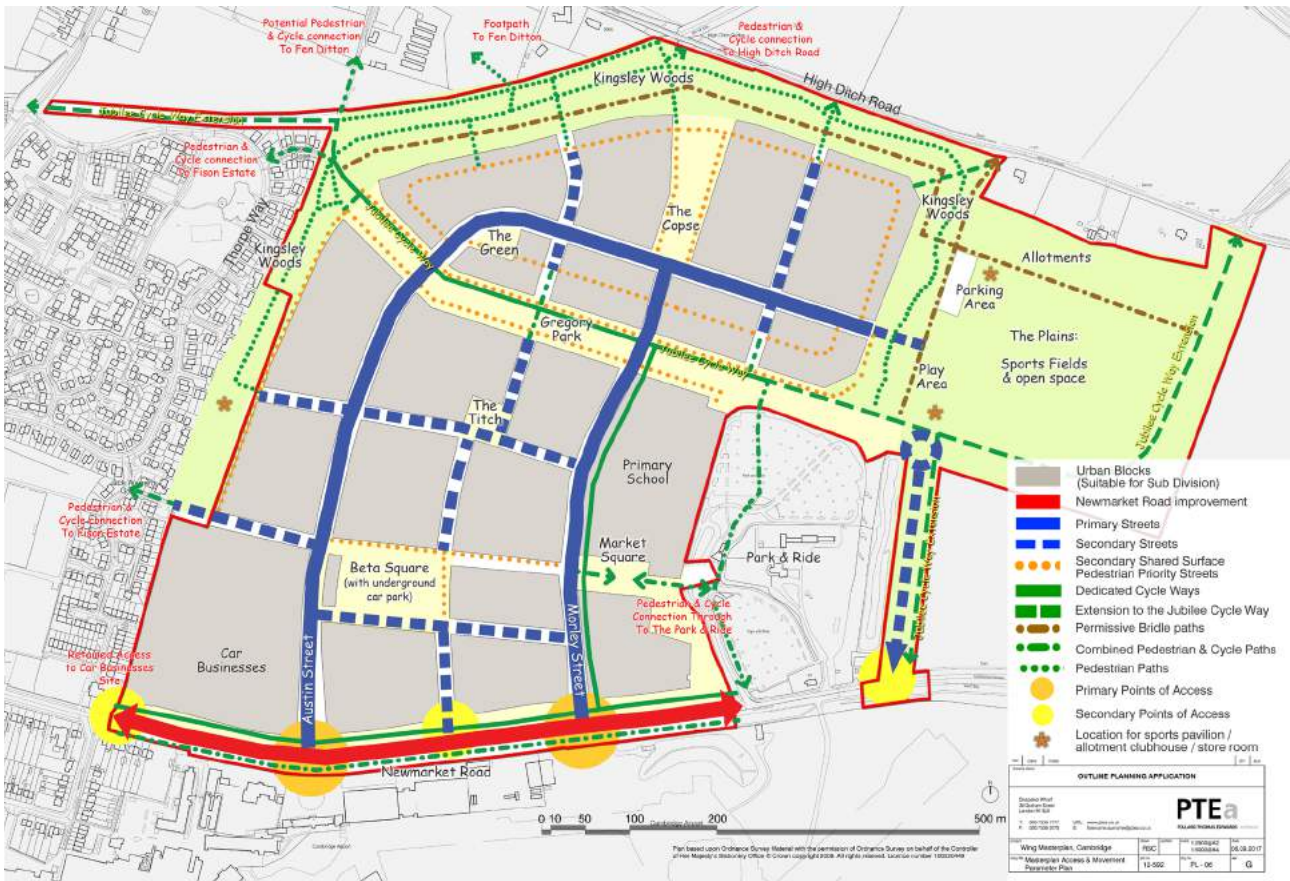
- A mix of tenures **must** be accommodated across Wing, with 30% affordable housing.
- A mix of size and type of homes **must** be provided across Wing.
- The car businesses **must** be rehoused on a consolidated site on Newmarket Road.
- Market Square **must** provide the function of a local centre and accommodate a primary school, community centre and commercial units.
- The Plains **must** provide sports pitches.

PRINCIPLES (ESTABLISHED IN DESIGN CODE)

- Across the Town and City Character Areas ground floor non-residential uses including A1, A2, A3, B1 and live/work uses may be appropriate.

Outline planning consent has been granted for:	
Residential	Up to 1,300 homes
Primary school	2.3 ha primary school site
Community hall	200 m ² gross internal floorspace (excluding any parish office)
Food store	Up to 500sqm gross internal floorspace
Flexible mixed-use units (A1 – 5, B1, D1, D2)	Up to 3,000 m ² gross internal floorspace
Park pavilion comprising: café, public WCs, park store, offices, and gym (A1 – 5, B1, D1, D2)	2,600 m ² of which 1,600 m ² offices gross internal floorspace
Sports pavilion	200 m ² gross internal floorspace
Allotment clubhouse and amenities	200 m ² gross internal floorspace
Replacement car dealerships	Up to 4 ha

4.2 STREETS



ACCESS & MOVEMENT PARAMETER PLAN

Streets and paths within Wing **must** encourage walking and cycling to key destinations within the development and the wider area, these include: Market Square, Beta Square, The Plains, Cambridge City Centre, Cambridge North Railway Station, Cambridge Science Park, Cambridge Business Park, Fen Ditton, Newmarket Road Park & Ride, the new ice rink and the local shopping facilities in Ditton Lane and Barnwell Road.

Streets **must** be designed to ensure vehicle speeds are no more than 20 mph to promote walking, cycling, children’s play and street life. All streets and paths **must** be designed to locally adoptable standards (apart from two private roads described on the following page) and be in accordance with Manual for Streets 1 and 2 (or any replacement national guidance). All streets within Wing are part of a **mandatory** street hierarchy, which is illustrated on the following pages. All walking and cycling routes **must** be legible, safe and attractive.

The alignment of the primary street is **mandatory**. The alignment of the secondary streets is **recommended**. The alignment of the tertiary streets is illustrative.

4 SITE WIDE CODING

ACCESS PRINCIPLES

- Motor vehicle access into Wing **must** only be provided from Newmarket Road, as specified on the plan below. All vehicle routes **must** integrate access for pedestrians and cyclists.
- The most westerly vehicle access to Wing from Newmarket Road **should** be a private road, providing access to the car businesses only.
- The most easterly vehicle access to Wing from Newmarket Road **should** be a private road and **must** serve the Plains only (this route will also act as an emergency access route until a second access point is built on Newmarket Road). This route also contains a cycle path.
- Pedestrian and cycle access **must** be provided in the locations shown on the plan below. (Please note some access points can only be delivered with the co-operation of a third party).

PEDESTRIAN AND CYCLE PATHS

- An extension to the Jubilee Cycleway (National Cycle Route 51) **must** be made through Wing, connecting Newmarket Road with the western end of the disused railway on Ditton Lane and with the top north east corner of the site in the Plains.
- A dedicated cycle path (free of vehicles and pedestrians) **must** be provided on Morley Street, from Newmarket Road to Gregory Park, where it meets the Jubilee Cycleway.
- A combined bridle & pedestrian path **must** be provided to the south of Kingsley Woods.

STREET HIERARCHY PRINCIPLES

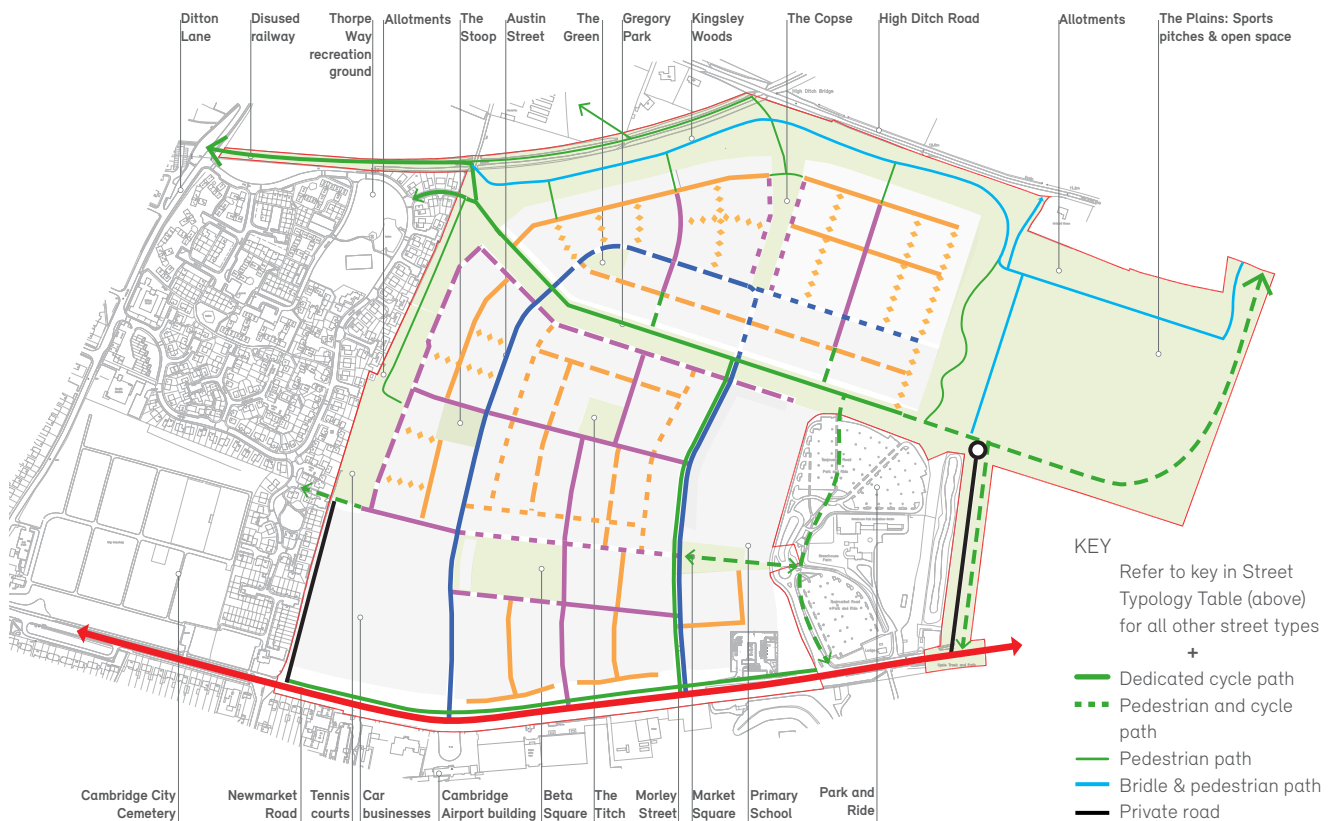
- All streets within Wing are part of a **mandatory** street hierarchy with **recommended** dimensions. There are three categories of street - primary, secondary and tertiary - depending on the role of the street within the wider masterplan. There are further subcategories for each street type, which are summarised in the table on the following page, with selected sections illustrated on the following pages.
- The lower down the street hierarchy the less the number of vehicles and the greater the potential for the design of the streets to promote children's' play and street life.
- Each shared surface street **must** serve a maximum of 14 homes. Visually the shared surface **should** by 7.0m wide, with a 6.0m shared surface zone and a 0.5m maintenance strip on both sides showing a 25mm kerb face.
- All streets **must**:
 - Comply with the adoptable standards of Cambridgeshire County Council (apart from two private roads noted on the plan opposite).
 - Minimise clutter and signage.
 - Provide visitor parallel parking on carriageway at appropriate locations.
 - Comply with the street planting principles on page 55 and threshold and boundary principles on page 58.



SITE ACCESS PLAN

STREET TYPOLOGY TABLE (RECOMMENDED DIMENSIONS)

	Primary Streets			Secondary Streets			Tertiary Streets			
	① Standard	② North	③ Plains link	① Standard	② Gregory Park	③ Green	① Standard	② Mews	③ Mews garage	④ Lane
Key										
Enclosure										
Building to building distance	20.5m -23.5m	20.5m	18.5m- 19.5m	18.5m	8.5m	8.5m (green space on one side)	12.5- 16.5m	15.0m	15.0m	10m
Street dimensions and character										
Carriageway / shared surface width	6.5m	6.5m	5.5m- 6.5m	5.5m	5m	7m (shared)	5.5m	7m (shared)	5.5m	7m (shared)
Street surface material (for more detail see page 48)	Asphalt	Asphalt	Asphalt	Asphalt	Asphalt	Heritage	Asphalt or heritage	Block paving	Asphalt or heritage	Block paving
Footway	2m	2m	2m	2m	2m	Shared	2m	Shared	2m	Shared
Sustainable transport										
Cycling	Dedicated cycle path (3m) on Morley St	On street	On street	On street	On street	On street	On street	Shared surface	On street	Shared surface
Potential future bus route	Yes	Yes	On loop only	No	No	No	No	No	No	No



STREET HIERARCHY PLAN

4 SITE WIDE CODING

NEWMARKET ROAD

- The area of Newmarket Road abutting the Wing site has detailed planning approval. The street section and plan below extend the area of the planning approval and are **recommended**.
- Parallel to Newmarket Road a tertiary street **should** provide access and parking to the apartment buildings. The character of the tertiary street on the north side of Newmarket Road **should** be that of a pedestrian friendly public space lined with street trees, rather than a car-based road.
- There **must** be continuous building frontage with hidden podium parking within the block.
- The Newmarket Road ground floor (excluding the car businesses) **should** support the potential for future commercial uses.



KEY
— Newmarket Road

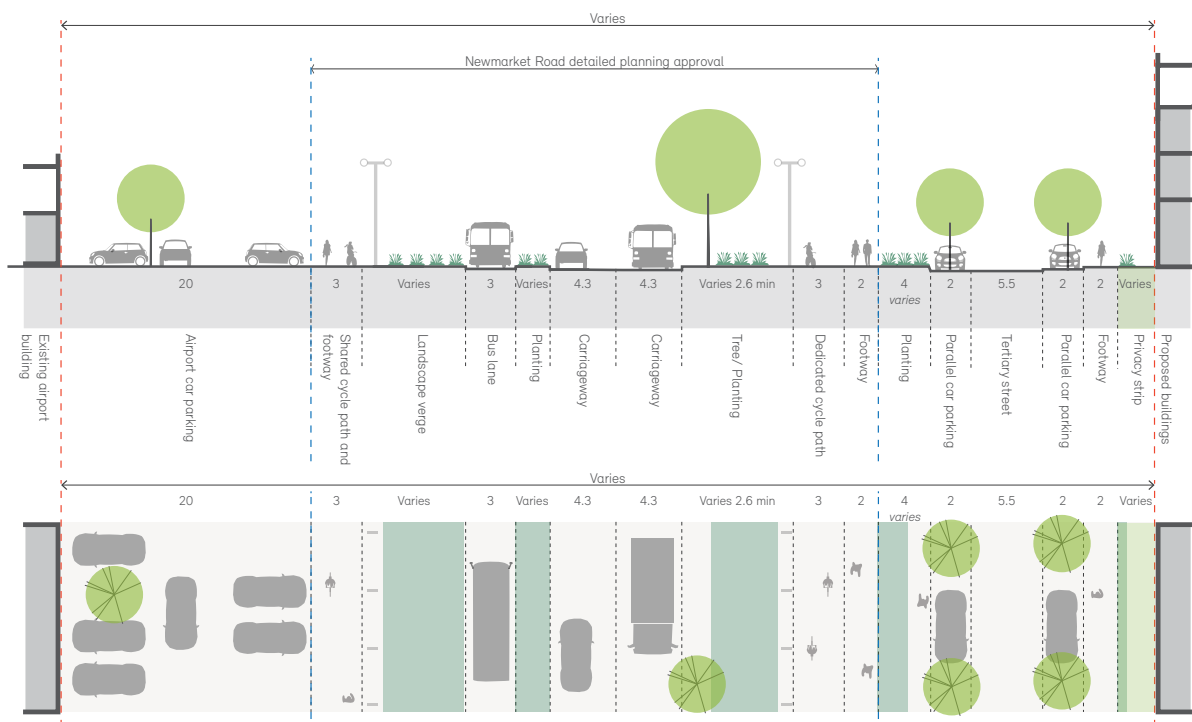


NEWMARKET ROAD



INDICATIVE VIEW OF NEWMARKET ROAD

Newmarket Road



PRIMARY STREETS

- The position/alignment of the primary streets are **mandatory**. The street sections are **recommended**.
- The primary street connects all three character areas and comprises three street sections.
- Primary Street 1 runs northward from the two main access points into Wing from Newmarket Road up to Gregory Park. It **should** be lined with street trees on both sides. Tree trunks and buildings **must** be no closer than 6.0m. The Morley Street section, between Newmarket Road and Gregory Park, **must** include a 3.0m dedicated cycle path. There **must** be continuous building frontage and appropriate parking solutions to support this (see page 23 for further information).
- Primary Street 2, located north of Gregory Park, **must** include street tree planting along the north side of the street.
- Primary Street 3, located between Gregory Park and the Copse, and between the Copse and the Plains, **must** include tree planting on both sides of the street.



KEY

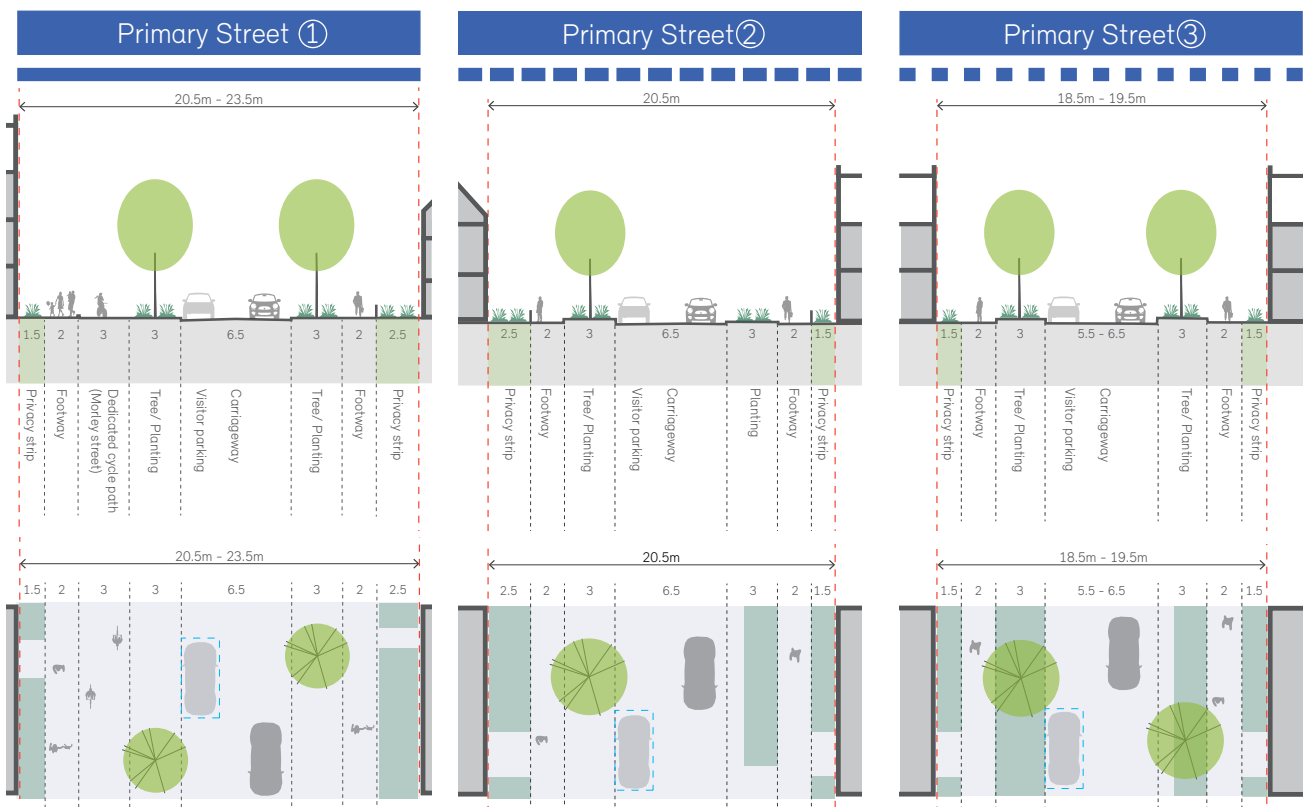
- Primary Street 1
- - Primary Street 2
- · Primary Street 3



EXAMPLE OF A CAMBRIDGE STREET WITH SIMILAR CHARACTER AND DIMENSIONS TO THE PRIMARY STREET



INDICATIVE VIEW OF THE PRIMARY STREET



4 SITE WIDE CODING

SECONDARY STREETS

- The position/alignment of the secondary streets is **recommended**. The street sections are **recommended**.
- The secondary streets **must** provide access to and movement through character areas and **should** create direct links between public spaces.
- Secondary Street 1 **should** be lined with street trees on both sides. Tree trunks and buildings **must** be no closer than 5.0m.
- Secondary Street 2, located on the south side of Gregory Park, includes a vehicle carriageway.
- Secondary Street 3 is located next to the Copse, on the western boundary of the site and on the north and south sides of Beta Square. This typology **should** be a shared surface with green space on one side.



KEY

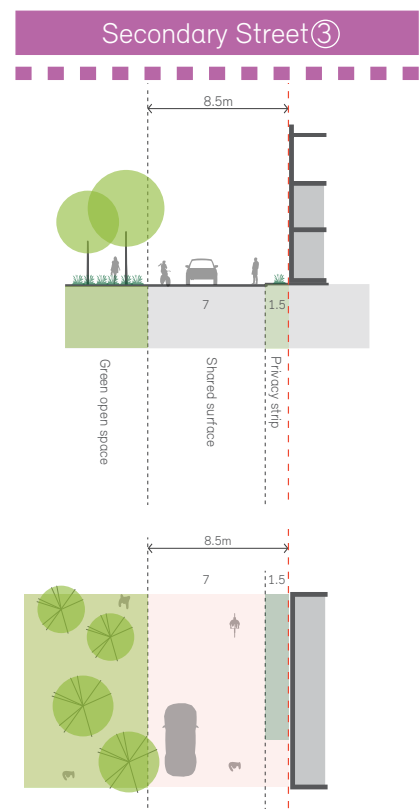
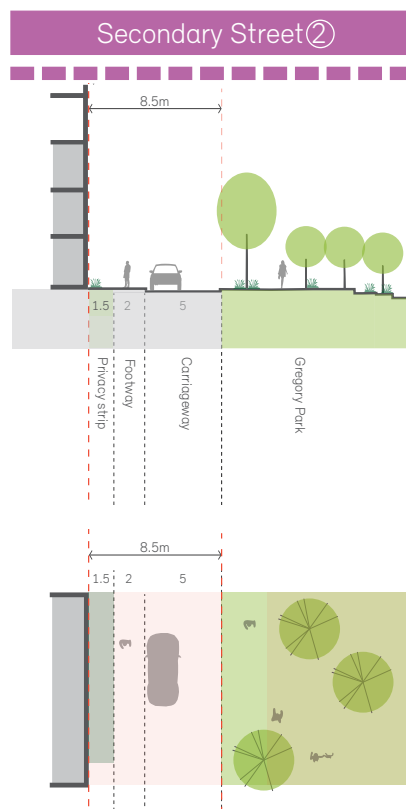
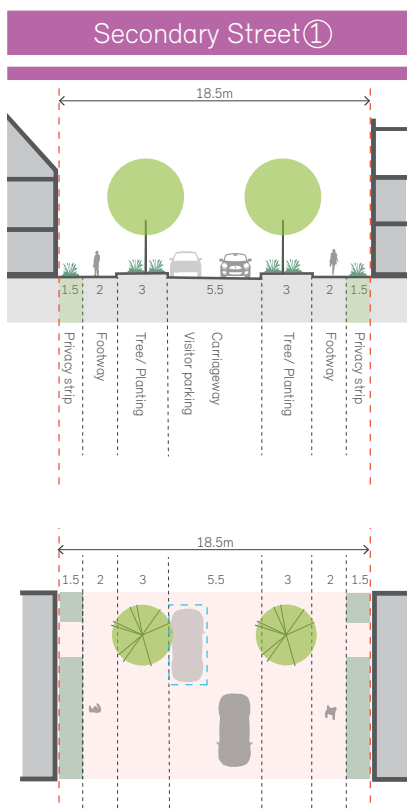
- Secondary Street 1
- Secondary Street 2
- Secondary Street 3



EXAMPLE OF A CAMBRIDGE STREET WITH SIMILAR CHARACTER AND DIMENSIONS TO SECONDARY STREET 1



INDICATIVE VIEW OF A SECONDARY STREET



TERTIARY STREETS

- The position/alignment of the tertiary streets is illustrative. The street sections are **recommended**.
- Tertiary Street 1 includes a vehicle carriageway and **should** be lined with street trees on both sides.
- Tertiary Street 2 **should** be a shared surface and **must** serve a maximum of 14 homes.
- Tertiary Street 3 **should** be in the form of a mews street with garages (with potential for accommodation above) on one side of the street and houses on the other. Tertiary Street 3 **should** be used to allow for continuous building frontage on the primary street loop, as parking is provided in garages to the rear (see page 23 for further information).
- Tertiary Street 4 **should** be a shared surface which is no wider than 10m between building frontages (not drawn, dimensions on page 17).



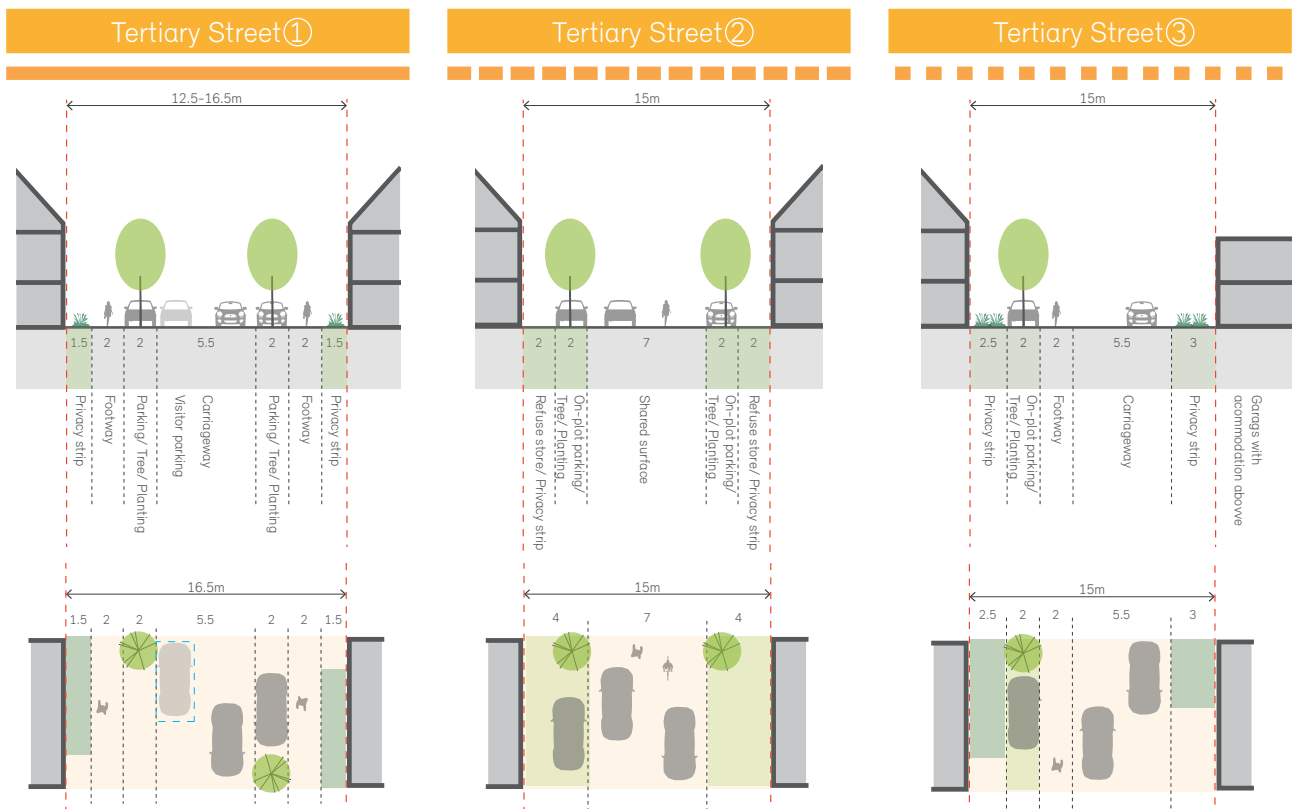
- KEY
- Tertiary Street 1
 - - - Tertiary Street 2
 - · · Tertiary Street 3
 - ◆◆◆◆ Tertiary Street 4



EXAMPLE OF A CAMBRIDGE STREET WITH SIMILAR CHARACTER AND DIMENSIONS TO TERTIARY STREET 2 OR 4



INDICATIVE VIEW OF A TERTIARY STREET



4 SITE WIDE CODING

















4.3 CAR PARKING

Car parking **must** be accommodated without being visually intrusive or creating a negative impact on place-making.

PRINCIPLES

- All proposals **should** comply with the local authority requirements for car parking. The current adopted car parking standards are set-out in the Cambridge East Area Action Plan (Cambridge City Council, 2008).
- Car club spaces **must** be provided for at strategic locations across the masterplan.
- Car parking **should** be compliant with the principles and typologies set-out on the following page. It may be that other parking typologies might be appropriate in specific locations, however, all parking proposals **must** be in the spirit of the typologies and principles illustrated.
- Car parking **must** be designed so it prevents over-sailing of the footway and front privacy strips.
- Visitor parking **should** be located principally around the primary street and public spaces.
- Visitor parking **should** be accommodated within parallel parking bays on the carriageway (apart from Market Square, please see page 87) and in groups of no more than three spaces. Visitor parking **should** also be accommodated within the curtilage of larger properties.
- A Controlled Parking Zone (CPZ) **should** be provided by the local authority for all of the adopted streets within Wing.
- Public and private electric car charging points **should** be considered when designing streets and buildings.

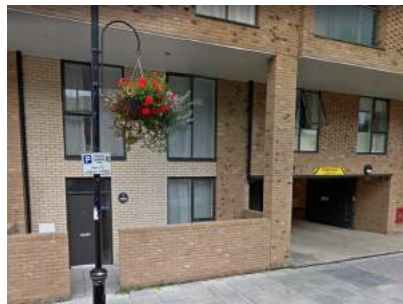
The adopted parking standards as set out in the Cambridge East Area Action Plan (2008) state the following maximum parking levels:

Residential		
Residential	 per dwelling up to two bedrooms in size	  per dwelling for three or more bedrooms in size
Visitor	 visitor space should be provided for every four homes	
Disabled	5% of the total number of car parking spaces will be reserved for disabled car parking	
Non-residential		
Food retail	 per 50 sqm Gross Floor Area (GFA) up to 1,400 sqm, including disabled car parking	 per 18 sqm thereafter, including disabled car parking
Non-food retail	 per 50 sqm GFA, including disabled car parking	
Financial and professional services	 per 40 sqm GFA, including disabled car parking	
Food and drink	 for every 20 sqm of drinking / dining area, including disabled car parking	 for proprietor when resident
Community centres	 per 20 sqm of public floor area, including disabled car parking	
Offices	 for every 40 sqm GFA, including disabled car parking	
Schools	  for every 3 staff	
Crèches and nurseries	  for every 3 staff	

PRECEDENTS



CAR PARKING IN THE PUBLIC REALM - CLAY FARM, CAMBRIDGE



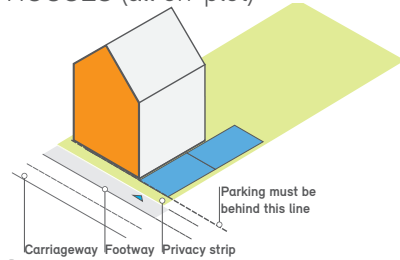
PODIUM CAR PARKING - BEMONDSEY, LONDON



CAR PARKING ON-PLOT AT SIDE OF HOUSE AND BEHIND BUILDING LINE. THE AVENUE, SAFFRON WALDEN

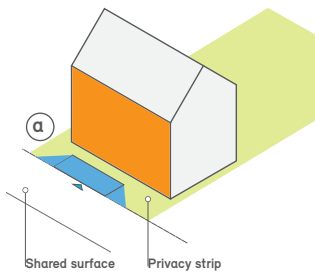
CAR PARKING PRINCIPLES AND TYPOLOGIES

HOUSES (all on-plot)



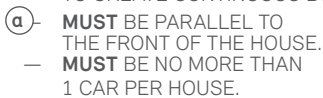
① BY SIDE OF HOUSE

- COULD BE IN A GARAGE, IN A CAR PORT OR UNCOVERED.
- ANY STRUCTURE OR PARKING SPACE **MUST** BE BEHIND THE BUILDING LINE.

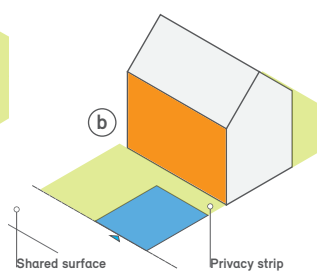


② IN FRONT OF HOUSE

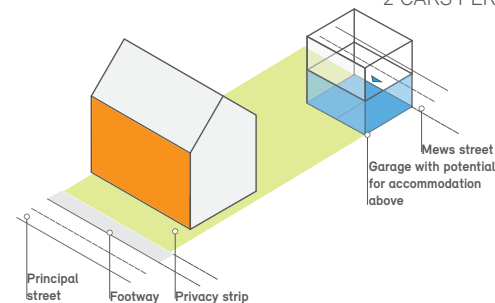
- **SHOULD** BE USED PREDOMINATELY ON TERTIARY STREETS TO CREATE CONTINUOUS BUILDING FRONTAGE.



- **MUST** BE PARALLEL TO THE FRONT OF THE HOUSE.
- **MUST** BE NO MORE THAN 1 CAR PER HOUSE.

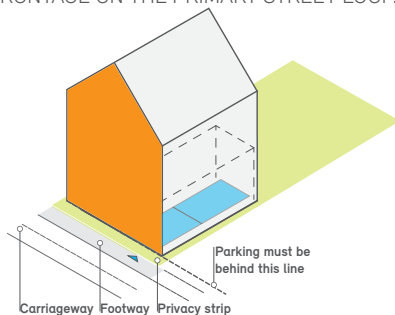


- **MUST** BE NO MORE THAN 50% HARD LANDSCAPING.
- **MUST** BE NO MORE THAN 2 CARS PER HOUSE.



③ AT REAR OF HOUSE

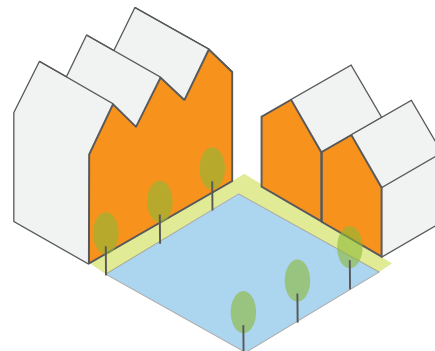
- **MUST** BE ACCESSED FROM MEWS STREET TO THE REAR OF PROPERTY.
- ACCOMMODATION ABOVE THE GARAGES **MUST** BE PROVIDED AT APPROPRIATE LOCATIONS TO ENSURE NATURAL SURVEILLANCE TO THE STREET. IT IS SUGGESTED 50% OF GARAGES SHOULD HAVE ACCOMMODATION ABOVE.
- **SHOULD** BE USED TO CREATE CONTINUOUS BUILDING FRONTAGE ON THE PRIMARY STREET LOOP.



④ INTEGRATED

- ANY STRUCTURE OR PARKING SPACE **MUST** BE BEHIND THE BUILDING LINE.
- **SHOULD** BE USED IN LOCATIONS WHERE CONTINUOUS BUILDING FRONTAGE IS REQUIRED.

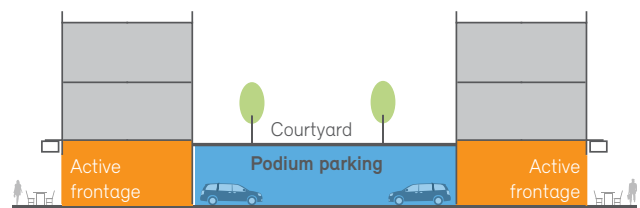
SMALL APARTMENT BUILDINGS



⑤ PARKING IN THE PUBLIC REALM

- **SHOULD** BE USED FOR AREAS SURROUNDING SMALL STANDALONE APARTMENT BUILDINGS.
- **MUST** BE PART OF THE PUBLIC REALM AND LINED WITH ACTIVE FRONTAGES.
- **MUST** BE TREATED AS A FLEXIBLE SINGLE SHARED SURFACE.
- **MUST** INCLUDE AT LEAST ONE TREE FOR EVERY 4 CARS.
- **SHOULD** PROVIDE NO MORE THAN 16 PARKING SPACES.
- **SHOULD** BE USED IN LOCATIONS WHERE CONTINUOUS BUILDING FRONTAGE IS REQUIRED.

LARGE APARTMENT/MIXED USE BUILDING



⑥ PODIUM

- **MUST** ALLOW FOR ACTIVE FRONTAGE ON EVERY SIDE OF THE BLOCK
- **MUST** PROVIDE LANDSCAPED COURTYARD / AMENITY SPACE / PLAY SPACE ON ROOF OF PODIUM.
- ENTRANCE TO PARKING **MUST** NOT DETRACT FROM THE CHARACTER OF THE STREETSCENE.
- **MUST** CONSIDER THE INTERFACE BETWEEN THE BUILDING, PODIUM AND LANDSCAPE.
- **MUST** CONSIDER THE PROVISION OF LIGHT TO THE HOME AND EXTERNAL AMENITY SPACE.
- **MUST** CONSIDER THE PEDESTRIAN ENVIRONMENT WITHIN THE PODIUM AND THE JOURNEY FROM CAR PARKING SPACE TO FRONT DOOR FOR RESIDENTS.
- **SHOULD** BE USED IN LOCATIONS WHERE CONTINUOUS BUILDING FRONTAGE IS REQUIRED.
- PARKING PODIUM ENTRANCES **SHOULD** BE PROVIDED ON LOWER ORDER STREETS.
- THE ABOVE GUIDANCE IS ALSO RELEVANT TO UNDERGROUND PARKING (IF USED).

KEY

- Building
- Parking
- Active frontage
- Garden/ amenity space

4 SITE WIDE CODING

4.4 CYCLE PARKING

Cycle parking **must** be secure and as convenient as car parking. Cycle parking **must** be designed as an integral part of Wing.

PRINCIPLES

- All proposals **must** comply with the local authority requirements for cycle parking. The current adopted cycle parking standards are set-out in Cycle Parking Guide for New Residential Developments (Cambridge City Council, 2010).
- Cycle parking for residential and non-residential land uses **must** be secure and covered (visitor parking does not need to be covered).
- Cycle parking for cargo cycles and cycle trailers **should** be provided where appropriate.
- For apartment buildings, cycle parking **must** be provided for in a convenient location to encourage cycling:
 - Cycle parking **should** generally be located within the footprint of the building.
 - If external cycle parking is provided it **should** be located within 20m of the entrance of the building, be covered and overlooked.
 - Visitor parking **should** be provided close to the entrance to the building.
- For houses, cycle parking **must** be provided for in a convenient location to encourage cycling in one or more of the following locations:
 - Within the footprint of the house.
 - In a secure, covered and lockable enclosure that does not rise above a side wall next to the public realm.
 - There is the potential to combine the storage of cycles, bins and gardening equipment in a single secure garden structure.
 - In a garage with additional cycle storage space. The size of the garage **must** allow cycles to be removed easily without first driving out any car parked within it.
 - Visitor cycle parking **should** be provided clear of the highway, with a discreet attachment to the building or ground where appropriate for a cycle.
- General visitor Sheffield stand cycle parking **should** be integrated into the public realm. Cycle parking is especially important in key public spaces, including: Market Square, The Plains and Beta Square.

PRECEDENTS



ILLUSTRATIVE CYCLE STORAGE SHED FOR HOUSES





















CYCLE STORE IN AN APARTMENT BUILDING

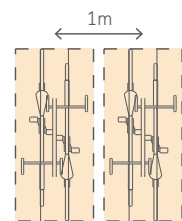
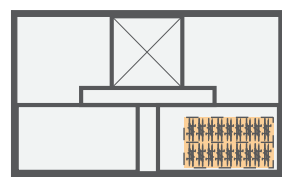
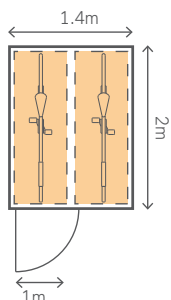
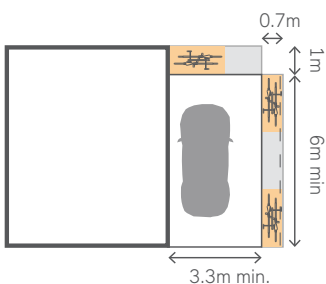
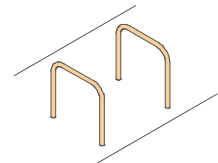
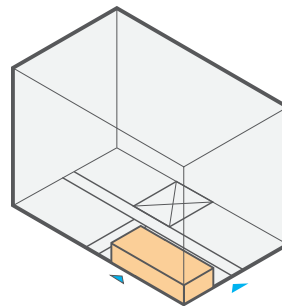
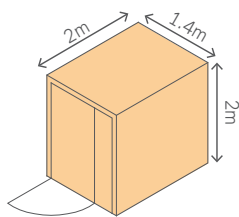
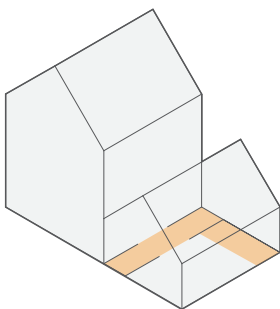


SHEFFIELD STANDS IN THE PUBLIC REALM

The adopted cycle parking standards set out in Cycle Parking Guide for New Residential Developments (2010) state the following minimums:

Dwelling	Minimum cycle storage	
Houses		
5 Bed		
4 Bed		
3 Bed		
2 Bed		
Apartments		
3 Bed		
2 Bed		
1 Bed		
Studio		
Public		
Visitors	As appropriate	
Non-residential		
Food retail	 per 25 sqm GFA upto 1500 sqm	Thereafter  per 75 sqm
Non- food retail	 per 25 sqm GFA upto 1500 sqm	Thereafter  per 75 sqm
Financial and professional services	 per 30 sqm GFA	
Parking		
Food and drink	 per 10 sqm of dining area	
Place of worship, public halls and community centres	 per 15 sqm of public floor area	
Offices	 per 30 sqm GFA	
Schools	 for 50% of children between 5 - 12	 for 75% of children over 12 years
Crèches and nurseries	 for every 2 members of staff	 visitor space per 5 children

CYCLE PARKING TYPOLOGIES



EXAMPLE OF GARAGE ARRANGEMENT FOR CYCLES - POTENTIAL PARKING FOR 6 CYCLES

EXAMPLE OF SECURE COVERED CYCLE STORE FOR A TWO BEDROOM HOUSE

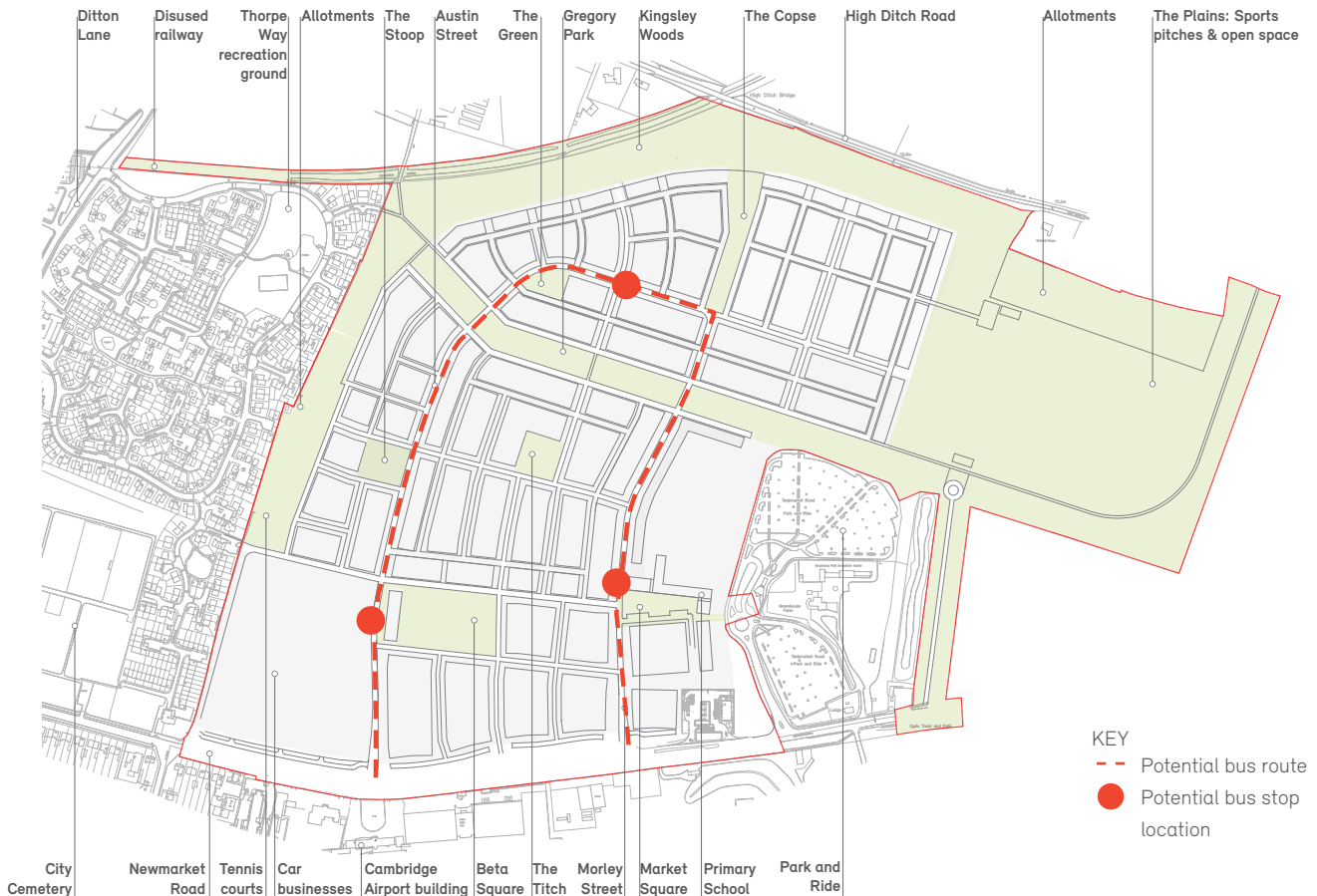
EXAMPLE OF A CYCLE STORE IN AN APARTMENT BUILDING

EXAMPLE OF SHEFFIELD CYCLE STANDS FOR VISITOR CYCLE PARKING

4 SITE WIDE CODING

4.5 BUS ROUTE - FUTURE PROOFING

The primary street loop from Newmarket Road **must** be capable of accommodating a bus route.



ROUTE OF FUTURE PROOFED BUS ROUTE

PRINCIPLES

- Although there are no current proposals to run a bus service directly through Wing, the design of the primary street is being developed to accommodate a bus service, should it be required in the future.
- The primary street carriageway loop **must** be no less than 6.5m wide to accommodate a bus.
- If a bus route is to serve Wing, bus stops **should** be placed at suitable locations to ensure that all homes and non-residential buildings are within 400m of a bus stop.
- It is suggested that bus stops **should** serve Market Square, Beta Square and the Green.
- Bus stops **must** be on the carriageway.

PRECEDENT



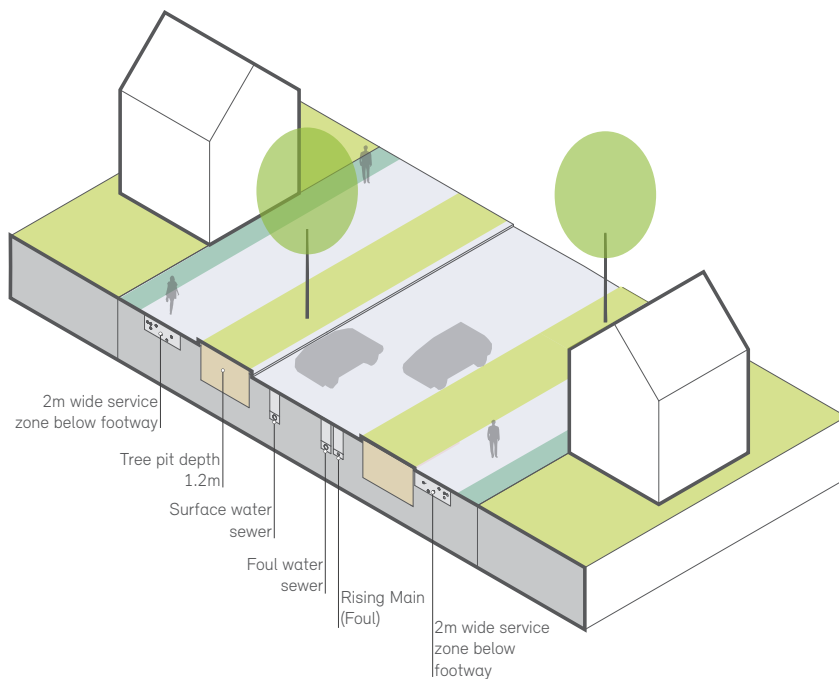
BUS STOP ON VEHICLE CARRIAGEWAY

4.6 UTILITIES

Utilities and services **must** be designed to integrate into the overall design of Wing and **should** not have a negative visual impact on the streetscene. Utility and services boxes, cables, wires, flues, satellite dishes, electric car charging points and vents **should** not be visible from the public realm. Utility and services buildings – such as electricity sub-stations, foul water pumping stations and gas governors – **must** be designed to integrate with the surrounding development in terms of materials, scale and architecture.

PRINCIPLES

- All proposals **must** comply with the local authority requirements for utilities and road construction. This is currently Housing Estate Road Construction Specification (Cambridgeshire County Council June 2013).
- On streets with a vehicle carriageway (as opposed to a shared surface), services and utilities **should** be located within a 2m wide service zone below the footways.
- On shared surface streets, services and utilities **should** be located in a 2m wide service zone below the shared surface.
- No services or utilities **should** be located within 5m of a drainage channel or watercourse.
- Please also see section on building details on page 46.



SECTION THROUGH THE PRIMARY STREET ILLUSTRATING ARRANGEMENT OF SERVICE ZONES



SERVICES CONCEALED IN EXTERNAL CUPBOARD



UNOBTRUSIVE SERVICES BOXES IN A PARKING ZONE



OBTRUSIVE SERVICES BOXES ON THE FRONT OF A HOUSE



OBTRUSIVE SERVICES BOXES ON FRONT ELEVATION

4 SITE WIDE CODING

4.7 WASTE AND RECYCLING

Waste and recycling storage and collection **must** be carefully considered to be both functional and appropriately integrated into the design of all buildings. All homes and non-residential buildings **must** be provided with adequate internal and external storage for waste and recycling. The layout of Wing and the location of waste storage facilities **must** be designed to ensure collection by the responsible authority is easy and efficient.

PRINCIPLES

- All proposals **must** comply with the local authority requirements for waste and recycling storage and collection. This is currently the RECAP Waste Management Design Guide SPD (Cambridgeshire County Council and Peterborough City Council 2012).
- The design of waste and recycling storage facilities **must** not detract from the streetscene or the overall appearance of the development.
- All buildings **must** have adequate space for refuse and recycling facilities within the property boundary or shared space. For houses provision of waste storage is likely to be wheelie bins. For apartments provision of waste storage is likely to be 'eurobins' within communal bin stores.
- All buildings **must** provide sufficient internal storage to allow for the segregation of recyclable materials and food waste.
- It **must** be possible for all refuse and recycling collections to be made from the adoptable public street network.
- The refuse collection route **should** allow vehicles to continue mainly in a forward direction, and avoid vehicles reversing, except where a turning head is specifically provided for this purpose.

PRECEDENTS



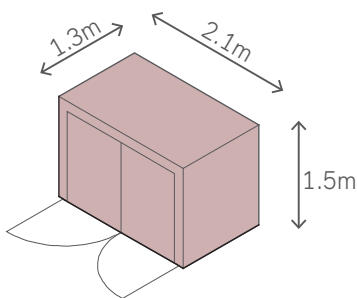
EXAMPLE OF AN INTEGRATED BIN STORE WITHIN THE BOUNDARY OF A PRIVATE ENTRANCE



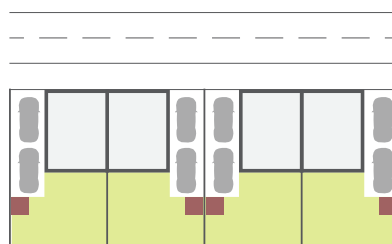
EXAMPLE OF AN INTEGRATED BIN STORE IN AN APARTMENT BUILDING WITH VENTILATION SCREENS



EXAMPLE OF A BIN AND CYCLE STORE IN AN APARTMENT BUILDING



TYPICAL BIN STORE DIMENSIONS FOR A HOUSE



ILLUSTRATIVE BIN STORE LOCATION FOR A SEMI DETACHED HOUSE



EXAMPLE OF WASTE MANAGEMENT WITHIN A HOME



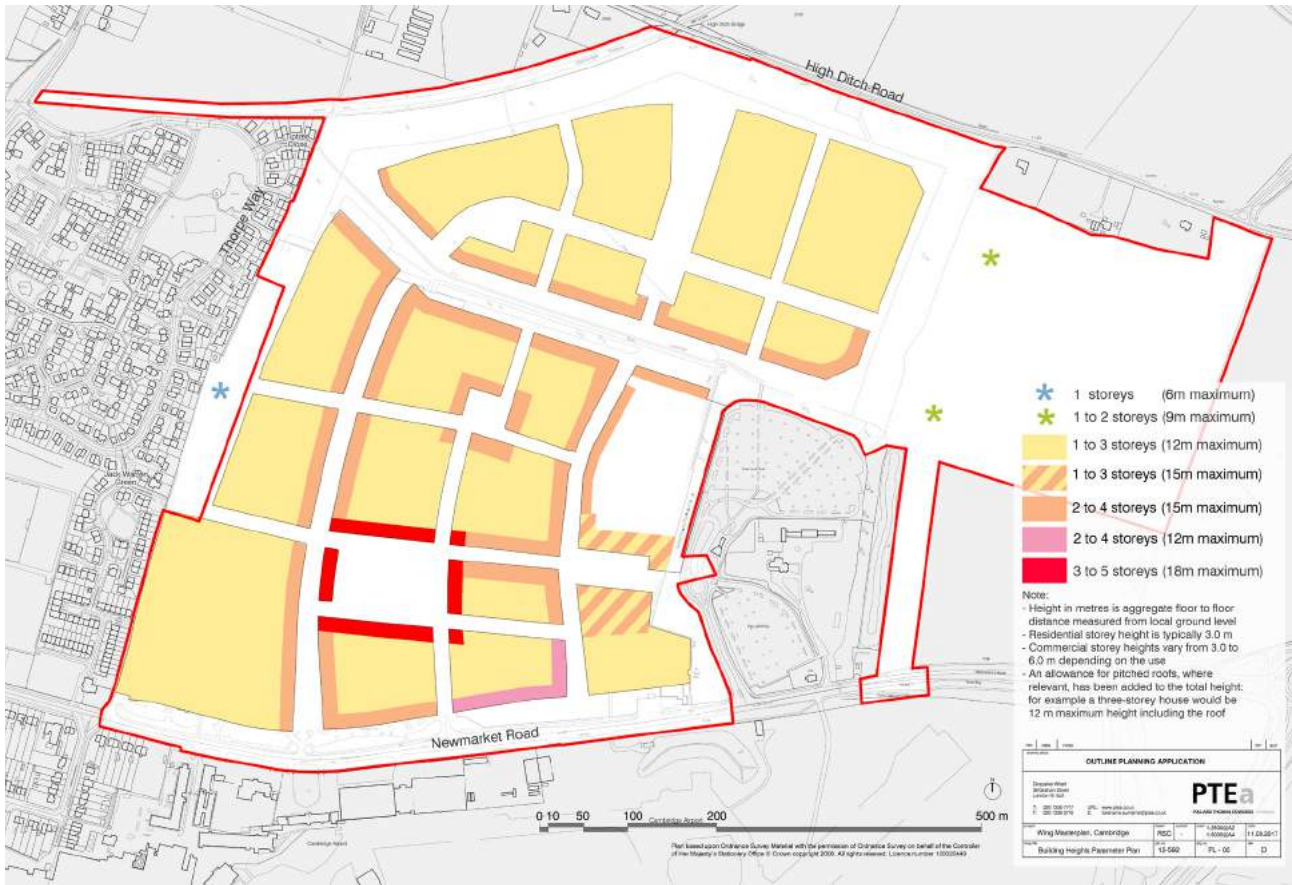
ILLUSTRATIVE REFUSE COLLECTION ROUTE

The adopted waste management standards, as set out in the RECAP Waste Management Design Guide SPD (2012), state the following:

Residential-Houses	<ul style="list-style-type: none"> — 775l refuse storage capacity for houses. — Waste should not have to be moved more than 30m to storage area. — Storage location should not be more than 25m distance from the collection point. — Gradients over which containers must travel must not exceed 1:12. — Passage of container from store to collection point should avoid transfer over more than 3 steps. — Waste should not have to be moved through a building to the collection point.
Residential-Apartments	<ul style="list-style-type: none"> — 240l - 640l refuse storage capacity for each apartment in a communal apartment building bin store. — Waste should not have to be moved more than 30m and (excluding vertical distance) to storage area. — Storage location should not be more than 10m from the collection point. — Gradients over which containers must travel must not exceed 1:12. — Passage of container from store to collection point should avoid transfer over more than 3 steps.
Offices	2600 litres per 1000m gross floor space
Retail	5000 litres per 1000m gross floor space
Restaurants/ Fast-food outlets	1500 litres per 20 dining spaces

4 SITE WIDE CODING

4.8 BUILDING HEIGHTS



BUILDING HEIGHTS PARAMETER PLAN

PRINCIPLES

(from Outline Planning Application Parameter Plan)

The stated maximum heights in metres are based on the following storey height assumptions:

- Height in metres is aggregate floor to floor distance measured from local ground level.
- Residential storey height is typically 3.0 metres.
- Commercial storeys heights vary from 3.0 to 6.0 metres depending on the use.
- An allowance for pitched roofs, where relevant, has been added to the total height: for example, a three-storey house would be 12m maximum height including the roof.



TALLER BUILDING FRONTAGES PLAN

Buildings of three storeys or more **must** be positioned in key places across the masterplan to help support legibility, wayfinding and place-making.

PRINCIPLES

- Buildings of three storeys or more **should** be positioned within the City Character Area, the primary street loop, around some of the open spaces and the gateways to the site, as identified in the plan above.
- Three storey buildings are defined as buildings with three full storeys, not including the roof.
- Building heights around key streets and spaces are subject to a greater degree of guidance, which is outlined on pages 40-41.

4 SITE WIDE CODING

4.9 BLOCKS

The masterplan for Wing **must** have a well connected, permeable and legible block structure. Buildings **must** be arranged to line the perimeter of blocks, creating passive surveillance of both the street and private open space/gardens in the centre of the block. Buildings **must** be positioned on the corner of every block.

PRINCIPLES

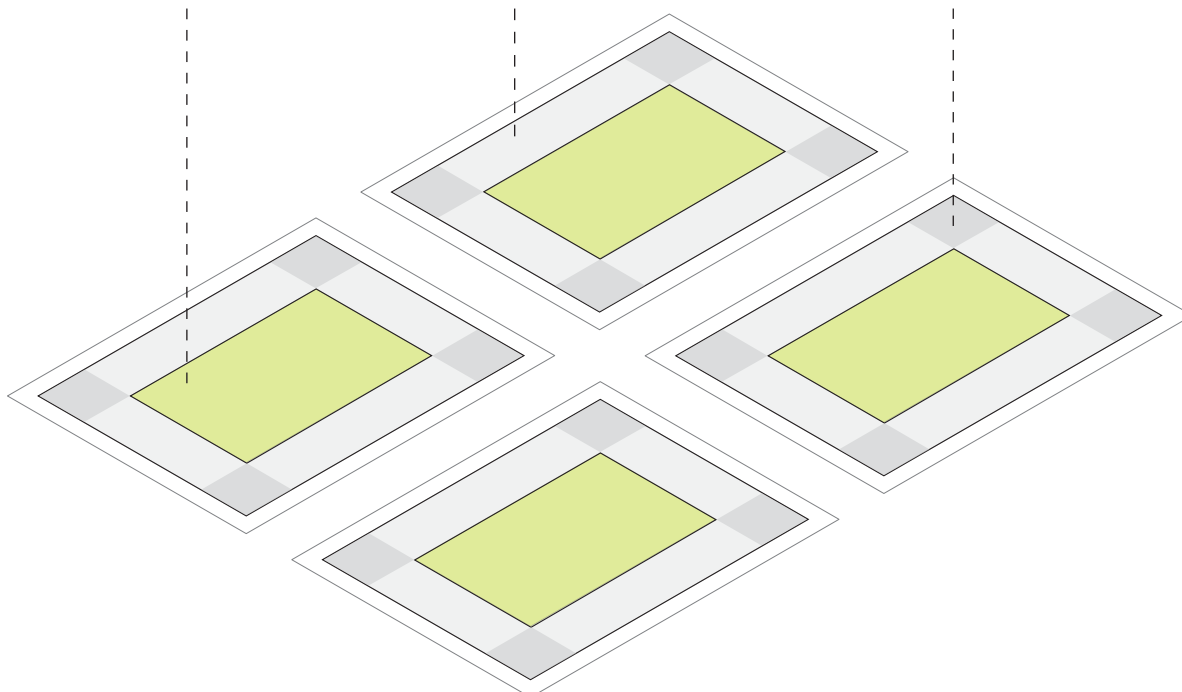
- To create an attractive and safe environment, buildings **must** line the perimeter of all blocks. Front doors and windows at ground floor level **must** be incorporated to promote passive surveillance of the street.
 - In the case of residential blocks, the centre of the block **should** be reserved for private open space/gardens. There **should** be a minimum 18m back-to-back distance between the windows of habitable rooms to the rear of residential properties. There is potential for this distance to be reduced if rear elevations are carefully designed and windows are arranged to avoid direct overlooking. All back-to-back relationships **must** be acceptable in terms of daylight and sunlight.
 - Buildings **must** be placed on the corner of every block to help place-making and define intersections.
- Six block types are illustrated opposite, two for each of the three character areas:
 - ① The Edge
 - ①a The Edge - Kingsley Woods
 - ② The Town I
 - ②a The Town II
 - ③ The City
 - ③a The City - Beta Square
 - Each block type has a set of general principles which **should** be followed.
 - Please cross-reference with the parking principles on page 23.

BLOCK PRINCIPLES

Private gardens in the centre of the block provide privacy and amenity

Buildings line the perimeter of blocks promoting passive surveillance

Buildings positioned on corners to define intersections



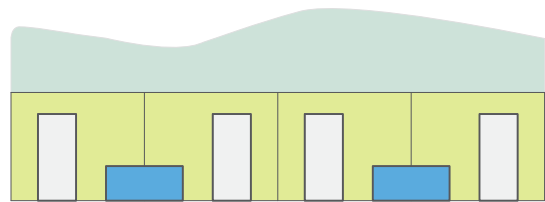
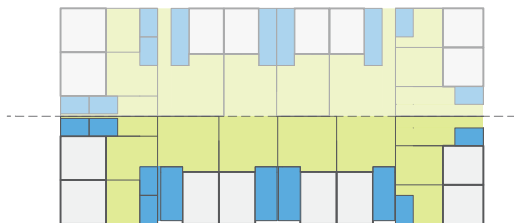
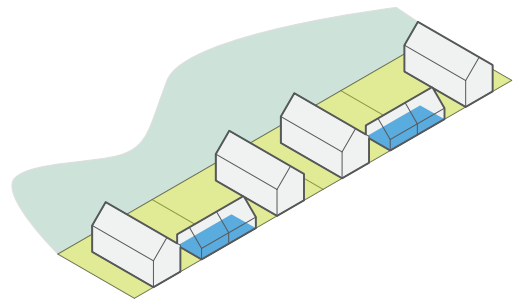
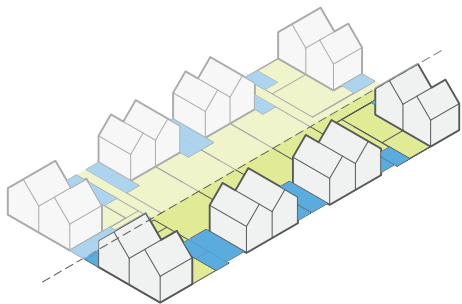


BLOCK TYPES PLAN

KEY

- 1 The Edge
- 2 The Town I
- 3 The City
- 1a The Edge - Kingsley Woods
- 2a The Town II
- 3a The City - Beta Square

BLOCK TYPES

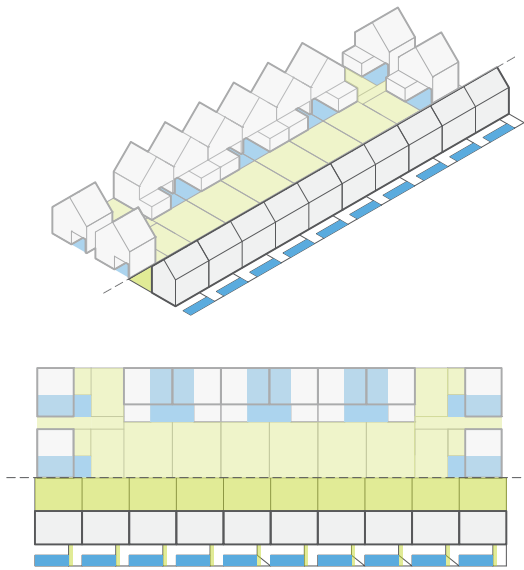


- 1 **THE EDGE**
 GENERAL PRINCIPLES:
 — SEMI-DETACHED HOUSES.
 — LARGER PLOTS.
 — PARKING ON-LOT TO SIDE OF HOUSES.
 — INTERCHANGEABLE BLOCK TYPOLOGY ALONG DOTTED LINE.

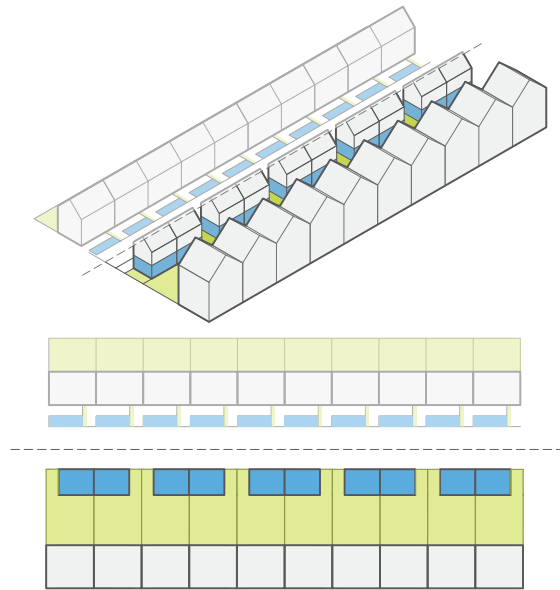
- 1a **THE EDGE - KINGSLEY WOODS**
 GENERAL PRINCIPLES:
 — DETACHED HOUSES.
 — LARGER PLOTS.
 — PARKING ON-LOT WITHIN GARAGE.
 — VIEWS AND PASSIVE SURVEILLANCE TO KINGSLEY WOODS.

- KEY
- Building
 - Parking
 - Private garden
 - Public open space

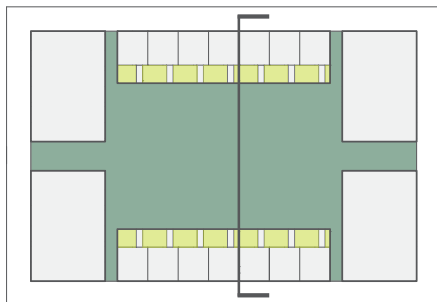
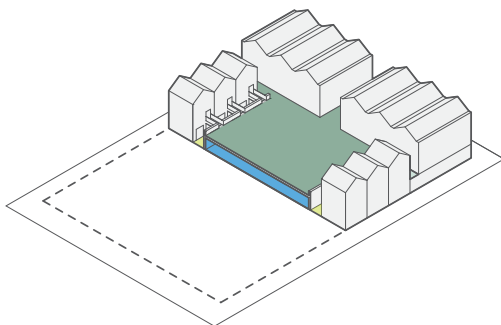
4 SITE WIDE CODING



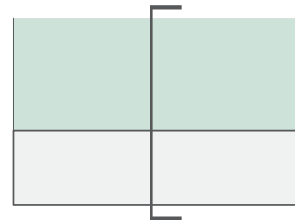
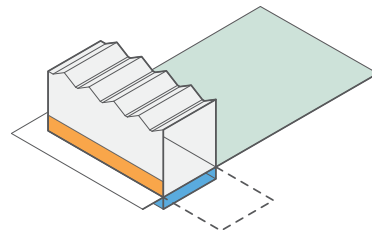
- 2 THE TOWN I**
 GENERAL PRINCIPLES:
- TERRACED HOUSES.
 - INTEGRATED PARKING ON-PLOT AND / OR PARALLEL PARKING ON-PLOT IN FRONT OF HOUSE TO ACHIEVE TERRACE.
 - INTERCHANGEABLE BLOCK TYPOLOGY ALONG DOTTED LINE.



- 2a THE TOWN II**
 GENERAL PRINCIPLES:
- TERRACED HOUSES.
 - SMALLER PLOTS FOR INDIVIDUAL HOUSES.
 - MEWS STREET WITH GARAGES (AND POTENTIAL ACCOMMODATION ABOVE) SERVING TERRACED HOUSES ON THE SOUTH AND TERRACED HOUSES WITH PARKING ON-PLOT TO THE NORTH.



- 3 THE CITY I**
 GENERAL PRINCIPLES:
- APARTMENTS AND HOUSES.
 - PARKING WITHIN PODIUM.
 - LANDSCAPED COURTYARD / AMENITY SPACE / PLAY SPACE ON ROOF OF PODIUM.
 - FOR MORE DETAILED GUIDANCE ON PODIUM PARKING PLEASE SEE PAGE 23.



- 3a THE CITY - BETA SQUARE**
 GENERAL PRINCIPLES:
- BLOCK / BUILDING MUST PROVIDE ACTIVE FRONTAGE TO BETA SQUARE AND AUSTIN STREET
 - PARKING EITHER PERPENDICULAR ON AUSTIN STREET OR UNDERGROUND (ILLUSTRATED ABOVE) DEPENDING ON NUMBER OF APARTMENTS. PLEASE SEE PAGE 86 FOR MORE INFORMATION.

- KEY**
- Building
 - Parking
 - Private garden
 - Communal Garden/ Amenity space
 - Public open space
 - Commercial



4 SITE WIDE CODING

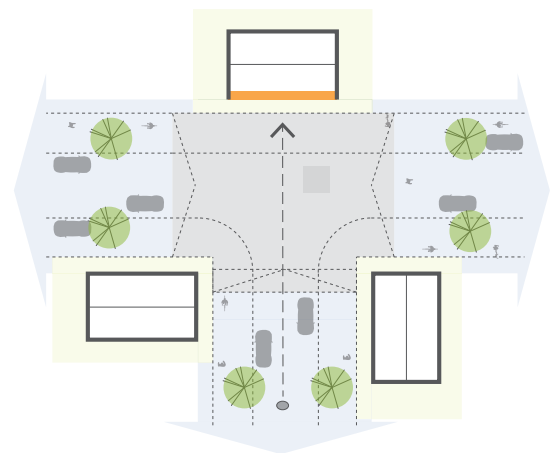
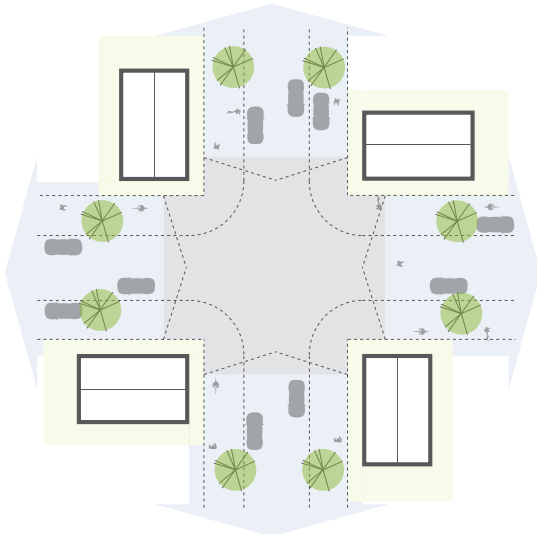
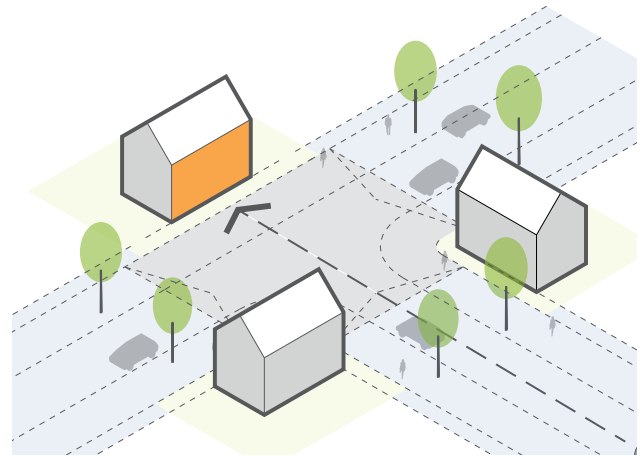
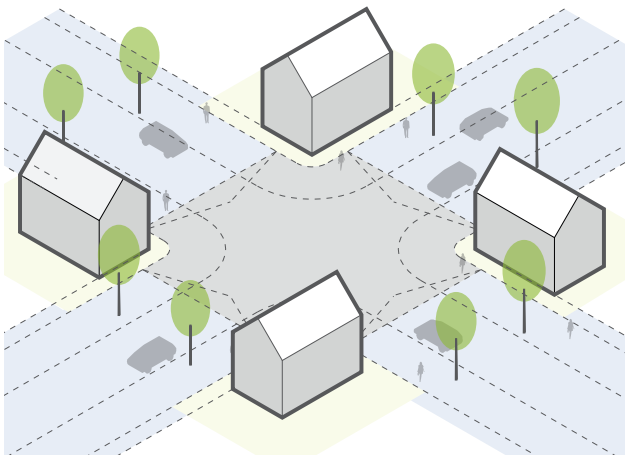
4.10 INTERSECTIONS

Buildings **must** hold the corner of blocks. Intersections between streets **must** contribute to place-making, with careful placement of front doors, privacy strips, carriageways, footways, shared surfaces, raised tables and parking.

PRINCIPLES

- At crossroad intersections all four corners **must** be held by buildings.
- At crossroads, front doors **should** generally either be arranged in a pin wheel or face the more dominant street.
- Buildings which terminate vistas at the end of T junctions and on shoulders **must** be treated as key elevations. Key elevations **must** be carefully located and provide a considered design.
- Raised tables **should** be provided at all junctions of primary and secondary streets.
- Junctions **must** be designed with safe visibility splays.

INTERSECTION PRINCIPLES



- ① **CROSSROADS**
- BUILDINGS TO HOLD THE CORNER.
 - FRONT DOORS IN PINWHEEL OR FACING MORE DOMINANT STREET.
 - RAISED TABLE IN ONE MATERIAL TREATMENT.

- ② **T JUNCTION WITH A VIEW TERMINATED BY A BUILDING**
- BUILDINGS TO HOLD THE CORNER.
 - RAISED TABLE IN ONE MATERIAL TREATMENT.
 - FRAME VIEW OF KEY ELEVATION.

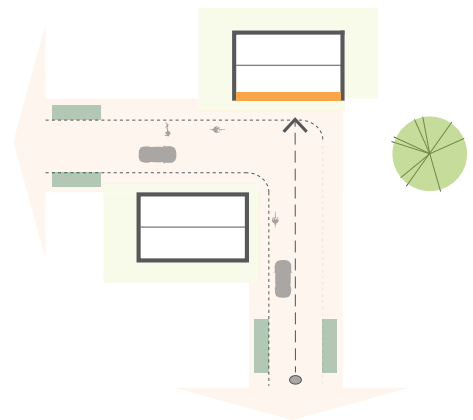
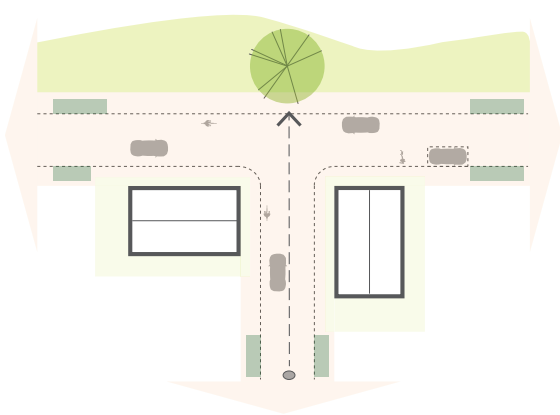
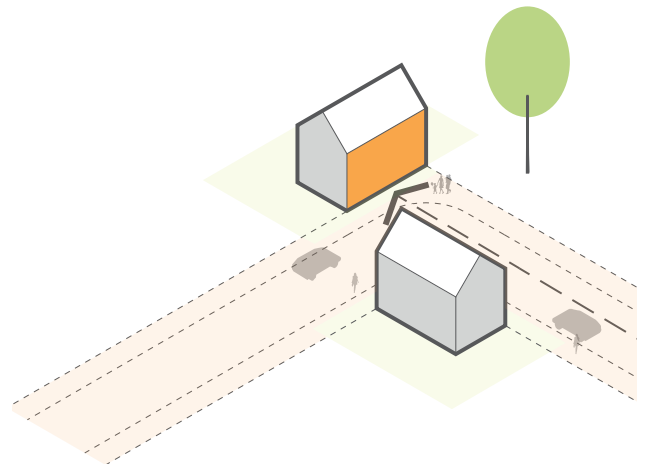
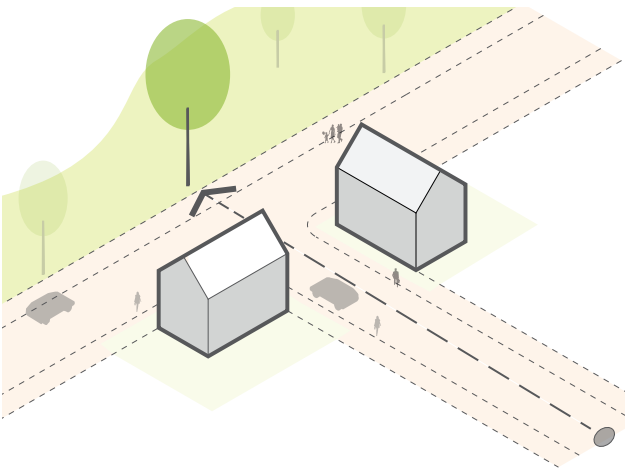
KEY

- Private garden
- Key elevation
- Raised table



INDICATIVE INTERSECTION LOCATION PLAN

INTERSECTION PRINCIPLES



- ③ T JUNCTION NEXT TO AN OPEN SPACE**
- BUILDINGS TO HOLD THE CORNER.
 - FRAME VIEW OF LANDSCAPE AT END OF JUNCTION.

- ④ SHOULDER**
- BUILDINGS TO HOLD THE CORNER.
 - FRAME VIEW OF KEY ELEVATION.

- KEY**
- Private garden
 - Key elevation

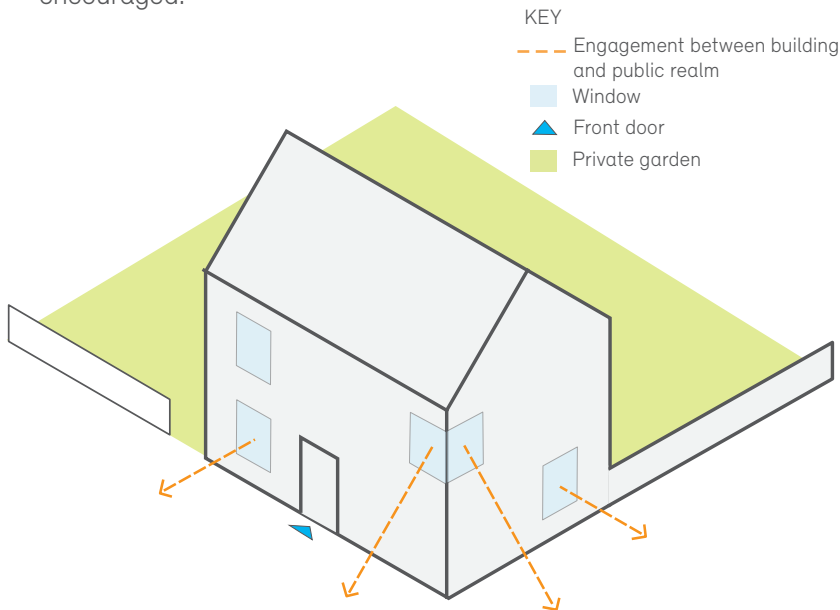
4 SITE WIDE CODING

4.11 BUILDING DESIGN

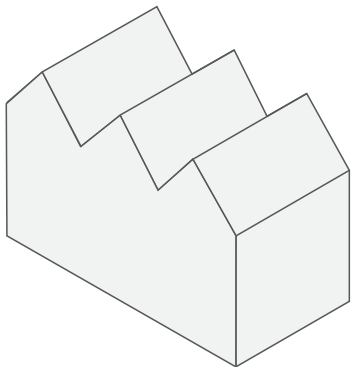
A varied townscape and roofscape **must** be achieved across Wing. Wing **should** be a pitched roof led scheme and building elevations **must** engage with the public realm.

PRINCIPLES

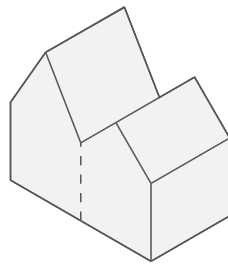
- Where more than one elevation of a building engages with the public realm, the building **must** be designed 'in the round'.
- Roof pitches can vary but **should** not be shallow.
- The roofscape of larger footprint buildings **should** mitigate massing and create a varied townscape.
- Solar panels **should** be incorporated into the design of buildings. Roofs and pitches **should** maximise the potential for the use of solar panels, where this can be achieved in harmony with the building design.
- Innovative renewable energy sources are encouraged.



BUILDING IN THE ROUND - ENGAGING WITH THE PUBLIC REALM



PITCHED ROOFSCAPE HELPS TO MITIGATE MASSING OF LARGER BLOCKS



VARIED ROOF PITCHES - CAN BE USED TO CREATE VARIETY AND INTEREST



CLUSTERS OF HOMES DESIGNED TO RELATE TO EACH OTHER



VARIED ROOF PITCHES ON A PAIR OF SEMI-DETACHED HOUSES



GABLE END OF HOUSE ENGAGING WITH THE PUBLIC REALM



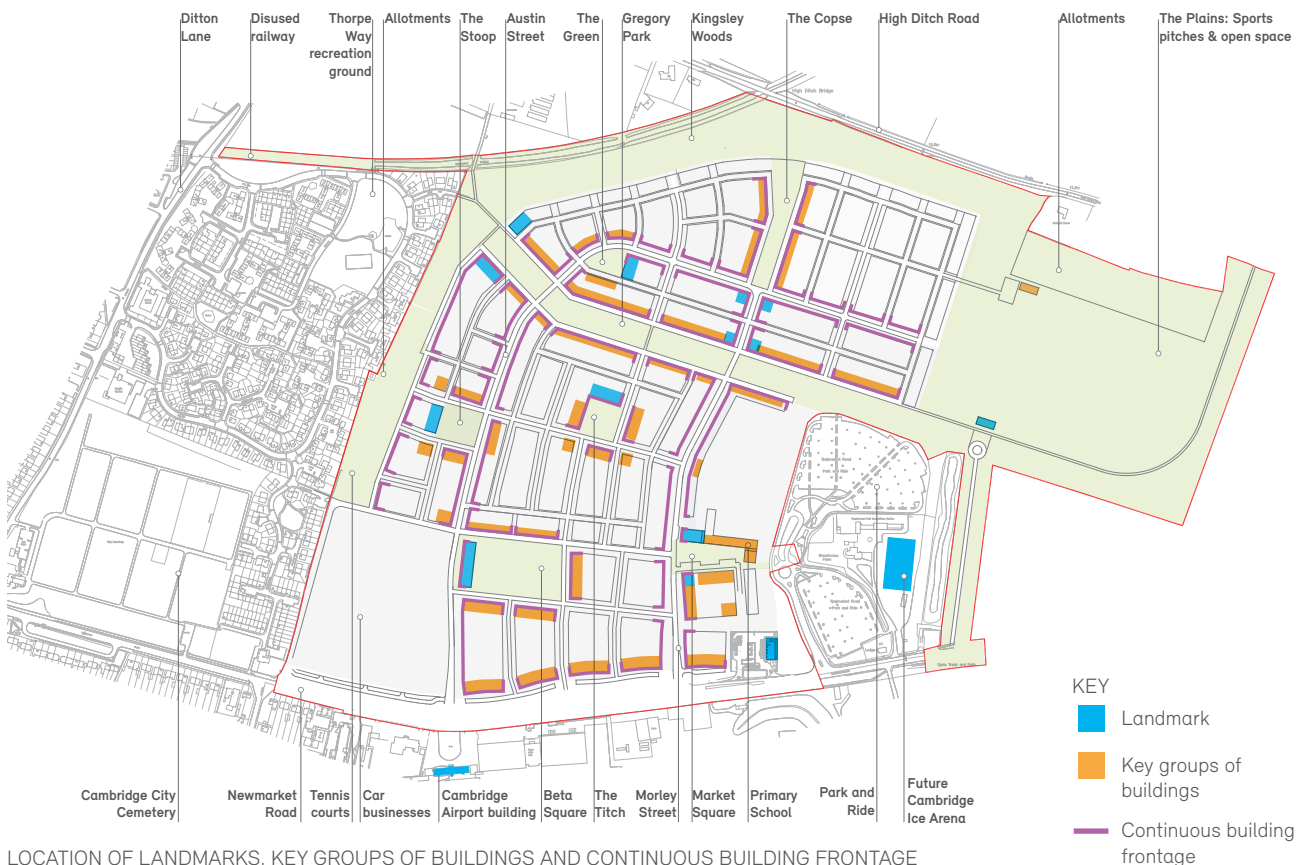
PITCHED ROOFS MITIGATING THE MASSING OF LARGER FOOTPRINT APARTMENT BUILDINGS

4.12 LANDMARKS, KEY GROUPS OF BUILDINGS AND CONTINUOUS BUILDING FRONTAGE

Landmarks, key groups of buildings and continuous building frontage **must** be delivered in strategic locations to help support legibility and place-making in Wing.

PRINCIPLES

- In line with the Framework Plan on page 12, landmarks, key groups of buildings and continuous building frontage **must** be delivered in the locations identified on the plan below.
- **Landmarks** are identifiable points of reference, such as a building or focal point, that stand out from their background/context (note: landmarks are primary in terms of hierarchy to key groups of buildings).
- Key groups of buildings shape and articulate the focal spaces that they address. They **should** aid legibility, contribute to place-making and align with key vistas and views (note: key groups of buildings are secondary in terms of hierarchy to landmarks)
- Continuous building frontage provides enclosure and a predominately uninterrupted elevation at ground floor level with a generally uniform building line.
- The following parking principles and typologies illustrated on page 23 support continuous building frontage:
 - ② In front of house
 - ③ At rear of house
 - ④ Integrated
 - ⑤ Parking in the public realm
 - ⑥ Podium
- Landmarks, key groups of buildings and continuous building frontage **must** be delivered in the following locations:
 - A. Around Beta Square
 - B. Around The Green
 - C. Around The Titch
 - D. Around The Stoop
 - E. Along Gregory Park
 - F. Along Newmarket Road
 - G. Around The Copse
 - H. Along the primary street loop
 - I. Around Market Square



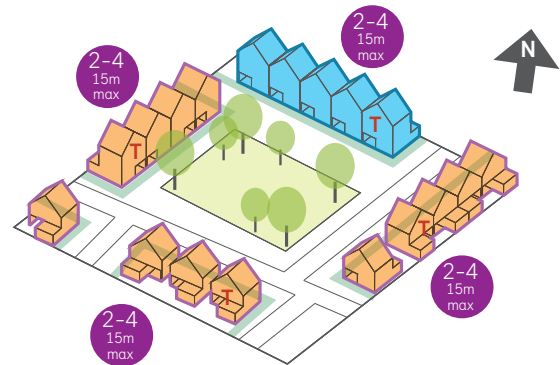
4 SITE WIDE CODING

4.13 BUILT FORM AROUND KEY STREETS AND SPACES

The built form around key streets and spaces **must** work with the public realm to aid good place-making.

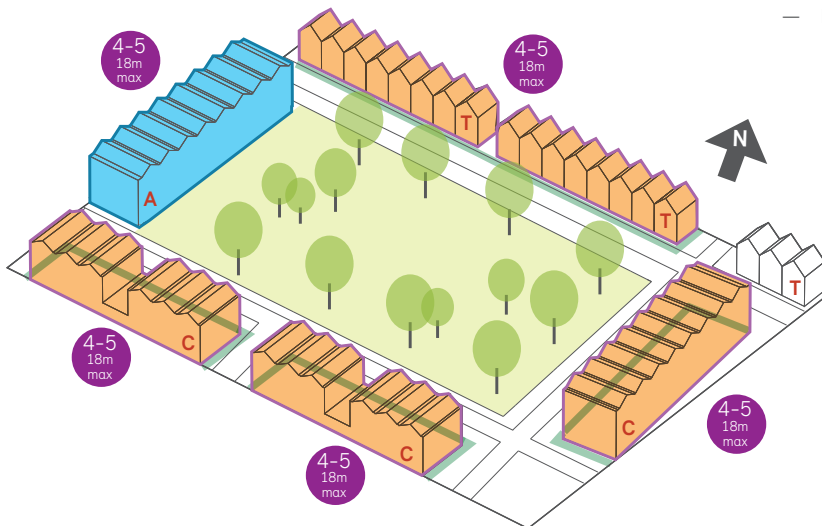
PRINCIPLES

- The built form around key streets and spaces **should** have a greater degree of control of height, building types, landmarks and parking types.
- The illustrative diagrams on these two pages summarise the **recommended** approach for the built form around the key public spaces and streets identified on the previous page.
- Building heights **must** be in line with the Building Heights Parameter Plan on page 30.
- Please refer to the parking principles and typologies illustrated on page 23



C - THE TITCH

- MIX OF TERRACED AND DETACHED HOUSES.
- 2-4 STOREYS IN HEIGHT.
- LANDMARK BUILDING ON NORTH SIDE OF SQUARE.
- PREDOMINANTLY ON-PLOT INTEGRATED PARKING.



A - BETA SQUARE

- MIX OF TERRACED HOUSES AND APARTMENT BUILDINGS.
- 4-5 STOREYS IN HEIGHT.
- LANDMARK BUILDING ON WESTERN SIDE OF BETA SQUARE.
- MIX OF PARKING TYPOLOGIES THAT ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



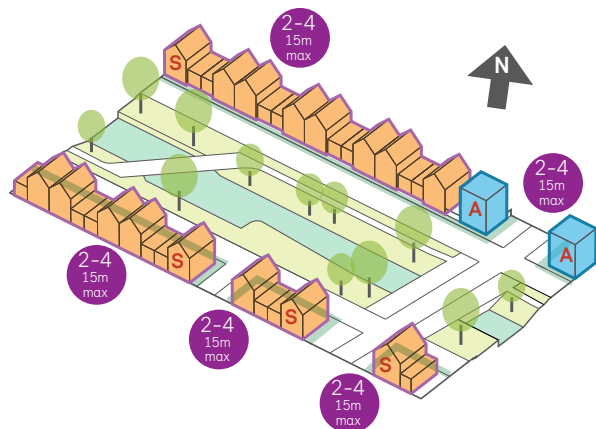
D - THE STOOP

- PREDOMINANTLY TERRACED HOUSES.
- 2-4 STOREYS IN HEIGHT.
- PREDOMINANTLY ON-PLOT PARKING AT REAR OF HOUSE AND ON-PLOT INTEGRATED TO ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



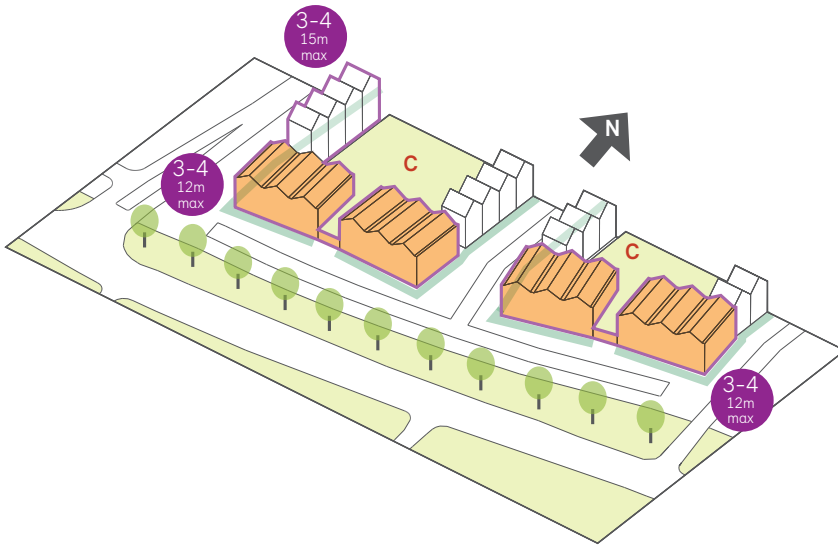
B - THE GREEN

- MIX OF SEMI-DETACHED HOUSES AND APARTMENT BUILDINGS.
- 2-3 STOREYS IN HEIGHT.
- LANDMARK BUILDING ON EASTERN SIDE OF THE GREEN.
- MIX OF PARKING TYPOLOGIES THAT ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



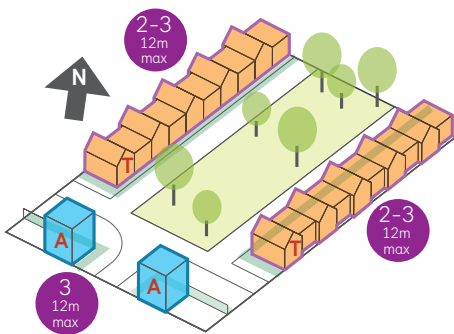
E - GREGORY PARK

- MIX OF LINKED SEMI-DETACHED HOUSES AND APARTMENT BUILDINGS.
- 2-4 STOREYS IN HEIGHT.
- LANDMARK BUILDINGS TO MORLEY STREET.
- PREDOMINANTLY REAR ACCESS PARKING.



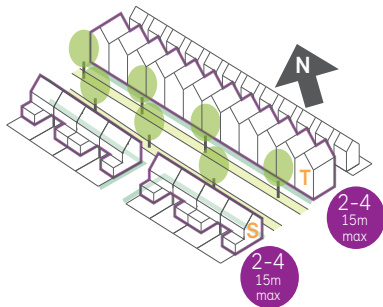
F - NEWMARKET ROAD

- APARTMENT BUILDINGS WITH POTENTIAL FOR COMMERCIAL AT GROUND FLOOR.
- 3-4 STOREYS IN HEIGHT.
- PODIUM PARKING WITH LANDSCAPED COURTYARD ABOVE.



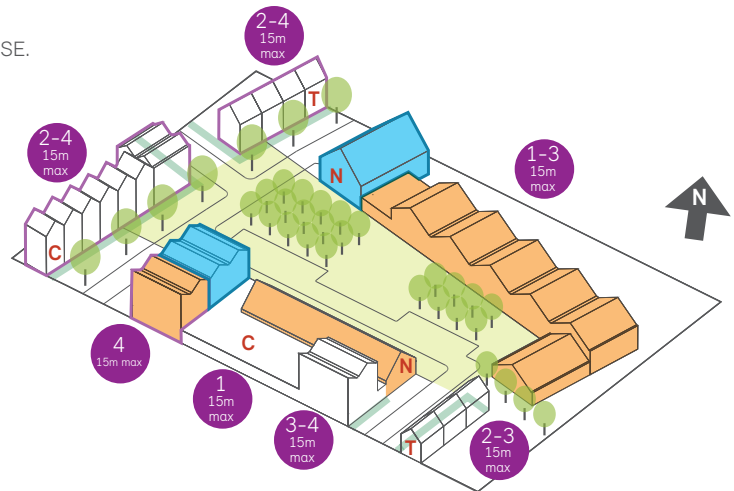
G - THE COPSE

- MIX OF LINKED SEMI-DETACHED HOUSES & APARTMENT BUILDINGS.
- 2-3 STOREYS IN HEIGHT.
- LANDMARK BUILDINGS CREATE GATEWAY TO THE COPSE.
- MIX OF PARKING TYPOLOGIES THAT ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



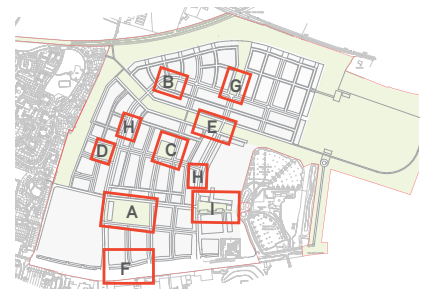
H - TYPICAL PRIMARY STREET LOOP

- PREDOMINANTLY TERRACED HOUSES.
- 2-4 STOREYS IN HEIGHT.
- PREDOMINANTLY ON-PLOT PARKING AT REAR OF HOUSE AND AT SIDE OF HOUSE TO ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



I - MARKET SQUARE

- MIX OF TERRACED HOUSES, APARTMENT BUILDINGS, COMMUNITY BUILDING, SCHOOL AND COMMERCIAL.
- HOUSES 2-4 STOREYS; APARTMENT BUILDING/ COMMERCIAL 3-4 STOREYS; SCHOOL AND COMMUNITY BUILDING 1-3 STOREYS IN HEIGHT.
- MIX OF PARKING TYPOLOGIES THAT ALLOW FOR CONTINUOUS BUILDING FRONTAGE.



LOCATION KEY

KEY

- Landmark
- Key groups of buildings
- Continuous building frontage
- 3
12m
max Building heights - storeys/maximum heights
- Boundary condition - 1.5m minimum privacy strip
- C** Residential courtyard blocks with podium parking
- A** Residential apartment blocks with on street/courtyard parking
- T** Residential terraced houses with on-plot parking
- S** Residential (linked) semi-detached houses with on-plot parking
- N** Non-residential building

4 SITE WIDE CODING

4.14 SUMMARY OF URBAN DESIGN PRINCIPLES

— The Summary of Urban Design Principles plan brings together key guidance from across the Design Code.

KEY

Access and Movement

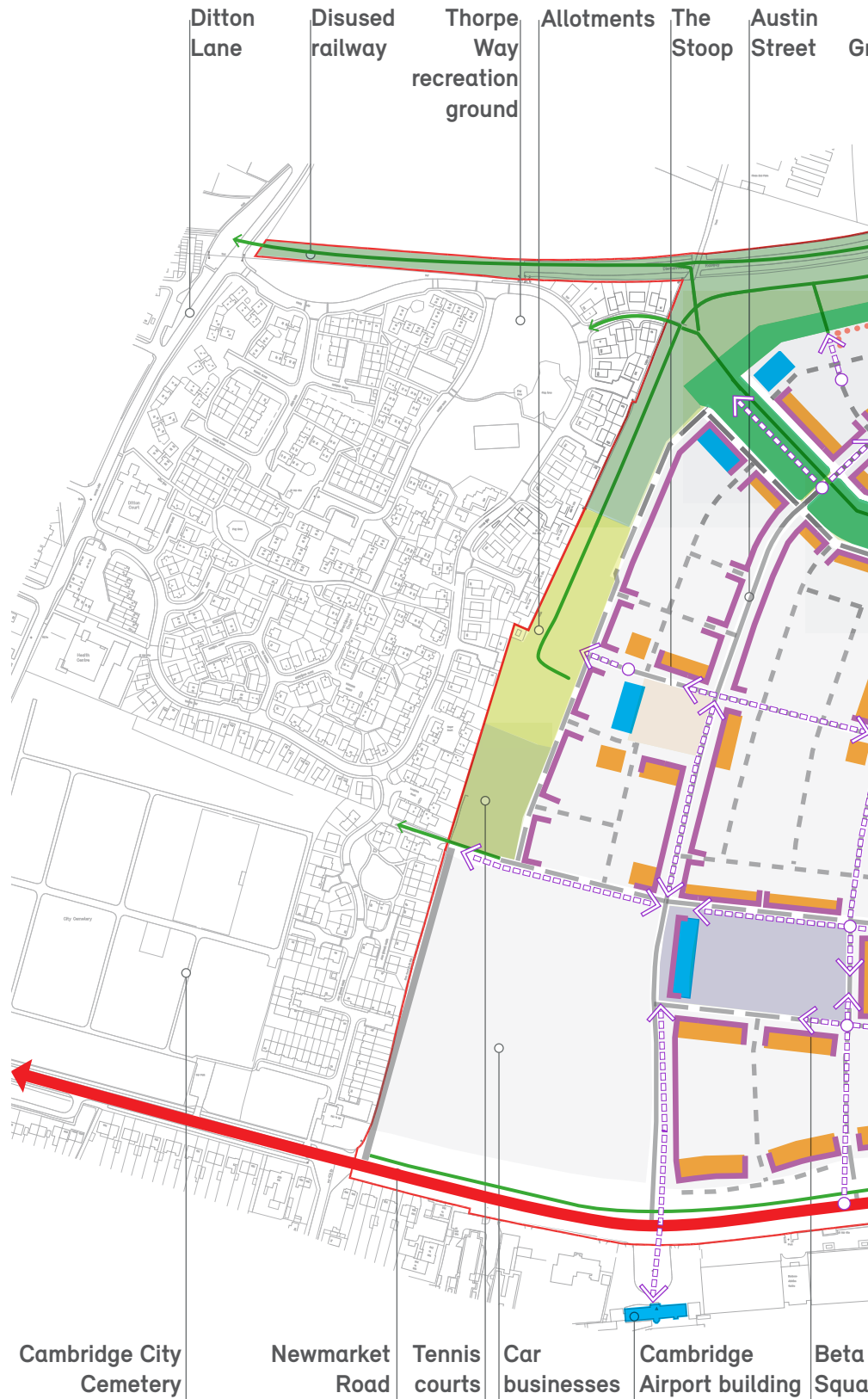
- Primary streets
- Secondary streets
- - - Tertiary streets
- Combined cycle and pedestrian routes

Urban design principles

- Continuous building frontage
- Buildings engaging with open space
- Visual connections
- Landmarks
- Key groups of buildings

Public open space

- Allotments
- Sports and tennis courts
- Informal open spaces
- Woodlands
- Urban squares
- Garden squares
- Village green





4 SITE WIDE CODING

4.15 BUILDING MATERIALS

All buildings **must** be made from well-detailed traditional materials that are durable, age well and are positively enhanced by weathering. Additional and alternative materials may be appropriate and will be considered on their merits, especially for non-residential buildings.

PRINCIPLES

Walls:

- Building materials for walls, roofs, windows, doors and balconies **must** be from the **building materials matrix**.
- Subtle variety in brick type **must** be employed, avoiding dominant strong colours or contrasts.
- Brickwork **should** potentially include features such as brick arches, string courses, decorative bonds, patterns and textures.
- The colour of the mortar **must** complement the tone of the brick.
- Tile-hanging **must** use plain tiles such as Redland Fontanelle or similar quality alternatives.
- Stone or precast features, such as cills, copings and thresholds **should** be used.

Railings, guardings and metal fascias:

- Powder-coated steel in colours that **must** complement the wall and roof materials.
- Powder coated metal sheet with decorative/ bespoke perforated patterns or rods **should** be used.

Roofs:

- Pitched roofs **must** use coverings such as good quality reconstituted slate.
- Flat roofs **must** be 'green' or 'brown' planted with seeded coverings or used as roof terraces.
- Roof verges **must** be mortar bedded.
- Flashings **must not** be PVC based.
- Rainwater goods, copings and trims **must** be powder coated aluminium in colours to complement the wall and roof materials.

Windows and doors:

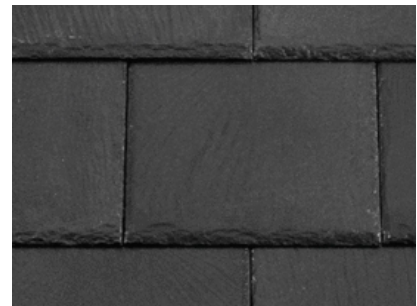
- Powder-coated aluminium or composite timber and aluminium in neutral colours **must** complement the wall and roof materials.
- Front doors for houses **should** be hardwood or other fine-grained timber in a range of coordinated colours and natural finishes.
- Front doors for apartment or non-residential buildings **should** be systematised PPC steel and glass assemblies or similar alternatives (not PVC).

BUILDING MATERIALS MATRIX

PREDOMINANT MATERIALS



RED CLAY FACING BRICK - SOFT MUD, MULTI



RECONSTITUTED SLATE TILE

ACCENT MATERIALS



WHITE CLAY FACING BRICK - SOFT MUD



METAL RAILINGS

There is the opportunity for civic buildings to use facing materials that are not part of the materials matrix, to differentiate and celebrate their public function. Any proposal for a non-matrix facing material **must** be justified in terms of design and durability.



BROWN CLAY FACING BRICK



BUFF CLAY FACING BRICK



CONCRETE PLAIN ROOF TILE



BROWN / GREEN ROOF



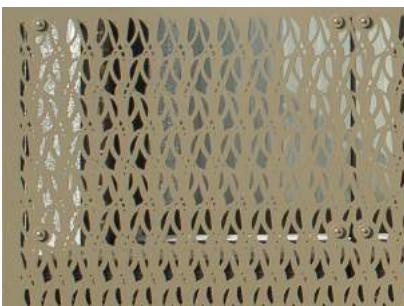
DARK GREY CLAY FACING BRICK MULTI



PAINTED BRICK



PLAIN TILE HANGING



PERFORATED POWDER COATED
STEEL GUARDING



PRE-CAST CONCRETE / RECONSTITUTED
STONE

4 SITE WIDE CODING

4.16 BUILDING DETAILS

Buildings **must** be carefully detailed to create clean and uncluttered elevations that positively contribute to place-making and create a sense of robustness, solidity and permanence.

PRINCIPLES

- Brickwork **should** incorporate features such as brick arches, string courses, decorative bonds, patterns and textures.
- The integration of movement joints in brickwork **must** be considered as part of the facade design.
- Ornament **should** be integral to design of secondary elements and integrated into building design.
- Crude or simplistic use of motif and pattern **must** be avoided.
- Window reveals **should** be either a minimum of 75mm deep or flush with the elevation to ensure a variety in depth and definition on building elevations.
- Window frame sections **must** be slender, and false glazing bars **must** be avoided.
- Entrances **must** be detailed to ensure durability and comfort for residents / those using the building.
- Balustrades, railings and balconies **must** be an integral part of the facade design. The design of balconies **must** ensure adequate privacy.
- Balcony and railing fixings **must** be discreet and hidden wherever possible to avoid clutter in the elevation design.
- All balconies **must** be able to fit a table and chairs.
- Rainwater goods **must** be an integral part of the façade design and visually unobtrusive on elevations visible from the public realm.
- Please also see the section on utilities on page 27.

MUST NOT DETAILS



VISIBLE ROOF PENETRATIONS



SURFACE MOUNTED SERVICES ON BRICKWORK



VISIBLE SERVICES BOXES



VISIBLE SERVICES BOXES



SURFACE MOUNTED SERVICES ON BRICKWORK



VISIBLE ROOF PENETRATIONS



PASTICHE BUILDING COMPONENTS



PASTICHE BUILDING COMPONENTS



PASTICHE BUILDING COMPONENTS



EXAMPLES OF HOW TO USE MATERIALS



BRICK DETAILING ADDS TEXTURE AND INTEREST



FULL BRICK WINDOW REVEALS GIVE A SENSE OF DEPTH



CONCRETE LINTELS ABOVE DOORWAYS



PRINCIPAL MATERIAL TAKEN THROUGH ENTIRE BUILDING



WELL ORDERED FLUSH COMPOSITE WINDOWS



ALUMINIUM RAINWATER GOODS WITH SUBTLE VARIETY OF BRICK AND ROOF



BRICK PRINCIPAL FACING MATERIAL SHEET METAL BALCONY ACCENT MATERIAL



RECESSED CORNER WINDOW WITH SLENDER FRAME SECTION



COMPLIMENTARY MATERIAL PALETTE WITH SLENDER FRAME WINDOWS



LEGIBLE ENTRANCE TO APARTMENTS USING TACTILE MATERIALS



SHEET METAL ACCENT USED FOR CYCLE AND BIN STORE



CAREFUL COMPOSITION OF FACADE ELEMENTS



DETAILING ADDS TEXTURE AND HELPS TO DEFINE OPENINGS IN A FACADE

4 SITE WIDE CODING

4.17 PUBLIC REALM MATERIALS

There **must** be a consistent use of materials throughout the public realm in order to create distinctiveness and a sense of place. Materials must be simple, robust and elegantly detailed in order to ensure an uncluttered public realm.

PRINCIPLES

Streets (please cross reference with the Street Typology Table on page 17):

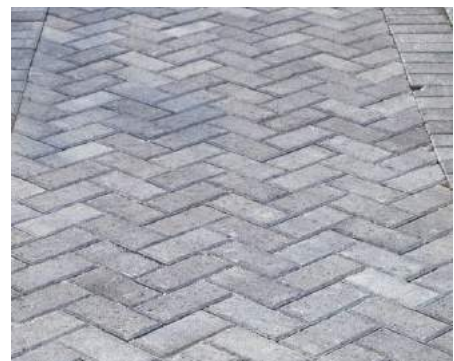
- Vehicle carriageways on the primary and secondary streets **must** be surfaced in Stone Mastic Asphalt (SMA) or hot rolled asphalt where there is a vehicle carriageway, with concrete kerbs.
- Pavements on the primary and secondary streets **should** be surfaced with Stone Mastic Asphalt.
- Shared surface streets **should** utilise block paving (colour: dark grey/dark buff) or 'heritage' asphalt.
- Raised table junctions **should** be paved with herringbone block pavements, colour: dark grey/dark buff. Traffic calming ramps **should** be paved with granite setts.
- Shared use and designated cycle paths **must** be surfaced with a "granite" SMA, HUE 7.5R/3/4 & HUE 7.5R/3/8 as defined by the Munsell Chart, with precast concrete pin kerbs to CCC adoptable standards.

Open spaces:

- In the open spaces a more diverse palette of paving materials may be used, but all materials and textures **should** be tonally consistent with the surrounding streets. This could include natural and precast stone in larger unit sizes and resin-bound gravel. Materials **must** be suitably robust for their intended uses, for example vehicle over-runs for loading areas in Market Square.
- Within the more informal open spaces - such as Kingsley Woods and The Copse - materials **should** be natural in appearance. This could include unbound or self-binding gravel footpaths, with timber edgings and timber or composite boardwalks and bridges. In woodlands, paths and trails **should** be surfaced with woodchip or bark with timber edgings.
- In areas of children's play bark mulch or sand safety surfaces **should** be used; formal play spaces **should** be surfaced with artificial grass rubber crumb or rubber 'mulch'.



ADOPTED CYCLE PATHS - RED SMA



HERRINGBONE BLOCK PAVING



CONCRETE BLOCK HERRINGBONE RAISED TABLES AND SHARED SURFACES



BLOCK PAVIOURS
DARK BUFF



BLOCK PAVIOURS
DARK GREY

MATERIALS



ASPHALT STREETS & CONCRETE KERBS



SELF BINDING GRAVEL PATHS



WOODCHIP WOODLAND PATHS



HERRINGBONE BLOCK PAVING



LOOSE PEA SHINGLE



TIMBER OR COMPOSITE BOARDWALK



PRECAST CONCRETE PIN KERBS



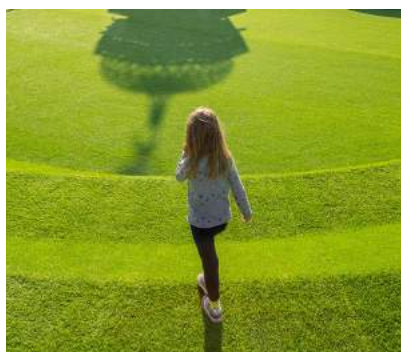
SETTS TO TRAFFIC CALMING RAMPS



RESIN BOUND GRAVEL



ASPHALT SURFACE FOR PRIMARY AND SECONDARY STREETS



ARTIFICIAL GRASS PLAY AREA



STONE FLAGS TO PUBLIC SPACES

4.18 PUBLIC OPEN SPACE

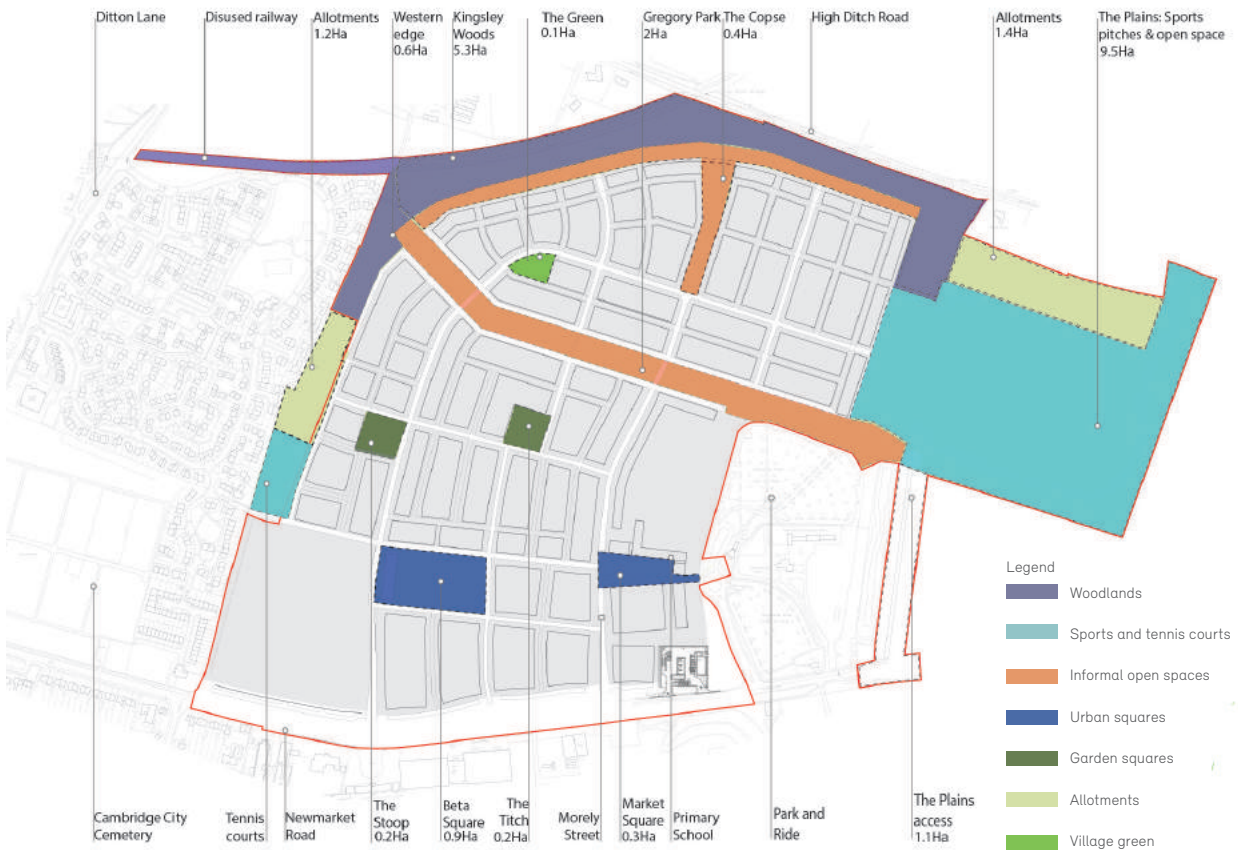


LANDSCAPE & OPEN SPACE PARAMETER PLAN

The design of the public open spaces **must** reflect their character, function and location. They **must** be durable, safe and accessible and capable of long-term sustainable management without undue cost to the community. Open spaces **should** link coherently into the existing tree belts and retained hedgerows. The spaces **should** respond to their context, being more formal in character in the City and Town Character Areas, and more relaxed and informal in the Edge where the site becomes more rural.

PRINCIPLES

- The open spaces **must** be located so that all users will have access to high quality open space, designed to relate to the surrounding land uses and activities.
- The main focus of public life will be Market Square, which **must** be designed as a vibrant, robust, flexible urban space, for events. The space **should** be predominantly a hard paved 'shared space' with formal blocks of large trees with seating beneath.
- Beta Square is the main urban park and **should** be a predominantly green open space, framed by tree planting around the edge, with a central lawn enclosed by generous shrub planting, paths for circulation and perambulation, spaces to sit in sun and shade, a children's Local Equipped Area of Play (LEAP) and a flexible paved space for events and seating.
- Gregory Park **should** follow the existing historic ditch that runs through the site and **must** be simultaneously a linear public park, ecological corridor and drainage attenuation feature. It **should** be a sunken space lined with formal and informal tree planting, with both dry and wet ponds, planting to enhance biodiversity and create wildlife habitats and spaces for recreation and play. A series of bridges **must** provide connections across the space and access **must** be provided via ramps and steps.
- The Plains **should** provide the main sports and recreation provision for Wing. This open space **must** include formal pitches and a kick-about space. A Neighbourhood Area of Play (NEAP) **must** be provided along the western edge. Facilities **must** also include parking, sports pavilion and allotments along the northern boundary.



PUBLIC OPEN SPACE DISTRIBUTION

PRECEDENTS



THE GREEN



BETA SQUARE



GREGORY PARK

- Kingsley Woods **must** be retained and managed to diversify the woodland structure, improve biodiversity, provide space for informal recreation and ensure the longevity of the woodlands. Paths **should** be introduced to create walking and cycling routes through the woodland, which **must** be constructed using 'no-dig' techniques to avoid damage to rootzones. A new green space – The Copse – **should** form an extension of Kingsley Woods southwards towards Gregory Park creating a wildlife corridor and a space for informal recreation.
- Smaller neighbourhood parks **must** be provided in all character areas. The Stoop and The Titch **should** have the character of a garden square, and The Green the character of a village green. All three **should** include play, seating and areas of low planting.
- Local Areas of Play (LAP) **must** be distributed across Wing.
- A low-speed, high-quality pedestrian priority environment **must** be created along all streets surrounding public open spaces. Roads surrounding open spaces **should** be designed in order to prevent unauthorised parking on green space, using kerbs, changes of levels or landscape features such as bollards, trees and light fittings.
- More detailed guidance on open spaces can be found within the guidance for each character area in the following chapter.

4.19 CHILDREN'S PLAY AND RECREATION

Designated and informal play spaces **must** be created in accordance with the Cambridge East Area Action Plan (AAP) and other local authority standards. These **must** be integrated into the design of the open spaces, within a safe walking distance of all homes and **must** include NEAPs, LEAPs and LAPs. Sports facilities for all ages **must** also be provided at Wing in accordance with national and local standards.

PRINCIPLES

- Each play space **should** be designed specifically for its location, to suit different ages and abilities and encourage social interaction. For example sites for imaginative play incorporating natural and informal play elements **should** be incorporated within Kingsley Woods while more formal play equipment **should** be provided in the urban squares and garden squares.
- Sites for imaginative play **should** include natural landscape features (e.g. boulders, landform and logs) as well as integrated play features (e.g. ditches and tunnels) alongside more conventional play equipment, in order to encourage imaginative play.
- Play potential **should** be considered in all elements of the landscape design as children will often find play opportunities in unexpected places.
- 'Green gyms' **should** also be provided, to encourage people of all ages to engage in activity.
- LAPs (Local Areas of Play aimed at toddlers and young children, minimum of 100m²) **must** be positioned so that there is a LAP within 100m walking distance from any dwelling. They **must** be at least 5m away from the forward-most part of dwellings that face the LAP.
- LEAPs (Local Equipped Areas of Play, for mixed ages, minimum 600m²) **must** be located within 400m a walking distance from any dwelling. They **should** contain at least six items of play equipment. They **must** be at least 20m from the nearest property boundary.
- A NEAP (Neighbourhood Equipped Area of Play, for mixed ages, minimum 1,000m²) **must** be located adjacent to the sports pitches and within 1km walk from any dwelling. They **should** contain a minimum of eight pieces of play equipment. They **should** be at least 30m from adjacent dwellings.
- The sports provision **must** include two senior football pitches, three junior football pitches and a cricket square, as well as tennis courts.

PRECEDENTS



INFORMAL RECREATION: THE PLAINS



FORMAL SPORTS PITCHES AND PAVILIONS: THE PLAINS



NATURAL PLAY



FORMAL PLAY



ILLUSTRATIVE CHILDREN'S PLAY DISTRIBUTION AND DISTANCES

KEY

- Dedicated cycle path
- - - Pedestrian and cycle path
- Pedestrian path
- Bridle & pedestrian path
- Private road

For the full street network plan please refer to page 17

- Local Area of Play (LAP) 10m x 10m, min. area of activity 100sqm. 5m min. separation between activity zone and the boundary of dwellings.
- Local Equipped Area of Play (LEAP), 20m x 20m min. area of activity, 400 sqm. 20m min. separation between activity zone and the boundary of dwellings.
- Neighbourhood Equipped Area of Play (NEAP), 31.6m x 31.6m, min. area of activity, 1000sqm. (Area of equipment, structures and hard surfaced area of at least 465 sqm.) 30m min. separation between activity zone and the boundary dwellings.

PRECEDENTS



LOCAL AREAS OF PLAY (LAPs)



LOCAL EQUIPPED AREAS OF PLAY (LEAPs)



NEIGHBOURHOOD EQUIPPED AREAS OF PLAY (NEAPs)



PLAY IN THE LANDSCAPE



SITE SPECIFIC ELEMENTS FOR IMAGINATIVE PLAY



IMAGINATIVE PLAY

4.20 TREES AND PLANTING

Planting **must** be based on a palette of robust plant species, including native species that are already present on the site. The planting character **should** be more formal and ornamental in the City and Town Character Areas, becoming more informal and native in character in the Edge.

PRINCIPLES

- Planting **should** be used to create identities for different streets and neighbourhoods and assist with wayfinding.
- Planting **should** be designed for biodiversity and wildlife value and deliver visual and seasonal interest. This **should** include a consideration of flowering times, scent, autumn colour, winter bark, fruit and berries as well as wildflower habitat and food sources.
- In paved areas or in areas where the rooting zone is restricted, trees **must** be planted using rootcell systems and linear trenches to ensure sufficient long-term rooting volumes and healthy trees which will achieve their optimum height and spread.
- Tree selection **should** be as shown in the Tree Strategy.
- Where there is on-street parking proposed, street tree species **should** be selected that do not attract aphids or drop fruit.
- All street tree, shrub and herbaceous planting **should** be tolerant of urban conditions - to allow for a variety of species to be used.
- Other small-scale biodiversity interventions **should** be incorporated in residential areas, such as green roofs and walls, window boxes and planters and climbing plants. Living roofs (green or brown) **should** be planted/ seeded with drought tolerant wild flowers.
- Trees **should** be selected and set-out in proportion to the street widths and building heights. Trees and shrubs **should** be planted at a spacing and density that allows them to take on their natural form without requiring regular pruning, and taking account of visibility splays, light fittings and signage.
- To mitigate against the effects of possible future pathogens, a range of trees **should** be used rather than relying on one species of street or parkland tree.
- Care **must** be taken that any planting does not cause an unacceptable increase in bird activity and cause bird strikes to aircraft. In particular, the planting around The Plains **must** be adequately maintained to restrict bird flocking. Please see page 65 for more information.



FORMAL STREET TREE PLANTING



PARKLAND PLANTING



ORNAMENTAL TREE PLANTING



NATIVE TREE PLANTING

PRINCIPLES: STREET PLANTING

- Primary streets **should** be planted with large trees (20m + height) of the same species per character area, this is to maintain the three distinctive character areas, regularly spaced in a staggered 'avenue' at approximately 30m centres. At junctions different ornamental tree species shall be planted to limit potential impact from disease to single species. Planted verges **should** utilise a limited palette of robust, predominantly evergreen shrubs and evergreen perennials chosen for form and texture.
- Secondary streets **should** be planted with medium to large trees (15-20m height) of the same species per street to maintain a unified character, regularly spaced in single rows or staggered pairs. Similar to the primary streets, different tree species shall be planted at junctions to limit the potential impacts from disease to single species. Planted verges to utilise a limited palette of robust, evergreen and deciduous flowering shrubs and perennials and bulbs.
- Tertiary shared surface streets **should** be informally planted with small ornamental tree species (5-15m height).
- Doorstep planting **should** include robust and low-maintenance flowering shrubs and perennials, including scented plants and herbs. Low and medium sized species **should** be selected that will not block windows, signage, lighting and doors.

PRINCIPLES: PLANTING IN PUBLIC OPEN SPACES

- The informal open spaces of Kingsley Woods, and The Copse **should** incorporate a mixture of predominantly native tree, shrub and wildflower species that reflect the local landscape character. The woodland areas **should** comprise a series of tree, shrub and herb layers, creating a 'woodland edge' condition.
- The planting in Gregory Park **should** incorporate a rich variety of adaptable plants that can tolerate occasional flooding and drought, provide habitat and sources of food and nectar for wildlife. Aquatic marginal planting **should** surround the areas of permanent water, with the dry swales seeded with local provenance wildflower grass.
- The squares **should** include a formal structure of larger tree planting to enclose the spaces and frame views, as well as an informal arrangement of more ornamental trees and mixed shrubberies containing native and ornamental shrubs, perennials and bulbs. Grass lawns **should** include both wildflower areas and closely mown grass.
- In Market Square large tree species (20m+ height) **should** be planted in formal grids to create a 'green architecture' and define spaces. These trees could be maintained by pruning/pollarding to create and retain their formal shape.



WOODLAND PLANTING



PLANTED ROAD VERGES



DOORSTEP PLANTING



MARGINAL AQUATIC PLANTING



FORMAL TREE PLANTING ENCLOSED OPEN SPACE

SITE WIDE CODING

ILLUSTRATIVE TREE STRATEGY

KEY PLAN

SUGGESTED TREE SPECIES

-  Existing woodland
-  Existing Newmarket Road trees
-  Newmarket Road street avenue trees:
Tilia platyphyllos 'Rubra' (O)
-  Primary street tree avenue to character area 'The City':
Tilia tormentosa
-  Primary street tree avenue to character area 'The Town':
Platanus x acerifolia (O)
-  Primary street tree avenue to character area 'The Edge':
Carpinus betulus 'Frans Fontaine'
-  Primary street junction trees:
Liquidamber styraciflura (O)
Acer platanoides 'Crimson King' (O)
-  Secondary street avenue trees:
Carpinus betulus (N)
Corylus colurna (O)
Fagus sylvatica 'Dawyck' (NN,O)
Parrotia persica 'Vanessa' (NN,O)
Sorbus aria (N,O)
-  Secondary street junction trees:
Acer campestre 'Queen Elizabeth' (O)
Carpinus japonica (O)
Ostrya carpinifolia (O)
Sorbus torminalis (N)
-  Gregory Park trees: - Large
Alnus glutinosa (N)
Alnus incana (O)
Crataegus monogyna (N)
Ginkgo biloba (NN,O)
Nothofagus antarctica (NN,O)
Pinus nigra (NN, O)
Populus tremula (N)
Salix alba (N)
Salix viminalis (N)
Sorbus aucuparia (N,O)
Tilia x euchlora (NN,O)
Quercus robur (N)
-  Tertiary street trees: - Medium/small
Acer campestre (N,O)
Ginkgo biloba 'Mayfield' (NN, O)
Ligustrum lucidum 'Variegata' (NN,O)
Pyrus calleryana 'Chanticleer' (O)
Prunus maackii 'Amber Beauty' (NN,O)
Sorbus asplenifolia (O)
-  Specimen trees:
Catalpa aurea (O)
Cedrus libani (O)
Ginkgo biloba (NN,O)
Ilex castaneifolia (NN,O)
Juglans nigra (NN, O)
Pavliwnua tomentosa (NN,O)
Prunus fruticosa 'Globosa' (NN,O)
Tilia x europaea 'Pallida' (NN)
Quercus ilex (NN,O)
Quercus robur (N)
-  Back garden ornamental trees: - Small
Crataegus x prunifolia (O)
Malus liset (O)
Prunus maackii 'Amber Beauty' (O)
Sorbus asplenifolia (O)

(N) Native
(NN) Non-Native
(O) Ornamental



Orchard trees: Large/small

- Juglans regia* (NN)
- Mespilus germanica* (NN,O)
- Prunus domestica* (NN,O)
- Pyrus communis* (NN,O)


Parks and open spaces trees:

- Acer campestre* (N,O)
- Acer rubrum* (O)
- Alnus glutinosa* (N)
- Alnus incana* 'Laciniata' (O)
- Betula pendula* (N)
- Betula pubescens* (N)
- Castanea sativa* (N)
- Carpinus betulus* (N)
- Prunus avium* (O)
- Sorbus aria* (N)
- Sorbus torminalis* (N)



Woodland edge trees

Acer platanoides	(NN,O)
Alnus glutinosa	(N)
Betula pendula	(N)
Betula nigra	(NN)
Euonymus europaeus	(N)
Fagus sylvatica	(N)
Ilex aquifolium	(N)
Malus sylvestris	(N)
Salix cinerea subsp. oleifolia	(N)
Sorbus torminalis	(N)

 Ha-ha & 1:3 Slope

-  THE EDGE
-  THE TOWN
-  THE CITY

4.21 THRESHOLDS AND BOUNDARIES

Boundary treatments provide the transition between the public and private realm and **must** be carefully controlled to avoid a disjointed approach to streets and buildings.

PRINCIPLES

- Privacy strips at the front and sides of residential properties **should** be a maximum of 1.5m wide, unless required to be wider to vary character or provide parking.
- Privacy strips should be either planted with a simple mix of robust, low shrubs, or in some tertiary streets, be paved with a texturally contrasting material.
- Exposed boundaries on the building line **should** be brick walls, 2m high maximum.
- Internal boundaries between gardens, not visible by the public, **should** be close-boarded or slatted timber fences, 2m high.
- Boundaries between front privacy strips **should** be evergreen hedges or brick walls, 1.2m high.
- Boundaries to public spaces **should** not be fenced but cars **must** be prevented from gaining access with street furniture, planting and kerbs.
- Vertical 1.1m high minimum estate rail fencing **should** be utilised to enclose rear gardens adjacent to woodland, for example along the ha-ha in the Edge Character Area.
- Close-boarded fences 1.8 m high **should** be utilised to enclose rear gardens, for example along the boundary between the school and residential properties facing it.



GABION HA-HA AND BRIDGE



VEHICLE CONTROL AROUND PARKS

PRECEDENTS



PRIVACY STRIP/THRESHOLD PLANTING



PLANTING AND PAVING, THE AVENUE, SAFFRON WALDEN



BOUNDARY HEDGES



ESTATE RAIL FENCING



GABION HA-HA



CLOSE BOARD GARDEN FENCES

4.22 STREET FURNITURE

A coordinated approach **must** be taken to street furniture across all phases of the development, with contemporary styled furniture favoured. This **must** include a consideration of: benches, litter bins, lamp columns, bollards, manhole covers, tree grilles and surrounds, bin stores and cycle parking. The integration of street furniture within the public realm **should** be carefully considered to avoid clutter.

PRINCIPLES

- Larger structures **should** incorporate green roofs wherever possible.
- Timber elements such as seats, boardwalks and bridges **should** utilise either sustainably sourced hardwoods or composite boards.
- Benches **should** include some with slatted timber tops, armrests and seat backs to assist people with restricted mobility and discourage antisocial behaviour.
- In more urban spaces - such as Market Square, Beta Square, the Titch and the Stoop - seating **should** be acid etched pre-cast concrete, with Forest Stewardship Council (FSC) sustainable hardwood timber backs and seating slats.
- In informal open spaces - such as Kingsley Woods, Gregory Park and the Copse - seating **should** be solid timber or moulded concrete.
- Seating **should** be functional and vandal resistant. Handrails, seating, retaining walls and steps **must** all incorporate anti-skateboarding devices.
- Litter bins **should** incorporate bird-proof lids and be a minimum of 70L in volume. Bins **should** be plain powder-coated steel. In informal open spaces bins **should** be timber clad.
- Bollards **should** be plain, circular brushed stainless steel or powder-coated steel. In informal open spaces, timber bollards **should** be used. Low, precast concrete vehicle restraints **should** be used to prevent vehicles parking on green spaces, rather than bollards.
- Tree surrounds **should** be flush precast stone units, or recessed paving grilles (e.g. of the Arborslot type).
- Manhole covers in paved areas **must** be recessed.
- Drinking fountains **should** be provided in all public spaces.
- Signage **should** be located to minimise clutter and be placed on buildings where possible.

PRECEDENTS



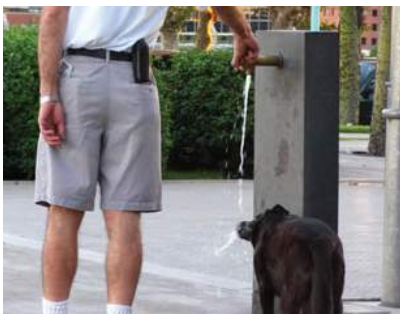
BIRD PROOF LITTER BINS



CAST STONE BASE WITH HARDWOOD SEAT



FLUSH TREE SURROUNDS



DRINKING FOUNTAINS



SCULPTURAL SEATING



FLUSH TREE SURROUNDS

4.23 LIGHTING

Lighting **should** be incorporated into Wing to complement the buildings and public realm, utilising a consistent palette of fittings that minimise clutter and provide appropriate lighting levels to ensure safety.

The proposed system of lighting for Wing **must** be of an adoptable standard, energy efficient, contemporary in style, sustainable, fit for purpose, cost effective and have suitable access for ongoing maintenance where sited in adoptable highway areas. Lighting units **must** be ecologically sensitive, providing zero upward light pollution.

PRINCIPLES

- Lighting **must** be designed to British Standard BS 5489-1:2013, BS EN 13201-1:2015 or CIE 115 (or any updated British Standards) in adoptable areas.
- Lighting provisions **should** correspond to the current Cambridgeshire County Council Street Lighting Development Specifications, with selections taken from the specified palette.
- Lighting **must** incorporate LED light sources.
- DALI CMS Compatible Intelligent lighting systems **should** be installed in the entirety of the development and integrated into Cambridgeshire County Council's management system for adoption.
- Lighting units **should** be column mounted where possible at heights no greater than 8m, or fixed on buildings where possible, minimising clutter.
- Lighting units **must** be sited away from property windows and access points as far as is reasonably practicable, preferably at property boundaries.
- Low level light solutions such as bollards or solar studs may be put forward as possible alternatives for full lighting installations, especially in public open spaces and on cycle paths.
- The lighting palette **should** be consistent across a street or open space.

PRECEDENTS



ILLUSTRATIVE HIGHWAY LIGHTING LUMINARIES



SOLAR STUD CYCLE LIGHTING



ILLUSTRATIVE HIGHWAY LIGHTING LUMINARIES



ILLUSTRATING LIGHTING UNITS

4.24 PUBLIC ART

Public art in Wing **must** enhance the value and identity of place.

Opportunities for public art in Wing **should** include everyday elements in the street scene, such as street furniture, signage, and the branding and identity of Wing.

PRINCIPLES

- Public art in Wing **should** enhance the value and identity of the site by providing artistic opportunities which will enrich people's experience of the built environment.
- Artists **should** reach out to engage with the local community, offering others the chance to shape their community.
- The commissioned artists/key development partners **should** work closely with the landowner, developer, architects, landscape architect and the local community.
- Public art **should** 'touch' the everyday elements within the street scene of Wing. This approach may include; front doors, gates, railings, signage, street furniture, manhole covers and street lights.
- Public art **should** include branding and identity which could be used during construction (e.g. fence hoardings or meanwhile uses) and in marketing.
- Artistic outcomes **should** be original, site specific and reflect on the historical and more recent local history of the site.

PRECEDENTS



PERFORMANCE PUBLIC ART



ECHO PUBLIC ART



PUBLIC ART REFLECTING SITE



PUBLIC ART IN THE PUBLIC REALM



PUBLIC ART IN THE PUBLIC REALM



INTERACTIVE PUBLIC ART

4.25 DRAINAGE AND SUDS

The surface water network **must** consist of a Sustainable Urban Drainage System (SuDS). The SuDS features **must** be genuinely integrated with the landscape design as part of place-making on the site. Peak surface water runoff rates **should** be limited to greenfield figures and attenuation provided for the 1 in 100 year return period rainfall event plus climate change.

The foul water drainage **should** consist of an adoptable gravity network with a pumping station and rising main to Newmarket Road. The systems **must** be sustainable, fit for purpose, cost effective and have suitable access for management.

PRINCIPLES

- Piped networks **must** adhere to current guidance. Currently these standards are: -
 - If draining more than two properties - 'Sewers for Adoption 7' specification.
 - If draining one property only - 'Building Regulations Part H' specification.
 - If draining the highway only - 'Cambridgeshire Housing Estate Road' specification.
- There **must** be no surcharging for the 1 in 1 year return period, no flooding for the 1 in 30 year return period and no flooding to properties for the 1 in 100 year return period.
- Controlled flooding for the 1 in 100 year event and exceedance routes **should** be located in roads, pathways, play areas and SuDS features.
- Gregory Park **should** consist of predominantly dry swale open attenuation features which are designed in accordance with CIRIA document C753 The SuDS Manual, with small amounts of permanent water alongside providing diversity.
- Kingsley Woods **should** consist of a predominantly dry ha-ha feature that provides a defensible boundary to the homes whilst temporarily storing and transporting surface water drainage. Please see images on pages 63 and 72.
- The ha-ha's drainage channels **must** drain to Gregory Park or to High Ditch Road Ditch and provide conveyance and attenuation. Ha-has **should** be grassed to increase water quality and to provide amenity space. Any retaining structure required **should** be located a clear distance from properties and be safe for access and maintenance.
- The maximum water depth within any feature **should** be 2m, with 1 in 3 maximum side slopes unless a retaining structure is proposed.
- Wetland ponds **should** be provided in addition to the required detention volumes.
- SuDS features **should** include: rainwater harvesting, permeable paving, rills and shallow drains to formal squares, open attenuation, wetland ponds and ha-has.
- Rainwater harvesting **should** be provided, examples include water butts or underground harvesting tanks.
- Permeable paving **should** be used on areas not offered for adoption. There **should** be a perforated pipe to underdrain the area which connects to the nearby drainage network.

PRECEDENTS



ATTENUATION BASIN



ATTENUATION BASIN



GRASS SWALE



SHALLOW SLOPING GRASS SWALE



DETENTION BASIN BAFFLES



VEGETATED SWALE

- Rills and shallow drains **should** be used for courtyard areas and podium roofs, discharging to the network.
- Beta Square **should** comprise of more urban attenuation features, which could include underground attenuation and an above ground basin.
- The formal sport provision within The Plains and the eastern access road **must** discharge to High Ditch Road Ditch at greenfield rates.

- There **must** be a 5m wide landscaped maintenance strip along the development side of Thorpe Way Ditch and north of the Ha-ha above the slope for use by the relevant drainage authority.
- Existing car businesses **should** drain to Thorpe Way Ditch and runoff rates preferably improved to greenfield figures with local attenuation.
- The foul network **should** drain to the proposed pumping station on-site. The southern part of the site **should** gravity drain directly to existing public sewers in Newmarket Road.
- Shelter belts, hedgerows and hedgerow trees along existing drainage ditches, such as High Ditch Road and Gregory Park **should** be retained or replaced, to provide biodiverse, green networks across the site.

PRECEDENTS



HA-HA WITH BRIDGE ACCESS



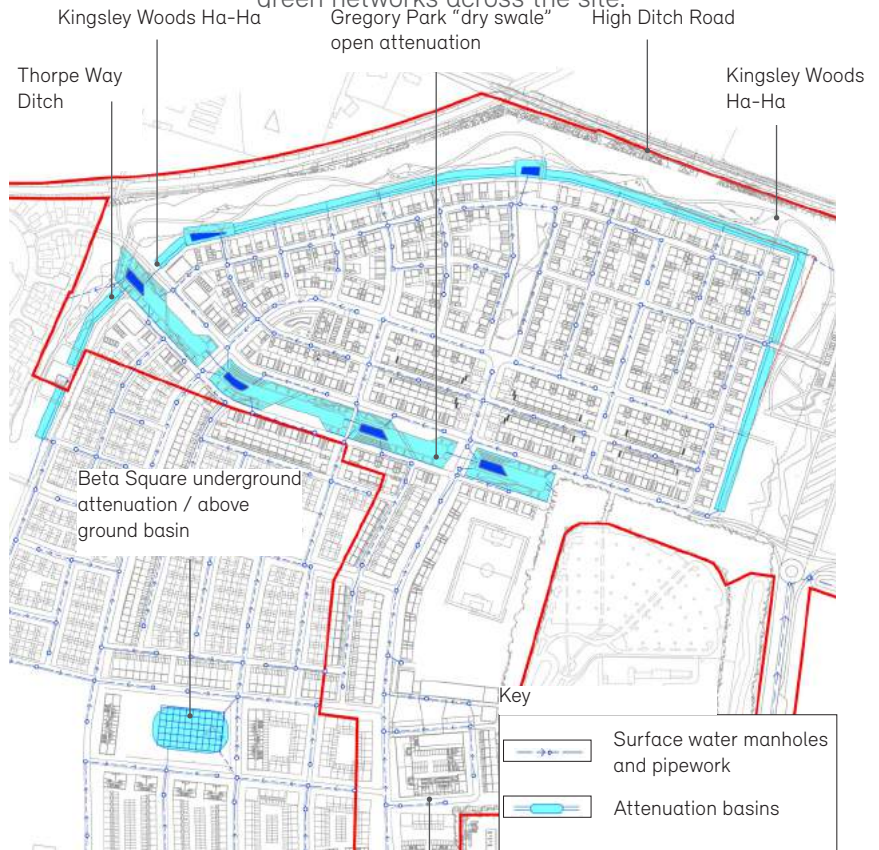
PLANTED SWALE



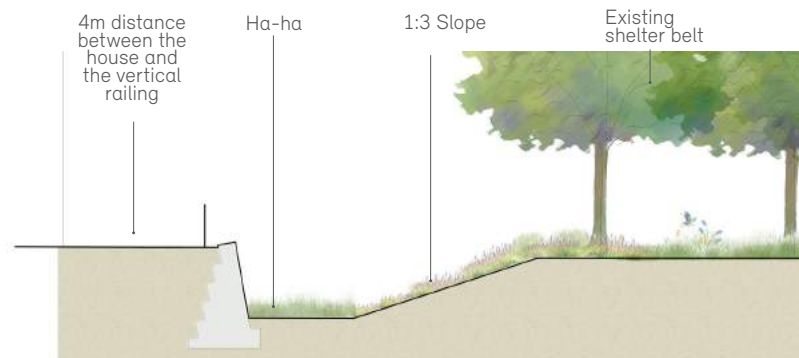
PLANTED SWALE



GRASS SWALE



SITE WIDE SURFACE WATER DRAINAGE



ILLUSTRATIVE SECTION THROUGH HA-HA

4.26 ECOLOGICAL FEATURES

Integrated bat roosting and bird nesting features **must** be provided on a proportion of new buildings. The minimum number of features to be provided is set out in the Site Wide Biodiversity Management Plan.

Suitable habitats for reptiles **should** be provided in The Plains and Gregory Park. Hedgehogs **should** be encouraged in rear gardens and public open space.

PRINCIPLES

- Bat roosting features **should** be provided on buildings located close to areas of green space and those buildings within the control of the Management Company. They **should** comprise “bat tubes” or an equivalent bat roosting feature, incorporated into the external wall of buildings. The location of the roost features **must** be determined in conjunction with the Project Ecologist.
- The positioning of bat roosting features **must** consider:
 - Lighting – to ensure that light spillage onto roosting features and habitat links is minimised
 - Landscape planting or retained vegetation – to ensure that suitable foraging habitat and habitat links are located near to new roosts
- Bird nesting features **should** be distributed throughout the development site. Features **should** be predominantly provided on buildings close to areas of green space. They **should** comprise integrated nest sites, designed specifically for house sparrows (also suitable for use by other similar sized hole-nesting species) and be constructed from high quality materials. The location of the nest features **must** be determined in conjunction with the Project Ecologist.
- Green and brown roofs **should** be provided in specific parts of the site. These will be designed to be of particular value for birds (specifically black redstart) with the exception of the species of concern for the airport. Mitigation against attracting these species of concern **must** be achieved through careful design and robust maintenance plans. Please see the following page for more information.
- Bunds to The Plains (please see image on page 73) and dry swale slopes in Gregory Park **must** be designed to provide suitable habitats for reptiles, with a wildflower meadow that is infrequently mown and new hibernation sites.
- Rear garden boundaries of properties and fencing around the open spaces **should** allow for access by hedgehogs. Reptile hibernation sites will also be provided in specific parts of the site. Details of the design of such sites are provided in Appendix 2 of the Site-wide Biodiversity Management Plan.

PRECEDENTS



BAT TUBE (SOURCE: THE BAT CONSERVATION TRUST WEBSITE)



INSTALLED BAT TUBES (X3) WITH A RENDERED FINISH (SOURCE: THE BAT CONSERVATION TRUST WEBSITE)



INTEGRATED BIRD BOX WITH FALSE BRICK FRONTAGE TO MATCH BRICKWORK



INTEGRATED SPARROW TERRACE (BRICK FRONT TO BE ADDED)

Feature	Installation height on building	Aspect	Grouping	Other comments
Bat tube or roosting feature	>2.5m above ground level	South-facing (or south-east or south-west)	Desirable to group up to 3 tubes together	Avoid locating close to windows
House sparrow 'terrace' (2 nest chambers in one box)	>2.5m above ground level	North-, east- or west-facing	Desirable to group terraces	Avoid locating above windows or doors

BAT ROOSTING AND BIRD NESTING FEATURES LOCATION AND DISTRIBUTION SCHEDULE

4.27 AIRPORT SAFEGUARDING

The design of the development **must** respond to the operational requirements of Cambridge Airport to ensure the continued safe operation of the airport and aircraft. The Cambridge Airport safeguarding team **must** be consulted during pre-application stages and formally by the Local Planning Authority upon the submission of any reserved matters application.

PRINCIPLES

- Any future reserved matters application **must** have regard to the operational requirements of Cambridge Airport. Proposals **must** prevent infringements of airport airspace and navigational aids, either temporary or permanent. Proposals for landscaping, drainage and other aspects of development **must** not increase risks to the airport.
- A Wildlife Hazard Management Plan, or any subsequent revision, **must** be submitted and complied with. The plan **must** ensure the proposals consider:
 - The individual potential bird attractant features.
 - Whether the site features, when combined with existing land features, will make any part of the airport's safeguarded area more attractive to birds and create hazards, such as bird flight lines across aircraft flight paths.
- Particular attention **must** be taken to manage construction activities.
- Landscaping proposals for The Plains **must** ensure that the potential attractants for birds are carefully managed given the proximity to the runway approach.
- Management plans established through any long term management arrangements for the site (e.g. open spaces and landscaping) **must** take into account the requirements of the Wildlife Hazard Management Plan.

PRECEDENTS



BIRD PROOF BINS



DRY SWALES REDUCING BIRD FEEDING



POLLARDED TREES REDUCING BIRD NESTING



5.1 SUMMARY OF CHARACTER AREAS

Wing is formed by three character areas: the Edge, the Town and the City. The three character areas are set-out in this chapter and include the following guidance:

- A headline setting-out the **mandatory** design principles.
 - **Recommended** number of homes.
 - Character area precedents.
 - A character area framework diagram, demonstrating the structure and design principles for the character area.
- A character area aerial illustrating scale and massing.
 - Examples of more detailed design at key locations within the character area. These examples are illustrative of how the **mandatory** and **recommended** guidance from the site-wide coding chapter and within the character area chapter can be brought together.
 - Detailed design guidance for the key open spaces.



- 1 THE EDGE**
LOWER DENSITY (375-425 HOMES); 2-3 STOREYS
Mainly larger houses on a loose grid enclosed by mature landscape and open spaces.
- 2 THE TOWN**
MEDIUM DENSITY (400-450 HOMES); 2-4 STOREYS
Mainly town houses set within a series of mews streets, lanes and community squares.
- 3 THE CITY**
HIGHER DENSITY (475-525 HOMES); 2-5 STOREYS
Mainly apartments, with two mixed use squares, school, community centre and car businesses.



1 THE EDGE



2 THE TOWN



3 THE CITY

5 CHARACTER AREAS

5.2 THE EDGE DESIGN PRINCIPLES

LOWER DENSITY; 2-3 STOREY

Mainly larger houses on a loose grid enclosed by mature landscape and open spaces.

Mandatory guidance for the Edge:

- Larger houses **must** wrap around Kingsley Woods, structuring and providing passive surveillance to the open space.
- Smaller houses **must** be set around a loose grid of shared surface streets with views to Kingsley Woods.
- Landmark buildings **must** be provided at the north-west gateway to the site and between Gregory Park and The Copse.
- The Plains open space **must** include sports pitches, allotments and two pavilion buildings to serve them.
- Gregory Park open space **must** be a series of landscape rooms and SuDS features lined with key groups of buildings and continuous building frontage.
- The Copse and The Green open spaces **must** be fronted by key groups of buildings and continuous building frontage.
- A new section of dedicated cycle path connecting Ditton Lane to Newmarket Road, via the primary street, **must** be provided.
- Parking **must** be predominately either on-plot at the side of the house or on-plot to the front of the house.



PRECEDENTS



DETACHED HOUSES WITHIN A MATURE LANDSCAPE



CLUSTERS OF SMALL HOMES THAT RELATE TO EACH OTHER



TYOLOGIES COMBINED TO GIVE VARIED ROOFSCAPES



SEPARATE DWELLINGS MAINTAIN CLEAR BUILDING ALIGNMENT



NETWORK OF PEDESTRIAN ROUTES THROUGH A MATURE LANDSCAPE



VIEWS AND ACCESSIBILITY TO WOODLAND AND SUDS

CHARACTER AREA 1: THE EDGE



ILLUSTRATIVE CHARACTER AREA FRAMEWORK DIAGRAM



ILLUSTRATIVE CHARACTER AREA AERIAL

5 CHARACTER AREAS

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE EDGE AREA 1: TYPICAL EDGE STREETS



LOCATION KEY

KEY

- S1 Secondary Street ① (P.20)
- T4 Tertiary Street ④ (P.21)
- ① Intersection ① (P.36)
- ▶ Front doors
- ▶ Destination

THE EDGE BLOCK TYPOLOGY (P.33)



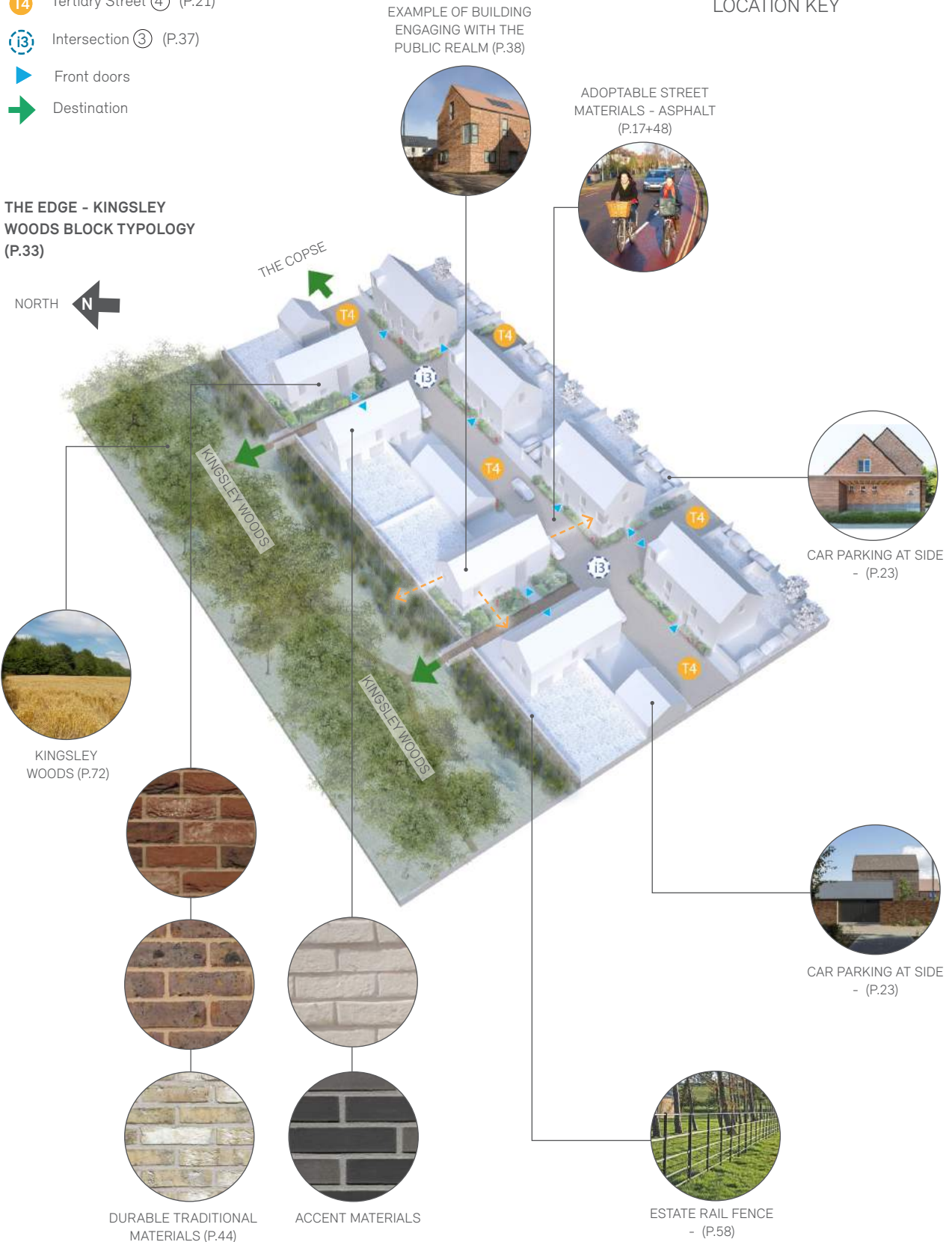
DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE EDGE AREA 2: BOUNDARY WITH KINGSLEY WOODS



KEY

- Tertiary Street ④ (P.21)
- Intersection ③ (P.37)
- Front doors
- Destination

THE EDGE - KINGSLEY WOODS BLOCK TYPOLOGY (P.33)



5 CHARACTER AREAS

DETAILED DESIGN GUIDANCE FOR THE OPEN SPACES WITHIN THE EDGE

PRINCIPLES

Surrounded by mature woodland and adjacent to open countryside, the Edge **must** have an informal suburban character with tree-lined streets, large gardens, parks and generous green spaces. This **should** be reflected in the landscape design and choices of plants and materials.

Kingsley Woods and The Copse

A linear green space wrapping around the north and east sides of the Edge. The woodland **should** be managed by selectively thinning trees and replanting with mixed deciduous species to improve biodiversity and ensure its longevity. It **must** include:

- Cycle paths and footpaths, using 'no-dig' construction techniques to avoid root damage.
- A scattering of specimen trees and shrubs in front of the tree belt with a number of LAP play spaces.
- A ha-ha ditch feature around the north, east and west sides of the Edge creating 'defensible space' for rear gardens and forming part of the site-wide Sustainable Urban Drainage System (SuDS).

- Elegant, timber bridges with anti-slip surfacing spanning the ditch at intervals to connect the residential streets to Kingsley Woods.
- A new linear open space- The Copse- **must** be introduced, running south from the woods towards Gregory Park. This 'green finger' **should** be an extension of Kingsley Woods, with informal drifts of native tree planting, areas of wildflower meadow and mown grass, with two LAPs and areas of seating.

The Plains

Beyond the eastern tree belt, this space **must** be laid out for community use and **must** include:

- Communal allotments, with a small area of car parking and a club house for allotment holders.
- Public sports pitches, with an area of 3.6 hectares able to accommodate two senior football pitches, three junior football pitches and a cricket square.
- An extension to the Jubilee Cycle Way around the south and east sides of The Plains, contained by an earth bund.
- A NEAP and a LEAP along the west side against the tree belt.

PRECEDENTS



KINGSLEY WOODS



THE PLAINS ALLOTMENTS



THE COPSE



KINGSLEY WOODS: ILLUSTRATIVE CROSS SECTION THROUGH INFORMAL OPEN SPACE

CHARACTER AREA 1: THE EDGE

Neighbourhood and locally equipped areas of play (NEAPs and LEAPs)

Vertical railings along rear garden boundaries to ha-ha

Gregory Park The Copse

Kingsley Woods existing woodland shelter belt



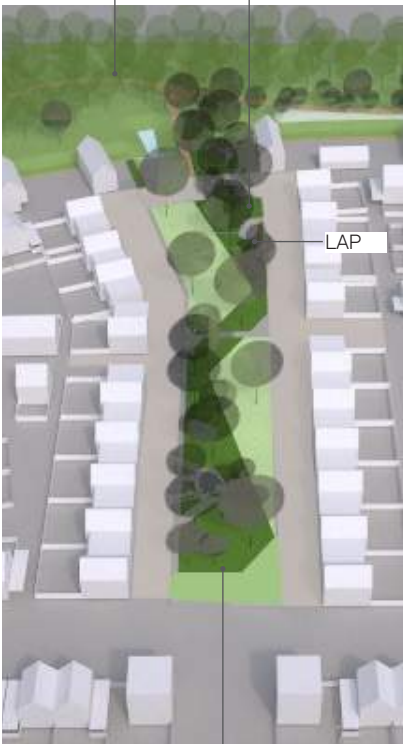
Kingsley Woods existing woodland shelter belt

Kingsley Woods ha-ha and bridge

KINGSLEY WOODS: ILLUSTRATIVE AERIAL VIEW LOOKING SOUTH

Kingsley Woods existing woodland shelter belt

Tree planting



LAP

Tree planting and wildflower grass

THE COPSE: ILLUSTRATIVE AERIAL VIEW LOOKING NORTH

Kingsley Woods existing woodland shelter belt

Allotments

Jubilee Cycle path

Bunds

Orchards

Allotment pavilion



Access road and parking

Kingsley Woods existing woodland shelter belt

Neighbourhood and locally equipped areas of play (NEAPs and LEAPs)

Sports pavilion

Formal sports pitches

Orchards

THE PLAINS: ILLUSTRATIVE AERIAL VIEW LOOKING EAST

5 CHARACTER AREAS

Gregory Park

This is an informal, linear green space designed as a SuDS feature and recreational amenity. This **must** include:

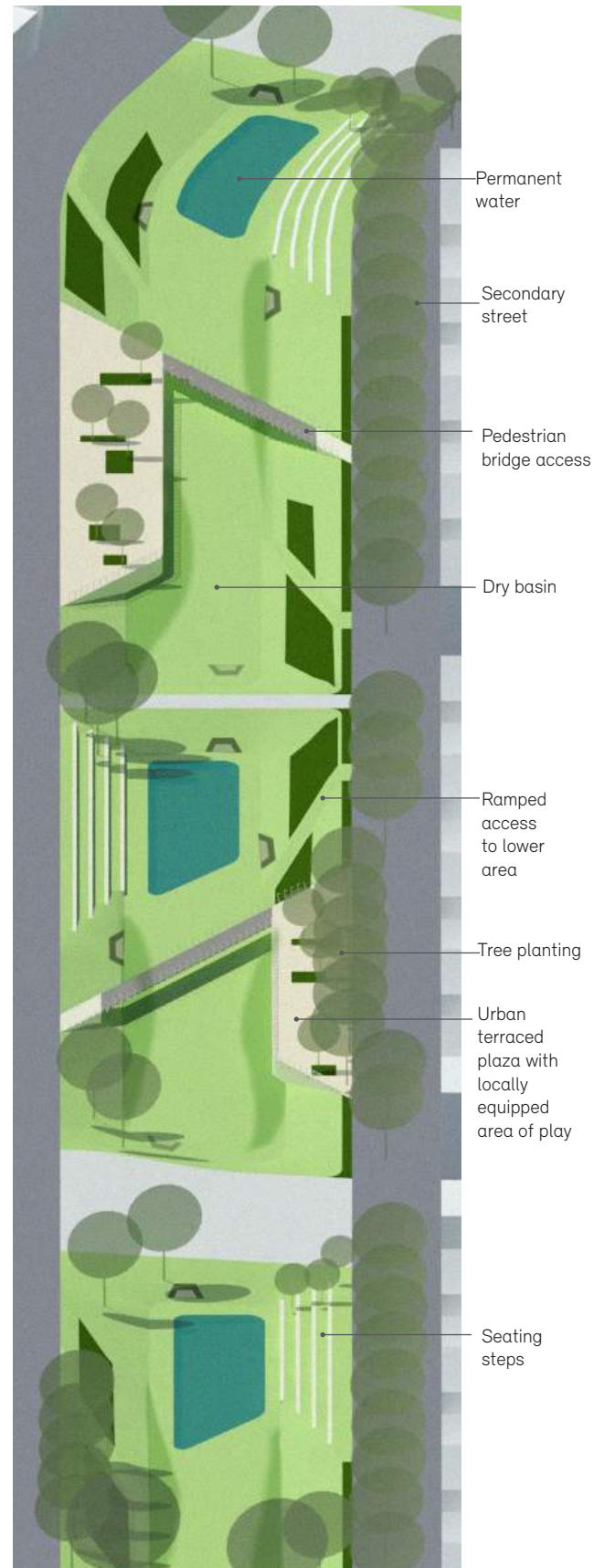
- A sunken area approximately 2m deep to accommodate the requirements of the SuDS system, with areas providing both temporary and permanent water attenuation. Edge treatments will include retaining walls and varied grass slopes at a maximum gradient of 1:3.
- Pedestrian routes across the space via simple, elegant timber bridges.
- Routes through and around the park for pedestrians.
- Access to the lower level via ramped grass banks.
- Emergent and wetland planting providing biodiversity, whilst restricting bird access to the water.
- Other blocks of native shrub planting and grasses.
- Paved areas at grade for seating and play (LAPs).
- Informal tree planting at the street level to frame and enclose the space.

The Green

This is a communal green space with the character of a village green. The open space **should** include a LAP and space for seating beneath trees. It **should** be able to accommodate informal recreation but not large organised games. The space **should** form a local focus for the surrounding neighbourhood.

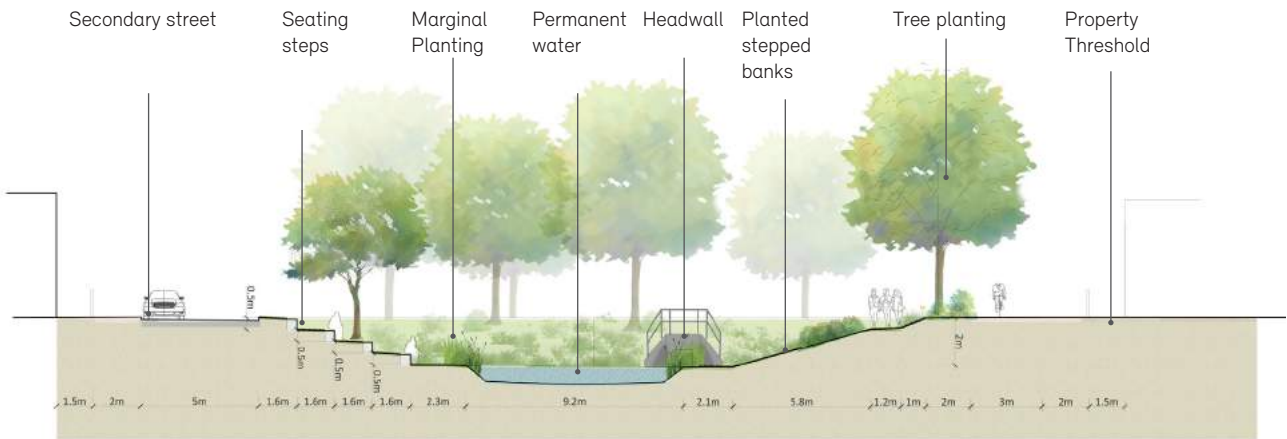
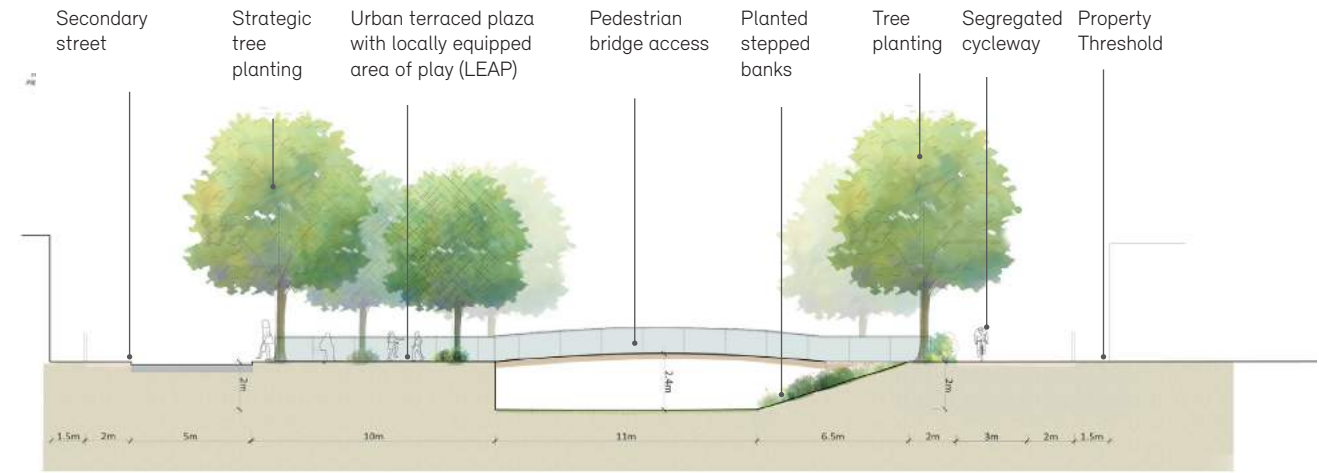


THE GREEN: ILLUSTRATIVE AERIAL VIEW LOOKING WEST



GREGORY PARK: ILLUSTRATIVE AERIAL VIEW LOOKING WEST

CHARACTER AREA 1: THE EDGE



GREGORY PARK: ILLUSTRATIVE SECTIONS



GREGORY PARK: ILLUSTRATIVE AERIAL VIEW LOOKING NORTH EAST

5 CHARACTER AREAS

5.3 THE TOWN DESIGN PRINCIPLES

MEDIUM DENSITY; 2-4 STOREYS

Mainly terraced houses set within a series of mews streets, lanes and community squares.

Mandatory guidance for the Town:

- **Must** be predominately terraced houses, sprinkled with some semi-detached houses, set out around north-south orientated perimeter blocks.
- Continuous building frontage and routes **must** be provided to open spaces including: Gregory Park, The Titch, Beta Square, The Stoop, Kingsley Woods, the allotments and tennis courts on the western side of the site.
- The primary street **must** provide continuous building frontage.
- Tertiary streets **must** be designed to create opportunities for play, cycling and meeting neighbours.
- Landmark buildings **must** be provided at the north-west gateway to the site and around the Titch and The Stoop.
- Parking **must** be predominately: on-plot at front of house; on-plot at rear; or on-plot integrated.



PRECEDENT



MEWS STREET



VARIED ROOFSCAPE ON SEMI-DETACHED HOUSES



SMALLER TERRACED HOUSES



THREE STOREY TOWN HOUSES



ENGAGING TERRACED HOUSE ELEVATION



GARDEN SQUARE ENCLOSED BY HOUSES

CHARACTER AREA 2: THE TOWN



ILLUSTRATIVE CHARACTER AREA FRAMEWORK DIAGRAM



ILLUSTRATIVE CHARACTER AREA AERIAL

5 CHARACTER AREAS

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE TOWN AREA 3: TYPICAL TOWN STREETS



LOCATION KEY

KEY

- S1 Secondary Street ① (P.20)
- T2 Tertiary Street ② (P.21)
- T3 Tertiary Street ③ (P.21)
- i Intersection ①②③ (P.36-7)
- ▶ Front doors
- ▶ Destination

EXAMPLE OF BUILDING ENGAGING WITH THE STREET (P.38)



CYCLE/STORAGE SHED IN THE GARDEN (P.24)



THE TOWN I BLOCK TYPOLOGY (P.34)

1.5M FRONT PRIVACY STRIP (P.58)



NORTH

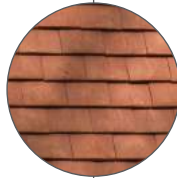


THE TITCH

SMALLER TERRACED HOMES



ADOPTABLE STREET MATERIALS - BLOCK (P.17+P.48)



DURABLE TRADITIONAL MATERIALS (P.44)

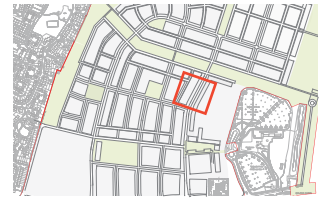
ACCENT MATERIALS



CAR PARKING ON-PLOT INTEGRATED (P.23)



CHARACTER AREA 2: THE TOWN

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE TOWN AREA 4. MORLEY STREET, MEWS STREET AND SCHOOL



LOCATION KEY

KEY

- P1** Primary Street ① (P.19)
- T3** Tertiary Street ③ (P.21)
-  Front doors
-  Destination

THE TOWN II BLOCK TYPOLOGY (P.34)



CAR PARKING ON-PLOT AT FRONT (P.23)



CAR PARKING AT REAR IN GARAGE WITH ACCOMMODATION ABOVE (P.23)

TOWN HOUSES



CYCLE PATH (P.19)



PRIMARY STREET 1. MATURE STREET TREES (P.19)



NORTH



GREGORY PARK

MARKET SQUARE

PRIMARY SCHOOL PLAYING FIELDS



DURABLE TRADITIONAL MATERIALS (P.44)



ACCENT MATERIALS



CYCLE/STORAGE SHED IN THE GARDEN (P.24)

5 CHARACTER AREAS

DETAILED DESIGN GUIDANCE FOR THE OPEN SPACES IN THE TOWN

PRINCIPLES

This area has a quiet residential, urban character, with tight streets and mews and **must** include a number of more formal open spaces.

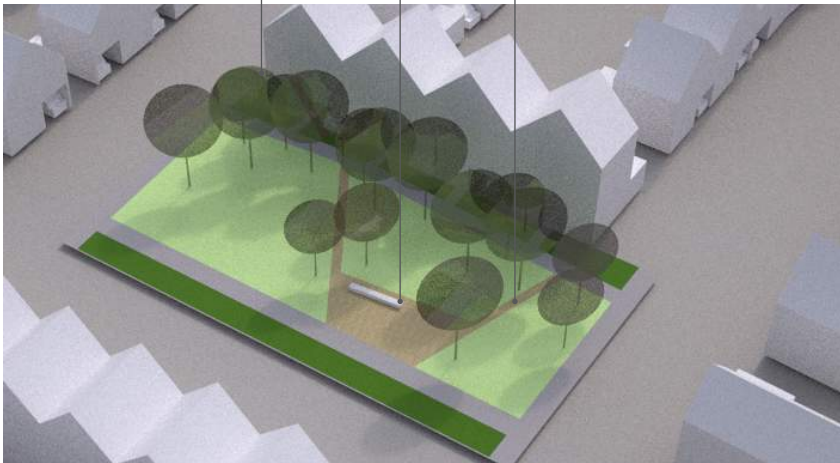
The Titch and The Stoop

These are similarly sized garden squares in the centre of the Town. They **should** be designed for flexible use, and laid out around central meeting /event spaces with areas for sitting and informal recreation. They **should** be framed by tree planting and include areas of more ornamental planting, a LAP, open lawns, areas of seating and paths catering for routes across the space.

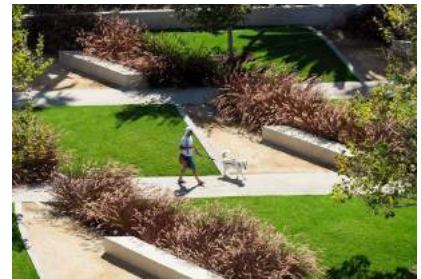
Allotments and tennis courts

In the open space on the western boundary of the site tennis courts and allotments **must** be provided.

Boundary tree planting Meeting space Access path



THE STOOP: ILLUSTRATIVE AERIAL VIEW LOOKING WEST



SEATING



TREE PLANTING

Boundary tree planting Local area of play (LAP) Diagonal access path



THE TITCH: ILLUSTRATIVE AERIAL VIEW LOOKING WEST



INFORMAL RECREATION



NEIGHBOURHOOD PARK PRECEDENT

PRECEDENTS



GARDEN SQUARES



GARDEN SQUARES



TENNIS COURTS



MEWS STREETS



ON-PLOT PARKING



STREET PLANTING



STREET PLANTING



ALLOTMENTS



CHILDREN'S PLAY

5 CHARACTER AREAS

5.4 THE CITY DESIGN PRINCIPLES

HIGHER DENSITY; 2-5 STOREYS

Mainly apartments, with two mixed use squares, school, community centre and car businesses.

Mandatory guidance for the City:

- **Must** comprise predominately apartments with podium parking on ground floor with landscape courtyards above. Podiums **must** provide active frontage around all sides of the block at ground floor.
- Key groups of buildings and continuous building frontage **must** be provided around Market Square, with active ground floors to include: primary school, nursery, community centre and commercial units. Apartments **must** be provided on upper floors.
- The Market Square landscape **must** include: paving; trees; parking; street furniture for sitting and enjoying; and a legible pedestrian and cycle link to Newmarket Road Park and Ride and Beta Square. The centre of the space **must** be able to host community events, such as a farmer's market.
- Beta Square **must** be a formal urban square with continuous building frontage, framed by a mix of terraced houses, apartment buildings and a landmark building.
- The primary street and Newmarket Road **must** provide continuous building frontage.
- Street trees, cycle path and a green buffer **must** be provided on Newmarket Road.
- The car businesses area **must** contribute to the positive place-making of Newmarket Road, Austin Street and the northern boundary of the car businesses, with a consistent building line and street trees.
- Parking **must** be accommodated predominantly within podiums.



PRECEDENT



A VARIETY OF ROOF FORMS AND MATERIAL TREATMENTS FOR LARGER BUILDINGS



APARTMENTS OVER NON-RESIDENTIAL USES



LARGER FOOTPRINT BUILDINGS WITH VARIED ROOF FORMS



VARIETY OF BUILDING FORMS AROUND A MARKET SQUARE



TERRACED OR PITCHED ROOF HOUSES WITH APARTMENT BUILDING



SCHOOL - VARIETY OF BUILDING ELEMENTS UNIFIED BY A CONTROLLED PALETTE OF MATERIALS AND ARCADED BASE (SEE PAGE 87)



ILLUSTRATIVE CHARACTER AREA FRAMEWORK DIAGRAM



ILLUSTRATIVE CHARACTER AREA AERIAL

- KEY
- Landmarks
 - Key groups of buildings
 - Continuous building frontage

5 CHARACTER AREAS

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE CITY AREA 5: TYPICAL CITY STREETS, BETA SQUARE AND PODIUM BLOCK



LOCATION KEY

KEY

- S1 Secondary Street ① (P.20)
- S3 Secondary Street ③ (P.20)
- T1 Tertiary Street ① (P.21)
- i3 Intersection ③ (P.37)
- ▶ Private front doors
- ▶ Entrances to apartment buildings
- ➔ Destination

THE CITY BLOCK TYPOLOGY (P.34)



BETA SQUARE (P.86)



MAISONNETTES AND HOUSES



APARTMENT BUILDINGS WITH MASSING BROKEN UP BY ROOF PROFILE (P.38)



NORTH



MARKET SQUARE



DURABLE TRADITIONAL MATERIALS (P.44)



ACCENT MATERIALS



PODIUM PARKING (P. 23)



FRONTAGE TO ALL SIDES OF PODIUM (P. 23)



LANDSCAPED COURTYARD OVER PODIUM (P. 23)

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE CITY AREA 6. NEWMARKET ROAD



LOCATION KEY

KEY

- N Newmarket Road (P.18)
- T1 Tertiary Street ① (P.21)
- i3 Intersection ③ (P.37)
- ▶ Private front doors
- ▶ Entrances to apartment buildings
- ▶ Destination

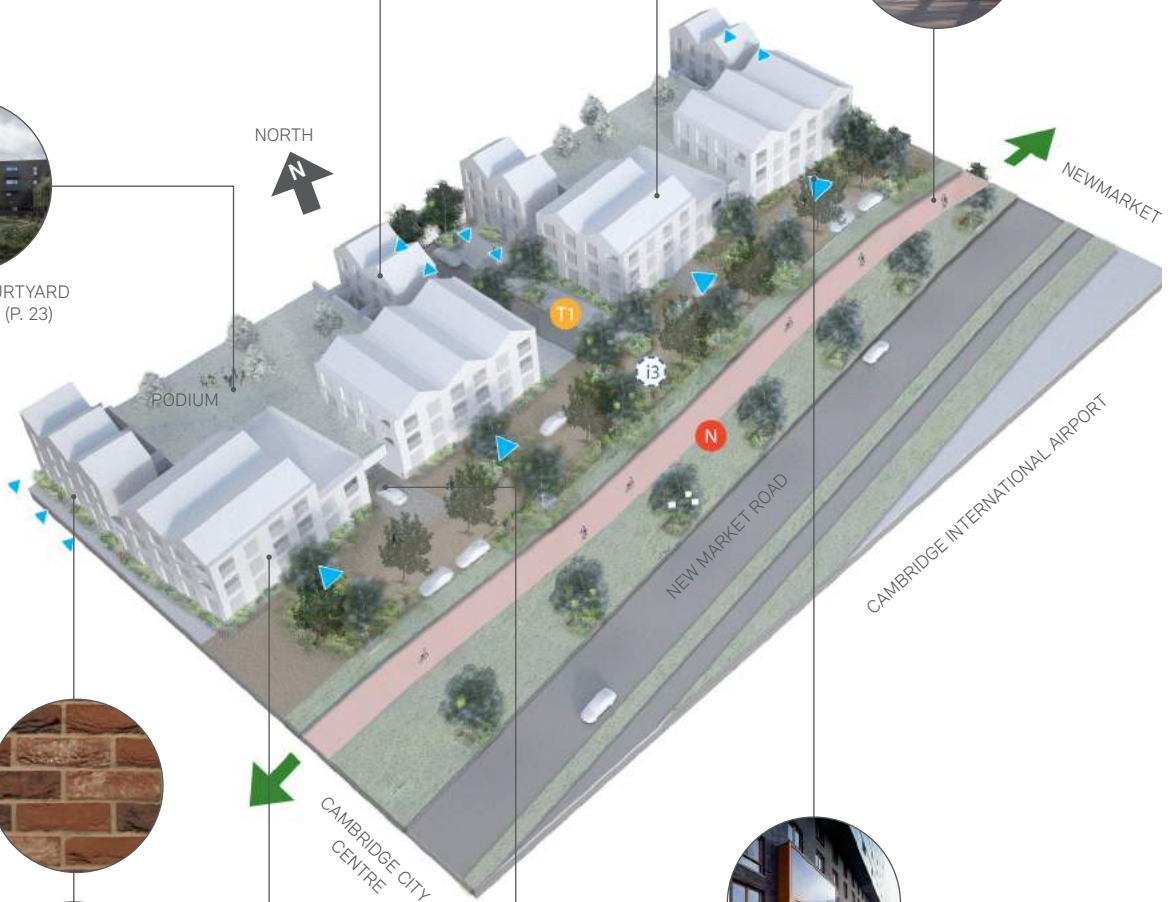
THE CITY BLOCK TYPOLOGY (P.34)



APARTMENT BUILDINGS WITH MASSING BROKEN UP BY ROOF PROFILE (P.38)



NEWMARKET ROAD IMPROVEMENTS INCLUDING DEDICATED CYCLE PATH (P.18)



DURABLE TRADITIONAL MATERIALS (P.44)



ACCENT MATERIALS



5 CHARACTER AREAS

DETAILED DESIGN GUIDANCE FOR THE OPEN SPACES IN THE CITY

PRINCIPLES

The City is characterised by larger buildings and mixed land-uses. It will have a larger urban 'grain' and more day and night activity. Consequently, the open spaces **must** be and multifunctional and cater for more active uses, events and edible landscapes.



LOCATION KEY

Beta Square

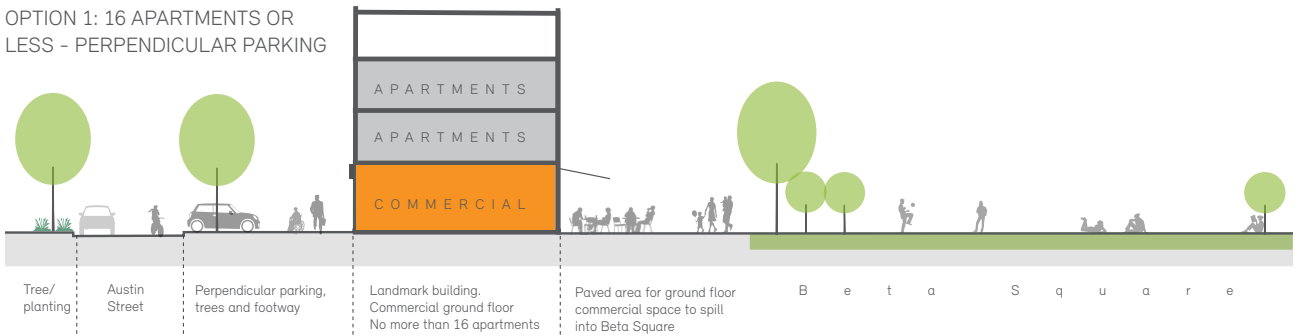
- Beta Square **should** have the character of a city park. Designed for intensive and flexible use, with large central lawn for recreation.
- A play area (LEAP) **must** be provided, possibly including water and imaginative play elements.
- It **should** include generous mixed shrubberies containing ornamental shrubs and herbaceous plants, with mixed tree planting above. A paved space **should** be outside the landmark building on the west of the square.
- The landmark building on the west of the square **must** provide active frontage to Austin Street and Beta Square. This **must** be achieved using the options illustrated below.
 - OPTION 1: 16 APARTMENTS OR LESS - PERPENDICULAR PARKING - which must adhere to the principles in Parking Typology 5 on page 23.
 - OPTION 2: MORE THAN 16 APARTMENTS, UNDERGROUND PARKING - which must adhere to the principles in Parking Typology 6 on page 23.
- Residential front doors **must** activate the north, east and south side of Beta Square.

- Landmark building with ground floor active frontage to Beta Square
- Paved area next to ground floor of landmark building
- Austin Street
- Local equipped area of play (LEAP)
- Central lawn
- Front doors wrapping square

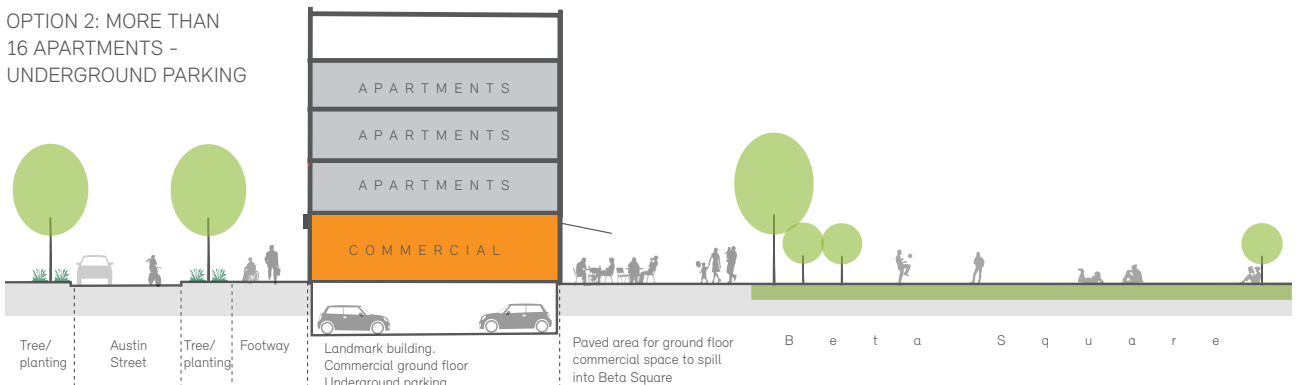


BETA SQUARE: ILLUSTRATIVE AERIAL VIEW LOOKING WEST (ALTHOUGH THE PLAN IS ILLUSTRATIVE THE PRINCIPLES ARE RECOMMENDED)

OPTION 1: 16 APARTMENTS OR LESS - PERPENDICULAR PARKING



OPTION 2: MORE THAN 16 APARTMENTS - UNDERGROUND PARKING



ILLUSTRATIVE EAST-WEST SECTIONS OF BETA SQUARE (ALTHOUGH THE SECTION IS ILLUSTRATIVE THE PRINCIPLES ARE RECOMMENDED)

Market Square

- This will be the main city square in the development, a space of civic scale and dignity, and **must** be designed to flexibly accommodate space for recreation and events, car parking and service access to the buildings.
- A link **must** be provided through Market Square to connect the Park and Ride with Beta Square.
- Market Square **must** include a raised table that extends over Morley Street.
- A central paved area for community events **must** be provided and **should** be framed by grids of trees.
- The majority of the visitor parking **must** be located in a flexible zone in the west of the square.
- Active frontage **must** be provided around the perimeter of the square and include building entrances to the school, nursery, community centre, residential and commercial units.
- Buildings surrounding Market Square **must** be no taller than three storeys in height (15m).
- The new school on Market Square **must** provide a strong sense of enclosure, with a varying roof form. Entrances and windows **must** create active frontage onto the square. A separate entrance **must** be provided to the school hall and playing fields to ensure they can be used independently outside of school hours.
- Depending on the different kinds of internal spaces that may be required, the school buildings could take the form of a number of elements. These elements could be linked with an arcaded brick base around the perimeter of the square, creating a unifying design feature.



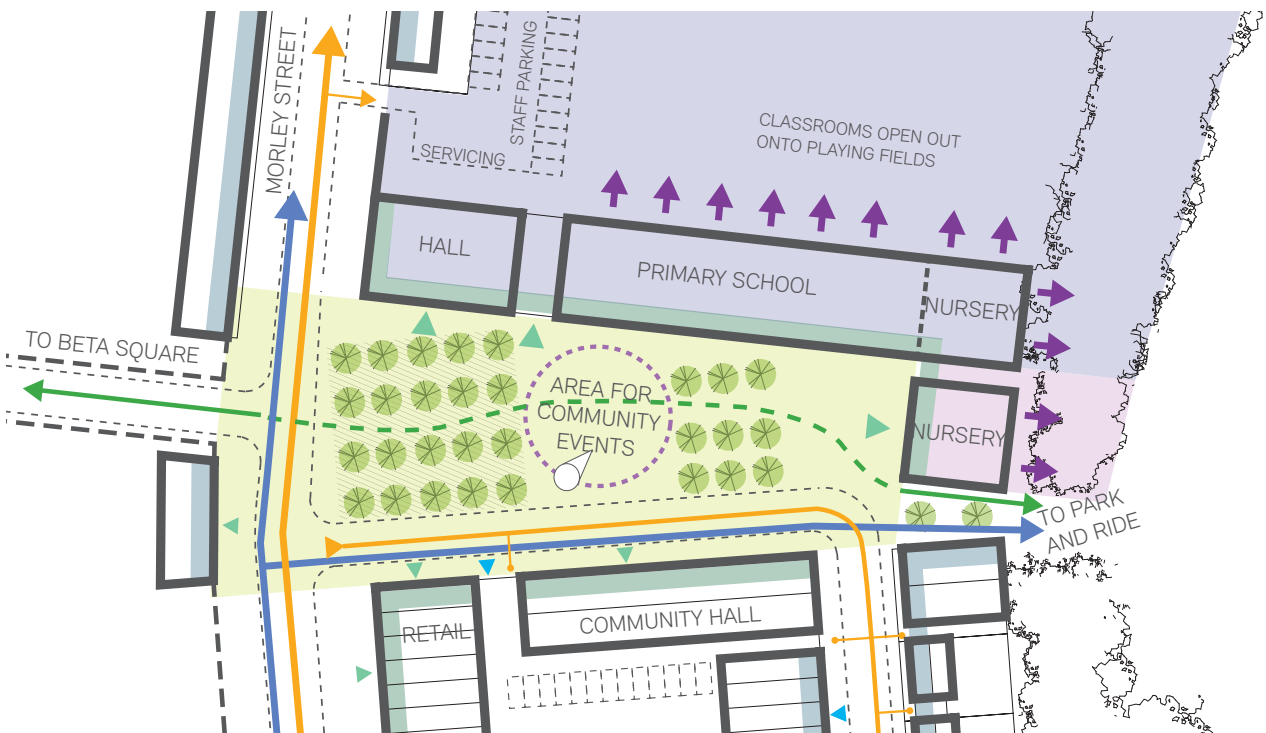
LOCATION KEY



ILLUSTRATIVE VIEW OF MARKET SQUARE WITH SCHOOL IN BACKGROUND

KEY

	Market Square		Residential frontage
	Roads and parking bays		Non residential frontage
	Flexible visitor parking zone		Residential entrance
	Cycle route		Non residential entrance
	Pedestrian key route		Primary school/ Nursery site area
	Vehicle route		Commercial nursery site area
	Refuse collection points		Classrooms onto outdoor space



ILLUSTRATIVE PLAN OF MARKET SQUARE (ALTHOUGH THE PLAN IS ILLUSTRATIVE THE PRINCIPLES ARE **RECOMMENDED**)

5 CHARACTER AREAS

DETAILED DESIGN ILLUSTRATING MANDATORY AND RECOMMENDED GUIDANCE FOR THE CITY AREA 7. MARKET SQUARE AND MORLEY STREET



LOCATION KEY

KEY

- Primary Street ① (P.19)
- Secondary Street ① (P.20)
- Intersection ③ (P.37)
- Private front doors
- Entrances to apartment buildings
- Commercial entrances
- Primary/nursery/community
- Destination
- School active frontage and arcaded base

SHARED PEDESTRIAN AND VEHICLE SURFACE WITH LINK BETWEEN PARK AND RIDE AND BETA SQ

PRIMARY SCHOOL WITH ARCADE

NURSERY

COMMUNITY CENTRE



DEDICATED CYCLE PATH (P.19)

DROP OFF SPACES



PARK AND RIDE



DURABLE TRADITIONAL MATERIALS (P.44)

ACCENT MATERIALS



COMMERCIAL

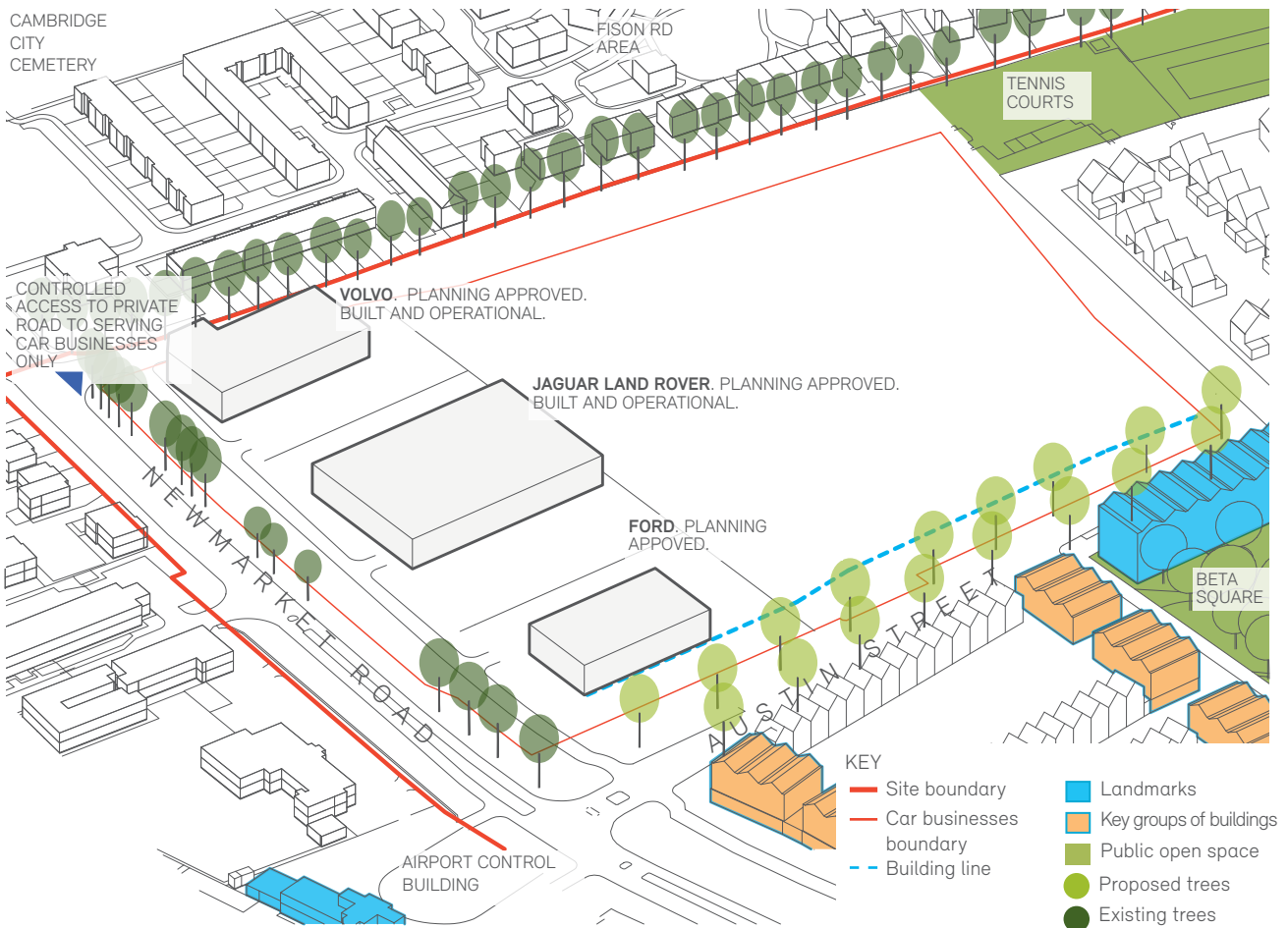


PODIUM PARKING (P.23)



LANDSCAPED COURTYARD OVER PODIUM (P.23)

DESIGN GUIDANCE FOR THE CAR BUSINESSES SITE



CAR BUSINESSES SITE

PRINCIPLES

- The south west corner of the Wing site **must** be used for car businesses.
- Proposals for the car businesses site **must** contribute to the positive place-making of Newmarket Road, Austin Street and the secondary street along the northern boundary of the car businesses site.
- New buildings on Newmarket Road can be no taller than 12m. New buildings on Austin Street can be no taller than 15m.
- Car businesses could consider other land uses on upper floors, e.g. office space.
- Proposals for new buildings on Austin Street **must** keep a consistent building line parallel with the alignment of the primary street.
- The existing trees on Newmarket Road, some of which are subject to Tree Preservation Orders (TPOs), **must** be retained.
- New trees **must** be accommodated/planted on both sides of Austin Street.



CAR BUSINESSES LOCATION PLAN



JAGUAR LAND ROVER ON NEWMARKET ROAD

6 DELIVERY

6.1 DELIVERY AND PHASING

A detailed site-wide phasing plan will be submitted to the local authority at the same time as the Design Code, in accordance with Condition 7 of the outline planning permission. Developers of future phases are expected to refer to the site-wide phasing plan. Phases 1 and 2 of Wing are being developed by Hill in a joint venture with the landowner, Marshall; the joint venture vehicle is referred to as Hill Marshall LLP.

Phase 10 will complete the masterplan with the car businesses site on Newmarket Road.

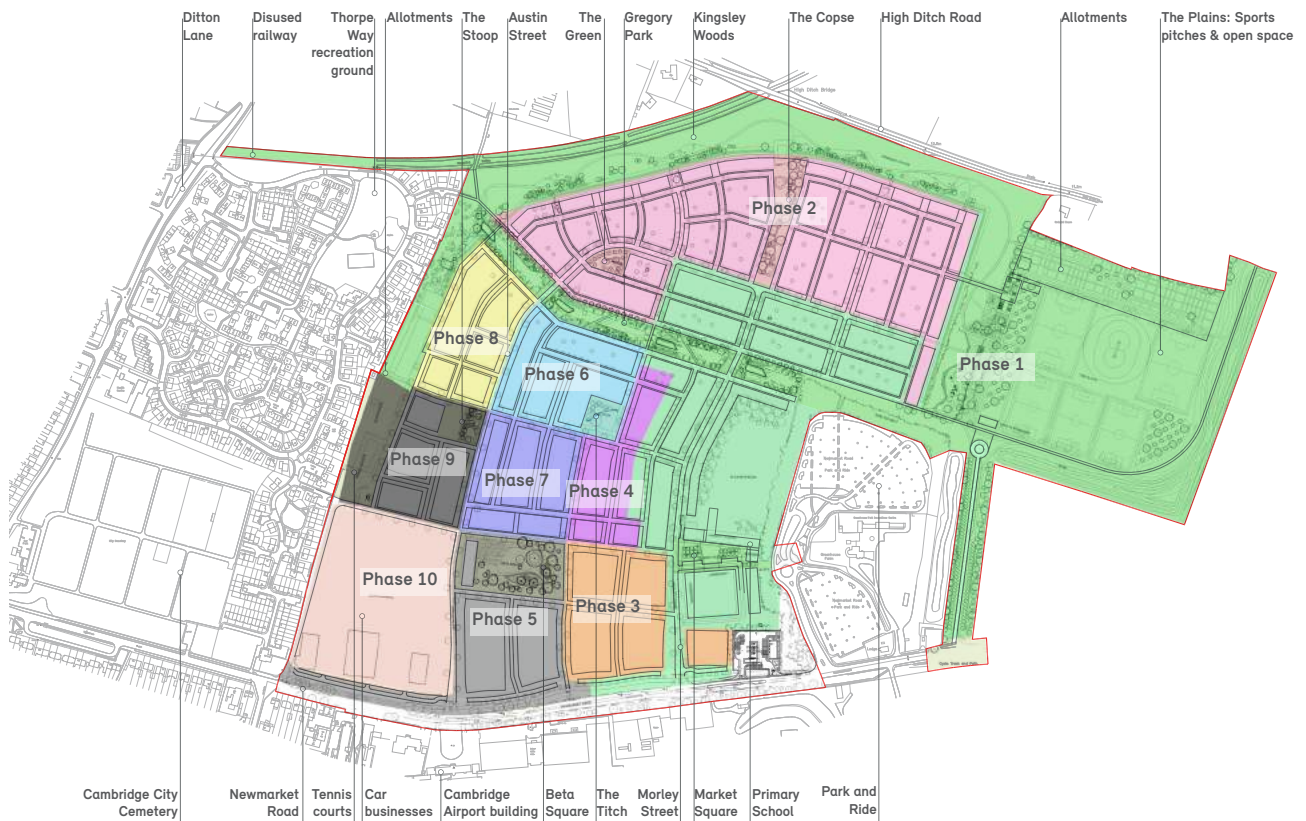
The primary school and nursery will be delivered by Cambridgeshire County Council and transferred to the Anglian Learning Trust under the terms of the S106 Agreement.

Phase 1 includes the site-wide SuDS strategy, the sports pitches and allotments in The Plains, Gregory Park, Kingsley Woods and the local centre, including Market Square, the Primary School, the nursery, the Community Centre and 250 homes.

Phase 2 includes 250 homes and The Copse.

It is envisaged that Phases 3-5 will deliver Beta Square and approximately 500 homes along Newmarket Road and in the centre of the site.

Phases 6-9 will deliver the Titch, the Stoop and tennis courts and allotments on the western edge of the site along with approximately 300 homes.



SITE-WIDE PHASING PLAN

6.2 MANAGEMENT AND ADOPTION

All of the streets in Wing are being designed to adoptable standards, with an aspiration that all streets will be adopted by Cambridgeshire County Council. Opportunities **should** be considered for downgrading vehicle streets to be traffic free where appropriate in the future.

It is envisaged that all strategic landscaping, including the open spaces, tree belts and playing pitches, along with the public realm and community uses associated with the Market Square, will be managed via a resident funded management company.

Hill Marshall LLP is committed to working with the local authorities, Fen Ditton Parish Council and the Marshall Group to ensure that the management company is established in such a way as to embed the quality expectations of the development into the long term management of the site.

The intention is to also ensure that service charges are set at levels which are manageable for residents and occupiers of the development. The details of the estate management arrangements for the site are to be worked up and agreed under the terms of the S106 Agreement.

Infrastructure provided to deliver utilities to the site will remain the responsibility of the statutory undertakers in respect of water, foul, gas and electricity networks.

6.3 CODE REVIEW

This Design Code is intended to provide guidance for developers, designers and development control officers during the length of the project. Condition 8 of the outline planning permission requires any reserved matters application **must** include a statement demonstrating compliance with the Code. Where reserved matters applications vary from the Code the variation **must** deliver greater design quality and be justified through pre-application meetings with SCDC and in a compliance statement in the Design and Access Statement (DAS). There will be no need to amend the Code to encompass each potential variation.

However, there may be aspects of the Code that require modification to reflect design issues that become apparent once the initial phases of the development are constructed and lived in. It is therefore appropriate that there is an opportunity for the landowner and/ or local authorities to request a review of the Design Code.

The following **must** be outlined for a review of the Design Code to be made: the section/pages of the Code to be reviewed; an explanation of the reasoning for the request; details outlining the proposed change; and a timetable for the review. The review process is intended to focus on matters of detail and not matters of principle established within the Outline DAS. If a review occurs, it will not consider any aspect of the masterplan for which outline consent is agreed.

Any changes to the Code **must** be agreed between the lead developer and local authorities by mutual consent and in writing. It has been agreed that the scope of the Code cannot be widened to include matters outside the requirements of Condition 8.

6.4 QUALITY CONTROL

Marshall will take long-term stewardship of Wing. All proposals for the Wing site **must** have landowner approval before submitting reserved matters applications. Landowner approval will include a compliance check against the Design Code.

All proposals **must** be prepared in conjunction with pre-application meetings with the local authority and, where appropriate, the Cambridgeshire Quality Panel.

A GLOSSARY / JARGON BUSTER

Active frontage is building frontage which contains uses that promote activity on the street. These frontages should have visual interest and connect the activities taking place in the buildings to the public realm, through the careful placement of front doors and windows.

Area Action Plans (AAPs) are planning policy documents that sit alongside local plans. The 2008 East Cambridge AAP established the principle for 10,000-12,000 homes in a 'sustainable new urban quarter'. Wing is one part of the wider East Cambridge AAP area.

Blocks are areas bounded by a set of streets without being divided by any other significant streets.

Building line is the line formed by the frontages of buildings along a street.

Character areas have distinct characteristics, elements of which include density, layout, landscape, massing, building typologies, materials and parking arrangements.

Components of a place are a method of analysing urban environments using five classifications: districts, nodes, paths, landmarks and edges.

Continuous building frontage provides enclosure and a predominately uninterrupted elevation at ground floor level with a generally uniform building line.

Curtilage is an area of land attached to a house.

Design Code is a document that sets rules and provides a benchmark for quality in new development. Design Codes are often prepared for sites that will be phased, as they help with co-ordination across all phases of a large masterplan. The Wing Design Code has a greater level of detail than the outline planning application, providing an intermediate step before reserved matters planning applications.

Dedicated cycle path is a cycle path with no vehicles or pedestrians.

Framework plan is a diagram which shows how the five components of place - districts, nodes, paths, landmarks and edges - are combined three dimensionally within the context of the surrounding area.

Frontage is used to refer to elevations which address the street/public realm.

Gable end is the side of the building where the triangular part of the roof is visible in elevation.

Gateway is a term used to refer to a building/ collection of buildings that signifies to the visitor an entrance or exit to an area.

Ha-has are a recessed landscape design element that create a vertical barrier while preserving an uninterrupted view of the landscape and beyond. The typical form of a ha-ha is created by an incline which slopes downwards to a sharp vertical face.

In the round can be used as a term to describe a building designed with several key elevations that are visible from more than one viewpoint.

Key groups of buildings shape and articulate the focal spaces that they address. They should aid legibility, contribute to place-making and align with key vistas and views (note: key groups of buildings are secondary in terms of hierarchy to landmarks).

Key elevations terminate important views and vistas and as such must be carefully located and provide a considered design.

Landmarks are identifiable points of reference, such as a building or focal point, that stand out from their background/context (note: landmarks are primary in terms of hierarchy to key groups of buildings).

Layout is the way buildings, routes and open spaces are placed in relation to each other.

Legibility is the degree to which a place can be easily understood and traversed.

Massing is the combined effect of the height, bulk and silhouette of a building or group of buildings.

On-plot parking describes car parking accommodated within a property's site boundary, rather than on a public street or space.

Outline planning applications seek to establish the broad principles of a development. The Wing outline planning application was approved in 2016.

Nodes are focal spaces, such as the junction of paths or open spaces.

Parameter Plans are used in outline planning applications to illustrate the broad approach to development and usually include the following: land use; movement and access; building heights and landscape.

Passive surveillance describes the effect of those within buildings looking out onto streets and public spaces, thereby discouraging crime or anti-social behaviour.

Permeability is the degree to which an area has a variety of pleasant, convenient and safe routes through it.

Phase 1 of Wing contains up to 500 homes and a local centre including a school, community centre shops and cafe.

Place-making is creating somewhere with a distinct identity.

Planning conditions are requirements stipulated by the local planning authority when granting planning permission.

Plot is a piece of land that determines the extent of the land belonging to a house or building.

Podium parking refers to a shared parking typology where car parking spaces are provided within a covered structure, typically with a landscaped courtyard above.

Privacy strip is generally a narrow linear area, usually to the front and side of buildings. It includes front gardens, which provides a buffer and clearly defines the private domain from the public.

Public realm is the space between and within buildings that is publicly accessible, including streets, squares, forecourts, parks and open spaces.

Roofscape is a scene or view of roofs, especially when considered in terms of its aesthetic appeal.

Reserved matters planning applications are submitted after an outline planning application has been approved and contain detailed plans.

Streetscene is used to refer to the combined components of a street including, built form, landscape and street furniture.

Sustainable Urban Drainage Systems (SuDS) control and slow down surface water run off by mimicking natural drainage processes in built-up areas. These systems include: areas for surface water storage; areas for water to infiltrate the ground slowly; and systems for limiting water flow.

Townscape is a term used to describe the urban form and its visual appearance, usually from a neighbourhood or town scale.

Urban village is a small self-contained district or community within part of a town or city with a distinct identity and a mix of different uses, including housing.

Visual connections are a combination of views (what is visible from a particular points) and vistas (enclosed views, usually long and narrow) between important junctions, spaces and features.

Wayfinding is a term used to describe how people find their way through the built environment.

B COMPLIANCE CHECKLIST

Design Code compliance		
	Scheme compliance	If non compliance – reason for change
Movement and access		
Streets	✓/X	
Car parking	✓/X	
Cycle parking	✓/X	
Bus - future proofing	✓/X	
Utilities	✓/X	
Waste and recycling	✓/X	
Urban design principles		
Building heights	✓/X	
Blocks	✓/X	
Intersections	✓/X	
Building design	✓/X	
Landmarks, key groups of buildings and continuous building frontage	✓/X	
Built form around key streets and spaces	✓/X	
Summary of urban design principles	✓/X	
Materials		
Building materials	✓/X	
Building details	✓/X	
Public realm materials	✓/X	
Landscape and open space		
Public open space	✓/X	
Children's play and recreation	✓/X	
Trees and planting	✓/X	
Thresholds and boundaries	✓/X	
Street furniture	✓/X	
Lighting	✓/X	
Public art	✓/X	
Drainage and SuDS	✓/X	
Ecological features	✓/X	
Airport safeguarding	✓/X	
Character areas		
The Edge	✓/X	
The Town	✓/X	
The City	✓/X	

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