

PERFECT factsheet 4



green infrastructure and food

Definitions

- **Green Infrastructure:**

A strategically planned network of high-quality natural and semi-natural areas with other environmental features which is designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings.

- **Allotment:**

An area of land leased either from a private or local authority landlord for the use of growing fruit and vegetables. The land may also be used to grow ornamental plants and keep animals such as hens and bees.

- **Community orchard:**

A collection of fruit, and sometimes nut, trees planted among grass full of wildflowers for the use of local residents.



This Factsheet sets out for the benefit of policy-makers the advantages of planning for green infrastructure and food-growing opportunities, 'principles for success' when encouraging and delivering these food-growing opportunities, and a case study of the approach pursued by 'Edible Ebbsfleet' in the UK.

Why is green infrastructure important for food?

Green infrastructure and food go hand in hand; we need areas in which food can be grown. Food plays a

fundamental role in our everyday lives – from the way we socialise, to the major role it plays in determining how long we may live; and, of course, we consume it (ideally) every single day. However, we have become increasingly disconnected from the way that food is grown, consumed and managed. And in the UK alone households throw away over £12 billion worth of food each year.

The evidence of the multiple benefits of growing, processing and consuming food locally – ranging from helping to tackle obesity to boosting global food security – demonstrates that reconnecting people to their food systems is more important than ever. Furthermore, waiting lists for allotments are at an all-time high, with many people wanting to 'grow their own'.

What do we mean by sustainable local food systems?

The idea of a sustainable local food system incorporates everything from encouraging healthy eating and community food-growing, to thinking about commercial opportunities for growing, processing and distributing food within and beyond communities. This relates to a continuum of scales, from the wider considerations of food supply and the relationship between agriculture on the peri-urban and rural edges of communities, to urban farms, new forests, farmers' markets, and food co-operatives, and right down to green roofs or walls on individual buildings. At all scales, food-growing considerations and providing opportunities for food-growing have implications for the way that a place is planned, designed, delivered and managed in the long term.

The benefits of sustainable local food systems

The EU is far from self-sufficient in food, not least in a context of climate change and its impacts on global food prices and food security.¹ It is important that we re-evaluate the relationship between food and planning to help embed sustainable local food systems that provide a wide range of benefits. These benefits, discussed further below, include reducing carbon dioxide emissions; climate change adaptation; increases in green infrastructure; improved community health and cohesion; and benefits to local economies.

Health and wellbeing

- **Increased physical activity:** Regular involvement in gardening, food production or community food-growing projects can have physical benefits through increases in overall levels of physical activity and fitness.²
- **Support for healthy consumption and lifestyles:** Participating in food-growing can not only increase people's consumption of fruit and vegetables but can also improve their attitude to healthy eating and their understanding of how food is grown. Eating increased amounts of fresh produce, and being outdoors, contribute to healthy-weight management, reducing the risk of obesity and increasing life expectancy.³
- **Improved mental health and wellbeing:** Direct contact with the natural environment, being outdoors and the social interaction of being involved in community projects can all have direct positive impacts on mental health, including improvements to



mood and self-esteem, reductions in stress and anxiety, and help with depression.⁴

- **Greater nutritional value:** Locally grown foods that are allowed to ripen naturally retain more nutrients and are thus more nutritious than produce that is transported for longer distances and is often picked before it is ripe to ensure that it survives the journey. Furthermore, food eaten at the peak of freshness is known to taste better.⁵

Inclusive communities

- **Improved interaction and social cohesion:** Being involved in community food-growing can encourage social interaction and community cohesion by bringing diverse groups of people together around a common interest.⁶ As one of the founders the Incredible Edible movement, Pam Warhurst, has said, 'If you eat, you're in.'
- **Reduced food poverty:** Millions of individuals and families across the EU struggle to afford to eat;⁷ green space and food-growing opportunities make access to food more affordable for everyone.

Environmental restoration and sustainability

- **Reductions in food miles and carbon footprints:** Growing and consuming food locally can reduce food miles and carbon footprints, leading to improved air quality and more sustainable consumption of resources.⁸ This

'Green space and food-growing opportunities make access to food more affordable for everyone'



‘Food-growing land and allotments can provide accessible open spaces for the whole community as part of a multi-functional network of green infrastructure’

helps in adapting to and mitigating the impacts of climate change and improves biodiversity.

- **Multi-functional green infrastructure:** Food-growing land and allotments can provide accessible open spaces for the whole community as part of a multi-functional network of green infrastructure.
- **Improved climate resilience, soil quality and ecosystems services:** Increases in vegetation and greenery and practices such as agroforestry can help to reduce the urban heat island effect and encourage sustainable drainage through more permeable surfaces.⁹ This can then lead to improved soil quality and the provision of ecosystem services.¹⁰

Economic development, skills and investment

- **Learning and education:** Getting involved in local growing schemes provides opportunities for learning and education based around food and green infrastructure – growing, managing, cooking and eating, including understanding (and tasting) the benefits of eating seasonally and healthily.
- **A green economy:** Community food-growing can encourage the development of life-long and transferable skills¹¹ as part of a green economy and ecosystems services approach.¹²
- **Attractive places:** The aesthetic benefits of urban environments designed with food in mind can encourage investment and increase property prices.¹³
- **Increased employment opportunities:** Community-led models of food production and distribution, such as co-operatives or vegetable-box schemes, can provide local employment and industry.¹⁴
- **Less waste:** In the UK alone, it is estimated that £13 billion of food was wasted between 2016 and 2017, with the average household losing £470 a year because of avoidable food waste.¹⁵

Principles of success – planning for sustainable food systems using green infrastructure

Of course, laws and local policies will come in to play when planning for effective delivery of local food systems. However, some universal steps or ‘principles of success’

can be followed to help plan sustainable food systems supported by green infrastructure.

Embedding aims in local policy

- If undertaking a review, consider how existing green land can be managed for food production and how this might relate to food supply for local communities.
- Include requirements for community food-growing and considerations of wider sustainable food systems in strategic and detailed local policy, including for site-specific briefs.
- Gather locally specific evidence on community food-growing opportunities to inform detailed site policies and design.

Design

- Integrate local food systems as part of a landscape-led approach to design and masterplanning.
- Give consideration to local food opportunities in the context of movement, density, commercial activity and land use to ensure their viability.
- Design spaces in the public realm with flexibility to incorporate local food-growing opportunities in the future.
- Ensure that each household has access to space to grow food – whether in a private garden or in shared community space.
- Ensure that the design of buildings has considered opportunities for food-growing as part of a wider network of green infrastructure, and allows adequate internal space to store, produce and cook fresh food and eat meals together.

Delivery

- Give consideration to community food-growing as a ‘meanwhile use’ on development sites, provided that this is supported by longer-term provision.
- Consider spaces which can be taken over by community-led initiatives.
- Integrate community food-growing with community participation over the life of a development.

Management and stewardship requirements

- Include local food systems and opportunities for the long-term management of food-related initiatives within scoping work on long-term stewardship models.
- Ensure that food is considered in the economic strategy for a scheme, including opportunities for initiatives such as food co-operatives.
- Consider the link between food and waste management, such as closed-loop processes.
- Ensure that the monitoring of developments considers health outcomes, including opportunities for local food provision.

Finance and local economies

- Consider how opportunities for green infrastructure funding can be used to fund local food-growing initiatives.
- Use business development funds for food-related businesses and co-operatives.
- Consider applying natural capital accounting processes to local food systems.

Case study - Edible Ebbsfleet

Ebbsfleet 'Garden City' is a new community located in Kent, England. It will provide up to 15,000 new homes and 32,000 jobs by 2035, and is the largest of the ten NHS England Healthy New Towns demonstrator sites. Ebbsfleet Development Corporation and Dartford, Gravesham and Swanley Clinical Commissioning Group are developing the new community collaboratively.

A baseline quality of life study in and around Ebbsfleet has revealed high levels of childhood obesity and type 2 diabetes, and limited access to healthier and more affordable food options. It has also indicated that the existing communities adjacent to Ebbsfleet Garden City have health indices over 30% lower than the national averages. As a result, enabling healthier eating has been a priority for the new development. Through local food-growing, residents will be encouraged to get involved in cooking, growing and eating healthily, and in getting to know their neighbours.

Edible Ebbsfleet, set up to build on the success of Incredible Edible Todmorden, is a community activation initiative working with local residents to develop a series



of small-scale food-growing initiatives, on all sizes of green spaces, along local streets, parks and gardens – both to transform the image of the area and to promote education on the health benefits of eating fresh fruit and vegetables. The Healthy New Towns team worked with a local voluntary sector organisation, No Walls Gardens, to kick off the initiative with modest financial support for ten small growing projects on unused land.

The work inspired others to get involved, and there are now several Edible Ebbsfleet initiatives across the area – including a community garden; edible streetscapes providing free access to fruit, vegetables and herbs; a growing initiative at Ebbsfleet International Station; and school projects involving over 1,200 children. Edible Ebbsfleet aims to use pockets of green infrastructure for growing small berry-bearing plants to great fruit trees and aims to help this become the norm across the community.

References

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<https://publications.parliament.uk/pa/cm201617/cmselect/cmenvfru/429/429.pdf>

Pointers to further information

Ebbsfleet Development Corporation – Edible Ebbsfleet.
<https://ebbsfleetc.org.uk/healthynewtowns/edible-ebbsfleet/>

NHS England Healthy New Towns programme, including the *Putting Health into Place* publications. <https://www.england.nhs.uk/ourwork/innovation/healthy-new-towns/>

No Walls Gardens. <http://www.nowallsgardens.org>

Incredible Edible Todmorden. <https://www.incredible-edible-todmorden.co.uk>

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About PERFECT

PERFECT (Planning for Environment and Resource efficiency in European Cities and Towns) is a five-year project, running from January 2017 to December 2021, funded by Interreg Europe. It aims to demonstrate how the multiple uses of green infrastructure can provide social, economic and environmental benefits. It will raise awareness of this potential, influence the policy-making process, and encourage greater investment in green infrastructure.

To find out more about PERFECT, visit <http://www.interregeurope.eu/perfect/>

Or contact: Jessica Fieth, Project Manager – PERFECT,
TCPA, 17 Carlton House Terrace, London SW1Y 5AS, United Kingdom

e: jessica.fieth@tcpa.org.uk t: +44 (0)20 7930 8903

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