

Land use planning as a tool for changing the food environment

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	3	4. CASE STUDIES.....	10
ACKNOWLEDGMENTS.....	3	Restrictions for food retailers who predominantly unhealthy options.....	10
1. INTRODUCTION	4	4.1. Case study 1: Hot Food Takeaway Supplementary Planning Documents	10
1.1. Background	4	4.2. Case study 2: No Fry Zone initiative.....	12
1.2. Purpose.....	4	4.3. Case Study 3: South Los Angeles Fast Food Ban	13
1.3. Scope.....	4	4.4. Case Study 4: Restrictions on formula restaurants	15
1.4. Outline	4	4.5. Case study 5: Restrictions on outdoor food advertising via land use planning tools	16
2. GENERAL BACKGROUND	5	4.6. Case study 6: Restrictions on drive-through services.....	18
2.1. Global trends and concern about the rising rates of non-communicable diseases	5	4.7. Case study 7: Food Retail Expansion to Support Health (FRESH).....	19
2.2. Conceptual overview of neighbourhoods and health.....	5	4.8. Case study 8: The Pennsylvania Fresh Food Financing Initiative (FFFI).....	21
2.3. Introduction to food environments	5	4.9. Case study 9: Green Cart Initiative.....	23
3. LAND USE PLANNING AND HEALTH PROMOTION	7	4.10. Case study 10: Permitted fruit and vegetables retailers North Carolina.....	26
3.1. A brief introduction to land use planning and health promotion	7	5. RECOMMENDATIONS.....	27
3.2. Introduction to land use planning as a mechanism to shape food environments.....	7	REFERENCES	29
		APPENDIX 1:	
		Template used to guide the case study analysis.....	33



EXECUTIVE SUMMARY

Easy access to nutritious food choices where people live, work, study and play can help to maintain health and prevent diet-related chronic disease. Governments, planners and urban designers can positively influence access to nutritious food by changing food availability and access at the local level through land use planning. The purpose of this report was to undertake a content analysis of known examples of land use planning tools from around the world which have been implemented to improve food availability and access.

Ten case study examples were identified as having sufficient information for detailed analysis. Six case studies related to creating barriers for food retailers selling primarily foods high in unhealthy fats, sugars and/ or salt:

- **Case study 1:** 'Hot Food Takeaway Supplementary Planning Documents' which use zoning measures to limit the establishment of hot food takeaways (England)
- **Case study 2:** 'No Fry Zone' initiative using zoning measures to exclude the construction or operation of new fast food/ takeaway outlets within 400m of schools or playgrounds (Wicklow, Ireland)
- **Case study 3:** 'Fast Food Ban' using zoning measures to prohibit the establishment of standalone fast food outlets (South Los Angeles, United States)
- **Case study 4:** 'Restrictions on formula restaurants' (United States)
- **Case study 5:** 'Restrictions on outdoor food advertising' (Vermont, United States and Mandurah, Australia)
- **Case study 6:** 'Restrictions on drive-through services' (North America and Australia)

Four case studies related to land use planning tools used to encourage food retailers offering primarily nutritious foods:

- **Case study 7:** 'Food Retail Expansion to Support Health (FRESH)' (New York City, United States)
- **Case study 8:** 'The Pennsylvania Fresh Food Financing Initiative (FFFI)' (Pennsylvania, United States)
- **Case study 9:** 'Green Cart Initiative' (New York City, United States)
- **Case study 10:** 'Permitted fruit and vegetable outlets' (North Carolina, United States)

Based on the learnings from these case studies, key documents and the scientific literature, several key considerations when using land use planning tools to improve local food environments were identified:

- ensure the local planning authority have a (food) retail classification system and data visualisation tools to enable the identification of problems with food access/ availability;
- adopt combined approaches that discourage food retailers who sell predominantly unhealthy food and encourage food retailers who sell predominantly nutritious options;
- focus on reducing inequalities and providing opportunities for all;
- use a 'health in all policies' approach with collaboration and input from stakeholders from different disciplines;
- better understand the barriers to adoption and feasible steps to overcome these barriers; and
- stronger evaluation of the effectiveness of land-use initiatives is needed.

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1. INTRODUCTION

1.1. Background

Intersecting with the United Nations (UN) Sustainable Development Goals, the UN Decade of Action on Nutrition 2016–2025 provides a framework for fostering and accelerating actions to end all forms of malnutrition (including undernutrition, micronutrient deficiency, overweight and obesity), by engaging with a range of stakeholders to address unique challenges faced by different countries (1). In supporting the implementation of the Decade of Action on Nutrition, the World Health Organization (WHO) has committed to providing leadership to shape the narrative and leverage actions, including via the implementation of relevant changes by sectors outside of health (2).

Action Area 5 in the Decade for Action on Nutrition work programme calls for safe and supportive environments for nutrition at all ages, where it is recognised that a healthy food environment can be achieved via regulatory and fiscal tools to promote healthy diets and incentivise healthy supply (1). The Urban Food Agenda further recognises the need for comprehensive action to improve ‘access to food and green environments for healthy cities’, and the role that effective land use planning, zoning regulations and legal frameworks can play in shaping cities to improve access to healthy food (3). The commitments of cities and local government to initiatives such as the Milan Urban Food Policy Pact (4) and the WHO’s Healthy Cities initiative (5) highlight growing global momentum for the critical role of city actions in shaping healthier urban environments and driving positive change.

In 2021, the UN Food Systems Summit aims to bring together a diverse range of key stakeholders to launch bold new actions to create positive changes to food systems to be healthier, more sustainable and more equitable (6). This includes bold actions that can be taken by local governments and other stakeholders that shape cities to ensure access to healthy and affordable food available to all.

1.2. Purpose

This project aimed to undertake a content analysis of known examples of land use planning tools that have been implemented around the world to improve food access and availability. These tools have the potential to improve food environments, and subsequently public health, when implemented as part of a comprehensive package of policies to make the food environment healthier, such as nutrition labelling, healthy public food procurement and service, fiscal and pricing policies, marketing restrictions and reformulation. The main aspect of the food environment in focus for this report is the availability and type of food retailers in the community. Food retailers in this instance are inclusive of any person, business or outlet that sells food, including market traders, small independent stores, and larger chain brand franchises.

This report provides a summary of the scientific evidence relating to food environments, how land use planning tools are integrated with health and food environments, and details ten international case studies that used land use planning initiatives to shape food environments, including their objective, where they have been implemented, the implementation process, and any evidence of outcomes resulting from their implementation (when evaluated). Based on the learnings from these case studies and the scientific literature, this report concludes with a list of recommendations to consider when using land use planning tools to manage food environments from a public health perspective.

1.3. Scope

The report was written in 2021 and led by the Institute for Physical Activity and Nutrition (IPAN), Deakin University, Australia. The literature and data for the review and case study analysis were sourced from peer-reviewed literature, grey literature, and relevant websites written in English. Whilst case studies across different contexts were sought for diversity, the scope was limited to cases where sufficient information could be sourced for a detailed analysis of the objectives and implementation processes. For the most part, these were limited to high-income countries. The analysis revealed that key land use tools to manage food environments related to both barriers (e.g., exclusion zoning to restrict hot food takeaway retailers, restricting outdoor food advertising, restricting drive-through services) and facilitators (e.g., incentivising the development of fresh food outlets, creating permits for mobile fresh fruit and vegetable carts, zoning to allow fruit and vegetables retailers as a permitted land use). A template of the information sought for the case study analysis is provided as an appendix. The review and case study analysis were used to inform the final recommendations.

1.4. Outline

This report contains:

- An overview of food environments and how they influence health
- An overview of how land use planning tools have been used to manage food environments from a public health perspective
- A case study analysis of current land use planning examples based on available written reports that are mostly limited to high-income nations.
- Recommendations for using land use planning tools to encourage healthier food environments.

2. GENERAL BACKGROUND

2.1. Global trends and concern about the rising rates of non-communicable diseases

Non-communicable diseases (NCDs) represent approximately 71% of all deaths globally and are a major cause of premature deaths, disproportionately impacting those from low- and middle-income countries (7). In adults, rates of obesity increased globally from 1975 to 2014 with the amount of increase varying by sex and by region (8). Although rates of childhood overweight and obesity have plateaued in many countries, they remain unacceptably high (9). The UN's 2030 Agenda for Sustainable Development calls for action to meet the target of reducing premature mortality from NCDs by one third by 2030 (10).

Unhealthy diets have been linked to an increased risk of a range of NCDs and related indicators, including cardiovascular disease, elevated blood pressure and blood cholesterol, diabetes, obesity and some forms of cancer (11-13). A recent systematic analysis demonstrated that suboptimal diets are globally pervasive, failing to meet the optimal levels for most indicators, including intake of fruits, vegetables, legumes, whole grains, nuts and seeds, milk, calcium, fibre, omega-3 fatty acids, trans-fatty acids, red meat, processed meats, sugar-sweetened beverages and sodium (12). In 2019, dietary risks, defined as the joint effects of the dietary pattern indicators listed above, was the second highest ranked risk factor globally for attributable deaths among women, the third ranked risk factor for men, and was the fifth most important contributor to attributable disability-adjusted life-years (14). Global action to address poor diet is critical.

Over the last decade, many studies have examined associations between lived environments and behaviours such as food consumption (15), physical activity (16) (including active transport (17), i.e., walking or cycling to a destination), and alcohol use (18). These studies have applied the socio-ecological model which posits an interplay between individual, social and environment factors in influencing behaviours (19). The neighbourhood environment has been shown to be positively associated with healthier behaviours, for example, when there are a variety of food retailers that stock nutritious and affordable foods (20) or when pedestrian-friendly infrastructure is present (21). However, findings are mixed (15, 22), partially because many studies are premised on the assumption that if a feature is available locally, people will use it. However, many people are regularly exposed to multiple contexts on a daily basis (e.g., near work, school) and these other environments may provide a more convenient location for food shopping or physical activity. Furthermore, not all residents have an equal propensity and ability to access features within their neighbourhood. The role of cultural, social, demographic and mobility-related factors mean that two people living near to each other may interact with the neighbourhood in quite different ways. Thus, planners have a role to ensure wider environments, and not just localised areas, are designed in a way to ensure healthy options become the easier choice.

2.2. Conceptual overview of neighbourhoods and health

There are many different explanations for why health behaviours and outcomes cluster within small areas such as neighbourhoods (23). At a crude level, these reasons may be simplified into either compositional (individual) or contextual (area or neighbourhood) effects (24). Compositional effects result from differences in the characteristics of people who live in an area (e.g., socioeconomic indicators such as percentage without formal education qualifications), whereas contextual effects relate to the characteristics of the area (e.g., availability of retailers selling healthy food or the amount of public open space) (25). Whilst health behaviours and outcomes are likely influenced by a combination of compositional and contextual factors, contextual factors are often more easily modified and can have an immediate impact on a wide population.

It is also important to acknowledge that compositional and contextual effects are likely to interact (26, 27). This means the magnitude in which compositional factors (e.g., low income) influence health behaviours are likely to vary based on differences in the context (e.g., price of fresh food within local grocery retailers). This interaction between composition and context can lead to what is known as "deprivation amplification", (25, 28) whereby people with low levels of personal resources may be further disadvantaged by living in an area with fewer resources or support mechanisms for those experiencing personal disadvantage. Therefore, to help reduce the socioeconomic patterning of health inequalities, creating environments that help support healthy decision making for all should be prioritised.

2.3. Introduction to food environments

Food environments have been conceptualized and incorporated into many different frameworks over recent years. Within their work on creating supportive environments for health, the World Health Organization conceptualizes the food environment as the surroundings that influence and shape consumers food behaviours, preferences and values and prompt decisions (29). This conceptual framework includes dimensions such as food availability, economic access, marketing, nutrition labelling, food quality, food safety and digital food environments (29, 30).

This report focuses on the presence and type of food retailers in the community that shape food availability (community food environment). Food retailers in this instance are inclusive of any person, business or outlet that sells food, including market traders, small independent stores, and larger chain brand franchises. It should be acknowledged, however, that in addition to the community nutrition environment, organizational nutrition environments (i.e., additional contexts where people may access food such as school or work) and the consumer nutrition environment (i.e., within-store factors such as the availability of healthy options, price, product placement and in-store promotions) may also influence food acquisition (20).

Within neighbourhoods or communities, a simplified measure of food retailer (i.e., store or market) access may distinguish two key components: 1) food retailers that sell food for home consumption (e.g., staple food items and fresh foods purchased from supermarkets); and 2) food retailers that sell food for immediate consumption (e.g., hot takeaway food retailers) (31, 32). Both measures of access have the potential to be associated with eating behaviours and health outcomes.

Whilst limited in regard to the geographic regions from which studies have been undertaken, existing evidence provides mixed results regarding the distribution of healthy food across communities that differ by socioeconomic conditions and racial composition (33, 34). In the US, however, predominantly Black and minority communities have been shown to have less access to healthy foods (35–38). For fast food restaurant locations, most international evidence has shown associations with the characteristics of the neighbourhood population. Specifically, residents of areas with higher levels of socioeconomic disadvantage are more likely to have a higher exposure to fast food restaurants (38–40), whilst others have reported high levels of exposure to fast food within a walking distance of schools, particularly in disadvantaged areas (41–44).

Whilst some studies have reported associations between the community and consumer food environment and both food behaviours and weight-related outcomes (15, 45, 46), overall the body of evidence is mixed and does not provide a consistent evidence base (34, 45–53). We note however, that much of this evidence is limited to high-income countries, with fewer studies conducted in low- and middle-income countries where the evidence is also considered mixed or, in some cases, less robust (54–56). Potential reasons for mixed findings include the cross-sectional nature of most studies,

as well as the lack of attention to direct exposure to, use of, or interaction with specific food retailers. Natural experiments that measure outcomes before and after a change in food environment, and that include a comparison group, are an underutilised tool to robustly investigate how changes in the environment impact behaviours (57, 58). Amongst existing natural experiments, there is also mixed evidence as to whether a potentially positive change to the community food environment (e.g., addition of a new supermarket) results in benefits to diet and health-related outcomes, although it appears there may be increased psychological benefits such as improved perceptions of access to food and increases in neighbourhood satisfaction (59, 60). A further limitation is that many existing studies only measure exposure to one type of food retailer and/or exposure in one geographic location. Exposure to all places where people have access to food (e.g., local neighbourhood, workplace, sporting venues) (61, 62) or all retailers that may potentially sell food (63) are rarely considered or measured. More research is also needed to better understand an individual's use of the food environment by, for example, measuring all the locations where they purchase food whether close to home or elsewhere (64, 65). This need is further underpinned by qualitative research highlighting the complexity of the link between food environments and food purchasing decisions and how individuals use coping strategies to combat an unhealthy food environment (66).

The limitations in the evidence base and the absence of robust empirical evidence, however, does not mean that food environments are not important for diet and health. It remains a reasonable assumption that the higher availability of certain foods makes the decision to purchase and consume these foods easier when combined with other policy initiatives that shape the food supply, food environments and food choices. Conversely, a food product that is harder to acquire would make purchasing that food more difficult. This view underpins the push to ensure healthy options are easier choices for all.



3. LAND USE PLANNING AND HEALTH PROMOTION

3.1. A brief introduction to land use planning and health promotion

Broadly, land use planning (inclusive of zoning bylaws) determines permitted use of available land within a jurisdiction. Land use planning decisions can occur at a national, regional, or local scale, depending on the administrative system within a country, but also at a more micro-scale at the level of a street (67). This means that planning decisions can have a direct impact on both the broader community and local residents (67). This review provides a high-level commentary on land use planning, recognising that planning systems vary across nations and indeed within nations, depending on which level of government is responsible for key planning laws and land-use decisions.

Whilst health has historically been intrinsically linked to town planning (e.g., through open space provision, sanitary infrastructure, etc.) (68), there is a growing advocacy movement to nudge modern day land use planners towards increasingly looking for opportunities to include health considerations in planning decisions and to create liveable environments (53, 69-77). For example, active travel can be encouraged when services, amenities and public transport options are located close by, and safe walking and cycling routes are available, whilst the provision of quiet open spaces can provide opportunities for relaxation and restoration (53, 69, 70). Less directly, planning can encourage healthy and sociable communities when services and amenities are easily accessible, when a diversity of housing options are provided to meet community needs, and when areas provide opportunities for community events and engagement (53, 69, 70). Land use planning can also be used to discourage, control, or limit land uses that may encourage harmful behaviours and health outcomes, such as alcohol and tobacco retailers, gambling venues, and noise (e.g., from major roads or entertainment venues) (53, 70, 78, 79). These mechanisms and considerations are not limited to urban areas as many opportunities also exist to integrate health into planning decisions within regional and rural communities (75, 80).

It seems obvious that health should be at the forefront of many planning decisions, however the decision-making process needs to consider multiple stakeholder perspectives. This includes the perspectives of local business owners, developers, community groups, practitioners, and residents (amongst others), who have an interest in or are impacted by planning decisions (70, 72, 73, 81). Health considerations generally do not underpin land use planning decisions but can be a consideration in the outcome. Programs such as Healthy Towns (82) and WHO's Healthy Cities initiative (5) can assist in this, recognising that planning decisions are made within the planning system and therefore the planning system needs to be designed to support planners to consider health. Health impact assessments have been advocated for as one mechanism that can assist in integrating health considerations into planning decisions (67, 74, 83, 84). Stronger evidence on the links between food environments and eating/health outcomes is required for these tools to be applied more widely with regards to planning decisions related to food retail settings.

In the next section, we explore planning decisions related to food access in local communities and some of the land use planning tools that have been applied to encourage healthier community food environments.

3.2. Introduction to land use planning as a mechanism to shape food environments

Melaniphy (1992) described the considerations generally employed by commercial operators when deciding on a locality for a new fast food restaurant, principally major franchised retailers (85). These include, but are not limited to, the customer profile near the proposed site (with the aim to target areas that match the most frequent visitor characteristics), traffic flow, visibility of the potential site, and existing competition (85). More broadly, the type of food retailers in a community and the availability, variety, and price of food products within stores are largely driven by free market considerations. Land use planning tools can, however, be used to influence the food retail environment and create healthier food environments (69, 86-88).

Types of land use planning tools used to encourage healthier food environments

An overview of planning tools that have previously been applied to help create healthier food environments is provided below and more detailed descriptions of individual case studies are reported in Section 4 of this report. Whilst it has been noted that the mixed evidence on the links between food environments and health may not persuade councils to make a change, precedent set by some councils can encourage other councils to follow (89).

To date, planning initiatives to improve food environments generally have one of two objectives:

1. To create restrictions for food retailers who sell predominantly unhealthy options, such as foods high in unhealthy fats, sugars and/or salt;
2. To create incentives to operate for retailers who sell primarily healthy and nutritious foods.

Create restrictions for food retailers who predominantly unhealthy options

Planners utilise restrictions and disincentives in different ways to discourage or prohibit the proliferation of food retailers selling products which are predominantly high in unhealthy fats, sugars or salt. This includes rezoning land or placing additional conditions on the permitted land use at a particular location. Examples of these conditions include an outright ban on new developments in specific areas, a requirement for fast food restaurants (i.e., limited service restaurants selling food for immediate consumption) to locate a minimum distance from schools, and restrictions

placed on drive-through services which may make the site less appealing for fast food restaurants (78, 90–98).

In 2012, the Greater London Authority, United Kingdom (UK), released the “Takeaways Toolkit” (99). This document provided advice to local authorities on how to control the sale of takeaway food in their local area using land use planning tools (99) (see Case Study 1). One of the three recommendations proposed was the use of regulatory and planning measures to address the proliferation of hot food takeaway retailers. Specifically, it was stated (99) (pg. 7):

In areas of over concentration of fast food takeaways or where vulnerable groups such as children and young people are a concern we recommend the promotion of clear guidance in planning policies that allow the restriction of fast food takeaways.

Interestingly, in the UK, it has been observed that there was a greater adoption of specific health planning policies and policies attempting to regulate takeaways in the most deprived areas compared to areas with the lowest levels of deprivation (97). It remains unknown at present how successful these policy adoptions have been improving population health. Whilst initiatives such as bans on new developments seem attractive, it is important to be aware the benefits through an isolated action may be more limited than anticipated (100). For example, a ban on new standalone fast food restaurants in South Los Angeles in the United States (US) was introduced in 2008, yet this seems to have had little impact on the overall food environment and on food consumption behaviours and rates of overweight/obesity (94, 101) (see Case study 3).

Literature examining land use zoning regulations for food retailers has explored rationales and framing used to support these regulations (90, 92, 98). A recent UK study reviewed the use of planning policies specific to takeaway food retailers, finding that policies with a health-based rationale most often argued for exclusion zones around places used by children and families (92). Importantly, however, almost 80% of takeaway food retailer planning criteria identified were not directly health-focused and were inclusive of policies related to issues such as litter, smells, noise, traffic and anti-social behaviour management (92). This highlights the importance of broader planning matters beyond health considerations when investigating the potential for barriers to further fast food development. One such example of this is the use of drive-through bans (see Case study 6) which provide an opportunity to manage over-development of fast food chains. It has been suggested that banning the drive-through service via placing conditions on land use can potentially have the same effect as an outright ban because 60% of fast food revenue is derived from drive-through service, making the business less viable without drive-through service (90, 91). In Canada, bans on drive-through services have been enacted for a variety of reasons including aesthetics, traffic, pollution through car idling, noise and the promotion of walkability (98). Local authorities have also used land use planning tools to reduce exposure to outdoor advertising (e.g., billboards, bus shelters, shop fronts) of foods high in unhealthy fats, sugars and salt. Previous studies of outdoor food advertising have identified a high proportion for such food or

beverages in school zones (102–106), areas surrounding other child-serving institutions (i.e., day-care facilities, recreation centres and libraries) (107), and at public transit stops (108–111). Being unable to advertise the presence of a nearby retailer may be a deterrent to new developments for some chain brand franchises. Case study 5 outlines examples of how land use planning laws have been used to manage this form of potentially harmful exposure to food advertising.

An often overlooked consideration for developing and implementing initiatives in the planning system to limit food retailers selling predominantly unhealthy food options is the need for a mechanism or classification system that allows commercial developments associated with this kind of food retailing to be easily identified. In some countries, identifying such developments is difficult. In the UK, a classification system exists which allows planners to make decisions related specifically to hot food takeaway retailers, as the “A5 use class” is specific to “Hot Food Takeaways” (89, 92, 95–97, 112). However, allowing self-classification can be problematic as chain brand retailers may designate themselves a restaurant classification rather than a takeaway classification, and not all hot food takeaway retailers sell predominantly unhealthy options. Further, there are many additional sources of unhealthy options not captured by such classifications (63).

A new challenge emerging for urban planners is how to deal with the proliferation of food delivery services via digital applications, which broaden the areas from which individuals source food (113) and has led to additional traffic via delivery vehicles (mostly cars, motorbikes/scooters, or bicycles). As these applications increase the ability to source unhealthy food options without having to visit stores, utilising land use planning to contain this supply is a challenge not yet addressed.

Summary of land use planning tools used to restrict exposure to retailers selling predominantly unhealthy options:

- Exclusion zoning to restrict hot food takeaway retailers
- Restricting drive-through services
- Restricting outdoor food advertising.

Incentives for food retailers selling predominantly healthy options

Planners can use incentives aimed at developers and retailers to encourage the supply of nutritious food options through outlets such as supermarkets or fresh food markets in local communities (88, 90, 100). These incentives can be financial, such as tax breaks or subsidies (90). For example, the Fresh Food Financing Initiative (FFFI) is a financing program that supports the establishment or expansion of healthy food retailers throughout the US state of Pennsylvania (114) (see Case study 8). The program helps retailers overcome costs related to locating and operating in underserved communities (114, 115). More specifically, the FFFI gives one-time grants and loans to food retailers in order to improve accessibility of healthy and affordable grocery food options and provide economic opportunities for lower-income neighbourhoods (114). This model has inspired the design of

similar initiatives in other US states. In New York, the Food Retail Expansion to Support Health (FRESH) is modelled after the FFI and provides financial incentives (e.g., mortgage recording tax deferral) as well as zoning incentives (e.g., additional development rights) for the development or retention of supermarkets in underserved areas (116, 117) (see Case study 7). Various economic and fiscal instruments can thus be incorporated into planning initiatives to support healthier food environments that improve the availability of and accessibility to nutritious foods (88).

Additional planning initiatives can be used to alter food environments in ways that are health promoting and feasible within given contexts and planning systems. For example, they can support food behaviours that are perhaps less typically associated with urban design, such as breastfeeding (118). A report developed by the Resource centres on Urban Agriculture and Food security Foundation in collaboration with the Global Alliance for Improved Nutrition and the Milan Urban Food Policy Pact proposed a set of actions to improve urban food environments (119). Relevant actions include delivering groceries ordered online from retailers not located locally to hubs within neighbourhoods (120), integrating healthy food sources into the public transport system (e.g., fresh fruit and vegetable stands at train stations) (121), and transporting those without a means of transport to areas where they can buy healthy foods (122, 123). Thus, beyond financial incentives, these examples demonstrate that other factors such as transport opportunities can improve healthy food accessibility.

Planning initiatives promoting healthier environments may have some benefit to the built environment through encouraging the development of more fruit and vegetable retailers (80) and to diet and health (124) but this has not been observed in all cases where the types of foods available at home or dietary intake have seemingly not improved (59, 125–127). More research on the most effective approaches and an evaluation of these is therefore warranted.

Whilst planning incentives for more healthy and fresh food availability have the potential to address inequalities in food availability across areas, one study reported that non-store food retailers, such as farmers' markets or community gardens, were less likely to be permitted in zoning ordinances in low-income communities than in higher-income communities (128). With regard to the New York Green Carts program (see Case study 9), research suggests these were largely operating in commercial and populated areas with more pedestrian traffic and often near existing retailers rather than in the intended 'food deserts' (100, 129, 130). It is important that there is an awareness of any inequalities that may exist prior to the implementation of new policies and to ensure that new policies reduce rather than exacerbate these.

Summary of land use planning tools used to encourage access to healthy food options:

- Incentivising the development of fresh food retailers
- Providing additional transport options to increase accessibility to healthy food
- Permits for mobile fresh fruit and vegetable carts.



4. CASE STUDIES

This section includes ten case studies. First, six case studies relating to restrictions to limit exposure to unhealthy food options (relating to retailers predominantly selling foods that are high in unhealthy fats, sugars or salt) are presented, followed by four case studies relating to incentives for healthy food supply and accessibility.

Restrictions for food retailers who predominantly unhealthy options

4.1. Case study I: Hot Food Takeaway Supplementary Planning Documents

Location	Numerous local authorities in England
Year	Adopted as early as 2009 by the London Borough of Waltham Forest
Target areas	Designated local areas
Responsible authorities	Government only: <ul style="list-style-type: none"> • Local council • Local planning authority
Food outlet	Hot food takeaways
Type of tool	Zoning measures to limit the establishment of hot food takeaways
Tool description	<ul style="list-style-type: none"> • A (400m) exclusion zone to restrict hot food takeaways near children's amenities, for example, primary schools, secondary school, youth facilities, and/or recreation parks. • Limiting overconcentration/proliferation of hot food takeaways in shopping centres and on high streets by considering, for example, the number or percentage of hot food takeaways in the area (e.g., >20% or >5% of all uses). Limits in terms of number or percentages vary per jurisdictions and are not always reported.
Objectives	Hot Food Takeaway Supplementary Planning Documents aim to promote healthier built environments. Supplementary Planning Documents provide principles to consider in planning applications.
Restricted use	Establishment with the sale of hot food for consumption off the premises as primary business
Process	<ul style="list-style-type: none"> • Problem evaluation: overconcentration of hot food takeaways and obesity • Preparation of Supplementary Planning Documents' principles • Local community consultation • Adoption of the Supplementary Planning Documents • Application for a planning permission • Assessment of application using principles laid out in the Supplementary Planning Document • Granting or refusal of planning permission for hot food takeaways • Appeals by applicants if refused
Key stakeholders' role	<p>Ministry of Housing, Communities and Local Government</p> <ul style="list-style-type: none"> • Developed the National Planning Policy Framework presenting the government's planning policies for England in 2012 <p>Local Council</p> <ul style="list-style-type: none"> • Developed and adopted Supplementary Planning Documents <p>Local Planning Authority</p> <ul style="list-style-type: none"> • Implements Supplementary Planning Documents, considers Supplementary Planning Documents' principles when assessing planning application <p>Planning Inspectorate</p> <ul style="list-style-type: none"> • Decides appeals

Implementation barriers	<ul style="list-style-type: none"> • Appeals on the grounds of the lack of evidence on links between hot food takeaways and community health • Lack of policy guidance to inform local planning decisions and ensure the Planning inspectorate can manage and defend appeal cases
Implementation facilitators	<ul style="list-style-type: none"> • Classification/definition of hot food takeaway (A5 use class) at the national level since 2005 • Enabling framework for local areas via recognition of the role of planning authorities in shaping healthy communities in the National Planning Policy Framework • Sharing learnings between Councils to inform iterations at other Councils
Monitoring and evaluation outcomes	<p>Implementation of Supplementary Planning Documents is evaluated at the local level through the Council's Authority Monitoring Report, including monitoring of permission granting and refusal and when Supplementary Planning Documents have been used in determining planning applications</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • In 2013, at least 9 local planning authorities had refused/dismissed planning application for hot food takeaways/decision appeals based on principles described in Supplementary Planning Documents or other planning policies on hot food takeaways. However, research has highlighted that given a multitude of factors are considered when assessing a planning application, it is not possible to give an exact number of hot food takeaway application that have been rejected due to hot food takeaway Supplementary Planning Documents. <p>To our knowledge, the actual impact against policy aims has so far not been assessed.</p>
More information	<ul style="list-style-type: none"> • Town and Country Planning, The Town and Country Planning (Use Classes) (Amendment) (England) Order 2005, 2005 (national legislative document) • Ministry of Housing, Communities & Local Government, National Planning Policy Framework, 2012 (national policy) • Ross A., Obesity-based policies to restrict hot food takeaways: progress by local planning authorities in England, 2013 (report) • Local Government Association, Tipping the scales: Case studies on the use of planning powers to restrict hot food takeaways, 2015 (report) • Scottish Government, Research Project: To Explore the Relationship Between the Food Environment and the Planning System, 2018 (report) • O'Malley C.L. et al., Exploring the fast food and planning appeals system in England and Wales: decisions made by the Planning Inspectorate (PINS), 2020 (research article)
List of applied examples	<ul style="list-style-type: none"> • London Borough of Waltham Forest, Waltham Forest SPD - Hot Food Takeaway Shops, March 2009, 2009 (local Supplementary Planning Document) • St. Helens Council, Local Development Framework: Supplementary Planning Document Hot Food Takeaways, 2011 (local Supplementary Planning Document) • Dudley Metropolitan Borough Council, Planning for Health Supplementary Planning Document, 2013 (local Supplementary Planning Document) • Salford City Council, Supplementary planning document: Hot food take aways, 2014 (local Supplementary Planning Document) • City of Bradford, Supplementary Planning Document: Hot Food Takeaways, 2014 (local Supplementary Planning Document) • Coventry City Council, Hot Food Takeaway Supplementary Planning Document, 2019 (local Supplementary Planning Document) • Nuneaton and Bedworth Borough Council, Supplementary Planning Document: Planning for a healthier area – Hot Food Takeaways, 2020 (local Supplementary Planning Document)

4.2. Case study 2: No Fry Zone initiative – Wicklow County Development Plan 2016–2022 Objective RT17

Location	Wicklow, Ireland
Year	Introduced in 2016
Target areas	Designated local areas
Responsible authorities	Government only: <ul style="list-style-type: none"> Wicklow County Council
Food outlet	Fast food/takeaway retailer
Type of tool	Zoning measures to ban the establishment of fast food/takeaway retailer
Tool description	The exclusion of construction or operation of new fast food/takeaway retailers within 400m from schools or playgrounds
Objectives	No Fry Zones aim to promote healthy living and reduce childhood obesity in local communities by excluding the construction or operation of new fast food/takeaway retailers near schools or playgrounds Projected benefits include: <ul style="list-style-type: none"> Reduction in obesity rates by limiting easy access of school children to foods high in unhealthy fats, sugars or salt. Reduction in the promotion of fast food to school children Consistency in local planning regarding fast food applications and proximity to schools through the specified 400-metre distance Reshape of the local planning framework to limit the obesogenic environment in local communities
Restricted use	Establishment with the sale of hot or otherwise prepared foods high in fat, salt, or sugar for consumption on or off the retailer premises as primary business
Process	<ul style="list-style-type: none"> No Fry Zone 4 Kids, local community group campaigned for the adoption of “No Fry Zones” Public and stakeholders’ consultation Council adopted the objective on No fry Zone in the Wicklow County Development Plan 2016–2022 Planners consider the No Fry Zones criteria in their assessment of development proposals
Key stakeholders’ role	<p>Wicklow County Council</p> <ul style="list-style-type: none"> Adopt the objective within the Wicklow County Development Plan 2016–2022 <p>No Fry Zone 4 Kids Community Group</p> <ul style="list-style-type: none"> Work with the Greystones councillors to develop a specific No Fry Zone Objective <p>Greystones Municipal District Council</p> <ul style="list-style-type: none"> Work with the No Fry Zone 4 Kids Community Group to develop a specific No Fry Zone Objective, propose amendments to clarify the objective by defining fast food restaurants and business in the scope of the objective
Implementation facilitators	<ul style="list-style-type: none"> Advocacy support by the No Fry Zone 4 Kids Community Group
Monitoring and evaluation outcomes	Unknown if a monitoring and evaluation framework was used or developed. Unknown if the actual impact against projected benefits has been assessed.

More information	<ul style="list-style-type: none"> • Irish Heart Foundation, Submission on the Wicklow County Development Plan 2016–22, 2016 (report) • Wicklow County Council, Wicklow County Development Plan 2016–2022, Chapter 6 – centres and retailing, 2016 (local policy) • No Fry Zone 4 Kids Community Group, Submission to National Planning Framework Ireland 2040 – Our Plan, 2017 (letter from the No Fry Zone for Kids Committee) • No Fry Zone 4 Kids Community Group, No Fry Zone Opening Statement to Joint Oireachtas Committee Children and Youth Affairs, 2018 (statement from the No Fry Zone for Kids Committee) • Harrington J.M. et al. for the Healthy Food Environment Policy Index (Food-EPI) project team, Policies for Tackling Obesity and Creating Healthier Food Environments in Ireland: Food-EPI 2020. Current policies and priority actions, 2020 (report)
Similar international examples	<ul style="list-style-type: none"> • South Korea: Green Food Zones, a fast food and soda ban within 200m from schools. Republic of South Korea, Special Act on Safety Management of Children’s Dietary Lifestyle, 2008 (national legislative document) • Malaysia: ban of food and beverage sales within 40m from schools. Ministry of Housing & Local Government, Prohibition of the Sale of Food and Beverages Outside School Fences, 2012 (national legislative document)

4.3. Case Study 3: South Los Angeles Fast Food Ban

Location	South Los Angeles, United States
Year	Introduced in 2008
Target areas	Designated local areas
Responsible authorities	Government only: <ul style="list-style-type: none"> • Department of City Planning • Planning and Land Use Management Committee of the City Council
Food outlet	Standalone fast food restaurants
Type of tool	Zoning measures to ban the establishment of standalone fast food restaurants
Tool description	Banning the issuance of permits for new [or additions to existing (e.g., drive-through windows)] standalone fast food restaurants for establishments located in whole or in part within the boundaries of West Adams–Baldwin Hills–Leimert, South Los Angeles, Southeast Los Angeles. These areas were identified based on local overconcentration of fast food restaurant.
Objectives	The ban aims to regulate the overconcentration of fast food restaurants. Projected benefits include: <ul style="list-style-type: none"> • Strong and competitive commercial sector serving community needs • Attract uses which strengthen the economy and expand market opportunities • Improve the appearance of commercial neighbourhoods • Identify and address the overconcentration of retailers detrimental to community health and welfare
Restricted use	Any standalone retailer selling food for consumption on or off the premises and meeting the following criteria: a limited menu, food prepared beforehand or quickly prepared or heated, no table orders, and foods served in disposable wrapping or containers.

<p>Process</p>	<ul style="list-style-type: none"> • Proposal of a (one-year) interim control ordinance banning fast food restaurants in designated areas in Los Angeles • Public hearing • Adoption of the interim control ordinance • Ordinance extended twice until overdue and ineligible for extension • General Zoning Plan amended through a footnote to permanently regulate the ban of standalone fast food restaurants • Footnote considered in the issuance of permits for fast food restaurants in designated areas
<p>Key stakeholders' role</p>	<p>Department of City Planning</p> <ul style="list-style-type: none"> • Initiated proceedings to establish an interim control ordinance to ban new fast food restaurant in South Los Angeles • Added the footnote to the General zoning plan • Contributed to the health impact assessment <p>Planning and Land Use Management Committee of the City Council</p> <ul style="list-style-type: none"> • Prepared the interim control ordinance
<p>Implementation barriers</p>	<ul style="list-style-type: none"> • Budget deficit delayed community plan updates and the initial ordinance become ineligible for extension.
<p>Implementation facilitators</p>	<ul style="list-style-type: none"> • Amending the City's General Plan by adding a "footnote" to regulate the issuance of permits for new standalone fast food restaurants. The footnote was used instead of a more comprehensive and time-consuming approach e.g., community plan updates or a new specific plan
<p>Monitoring and evaluation outcomes</p>	<p>A health impact assessment was conducted by Community Health Councils with the City Planning in the steering committee, evaluating potential impacts of fast food restrictions on the South LA food environment and recommended integrating monitoring and evaluation into the program and project review process. External groups have also assessed the effectiveness of the ban.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • No difference in the share of new permits belonging to fast food restaurants between the ban area and other areas five years post-ban • No difference in the share of new fast food permits relative to all operating fast food restaurants between the ban area and other areas five years post-ban • No reduction in overweight/obesity rates: average BMI and overweight/obesity prevalence rates were higher in the ban area compared to non-ban areas before the introduction of the ban. Three-four years post-ban, average BMI and overweight/obesity prevalence rates have increased in the ban area and non-ban areas. The gap between the ban area and other areas has widened, not narrowed. • No evidence of positive impact on diet three-four years post-ban • No change in the composition of new food retailers: a ban alone does not promote a healthy food environment



More information	<ul style="list-style-type: none"> • Los Angeles City Council, Office of the City Clerk, Council File Number: 07-1658. Fast food restaurants/Interim control ordinance/West-Adams-Baldwin Hills-Leimert/South and Southeast Los Angeles, 2008 (local council file) • Los Angeles City Council, Office of the City Clerk, Ordinance No. 180103, 2008 (local legislative document) • Sturm R. & Cohen D.A., Zoning for Health? The Year-Old Ban On New Fast-Food Restaurants In South LA, 2009 (research article) • Los Angeles City Council, Office of the City Clerk, Council file No. 10-1843, 2010 (local legislative document) • Los Angeles City Planning Commission, Case No.: CPC-2010-2278-GPA, 2010 (local legislative document) • Community Health Councils, Why South LA Needs the “Fast Food Footnote”, 2010 (local council document) • Community Health Councils, Fast Food Restaurant Report: Promoting Healthy Dining in South Los Angeles, 2012 (report) • Sturm R. & Hattori A., Diet and obesity in Los Angeles County 2007-2012: Is there a measurable effect of the 2008 “Fast-Food Ban”?, 2015 (research article) • Community Health Councils, Fast Food Restaurant Policy in a Food Desert: A Health Impact Assessment, 2017 (report)
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4.4. Case Study 4: Restrictions on formula restaurants

Location	Various cities across the United States
Year	Adopted as early as the mid-1980s in Carmel-By-The-Sea, California
Target areas	Designated local areas or citywide
Responsible authorities	Government only: <ul style="list-style-type: none"> • Local City Council
Food outlet	Formula restaurants defined as retailers preparing and selling food for consumption on or off the premises and which, by contractual or other arrangement, need to present criteria such as standardised menus, ingredients, food preparation, food presentation, interior decor, uniforms, architecture, exterior signs or similar standardised features making them substantially identical to other food retailers.
Type of tool	Zoning measures to limit the establishment of formula restaurants
Tool description	Regulation of the establishment of formula restaurant by either restricting their number (e.g., no more than 10% of the total number of restaurants in an area), their location (e.g., cannot locate on a corner), their size (e.g., no more than 4000 square feet) or banning them altogether.
Objectives	Stated objectives are usually not directly health related. Examples include maintaining neighbourhood aesthetics/(historical) character, protect local businesses, and mitigate traffic.
Restricted use	Formula restaurants
Process	<ul style="list-style-type: none"> • Proposal • Public hearing • Amendments to the city’s code of ordinances • Code considered when issuing permits
Stakeholders’ role	Local city council <ul style="list-style-type: none"> • Adopts legislation

Implementation barriers	Could not be identified.
Implementation facilitators	Could not be identified.
Monitoring and evaluation outcomes	Unknown if a monitoring and evaluation framework was used or developed.
More information	<ul style="list-style-type: none"> • Spitzer D.A. & Yonkers J.L., A Guide to regulating big box stores, franchise architecture, and formula businesses, 2007 (report) • Davis J.S., Fast Food, Zoning, and the Dormant Commerce Clause: Was It Something I Ate?, 2008 (review article) • Cox, Castle & Nicholson, Proposed Formula Retail Ordinance: Comparison to Other Ordinances, 2013 (local council document) • Stowers K.C., Food Swamps, Obesity & Health Zoning Restrictions on Fast Food Restaurants, 2016 (thesis) • Institute for Local Self-Reliance, Formula Business Restrictions (webpage)
List of applied examples	<ul style="list-style-type: none"> • Carmel-By-The-Sea, 17.14.040 Additional Use Regulation (local legislative document) • City of Arcata, 9.42.164 Formula Restaurants (local legislative document) • City of Calistoga, 17.22.050 Prohibited uses (local legislative document) • City of Sanibel, Sec. 126-492. – Conditional uses (local legislative document) • Additional examples: Formula Business Bylaws Nationwide (webpage)

4.5. Case study 5: Restrictions on outdoor food advertising via land use planning tools

Location	State of Vermont, United States City of Mandurah, Australia
Year	Adopted in Vermont in 1968 Adopted in Mandurah in 2021
Target areas	State-wide (Vermont), Local Government Area (Mandurah)
Responsible authorities	Local authorities
Type of use	Outdoor advertisements
Type of tool	Ban or restrictions on outdoor advertisements, for example, complete ban of outdoor advertising, or prohibited use of images depicting foods high in unhealthy fats, sugars or salt in advertisements
Objectives	Objectives vary per jurisdiction. Some of the objectives include: <ul style="list-style-type: none"> • Preserving landscape/reduce visual pollution • Attracting tourists • Obesity prevention
Restricted use	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • Sign advertising, drawing attention, or directing to a business, product, service, or any activity of any type, and is visible from a public road <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • Advertising on illuminated street signs and bench seats with banned food images

Process	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • Could not be determined. <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • Problem evaluation: local overweight/obesity prevalence • Policy development • Consultation with Elected Members • Policy proposal • Policy adoption • Policy guidelines considered in assessment processes
Key stakeholders' role	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • The State of Vermont adopted the law • Travel Information Council (Department of Commerce and Community Development) enforces the law <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • City council developed and adopted the policy
Implementation facilitators	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • Could not be identified. <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • Intended use of the Australian Dietary Guidelines, Western Australia (WA) Healthy Options Policy and the Live Lighter public education program to determine if the food item is categorised as banned • Definition of outdoor advertising
Implementation barriers	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • Could not be identified. <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • No precedent: no regulation banning advertising of foods high in unhealthy fats, sugars or salt • Image of food item considered in assessment process if the business can show it truly represents the product, the business provides nutritional information, and the image is linked to a health message
Monitoring and evaluation outcomes	<p>Unknown if a monitoring and evaluation framework was used or developed.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • Lack of advertising is a frequently cited factor that visitors like about the state of Vermont
More information	<p>Vermont, United States:</p> <ul style="list-style-type: none"> • Vermont State House, Prohibition of other outdoor advertising, 1968 (local legislative document) • Gibson N, Challenge of the times: Vermont's billboard regulations in the age of digital advertising, 2012 (press article) <p>Mandurah, Australia:</p> <ul style="list-style-type: none"> • City of Mandurah, Advertising in Road Reserves Policy, 2021 (local policy) • Stoneham M., In Western Australia, a case study of local government leading on public health, 2021 (press article)

4.6. Case study 6: Restrictions on drive-through services

Location	North America and Australia
Year	First introduced in the 1970s–80s
Target areas	Designated local areas or citywide
Responsible authorities	Local authorities
Food outlet	Drive-through services
Type of tool	Zoning, zoning bylaws, community plans, additional land use provisions to restrict or ban drive-through services. For example, complete ban of drive-through takeaway food shop, ban of new drive-through facilities, restricted use
Objectives	Objectives vary per jurisdiction. Some of the objectives include: <ul style="list-style-type: none"> • Reduce traffic • Reduce air pollution • Promote health • Protect local economy
Restricted use	Drive-through services
Process	Policy learning (public consultation and/or research)
Key stakeholders' role	Generally implemented by local authorities
Implementation facilitators	<ul style="list-style-type: none"> • Precedent had been set in other jurisdictions
Implementation barriers	<ul style="list-style-type: none"> • Involvement of opposition groups (e.g., food industry) • Competing policies or different directions (e.g., anti-idling zones) • Lack of political support
Monitoring and evaluation outcomes	Unknown if a monitoring and evaluation framework was used or developed.
More information and applied examples	<ul style="list-style-type: none"> • New South Wales Government, Byron Local Environmental Plan 1988, 1988 (local legislative document) • Nykiforuk C.I.J. et al., Adoption and diffusion of zoning bylaws banning fast food drive-through services across Canadian municipalities, 2018 (research article) • Minneapolis City Council, Minneapolis 2014 – The City's Comprehensive Plan, 2019 (local policy)





Incentives for retailers selling predominantly healthy options

4.7. Case study 7: Food Retail Expansion to Support Health (FRESH)

Location	New York City, United States
Year	Introduced in 2009
Target areas	Designated local areas
Responsible authorities	Government only: <ul style="list-style-type: none"> • New York City Industrial Development Agency • New York City Department of City Planning
Food outlet	Full-service grocery stores
Type of tool	Financial and zoning measures to incentivise the development and retention of grocery stores
Tool description	Two types of incentives are available to applicants through two separate application processes. The incentives include: <ul style="list-style-type: none"> • Financial incentives: reduced land taxes and building taxes, sales tax exemption, mortgage recording tax deferral. • Zoning incentives: additional floor area, reduced parking requirements, larger stores in light manufacturing areas.
Objectives	FRESH aims to bring healthy and affordable food options to low-income and underserved areas. These incentives aim to address disincentives regarding food retailer development and operation. <p>Projected benefits include:</p> <ul style="list-style-type: none"> • Address grocery retailer shortage • Produce economic and commercial benefits • Reduce crime • Improve accessibility to healthy foods • Improve local quality of life

Eligibility	<p>Applicants: grocery store operators opening new stores, renovating, or expanding existing stores, and developers seeking to build, renovate or expand existing stores to lease or sell to a grocery store operator.</p> <p>Establishment: The retailer’s primary business must be the sale of grocery products and must meet a list of criteria relating to retail space (e.g., minimum 6,000 square feet for food and non-food grocery products for home preparation, consumption, and use)</p> <p>Location: The retailer must be in an eligible area (low-income and underserved areas)</p>
Process	<ul style="list-style-type: none"> • Problem evaluation and needs assessment: identification of grocery retailer shortage • Feasibility analysis • Program launch • Financial incentive key processes <ul style="list-style-type: none"> • Preliminary assessment of eligibility • Application • Public review process (notice, hearing) • Board of Directors’ approval • Tax Equity and Fiscal Responsibility Act (“TEFRA”) • Mayoral Confirmation • Zoning incentive key processes <ul style="list-style-type: none"> • Pre-application meeting • Application • Local Community Board review • City Planning Chair certification of eligibility • Certification of “FRESH food store” • Building permit
Key stakeholders’ role	<p>New York City Industrial Development Agency (NYCIDA)</p> <ul style="list-style-type: none"> • Manages financial incentives <p>New York City Department of City Planning (DCP)</p> <ul style="list-style-type: none"> • Manages zoning incentives <p>New York State Department of Health’s Healthy Eating and Active Living by Design (HEALD)</p> <ul style="list-style-type: none"> • Funded the program through a multi-year grant <p>Community-based organisations and local non-profits</p> <ul style="list-style-type: none"> • Provide the program with community insight and help assess the capacity for additional grocery retail in specific areas
Implementation barriers	<ul style="list-style-type: none"> • Uptake hesitancy among developers and operators • Limited or no available spaces of 6000 square feet in some neighbourhoods (due to urban density)
Implementation facilitators	<ul style="list-style-type: none"> • Outreach and information sessions with community and industry stakeholders at the start of the program • Creation of community partnerships to embed FRESH into the community • Promotion of the program to encourage applications • Connection with other city agencies and department within the New York City Economic Development Corporation (NYCEDC) to identify possible sites for new retailers)
Monitoring and evaluation outcomes	<p>Unknown if a monitoring and evaluation framework was used or developed. However, FRESH staff surveyed customers about accessibility to and consumption of fresh foods at five grocery retailers part of the FRESH program, and approvals are monitored.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • 28 FRESH projects have been approved • 22 stores have completed construction and opened • FRESH shoppers reported the renovation or construction of their local grocery store increased access to affordable, fresh produce, and that they buy more fruits and vegetables as a result.

More information_	<ul style="list-style-type: none"> • New York City, FRESH Food Stores – Approved, 2009 (local policy) • New York City, Special Regulations Applying to FRESH Food Stores, 2009 (local policy) • New York City Economic Development Corporation, Food Retail Expansion to Support Health: Impact Report, 2018 (report) • New York City Economic Development Corporation, Food Retail Expansion to Support Health (FRESH), 2021 (webpage) • New York City Business, Food Retail Expansion to Support Health (FRESH) program, 2021 (webpage) • New York City Department of City Planning, Rules for Special Areas: FRESH Food Stores, 2021 (webpage) • New York City Department of City Planning, FRESH Food Stores Update, 2021 (webpage) • New York City Department of City Planning, FRESH Update, 2021 (fact sheet) • New York City Economic Development Corporation, Food Retail Expansion to Support Health (fact sheet)
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4.8. Case study 8: The Pennsylvania Fresh Food Financing Initiative (FFFI)

Location	State of Pennsylvania, United States
Year	2004-2010
Target areas	Designated areas state-wide
Responsible authority	Public-private partnership: <ul style="list-style-type: none"> • Department of Community and Economic Development • The Reinvestment Fund (community development financial institution) • The Food Trust (food access organisation)
Food outlet	Grocery stores and other healthy food retailers
Type of tool	Financial measures to incentivise the development of food retail retailers
Tool description	Financial incentives (on a case-by-case basis): <ul style="list-style-type: none"> • One-time grants and loans for costs associated with opening, renovating, expanding food stores (e.g., predevelopment costs, land assembly, site development, infrastructure improvement, purchasing of equipment improving availability and quality of fresh foods, and innovative healthy food access technology). Four financing packages: <ul style="list-style-type: none"> • Loans from a bank-syndicated supermarket loan fund • Loans from The Reinvestment Fund • Federal New Markets Tax Credit program (NMTC) • Grants disbursed directly to operators and/or developers
Objectives	The Pennsylvania Fresh Food Financing Initiative (FFFI) aims to increase access to healthy and affordable food options and improve economic opportunities in low-income and underserved areas by investing in new or expanding grocery stores through financial incentives <p>Projected benefits include:</p> <ul style="list-style-type: none"> • Better health outcomes • Investment of private capital in lower-income communities • No financing and operating barriers for healthy food retailers in lower-income communities • Strengthened local food system and increased market opportunities for local farmers • Creation and preservation of quality, living wage jobs • Creation and retention of a qualified workforce

<p>Eligibility</p>	<p>Applicants: for-profit, non-profit, or cooperative entities developing, renovating, or expanding food-related venues directly linked to direct-to-consumer retailers</p> <p>Establishment: Establishments must be grocery stores, corner stores, convenience stores, local stores, bodegas, food hubs, mobile markets, co-ops, farmers markets, or food aggregation or processing centres and must meet community needs and expectations (e.g., improve accessibility to quality, affordable fresh and healthy foods, demonstrate a path to a positive economic and well-being impact on the community)</p> <p>Location: The establishment must be in a low- to moderate- income (LMI) census tract or show that the majority of customers live in LMI areas. It must be in an underserved community with limited or no fresh food retailers</p>
<p>Process</p>	<ul style="list-style-type: none"> • Problem evaluation: shortage of supermarkets in low-income areas • Needs assessment: identify barriers to supermarket investment • Policy options • Engagement with stakeholders • Launching of the FFFI • Outreach and marketing to fresh food retail operators • Application for funding (2-step process) <ul style="list-style-type: none"> 1. Application to determine if site and store meet program eligibility criteria (LMI, underserved community, meeting community needs and expectations) and if project therefore qualifies to apply for financing 2. Financial application to determine if project qualifies to receive funding. The project is evaluated on various aspects (e.g., their mission fit, financial strength of the borrower, budget integrity) • Determine appropriate financing package • Disburse funding • Monitor borrowers for compliance with program guidelines
<p>Key stakeholders' role</p>	<p>Department of Community and Economic Development</p> <ul style="list-style-type: none"> • Provided seed funding and oversees program implementation <p>The Reinvestment Fund</p> <ul style="list-style-type: none"> • Raises funds, determines financial eligibility, originates and underwrites projects for grants and loans, and reports program impacts <p>The Food Trust</p> <ul style="list-style-type: none"> • Developed program guidelines and materials, conducts outreach and marketing to food retailers and community leaders, determines if site and store meet eligibility criteria and applicant is therefore qualified to apply for financing, advocates for community needs, evaluates program impact
<p>Implementation barriers</p>	<p>Could not be identified.</p>
<p>Implementation facilitators</p>	<p>Public-private partnership brought unique expertise from diverse sectors including economic development, public health and the grocery industry.</p> <p>Private sector leverage: The public allocation was matched by private dollars on a 3:1 basis.</p> <p>Focused eligibility criteria: criteria focused on healthy food availability incentivised fresh food retail projects without burdening application processes with excessive administrative or eligibility requirements</p> <p>Variety of financing packages allowed to meet financial requirements of diverse applicants.</p>
<p>Monitoring and evaluation outcomes</p>	<p>Formal economic and community impact assessments</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • 88 projects or fresh food retail financed • 5000 jobs created or preserved • 1.67 million square feet of retail created or preserved • 400 000 PA residents with increased fresh food accessibility

More information	<ul style="list-style-type: none"> • The Reinvestment Fund, The Economic Impacts of Supermarkets on their Surrounding Communities, 2007 (report) • The Reinvestment Fund, CDFI Financing of Supermarkets in Underserved Communities: A Case Study, 2008 (report) • Giang T. et al., Closing the Grocery Gap in Underserved Communities: The Creation of the Pennsylvania Fresh Food Financing Initiative, 2008 (research article) • Karpyn A. et al., Policy Solutions To The 'Grocery Gap', 2010 (research article) • O'Sullivan K., Growing Network: Fresh Food Financing Initiative, 2011 (press article) • The Food Trust, The Healthy Food Financing Handbook: From Advocacy to Implementation, 2013 (report) • The Food Trust, Healthy Food Access in Pennsylvania: Building on Success, Reinvesting in Communities, Creating Jobs, 2015 (report) • The Food Trust, Pennsylvania Fresh Food Financing Initiative: Eligibility Criteria, 2021 (guidelines) • The Food Trust, Healthy Food Access in Pennsylvania, (webpage) • The Food Trust, Pennsylvania Fresh Food Financing Initiative, (webpage)
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4.9. Case study 9: Green Cart Initiative

Location	New York City, United States
Year	Introduced in 2008
Target areas	Designated local areas
Responsible authorities	Government only: <ul style="list-style-type: none"> • Department of Health and Mental Hygiene
Food outlet	Mobile fresh fruit and vegetables carts
Type of tool	Permits for mobile street vendors
Tool description	New class of (branded) mobile food vending permits specifically for the sale of fresh fruit and vegetables. Pre-existing permits for mobile vendors were capped, resulting in long waiting lists for vendors. The Green Cart initiative made 1,000 new vendor permits available for fresh food and vegetables vendors.
Objectives	<p>Green Carts aim to improve child and family access to healthier foods through food carts selling fresh fruit and vegetables in areas with poor access to fresh fruit and vegetables/ low-income neighbourhoods to eliminate health disparities.</p> <p>Projected benefits include:</p> <ul style="list-style-type: none"> • Increased access to fresh produce in neighbourhoods where consumption was low • Increased fresh food consumption by at least 75,000 New Yorkers • Around 100 lives saved each year over the long term ("long term" not defined) • Provision of entrepreneurial opportunities to Green Cart vendors • Creation of an economically viable and sustainable program • Increased demand for healthy foods in underserved areas in the long term ("long term" not defined) • Decreased incidence of diet-related diseases in low-income population in the long term
Eligibility	<p>Applicants: vendors with a valid mobile food vending license</p> <p>Establishment definition: Green Carts are mobile food carts selling fresh fruit and vegetables (only raw produce, i.e., whole foods, not cut, slices, or processed, or frozen)</p> <p>Location requirements: Green Carts can only operate within one district (Brooklyn, the Bronx, Manhattan, Queens, or Staten Island) in designated areas identified based on income, grocery store availability, fruit and vegetable consumption and rates of diet-related diseases.</p>

Process	<ul style="list-style-type: none"> • Problem evaluation: limited access to fresh foods in some communities • Policy options • Public and stakeholder’s consultation • Development of a new class of mobile food carts, “Green Cart” • Legislation to support 1,000 Green Carts businesses • Start-up support for Green Cart vendors • Marketing and community outreach (Green Cart branding campaign) • Application for or renewal of a mobile food vending license at the vendor’s cost • Application for or renewal of a green cart permit • Green Cart permit waiting list (selection based on priority groups and lottery system) • Once permitted, vendors must purchase their own cart and produce • Ongoing support and technical assistance for vendors
Key stakeholders’ role	<p>Mayor’s Office and City Council</p> <ul style="list-style-type: none"> • Constructed the legal framework for new class of mobile food vending permits <p>Department of Health and Mental Hygiene</p> <ul style="list-style-type: none"> • Developed an operating plan, provides centralised support to Green Cart vendors, organise Food Protection Course for Mobile Vendors, identified areas eligible for Green Carts, establishes Green Carts waiting list, inspects and approves cart before vendors can start to operate, provides Green Cart umbrella after successful inspection <p>Illumination Fund</p> <ul style="list-style-type: none"> • Provided seed funding, provides fund for technical assistance for vendors, initiated and funded a marketing and communications campaign for Green Carts, creating a unique brand and building awareness of the importance of fruit and vegetable intake
Implementation barriers	<ul style="list-style-type: none"> • Initial and renewal cost for license and permit • Purchasing of cart by vendors themselves • Can only have one mobile food vending permit at a time (if selected for a Green Cart, need to forfeit the other mobile food permit) • Cart storage can be an issue because storing carts is costly and transportation of carts requires purchasing or renting van with a commercial license plate • Limited Green Carts: waiting list • Inadequate tracking system for operational green carts. Many permits issued but limited located operational Green Cart. The waiting list for a Green Cart permit is not based on the number of operating permit holders. • Health department need to continue help more vendors to get set up with electronic benefits transfer (EBT) equipment, which they need in order to accept Supplemental Nutrition Assistance Program (SNAP) benefits
Implementation facilitators	<ul style="list-style-type: none"> • Private funder (resources and drive to move forward) • License and permit fees are waived for a United States Veteran with a New York State Peddler’s Certificate, or their surviving spouse or domestic partner with this certificate • Technical assistance for vendors • Raised awareness through the Green Cart Branding Campaign

<p>Monitoring and evaluation outcomes</p>	<p>Department of Health and Mental Hygiene evaluated the effectiveness of the Green Cart Initiative.</p> <p>At the request of the Illumination Fund, Columbia University's School of International and Public Affairs also evaluated the effectiveness of the Initiative. The School identified key components to evaluate in the short and long term: access to fresh and high-quality foods, consumption of fresh fruit and vegetables in the population, profitability of its individual vendors, viability of the vendor business model, incidence of diet-related diseases in the population.</p> <p>External groups have also assessed the effectiveness of the Initiative.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> • Increase in number of establishments selling fruits and vegetables in Green Carts neighbourhoods from 50% in 2008 to 69% in 2011 • Limited evidence of positive impact on diet • Clustering of Green Carts in high foot-traffic areas, near public transport stops and other food retailers • Inadequate tracking system for operational Green Cart: permits issued but few operational Green Carts could be located
<p>More information</p>	<ul style="list-style-type: none"> • Citizens' Committee for Children of New York, Green Cart Implementation: Year One, 2010 (report) • Lucan S.C. et al., Green Carts (Mobile Produce Vendors) in the Bronx—Optimally Positioned to Meet Neighborhood Fruit-and-Vegetable Needs?, 2011 (research article) • New York City, Green Cart, 2013 (guidelines) • Fuchs E.R. et al., Innovative Partnership for Public Health: An Evaluation of the New York City Green Cart Initiative to Expand Access to Healthy Produce in Low-Income Neighborhoods, 2014 (report) • Li K.Y. et al., Evaluation of the Placement of Mobile Fruit and Vegetable Vendors to Alleviate Food Deserts in New York City, 2014 (research article) • New York City Department of Health and Mental Hygiene, Green Cart Evaluation, 2008-2011, 2014 (brief report) • Farley S.M. et al., Evaluation of the New York City Green Carts program, 2015 (research article) • Pacheco A.L., The Effects of the Implementation of Green Carts on New Yorkers' BMI, 2016 (thesis) • Healthy People, Pushing Produce in New York City's Neighborhoods: The Green Carts Initiative, 2020 (webpage) • New York City, Green Carts, 2021 (webpage)



4.10. Case study 10: Permitted fruit and vegetables retailers North Carolina

Location	Various cities/towns in North Carolina, United States
Year	Multiple introductions over the last decades
Target areas	Designated local areas
Responsible authorities	Municipality
Food outlet	Fruit and vegetables retailers
Type of tool	Zoning measures to permit fruit and vegetables establishments in designated areas
Objectives	No specified objectives.
Eligibility criteria	To be permitted, the retailer must be a fruit and vegetables retail establishment: outdoor fruit and vegetables markets or fruit and vegetables stands (varies per jurisdiction)
Process	North Carolina Community Transformation Grant Project to promote state-wide efforts to enhance farmers' markets through, amongst other things, amending zoning laws to be more supportive of farmers' markets
Key stakeholders' role	Municipality <ul style="list-style-type: none"> Adopts changes into their code of ordinances
Implementation facilitators	Could not be identified.
Implementation barriers	Could not be identified.
Monitoring and evaluation outcomes	Outcomes: <ul style="list-style-type: none"> A study examining associations between healthy food zoning scores and access to fruit and vegetables retailers in municipalities in rural North Carolina found a positive association between a healthful food zoning score and the number of fruit and vegetables retailers. Zoning scores were derived from information on local zoning codes. Municipalities were assigned 4 points if the use was permitted, 3 points if conditional, 2 points if accessory, 1 point if prohibited, and 0 points if type of use was not specified. A study examining associations between healthy food zoning scores and fruit and vegetable consumption and in North Carolina municipalities found a positive association between a healthful food zoning score and fruit and vegetables consumption. Zoning scores were derived from information on local zoning codes using the same scoring system as the previous study.
More information	<ul style="list-style-type: none"> Mayo M.L. et al., Associations Between County and Municipality Zoning Ordinances and Access to Fruit And Vegetable Outlets in Rural North Carolina, 2012, 2012 (research article) Jilcott Pitts S.B. et al., Disparities in healthy food zoning, farmers' market availability, and fruit and vegetable consumption among North Carolina residents, 2015 (research article)
List of applied examples	<ul style="list-style-type: none"> County of Nash, Code of Ordinances Nash County, North Carolina (local legislative document) County of Pasquotank, Zoning Ordinance of the County of Pasquotank, North Carolina (local legislative document) City of Wilmington, Code of Ordinances of the City of Wilmington, North Carolina (local legislative document)

5 RECOMMENDATIONS

Based on the review of the literature (Section 3) and case study analysis (Section 4), several land use planning recommendations are provided for consideration for those aiming to create healthier food environments. These recommendations form a broad suite of planning policies that should be part of a larger package of policy interventions.

1. Ensure the local planning authority have a (food) retail classification system and data visualisation tool

A classification system designed for the local context allows different types of retailers to be identified. Mapping and assessing the location of retailers by a local classification type gives planners the opportunity to understand the distribution of existing retailers relative to residential characteristics and up to date robust food access data to be able to identify if/where there are problems with food access/availability. More informed decisions regarding permits for new developments can then be made based on the existing retail and population characteristics of an area. In England, several use classes exist for shops and services. One such use is “Class A5 – Hot food and takeaway” which is “For the sale of hot food intended for consumption off the premises” (131). Managing the overdevelopment of takeaway retailers is thus potentially more achievable where planners are specifically able to prohibit the application of new retailers that fall under this use class. Thus, the adoption of similar use class systems is recommended for authorities where this does not exist.

The classification system should be coupled with a data visualisation tool to allow the distribution of retailer types to be assessed. Internationally, two interactive data visualisation tools have been released, providing a novel gateway between researchers and a range of stakeholders seeking ways of accessing and using evidence to inform food-related programs and policies. In the UK, ‘The Food Environment Assessment Tool’ (FEAT, <https://www.feat-tool.org.uk/>) enables detailed exploration of the geography of food retail access across England, Scotland and Wales, over time. Within the first five weeks of it being available, FEAT had 7000+ page views from 3250 visitors across 61 countries and has been used within local authorities, regional and national public health bodies by those in planning, environmental and public health. The US Department of Agriculture (USDA) Economic Research Service’s (ERS) ‘US Food Access Research Atlas’ and ‘US Food Environment Atlas’ (<https://www.ers.usda.gov/data-products/food-access-research-atlas/>) are publicly available databases with more than 160 indicators on the food environment for US communities (primarily at the county level), including availability of food retailers, expenditure on food, as well as other socio-economic characteristics that may influence food access and consumption.

2. Adopt combined approaches that discourage retailers selling predominantly unhealthy options and encourage retailers selling predominantly healthy options

Many of the case studies reviewed focused on either discouraging retailers selling predominantly unhealthy food options OR encouraging retailers selling predominantly healthy food options, with little evidence available of effectiveness. We propose that authorities should integrate multiple actions simultaneously to ensure there is at least a balance of choices for residents. Discouraging retailers selling predominantly unhealthy food options is unlikely to have a demonstratable benefit if nutritious food options are not provided as an alternative.

3. Focus on reducing inequalities and providing opportunities for all

Many health conditions are disproportionately distributed, with worse outcomes often documented within disadvantaged communities. Ensuring all communities have access to healthy and affordable food options is critical. Planning tools should be utilised to understand the spatial distribution of food retailers to select appropriate policies to meet community needs. This includes the introduction of policies to ensure that the environments most proximate to disadvantaged communities provide opportunities to buy healthy and nutritious foods at affordable prices without being faced with an over-supply of retailers selling unhealthy food options.

4. Use a health in all policies approach

Improving food environments is a cross-discipline effort, with collaboration and input needed from stakeholders with an interest in health, transport and planning amongst others. Learning how to better work together to achieve this is needed (82, 132). Authorities responsible for planning decisions should seek opportunities for health-focused collaborations where appropriate. Global healthy cities and healthy urban design initiatives should strengthen their focus on creating healthy food environments to guide and support the expansion of research and initiatives. Active initiatives and networks on urban food systems should continue to expand and strengthen country-level reach to provide technical assistance and shared experiences in improving food environments through a health in all policies approach, with particular focus on reaching stakeholders at the local municipality level.

5. Better understand the barriers to adoption and feasible steps to overcome these barriers

Creating and making available documentation about relevant land use initiatives, implementation processes, barriers and enablers is important to provide learnings that can be applied to the development and implementation of initiatives in other jurisdictions, and to help explain any outcomes of the initiatives. This documentation requires the inclusion of any community consultation processes that took place and the outcomes of these. In addition, practical guidance for overcoming opposition to the introduction of planning initiatives to restrict retailers selling predominantly unhealthy food options and/or incentivise retailers selling predominantly healthy food options should be developed. As noted in a prior report (119), and as evidenced by this current report, further research is also warranted outside of high-income nations to gain a more holistic picture of potential barriers. The planning community should seek to document how planning tools are being used to create nutritious food environments in other settings and make this information publicly available.

6. Stronger evaluation of land-use initiatives

To date, there is limited evidence as to the effectiveness of many land use initiatives intended to improve the community food environment with regards to whether they changed food acquisition or consumption of certain foods or changed dietary patterns. Where land use initiatives are self-evaluated, a clear delineation of the proposal's objectives is required and a monitoring and evaluation framework established from the outset to assess if the objectives were met, and to allow learnings to be applied in other jurisdictions. This should include process evaluation. Careful evaluation, however, requires extra resources to be invested. Natural experiment designs that compare outcomes before and after an initiative is implemented to a comparison group or area where no policy change was enacted are needed to ensure that any changes in land use, shopping, diet, or health outcomes can be reasonably assumed to be due to the initiative. Monitoring also requires sufficient time for outcomes to be realised.



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APPENDIX 1: Template used to guide the case study analysis

Location	City/council/town/local government/state/national level; Country
Year	Year(s) of adoption
Target areas	Designated local areas, city wide, state-wide
Responsible authority	Authorities in charge. Joint venture between different government departments and/or private organisations
Food outlet	Type of food outlet targeted
Type of use	Type of use when not specific food outlet
Type of tool	Brief description of the planning mechanism enacted
Tool description	Detailed description of the planning mechanism enacted
Objectives	Overall aim and objectives
Restricted use	Type of business or use restricted
Eligibility	Criteria for applicants, establishment of interest, location requirements etc.
Process	Processes involved in the development and implementation
Key stakeholders' role	Stakeholders involved in the implementation
Implementation barriers	Barriers, challenges impeding the implementation
Implementation facilitators	Factors that assisted in the implementation process
Monitoring and evaluation outcomes	Evaluation framework Key outcomes
More information	Links related to the case study
List of applied examples	Examples of jurisdictions
Similar international examples	Similar examples in other countries

Note: not all criteria are applicable to each case study

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