



Land & Property Services  
Seirbhísí Talún agus Maoine



**NISRA**  
Northern Ireland  
Statistics and Research Agency  
Gníomhaireacht Thuaisceart Éireann  
um Staitisticí agus Taighde

# Northern Ireland House Price Index

## Explanatory Notes

Updated 17 August 2022

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# 1 Methodology

The Northern Ireland House Price Index (NI HPI) is designed to measure the trend in the residential property market.

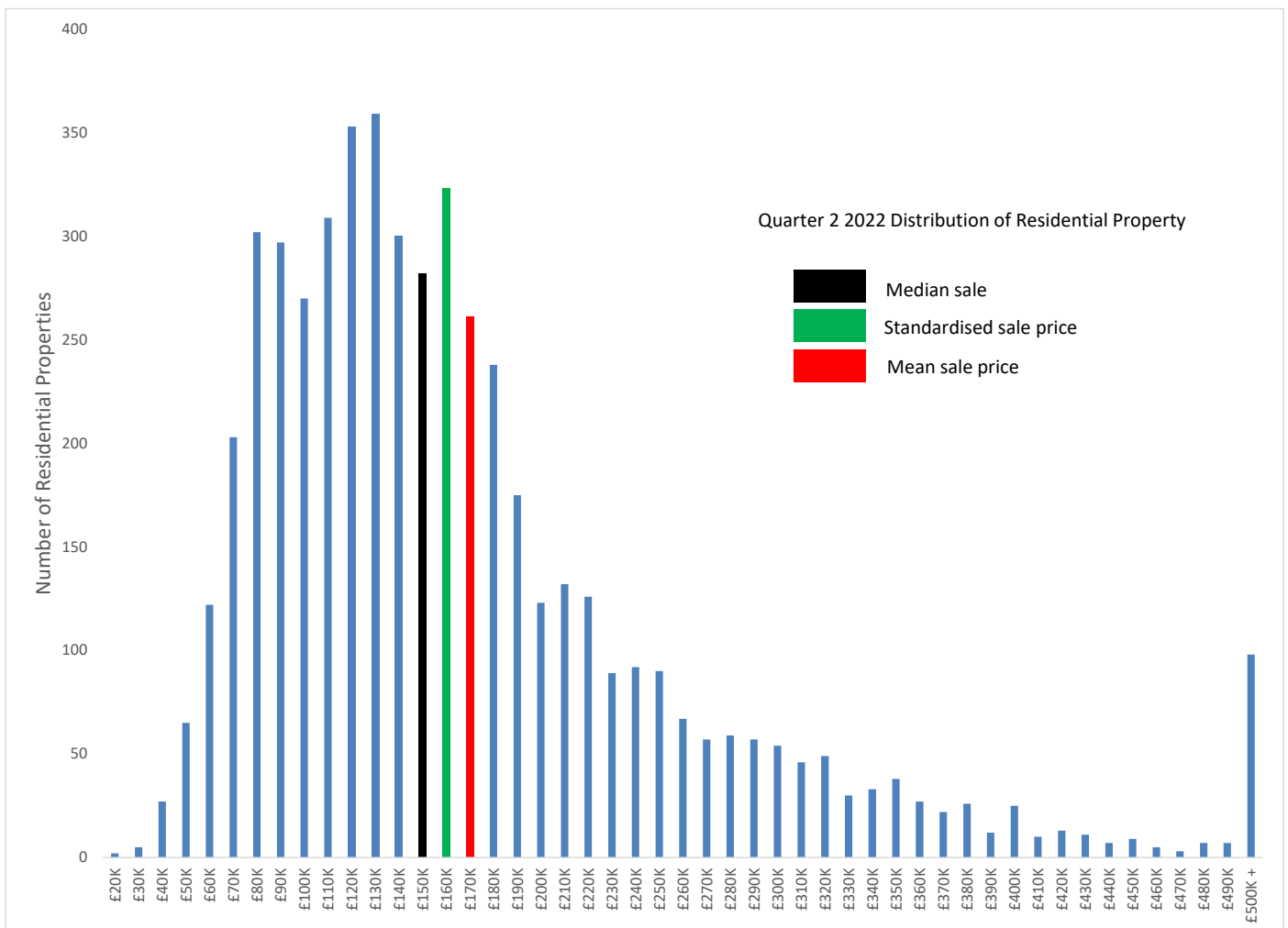
Calculating a House Price Index (HPI) for Northern Ireland is not straightforward.

1. not all properties are available for sale (e.g. some public sector properties are never sold). Therefore sales price data do not represent the overall housing stock.
2. there is significant difference in sales price data across property types.
3. the distribution of sales price data is asymmetric (see figure 6.1).

A standard summary measure of sales price data is the **simple average price** (shown in the red bar). However this is influenced by the small number of higher priced detached properties sold.

Another measure is the **simple median price** (i.e. the price below/above which half of properties are sold). This is shown by the black bar and is a better measure of the “price of a typical property”. However the simple median does not give a good measure of the overall market trend as it does not take account of the differences in types of properties sold each quarter.

**Figure 1: Distribution of Residential Property Sale Prices (Q2 2022)**



The preferred method to create a standardised house price and subsequent index is to use mathematical modelling. This is done using a technique called hedonic modelling. Such a method takes the price of a “good”, in this case a House, and describes it by some characteristics. A House can be viewed as a collection of characteristics such as (size = 150 m<sup>2</sup>, Class = Private Sector, Type = Detached, Housing Market = Greater Belfast, etc.). Hedonic modelling then estimates the relationship between these characteristics and price. The key characteristics are then defined as those that are shown to be statistically related to price.

The NI House Price Index uses this approach to create a standardised property across all the key characteristics that the model identifies. Change over time in the price of the standardised property therefore reflects pure price change as opposed to changes in the mix of properties sold.

A more detailed explanation of the methodology is documented and available on the Department of Finance website. A quality report and the revisions policy for the NI HPI are also available on the [Department of Finance webpage](#).

## **2 Data**

The Commissioner of Valuation for Northern Ireland has access to returns, typically by solicitors, to HM Revenue & Customs (HMRC) of the details of land and property sales in Northern Ireland.

This includes all domestic property sales as well as non-domestic property sales, land sales and property rentals in Northern Ireland, regardless of how they are purchased e.g. this will include auction sales. However, there are a small number of property sales which do not require notification to HMRC, these include:

- transactions where no money changes hands;
- property that's left in a will; and
- transfers of property in a divorce or when a civil partnership is dissolved.

In the modelling of prices each sale is combined with the property characteristics held in the Valuation List database. These characteristics include:

- Size of property (living space)
- Class of Property (Private/Public Sector)
- Type of Property (Detached, Semi-Detached, Terrace, Apartment)
- New/Existing resold property
- Location (LPS Housing Market Areas and Neighbourhood)
- Neighbourhood of property (Acorn Category geo-demographic segmentation of area)

Geo-demographic segmentation is based on two simple principles:

- People who live in the same neighbourhood are more likely to have similar characteristics than two people chosen at random.
- Neighbourhoods can be categorized in terms of the characteristics of the population which they contain. Any two neighbourhoods can be placed in the same category, i.e., they contain similar types of people, even though they are widely separated.

A new property is defined as the first sale of a property after it has been entered into the NI Valuation List. An existing resold property is defined as the sale of a property which already exists in the NI Valuation List.

### **3 Omitted Sales Data**

There are a number of property transactions recorded by HMRC which are counted as verified sales but omitted from the analysis as they do not constitute a fully consistent body of data. Namely, property transactions which are sold at prices which may not represent “free” or “arms-length” market prices, and sales where the price/property type is atypical due to one of the following reasons:

- Sales of NIHE properties to sitting tenants or partial sales by co-ownership
- Sales with a Sale Price less than £20,000
- Sales where Floor size outside identified limits (< 30m<sup>2</sup>, > 1,000m<sup>2</sup>)

### **4 Calculating percentage changes in the index**

The movement of the NI HPI is expressed as a percentage change. Index point changes are not used as this is affected by the level of the index in relation to the base period.

## 5 Reference Period

The reference base period is a point in time used as a reference point for comparison with other periods. The NI HPI is referenced to Q1 2015 and the index is set to equal 100 in this period.

## 6 Seasonal Adjustment

Many time series can be difficult to analyse because short-term movements are often affected by seasonal fluctuations and other calendar/trading-day effects. The property transaction data have been tested for seasonal adjustment using the US Census Bureau X12-Arima software.

<http://www.census.gov/ts/x12a/v03/x12adocV03.pdf>

Although the series of house sales passed the 'combined test for identifiable seasonality', the final seasonal factors estimated are close to unity — thus noting little difference between the unadjusted and adjusted series.

In the case of apartment sales, the software found the series *not* to be seasonal. Therefore the NI HPI as currently published is unadjusted for seasonality.

The NI HPI series will be tested for seasonality periodically and if seasonality is present, a seasonally adjusted index will be presented.

## 7 New and Existing Resold Dwellings

A new property is defined as the first sale of a property after it has been entered into the NI Valuation List. An existing resold property is defined as the sale of a property which already exists in the NI Valuation List.

Due to the nature of the building and purchasing process for new dwellings, the majority of new dwellings are sold prior to entry into the NI Valuation List. As the number of sales recorded for the current quarter only includes sales which could be matched to a residential property in the Valuation List, the figure for new dwellings in the current quarter is a small percentage of the final number. The remaining sales of new dwellings will be identified during the following quarter(s) as the properties are entered into the Valuation List and the figure for the current quarter will be revised and published in the report two quarters following the period to which the figure refers.

## 8 Geographical Areas

### Local Government Districts

From 1 April 2015, 11 new councils took over from the previous 26 under a program of reform. It should be noted that the current Belfast City Council area is not comparable with the previous Belfast Local Government District which is used in the regional (NUTS3) area calculation.

### Electoral Wards

The smallest unit of administrative geography in Northern Ireland. Electoral Ward boundaries are determined by the Local Government Boundaries Commissioner, and reviewed every 8-10 years. Northern Ireland is divided into 462 Wards since 2015.

### Urban - Rural Classification

Urban - Rural classification boundaries are available for Northern Ireland as defined by the Planning Service. These areas are defined from Settlement Development Limits (SDLs).

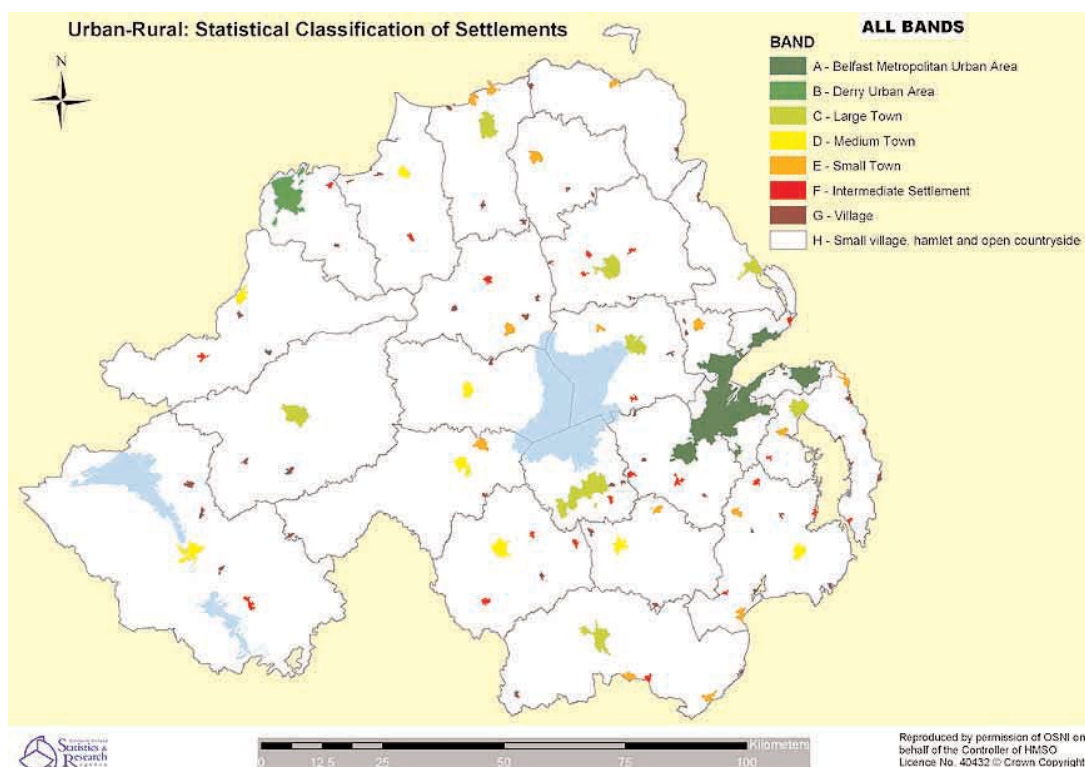
### SDL Statistical Classification Bands

Settlement Development Limits (SDLs) are a statistical classification and delineation of settlements in Northern Ireland defined by the Planning Service. More information is available at:

<https://www.nisra.gov.uk/support/geography/urban-rural-classification>

SDL boundaries are available for the statistical classification bands (A-H).

### Figure 2: Urban-Rural: Statistical Classification of Settlements



Source: NISRA Geography

**Table 1: Urban-Rural: Statistical Classification of Settlements**

Label	Name	Settlement Population Size (2001 Census)
Band A	Belfast Metropolitan Urban Area (BMUA)	c580,000
Band B	Derry Urban Area (DUA)	c90,000
Band C	Large town (outside BMUA and DUA)	18,000 or more and under 75,000
Band D	Medium town (outside BMUA and DUA)	10,000 or more and under 18,000
Band E	Small town (outside BMUA and DUA)	4,500 or more and under 10,000
Band F	Intermediate settlement (outside BMUA and DUA)	2,250 or more and under 4,500
Band G	Village (outside BMUA and DUA)	1,000 or more and under 2,250
Band H	Small village, hamlet and open countryside (outside BMUA and DUA)	Settlements of less than 1,000 people and open countryside

Source: NISRA Geography

Bands A-E can be defined as urban and Bands F-H as rural.

It should be noted that settlement development limits are designated by Planning Service in order to protect the character of settlements and prevent urban sprawl into the surrounding countryside whilst providing for future development needs. Their purpose is not solely to define settlements geographically. Details are available on the Planning Service website ([www.planningni.gov.uk](http://www.planningni.gov.uk)).

Settlement Development Limit Boundaries were updated in 2015. The new boundaries have been applied to sales from January 2016 onwards. More details are available on the [NISRA website](#)

## 9 Other Northern Ireland House Price Statistics

Currently there are a number of different sources of house price statistics published in addition to the NI HPI. There will be differences in the data published by each source as there are differences in both the source data and methodology used. Therefore the NI HPI is not directly comparable with these other indicators. For completeness the references to the other main house price indices are included below.

Following the publication of the National Statisticians review of house price statistics in 2010, the current producers of official house price statistics have developed a consistent methodology which



is now used to produce a single official UK House Price Index (from 14<sup>th</sup> June 2016). The NI HPI will be used as the NI component of the single official UK HPI. Official house price data across the four regions is now comparable. The UK House Price Index can be accessed via <https://www.gov.uk/government/collections/uk-house-price-index-reports>

#### A. The Halifax House Price Index

The Halifax produce a UK wide House Price index based on their own mortgage approvals. A regional index for Northern Ireland is also produced on a quarterly basis. The Halifax House Price Index can be accessed via

[www.lloydsbankinggroup.com/media1/economic\\_insight/halifax\\_house\\_price\\_index\\_page.asp](http://www.lloydsbankinggroup.com/media1/economic_insight/halifax_house_price_index_page.asp)

#### B. The Nationwide House Price Index

The Nationwide also produce a UK wide House Price index based on their own mortgage approvals. A regional index for Northern Ireland is produced on a quarterly basis. Indices and average prices for the UK and the regions are produced using Nationwide's updated mix-adjusted House Price Methodology. Like the Halifax and NI HPI this allows a “typical” property to be tracked over time on a like-for-like basis. The Nationwide House Price Index can be accessed via

[www.nationwide.co.uk/hpi](http://www.nationwide.co.uk/hpi)

#### C. Ulster University/NIHE Northern Ireland Quarterly House Price Index

The Northern Ireland Quarterly House Price Index is produced by the Ulster University in partnership with the Northern Ireland Housing Executive. The market evidence is sourced from a sample of estate agents across Northern Ireland. The price statistics are based on simple arithmetic averages. The index produced is weighted to reflect the market share of each property type. The index can be accessed via

<http://www.rpp.ulster.ac.uk/housing-index.php>

## Annual Descriptive House Price Statistics

Annual descriptive price statistics for each calendar year 2005 – 2021 are available for:

- eleven Local Government Districts;
- 80 District Electoral Areas;
- 462 electoral wards.

The statistics include:

- Minimum sale price
- Lower quartile sale price
- Median sale price
- Simple Mean sale price
- Upper Quartile sale price
- Maximum sale price
- Number of verified sales

The annual statistics were released, for the first time in Feb 2020, in response to requests from users. The data is presented annually due to the small number of transactions. Prices are available where at least 30 sales were recorded in the area within the calendar year which could be included in the regression model i.e. Non Arms-Length sales, sales of properties where the habitable space are less than 30m<sup>2</sup> or greater than 1000m<sup>2</sup> and sales less than £20,000 are excluded.

**Annual median or simple mean prices should not be used to calculate the property price change over time.** The quality (where quality refers to the combination of all characteristics of a residential property, both physical and locational) of the properties that are sold may differ from one time period to another. For example, sales in one quarter could be disproportionately skewed towards low-quality properties, therefore producing a biased estimate of average price.

The median and simple mean prices are not 'standardised' and so the varying mix of properties sold in each quarter could give a false impression of the actual change in prices. In order to calculate the pure property price change over time it is necessary to compare like with like, and this can only be achieved if the 'characteristics-mix' of properties traded is standardised.

The annual information is available on the [DoF website](#).

## 10 Terms & Conditions

Land & Property Services in conjunction with the Northern Ireland Statistics & Research Agency (LPS/NISRA) produce the NI House Price Index to high professional standards and free from political interference.

LPS/NISRA or any third party shall not be liable for any loss or damage, direct, indirect or consequential, arising from any inaccuracy or incompleteness of the data in the NI HPI or any decision made or action taken in reliance upon the data.

Persons seeking to place reliance on the NI HPI for their own or third party commercial purposes do so entirely at their own risk.

## 11 Future Changes

LPS/NISRA plan to investigate the possibility of producing robust price statistics at smaller geographical areas e.g. within areas of Belfast.

## 12 Future Publication Date

Publication dates for the NI House Price Index bulletin are pre-announced on the [Department of Finance](#) website

## 13 User Consultation

Details of user consultations held in relation to the NI House Price Index are available on the [Department of Finance](#) website:

Users' comments or any issues relating to the statistics are particularly welcomed and encouraged. Responses should be addressed to the contact below:

### Contact Details

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