

# Hardwood Price-size Curves for 2022 Calendar Year

## Forest Research and Grown in Britain

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The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, data, technical support and consultancy services.

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## Glossary

Term	Definition
Beam grade	Timber suitable for structural beams in construction. Of the hardwoods included in this publication, generally only oak and sweet chestnut are used for this purpose.
First grade planking	Timber suitable for producing planking and boards that has "a uniform appearance with few if any knots, splits or other features that would limit their use in applications where little variation in appearance is permitted" (Davies and Watt, 2005).
First grade sawlog	A sawlog that has "a uniform appearance with few if any knots, splits or other features that would limit their use in applications where little variation in appearance is permitted" (Davies and Watt, 2005). This category is used for first grade timber from cherry, lime, and poplar as timber from these species would not generally be suitable for planking and beam and cannot be further subdivided into these.
Nominal values	Values that have not been adjusted to account for inflation.
Sapwood	"The outer zone of a tree underneath the bark that, when the tree is growing, contains living cells and conducts sap. Sapwood is frequently paler than the heartwood though is not clearly differentiated in all species. Sapwood has a low natural durability" (Davies and Watt, 2005).
Sawlog	The part of a tree that is of a suitable size and quality to be used to produce sawn timber.
Second grade planking	Timber suitable for producing planking and boards that has "some knots, splits or other features that limit use where uniformity of appearance is important. Nevertheless the piece will yield areas clear of unacceptable features along with timber suitable for applications where some variation is acceptable" (Davies and Watt, 2005).
Standing sale	Transaction where trees are purchased unfelled, and the buyer is responsible for felling and transportation off site.

# 1 Introduction

In partnership with Grown in Britain (GiB), Forest Research (FR) is relaunching the publication of hardwood price-size data. The following tables and charts are mainly based on expert judgement. Where possible, data from sales during the 2022 calendar year have been incorporated to indicate the range of values. GiB first published hardwood price-size curves and tables for the main hardwood species in 2017 and subsequently revised data for 2018 ([Grown in Britain - Download and resources for UK grown timber suppliers](#)). The publication of 2022 price-size curves are the first since 2018. The previous versions published by Grown in Britain for 2017 and 2018 were based purely on expert opinion (Graham Taylor of Pryor & Rickett in collaboration with GiB). The latest price-size curves adopt a mixed approach that supplements expert judgement with timber sales data collected via a survey of sellers and buyers of UK-grown hardwood. Graham Taylor continues to support the current project, providing industry expertise and helping fill gaps where data requirements for statistical analysis are not met. A comparison of the 2022 price-size curves with the previous iterations in 2017 and 2018 is provided (Section 6 - 2022 hardwood price-size curves, compared to 2017 and 2018 ).

Whilst every effort has been made to make results as representative as possible, due to the outputs being based largely on expert judgement – with collected transaction data supplementing this in some but not all cases – the statistical outputs of these methods should be regarded as indicative. Consequently, the data presented should be interpreted with this in mind and may not reflect the market as a whole during 2022. It is recommended to read Section 4 – ‘Assumptions’, prior to interpretation of the price-size curves, as this provides important context to the data presented.

## 2 Disclaimer

The following data relating to British hardwood prices (the Data) is subject to change at any time and is provided for illustrative purposes only. The Data shall not be deemed to include any warranty, assurance or representation, including but not limited to, its on-going accuracy or completeness. In particular: (i) the interpretation and use of the Data is entirely at the discretion and risk of the user; and (ii) the user should, where appropriate, seek professional third-party advice. This disclaimer is subject to the laws of England and Wales.

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## 3 Methods

### 3.1 Survey data

Data were collected via SmartSurvey, with respondents asked to provide information on prices of the UK-grown hardwood products they sold or purchased. Respondents consisted of traders of UK-grown hardwood timber (both buyers and sellers). This covers sawmills, forestry management and harvesting companies, agents and woodland owners. The survey was conducted over April and May 2023 and received responses from 60 participants. Survey data were extracted via .csv downloads from SmartSurvey, then cleaned and analysed using R (version 4.2.1, R Core Team 2022). Units were aligned by converting all responses to m<sup>3</sup>. Where more than three sample data points were available, price ranges were estimated from the survey data for a product. Ranges were estimated from the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentile, providing a range of 95% of the surveyed data prices.

### 3.2 Expert judgement

Expert judgement was provided by Graham Taylor of Prior & Rickett Silviculture based on personal knowledge of markets and transactions within the hardwood market over the calendar year (2022). This knowledge includes that attained through wider contacts within the industry. Expert judgement median values were provided prior to the survey data analysis.

Where insufficient data were available for a product, expert judgement was used to provide a median value with the upper and lower range set as +/-25% this value. In some cases this method led to the lower range including negative values (as the estimated cost of harvesting exceeded the price for the timber). As in such cases no transaction would be expected to occur (as a woodland owner would be better off not selling the timber), negative values are rounded up to zero in the price-size curves. In all cases, expert opinion was used to estimate the median price within the range. The source of estimates (survey versus expert opinion) is defined under



each chart. For ranges based upon the survey data, all expert judgement median estimates fell within the 95% data range covered with the exception of “Grade A Ash”, where the expert opinion median price was below the 2.5th percentile.

Note that the ranges for price-size curves including survey data may not be directly comparable with those based only on expert opinion, nor are they directly comparable with each other as the amount of survey data differs in each.

## 4 Assumptions

The following assumptions were used as a basis for expert judgement in estimating timber prices:

1. For each species, the values of each of the marketable grades and quality classes for sawlogs at a certain average tree size have been used (see Davies and Watt (2005) [Making the Grade](#) for further information on hardwood timber grading). These are as follows:
  - a. Ash, beech and sycamore - first/second grade planking lengths.
  - b. Oak and sweet chestnut - first/second grade planking lengths plus beam grade timbers.
  - c. Lime, cherry, and poplar - first grade sawlogs only.
2. The timber sold is assumed to be defect-free i.e., they are free of stain, shake, rot or decay.
3. Typical amounts of knots and branching that occur in trees of average size are assumed.
4. For oak and sweet chestnut, typical sapwood content of 25-30mm outer ring depth is assumed.
5. An average parcel size is assumed to comprise between 200m<sup>3</sup> and 300m<sup>3</sup> of a single species, being of a good marketable size.
6. The marketing period for timber parcels is assumed to be during the main hardwood timber season from October to March.
7. Harvesting rates assume thinning (not clear felling) in average conditions and of a reasonable scale, in accessible woodlands, somewhere in Central England.
8. Extraction distances are assumed to be less than 400m.

9. Harvesting rates assume mechanisation where tree size currently allows the timbers to be mechanised. Larger diameter hardwood sawlog harvesting rates are based on motor manual systems.
10. Mechanised harvesting rates are those undertaken without additional motor manual support and hence imply an average quality of workmanship.
11. Harvesting rates and sale values within the curves are based on £/m<sup>3</sup> standing sale prices overbark. In reality most timber is harvested based upon on a tonnage rate, but variable green densities are rarely reflected in harvesting rates - hence no adjustment has been made on fresh timber density within the harvesting rates.
12. Firewood values have been subject to adjustment for green density/calorific value as this is often more reflected in the prices achieved.
13. Hardwood sawlogs are usually sold on a measured (m<sup>3</sup>) basis and prices reflect this, with the exception Poplar, which is usually sold on a tonnage basis.
14. In all cases estimated harvesting costs are based on expert opinion.
15. The Poplar harvesting rates are assumed to be more in line with those of harvested conifer, until the trees exceed mechanised harvest size.
16. A conversion factor of 1.43 is used to convert tonnes to m<sup>3</sup>.
17. A conversion factor of 0.03605 is used to convert hoppus ft to m<sup>3</sup>.

## 5 Price-size Curves

The price-size curves presented in the following section give an indication of the achieved overbark standing sales prices per m<sup>3</sup> for each hardwood species included during 2022 calendar year. For ease of reading, the median lines have been smoothed using a simple moving average with the original values viewable in Appendix A – Price-size curve tables. The upper and lower bound lines have not been smoothed.

### 5.1 Interpretation of charts

To find the estimated standing sales price in 2022 for a given species of a given average size, three steps are needed:

- i) first identify the size you are interested in on the x-axis;
- ii) second, trace vertically from this point until reaching the unbroken line;
- iii) third, from this point on the unbroken line, trace horizontally left to find the corresponding price on the y-axis.

The same method can be used to find the lower range and upper range (which are denoted by the lighter broken lines) – see illustrative example below.

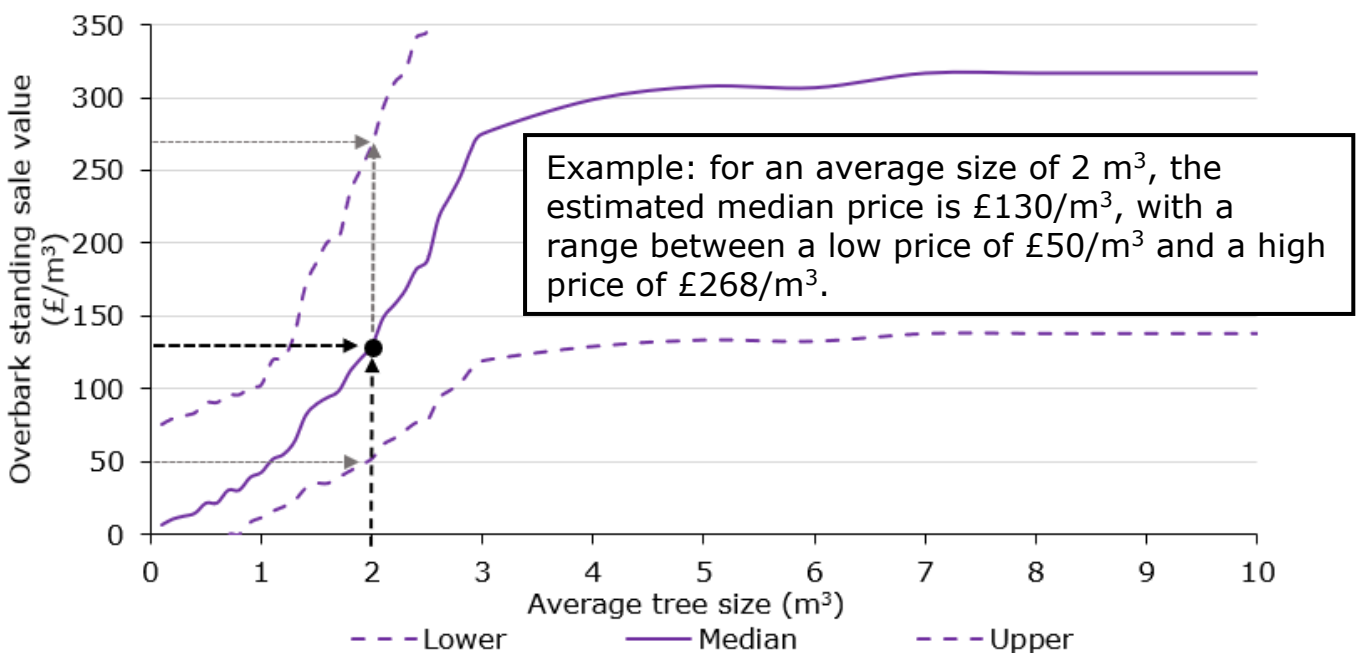


Figure 1. Illustrative example of interpreting price-size curve chart.

## 5.2 Ash

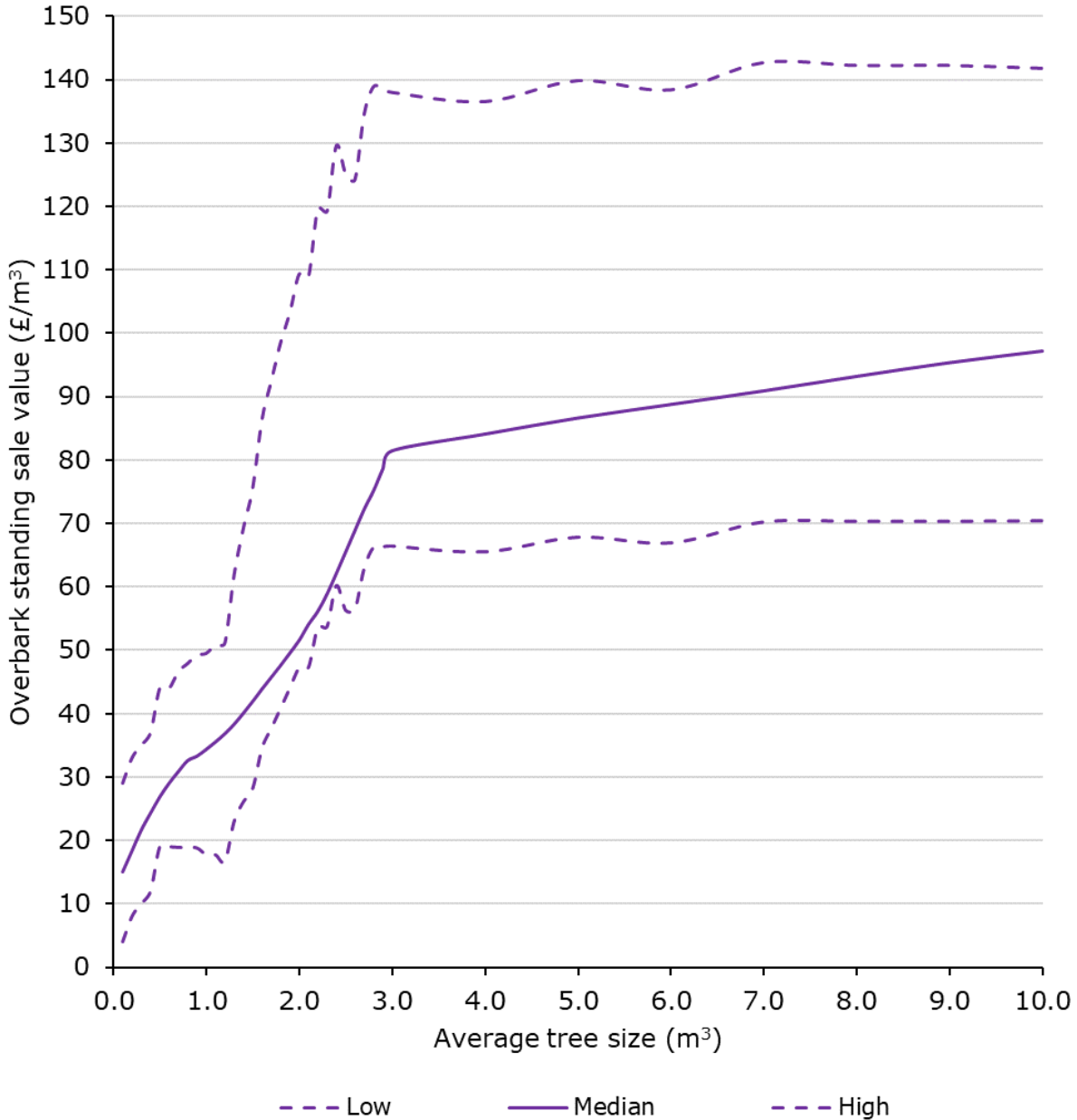


Figure 2. Ash standing sale value (£) price-size curve, 2022.

Note: Estimates based on survey data and expert judgement (see Appendix B – Data table: Prices). Estimated lower bound for “Grade A Ash” from survey data (£107/m<sup>3</sup>) was higher than the median price provided by expert judgement (£90/m<sup>3</sup>).

### 5.3 Beech

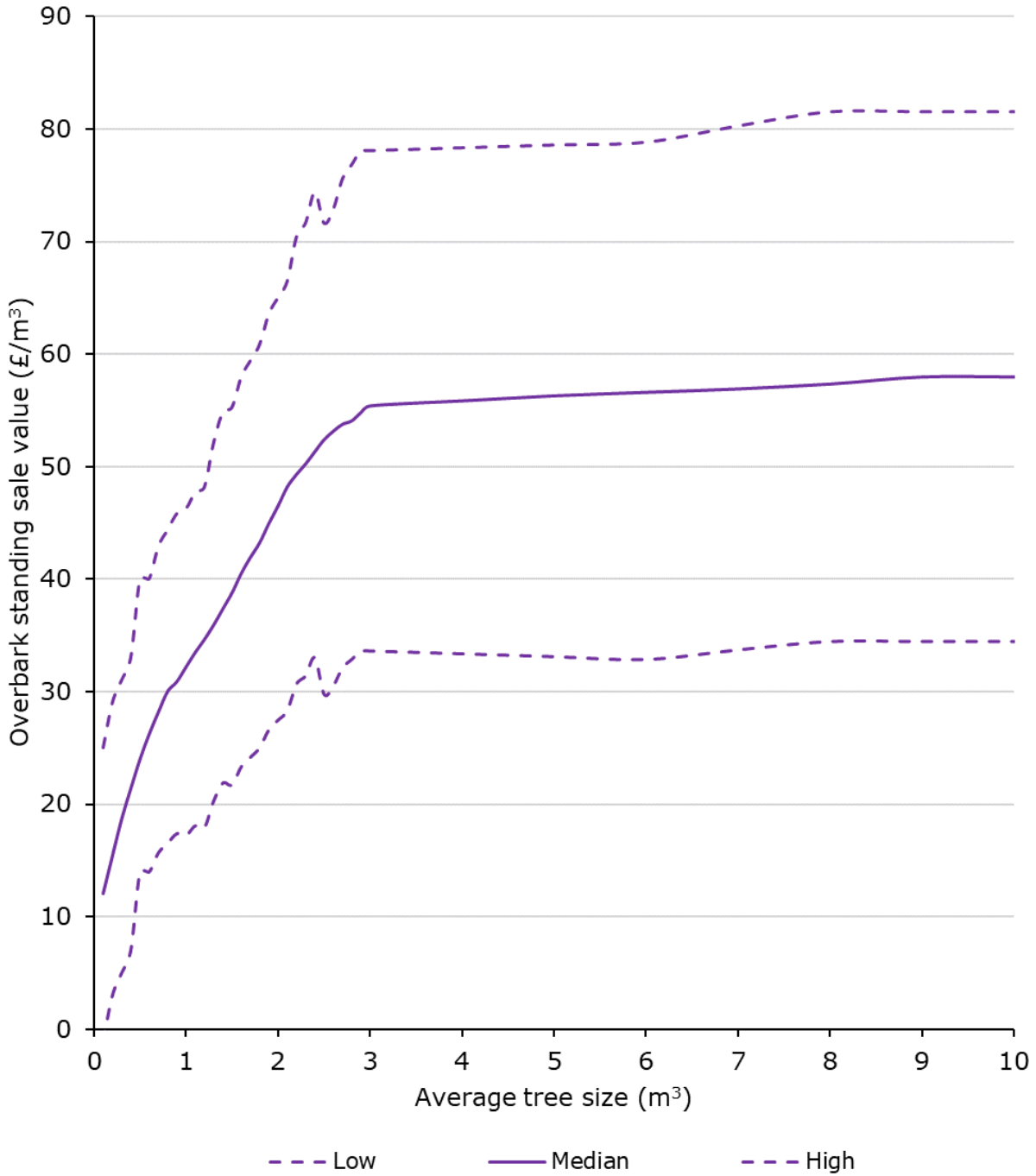


Figure 3. Beech standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement.

## 5.4 Cherry

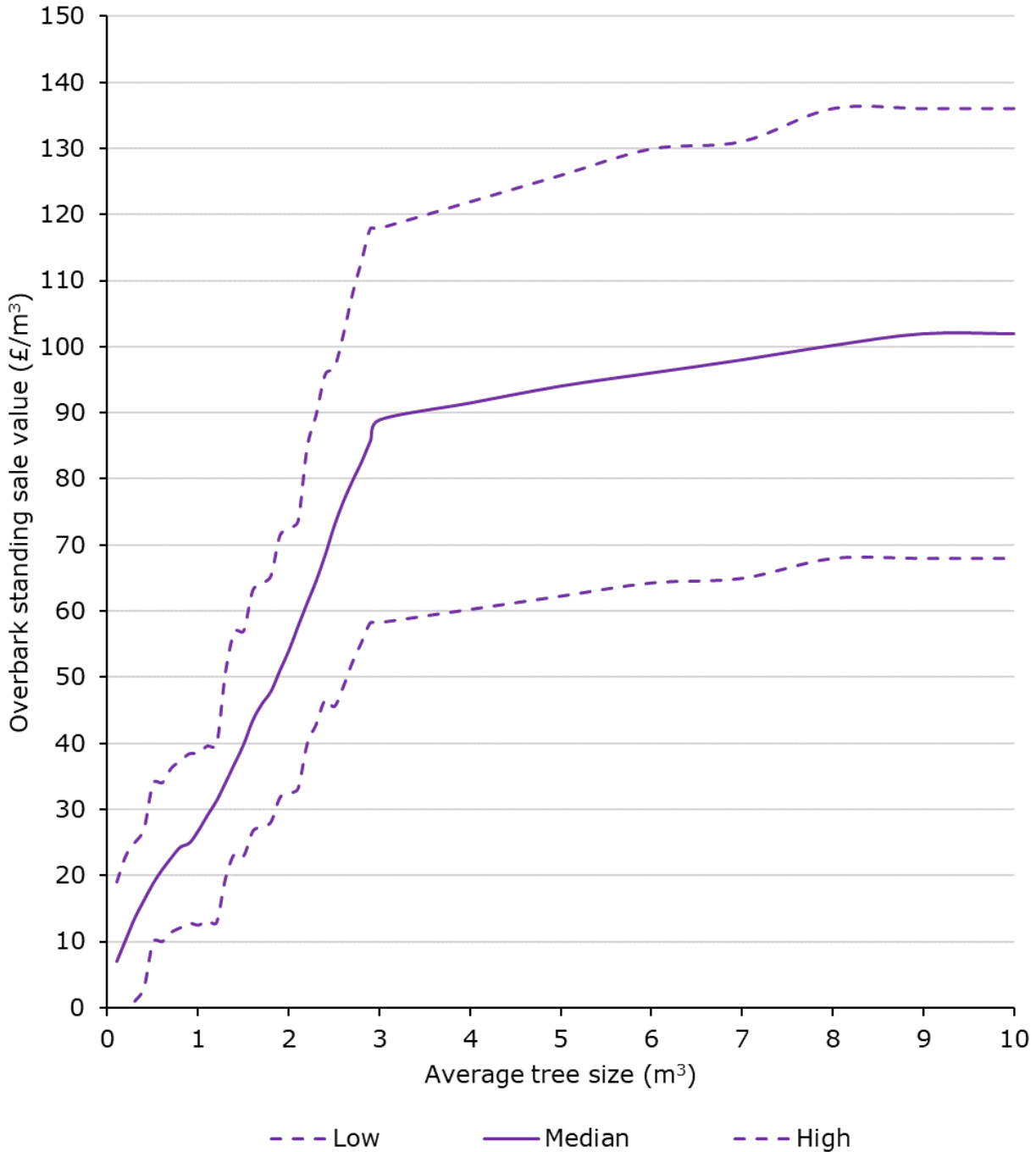


Figure 4. Cherry standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement.

## 5.5 Lime

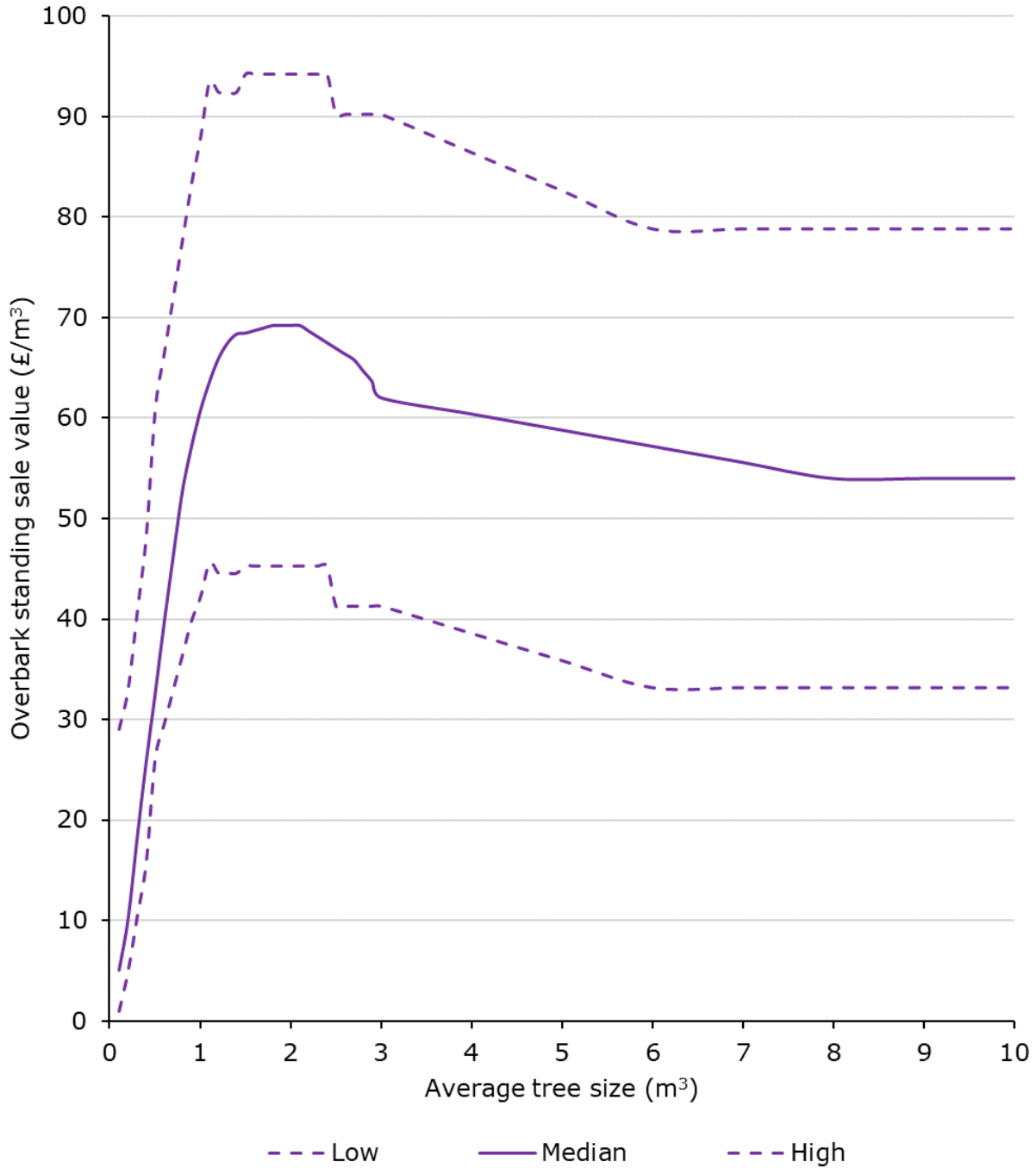


Figure 5. Lime standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement.



## 5.6 Oak

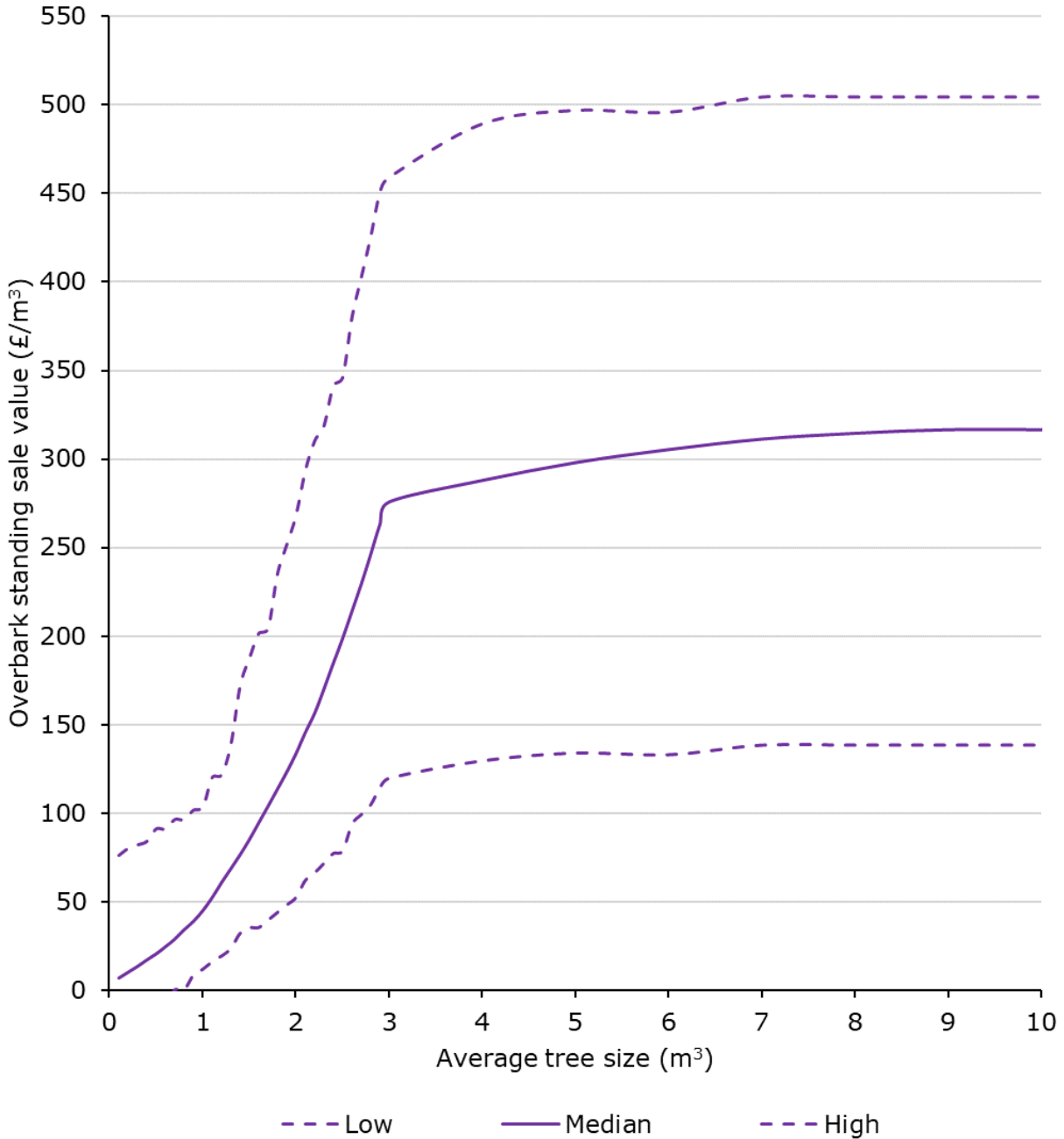


Figure 6. Oak standing sale value (£) price-size curve, 2022.

Note: Estimates based on survey data and expert judgement (see Appendix B – Data table: Prices).

## 5.7 Poplar

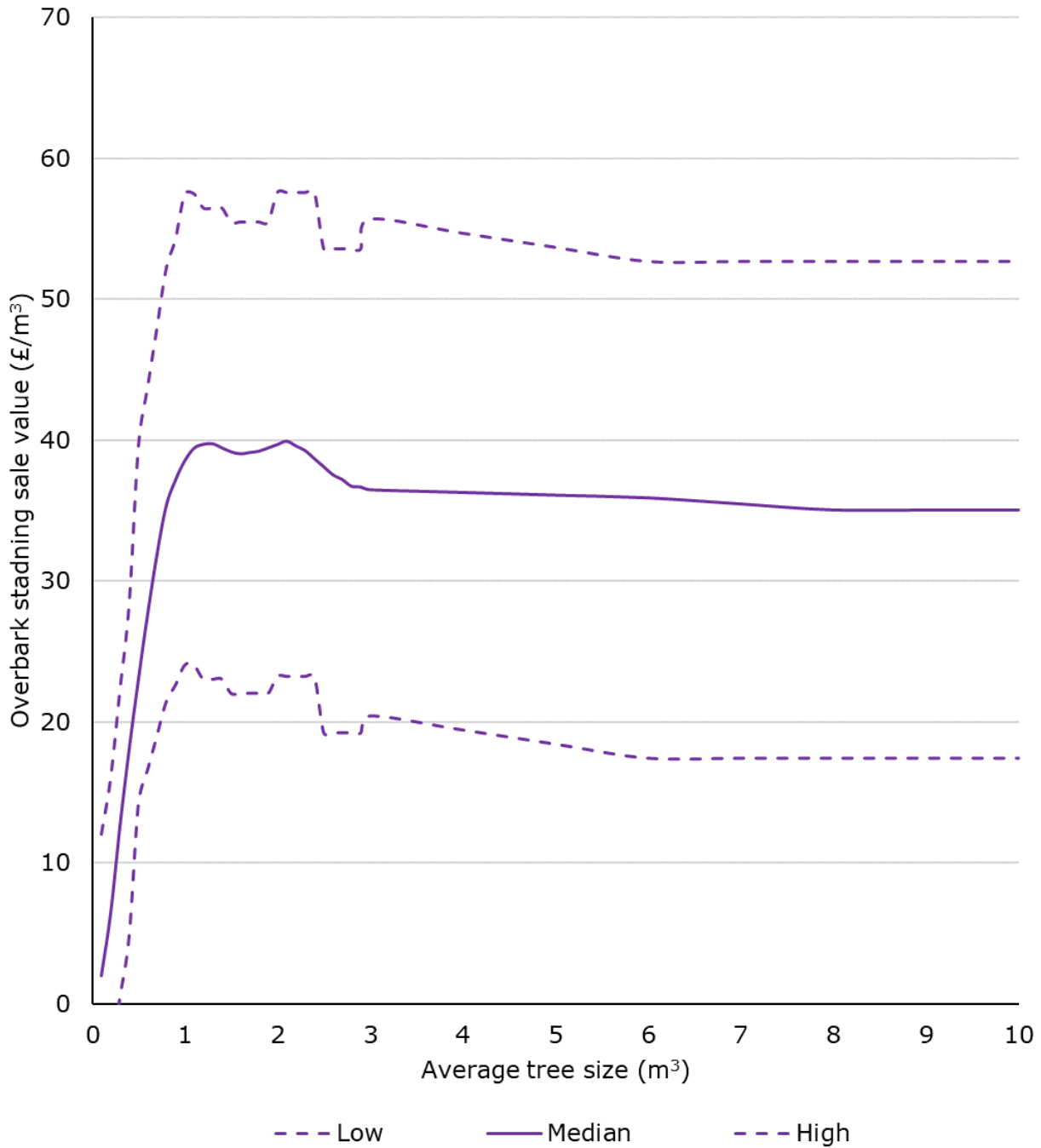


Figure 7. Poplar standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement.

## 5.8 Sweet chestnut

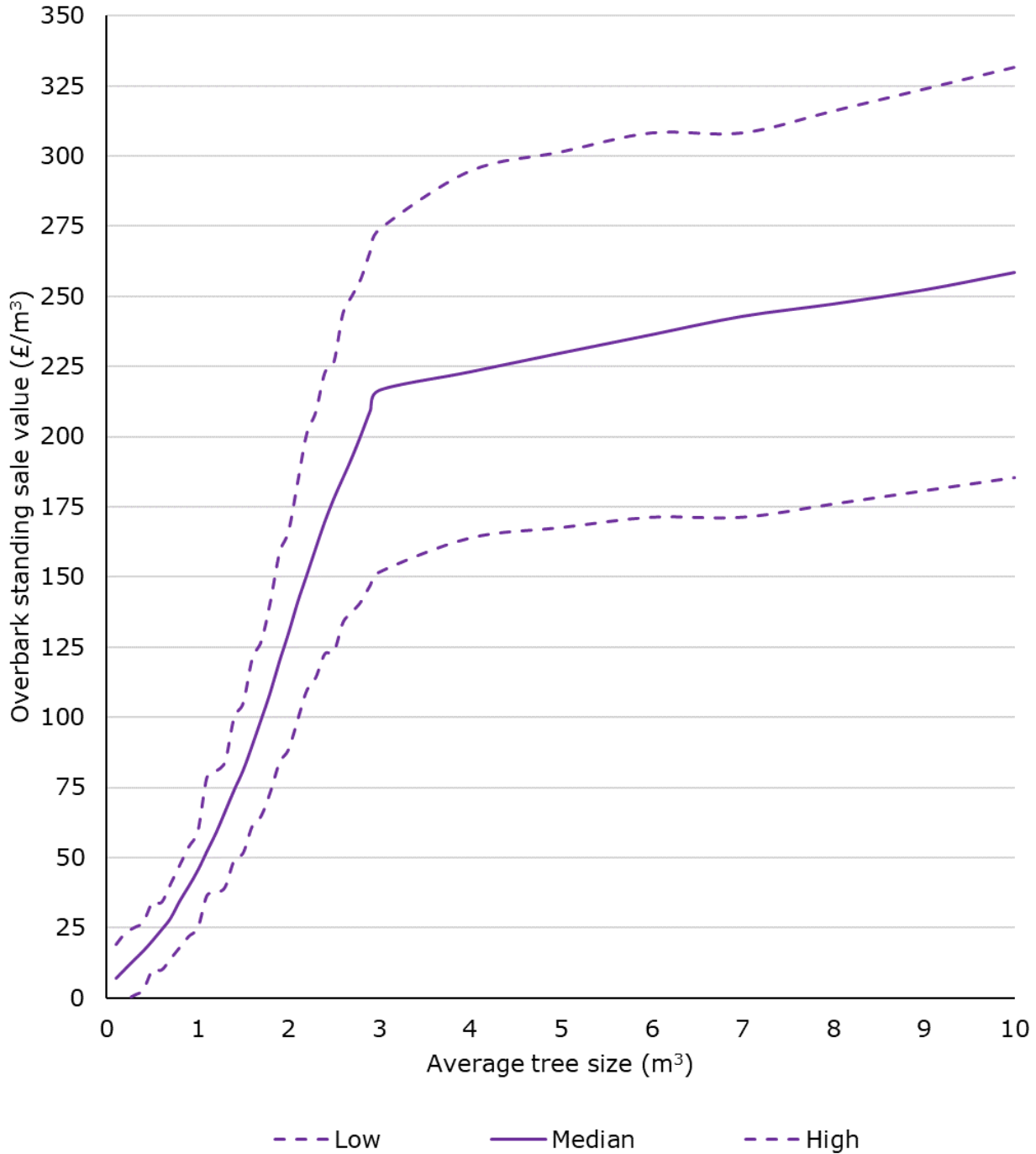


Figure 8. Sweet chestnut standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement.

## 5.9 Sycamore

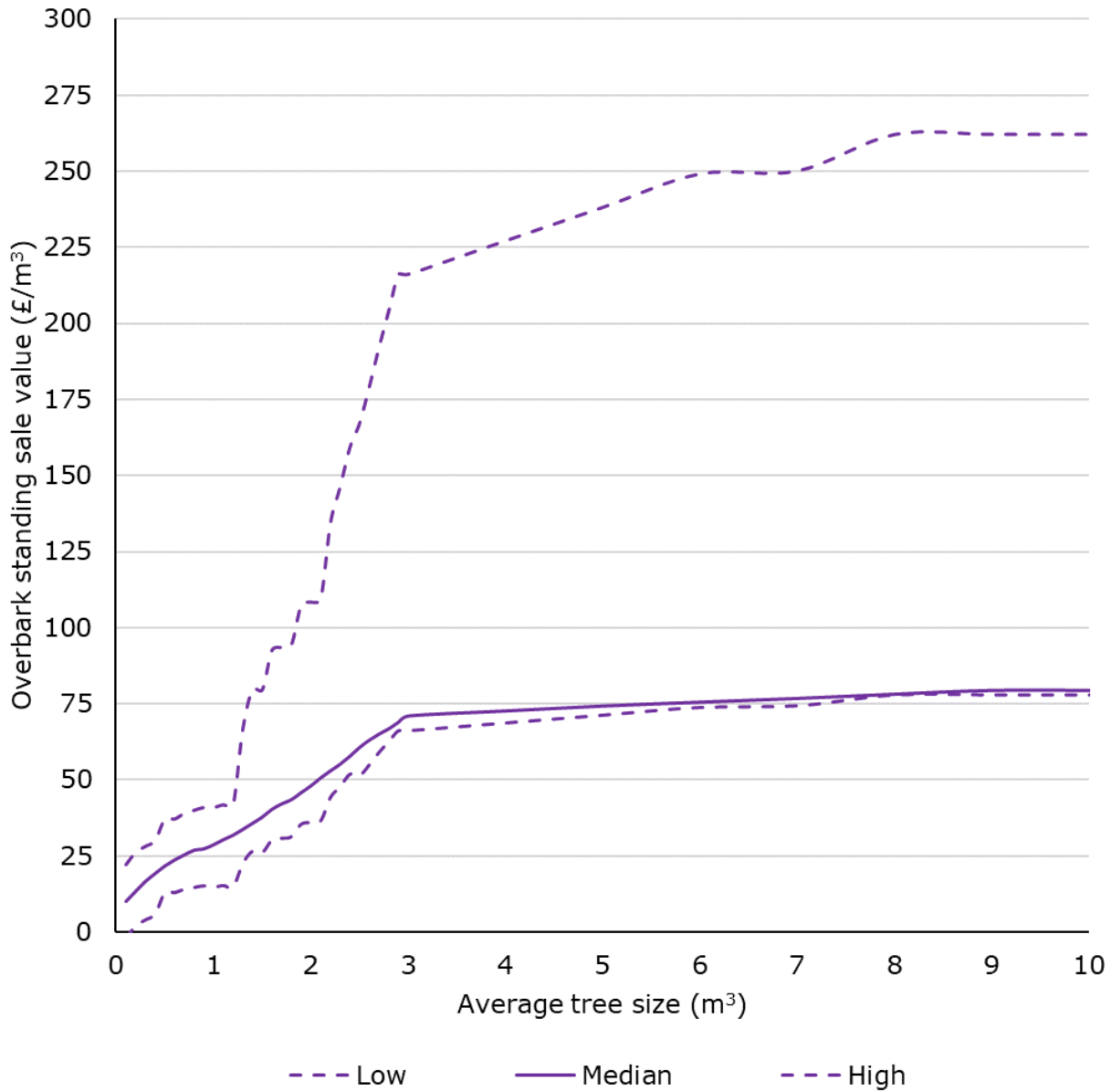


Figure 9. Sycamore standing sale value (£) price-size curve, 2022.

Note: Estimates based on expert judgement and survey data (see Appendix B – Data table: Prices). For “Grade A Sycamore” the lower estimate based on survey data (£119/m³) was close to the median value provided by expert judgement (£120/m³).

## 6 2022 hardwood price-size curves, compared to 2017 and 2018 estimates

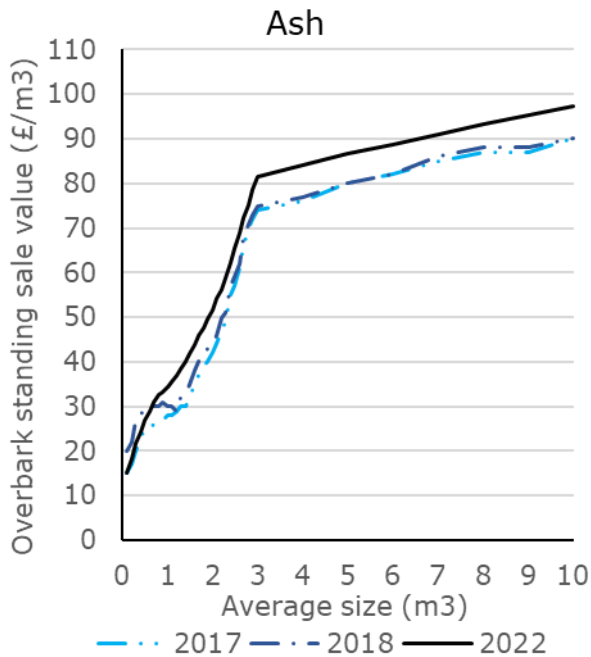


Figure 10. Ash median standing sale values by average size, grouped by year (nominal values).

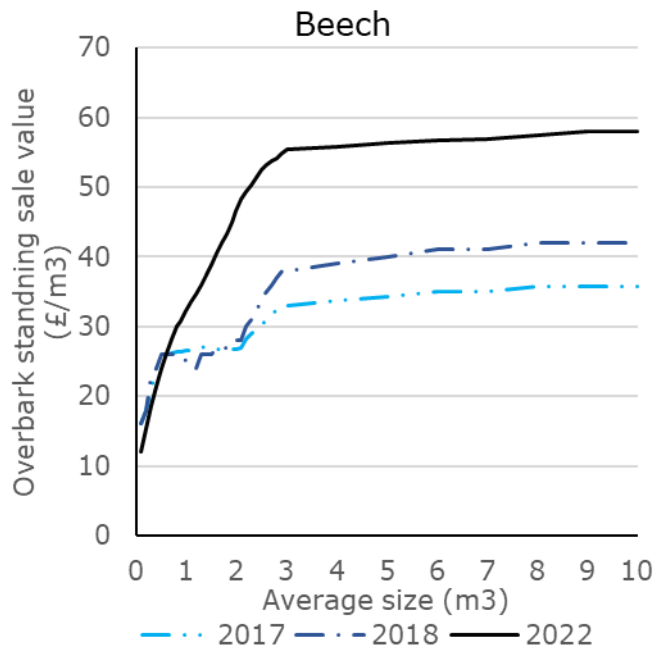


Figure 11. Beech median standing sale values by average size, grouped by year (nominal values).

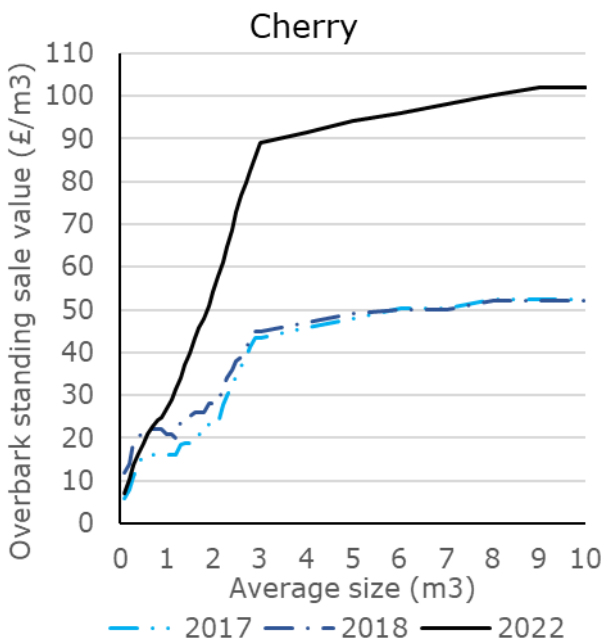


Figure 12. Cherry median standing sale values by average size, grouped by year (nominal values).

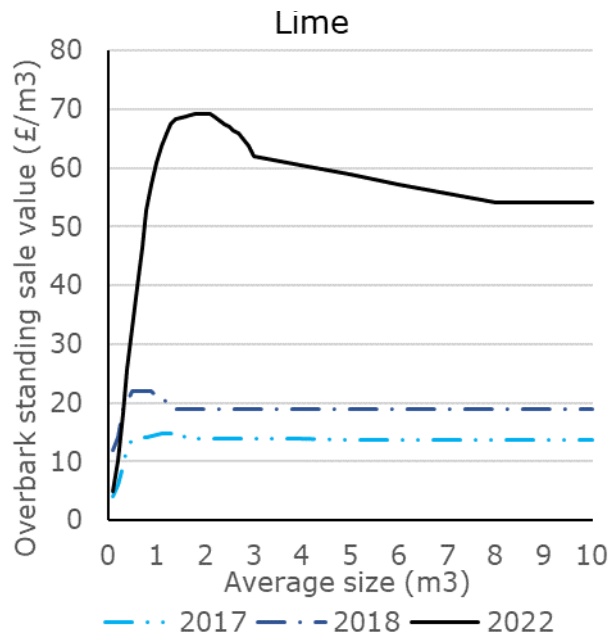


Figure 13. Lime median standing sale values by average size, grouped by year (nominal values).

**Note: Data collected for 2017 and 2018 used a different methodology to data collected from 2022 onwards.**

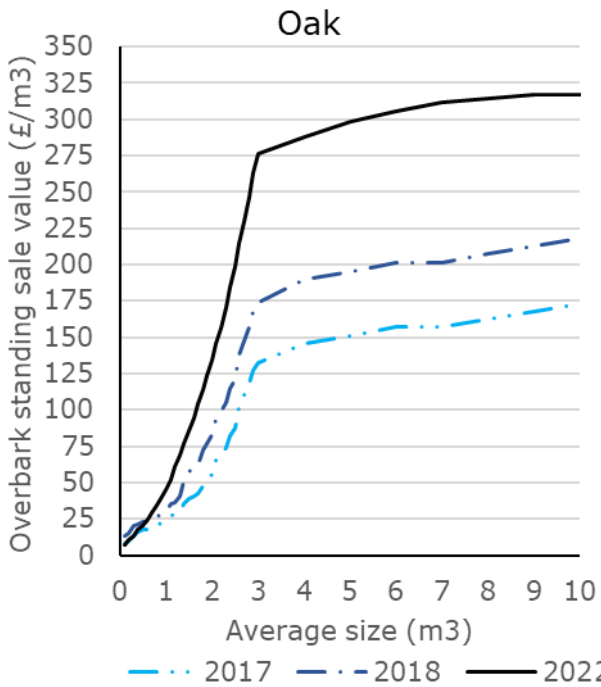


Figure 14. Oak median standing sale values by average size, grouped by year (nominal values).

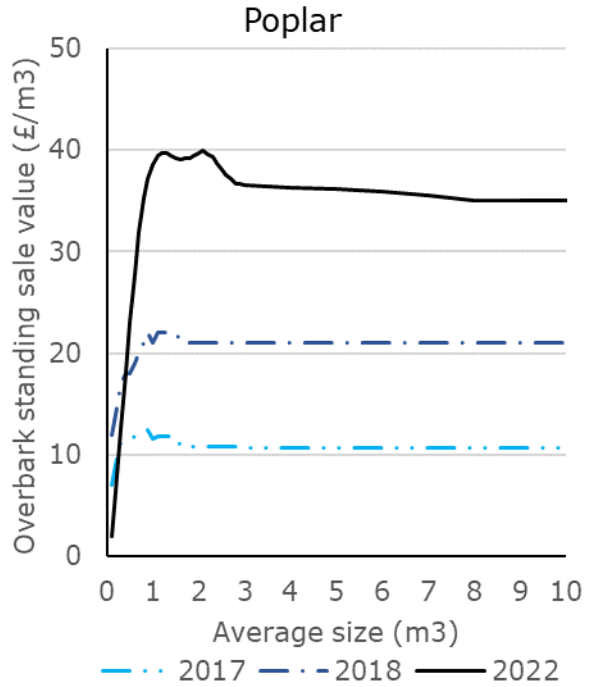


Figure 15. Poplar median standing sale values by average size, grouped by year (nominal values).

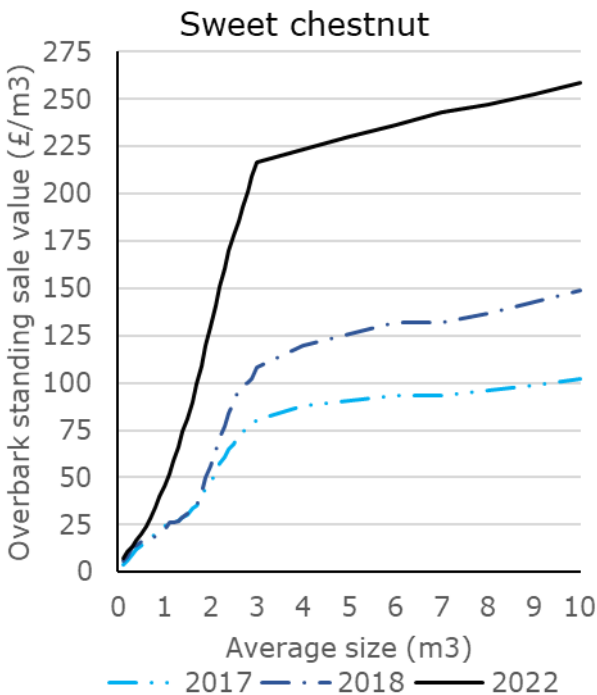


Figure 16. Sweet chestnut median standing sale values by average size, grouped by year (nominal values).

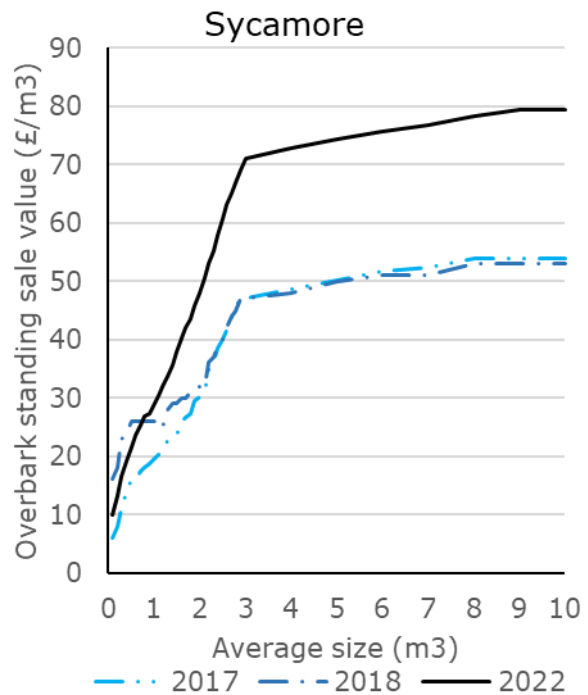


Figure 17. Sycamore median standing sale values by average size, grouped by year (nominal values).

**Note: Data collected for 2017 and 2018 used a different methodology to data collected from 2022 onwards.**

## Appendix A – Price-size curve tables

Table 1. Ash price-size curve table.

Average tree size	Product assortment proportions				Selling roadside		Standing sale
Average size m <sup>3</sup>	Firewood	Second	First	Niche	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	0.00	0.00	55	40	15
0.2	1.00	0.00	0.00	0.00	55	36	19
0.3	1.00	0.00	0.00	0.00	55	34	21
0.4	1.00	0.00	0.00	0.00	55	32	23
0.5	1.00	0.00	0.00	0.00	55	25	30
0.6	1.00	0.00	0.00	0.00	55	25	30
0.7	0.90	0.10	0.00	0.00	57	25	32
0.8	0.85	0.15	0.00	0.00	58	25	33
0.9	0.80	0.20	0.00	0.00	59	25	34
1	0.75	0.25	0.00	0.00	60	26	34
1.1	0.70	0.30	0.00	0.00	61	26	35
1.2	0.65	0.35	0.00	0.00	62	27	35
1.3	0.60	0.30	0.10	0.00	65	27	38
1.4	0.50	0.35	0.15	0.00	67	27	40
1.5	0.40	0.40	0.20	0.00	70	28	42
1.6	0.35	0.35	0.30	0.00	73	28	45
1.7	0.30	0.35	0.35	0.00	74	28	46
1.8	0.25	0.35	0.40	0.00	76	28	48
1.9	0.25	0.30	0.45	0.00	77	28	49
2	0.20	0.30	0.50	0.00	79	28	51
2.1	0.20	0.30	0.45	0.05	81	28	53
2.2	0.15	0.25	0.55	0.05	84	28	56
2.3	0.15	0.25	0.50	0.10	87	28	59
2.4	0.10	0.20	0.55	0.15	92	28	64
2.5	0.10	0.20	0.50	0.20	95	32	63
2.6	0.10	0.20	0.40	0.30	100	32	68
2.7	0.05	0.15	0.45	0.35	105	32	73
2.8	0.05	0.10	0.45	0.40	109	32	77
2.9	0.05	0.10	0.40	0.45	112	32	80
3	0.05	0.10	0.35	0.50	114	32	82
4	0.05	0.10	0.30	0.55	117	33	84
5	0.05	0.05	0.30	0.60	121	34	87
6	0.05	0.05	0.25	0.65	123	35	88
7	0.05	0.00	0.25	0.70	127	35	92
8	0.05	0.00	0.20	0.75	130	35	95
9	0.05	0.00	0.20	0.75	130	35	95
10	0.05	0.00	0.15	0.80	132	35	97

Table 2. Beech price-size curve table.

Average tree size	Product assortment proportions			Selling roadside		Standing sale
Average size m <sup>3</sup>	Firewood	Second	First	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	0.00	52	40	12
0.2	1.00	0.00	0.00	52	36	16
0.3	1.00	0.00	0.00	52	34	18
0.4	1.00	0.00	0.00	52	32	20
0.5	1.00	0.00	0.00	52	25	27
0.6	1.00	0.00	0.00	52	25	27
0.7	0.90	0.10	0.00	54	25	29
0.8	0.85	0.15	0.00	55	25	30
0.9	0.80	0.20	0.00	57	25	32
1	0.75	0.25	0.00	58	26	32
1.1	0.70	0.30	0.00	59	26	33
1.2	0.65	0.35	0.00	60	27	33
1.3	0.60	0.30	0.10	63	27	36
1.4	0.55	0.30	0.15	65	27	38
1.5	0.50	0.35	0.15	67	28	39
1.6	0.45	0.35	0.20	69	28	41
1.7	0.40	0.40	0.20	70	28	42
1.8	0.35	0.45	0.20	71	28	43
1.9	0.30	0.45	0.25	73	28	45
2	0.25	0.50	0.25	74	28	46
2.1	0.20	0.55	0.25	75	28	47
2.2	0.15	0.50	0.35	79	28	51
2.3	0.15	0.45	0.40	80	28	52
2.4	0.10	0.45	0.45	82	28	54
2.5	0.10	0.40	0.50	83	32	51
2.6	0.10	0.35	0.55	84	32	52
2.7	0.05	0.35	0.60	86	32	54
2.8	0.05	0.30	0.65	87	32	55
2.9	0.05	0.25	0.70	88	32	56
3	0.05	0.25	0.70	88	32	56
4	0.05	0.20	0.75	89	33	56
5	0.05	0.15	0.80	90	34	56
6	0.05	0.10	0.85	91	35	56
7	0.00	0.15	0.85	92	35	57
8	0.00	0.10	0.90	93	35	58
9	0.00	0.10	0.90	93	35	58
10	0.00	0.10	0.90	93	35	58



Table 3. Cherry price-size curve table.

Average tree size	Product assortment proportions			Selling roadside		Standing sale
Average size m <sup>3</sup>	Firewood	Second	First	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	0.00	47	40	7
0.2	1.00	0.00	0.00	47	36	11
0.3	1.00	0.00	0.00	47	34	13
0.4	1.00	0.00	0.00	47	32	15
0.5	1.00	0.00	0.00	47	25	22
0.6	1.00	0.00	0.00	47	25	22
0.7	0.90	0.10	0.00	49	25	24
0.8	0.85	0.15	0.00	50	25	25
0.9	0.80	0.20	0.00	51	25	26
1	0.75	0.25	0.00	52	26	26
1.1	0.70	0.30	0.00	52	26	26
1.2	0.65	0.35	0.00	53	27	26
1.3	0.60	0.30	0.10	62	27	35
1.4	0.55	0.30	0.15	67	27	40
1.5	0.50	0.35	0.15	68	28	40
1.6	0.45	0.35	0.20	73	28	45
1.7	0.40	0.40	0.20	74	28	46
1.8	0.35	0.45	0.20	75	28	47
1.9	0.30	0.45	0.25	80	28	52
2	0.25	0.50	0.25	81	28	53
2.1	0.20	0.55	0.25	81	28	53
2.2	0.15	0.50	0.35	90	28	62
2.3	0.15	0.45	0.40	94	28	66
2.4	0.10	0.45	0.45	99	28	71
2.5	0.10	0.40	0.50	103	32	71
2.6	0.10	0.35	0.55	107	32	75
2.7	0.05	0.35	0.60	112	32	80
2.8	0.05	0.30	0.65	116	32	84
2.9	0.05	0.25	0.70	120	32	88
3	0.05	0.25	0.70	120	32	88
4	0.05	0.20	0.75	124	33	91
5	0.05	0.15	0.80	128	34	94
6	0.05	0.10	0.85	132	35	97
7	0.00	0.15	0.85	133	35	98
8	0.00	0.10	0.90	137	35	102
9	0.00	0.10	0.90	137	35	102
10	0.00	0.10	0.90	137	35	102

Table 4. Lime price-size curve table.

Average tree size	Product assortment proportions		Selling roadside		Standing sale
Average size m <sup>3</sup>	Firewood	Sawlog	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	45	40	5
0.2	1.00	0.00	45	36	9
0.3	0.90	0.10	51	34	17
0.4	0.80	0.20	56	32	24
0.5	0.70	0.30	62	25	37
0.6	0.60	0.40	67	25	42
0.7	0.50	0.50	73	25	48
0.8	0.40	0.60	78	25	53
0.9	0.30	0.70	84	25	59
1	0.20	0.80	89	26	63
1.1	0.10	0.90	95	26	69
1.2	0.10	0.90	95	27	68
1.3	0.10	0.90	95	27	68
1.4	0.10	0.90	95	27	68
1.5	0.05	0.95	97	28	69
1.6	0.05	0.95	97	28	69
1.7	0.05	0.95	97	28	69
1.8	0.05	0.95	97	28	69
1.9	0.05	0.95	97	28	69
2	0.05	0.95	97	28	69
2.1	0.05	0.95	97	28	69
2.2	0.05	0.95	97	28	69
2.3	0.05	0.95	97	28	69
2.4	0.05	0.95	97	28	69
2.5	0.05	0.95	97	32	65
2.6	0.05	0.95	97	32	65
2.7	0.05	0.95	97	32	65
2.8	0.05	0.95	97	32	65
2.9	0.05	0.95	97	32	65
3	0.05	0.95	97	32	65
4	0.10	0.90	95	33	62
5	0.15	0.85	92	34	58
6	0.20	0.80	89	35	54
7	0.20	0.80	89	35	54
8	0.20	0.80	89	35	54
9	0.20	0.80	89	35	54
10	0.20	0.80	89	35	54

Table 5. Oak price-size curve table.

Average tree size	Product assortment proportions				Selling roadside		Standing sale
Average size m <sup>3</sup>	Firewood	Fence	Beam	Planking	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	0.00	0.00	47	40	7
0.2	1.00	0.00	0.00	0.00	47	36	11
0.3	1.00	0.00	0.00	0.00	47	34	13
0.4	1.00	0.00	0.00	0.00	47	32	15
0.5	1.00	0.00	0.00	0.00	47	25	22
0.6	1.00	0.00	0.00	0.00	47	25	22
0.7	0.90	0.10	0.00	0.00	56	25	31
0.8	0.90	0.10	0.00	0.00	56	25	31
0.9	0.80	0.20	0.00	0.00	65	25	40
1	0.75	0.25	0.00	0.00	69	26	43
1.1	0.70	0.25	0.05	0.00	78	26	52
1.2	0.65	0.30	0.05	0.00	82	27	55
1.3	0.60	0.30	0.10	0.00	91	27	64
1.4	0.50	0.30	0.20	0.00	109	27	82
1.5	0.45	0.30	0.25	0.00	118	28	90
1.6	0.45	0.25	0.30	0.00	122	28	94
1.7	0.40	0.30	0.30	0.00	127	28	99
1.8	0.35	0.25	0.40	0.00	140	28	112
1.9	0.30	0.25	0.45	0.00	149	28	121
2	0.25	0.25	0.50	0.00	158	28	130
2.1	0.20	0.25	0.50	0.05	177	28	149
2.2	0.15	0.25	0.55	0.05	186	28	158
2.3	0.15	0.25	0.50	0.10	196	28	168
2.4	0.15	0.20	0.50	0.15	210	28	182
2.5	0.15	0.20	0.45	0.20	220	32	188
2.6	0.10	0.20	0.40	0.30	249	32	217
2.7	0.10	0.15	0.40	0.35	264	32	232
2.8	0.10	0.10	0.40	0.40	278	32	246
2.9	0.05	0.10	0.40	0.45	297	32	265
3	0.05	0.10	0.35	0.50	307	32	275
4	0.05	0.05	0.30	0.60	332	33	299
5	0.05	0.05	0.25	0.65	342	34	308
6	0.05	0.05	0.25	0.65	342	35	307
7	0.05	0.05	0.20	0.70	352	35	317
8	0.05	0.05	0.20	0.70	352	35	317
9	0.05	0.05	0.20	0.70	352	35	317
10	0.05	0.05	0.20	0.70	352	35	317

Table 6. Poplar price-size curve table.

Average tree size	Product assortment proportions		Selling roadside		Standing sale
Average size m <sup>3</sup>	Biomass	Sawlog	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	42	40	2
0.2	1.00	0.00	42	36	6
0.3	0.90	0.10	45	34	11
0.4	0.80	0.20	49	32	17
0.5	0.70	0.30	52	25	27
0.6	0.60	0.40	55	25	30
0.7	0.50	0.50	59	25	34
0.8	0.40	0.60	62	25	37
0.9	0.35	0.65	63	25	38
1	0.25	0.75	67	26	41
1.1	0.25	0.75	67	26	41
1.2	0.25	0.75	67	27	40
1.3	0.25	0.75	67	27	40
1.4	0.25	0.75	67	27	40
1.5	0.25	0.75	67	28	39
1.6	0.25	0.75	67	28	39
1.7	0.25	0.75	67	28	39
1.8	0.25	0.75	67	28	39
1.9	0.25	0.75	67	28	39
2	0.20	0.80	68	28	40
2.1	0.20	0.80	68	28	40
2.2	0.20	0.80	68	28	40
2.3	0.20	0.80	68	28	40
2.4	0.20	0.80	68	28	40
2.5	0.20	0.80	68	32	36
2.6	0.20	0.80	68	32	36
2.7	0.20	0.80	68	32	36
2.8	0.20	0.80	68	32	36
2.9	0.20	0.80	68	32	36
3	0.15	0.85	70	32	38
4	0.15	0.85	70	33	37
5	0.15	0.85	70	34	36
6	0.15	0.85	70	35	35
7	0.15	0.85	70	35	35
8	0.15	0.85	70	35	35
9	0.15	0.85	70	35	35
10	0.15	0.85	70	35	35

Table 7. Sweet chestnut price-size curve table.

Average tree size	Product assortment proportions				Selling roadside		Standing sale	
	Average size m <sup>3</sup>	Firewood	Fencing	Second planking	First planking	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>	Standing value £/m <sup>3</sup>
0.1	1.00	0.00	0.00	0.00	0.00	47	40	7
0.2	1.00	0.00	0.00	0.00	0.00	47	36	11
0.3	1.00	0.00	0.00	0.00	0.00	47	34	13
0.4	1.00	0.00	0.00	0.00	0.00	47	32	15
0.5	1.00	0.00	0.00	0.00	0.00	47	25	22
0.6	1.00	0.00	0.00	0.00	0.00	47	25	22
0.7	0.90	0.10	0.00	0.00	0.00	52	25	27
0.8	0.80	0.20	0.00	0.00	0.00	58	25	33
0.9	0.70	0.30	0.00	0.00	0.00	63	25	38
1	0.60	0.40	0.00	0.00	0.00	68	26	42
1.1	0.50	0.40	0.10	0.00	0.00	84	26	58
1.2	0.45	0.45	0.10	0.00	0.00	86	27	59
1.3	0.40	0.50	0.10	0.00	0.00	89	27	62
1.4	0.35	0.45	0.20	0.00	0.00	101	27	74
1.5	0.35	0.40	0.25	0.00	0.00	106	28	78
1.6	0.30	0.35	0.35	0.00	0.00	119	28	91
1.7	0.30	0.30	0.40	0.00	0.00	124	28	96
1.8	0.30	0.25	0.40	0.05	0.05	135	28	107
1.9	0.25	0.25	0.40	0.10	0.10	149	28	121
2	0.25	0.25	0.35	0.15	0.15	156	28	128
2.1	0.20	0.25	0.35	0.20	0.20	169	28	141
2.2	0.15	0.25	0.35	0.25	0.25	183	28	155
2.3	0.15	0.25	0.30	0.30	0.30	190	28	162
2.4	0.15	0.20	0.30	0.35	0.35	201	28	173
2.5	0.15	0.20	0.25	0.40	0.40	207	32	175
2.6	0.10	0.20	0.25	0.45	0.45	221	32	189
2.7	0.10	0.15	0.30	0.45	0.45	226	32	194
2.8	0.10	0.10	0.35	0.45	0.45	231	32	199
2.9	0.05	0.10	0.40	0.45	0.45	239	32	207
3	0.05	0.10	0.35	0.50	0.50	245	32	213
4	0.05	0.05	0.30	0.60	0.60	262	33	229
5	0.05	0.05	0.25	0.65	0.65	269	34	235
6	0.05	0.05	0.20	0.70	0.70	275	35	240
7	0.05	0.05	0.20	0.70	0.70	275	35	240
8	0.05	0.05	0.15	0.75	0.75	281	35	246
9	0.05	0.05	0.10	0.80	0.80	287	35	252
10	0.05	0.05	0.05	0.85	0.85	294	35	259

Table 8. Sycamore price-size curve table.

Average tree size	Product assortment proportions			Selling roadside		Standing sale
	Average size m <sup>3</sup>	Firewood	Second	First	Roadside value £/m <sup>3</sup>	Harvest £/m <sup>3</sup>
0.1	1.00	0.00	0.00	50	40	10
0.2	1.00	0.00	0.00	50	36	14
0.3	1.00	0.00	0.00	50	34	16
0.4	1.00	0.00	0.00	50	32	18
0.5	1.00	0.00	0.00	50	25	25
0.6	1.00	0.00	0.00	50	25	25
0.7	0.90	0.10	0.00	52	25	27
0.8	0.85	0.15	0.00	52	25	27
0.9	0.80	0.20	0.00	53	25	28
1	0.75	0.25	0.00	54	26	28
1.1	0.70	0.30	0.00	55	26	29
1.2	0.65	0.35	0.00	55	27	28
1.3	0.60	0.30	0.10	62	27	35
1.4	0.55	0.30	0.15	65	27	38
1.5	0.50	0.35	0.15	66	28	38
1.6	0.45	0.35	0.20	69	28	41
1.7	0.40	0.40	0.20	70	28	42
1.8	0.35	0.45	0.20	71	28	43
1.9	0.30	0.45	0.25	74	28	46
2	0.25	0.50	0.25	75	28	47
2.1	0.20	0.55	0.25	76	28	48
2.2	0.15	0.50	0.35	82	28	54
2.3	0.15	0.45	0.40	85	28	57
2.4	0.10	0.45	0.45	88	28	60
2.5	0.10	0.40	0.50	91	32	59
2.6	0.10	0.35	0.55	94	32	62
2.7	0.05	0.35	0.60	97	32	65
2.8	0.05	0.30	0.65	100	32	68
2.9	0.05	0.25	0.70	103	32	71
3	0.05	0.25	0.70	103	32	71
4	0.05	0.20	0.75	106	33	73
5	0.05	0.15	0.80	108	34	74
6	0.05	0.10	0.85	111	35	76
7	0.00	0.15	0.85	112	35	77
8	0.00	0.10	0.90	115	35	80
9	0.00	0.10	0.90	115	35	80
10	0.00	0.10	0.90	115	35	80

## Appendix B – Data table: Prices

Table 9. Table of timber product price data and sources of data.

Species: Product	Expert Price (£)	Lower Estimate (£)	Upper Estimate (£)	Type	Number Of Parcels	Total Volume in Survey (m <sup>3</sup> )
Ash: Firewood	55	44	69	Survey Data	4	809
Ash: First grade	90	107	190	Survey Data	14	295
Ash: Second grade	75	43	95	Survey Data	11	687
Ash: Niche	145	109	181	Expert Opinion	N/A	N/A
Beech: Firewood	52	39	65	Expert Opinion	N/A	N/A
Beech: First grade	95	71	119	Expert Opinion	N/A	N/A
Beech: Second grade	75	56	94	Expert Opinion	N/A	N/A
Cherry: Firewood	47	35	59	Expert Opinion	N/A	N/A
Cherry: First grade	145	109	181	Expert Opinion	N/A	N/A
Cherry: Second grade	65	49	81	Expert Opinion	N/A	N/A
Lime: Firewood	55	41	69	Expert Opinion	N/A	N/A
Lime: Timber	100	75	125	Expert Opinion	N/A	N/A
Oak: Beam	225	102	450	Survey Data	20	1,356
Oak: Fence	135	101	169	Expert Opinion	N/A	N/A
Oak: Firewood	47	17	116	Survey Data	6	2,017
Oak: Planking	425	210	622	Survey Data	19	227
Poplar: Biomass	42	32	52	Expert Opinion	N/A	N/A
Poplar: Sawlog	75	56	94	Expert Opinion	N/A	N/A
Sweet chestnut: Fence	100	75	125	Expert Opinion	N/A	N/A
Sweet chestnut: Firewood	47	35	59	Expert Opinion	N/A	N/A
Sweet chestnut: First grade	325	244	406	Expert Opinion	N/A	N/A
Sweet chestnut: Second grade	200	150	250	Expert Opinion	N/A	N/A
Sycamore: Firewood	50	38	62	Expert Opinion	N/A	N/A

## Hardwood Price-size Curves for 2022 Calendar Year

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Sycamore: First grade	120	119	321	Survey Data	5	29
Sycamore: Second grade	65	49	81	Expert Opinion	N/A	N/A



## References

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