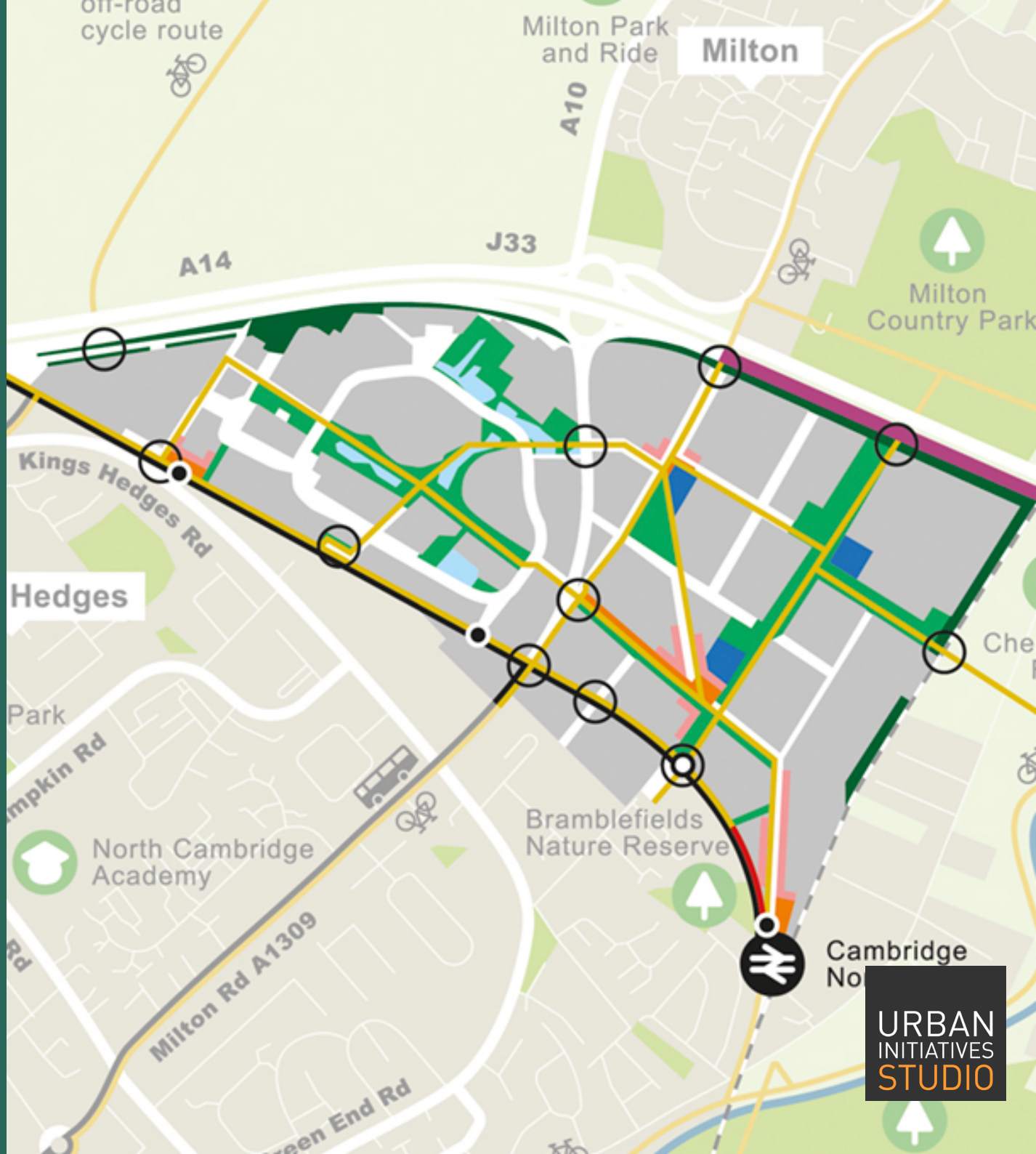
NORTH EAST CAMBRIDGE
TOWNSCAPE STRATEGY

APPENDIX:
DRAFT AREA ACTION PLAN REVIEW

FINAL REPORT

SEPTEMBER 2021



CONTENTS

1.0 INTRODUCTION

1.1 About this Appendix

1.1.1 This Appendix provides an independent review of the Draft North East Cambridge Area Action Plan (2020) undertaken by consultants Urban Initiatives Studio.

1.1.2 It is meant to inform further work on the North East Cambridge AAP and should be read in conjunction with the Townscape Analysis and Townscape Strategy reports.

2.0 CONNECTIONS

2.1 External Connections

Review

- Connections are generally sensible and in the right locations (1, 2, 4 and 5 on Figure 2.1) - but will need to align with approach routes.
- A14 Underpass (3) is ambitious, as needs tunnelling rather than cut and deck approach. It would need to be very wide to be a high quality environment. However, cost may be prohibitive.
- Access to Mere Way (2) missing from Cambridge Regional College.
- Access to Cambridge North Station from Chesterton and Fen Road has not sufficiently been considered.

Options

- Options are labelled A-D and annotated in red in Figure 2.1.
- Move link 3 further to east to bring footfall into north east corner and link to Waterbeach Greenway, and allow for circular walks through Milton Country Park (B). There is potential for a (wide) underpass underneath or a bridge link above the A14.
- Provide a better connection between Chesterton and Cambridge North Station - consider direct access through Bramblefields Nature Reserve and from Fen Road via Moss Bank (A). However, there is a challenge with providing access without disrupting the biodiversity of the nature reserve.
- Enhance connection from Orchard Park to Mere Way (2) (C).
- Is there a need to safeguard for a future connection northwards across the A14, to the west of the A14 interchange? (D). Land to the north of the A14 is in the Green Belt and not allocated for development by the Local Plan.

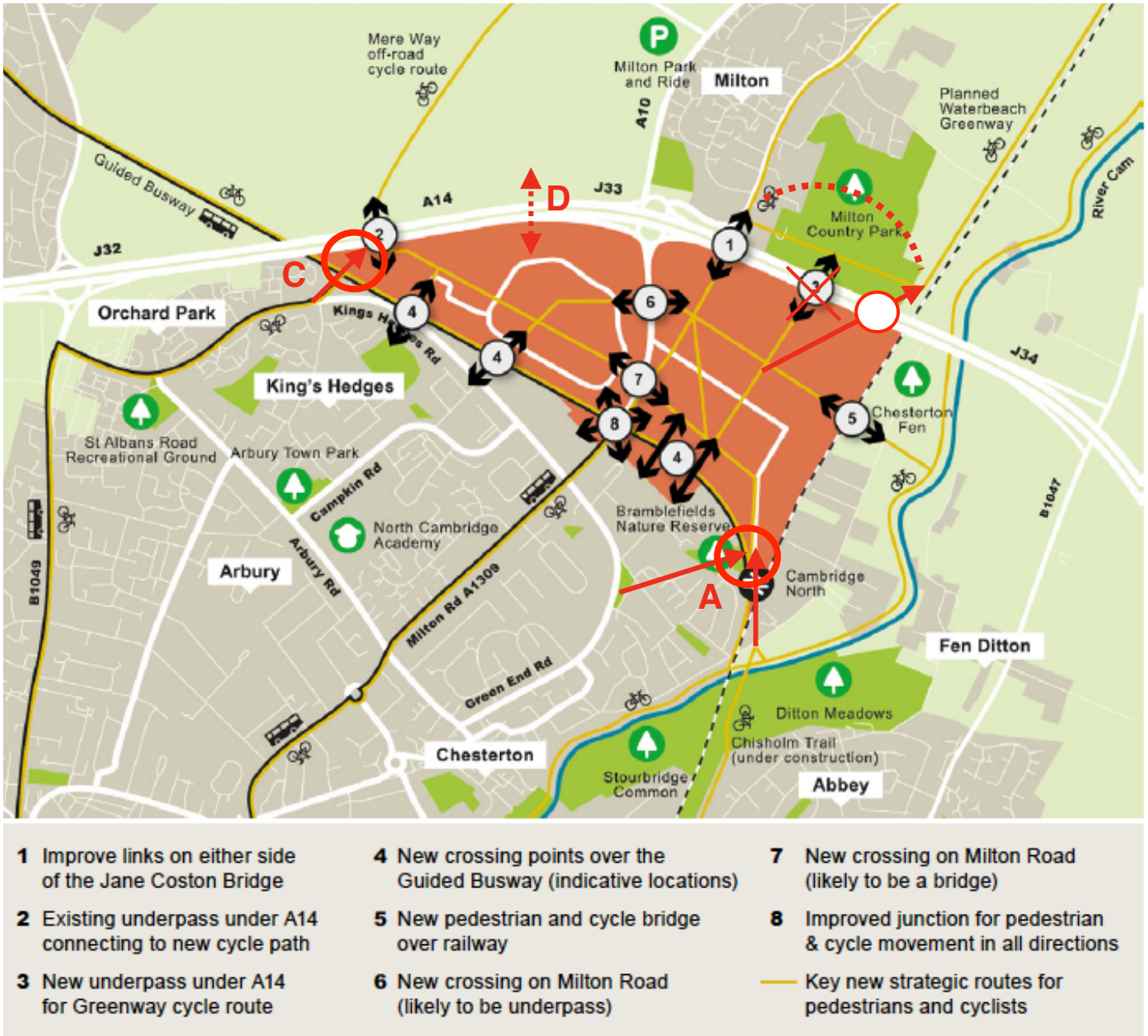


Figure 2.1: External connections diagram (draft NEC AAP) annotated with recommendations

2.2 Milton Road

Review

- Milton Road is major barrier for pedestrian and cycle movement, but also a psychological barrier.
- If NEC wants to become a single functional area, Milton Road needs to be tackled and overcome.
- Bridging and tunnelling Milton Road are less desirable means to cross for pedestrians and cyclists compared to a surface crossing because of the following:
  - Greater energy demand to walk and cycle on ramps;
  - Lack of supervision within a tunnel and potential safety concerns;
  - Poor environment in a tunnel;
  - Ramps/cuts become barriers themselves;
  - Does not resolve local street crossing on Milton Road to access public transport;
  - Tunnel or bridge will be avoided, and may not be used if alternative crossing facilities exist; and
  - This approach puts the car first, not people.
- South of the Guided Busway, Milton Road is a single lane each direction, so less traffic capacity anyway.

Options

- Opportunity to transform Milton Road into a civic urban street with 2-3 lanes but a 30mph travel speed between connections 6 and 8 in Figure 2.2. However, there is a challenge in delivering this as there is a risk of creating additional congestion.
- Facilitate at-grade junctions and pedestrian crossings with generous central reserves.
- Create an all-direction crossing at the intersection of the Guided Busway and Milton Road to include the backfilling of the existing underpass and establishing at-grade pavements.

Figure 2.2: External connections diagram (draft NEC AAP) with Milton Road highlighted

2.3 Bus, Guided Bus and Rail

Review

"North East Cambridge must be designed around the principles of walkable neighbourhoods and healthy towns, to reduce the need to travel and to encourage sustainable travel choices." (Draft NEC AAP)

- What is the relative importance of:
  - Cambridge North (regional connections, with CAM to city centre)
  - Guided Busway (suburban villages, Cambridge North station)
  - Milton Road bus corridor (Cambridge city centre)?
- Milton Road has the highest concentration of bus links with the city centre, which is possibly more relevant for future residents than Cambridge North Station.
- Figure 2.3 is annotated with 5 minute walkbands around proposed mobility hubs. The proposed bus route means poor accessibility for future residents at the northern edge of NEC.
- How is local east-west public transport connectivity between Cambridge Science Park and the eastern part of NEC facilitated? The Guided Busway is peripheral.

Options

- There is potential for a future interchange between the Guided Busway and local buses at the intersection of Milton Road and the Guided Busway. This is the major public transport access gateway into NEC.
- Design public transport routes to allow access to bus stops within a 5 minute walk from home for future residents.

Figure 2.3: Movement diagram (draft NEC AAP) annotated with recommendations

2.4 Walking and Cycling Approach

Review

"Providing an extensive high-quality network of walking and cycling routes within the site and (removing barriers) connecting to the wider area" (Draft NEC AAP).

- The AAP states that "Cycle congestion exists" already. How does the plan respond?
- Important not to lump walking and cycling in the same group as they have different requirements on their context and travel speed (safety and conflicts - speed of cycles and e-scooters vs pedestrian).

Figure 2.4: Movement diagram (draft NEC AAP)

Options

- The plan should be more specific about strategic cycling and walking infrastructure and their purpose.

Cycling

- Provide high capacity cycle infrastructure between NEC and:
  - Cambridge Science Park;
  - River Cam cycle route;
  - Cambridge North Academy;
  - other key infrastructure outside of the AAP area; and
  - Cambridge city centre
- The Chisholm Trail and GCP Milton Road improvements will improve connections with the city centre. A critical role for the AAP will be to integrate with these and other future planned projects, not only for new residents and employees but also people wanting to pass through NEC (e.g. to cycle from the city to Waterbeach)
- Distinguish between cycling for commute, leisure or local access.

Walking

- Plan for different walk purposes.
- Walking distance to local centres, parks and public transport stops should be no more than 5 minutes.
- Destination walks to schools, Cambridge North Station and places of employment should be no more than 10-15 minutes.
- Leisure walks (dog walking, running for exercise, to be out-and-about) can be longer, especially if within a green environment / corridor, and should allow for circuitous walks.
- A variety and choice of routes is important.

2.5 Walking and Cycling Routes

Review

- What are the desire lines for each mode?
- How important is Cambridge North Station for the area in respect of travel within Cambridge? Who is going to use the station and what routes will therefore be used?
- The proposed diagonal from Cambridge North Station to Milton is understood to enhance cycle connectivity from the station with Milton. What about providing a similar diagonal connection that links Milton Road with the Waterbeach Greenway?

Figure 2.5: Movement diagram
(draft NEC AAP) with diagonal route highlighted

Options

- Need to differentiate hierarchy of routes for walking and cycling because the will have different purposes and different qualities.
- Strategic Cycling Routes:
  - For commuting;
  - Allow faster travel speed;
  - Ideally segregated cycle lanes;
  - Feeding to destinations and into local neighbourhoods; and
  - Double up as leisure cycle routes.
- Local Cycling Routes:
  - Follow local streets;
  - Segregated lanes next to footways; and
  - Connect Cambridge Science Park, District Centre, residential areas and Cambridge North Station.

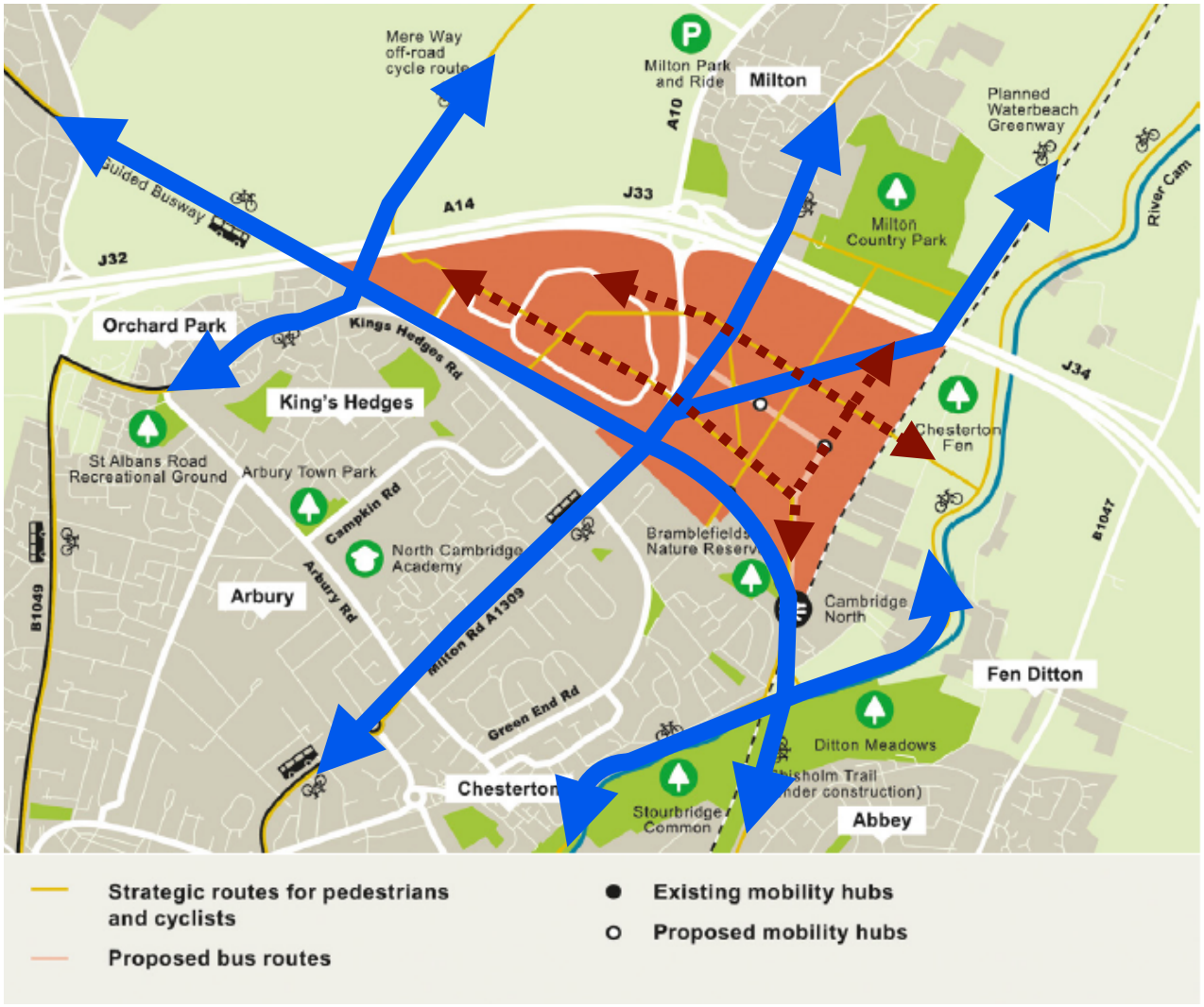


Figure 2.6: Movement diagram (draft NEC AAP) annotated with recommendations for strategic cycle routes (blue) and local cycling routes (red dash)

2.6 Discouraging Car Use / Approach

Review

"The scope for highway capacity improvements is limited due to the existing road configuration and lack of space, particularly at the junction of Milton Road with King's Hedges Road and Green End Road. The already high levels of traffic and peak hour congestion on the existing road network mean that the introduction of additional vehicular traffic is unacceptable in terms of highway capacity, place making and air quality. As a result, development will need to support a significant shift away from the private car and towards sustainable travel to a level not seen in Greater Cambridge previously." (Draft NEC AAP, p188).

- The capacity constraints on Milton Road, should not be the only reasons to shift away from the private car. Given the scale of development and its ambition, changes to the design of Milton Road should not be off the cards.
- The plan aims to have no additional vehicles on Milton Road and King's Hedges Road, stating that NEC "is firmly designed around the needs of people rather than cars". 0.5 parking spaces per new home is delivering 4,000 new parking spaces. This is a tall order considering the proposed development quantum. To deliver the aims of the plan, residential parking may need to be much lower than 0.5.
- The plan's design emphasis is to make car movements unattractive through limited parking no through routes for non-essential vehicles.
  - Will this approach work? Will it displace parking off-site, be efficient and desirable for the neighbourhood?
  - How inclusive is it? Some people, elderly and families have a greater need for car access or ownership as part of their everyday life, especially given peripheral location.
- 70% of existing Cambridge Science Park employees arrive by car. It is a major trip generator. Why is this? Where do they live? Do they have a viable alternative? What is the strategy to reduce demand at Cambridge Science Park?
- Given the peripheral location there will be people that want or need a car to respond to their needs.
- *"On-street parking should be limited through prohibitive design to ensure the appeal of the public realm is maintained, and that priority is clearly given to active sustainable modes and public transport. This will be enforced where necessary."* (Draft NEC AAP).

- However short term parking is often desired by retailers to support shop fronts in centres and on through routes, not just for disabled people.

Options

- Combine trip / parking budget across NEC. Challenge of how to enforce this.
- Other measures are needed to limit stress on King's Hedges junction.
- It is preferable to plan for cars as part of the mode share, rather than segregate them, albeit with a much reduced share.
- Opportunity to provide short term parking in the district or local centres, to provide an option for people that are less mobile, with the provision to monitor use of spaces and to review this in the future. Potential to use pricing as a deterrent.

Figure 2.7: Movement and parking diagram (draft NEC AAP)

2.7 Street Hierarchy

Review

"However, a site-wide network of through routes for vehicles would undermine efforts to reduce car use and encourage active travel" (Draft NEC AAP).

- The design approach to disconnect secondary routes, car-free centres and to separate vehicular from pedestrian / cycling routes may have unintended consequences:
  - Poor legibility and wayfinding;
  - Lack of clarity on front door location and main access for uses;
  - May disperse footfall and lack of activity concentration may affect vitality and viability of uses;
  - Proposed bus routes follow primary streets away from centres, which does not contribute to footfall;
  - Concern over pedestrian safety at night without vehicles because vehicular movement would provide passive surveillance;
  - The street network may create inefficiencies for delivery and services, generating additional traffic / miles driven;
  - May require space hungry turning heads for larger servicing vehicles; and
  - Cul-de-sacs have little passive surveillance and often have higher crime rates.

"Consideration should be given to the incorporation of car-free zones, particularly close to centres of activity and mobility hubs." (Draft NEC AAP).

- Pedestrian only zones are only viable in intense urban centres. Here they may fail to attract sufficient footfall from public transport and car based transport to make uses viable.

Options

- The plan should propose a clear hierarchy of routes that access the entire area.
- Movement routes should generally cater for all modes, walking, cycling, public transport and the private car, to cater for the needs of the neighbourhood 24/7.

Primary Streets

- Direct routes to provide main access to the area.
- Used by public transport.
- With segregated walking and cycling routes.
- High activity and safe to walk at night.
- Access to main centres, destinations and employment areas.
- Access to secondary streets.

Secondary Streets

- Main access to sub-areas.
- Designed as loops: streets that do not offer connectivity across the area but allow traffic to pass through for access, servicing and policing without having to back out or turn around.
- May be designed as conventional street or with traffic calming measures or as play street.
- Primary access to residential front doors, parking areas and servicing points.

Tertiary Streets

- Shared lanes and courtyards.
- Primary routes for pedestrian and cycling access to filter through neighbourhoods.
- Safe and calm routes.
- Access for emergency vehicles.
- Connecting open spaces.
- Supervision through intimate relationship with development.

- Important reference: Manual for Streets 2, 2010 - explores the integrated nature of street design with places and land uses.

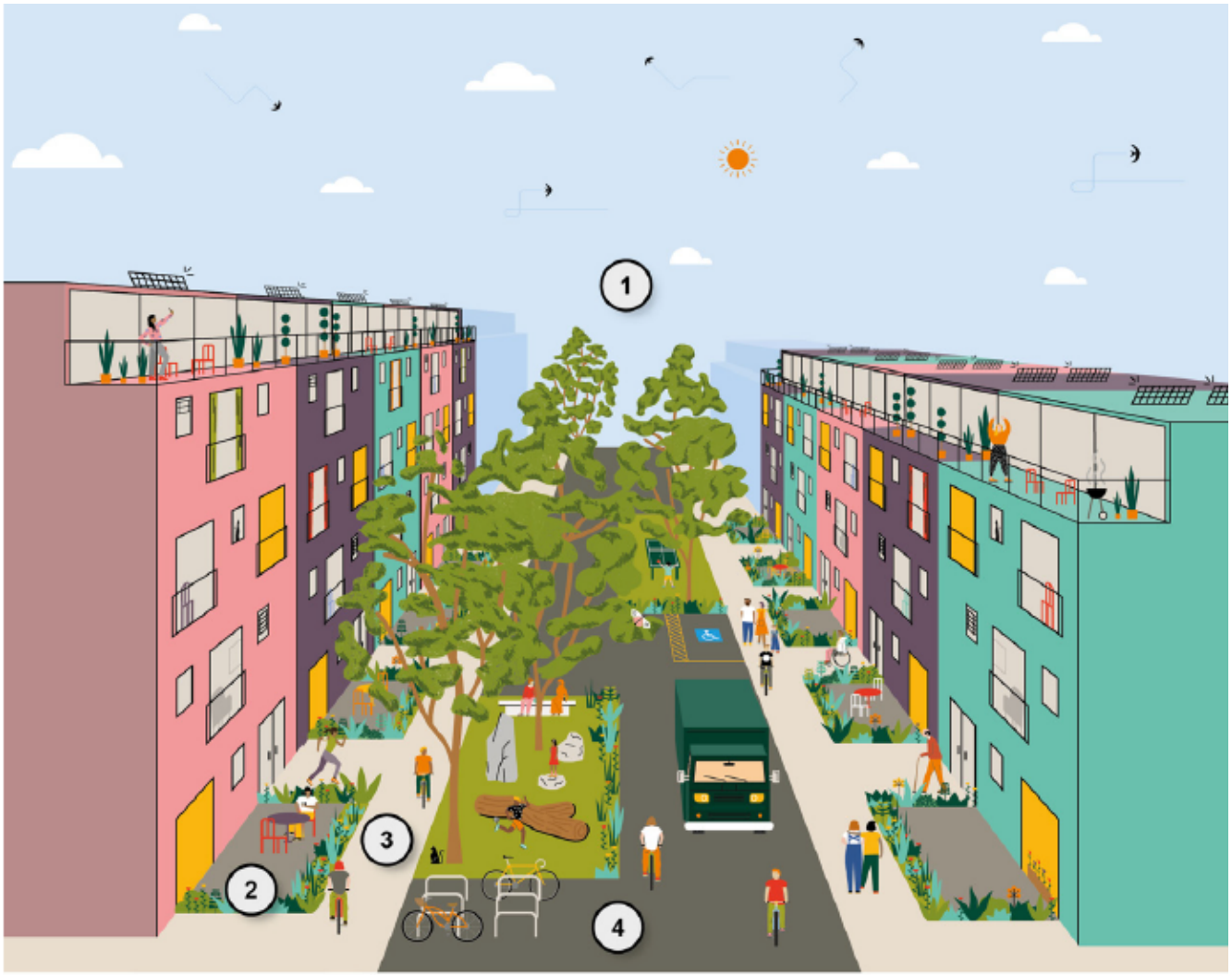
2.8 Street Design

Review

- The shared streets approach can work for residential streets with little traffic demand but not for the main streets passing through the area to the industrial area and Cambridge North Station.
- 2m footway may be too narrow in places.
- Providing small recreation areas in the street is welcome but mixing children's play with traffic may not be best option for either use (residual risk).
- Who will look after the street and public space elements?

Options

- Street design should reflect the role of the street in the network and the kind of traffic it will receive (including bus and car).
- Consider the social dimension of street and how pedestrian movement can be concentrated so there are opportunities for encounter and meeting.
- Consider that during the night time pedestrians prefer to walk along busy vehicular streets for added security.
- Consider pocket spaces away from moving traffic.
- Provide appropriate space for cyclists and minimise conflicts with pedestrians. Cyclists can use vehicular space and reserve footways for pedestrians.
- Prepare design codes for specific street types.
- Prepare a street network plan that sets out principal routes across the NEC area that development should implement.



KEY

1 Minimum 21m distance between building frontage

2 3m wide terrace gardens in front of ground floor homes

3 2m wide footway

4 Street design incorporates informal seating, planting, doorstep play areas, cycle and disabled parking, drop-off areas and accommodates vehicle access with a design speed below 20mph in a 'Woonerf' approach

Figure 2.8 Illustration of proposed secondary street design (draft NEC AAP)

3.0 OPEN SPACES

3.1 Open Space Provision

Review

- Most spaces proposed in draft AAP are linear spaces of similar scale.
- The plan lacks a large green space to act as a focal point and meeting place for community.
- A large open space would provide benefits beyond what many smaller space can, including a sense of “escape”, flexibility, the ability to play sports and hold events.
- City spaces such as Parker’s and Christ’s Pieces are far more usable for lots of people than a corridor as they offer opportunity to get away from buildings and into the open.
- The plan does not make clear the role and importance of spaces in the centre of neighbourhoods or sites to provide local amenity and respond to local need.
- Neighbourhood spaces can also offer character and identity, similar to the University’s quadrants.
- SUDS offer visual amenity and could be part of street design but retention areas will need to be found - where?
- Plan says that each site needs to deliver significant open space for use by the public on site. However it also allows for open space to be provided off-site: “Where a development proposal is unable to provide on-site provision in accordance with the adopted standards, new or enhanced provision should then be made offsite at Bramblefields Local Nature Reserve, Milton Country Park and Chesterton Fen.”
- High density development in particular needs to compensate with quality public spaces nearby (within 5 minutes to be convenient).
- Important that a certain minimum is provided on-site as surrounding open space, especially to the south of the site are minimal and already serve the community of Chesterton.

Options

- The plan should require the delivery of a range of types and sizes of open spaces, including
  - A centrally located large central park (ideally close to the district centre to enhance the experience offer of the centre and to encourage trip combination).
  - Linear green and blue corridors to connect open spaces, providing SUDS, but also for jogging, leisure walking and cycling.
  - Smaller neighbourhood green spaces to serve sub-areas - max 5 minutes walk from homes.
  - Smaller pocket parks and informal open space
- Local play facilities for children and teenagers should be provided;
- Development could more actively embrace Chesterton Fen and Milton Country Park as leisure and recreation destinations.

Fig 3.1: Open spaces diagram (draft NEC AAP)

Figure 3.1: Open spaces diagram (draft

4.0 LAND USES

4.1 Location of Centres

Review

- The rationale for the proposed locations of centres is not clear.
- Local centres perform local convenience role (convenience store, local independents, cafe, restaurant, bar, take-away) for their immediate hinterland and should be no more that 5 minutes away.
- District centres also perform local convenience role to their immediate hinterland (5 minutes walk). They also provide destinations and concentrations of uses (supermarket, shops and services, culture and leisure uses, range of eat and drink uses, evening economy, library) for larger catchment (10 min walk, cycle, public transport, car access) - opportunity for trip combination.
- Current centre locations shows poor convenience provision in north-east corner meaning people will be likely to drive.
- The District centre is:
  - hidden away and not visible from main vehicular and bus route through area (Milton Road), and unlikely to attract custom from King's Hedges, Chesterton and Milton;
  - only properly serves the NEC's eastern part, but not Cambridge Science Park; and
  - lack of buying power from office workers during the day and lunch time will affect its range, vitality and viability.
- For centres to work - they need to be natural hubs of activity due to their 'central location' in the route network and be highly accessible.
- Centres without high accessibility, prominence and visibility and a sufficiently dense hinterland that supports their convenience function are likely to struggle or fail.
- Trip combination and naturally passing through a centre is key to its success.
- Mixed use hinterland can help centres, which can benefit from different activity patterns (day, evening, weekend) and greater animation and variety.

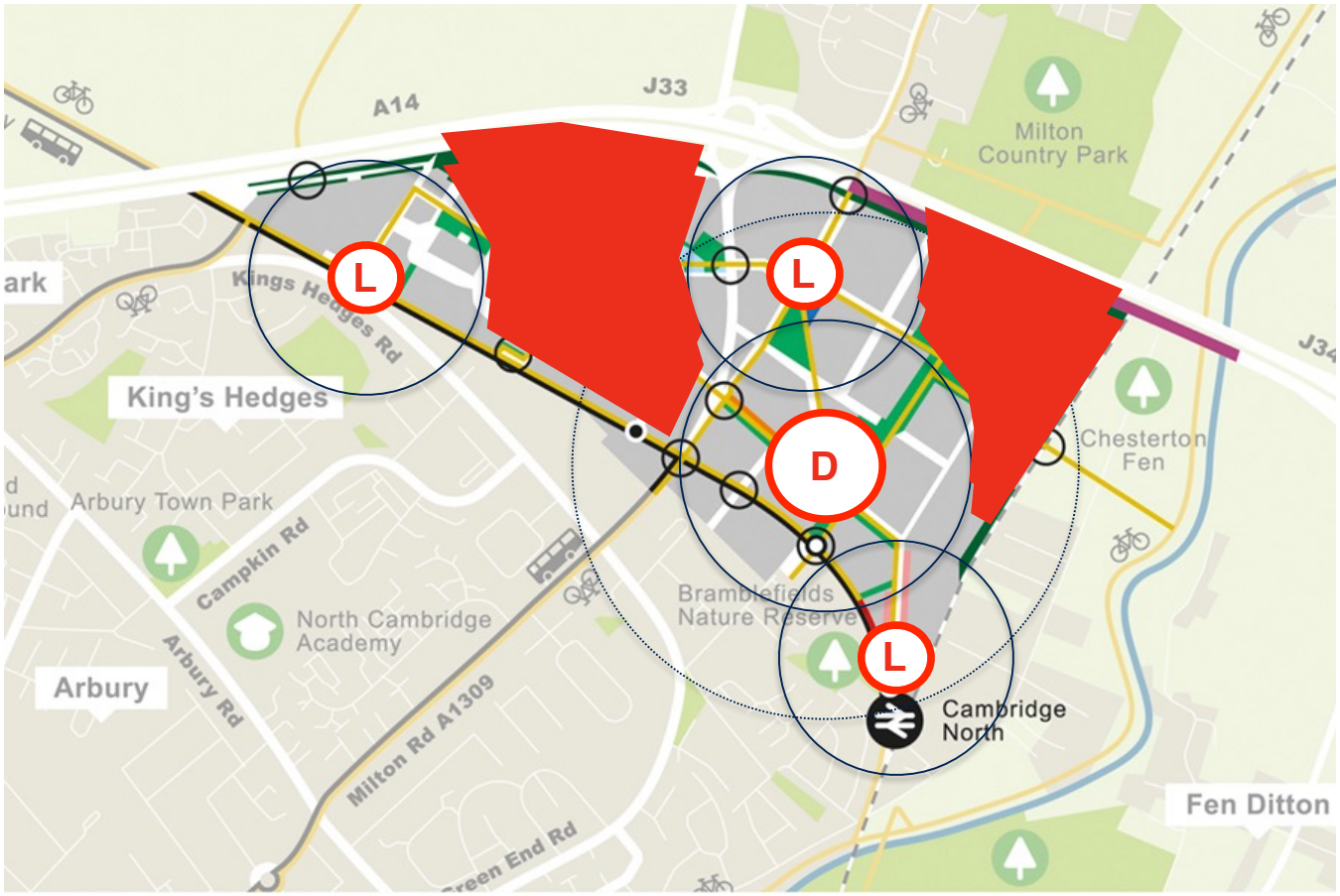


Figure 4.1: Structure diagram (draft NEC AAP) annotated to show locations of centres and walking radii as proposed in AAP

Options

- The suggested locations for centres is shown in Figure 4.2.
- Move the district centre to the edge of Milton Road for the following reasons:
  - Prominent location on the main route through area;
  - Served by two public transport corridors and main cycle route through area;
  - Conveniently accessible from Cambridge Science Park benefiting from trip combination, lunch and evening offer for commuters;
  - Visible and accessible for residents in King's Hedges, Chesterton and Milton to serve the wider community;
  - Serves core area for convenience uses;
  - Could establish strong character on Milton Road and help to civilise this road; and
  - Provide an attractive gateway into Cambridge and front door to the NEC area.
- Move local centres:
  - To create a more balanced provision with neighbourhood centres within 5 minutes walk of homes;
  - Move Cowley Road local centre to the east to serve north-east corner of site; and
  - Move Cambridge North Station centre up along Milton Avenue (high street) to have a greater hinterland and be accessible from Chesterton.

prominent location on main route through

Conveniently accessible from the science park (trip-combination, lunch and evening

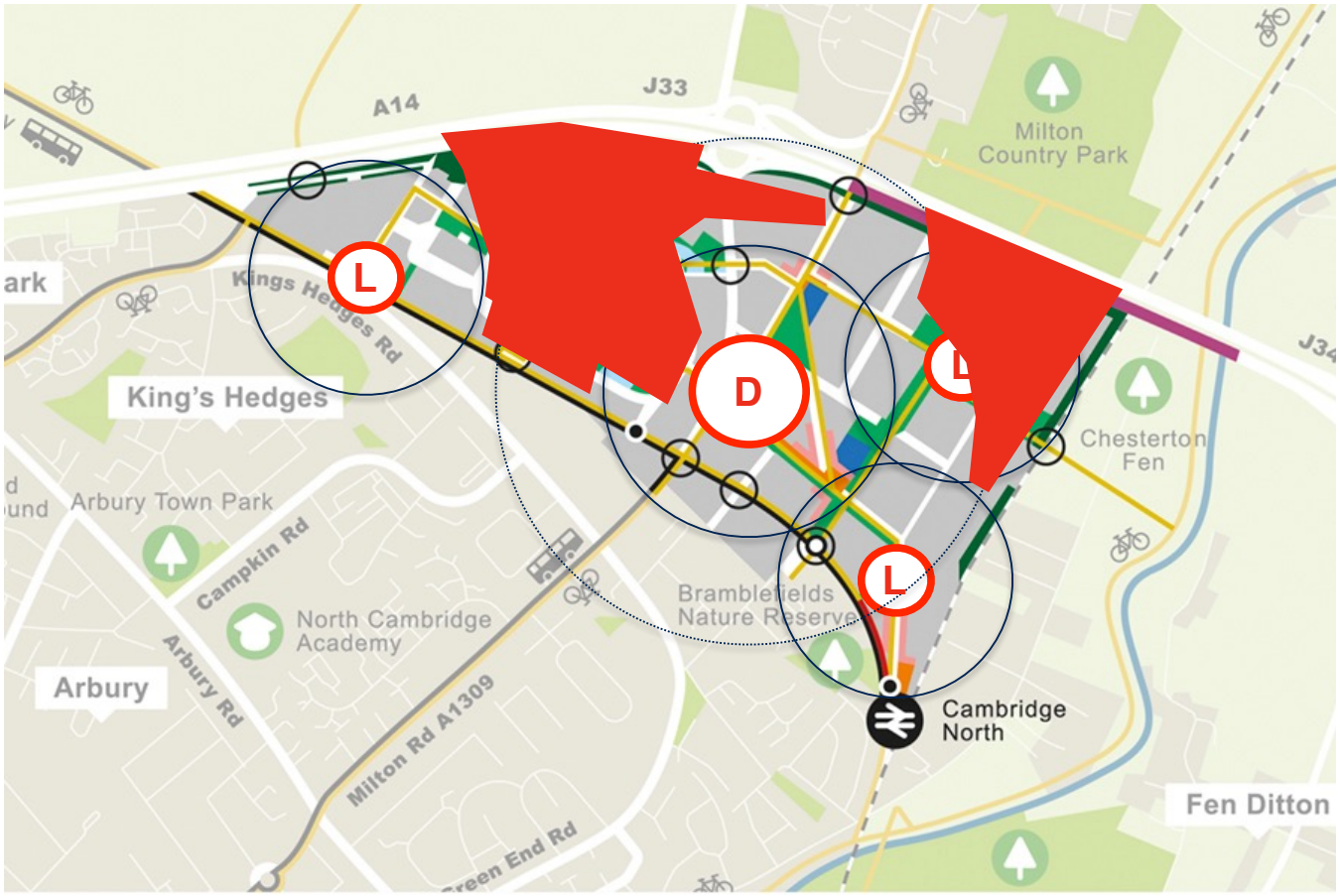


Figure 4.2: Structure diagram (draft NEC AAP) annotated to show recommendations for centre locations

4.2 Schools

Review

- Schools are co-located with district/local centres which should support linked trips and generate footfall
- The provision of conventional schools amidst centres however can be challenging:
  - Schools are large, single use buildings / sites and space hungry;
  - They do not naturally fit into the fine grain of centres, where they could sterilise large frontages or create large blocks;
  - Noise and activity of centres may affect learning at the school;
  - School traffic in the morning and end of school day can be intense and could cause footway congestion in centre, detracting from centre amenity and offer of centres; and
  - Schools need to be accessible by safe routes for walking and cycling and close to public transport (especially secondary schools).
- Safeguarding land for a secondary school means a large site sitting there in a central location for a long time, possibly creating a barrier or blighting the area, which is not the best use of land in a centre.

Options

- Locate schools nearby centres where they would be accessible from safe walking and cycling routes, but could also provide an element of footfall.
- Locate the secondary school site near the edge of the area (railway or A14) where it does not rupture the urban fabric.
- Locate schools near public spaces for shared use.
- Promote smaller footprint/higher density urban school solutions that positively integrate with the surrounding fabric and avoid inactive frontages to surrounding streets

Figure 4.3: Location of schools diagram (draft NEC AAP)

Figure 4.3: Location of schools
diagram (draft NEC AAP)

4.3 Leisure

Review

"It may be more feasible to take a more strategic approach for the delivery of large, formal sports facilities such as swimming pool provision, and provide these off-site taking advantage of opportunities provided in alternative locations for areawide facilities." (Draft NEC AAP)

- Does this say the leisure centre for this area is located elsewhere?
- Where? At North Cambridge Academy? 20-40 minutes walk away
- How do residents and workers get to it? - cycle, PT or car?

Options

- It would be beneficial to support NEC with a new leisure centre to serve new residents and office workers in the area in central location that is also accessible from surrounding neighbourhoods. Centrally located this could also generate footfall to support district centre.
- However, if this is not possible, then it is important to provide high quality walking and cycling routes to nearby leisure facilities.
- Maximise on the offer by Cambridge Regional College of indoor and outdoor formal sports provision to the wider community and enhance walking and cycling connectivity with the college

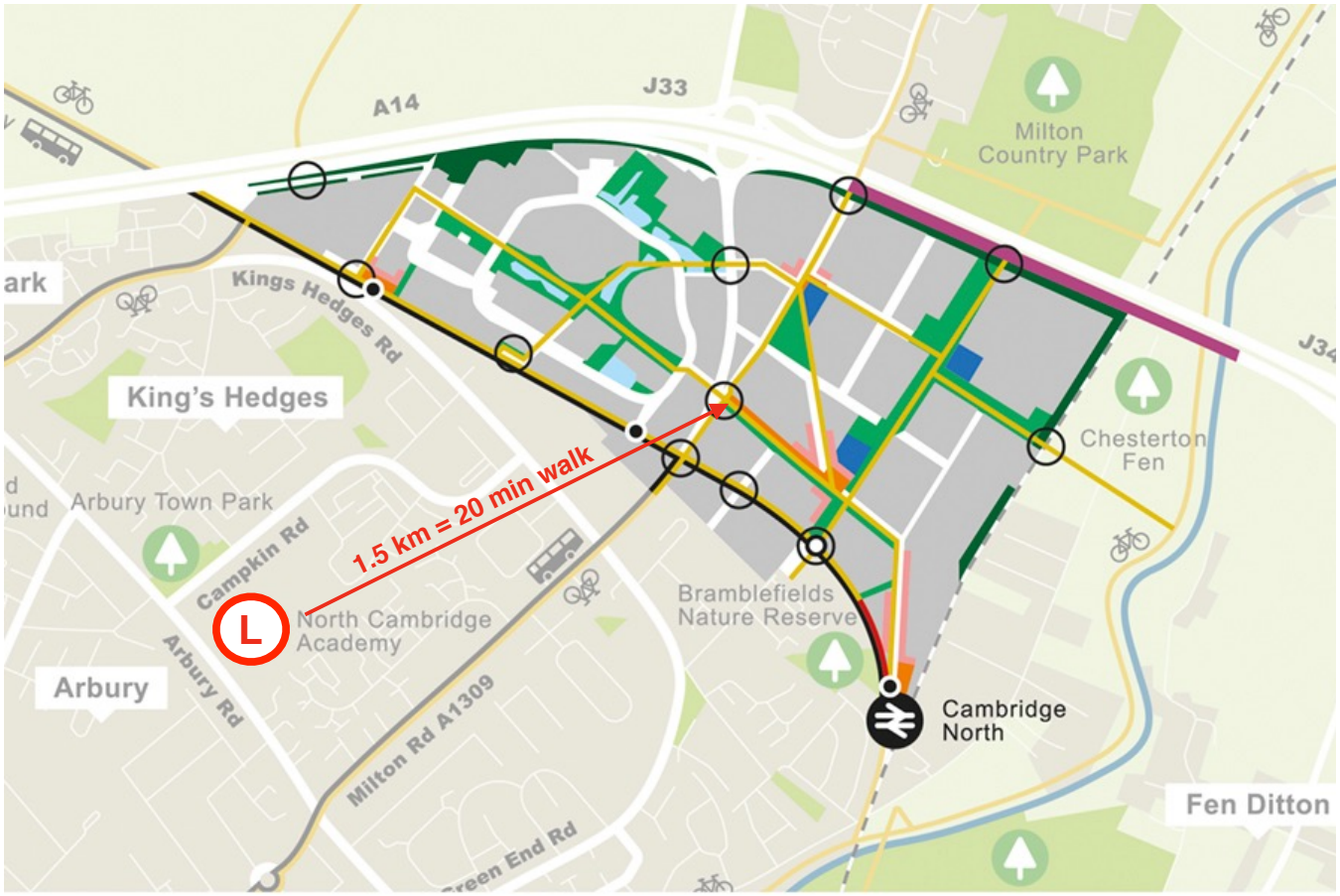


Figure 4.4: Structure diagram (draft NEC AAP) annotated to show distance to North Cambridge Academy Sports Centre

4.4 Land Use Distribution

Review

- The proposed mixed use district is east of Milton Road with a large business focus along Cowley Road. How will this work in practice for offices (who want concentration, a distinct address, security and often parking) and residential uses and amenity needs?
- How do you attract the type of commercial and business uses there, who may worry about impact on neighbours?
- Location (retention) of industrial uses central to the site will create traffic impact onto residential area and detract from the residential character and separates the station area form the north east area.
- Why is no housing being proposed to the west of Milton Road in Cambridge Science Park and near the college or on Trinity Hall Farm Industrial Estate? Would this not offer an opportunity to provide greater mix and overcome the mono-functionality of this area?
- "*Opportunities within North East Cambridge for start up companies and Small and Medium Sized Enterprises (SMEs) to establish themselves and then grow within the area through the provision of 'move on spaces'."* (Draft NEC AAP).
  - How is this incubator space component be managed / provided?

Options

- Clear plans and policies within the AAP with land use designations and access routes
- Consider introducing a mix with housing at Cambridge Science Park

Figure 4.5: Land use diagram (draft NEC AAP)

4.5 Industrial Co-Location

Review

- The draft AAP proposes Industrial Co-Location but is this viable?
- Does it deliver the type of industrial spaces and flexibility needed in the Cambridge context?
- Is there demand for this type of housing - likely Built to Rent?
- Need to avoid externalities such as noise, odour, vibration, fire risk and allow for 24/7 access.
- The 'Agent of Change' principle is required to protect existing or new industrial uses.

Options

- More conventional but compact industrial layouts that are spatially separated from housing by using back to back and courtyard typologies, or being set against the rail line.

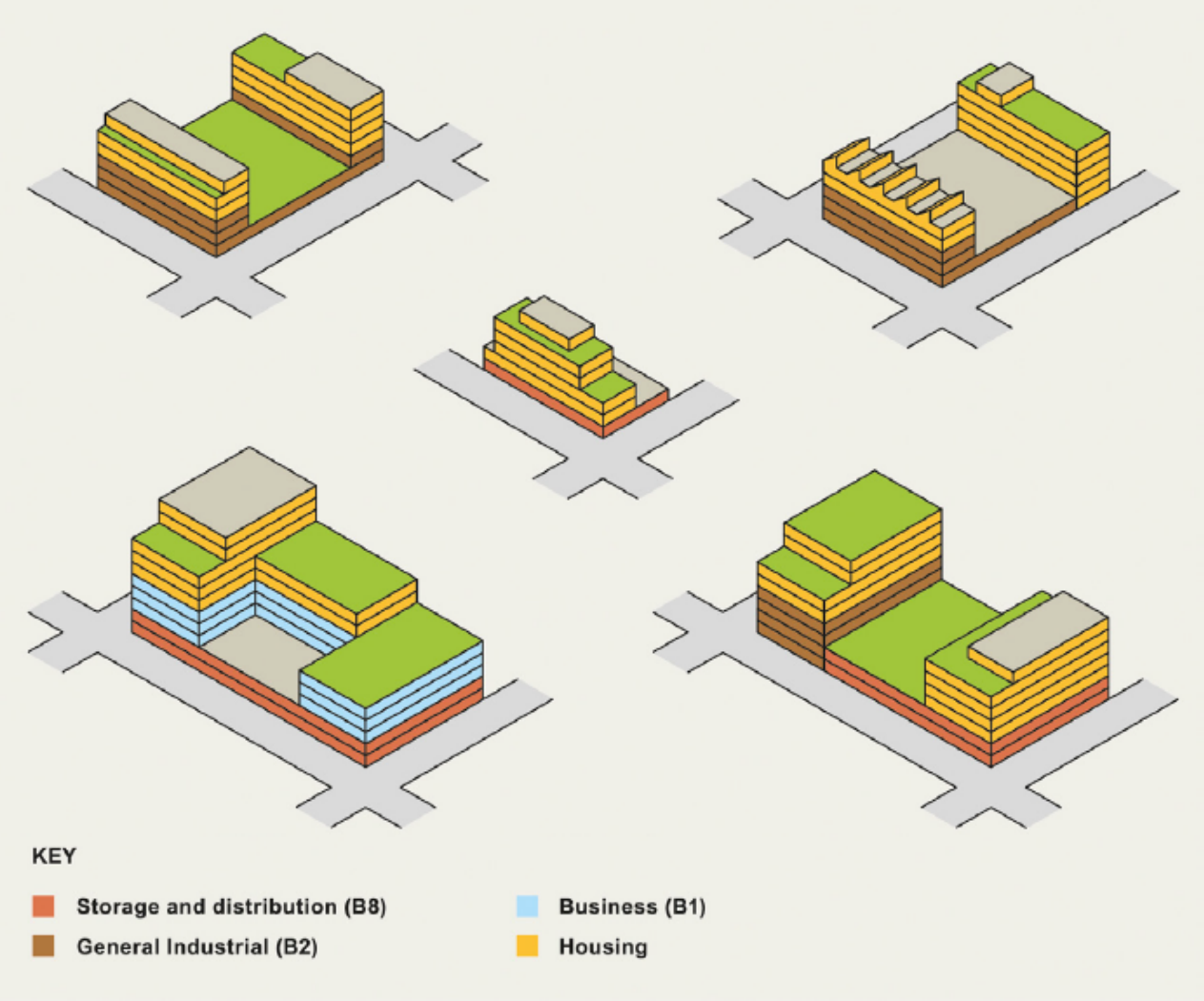


Figure 4.6: Industrial co-location concept diagram (draft NEC AAP)

4.6 Custom Build

Review

"The provision of serviced plots for self-build housing is unlikely to be feasible"

...

"On major developments, 2% of net additional homes should be brought forward as custom finish units." (Draft NEC AAP)

- Limiting requirement as the overall layout of a place and windows determine largely what could happen
- This approach forestalls the opportunity that custom build can bring to character, variety of housing offer and sense of community.

Options

Small Sites

- Oven ready sites on infill and gap sites
- Adding interest to a house-builder development.
- Could be pre-prepared building platforms.

Co-housing

- Support larger self-procured apartment projects.
- Quirky - lots of variety.
- Likely strong interest in Cambridge.
- Example: Berlin Baugruppen.
- Prepare the ground for strong community participation and engagement in the development.

Co-housing in Baugruppen, Berlin

5.0 HEIGHTS AND DENSITY

5.1 Building Heights

Review

- The approach of the draft AAP sees an increase of height from edges to the centre of the site on the eastern half of NEC.
- Why is height in Cambridge Science Park being kept low? The environment here is far less sensitive to height, and additional height could help intensify and animate this area, especially if it provides a mix of uses.
- It is unclear how the typical and maximum heights prescribed in the AAP will work in practice, as developers are likely push up to the maximum height.
- How does the proposed height relate to Cambridge's character and vernacular?
- The greatest height would be in the district centre, where the height range is 7 to 11 storeys. There is a risk that this could be interpreted as an invitation for development to come forward towards the upper end of this range, which could lead to an overly tall and overpowering fabric even in a much more urban context such as London.
- Heights should correspond to the proposed character, mix of uses and typologies, and accessibility, therefore being higher in centres and highly accessible areas and lower in peripheral areas.

Options

- Set more definitive building heights for each character area/sub-area.
- Clearly define the rules for exceptional taller buildings.
- Tall buildings should mark places of functional or visual importance, or create clusters where this is part of the area's character.
- Heights to be proportionate to location and function.

Figure 5.1: Building heights diagram (draft NEC AAP)

5.2 Net Densities

Review

- It is unclear how the proposed development densities have been determined and what their underlying rationale is.
- How do the proposed densities relate to the building height plan?
- Why do densities drop in more central areas and increase in outer areas? Is this consistent?
- Given the plan stipulates heights and quantity of development, do we need to specify densities?

Options

- Density should be an outcome of good design, not a determinant.
- It is suggested to not require densities as such but set other parameters for good design.
- Use density to establish the need for open spaces and other infrastructures.
- Where density is highest the more people will live, work and visit - it has the highest need for public open space within 5 minutes with most people benefiting from it.

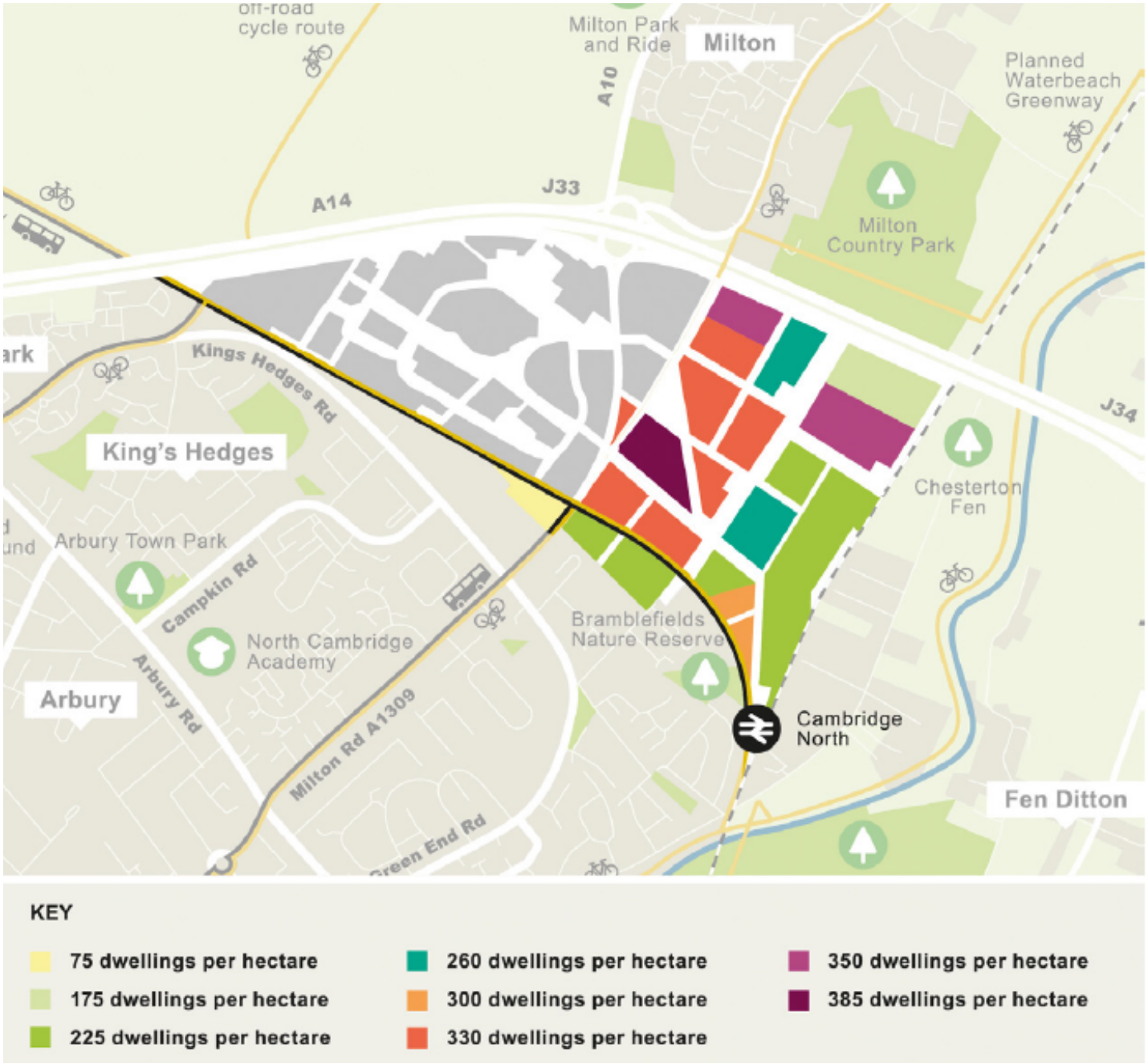


Figure 5.2: Net density diagram (draft NEC AAP)

5.3 Gross Densities (plot ratio)

Review

- An analysis of the gross densities (plot ratio) of the draft AAP proposals has been undertaken to support this review.
- The plot ratios are as follows:
  - 0.5 to 0.8 in office parks - comparably low
  - 1.08 at Nuffield Road Industrial - urban
  - 1.4 at the Waste Water Treatment Plan - urban / intense
  - 1.77 at Cambridge Business Park - urban / intense
  - 2.78 Merlin Place (outlier as small site) - highly intense
- Densities in some areas appear high in the Cambridge context, but are not uncommon in urban regeneration areas. They will require a high quality approach to design and development.

Options

- Council is invited to review the underlying assumptions on development numbers and the distribution of housing across the site.
- Can more housing be provided to the west of Milton Road and densities reduced in the east?

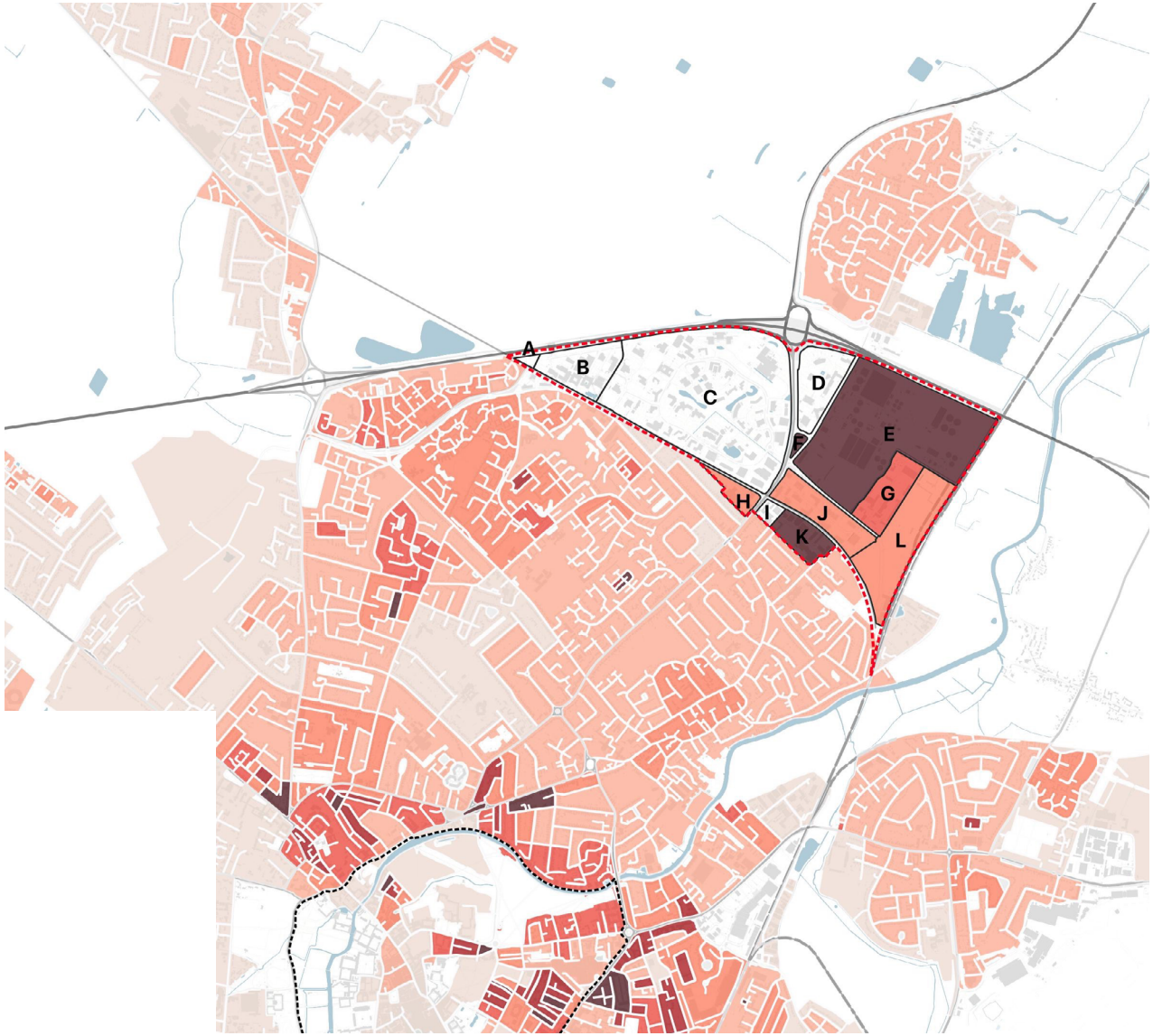


Figure 5.3: Residential density (homes per hectare), showing density of NEC based on AAP proposals

EXISTING, FRAMEWORK PLAN, CUMULATIVE						Break Down								
Code	**Site Name**		**Site Size**	**Total**	**Plot Ratio**	**Residential**	**Residential Units (at 100m2/unit GEA)**	Residential Density	Residential Density (Assuming all other uses as resi.)	**Employment**	**Community & Cultural**	**Industrial**	**Retail**	**Parking**
			Ha	m2		m2		Units/Ha	Units/Ha	m2	m2	m2	m2	m2
A	Well's Triangle	Existing	0.52	0	0.00	0	0	0		0	0	0	0	0
		Framework Plan		0	0.00	0	0	0		0	0	0	0	0
		Cumulative		0	0.00	0	0	0	0	0	0	0	0	0
B	Cambridge Regional College	Existing	9.21	48696	0.53	0	0	0		4375	41980	0	2342	0
		Framework Plan		0	0.00	0	0	0		0	0	0	0	0
		Cumulative		48696	**0.53**	0	0	0	487	4375	41980	0	2342	0
C	Science Park	Existing	62.11	267261	0.43	0	0	0		235613	10007	7915	0	13726
		Framework Plan		71100	0.11	0	0	0		70000	100	1150	1000	0
		Cumulative		338361	**0.54**	0	0	0	54	305613	10107	9065	1000	13726
D	St John's Innovation Park	Existing	8.80	37017	0.42	0	0	0		37017	0	0	0	0
		Framework Plan		35100	0.40	0	0	0		35000	0	0	100	0
		Cumulative		72117	**0.82**	0	0	0	82	72017	0	0	100	0
E	Waste Water Treatment Plan	Existing	42.82	16673	0.04	608	6	0		4134	776	11154	0	0
		Framework Plan		582900	1.36	550000	5500	128		23500	5700	0	3700	0
		Cumulative		599573	**1.40**	550608	5506	129	140	27634	6476	11154	3700	0
F	Merlin Place	Existing	0.55	3171	0.58	0	0	0		3171	0	0	0	0
		Framework Plan		12000	2.20	12000	120	220		0	0	0	0	0
		Cumulative		15171	**2.78**	12000	120	220	278	3171	0	0	0	0
G	Cambridge Commercial Park / Cowley Rd IE	Existing	7.65	19311	0.25	0	0	0		2030	0	16752	529	0
		Framework Plan		50000	0.65	50000	500	65		0	0	17500	0	0
		Cumulative		69311	**0.91**	50000	500	65	91	2030	0	34252	529	0
H	Milton Road Garage Site	Existing	2.73	5957	0.22	0	0	0		0	0	1029	4929	0
		Framework Plan		10000	0.37	10000	100	37		0	0	0	0	0
		Cumulative		15957	**0.59**	10000	100	37	59	0	0	1029	4929	0
I	Trinity Hall Farm Industrial Estate	Existing	1.28	4970	0.39	0	0	0		0	0	4970	0	0
		Framework Plan		1500	0.12	0	0	0		1500	0	0	0	0
		Cumulative		6470	**0.51**	0	0	0	51	1500	0	4970	0	0
J	Cambridge Business Park	Existing	9.08	41588	0.46	0	0	0		39479	0	0	0	2109
		Framework Plan		119500	1.32	50000	500	55		68000	0	0	1500	0
		Cumulative		161088	**1.77**	50000	500	55	177	107479	0	0	1500	2109
K	Nuffield Road Industrial Estate	Existing	5.10	4748	0.09	0	0	0		0	0	4748	0	0
		Framework Plan		55000	1.08	55000	550	108		0	0	0	0	0
		Cumulative		55000	**1.08**	55000	550	108	108	0	0	4748	0	0
L	Chesterton Sidings	Existing	16.76	14708	0.09	0	0	0		0	12569	1501	638	0
		Framework Plan		110600	0.66	73000	730	44		36500	100	8800	1000	0
		Cumulative		125308	**0.75**	73000	730	44	75	36500	12669	10301	1638	0

Figure 5.4: Analysis of AAP density and land use proposals with Plot Ratio highlighted

5.4 Open Space Requirement

Cambridge Open Space Policy

- Cambridge City Local Plan defines open space requirement for new development in respect of number of residents (summary to right)
- If these ratio would be applied to the entirety of proposed development (see figure 5.5), then in some places there would not be sufficient site areas available to provide for the open space demand of proposed number of residential units or indeed deliver development

Options

- AAP to provide further guidance on how the open space policy should be applied in the context of the NEC
- Consider use of existing open space resources nearby such as Milton Country Park (informal space) and Fen Meadows (informal outdoor sports facilities)
- Identify site to locate allotments nearby
- Consider not only the quantity of open space but also the quality of provision
- Creative approach to the provision of space, including on roof-tops and other development areas

Open Space and Recreation Standards

Type	
• Outdoor Sports Facilities	1.2HA/1000 people
• Indoor Sports Facilities (Sports Hall)	1 Sports Hall per 1300 people
• Indoor Sports Facilities (Swimming Pool)	1 Swimming Pool for 50000 people
• Provision for Children and Teenagers	0.3Ha/1000 people
• Informal Open Space	2.2Ha/1000 people
• Allotments	0.4Ha/1000 people

EXISTING, FRAMEWORK PLAN, CUMULATIVE				Open Space and Recreation Standars								
Code	**Site Name**		**Site Size**	**Residential Units**	Outdoor Sports Facilities	Indoor Sports Facicilities (Sport Hall)	Indoor Sports Facicilities (Swimming Pool)	Provision for Children and Teenagers	Informal Open Space	Allotments	**Total Open Space Required**	**% Site Area**
			Ha	Units	m2	Units	Units	m2	m2	m2	ha	%
A	Well's Triangle	Existing	0.52									
		Framework Plan		0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0**	**0**
		Cumulative										
B	Cambridge Regional College	Existing	9.21									
		Framework Plan		0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0**	**0**
		Cumulative										
C	Science Park	Existing	62.11									
		Framework Plan		0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0**	**0**
		Cumulative										
D	St John's Innovation Park	Existing	8.80									
		Framework Plan		0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0**	**0**
		Cumulative										
E	Waste Water Treatment Plan	Existing	42.82									
		Framework Plan		5500.00	148500.00	0.95	0.25	37125.00	272250.00	49500.00	**50.74**	**119**
		Cumulative										
F	Merlin Place	Existing	0.55									
		Framework Plan		120.00	3240.00	0.02	0.01	810.00	5940.00	1080.00	**1.11**	**203**
		Cumulative										
G	Cambridge Commercial Park / Cowley Rd IE	Existing	7.65									
		Framework Plan		500.00	13500.00	0.09	0.02	3375.00	24750.00	4500.00	**4.61**	**60**
		Cumulative										
H	Milton Road Garage Site	Existing	2.73									
		Framework Plan		100.00	2700.00	0.02	0.00	675.00	4950.00	900.00	**0.92**	**34**
		Cumulative										
I	Trinity Hall Farm Industrial Estate	Existing	1.28									
		Framework Plan		0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	**0**
		Cumulative										
J	Cambridge Business Park	Existing	9.08									
		Framework Plan		500.00	13500.00	0.09	0.02	3375.00	24750.00	4500.00	**4.61**	**51**
		Cumulative										
K	Nuffield Road Industrial Estate	Existing	5.10									
		Framework Plan		550.00	14850.00	0.10	0.02	3712.50	27225.00	4950.00	**5.07**	**100**
		Cumulative										
L	Chesterton Sidings	Existing	16.76									
		Framework Plan		730.00	19710.00	0.13	0.03	4927.50	36135.00	6570.00	**6.73**	**40**
		Cumulative										

Figure 5.5: Analysis of AAP proposals against Local Plan open space standards - this table provides and overview of the amount of open space each site would need to deliver in respect of the Local Plan open space standard. However it is recognised that other factors such as proximity to existing open spaces, financial contribution to their management and maintenance, design and quality of spaces and other will also need to be considered by a planning application.

6.0 CHARACTER AND TOWNSCAPE

6.1 Character and Townscape

Review

"Development in North East Cambridge will be expected to provide distinctive, high-quality and contemporary design and architecture that responds to and positively contributes to Cambridge's heritage and townscape qualities. Applications will need to demonstrate how they have had regard to the unique characteristics of Cambridge and Cambridgeshire, and the particular challenges of higher density development, in how they have developed their proposals." (Draft NEC AAP)

- It is key for the Townscape Strategy to provide direction on how development can create a distinctive townscape and character.
- What makes NEC part of Cambridge? Is it responding to its immediate suburban context or should it takes cues from Cambridge City Centre or other urban expansions?

Options

- Development at NEC should respond to wider (international) image of the City, which includes the university, innovation, heritage, green spaces, landmarks and cycling.
- Learn from the morphology of the city, including:
  - Streets and lanes;
  - Diverse and well defined public spaces;
  - Semiprivate courtyards;
  - Open river meadows;
  - Signature buildings;
  - Fine grain ordinary urban fabric;
  - Cycling;
  - Colleges and student life; and
  - Everyday life pattern of the community.

Village character of Fen Ditton

Character of new development in outer Cambridge (Eddington)

Character of Cambridge City Centre and University

7.0 DEVELOPMENT APPROACH

7.1 Comprehensive and Coordinated Development

Policy Aim

- The policy aim of the draft AAP is to deliver an integrated whole through:
  - Clear policy direction of what is required on each site;
  - Identification of key infrastructures; and
  - Willingness to use CPO powers to assemble land needed.
- Policy 23: Comprehensive and Coordinated Development requires development to:
- Contribute to wider infrastructure connectivity;
- Reserve land for necessary strategic and site specific infrastructure; and
- Undertake a masterplan with clear parameter plans to:
  - Proportionally deliver the vision;
  - Integrate, connect and complement surrounding context;
  - Take a landscape and design-led approach;
  - Achieve the required modal shift;
  - Respond to climate change;
  - Contribute to biodiversity net gain;
  - Mitigate environmental constraints; and
  - Respond to site circumstance and implement agent of change principle.

Challenges

- How do we ensure joining up at the edges of ownerships and the alignment of masterplans?
- How to deliver critical new infrastructure across different ownerships that may be at different stages of development?
- How to ensure acceptable operation of existing uses when area changes?
- How do we ensure relocation of uses when this is required for the overall vision?

Options

- Establish street network plans of strategic routes that development needs to reserve / implement.
- Provide design guide to cover:
  - Street and public realm design;
  - Block layout, typologies, height;
  - Access and parking;
  - Open space standards; and
  - Character.
- Potential to accept off-site open space allocation.
- Ensure rigorous design review process.
- Outline planing applications should confirm parameter principles.

KEY

A	Well's Triangle (private ownership)
B	Cambridge Regional College
C	Cambridge Science Park (Trinity College)
D	St John's Innovation Park (St Johns College)
E	Cambridge Waste Water Treatment Plant, former Park and Ride and Golf Driving Range (Anglian Water / Cambridge City Council)
F	Merlin Place (private ownership)
G	Cambridge Commercial Park / Cowley Road Industrial Estate (multiple land ownership)
H	Milton Road garage site (private ownership)
I	Trinity Hall Farm Industrial Estate (Trinity Hall College)
J	Cambridge Business Park (The Crown Estate)
K	Nuffield Road Industrial Estate (multiple land ownership)
L	Chesterton Sidings (Network Rail)

Figure 7.1: Land ownership diagram (draft NEC AAP)