

Appendix C5: Open Space Topic Paper

Introduction

Open spaces, regardless of ownership, are a key aspect of high-quality urban environments and are fundamental to the character of an area. Attractive, accessible and well-designed open space can support and enhance the appearance of an area, creating more desirable places to live and underpin good growth. Open spaces and recreation facilities provide people with a place to relax and socialise as well as encouraging healthier lifestyles by providing opportunities for sport, informal play and daily encounters with the natural environment.

An essential part of the character of Cambridge stems from its many green spaces, trees and other landscape features, including the River Cam. These not only play an important role in promoting both active and passive sport and recreational activities but also provide valuable amenity space and support for biodiversity.

Open spaces not only help support the health, social and cultural well-being of local communities but also help support strategies to mitigate the adverse effects of climate change.

This topic paper has the purpose of explaining how new residential development at North East Cambridge should contribute to the provision of open space and recreation sites/facilities.

Key Documents

- National Planning Policy Framework / Guidance
- Cambridgeshire Green Infrastructure Strategy
- Corporate Plans (Objectives and Strategies)
- Open Space and Recreation Strategy
- Greater Cambridge Playing Pitch Strategy
- Greater Cambridge Indoor Sports Facility Strategy
- South Cambridgeshire Local Plan 2018
- Cambridge Local Plan 2018

National Planning Policy Framework / Guidance

National Policy (NPPF)

A revised National Planning Policy Framework was published February 2019. National policy in the NPPF includes the presumption in favour of sustainable development at the heart of the planning system. This sets a clear expectation on planning authorities to plan positively to promote development and create sustainable communities.

Paragraph 91 explains how the planning policies and decisions should aim to achieve healthy, inclusive and safe places. They should a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other; b) be safe and accessible, and include high quality public space, which encourage the active and continual use of public areas; and c) enable and support healthy lifestyles, including identified local health and well-being needs, examples include the provision of safe and accessible green infrastructure, sports facilities, access to healthier food, allotments and layouts that encourage walking and cycling.

Paragraph 92 explains how planning policies and decisions should provide social, recreational, and cultural facilities including services needed by the community. It includes the need for: (a) local authorities to plan positively for the provision of community facilities such as meeting places, sports venues, open space and other local services to enhance the sustainability of communities and residential environments; and (b) take account of, and supporting the delivery of local strategies to improve the health, social and cultural well-being of all sections of the community.

Paragraph 96 highlights the importance of providing access to a network of high-quality open spaces and opportunities for sport and physical activity for the health and well-being of communities. It recommends the need for planning policies to be based on robust and up-to-date assessments of the need for open space, sport, and recreation facilities (including quantitative or qualitative deficits or surpluses) and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate.

Paragraph 97 states open spaces should not be built on unless one of three exceptions can be satisfied. These exceptions are as follows: the land is surplus to requirements; the loss can be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; the development is for alternative sports and recreational provision.

Paragraph 98 advises planning policies and decisions to protect and enhance public rights of way and access, including taking opportunities to provide better facilities for

users, for example by adding links to existing rights of way networks including National Trails.

National Guidance (NPPG)

National Guidance (NPPG) provides a series of notes about healthy communities explaining its importance in sustainable communities and advising on how it should be integrated with other uses/strategies. Those that have a bearing on open spaces are summarised as follows:

Paragraph: 001 Reference ID:53-001-20190722

Positive planning can make a significant contribution to creating a healthy community with the design and use of the built and natural environments, including green infrastructure. These are major determinants of health and wellbeing by creating environments that support and encourage healthy lifestyles.

Paragraph: 001 Reference ID: 37-001-20140306

How should open space be taken into account in planning?

Open space should be taken into account in planning for new development and considering proposals that may affect existing open space. Open space, which includes all open space of public value, can take many forms, from formal sports pitches to open areas within a development, linear corridors and country parks. It can provide health and recreation benefits to people living and working nearby; have an ecological value and contribute to green infrastructure, as well as being an important part of the landscape and setting of built development, and an important component in the achievement of sustainable development. It is for local planning authorities to assess the need for open space and opportunities for new provision in their areas.

Paragraph: 002 Reference ID: 37-002-20140306

How do local planning authorities and developers assess the needs for sports and recreation facilities?

Authorities and developers may refer to Sport England's guidance on how to assess the need for sports and recreation facilities.

Paragraph: 003 Reference ID:53-003-20191101

A healthy place is defined as one which supports and promotes healthy behaviours and environments and a reduction in health inequalities for people of all ages. It will provide the community with opportunities to improve their physical and mental health, and support community engagement and wellbeing.

It is a place which is inclusive and promotes social interaction. It meets the needs of children and young people to grow and develop, as well as being adaptable to the needs of an increasingly elderly population and those with dementia and other sensory or mobility impairments.

The NPPG also provides a series of notes about green infrastructure explaining what types of spaces this can embrace and support a range of environmental strategies. Those that have a bearing on open spaces are summarised as follows:

Paragraph: 004 Reference ID: 8-004-20190721

Green infrastructure can include a range of spaces and assets that provide environmental and wider benefits. Examples include woodland, parks, and other areas of open space.

Paragraph: 006 Reference ID: 8-006-20190721

Green infrastructure can help reduce air pollution and noise as well as mitigating climate change and flooding. High-quality networks of multifunctional green infrastructure contribute a range of benefits, including ecological connectivity and facilitating biodiversity net gain.

County Wide Strategies

Cambridgeshire Green Infrastructure Strategy

The Cambridgeshire Green Infrastructure Strategy was designed to assist in shaping and co-ordinating the delivery of green infrastructure in the county, to provide social, environmental and economic benefits now and in the future.

This strategy is based on the analysis of public policy and key baseline data grouped into seven themes identified as important elements of green infrastructure, biodiversity, climate change, green infrastructure gateways, heritage, landscape, publicly accessible open space and rights of way. In addition, three cross-cutting/overarching issues were considered: economic development, health and well-being, and land and water management.

A 'Strategic Network' of green infrastructure priorities for Cambridgeshire was identified by mapping these themes and other important factors relating to green infrastructure to show where each theme is most important for green infrastructure in Cambridgeshire. It provides a county-wide framework upon which to provide or enhance green infrastructure in Cambridgeshire up to and beyond 2031. It is designed to offer county-wide connectivity, identify opportunities to support the delivery of the four objectives, and link into green infrastructure provision outside

Cambridgeshire. It is this Strategic Network that identifies the need and the opportunities to provide additional provision.

Corporate Plans (Objectives and Strategies)

South Cambridgeshire Business Plan 2019-24

The South Cambridgeshire Business Plan 2019-24 sets 4 priority areas for the district one of which is:

- Being green to our core – we will create a cleaner, greener and zero carbon future for our communities

Under this priority area the Council will focus on protecting and enhance the district's heritage and environment and will identify sites and opportunities for tree planting and habitat enhancement to offset the environmental impact of developments in the district. One of the measures to achieve the priority is to carry out an assessment to identify natural capital opportunities and strategic open space for tree-planting and biodiversity/carbon offsetting by end of March 2020.

South Cambridgeshire Healthy Communities objectives for Northstowe Area Action Plan, 2007

The Northstowe Area Action Plan makes reference to the Community Strategy's vision which is split into 6 aims one of which is to provide 'Active, Safe and Healthy Communities where residents can play a full part in community life, with a structure of thriving voluntary and community organisations.

One of the development principles is to ensure that the town of Northstowe will be developed as a balanced, viable and socially inclusive community where people can live in a healthy and safe environment, and where most of their learning needs are met.

Policy NS/19 Public Open Space and Sports Provision states that Northstowe's residents should be able to find that their sport, leisure and recreational needs are met locally so that they can lead a healthy lifestyle and enjoy a high quality of life and leisure time. The policy also states that recreational facilities and associated landscaping will be delivered early within the development such that the needs of the development are met at all times.

Cambridge City Corporate Plan 2019-2022

The Cambridge City Corporate Plan 2019-2022 sets out 5 strategic objectives, one of which is to protect our environment and tackle climate change. This objective is unpinned by a series of actions, initiatives and strategies that look to:

- Make our streets and open spaces and communities more resilient to the impacts of climate change so Cambridge's streets and open spaces can continue to be enjoyed by future generations

- Manage Cambridge's streets and open spaces for the benefit of both wildlife and people by ensuring that biodiversity protection and enhancement is taken into account in all development decisions and management practices. This will be measured by the % of City Council owned and managed parks and open spaces actively designated and / or managed for biodiversity
- Keep our streets and open spaces clean, green and safe, including by: supporting communities to assist us in caring for their streets and open spaces. The management of our streets and open spaces is supported by an active band of community volunteers. A High quality, environmentally friendly street and open space environments achieved. This will be measured by % of streets achieving Grade A cleanliness standard, Number of open spaces with active friends' groups, Number of volunteer hours contributed to maintaining streets and open spaces and the number of Green Flag sites
- Deliver the Streets and Open Spaces service development strategy, 2017-21, including investing in new technologies and ways of working. This will result in our Streets and Open Spaces service being able to respond to the impacts of growth and associated service demands without increasing costs. Our customers are able to raise and track streets and open spaces service requests digitally. This will be measured by Operational unit cost to maintain streets and open spaces

Local Council Strategy Documents

Open Space and Recreation Strategy for Cambridge City Council

Cambridge City Council produced the Open Space and Recreation Strategy (OSRS) 2011 to support the plan-making process. This strategy replaced the 2006 strategy, which was adopted in November 2006, incorporating relevant changes made to the Cambridge Local Plan 2006 during the Inquiry process. The 2011 strategy reassessed open spaces within the city, which were considered as a part of the previous strategy, evaluated a range of additional sites and included a new quality assessment of all sites surveyed.

The 2011 OSRS assessed around 400 sites across the city for their environmental and recreational importance and subsequent protected from new development. It also explains how some wards have significant open space deficiencies and is used by the Council to ensure on-site delivery in these areas where possible. The OSRS will be updated in 2020, subject to Covid-19 movement restrictions. This will take account of those sites previously assessed and new sites delivered since the 2011 assessment, this will include sites in South Cambridgeshire District Council which adjoin the fringes of Cambridge City Council, south of the A14, such as Orchard Park and east of the M11 such as Eddington and Trumpington Meadows.

Playing Pitch Strategy and Indoor Sports Facility Strategy for Greater Cambridge

Cambridge City Council and South Cambridgeshire District Council, in partnership with Sport England, developed two sports strategies: a Playing Pitch Strategy 2015-2031 for grass and all weather pitches covering both areas; and an Indoor Sports Facility Strategy 2015-2031 to guide future provision and management of indoor sports halls, swimming pools and outdoor cycling facilities to serve existing and new communities in Cambridge and South Cambridgeshire. These strategies assessed existing facilities, the future need for sport and active recreation facilities, and opportunities for new provision. The Playing Pitch Strategy and Indoor Sports Facility Strategy take into account planned growth to 2031. These will be updated to support the growth at both North East Cambridge and the proposed growth anticipated in the new Joint Local Plan for Greater Cambridge. These documents have the purpose of identifying strategic sports facilities such as full-size artificial grass pitches and sports halls..

It should be noted that Sport England advise the use of their Sports Facility Calculator to calculate the quantum of any formal sports provision generated by new large-scale residential developments. More details specific to North East Cambridge are provide below, in the section ‘Sports England’s Sports Facility Calculator’.

South Cambridgeshire Local Plan 2018

Policy NH/11: Protected Village Amenity Areas

Protected Village Amenity Areas are identified on the Policies Map where development will not be permitted within or adjacent to these areas if it would have an adverse impact on the character, amenity, tranquillity or function of the village.

Policy NH/12: Local Green Space

Local Green Space identified on the Policies Map will be protected from development that would adversely impact on the character and particular local significance placed on such green areas which make them valued by their local community. Inappropriate development, as defined in the NPPF, would not be approved except in very special circumstances and in discussion with the local community.

Policy SC/2: Health Impact Assessment

New development will have a positive impact on the health and wellbeing of new and existing residents. Planning applications for developments of 20 or more dwellings or 1,000m² or more floorspace will be accompanied by a Health Impact Assessment to demonstrate this.

- a. For developments of 100 or more dwellings or 5,000m² or more floorspace a full Health Impact Assessment will be required;
- b. For developments between 20 to 100 dwellings or 1,000 to 5,000m² or more floorspace the Health Impact Assessment will take the form of an extended screening or rapid Health Impact Assessment.

Policy SC/7: Outdoor Play Space, Informal Open Space and New Developments

1. All housing developments will contribute towards Outdoor Playing Space (including children's play space and formal outdoor sports facilities), and Informal Open Space to meet the need generated by the development in accordance with the following minimum standards:

- a. Outdoor play space, informal open space and allotments and community allotments: 3.2 hectares per 1,000 people comprising:
 - i. Outdoor Sport 1.6ha. per 1,000 people
 - ii. Open Space 1.2ha. per 1,000 people
 - iii. Allotments and community orchards 0.4ha. per 1,000 people
- b. Subject to the needs of the development the open space requirement will consist of:
 - iv. Formal Children's Play Space 0.4ha. per 1,000 people
 - v. Informal Children's Play Space 0.4ha. per 1,000 people
 - vi. Informal Open Space 0.4ha. per 1,000 people

2. Only family dwellings of two or more bedrooms will be required to contribute to the provision of Children's Play Space.

3. Housing provision consisting of Sheltered housing, Extra Care housing, and residential and nursing homes will not be required to provide Outdoor Play Space except Informal Open Space.

4. Where appropriate, provision will be on-site so that provision is integrated into the development and benefits to the health and wellbeing of new residents are maximised, guided by Figure 10. However, an appropriate contribution will be

required for “off-site” provision of the types of space not provided on-site. This may be for new facilities and/or improvements to existing facilities. On individual sites negotiation may take place on the types of space provided on site, taking account of the needs of the area, existing provision and any identified deficiencies in provision.

5. In developments of less than 10 homes, it is expected that only the Informal Open Space element will be provided on-site. Where an individual phase comprises 10 or fewer dwellings but will form part of a larger scheme exceeding that total, a proportional contribution to future on-site provision will be required.

6. Depending on the nature of provision, contributions may also be required to meet maintenance and/or operating costs either as pump priming or in perpetuity.

7. Where on-site provision is required, the Council may seek the option of a commuted capital sum to construct the facility. In these circumstances, a serviced site (as appropriate for the facility concerned) will be transferred to the Council free of charge by the developer.

Cambridge Local Plan 2018

Policy 7: The River Cam

The River Cam is of considerable importance to the city of Cambridge which Cambridge sweeps in from the rural hinterland to the heart of the city. The River Cam is a key part of the defining character of Cambridge¹.

The River Cam is a designated county wildlife site in recognition of the river’s importance in linking semi-natural habitats, including ecologically designated Local Nature Reserves in the city with the wider countryside of South Cambridgeshire. The different aspects of the river are addressed in Policy 7 of the Cambridge Local Plan 2018 (CLP2018).

Policy 67: Protection of open space

An essential part of the character of the city stems from the spaces and grounds around buildings and their natural features. Policy 67 is the Council’s established mechanism for protecting open space within Cambridge’s administrative area. The loss or relocation of any formal sports facilities would also need to comply with Policy 73 (Community, sports and leisure facilities), where applicable.

¹ Cambridge Landscape Character Assessment 2003

Policy 68: Open space and recreation provision through new development

Policy 68 requires new residential developments to provide public open space with provision given early consideration in the design process. The specific requirements are calculated using the Open Space and Recreation Standards (see CLP2018, Appendix I) and will have regard to the Council's adopted Open Space and Recreation Strategy, Playing Pitch Strategy and Indoor Sports Facility Strategy.

Appendix I: Open Space and Recreation Standard

The Council's open space and recreation standards are listed in Table 1 below. They apply to all schemes for new residential developments and the requirement is based on the net number of residents accommodated in the new development.

Table 1: CLP 2018 Appendix I, Table I.1: Open space and recreation standards

Type of open space	Definition	Standard	CIL ⁺	Onsite or S106 ⁺
Outdoor sports facilities	Playing pitches, courts and greens	1.2 hectares per 1,000 people	No	Yes
Indoor sports provision	Formal provision such as sports halls and swimming pools	1 sports hall for 13,000 people 1 swimming pool for 50,000 people	Yes	No
Provision for children and teenagers	Equipped children's play areas and outdoor youth provision	0.3 hectares per 1,000 people	No	Yes
Informal open space	Informal provision, including recreation grounds, parks, natural greenspaces and, in town centres or urban locations, usable, high quality, public hard surfaces	2.2 hectares per 1,000 people	No	Yes
Allotments	Allotments	0.4 hectares per 1,000 people	No	Yes

⁺ Indicative, and subject to the adoption of the Community Infrastructure Levy and associated Regulation 123 list

Policy 73: Community, sports and leisure facilities

Policy 73 supports new and improved formal sports facilities where they improve the range, quality and access to facilities both within Cambridge and, where appropriate, in the sub-region. Proposals should have regard to the Playing Pitch Strategy and

Indoor Sports Facility Strategy. This policy is relevant to a wide range of facilities from health clubs and tennis courts to an indoor sports complex and swimming pools.

Provision for new sports facilities

Guidance on the provision of new indoor and outdoor sports facilities is provided in the Indoor Sport Facilities Strategy and Playing Pitch Strategy, respectively; both of which take into account planned growth to 2031. However, there will be instances where large windfall sites come forward which have not been accounted for in the strategies. Where this is the case, applicants should provide a sports strategy (also known as a facilities development plan) setting out the details of specific facilities to be developed, the rationale and need for these. The process will involve consultation with Sport England and the relevant National Governing Bodies for sport. At the time when these strategy documents were produced, the NEC area was not allocated for residential development and was therefore not included in these documents.

Provision for new on-site spaces

On-site provision for children and teenagers, informal open space and allotments should be considered at the early stage of design. This should consider how best these spaces can be provided on-site in accordance with the requirements of Policy 68 and the recommendations outlined in the council's Open Space and Recreation Strategy. In areas where there is a shortage of public open space, all attempts to maximise high quality, low maintenance on-site provision should be considered to avoid the over dependence on a limited number of existing public open space sites.

Quantum of new provision for a standard residential development in Cambridge

Appendix I, paragraph I.14 of CLP 2018 explains how the open space standards should be applied for each type of open space or sports provision for new residential proposals.

Applicants will need to calculate the number of new residents arising from the development using the number of bedrooms in each unit as a guide. Without knowing the type of dwelling proposed only the number, the city's most recent average number of residents per dwelling. At present, this is 2.3 people per dwelling.

Where more detailed knowledge of the dwelling size is known, a more accurate calculation of the indicative development population should be provided, based upon bedroom numbers e.g. a three bedroom house will be occupied by three people. This number will need to be provided in the design and access statement. The specific requirements are calculated using the Open Space and Recreation

Standards (see CLP2018, Appendix I) and will have regard to the Council's adopted Open Space and Recreation Strategy, Playing Pitch Strategy and Indoor Sports Facility Strategy.

Open Space & Recreation Standards To Be Applied at North East Cambridge

The NEC area straddles two local planning authorities each with their own open space standards for new residential development. These are based upon each area's general characteristics and needs; standards in South Cambridgeshire reflect its rural nature while those in Cambridge relate to its more urban environment. Due to the high-density nature of development at NEC, it is considered reasonable to apply the current adopted open space standards detailed in the Cambridge Local Plan 2018 including their recommended application and deficiency tests outlined in Appendix I.

Calculation of Open Space and Recreation Standards at NEC

Population Profile of NEC

The projected/estimated population figures provided by Cambridgeshire County Council are provided in table 2 below.

Table 2: Population Age Profile for North East Cambridge

Age	Population
0-3	1,655
4-10	1,348
11-16	608
17+	14,280
Total residential population	17,891

Sports England's Sports Facility Calculator

Applying the population profile of NEC (in Table 2 above) to Sports England's Sports Facility Calculator (SFC), generates demand for:

- Sports halls - 5.28 courts (1.32 sports halls, 4 courts). Cost £3.655m
- Swimming Pools - 182.86m² (0.86 of a 4-lane pool). Cost £3.647m

The SFC looks at a specific area of population growth and what is needed there to meet the needs of that specific population.

More detail about how this provision can be delivered will be provide below, in the section 'Approach to Providing Open Spaces at North East Cambridge'.

Application of Open Space and Recreation Standards at NEC

Providing Open Spaces in High Density Developments

There is limited application in the rest of Greater Cambridge for high-density developments proposed at NEC however, there are samples found across the UK and Europe where high density developments have contributed positively towards open space and have delivered innovative and well managed facilities that provide opportunities for physical activity, public realm, landscaping, sustainable urban drainage and biodiversity/habitat.

It is the intention of the NEC to provide as much open space on-site, where practical and subject to viability. However, it is recognised that these may take more innovative forms than might be normally provided in a traditional Cambridge development. Some facilities may also need to be provided off-site but still within an accessible location to NEC.

Some recreation activities and features typically available in low density developments such as private spaces can be substituted by public or semi-public/communal space. For example:

- Community gardens and allotments
- A shed space or similar for all age groups, for making things
- Dog parks and off-road trail circuits
- Social gathering spaces/doorstep play as communal open space
- A pleasant garden landscape for restorative values and civic pride
- Children's open space closer to medium high-density dwellings (i.e. 300m rather than 400m)

There is often a high demand for swimming pools and social court sports and gyms in higher density areas because of the relatively high proportion of young adults living in in this type of housing. However, apart from sports courts, it is not desirable that every development has a small gym or swimming pool as these have risk management issues and are often too small to deliver the quality of service sought.

Similarly, full-sized football pitches are unlikely to be provided on-site due to their single large land take. However, a range of alternative formal sports facilities could be provided on-site, these could include 5-a-side pitches, tennis, netball and other artificial court surfaces which can also support a range of other active pursuits.

The proximity of housing to existing public spaces may also exacerbate conflict between residents and sports and recreation activities due to, for example, the noise of children or sports or the provision of floodlights. Careful design will therefore be required to ensure these spaces avoid conflict. This may require some of these formal spaces to be provided inside to minimise noise and light pollution.

Where possible, new facilities will be provided on-site, it is also essential that nearby opportunities that are accessible to NEC are also considered to provide some of these facilities. This will also have the benefit of helping to integrate new and existing communities.

Approach to Providing Open Spaces at North East Cambridge

This section will outline how the standards should be applied providing suitable innovative examples for each type of open space and how the need generated by the development could be provided.

Given the high-density characteristics of the proposed development at NEC, the approach to delivering the various types of open spaces will need to be tailored accordingly to making the best use of the limited land available. Notwithstanding this, it is recommended that open space provision to serve the NEC area is met in the first instance on-site and through off-site contributions as an exceptional circumstance through the provisions set in the existing Cambridge Local Plan 2018 Policy 68.

Standards Compliance

Proposals that require the delivery of open space through new development should explain how the proposed on-site provision and off-site contributions comply with the standards.

Design

Any on-site provision should be an integral part of the overall development scheme and therefore should be considered at the earliest stage of design.

Delivery

Unless otherwise agreed with the Local Planning Authority, where relevant, the S106 agreement should ensure the delivery of on-site provision is linked and effectively phased to the delivery of new residential units.

While the presumption is to provide as much formal sports provision and open space on-site, it is also essential that any existing open spaces deficiencies in neighbouring residential areas are identified. These could provide opportunities for new off-site provision in order to meet the need of both new and existing communities. These spaces could also allow new provision during the construction phase to meet the needs of early new residents. This approach would also support integrating the new community with neighbouring communities.

Open Space Resilience

There is a need to build in resilience and capacity into the existing open space provision for NEC. Alongside any on-site provision, opportunities to use S106 contributions outside the city on large-scale green infrastructure should be considered. This will avoid pressure building up on existing parks, open spaces and cycleways, which might otherwise lose their biodiversity and other qualities. For example, undertaking negotiations for specific S106 contributions for growth sites straddling the Cambridge/South Cambridgeshire boundary could explore opportunities for improving existing parks beyond the city (e.g. Milton Country Park) in order to avoid over-investment in and over-use of the city's parks.

Connectivity with Other Open Spaces

It is essential that new and existing spaces are integrated within the area's urban form and connected with footpaths, running trails and cycle routes. They should also be linked to surrounding green spaces to form an extensive green network which supports active and healthy lifestyles.

Given the area's high-density urban character, it is important that development proposals facilitate improved access to important neighbouring green spaces, including Milton County Park and other facilities in North Cambridge.

There is a need to build in resilience and capacity into the existing open space provision for NEC. Alongside any on-site provision, opportunities to use S106 contributions outside the city on large-scale green infrastructure should be considered. This will avoid pressure building up on existing parks, open spaces and cycleways, which might otherwise lose their biodiversity and other qualities. For example, undertaking negotiations for specific S106 contributions for growth sites straddling the Cambridge/South Cambridgeshire boundary could explore opportunities for improving existing parks beyond the city (e.g. Milton Country Park) in order to avoid over-investment in and over-use of the city's parks.

NEC provides a unique opportunity for the enhancement, extension and improved connectivity of areas such as Bramblefields Local Nature Reserve (LNR), the protected hedgerow on the east side of Cowley Road (City Wildlife Site) and the First Public Drain wildlife corridor and other habitats including ponds and areas of woodland, scrub and grassland. It also provides an opportunity to create a new biodiversity hotspot at Chesterton Fen which can deliver a suite of priority habitats and species that reflect the local landscape. This feature would also serve as a green gateway on the edge of the city which connects to wider schemes such as the National Trust Wicken Vision as well as the River Cam corridor. This offers greater opportunities for public engagement with nature, and the subsequent health and well-being benefits that this brings.

Relevant City/Area-Wide/Regional Strategies

All forms of new open space should support relevant city/regional strategies, where possible, such as the Cambridgeshire Green Infrastructure Strategy.

Flexible/Multi-functional Spaces

All spaces should be both flexible and multi-functional, where practical to do so and allow for a range of 'occasional' events that will help support community activities and sporting events. It is essential that communities can use spaces to foster community interaction and allow people to follow a healthy lifestyle, for all ages throughout the year.

Highly Accessible Spaces

All on-site communal open spaces will need to be high quality, low maintenance and multi-functional to maximise their utility as well as being both available and functional throughout the year.

In Spring, they should encourage people to spend time outdoors. In Summer, they should provide sufficient shade to allow play and minimise localised solar heating, e.g. they should allow some respite from excessive heating during long hot summer days. In Autumn, they should be sufficiently sheltered to allow their continued use, e.g. they should not be located in exposed areas that discourage their use in windy conditions. In Winter, these areas should also be usable spaces e.g. they should not be subject to surface water flooding due to prolonged bouts of rain.

Planning proposals for formal sports facilities (e.g. pitches, pools and courts) will be considered against the requirements set out in NEC Policy 9: Social and Community Infrastructure.

Private ancillary sports and, or leisure facilities incorporated into an employment centres or single, large employment development

Employment centres and, or large, single employment developments may want to include some sports and leisure facilities for use by their employees. It is important that these facilities are commensurate in size to the number of people expected to use them. These should also not have an adverse impact on other similar sports and leisure facilities.

Proposals for ancillary corporate sports and leisure facilities, as part of an employment centre and, or large employment development should therefore use Sport England's Sports Facility Calculator, where possible to calculate the quantum of sports provision generated by the number of people expected to be employed on-site new large-scale employment centres incorporating their own sports and leisure facilities.

Formal Outdoor Sports Provision

New on-site, publicly available formal sports facilities could include 5-a-side pitches, tennis, netball and other artificial court surfaces which can also support a range of other active pursuits.

Trim trails, pedestrian paths and cycle routes can also contribute to formal outdoor space if they are of a sufficient size and standard (which is maintained) to allow for sports events. These routes should be of sufficient width to avoid conflict between pedestrians, runners and cyclists. These should also be of sufficient length to support regular activities such as '5km' park runs and parts of a triathlon circuit.

Opportunities to make existing NEC facilities publicly available, at certain times such as those at Cambridge Regional College will be explored. Given the specific constraints of the land available, a small portion of the formal outdoor spaces may need to be provided inside to minimise noise and light pollution as well as facilitating their availability throughout the year.

With improved access to Milton Village's existing sport and leisure facilities (with a new underpass under the A14) comes the opportunity of providing additional formal sports provision at this location, to help meet the needs of NEC. This will require careful consideration to ensure the needs of both the new and existing communities are met.

Due to the potential for flooding, the Chesterton Fen area will not be considered as part of any calculation for formal recreational provision.

Indoor Sports Provision

Applying the projected NEC demographics to Sport England's Sports Facility Calculator, NEC will generate a need for: 1.32 sports halls or 4 courts; and 182.86 sqm or 0.86 of a 4 lane swimming pool.

A new sports hall could be provided on-site as part of a new community, sports, leisure hub. Alternatively, the Indoor Sports Facility Strategy indicates that there is capacity to expand premises at North Cambridge Academy's 3 court sports hall with existing community access. This type of facility is will ensure both new and existing communities can benefit from a range of accessible activities across the wider northern Greater Cambridge area.

In terms of swimming pool provision, Cambridge City and South Cambridgeshire Councils have commissioned a Swimming Pool Delivery Strategy for Greater Cambridge. In addition to NEC's demand for approximately 0.8 of a swimming pool, there are a number of other proposed swimming pools in the area (West Cambourne, Northstowe and Waterbeach).

The study will: analyse demand for swimming pools in NEC and the wider Cambridge area, using Sport England's Facilities Planning Model; analyse existing supply (including new provision); and advise on how best to deliver swimming pool provision across Greater Cambridge including NEC. It is anticipated that NEC development will collect monies for swimming pool provision which will be invested in off-site swim provision, accessible to NEC residents.

Provision for children and teenagers

On-site, a range of spaces should be provided to cater for all ages including teenagers. They should also be close proximity to residential areas. It is expected that more people will be living in much taller buildings than those normally found in other parts of Cambridge. This means, more time is taken to access the ground floor

level. To compensate for this, open spaces close to medium high-density dwellings should be no more than 300 metres away, in actual walking distance rather than the norm of 400 metres.

In exceptional circumstances, where it is considered more beneficial to provide facilities off-site, then regard for existing open spaces deficiencies in neighbouring residential areas should be identified and considered for off-site provision. Cambridge's Outdoor Play Investment Strategy contains 'Target Lists' for Kings Hedges and East Chesterton and should therefore be considered when considering off-site provision and/or enhancement to existing facilities.

North of NEC, Milton Country Park and Milton Village have several existing sport and leisure facilities. Whilst access to these facilities will be improved through a new underpass under the A14, these are not considered sufficiently accessible for children to access from NEC.

Informal open space

Where possible, despite the limited amount of space available, as much informal open space as possible should be provided on-site. Where it is not possible to do so, then this deficient should be compensated by ensuring those spaces provided are very high-quality similar to that of an established park area which are able to cater for all-ages throughout the year.

These park areas will be flexible, highly accessible and multi-functional spaces, where practical to do so and allow for a range of 'occasional' events that will help support community activities and sporting events. It is essential that communities can use spaces to foster community interaction and allow people to follow a healthy lifestyle, for all ages throughout the year.

They should also support regional/city/area-wide strategies, where practical such as mitigating flood risk and the effects of climate change as well as supporting ecological initiatives and enhancing the area's biodiversity.

Several specific off-site opportunities that will benefit NEC by providing access to informal open spaces have been identified. In addition to the requirement to provide high quality informal open space, specific off-site contributions will be sought towards informal open space at Bramblefields nature reserve, Milton Country Park; Orchard Park, Chesterton Fen and accessibility to River Cam including pedestrian/ cycle bridge crossing over railway.

The River Cam will also be made more accessible through new pedestrian and cycling routes and this will provide access to informal recreation space and serve wider needs.

Allotments

It is unlikely that there will be sufficient space to provide all of this space on-site. Off-site provision should therefore be considered to provide this. On-site community gardens, communal shed spaces and integrated areas supporting local food production will also be an acceptable format. A balance will need to be found that maximises the benefits to the local community and environment.

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Policy 23: Open Space, Sport and Recreation Standards

Policy 23: Open Space, Sport and Recreation Standards requires new residential development to provide new open spaces and recreational facilities. It also explains how this is calculated, for all types of spaces. Normally, informal and formal children's play spaces are provided on-site with off-site contributions collected to finance much larger one-off facilities like sports halls and swimming pools.

Policy 9: Social and Community Infrastructure

Policy 9 is applicable for all formal sports and leisure facilities (all leisure categories in Table 8.3 of the CLP2018), both public and private to ensure these and other relevant matters are given careful consideration.

Proposals for new formal leisure facilities often involve a much wider catchment area than their immediate neighbourhoods and can therefore have an adverse impact on similar facilities in neighbouring communities which need to be given careful consideration before approval. These also include gymnasiums.

This is also the case for ancillary formal sports and leisure facilities provided as part of an employment centre or a large, single development provided for use by their employees. It is important that these facilities are commensurate in size to the number of people expected to use them. These should also not have an adverse impact on other similar sports and leisure facilities.

Proposals for ancillary corporate sports and leisure facilities, as part of an employment centre and, or large employment development should therefore use Sport England's Sports Facility Calculator, where possible to calculate the quantum of sports provision generated by the number of people expected to be employed on-site new large-scale employment centres incorporating their own sports and leisure facilities.

Delivery Comparison of Public Open Space between the Southern Fringe and North East Cambridge (AAP)

Open Space & Recreation Standards

As discussed above in this paper, the Council's open space and recreation standards are listed in Table I.1 of the Cambridge Local Plan 2018. They apply to all schemes for new residential developments and the requirement is based on the net number of residents accommodated in the new development. The current 2018 standards are different to the standards in the Cambridge Local Plan 2006 which

were applicable for most planning application in Cambridge including Clay Farm in the Southern Fringe of Cambridge. The main difference is as follows:

Table 3: Summary of differences between the 2006 and 2018 Cambridge Open Space Standards

Open Space Type	2006 Local Plan (per 1,000 population)	2018 Local Plan (per 1,000 population)
Informal open space	1.8 hectares	2.2 hectares
Allotments	0.4 hectares for urban extensions only	0.4 hectares for all developments

Open Space Provision Calculation

This section provides a summary of the estimated amount of space that NEC will need to provide or contribute towards. These calculations use the Local Plan 2018 Open Space & Recreation Standards (see Table 1) unless an alternative means of calculation will be used. It should be noted that the standard is applied to the total population for the applicable age group(s) listed in NEC’s Population Profile (see Table 2). An indicative approach to delivering these different types is also provided.

As discussed earlier, delivering open spaces in high-density developments, where there is a limited amount of space available, there are alternative high-quality means of providing open spaces which achieve the same outcomes as those provided in traditional residential developments. Quality and availability are often more important than the actual quantum provided. The challenge is to incorporate as much as possible on-site with innovative types of spaces which encourage active and healthy lifestyles which are available, throughout the year. Table 4 provides a summary of the amount of open space that should be provided, based upon the current standards and population profile and how these types could be provided on or off-site.

Table 4: Summary of Open Space Provision Calculation by Open Space Typology

Open Space Typology	Quantum needed	Delivery
Formal outdoor provision (Playing)	(16,236 people @ 1.2 ha/1000)	On-site (tennis courts, running trails and other formal all-weather spaces).

pitches, Courts & Greens)	19.4 hectares	<p>Possibility that some extra indoor provision provided (increased public accessibility) to ensure space is usable in all-weathers.</p> <p>An updated Local Plan Playing Pitch Strategy will also plan for off-site pitch provision nearby along with other growth to 2040. This update may also change the quantum of formal outdoor provision required by North East Cambridge.</p>
Formal provision of sports halls	<p>5.28 courts (1.32 sports halls, 4 courts)</p> <p>Sports England's Sports Facility Calculator</p>	<p>On-site. Options include new community hub, an extension to Cambridge Regional College as well as at North Cambridge Academy.</p> <p>An updated Local Plan Indoor Sports Facility Strategy will also plan for NEC development along with other growth to 2040. This update may change the quantum of formal indoor provision required by North East Cambridge.</p>
Formal provision of swimming pools	<p>182.86m² (0.86 of a 4-lane pool).</p> <p>Sports England's Sports Facility Calculator</p>	<p>Off-site. Swimming Pool Delivery Strategy for Greater Cambridge will report on how NEC can contribute to an accessible swimming pool nearby.</p>
Informal open space	<p>(17,891people @ 2.2 ha/1000)</p> <p>39.3 hectares</p>	<p>Unlikely full quantum will be provided on-site. High quality park areas to be provided to allow them to be useable throughout the year.</p>
Informal provision of natural greenspaces	<p>There is no specific standard requirement for this category.</p>	<p>Access will be provided by facilitating access to local green infrastructure.</p>
Multi-Use Games Area (Tennis)	<p>Category is part of formal outdoor</p>	<p>On-site</p>

/netball/5-a-side football nets)	provision	
Equipped children's play areas	(3,611 people @ 0.3 ha/1000) 1.1 hectares	On-site provision including: Local Area of Play (LAP); Local Equipped Area for Play (LEAP); Neighbourhood Equipped Area for Play (NEAP); and Space for Imaginative Play (SIP). Possibility that some is provided off-site on open spaces nearby.
Allotments	(16,236 people @ 0.4 ha/1000) 6.5 hectares	On-site in the form of community garden/sheds/orchards

Formal Indoor Sports & Swimming Provision Calculation

As discussed above in the section 'Sports England's Sports Facility Calculator', Sport England treat the standards for both outdoor and indoor formal sports provision as an indicative measure of what should be provided for these typologies. This means they can be used for high-level master planning when there is limited detail about the future population's profile. However, once this is known, it should be applied to Sports England's Sports Facility Calculator (SFC). For NEC, the SFC generates demand for:

- Sports halls - 5.28 courts (1.32 sports halls, 4 courts). Cost £3.655m
- Swimming Pools - 182.86m² (0.86 of a 4-lane pool). Cost £3.647m

Formal Outdoor Sports Provision Calculation

Given the unique high-density nature of NEC, it is not envisaged large, strategic outdoor pitches will be provided on-site that have been traditionally provided in developments such as those at Trumpington Meadows and Clay Farm, rather these would be delivered in the form of more smaller, flexible all-weather surfaced courts and other forms of outdoor facilities such as a designated running trails supporting and encouraging regular running and outdoor fitness activities. These would be separate to cycling lanes and walking trails.

The Playing Pitch Strategy will also be updated to inform the Greater Cambridge Local Plan. This review will take account of the growth planned at NEC along with other growth to 2040 and recommend how off-site pitch provision could be provided nearby.

Comparison to Providing Open Spaces at North East Cambridge

Below is a general summary of open space provision for NEC and Cambridge Southern Fringe, for the purpose of providing an indicative comparison between the two developments. It should be noted that swimming provision is an off-site contribution for both developments and therefore does not feature in the comparison table below.

Formal provision of sports halls for NEC is 1.32 sports halls (4 courts). At the Southern Fringe, A 4 court sports hall is provided however public access is restricted because the facilities (including some formal outdoor sports spaces) are shared with Trumpington Community College. The remaining open space categories are listed below for indicative comparison.

Table 5: Comparative Summary of Open Space Provision between North East Cambridge and the Southern Fringe

	NEC	Southern Fringe
Population (approx.)	17,891	9,232
No. of dwellings	8,400	4,000
Open Space Typology	Hectares	Hectares
Formal outdoor provision (Playing pitches, Courts & Greens)	19.4	11
Informal open space	39.3	16.6
Equipped children's play areas:	1.1	2.7
Allotments	6.5	3.6
Total	66.3	33.9
Total per 1000 Pop	3.70	3.68

These figures are relatively the same because the applicable standards are similar. The main differences are with equipped children's play areas and informal open space. Given the relatively low number of children expected to live at NEC (see Population Profile above) there will less need for equipped children's play areas.

The requirement for informal provision for parks is also relatively higher in part because the 2018 Open Spaces & Recreation standard was increased by 0.4 hectares per 1000 population. However, it should be noted that it is unlikely that this

quantum will be achieved on-site. While there are several identified opportunities to increase access to informal open space. Nonetheless, there is significant potential to offset the reduced quantum of on-site provision by providing much higher-quality spaces, equivalent to that of an established pocket park.