Healthy and Sustainable Places Data Service

Priority Places for Food Index (Version 2.1) User Guide

Francesca Pontin | Rachel Oldroyd | Peter Baudains

Emily Ennis | Maeve Murphy Quinlan | Michelle Morris

2025-12-19

Notice

This pdf document has been generated by the HASP Data Service Data Profile repository; the document was last edited on 2025-12-19 and refers to the version DOI:10.82147/003. Please ensure that you are using an up-to-date version. Please use the Data Catalogue as reference to the most up-to-date information.

! Citation and attribution

Note that the authors listed on this document are the authors of this user guide only, and that authorship may vary between user guides and datasets. Please ensure you are correctly citing the data asset.

1. If you are using or referring to the dataset

Please cite as follows:

Pontin, F., Oldroyd, R., Baudains, P., Ennis, E., Newing, A. & Morris, M. (2024) 'Priority Places for Food Index'. (Version 2.1). Data asset provided by the Healthy & Sustainable Places Data Service (ES/Z504336/1), originally produced by the CDRC (ES/L011840/1;ES/L011891/1). doi:10.82147/003

2. If you are specifically referring to this user guide document

Please cite as follows:

Pontin, F., Oldroyd, R., Baudains, P., Ennis, E., Murphy Quinlan, M., & Morris, M. (2025). 'Priority Places for Food Index (Version 2.1) User Guide'. Data asset provided by the Healthy & Sustainable Places Data Service (ES/Z504336/1), originally produced by the CDRC (ES/L011840/1;ES/L011891/1).

If in doubt, cite both.

Overview

The Priority Places for Food Index is a composite index formed of data compiled across seven domains, in England, Scotland, Wales, and Northern Ireland. Its goal is to identify neighbourhoods that are most vulnerable to increases in the cost of living and which have a lack of accessibility to affordable, healthy, and sustainable sources of food - making them a Priority Place for Food. It is developed at the geographic level of Lower Super Output Areas in England and Wales (2021 boundaries), Data Zones in Scotland (2011 boundaries), and Super Output Areas in Northern Ireland (2011 boundaries). This user guide describes the construction of the indicators and domains that form the index. Please refer to the e-food desert index (EFDI) for further information about EFDI indicators (https://doi.org/10.82147/002).

Included data

The data comprises of a ranking within each country in the UK for each neighbourhood (lsoa/ data zone/ super output area) across seven different domains. The data within each domain is summarised in Table 1.

The data dictionary describes the variables available in the dataset.

Table 1: Priority Places for Food Index Variables

Domain	Indicator	Source data	Description/Method
Proximity to supermarket retail facilities	Average distance to nearest large grocery store	EFDI, Geolytix Retail Points v28. https://geolytix.com/blog/supermarket-retail-points/	Supermarkets are defined using Geolytix retail store categories and include discounters, freezer centres, traditional, wholesaler and specialist retailers. The distance is calculated from each postcode centroid to the nearest supermarket and the mean distance calculated for each LSOA.
Proximity to supermarket retail facilities	Average count of stores within 1km	EFDI, Geolytix Retail Points v28. https://geolytix.com/blog/supermarket-retail-points/	For each postcode in the UK, the number of stores (as above) within 1km are counted and the mean calculated for each LSOA.
Accessibility to supermarket retail facilities	Average travel distance	England, Scotland and Wales: EFDI variable built from a custom- Spatial Interaction Model (SIM).	The SIM reflects interactions between residential neighbourhoods and physical grocery retail facilities. This indicator captures the average travel time for modelled individuals to carry out a food

Domain	Indicator	Source data	Description/Method
			shop (including effects for store size, brand, and proximity). No equivalent data were available for Northern Ireland. See Newing et al. (2020).
Accessibility to supermarket retail facilities	Accessibility to nearest supermarket via public transport	EFDI variable (England: Journey Time Statistics 2019, Table JTS0507; Wales: Welsh IMD 2019 Physical Access Domain; Scotland: Scottish IMD 2020, Geographic Access to Services)	This indicator is formed from journey travel time via public transport statistics sourced for England, Wales and Scotland. In each case, the average time to a supermarket or other facility is given in minutes. Equivalent statistics for Northern Ireland are not available.
Access to online deliveries	Online groceries availability	England, Scotland and Wales: EFDI, Newing et al (2020).	Newing et al. (2020) describe a web-scraping method to gather data on e-commerce availability for different grocery retailers. This analysis was conducted in 2019. The number of grocery retailers delivering to each LSOA was enumerated and used as the indicator. Equivalent data for Northern Ireland is not available.
Access to online deliveries	Propensity to shop online	England, Scotland and Wales: 2018 Internet User Classification, available via the CDRC https://data.geods.ac.uk/dataset/internet-user-classification	The Internet User Classification links each LSOA to a derived classification of internet use using data from the British Population Survey, transactional datasets from the CDRC (now available via GeoDS), and infrastructure information, supplied by Ofcom. The indicator is derived using the cluster centroid for each LSOA corresponding to the propensity for a household to shop online for groceries (Alexiou and Singleton, 2018).

Domain	Indicator	Source data	Description/Method
			Equivalent data for Northern Ireland is not available.
Proximity to non-supermarket food provision	Distance to nearest non-supermarket retail food store	Food Standards Agency (FSA) UK Food Hygiene Rating Scheme (FHRS) API, accessed 2nd November 2023. Geolytix retail points v28. https://geolytix.com/blog/supermarket-retail-points/	To incorporate food provision from non-supermarkets, the FSA FHRS API was used to identify food retailers other than supermarkets, alongside food retail outlets classed as 'convenience' stores from Geolytix retail points data. The distance is calculated from each postcode to the nearest non-supermarket food retailer and is averaged for each LSOA.
Proximity to non-supermarket food provision	Count of non-supermarket retail food stores within 1km	FSA UK FHRS API, accessed 2nd November 2023. Geolytix retail points v28.	Using the same data as above, the number of non-supermarket food shops within 1km of each postcode is counted and the mean calculated for each LSOA.
Proximity to non-supermarket food provision	Average distance to nearest market	England and Wales: National Market Traders Federation (NMTF), please contact us if you require access to this data	The NMTF collect data for registered markets in the UK via field visits to each market site by NMTF field officers. The distance is calculated from each postcode to the nearest listed market and the mean is calculator for each LSOA. Coverage of the data did not extend to Scotland and Northern Ireland, for which this indicator has been omitted.
Proximity to non-supermarket food provision	Average count of markets within 1km	England and Wales: NMTF, please contact us if you require access to this data	Using the same dataset as above, the number of markets within 1km of each postcode was counted which was then averaged to LSOA level. Coverage of the data did not extend to Scotland and North-

Domain	Indicator	Source data	Description/Method
			ern Ireland, for which this indicator has been omitted.
Socio-economic barriers	Proportion of population experiencing income deprivation	England: English Indices of Multiple Deprivation 2019, income deprivation domain; Wales: Welsh Index of Multiple Deprivation 2019, Income domain; Scotland: Scottish Index of Multiple Deprivation 2020 Income domain; Northern Ireland: Northern Ireland Multiple Deprivation Measure 2017, Income Deprivation Domain.	Each of the four nations in the UK product an index of multiple deprivation with an Income domain measure capturing the proportion of the population in each geographic area in a form of income deprivation. The score data was used directly in each case.
Socio-economic barriers	Proportion of population with no car access	UK Census 2021. https://www.nomisweb.co.uk/output/census/2021/census2021-ts045.zip	The proportion of households with no car access was calculated from UK Census 2021 data.
Family food support	Free School Meal Eligibility	Department for Work and Pensions. Children in relative low-income families: local area statistics, financial year ending 2022, available from stat-xplore https://stat-xplore.dwp.gov.uk/webapi/jsf/dataCatalogueExplorer.xhtml	To reflect the changing policy landscape and address regional inconsistencies in Free School Meal (FSM) eligibility arising since PPFI v1, children in relative low-income families (CiRLIF) are used as a proxy for school aged children requiring food support. This approach is based on recommendations by both the national food strategy independent review (2020) and the Food Foundation that FSM eligibility be extended to all children in low income house-

Domain	Indicator	Source data	Description/Method
			holds. Use of CiRLIF ensures that the risk of food insecurity is not disproportionately moderated in areas where all children are eligible for FSM.
Family food support	Healthy start voucher usage	Data on uptake % at the Local Authority Level https://www.healthystart.nhs.uk for England and Wales. Average healthy start voucher uptake between January and June 2023 was calculated.	For England and Wales, data on Healthy Start Voucher uptake at the Local Authority level was used to provide an estimate at the LSOA level. Northern Ireland data was only available at the primary care trust level, which was regarded too large to create accurate local estimates. No equivalent data could be found for Scotland's Best Start scheme at a suitable level of geography.
Family food support	Distance to nearest foodbank	FSA UK FHRS API. Foodbank data from https://www.givefood.org.uk/. Both accessed 2nd November 2023.	FSA UK FHRS API was used to identify foodbanks, alongside foodbank location data from givefood.org.uk. The distance is calculated from each postcode to the nearest foodbank and the mean is calculator for each LSOA.
Fuel Poverty	Proportion of households in fuel poverty	England: Fuel Poverty Statistics, 2020. Scotland: Scottish House Condition Survey, 2019. Wales: Fuel poverty modelled estimates for Wales as of October 2021.	For each of the three nations, the data sources provide a measure of the number of households in fuel poverty. In the case of England, these are provided as modelled data at LSOA level, using a regression model of sample survey data. For Scotland and Wales, the data is provided at Local Authority level, which is mapped to LSOA level according to the Local Authority value. No equivalent data for Northern Ireland could be identified.

Domain	Indicator	Source data	Description/Method
Fuel Poverty	Prepayment meter prevalence	Electric Prepayment Meter Statistics from the UK Department for BEIS.	Using data published by UK Dept for BEIS, the proportion of households that have an Electric Prepayment Meter at the LSOA level is calculated for England, Scotland and Wales. No equivalent data for Northern Ireland could be identified.

Index Construction

To construct the domain level ranks for each neighbourhood area (LSOA/ data zone/ Super Output Area) from the indicator values, the following procedure is applied:

1. The raw indicator values are oriented so that the highest values in each indicator represents places of higher priority.
2. The indicators are grouped by country and then ranked.
3. Each indicator is transformed using the Rankit method to normalise the data (Green et al., 2018)
4. Domains are constructed by averaging over each indicator within each domain.
5. A ranking is then constructed for each domain by grouping on each country.
6. To create the combined Priority Places Index for Food, the domain ranks are transformed to an exponential distribution to minimise cancellation effects (Noble et al., 2006).
7. The domains are then combined using the domain weights shown in the diagram below.

Domain Weightings

Each domain within the Index was weighted as follows so that the food shop access domains (1-4) and affordability barriers (5-7) are equally weighted:

1. Proximity to supermarket retail facilities (12.5% of composite index)
2. Accessibility to supermarket retail facilities (12.5% of composite index)
3. Access to online deliveries (12.5% of composite index)
4. Proximity to non-supermarket food provision (12.5% of composite index)
5. Socio-demographic barriers (16.7% of composite index)
6. Need for family food support (16.7% of composite index)
7. Fuel Poverty (16.7% of composite index)

Quality

The data is built using open data sources. In some cases, indicator data is not available for certain countries or is not captured at an appropriate geography. Where this lack of availability has been problematic for the construction of the index, the indicator has been omitted from the construction of the corresponding domain. Other indicators have been estimated at the necessary level of geography by using statistics at a higher level where it was appropriate to do so. The details of the domain construction and the geographic coverage of each indicator is detailed in Table 1.

Representation and Bias

The data consists of ranks on a country-by- country basis, leading to reliable comparisons between areas within countries. Comparison of the indicators across countries is not recommended due to differences in the source data across countries.

Overview of Version 2 Changes

The Priority Places for Food Index was updated from version 1 to version 2 to reflect changes in the policy and data landscape. An overview of the main changes to each domain are provided in Table 2 below.

> ⚠ Warning
>
> Subject to the Department of Health and Social Care making a statement highlighting inaccuracies in the Healthy Start Uptake data between July 2023-February 2024, we have updated Version 2 of the Priority Places for Food Index (PPFI). Version 2.1 of the PPFI replaces the October 2023 uptake of Healthy Start Vouchers values with the average voucher uptake between January and June 2023 to minimise the impact on the Priority Places for Food Index insights.

Table 2: Version 2 updates to the Priority Places for Food Index Variables

Domain	Overview of changes
Proximity to supermarket retail facilities	• Updated Geolytix retail points data (to v28) • To better align with industry and policy definitions Geolytix store categories have been adopted to define large grocery stores.
Accessibility to non-supermarket food provision	• Updated Journey Time Statistics (to 2019)
Proximity to non-supermarket provision	• Updated Geolytix retail points data (to v28) • Geolytix store categories have been adopted to define convenience stores. • FSA FHRS data API used to identify convenience retailers not captured by Geolytix retail points data.

Domain	Overview of changes
Socio-Economic Barriers	• Proportion of households with no car access data updated (to 2021 census data).
Family Food Support	• To reflect the changing policy landscape and to address regional inconsistencies in Free School Meal (FSM) eligibility arising since version 1, PPFI version 2 uses Department for Work and Pensions (DWP) Children in relative Low-Income Families (CiLIF), as a proxy for school aged children requiring food support. This update is based on recommendations by both the National Food Strategy Independent Review (2021) and the Food Foundation that FSM eligibility be extended to capture children in low income families. The DWP 'Children in relative low-income families' local area statistics provides information on the number and proportion of children living in Relative low income by local area across the United Kingdom. Relative low-income is defined as a family in low income Before Housing Costs (BHC) in the reference year. A family must have claimed Child Benefit and at least one other household benefit (Universal Credit, tax credits, or Housing Benefit) at any point in the year to be classed as low income in these statistics. Gross income measure is Before Housing Costs (BHC) and includes contributions from earnings, state support and pensions. • Healthy Start Voucher Data Updated (to uptake as of 23/10/2023) • Give Food food banks data updated (accessed 02/11/2023) • FSA FHRS data API used to identify food banks not captured in the Give Food data.

Dataset Structure

Data are provided as a .csv file, supporting information can be found in this user guide and on the HASP data service, including a full data dictionary.