This Planning Advice Note has been written by Food Matters, as part of Harvest Brighton & Hove, with support from Brighton & Hove City Council.

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Introduction
The purpose of this Planning Advice Note is to provide some basic technical considerations, as well as offer inspiration, on how food growing can be incorporated into proposals for new developments. Brighton & Hove City Council supports the provision of food growing opportunities within the city as part of its commitment to sustainable development.

The Brighton & Hove Open Space Study Update (2011) makes recommendations for provision of allotments space because of recognised need for this land use. Allotment provision can be challenging in high density situations and new developments present the opportunity to think more creatively about incorporating food growing opportunities in their design.

Urban food growing is an international movement now being taken seriously by both policy makers and planners as a way of achieving a range of diverse benefits. The inclusion of food growing areas in new developments extends beyond the conventional provision of gardens and allotments in that it might include the creative use of roofs, walls and balconies where external space is limited. It might also include landscaping with edible plants rather than ornamental trees and shrubs. This is particularly relevant in high density developments in cities such as Brighton & Hove where land may not be readily available.

There are many benefits associated with food growing, including improving the physical and mental health of residents, increasing bio-diversity in cities, reducing carbon emissions associated with long distance food distribution, and greening the urban landscape. It is also well evidenced that green walls and roofs can improve the performance of buildings by regulating temperature and contributing to energy savings and reduced carbon emissions. The application of green walls and roofs to include productive plants is a developing technology with innovations emerging all the time.

Provision of food growing in any new developments will need to be considered and integrated with other uses for outside space, for example provision of sport and play facilities and access to open space.
This Planning Advice Note applies to new build commercial, residential and mixed use developments, and if applicable, to conversions. It is intended to be used by developers and planning officers and interested members of the public as a guide to what might be achievable depending on the specific context of the development.
Section One: Policy Framework

National Policy

The recent resurgence of food growing and ‘grow your own’ is driven by a variety of factors – an interest in healthy eating and physical activity, environmental concerns, and a desire to know where our food is coming from and how it has been produced. Food growing is supported by policy at both a national and local level. Growing food as close to the point of consumption as possible contributes to climate change targets by reducing emissions associated with the food supply chain, increases access to fresh food and provides physical activity opportunities, leading to improved health outcomes.

Planning Policy Guidance 17: Planning for open space, sport and recreation (2002) sets out standards and recommendations for provision of open space including allotments and community gardens. This takes into account the multiple benefits delivered through the various functions of open space including: strategic functions; urban quality; promoting health and well-being; havens and habitats for flora and fauna; as a community resource; and as a visual amenity.

Food 2030 (2010), The Department for Environment, Food and Rural Affairs (DEFRA) food strategy, refers to the benefits growing food can have for individual health and for community cohesion and praises the positive impact small-scale food projects can have on the local community. A recent DEFRA Fruit and Vegetable Task Force also acknowledged the benefits people and communities experience through growing their own food: ‘food growing can repair connections between people and food; help people understand food’s origin and seasonality; promote healthy eating; be mentally and physically beneficial; protect and enhance biodiversity; build up social bonds; support school curricula and develop young people’s skills’. It also explicitly recommends that ‘an increased amount of land, and infrastructure such as soil quality, is allocated for fruit and vegetable production in planning proposals’.

Planning Advice Note  PAN 06
Food Growing and Development
September 2011
Other national policy:

The recently published *Natural Environment White Paper (Defra 2011)* recognises the value of our natural environment and the need to create and protect green spaces, particularly within urban settings, and the need to reconnect people and communities to nature.

The public health White paper, *Healthy Lives, Healthy People (Department of Health 2010)*, recognizes the impact of access to green and open spaces and nature on influencing the health and well being of the local population.

Local Planning Policy

The benefit of providing opportunities for individual and communal food growing is supported in various planning policies and strategies, in particular:

- Local Development Framework
- The Local Plan
- Sustainable Community Strategy

Local Development Framework

**Brighton & Hove City Council Open Space Study Update 2011**

This study sets standards for access to allotments and urban farms (i.e. food growing). It identifies that access to allotments varies with some significant gaps in parts of the City. It acknowledges the aspiration for allotment provision of at least 0.23 hectares for every 1000 residents, within a maximum distance of 15 minutes walk. On new developments there is the potential to think creatively about this provision even where there is a limited amount of outdoor space. For example including rooftop allotments and/or raised beds.
Brighton & Hove Draft Core Strategy Proposed Submission 2010
The Brighton & Hove Core Strategy Proposed Submission which was intended to provide the overall strategic and spatial vision for the future of Brighton & Hove for the next 25 years, refers directly to the importance of including urban food growing in planning:

- Recognise, safeguard and encourage the role of allotments; garden plots within developments;
- Food growing opportunities provide people directly with fresh, healthy food, increase education and awareness about good food and healthy eating. The light physical exercise involved in gardening is in line with the recurring aim to promote ‘healthier lifestyles’ and ‘active living’. (CP4 Healthy City)

Other requirements within the strategy can also be met by considering the provision of food growing opportunities:

- **CP1 Sustainable Buildings**: New developments to incorporate features that contribute towards a reduction in the city’s ecological footprint. Among other things these should include: water efficiency; effective use of land; protecting occupant health; reducing ‘heat-island’ effect; reducing water runoff; enhancing biodiversity; facilitating composting; reducing air and water pollution; encouraging environmentally intelligent behaviour.
- **CP5 Biodiversity**: The importance of enhancing biodiversity and creating an urban green network is also emphasised. Food growing projects can provide wildlife habitats, particularly in high density areas.
- **CP6 Open Space**: Food-growing can contribute to several aims within this policy –enhancing the range and quality of existing spaces and in particular creating fresh open space in new developments. The Council’s Open Space Sport and Recreation Study acknowledged the health and community benefits that allotments and community gardens can have. As detailed above, a key objective of the standard for allotments is to ensure there is provision of space for food growing that can be protected for future occupiers. In view of the constraints on the city the standard will take appropriate account of all types of food growing space and opportunities. In high density developments use of rooftops / balconies for gardens can provide access to open space which may otherwise be impossible where no land is available.
Supplementary Planning Documents and Guidance:

- **Trees and Development Sites SPD06.** Provides guidance and statutory controls on the preservation and planting of trees on development sites.
- **Nature Conservation and Development SPD11.** Explains the applications and interpretations of Brighton & Hove city council’s statutory duty to conserve biodiversity through the planning system. This SPD can provide important guidance on incorporating biodiversity into designated food growing areas.
- **Sustainable Building Design SPD08.** Sets standards of sustainability expected for development by size, type and site.
- **Brighton & Hove Sustainability Checklist for Planning:** recognises the importance of food growing on development sites and includes questions on this.
- **SPGBH9: Ancillary Update Document – Updated Open Space Contributions Calculator:** this is a calculator to assist in working out the generated demand for open space by a development. It applies the locally devised open space standards including the one for allotments.

Developer Contributions – Interim Technical Guidance on the main types of contribution

This document sets out the main types of contributions expected from developments. It includes the local open space standards and encourages on-site open space provision in favour of a financial contribution. The local standard for allotments is 0.23 hectares per 1,000 population (2.3 m² per person) within a 15 minute walk time (720 metres). It indicates a minimum size threshold of 0.05 hectares, however, if appropriate smaller provision can be created on-site this may be taken into account. As detailed above, in view of the constraints on the city, ‘allotments’ may be innovatively interpreted provided there is a mechanism that protects the allotment/food growing space for current and future occupiers.
Local Plan

The Local Plan is the adopted development plan for Brighton & Hove. It sets out requirements which can be supported and met by the provision of food growing:

- **QD15: Landscape Design.** All proposals for development must submit details to show that:
  a). adequate consideration has been given to landscape design, including all the spaces between and around buildings, at an early stage in the design process;
  b). the proposal includes suitable open space provision;
  c). high quality plant materials and high quality landscaping materials have been selected, which are appropriate to the site and its proposed use;
  e). where appropriate, existing nature conservation features have been retained and new suitable ones created.

- **QD17: Protection and integration of nature conservation features.** New development can also create a variety of opportunities to integrate new nature conservation features for the benefit of local people. Larger development proposals can integrate new habitats into imaginative landscaping schemes and even small developments can incorporate ponds, native plants, bird and bat boxes within roof spaces, ‘green roofs’ and similar ‘greening’ ideas.

- **QD20: Urban open space.** Planning permission will not be granted for proposals that would result in the loss of areas of public or private open space that are important to people because of their recreational, community, historical, conservation, economic, wildlife, social or amenity value. Enhancements to these areas of open space will be sought and the preservation of character, appearance, layout and features of importance. For the purposes of this policy ‘open space’ does not just relate to parks and gardens: it also includes... areas that provide a valuable feeling of space and / or seating within the urban area, areas of grass important as an informal area of play, recreational areas, allotments and areas of amenity value that are visible but not necessarily accessible to the public.

- **HO6: Provision of outdoor recreation in housing schemes.** New residential development will not be permitted unless the requirement for outdoor recreation space, generated by the development, is suitably provided.
The applicable local open space standards include a standard for ‘allotments’. A key objective of the standard for allotments is to ensure there is provision of space for food growing that can be protected for future occupiers. In view of the constraints on the city the standard will take appropriate account of all types of food growing space and opportunities.

- **QD2: Key principles for neighbourhoods.** All new developments should be designed to emphasise and enhance the positive qualities of the local neighbourhood.

- **QD21: Allotments.** Whilst this policy refers to protection of allotments it reflects the importance of allotments to healthy neighbourhoods.
Brighton & Hove Sustainable Community Strategy

The city’s Sustainable Community Strategy aims ‘to increase the amount of food grown and consumed within the city and reduce food miles and emissions from production, transportation, packaging and disposal. To increase the amount of land available within the city on which to grow food, extending allotments, growing in schools, around estates, and other available land within the city’.

Spade to Spoon: Making the Connections, a Food Strategy and Action Plan for Brighton & Hove (2006)
Supports a sustainable food system within the City and encourages increased food production.
Section Two: Planning, Technical and Design Issues

How food growing can be incorporated into new developments will be subject to a range of variables dependent on the purpose, scale and location of the development. Some developments may have no land available but could consider utilising rooftops, walls or balconies as growing spaces. Some developments may have limited access to land in which case landscaping could include productive plants such as herbs or fruit trees as a minimum. Land that is considered unsuitable for buildings i.e. land susceptible to subsidence or awkward pockets could be considered for food growing. Residential developments will present a different scenario to commercial or mixed use development, as there is immediately an obvious group of people to grow the food (i.e. residents). In other situations thought will need to be given to the on-going management of the growing space and who will harvest the produce.

Planning Considerations
As highlighted above new developments should take into account the local open space standards. A standard has been set for ‘allotment’ provision, however, it is recognised innovative solutions will need to be found to meet the city’s open space requirements. When applying the ‘allotment’ standard regard will therefore be given to other types of food growing provision provided it can be protected for current and future residents/occupiers.

Technical and practical considerations
The following technical issues must be taken into consideration as the starting point for food growing whatever the scale or circumstances or features being considered:

- **Land**: how much external land, if any, is available on the site, or can be made available through the design process?
- **Use of building**: is there potential to incorporate growing spaces within, around and on the building?
- **Aspect and light**: Ideally growing spaces should be south facing. Food plants require exposure to direct sunlight during the growing period. If this is limited it may not prohibit food growing but it may restrict the choice of plants to those which require less light.
• **Water**: Any food growing will need a reliable water supply. Incorporating rainwater collection into any design is desirable, but easy access to mains water may also be necessary. Consideration should also be given to water delivery and storage systems to ensure risk of Legionella is controlled.

• **Wind**: Exposure to salty sea wind can damage plants and hinder their growth. Adequate protection needs to be planned into any growing space to allow crops to thrive.

• **Soil/growing medium**: An essential component for growing food which will vary according to the setting. Rooftop or container growing may require a more lightweight growing medium.

• **Compost**: All food growing requires on-going inputs to maintain the fertility of the growing medium. Provision of on-site composting should be designed in from the outset to provide this and will also help manage organic ‘waste’ generated within the development.

• **Contaminated Land**: Soil in urban settings may need to be checked for contamination and quality. Any site must be made safe for its existing use. The suitability of the land for growing food should be assessed as previous or current land use could have created contamination of the soil. It is the developer’s responsibility to ensure any risks posed are appropriately managed. Depending on the circumstances, soil contamination can be overcome by use of containers or raised beds.

• **Access**: Depending on who the site will be used by (elderly people, children, etc.) adequate access must be planned for. In addition, heavyweight materials such as compost and tools may need to be taken to the site – a particular issue for rooftop or balcony growing.

• **Storage**: Adequate provision for the storage of tools and associated equipment will need to be integrated into the design.

• **Management**: Who will be growing the food and will there be a need to provide on-going management of the growing areas by a caretaker or external contractor?

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Design Options

Depending on the answers to the above questions and consideration of the above requirements for food growing, several design options can be considered:

- **Rooftops**
  Green roofs can be categorised as extensive or intensive. Extensive green roofs tend to consist of non-productive plants e.g. sedums and are designed for energy efficiency or water management. They tend not to be generally accessible. Intensive green roofs are designed to be accessible for either food growing or other recreational activities. Intensive green roofs will require deeper soil levels to support shrubs, perennials and even trees. Beds for growing can be incorporated into the roof at the time of design/construction or they can be added as containers after completion or in conversion projects. Loading capacity for green roofs should be addressed at the design stage.

- **Balconies**
  Design of balconies can provide small spaces for individuals to grow a limited selection of plants and are particularly suited to high density residential developments. It is critical to consider aspect. North facing balconies overshadowed by other high density buildings are unlikely to be suitable for food growing. Planting containers / window boxes can be incorporated into balcony design. Railings and structures joining neighbouring balconies can also be designed to support climbing / espaliered plants. Loading capacity for containers should be addressed at the design stage.

- **Walls**
  Vertical growing on external and internal walls, the latter usually in atriums or courtyards, can be adapted for food production. As with green roofs, green walls are now routinely used in building design to increase build performance, and in such cases tend to be planted with non productive climbing plants. Green walls require technical considerations such as maintaining the plant and the growing medium in place, and supplying irrigation. There are various systems now on the market for achieving this and some modular planting systems are now starting to include productive plants in their design, in
particular salads and herbs. Maintenance of productive green walls is high, as they will require harvesting and seasonal replanting, and therefore will need to be accessible. They will also have a dormant period during the winter when no plants will grow and allowance will need to be made for the appearance of the walls at this time. Walls can also be utilised for training espaliered and climbing plants which require less technical considerations.

• **Internal Atriums/courtyards**
  Designing buildings with atriums or courtyards with adequate exposure to sunlight can create deliberate opportunities for food growing. Such situations will often create micro-climates allowing high value tender plants such as tomatoes and citrus fruits to be cultivated. Ground level beds or planters can be used, as well as living walls. Care must be given in internal spaces to providing irrigation systems and allowing for water run-off.

• **External Landscaping and integrating ornamental with edible planting**
  Depending on the land available around the building or on the site various options are available. Cropping can be integrated within areas of soft landscaping with a minimum cost outlay. Traditional gardening styles of cottage and potager\(^2\) gardening, as well as permaculture\(^3\), embrace this mixed approach. Low maintenance productive landscaping can include the planting of fruit, nut trees and vines, both freestanding and espaliered against walls. Beds can include perennial edible shrubs such as artichoke, currants, herbs, rhubarb and fruit alongside ornamental plants. Similarly planters or containers can be used if no soil is available or in hard landscaping designs. Walls can be used for espaliered fruit and nut plants. At this level, planting requires minimal attention. Larger areas of external space can be used for beds or even allotments and / or communal gardens, which will require more maintenance by either residents or contractors.

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\(^2\) Potager is a French term for an ornamental vegetable or kitchen garden.

\(^3\) The word ‘Permaculture’ is derived from the two phrases ‘permanent agriculture’ and ‘permanent culture’.
● **Raised Beds**

Reasons for building raised beds might include presence of contaminated, compacted or thin soil, or providing growing space where there is hard-standing or on rooftops. It is suggested that beds should be: up to 2 feet tall for wheelchair access; 3 foot wide where there is only going to be access on one side; 4 foot wide for a bed with access on both sides.

**Management of Growing Spaces**

Edible plants tend to require more maintenance than ornamental plants, and ideally need to be harvested and the resulting produce used. Vegetables tend to be annuals and need replanting every year. It is possible to plant low maintenance edible trees and shrubs as indicated above. These plantings will require the same on-going management, usually undertaken by external contractors, as normal landscaping. This approach is the most useful in situations where there is no obvious group who will undertake the growing, for example in commercial or industrial situations.

Residential developments have an obvious group of people able to undertake the food growing in a variety of different ways:

- Residents manage their own gardens / balconies / rooftop allotments:
- Residents organise themselves as Residents Association and grow collectively in community garden/allotment/rooftop garden etc.

Public spaces and communal areas in residential or commercial /mixed developments may require management by a ‘green’ caretaker, facilities manager or external contractor.

Public buildings such as schools and hospitals have communities – staff, pupils and other users of the buildings who will organise together to grow food – and may be supported and joined by others in their wider surrounding community. Involving these people at the start of the design process will be advantageous.

It is undesirable to create growing spaces which cannot be managed and become unsightly and unattractive. Therefore consideration of the on-going management of the site is critical.
Appendix 1: Examples of Potential Approaches in Particular Settings

1. **Residential - High Density, Limited Land Available**
   - Balconies with in-built container beds
   - Productive green walls
   - Roof-top allotments

2. **Commercial**
   - Green roof with productive plants
   - Landscaping with edible shrubs, herbs, fruit and nut trees
   - Productive green walls

3. **Public Building - High Density, Area with no Essential Land e.g. School**
   - Managed by school community and caretaker
   - Productive green walls
   - Roof Garden with productive plants
Appendix 2: Case Studies

One Brighton - Rooftop Allotments

The One Brighton development in central Brighton has a rooftop allotment site, consisting of 28 mini-allotments, which are rented out to residents who manage their individual plots at their own leisure (although the caretaker oversees to some extent the running of the site). The space brings residents together around a common interest and helps build a sense of community. The only real problem is the small number of plots compared to the number of residents and given how many were immediately keen to rent one.

Good use has been made of roof space, especially as there was no available space at ground level for such a project. Well integrated water butts collect rain and satisfy most of residents’ watering needs, and each mini-allotment has its own tool box neatly built onto it. The organic waste from gardening is composted in the building’s macerator which also processes kitchen waste from the apartments, and the resulting compost is then used back on the allotments.
Reading International Solidarity Centre – Rooftop Forest Garden

The Rooftop Forest Garden at RISC is primarily an educational space for local schools and community groups, and is run by staff and volunteers from the centre. The design mimics a woodland ecosystem through a careful combination of different types and layers of vegetation, resulting in a highly productive garden needing relatively little labour. Herbs, flowers and salad leaves from the garden go to the café at ground level, which in turn composes its organic waste to feed the plants on the roof. This pioneering project has been extremely successful. The originally sparse looking planting has, over time, grown and matured into a dense and impressive natural environment. The forest garden design, as opposed to conventional allotment plots, leads to a great diversity of plant species and provides habitat for a large variety of wildlife, contributing to biodiversity protection and enhancement. Although not part of a new development, this impressive refurbishment shows what is possible on an ageing roof space, and hints at the even more ambitious potential to incorporate into new builds. It was fortunate that the existing roof was structurally strong enough for their project. On a new design, this can easily be planned for.

www.risc.org.uk/gardens  www.eco-garden.co.uk
Waterhouse Restaurant, Shoreditch – Growing wall

This restaurant has incorporated a professionally designed 3m X 3m hydroponic wall for growing seasonal herbs and salads into its entrance courtyard. Thus some of the highest value crops are grown and served on site. Installation costs were minimal as this element was integrated within a wider regeneration scheme, rather than added onto a finished project. Maintenance costs are insignificant as the wall needs very little tending to, and this is done by the restaurant staff.

The growing wall links into the restaurant’s provision of only seasonal food, and although annual crops are grown currently (some aesthetic appeal being lost in the winter months), perennial crops could easily be incorporated into similar projects to be harvested throughout the year.

www.waterhouserestaurant.co.uk
www.biotecture.uk.com

Mole Hill Community Housing, Vancouver, Canada

This urban housing regeneration project combined heritage building restoration with affordable housing creation, built along sound environmental guidelines. The development combines an intelligent use of innovative technologies and thorough planning for healthy communal living to produce an exemplar of sustainable urbanization.

Integrating biodiversity links and open space, the pedestrian-priority “living-lane” running through the development is lined with communal food-growing plots that are shared between the estate’s residents and those of the wider area.
Alara Factory, Kings Cross, London

Alara, a wholefoods company in London, have created a forest garden on a disused strip of land down the side of their factory. The garden is used and maintained by staff members and local community members, in particular youth groups who utilise the space for educational activities. The garden has created links between the local community and local businesses creating better neighbourly relationships.
Appendix 3: Resources

National Policy Documents:

Planning Policy Guidance 17: Planning for open space, sport and recreation (DCLG 2002)
http://www.communities.gov.uk/publications/planningandbuilding/planningpolicyguidance17

Food 2030 (2010), Department for Environment, Food and Rural Affairs (Defra)

Natural Environment White Paper (Defra 2011)
http://www.defra.gov.uk/environment/natural/whitepaper/

Healthy Lives, Healthy People (Department of Health 2010),

Local Policy Documents:

Brighton & Hove Local Plan 2005,
http://www.brighton-hove.gov.uk/index.cfm?request=b1000164

Brighton and Hove Draft Core Strategy Proposed Submission 2010
http://www.brighton-hove.gov.uk/index.cfm?request=c1148443

Sustainable Community Strategy
http://www.bandhsp.co.uk/index.cfm?request=b1158724

Spade to Spoon: Making the Connections, a Food Strategy and Action Plan for Brighton & Hove (2006)
SpadeToSpoon-WEB_FINAL_SEPT06.pdf
Developer Contributions: Interim Technical Guidance on the main types of contributions (including open space) (BHCC 2011)

SPGBH9: Ancillary Update Document – Updated Open Space Contributions Calculator following approval at Cabinet (17/02/2011)

BHCC Open Space Study Update 2011,

Further background documents to the BHCC Open Space Study:
http://www.brighton-hove.gov.uk/index.cfm?request=c1187994

Websites:

For information on Brighton & Hove Food Partnership, food and food growing in Brighton & Hove: www.bhfood.org.uk

Examples of technical information on urban food growing:
http://vancouver.ca/commsvcs/southeast/documents/pdf/designingUA.pdf

An extensive list of companies specialising in Green Roof construction:
http://livingroofs.org/20100310102/green-roof-industry/industryintro.html

The RISC website garden section contains information about its design principles and technical issues:
http://www.risc.org.uk/gardens/?PHPSESSID=3ebcf2892fcaf1e3a0d6a1ce51ec1f74

BioTecture pioneered the productive green wall at the Waterhouse Restaurant in Shoreditch: http://www.biotecture.uk.com/

Carrot City explores the potential for urban food growing through case studies of real and exploratory projects: http://www.ryerson.ca/carrotcity/
Some examples of composting solutions for high-density developments:

Documents:

Cultivating the Capital, a report exploring food production and the planning system for London, has a section dedicated to the potential for new growing sites in the city (section 5, p. 36):
http://www.london.gov.uk/archive/assembly/reports/plansd/growing-food.pdf

DEFRA Fruit and Vegetables Task Force’s report emphasises the benefits of creating opportunities for communities to grow their own food:

Natural England’s Green Infrastructure guidance advocates the incorporation of food growing spaces within a more comprehensive ecological context (p. 35):
http://naturalengland.etraderstores.com/NaturalEnglandShop/NE176

Sustain have developed guidance: ‘Good Planning for good food. How the planning system in England can support healthy and sustainable food’ January 2011:
http://www.sustainweb.org/publications/?id=192

Environmental Protection UK has developed a leaflet on addressing land contamination when growing edible crops: