

Tree Cover in Wales' Towns and Cities: update 2020

Report No: 465

Author Name: Dowding, D. Hodges, C.

Author Affiliation: Geo Smart Decisions, Tywyn, Gwynedd

About Natural Resources Wales

Natural Resources Wales' purpose is to pursue sustainable management of natural resources. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

Evidence at Natural Resources Wales

Natural Resources Wales is an evidence-based organisation. We seek to ensure that our strategy, decisions, operations and advice to Welsh Government and others are underpinned by sound and quality-assured evidence. We recognise that it is critically important to have a good understanding of our changing environment.

We will realise this vision by:

- Maintaining and developing the technical specialist skills of our staff;
- Securing our data and information;
- Having a well resourced proactive programme of evidence work;
- Continuing to review and add to our evidence to ensure it is fit for the challenges facing us; and
- Communicating our evidence in an open and transparent way.

This Evidence Report series serves as a record of work carried out or commissioned by Natural Resources Wales. It also helps us to share and promote use of our evidence by others and develop future collaborations. However, the views and recommendations presented in this report are not necessarily those of NRW and should, therefore, not be attributed to NRW.

Report number: 465
Publication date: December 2020
Contract number: Framework Reference Number: NRW 43244
Contractor: Geo Smart Decisions Ltd
Contract Manager: Buddug Jones
Title: **Tree Cover in Wales' Towns and Cities: update 2020 - Updated information to help us understand canopy cover to better plan and manage our urban trees.**
Author(s): Dowding, D. Hodges, C.
Technical Editor: Dowding, D.
Quality assurance: Tier 1
Peer Reviewer(s): Briggs, J; Frost, P.
Approved By: DPAS
Restrictions: None

Distribution List (core)

NRW Library, Bangor	2
National Library of Wales	1
British Library	1
Welsh Government Library	1
Scottish Natural Heritage Library	1
Natural England Library (Electronic Only)	1

Recommended citation for this volume:

Hodges, C. 2020. Tree Cover in Wales' Towns and Cities: update 2020 - Updated information to help us understand canopy cover to better plan and manage our urban trees. Report No: 465, 26pp, Natural Resources Wales, Bangor (Gwynedd).

Contents

1. Crynodeb Gweithredol	4
2. Executive summary	5
3. Approach and methodology	6
4. Potential future methodology	6
5. National urban canopy cover	6
6. County canopy cover comparisons.....	8
County Canopy Cover 2013 below national average	9
County Canopy Cover 2019 below national average	9
County Canopy Cover 2013 above national average.....	10
County Canopy Cover 2019 above national average.....	10
7. Gains and losses	11
8. Change in amenity tree numbers between 2006, 2009, 2013 and 2019.....	11
9. Urban Area canopy cover 2013-2019	12
10. References.....	29
10. Data Archive Appendix.....	29

List of Figures

• Figure 1: 2019 urban area canopy cover.....	7
• Figure 2: County canopy cover in 2013 - below the national average of 16.3%	9
• Figure 3: County canopy cover 2019 – below the national average 16.4%	9
• Figure 4: County canopy cover 2013 – above the national average of 16.3%.....	10
• Figure 5: County canopy cover 2019 – above the national average of 16.4%.....	10

List of Tables

• Table 1: Number of amenity trees in Wales' urban areas.....	11
• Table 2: Urban Area canopy cover 2019	28

1. Crynodeb Gweithredol

Mae maint brigdwf coed trefol yn ddangosydd y derbynnir yn eang ei fod yn fesuriad procsi o lefelau'r buddion ecosystem a lles y mae coed trefol yn eu darparu. Datgelodd ein hasesiadau blaenorol o frigidwdf coed trefol yng Nghymru, a gyflwynwyd yn yr Adroddiad ar [Sefyllfa Adnoddau Naturiol yn 2016 \(SoNaRR1\)](#), duedd o golli tua 7,000 o goed â brigdwf mawr (h.y. aeddfed) yn ystod y 7 mlynedd rhwng 2006 a 2013.

Mae'r astudiaeth hon yn diweddarar'r data ynghylch Brigdwf Coed Trefol yng Nghymru, gan amlygu newidiadau i faint, lleoliad a'r ddarpariaeth o orchudd coed trefol ers 2013.

Mae'n dilyn y fethodoleg a ddefnyddiwyd i gael data ynglŷn â brigdwf yn adroddiad [Gorchudd Coed yn Nhrefi a Dinasoedd Cymru, 2016](#) (gweler Atodiad 2 i'r adroddiad hwnnw).

Yn 2019, amcangyfrifwyd bod brigdwf trefol cymedrig Cymru yn cyfateb i 16.41% (sef 14,231 hectar o goed) o gyfanswm ardal drefol Cymru (86,705 hectar). Yn 2013, amcangyfrifwyd bod y brigdwf trefol cymedrig yn cyfateb i 16.34% (sef 14,171 hectar o goed) dros yr un ardal drefol gyfan. Felly, cafwyd cynnydd o 0.07% (61 hectar) yn unig yn y gorchudd coed rhwng y blynyddoedd hynny.

Mae'r tair sir a oedd â'r ganran fwyaf o orchudd coed trefol yn 2013 a 2019 yng Nghymoedd y De: Torfaen, Blaenau Gwent a Merthyr Tudful.

Rhwng 2013 a 2019, cafodd trefi Cymru 12,413 o 'goed mawr', sef y rhai y mae diamedr eu corun yn fwy na deuddeg metr. Dros y blynyddoedd hyn cafwyd gostyngiad cyffredinol o 109,591 yng nghyfanswm nifer yr holl goed.

Er mai ychydig o newid a fu o ran brigdwf rhwng 2013 a 2019, mae nifer y coed wedi gostwng yn gyffredinol dros y cyfnod hwn ac mae'r ffigurau'n dangos poblogaeth o goed trefol sy'n heneiddio ac nad ydynt yn cael eu hadnewyddu.

Bydd canlyniadau'r astudiaeth hon yn llywio adroddiad SoNaRR2 (2020) ac yn helpu CNC ac eraill i nodi'r colledion neu'r enillion ac i osod amcanion (cenedlaethol/sirol/ar lefel tref) o ran yr adnoddau y bydd eu hangen yn y dyfodol i gynnal ac ehangu'r brigdwf trefol yng Nghymru.

2. Executive summary

The extent of urban tree canopy cover is a widely accepted proxy indicator for the levels of ecosystem and wellbeing benefits that urban trees provide. Our previous urban tree canopy cover assessments in Wales, reported in [The State of Natural Resources report 2016 \(SoNaRR1\)](#) revealed a trend of loss of some 7,000 large canopy (i.e. mature) trees within the 7 year period 2006-2013.

This study updates the data on Urban Tree Canopy Cover in Wales, highlighting changes in the extent, location and provision of urban tree cover since 2013.

It follows the methodology used to obtain canopy cover data in the [2016 Tree Cover in Wales' Towns and Cities report](#) (see Appendix 2 of that report) .

In 2019, Wales' mean urban canopy cover was estimated at 16.41% (14,231 hectares of trees) of Wales' total urban area (86,705 hectares). In 2013 the mean urban canopy cover was estimated at 16.34% (14,171 hectares of trees) for the same total urban area. This means there has been an increase of just 0.07% (61 hectares) in tree cover between those years.

The three counties with the largest percentage of urban tree cover in both 2013 and 2019 are in the South Wales Valleys; Torfaen, Blaenau Gwent and Merthyr Tydfil.

Between 2013 and 2019, Wales' towns have gained 12,413 'large trees', those greater than twelve metres in crown diameter. Across these years there has been an overall decrease in the total number of all trees of 109,591.

Whilst there has been little change in canopy cover between 2013 and 2019, the number of trees over this period have decreased overall and the figures show an ageing population of urban trees which is not being replenished.

The results of this study will inform the second State of Natural Resources Report (2020) (SoNaRR2) and help NRW and others identify losses or gains and set goals (national/county/town-level) for future resources required to sustain and expand urban canopy cover in Wales.

3. Approach and methodology

This study follows the methodology used to obtain canopy cover data in the [2016 Tree Cover in Wales' Towns and Cities](#) report (see Appendix 2 of that report).

4. Potential future methodology

There are many examples in the academic literature that demonstrate the successful use of airborne LiDAR, colour infrared and RGB imagery, as well as stereo aerial photography, to identify and classify tree canopies. Limitations using these methods however can include identifying both small and sub-canopy trees. However, the existing methodology cannot identify sub-canopy trees either. Procuring the imagery required for the whole of Wales and processing this may involve costly computing power and resources. Off-the-shelf products in the UK do exist with continual updates proposed though, notably, small trees are excluded. There are also limitations on publishing commercially available data under the open government license, and the dates of such data may not coincide with the time periods that we wish to compare.

5. National urban canopy cover

Headline: Mean urban canopy cover: 16.41%

Wales' mean urban canopy cover was estimated at 16.41% for 2019. Wales' total urban area was measured at 86,705 hectares. Of this, 14,231 hectares were covered by trees. In 2013 the mean urban canopy cover was estimated at 16.34% which is 14,171 hectares of trees. This means there has been an increase of just 0.07% (61 hectares) in tree cover between those years.

Across the urban areas canopy cover was found to range from 34% in Trimsaran to 2.9% in Cardiff Bay. While these areas both fall into the smallest town size category (0-250 Ha) they are different, with Trimsaran being a former Valley mining community and Cardiff Bay being a recently developed city area.

There has been little change in canopy cover between 2013 and 2019.

Urban Canopy Cover Percentage - 2019

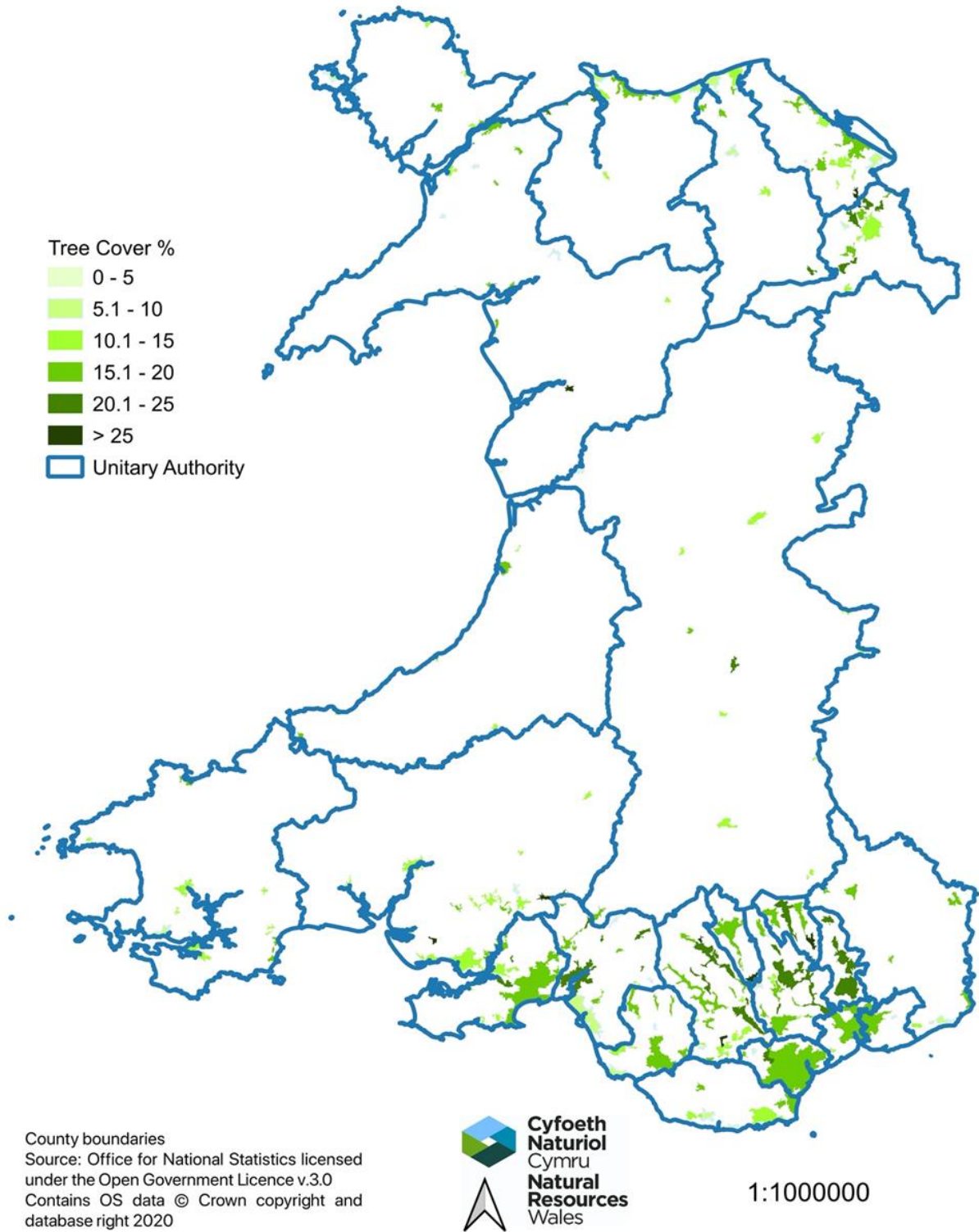


Figure 1: 2019 urban area canopy cover

6. County canopy cover comparisons

The five counties with the lowest percentage of urban tree cover in 2013 were the same in 2019 and are associated with the coastal belt: Denbighshire, Anglesey, the Vale of Glamorgan, Pembrokeshire and Conwy.

In 2019 there are eight counties with a percentage urban tree cover above the national average, compared with nine in 2013. In both years, six of these counties fall within the South Wales Valleys. In fact, the three counties with the largest percentage of urban tree cover in both 2013 and 2019 are in the South Wales Valleys; Torfaen, Blaenau Gwent and Merthyr Tydfil.

County Canopy Cover 2013 below national average

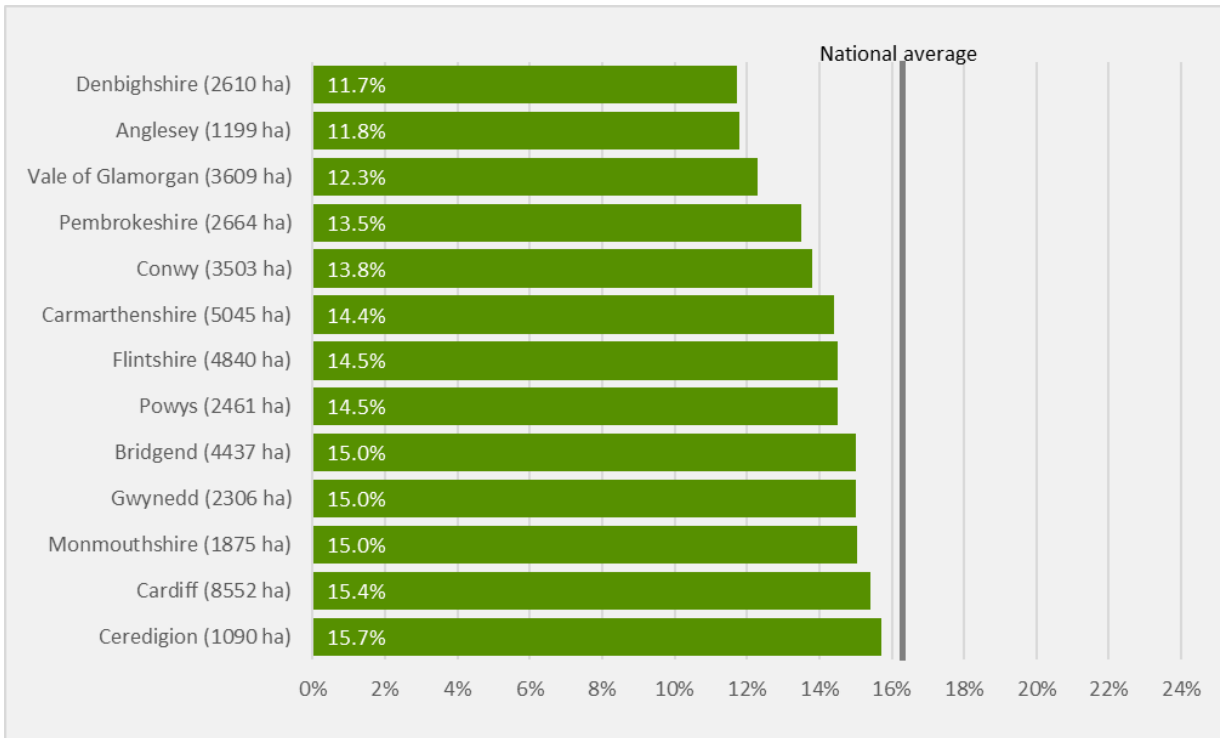


Figure 2: County canopy cover in 2013 - below the national average of 16.3% (Urban extent of counties highlighted in hectares)

County Canopy Cover 2019 below national average

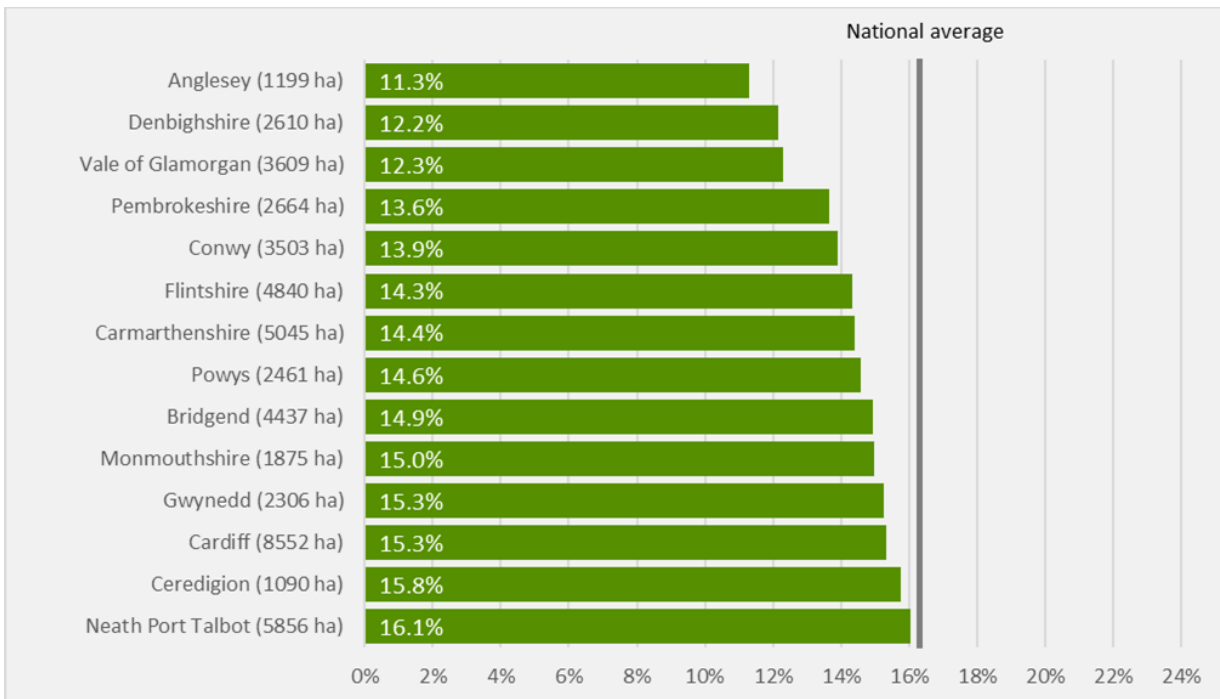


Figure 3: County canopy cover 2019 – below the national average 16.4% (Urban extent of counties highlighted in hectares)

County Canopy Cover 2013 above national average

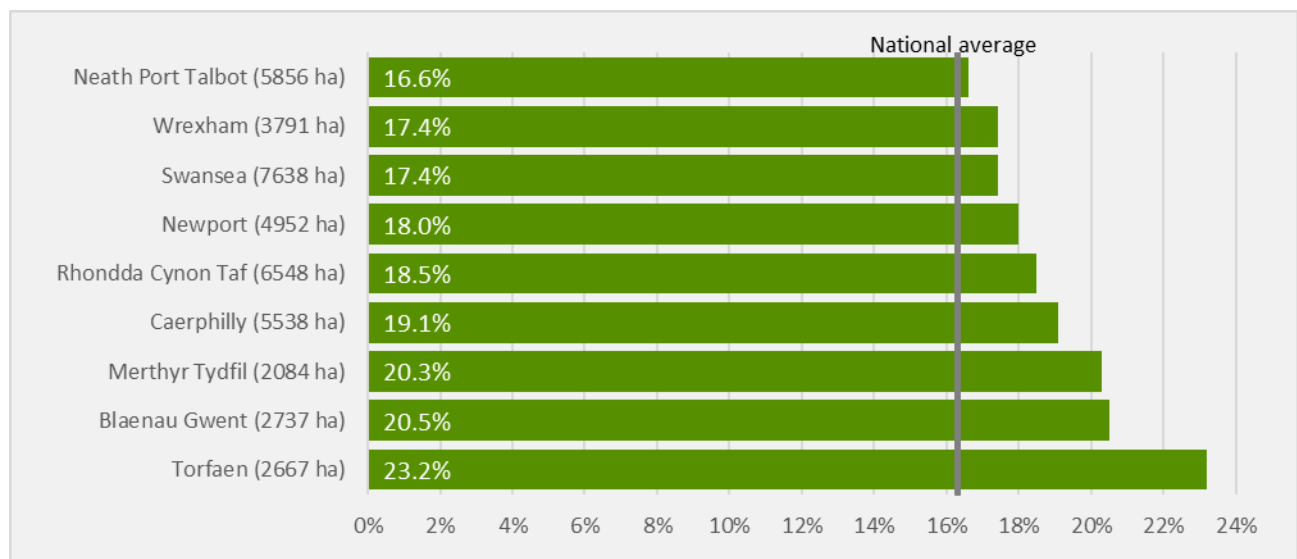


Figure 4: County canopy cover 2013 – above the national average of 16.3% (Urban extent of counties highlighted in hectares)

County Canopy Cover 2019 above national average

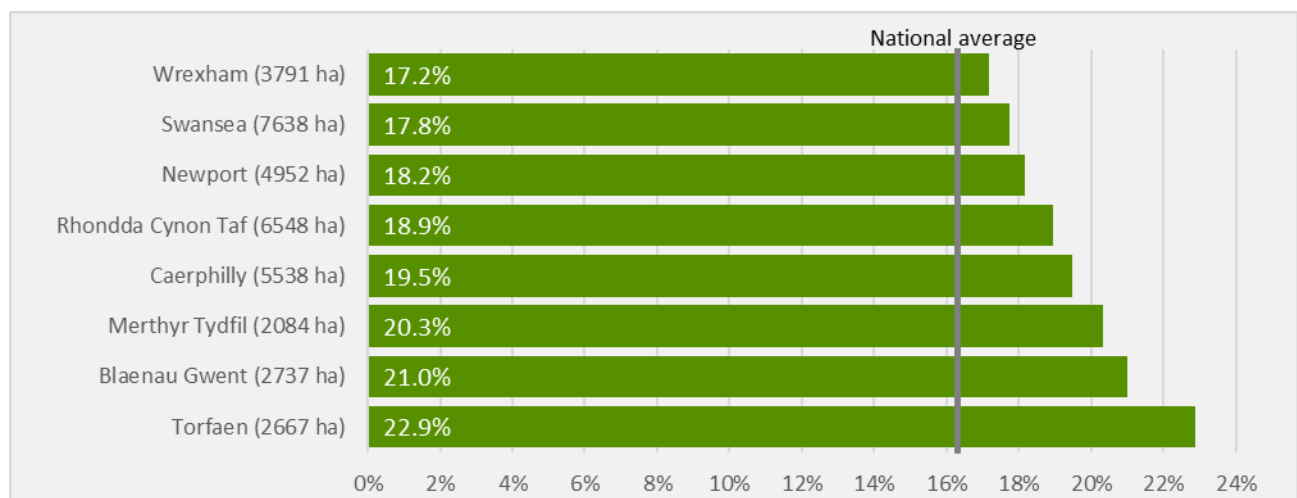


Figure 5: County canopy cover 2019 – above the national average of 16.4% (Urban extent of counties highlighted in hectares)

7. Gains and losses

The biggest percentage gain in urban tree cover from 2013 to 2019 is in Gwaun-Lleision and Tairgwaith where the percentage rose from 14.0% to 19.7%. The other area that had a percentage gain of over 2% is Aberaeron.

The biggest percentage decrease in urban tree cover was in Rossett where the percentage tree cover decreased from 17.4% to 15.4%. There were only two other areas which had decreases of over 1%; Amlwch and Ammanford Betws.

8. Change in amenity tree numbers between 2006, 2009, 2013 and 2019

Between 2013 and 2019, Wales' towns have gained 12,413 'large trees', those greater than twelve metres in crown diameter. Across these years there has been an overall decrease in the total number of trees in the area surveyed of 109,591.

Year	Total Number of Amenity Trees			Total No. of Amenity Trees in Urban Areas
	Large 12m+	Medium 6.0 – 12m	Small 3.0 – 6.0m	
2006	34,972	658,732	1,853,006	2,546,710
2009	23,578	727,693	2,966,591	3,717,862
2013	27,967	926,262	1,928,784	2,883,013
2019	40,380	888,273	1,844,769	2,773,422
Change in Tree Numbers 2006 – 2009	-11,394	68,961	1,113,585	1,171,152
Change in Tree Numbers 2009 – 2013	4,389	198,569	-1,037,807	-834,849
Change in Tree Numbers 2006 – 2013	-7,005	267,530	75,778	336,303
Change in Tree Numbers 2013 – 2019	12,413	-37,989	-84,015	-109,591

Table 1: Number of amenity trees in Wales' urban areas

9. Urban Area canopy cover 2013-2019

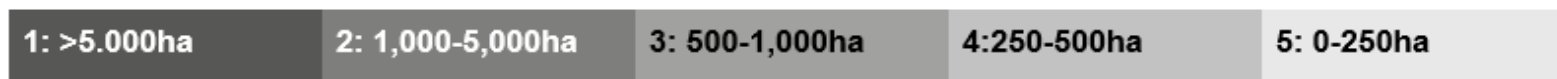
The following keys apply to Table 2 below: Canopy cover is highlighted in green cover-coding across 5 percentage category intervals depicted below:

Canopy Cover Size Classes:



The urban areas are listed in order of size (hectarage), highlighted in line with the grey colour-coding depicted below:

Urban Area Size (ha) Category:



Area Size Rank	Urban Area	County	Urban Area (Ha)	Total Cover '13 (ha)	Total cover '13 (%)	Total Cover '19 (ha)	Total cover '19 (%)	Difference
166	Aberaeron	Ceredigion	86	10.09	11.7%	11.99	13.9%	2.2%
135	Aberbig Llanhilleth Glandwr Brynthinel	Blaenau Gwent	119	32.54	27.4%	32.67	27.5%	0.1%
88	Abercanaid Troedyrhiw	Merthyr Tydfil	224	40.92	18.2%	41.07	18.3%	0.1%
105	Abercynon	Rhondda Cynon Taf	158	29.73	18.8%	30.69	19.4%	0.6%
198	Aberdare - Llwydcoed	Rhondda Cynon Taf	60	16.57	27.7%	16.66	27.8%	0.1%
15	Aberdare MountainAsh Penrhiwceiber Cwmbach	Rhondda Cynon Taf	1298	285.70	22.0%	286.08	22.0%	0.0%
158	Aberfan Merthyr Vale	Merthyr Tydfil	95	15.16	16.0%	14.90	15.8%	-0.3%
48	Abergavenny	Monmouthshire	400	70.32	17.6%	70.36	17.6%	0.0%
54	Abergele	Conwy	362	42.24	11.7%	41.69	11.5%	-0.2%
205	Aberporth	Ceredigion	54	7.92	14.7%	7.75	14.4%	-0.3%
74	Abertillery	Blaenau Gwent	292	77.15	26.4%	80.55	27.6%	1.2%
106	Abertridwr Senghenydd	Caerphilly	156	23.62	15.2%	24.16	15.5%	0.3%

225	Abertysswg	Caerphilly	27	1.73	6.4%	1.64	6.1%	-0.3%
31	Aberystwyth	Ceredigion	568	103.29	18.2%	102.04	18.0%	-0.2%
104	Amlwch	Anglesey	159	19.48	12.2%	16.79	10.6%	-1.7%
61	Ammanford Betws	Carmarthenshire	346	52.70	15.2%	48.15	13.9%	-1.3%
168	Bala	Gwynedd	85	9.93	11.7%	10.25	12.0%	0.4%
38	Bangor	Gwynedd	472	85.31	18.1%	87.66	18.6%	0.5%
119	Bargoed Blackwood Newbridge	Caerphilly	146	30.13	20.7%	29.98	20.5%	-0.1%
7	Bargoed Pengam Blackwood Pontllanfraith Oakdale Newbridge Crumlin	Caerphilly	1865	392.22	21.0%	396.67	21.3%	0.2%
157	Barmouth	Gwynedd	97	22.42	23.1%	22.59	23.3%	0.2%
9	Barry	Vale of Glamorgan	1590	184.53	11.6%	183.67	11.6%	-0.1%
138	Barry - Barry Island	Vale of Glamorgan	117	8.69	7.4%	8.15	7.0%	-0.5%
207	Beaumaris	Anglesey	51	5.49	10.7%	5.82	11.3%	0.6%
39	Beddau ChurchVillage LlantwitFardre	Rhondda Cynon Taf	470	54.86	11.7%	53.93	11.5%	-0.2%
146	Benllech	Anglesey	107	11.54	10.8%	11.21	10.5%	-0.3%

139	Bethesda	Gwynedd	115	18.11	15.7%	18.70	16.2%	0.5%
213	Bettws	Bridgend	45	2.40	5.4%	2.40	5.4%	0.0%
128	Bishopston	Swansea	132	18.11	13.7%	19.25	14.6%	0.9%
82	Blaenafon	Torfaen	252	49.90	19.8%	51.09	20.3%	0.5%
142	Blaenau Ffestiniog	Gwynedd	112	7.90	7.0%	8.37	7.5%	0.4%
224	Blaengwynfi	Neath Port Talbot	28	2.02	7.3%	2.21	7.9%	0.7%
118	Bodelwyddan	Denbighshire	148	26.94	18.3%	28.89	19.6%	1.3%
217	Bow Street	Ceredigion	42	4.07	9.8%	4.44	10.7%	0.9%
45	Brecon	Powys	407	52.64	12.9%	54.17	13.3%	0.4%
5	Bridgend Aberkenfig Sarn Bryncethin Tondy	Bridgend	2188	380.60	17.4%	374.65	17.1%	-0.3%
34	Broughton	Flintshire	533	27.95	5.2%	27.12	5.1%	-0.2%
43	Brymbo	Wrexham	419	89.72	21.4%	89.26	21.3%	-0.1%
137	Brynamman	Carmarthenshire	117	24.17	20.6%	25.04	21.4%	0.7%
28	Brynmawr Nantyglo Blaina	Blaenau Gwent	605	116.46	19.2%	117.75	19.5%	0.2%
180	Brynna Llanharan	Rhondda Cynon Taf	75	8.37	11.1%	8.50	11.3%	0.2%

193	Brynna Llanharan - Bryncae Dolau	Rhondda Cynon Taf	66	5.48	8.4%	5.97	9.1%	0.7%
29	Buckley Mynydd Isa	Flintshire	605	75.41	12.5%	74.30	12.3%	-0.2%
150	Builth Wells	Powys	105	14.20	13.6%	15.04	14.4%	0.8%
65	Burry Port	Carmarthenshire	332	44.89	13.5%	45.13	13.6%	0.1%
86	Caergwrle Hope	Flintshire	239	70.93	29.7%	71.59	30.0%	0.3%
76	Caerleon Ponthir	Newport	283	49.70	17.6%	48.77	17.2%	-0.3%
72	Caernarfon	Gwynedd	296	35.66	12.0%	36.77	12.4%	0.4%
17	Caerphilly Bedwas	Caerphilly	1236	208.08	16.8%	217.00	17.6%	0.7%
223	Caerphilly CraigyRhacca	Caerphilly	30	2.86	9.6%	3.03	10.1%	0.6%
69	Caldicot	Monmouthshire	312	27.35	8.8%	26.75	8.6%	-0.2%
1	Cardiff	Cardiff	8038	1222.17	15.2%	1216.95	15.1%	-0.1%
228	Cardiff - Gwaelod-y-Garth	Cardiff	8	2.28	29.5%	2.23	28.9%	-0.6%
215	Cardiff Bay	Cardiff	43	0.91	2.1%	1.25	2.9%	0.8%
66	Cardiff Radyr Morganstown	Cardiff	331	66.95	20.2%	73.33	22.2%	1.9%
122	Cardigan	Ceredigion	142	22.09	15.6%	21.93	15.5%	-0.1%

26	Carmarthen	Carmarthenshire	624	77.55	12.4%	77.41	12.4%	0.0%
68	Cefneithin Cross Hands	Carmarthenshire	318	44.30	13.9%	44.84	14.1%	0.2%
44	Chepstow	Monmouthshire	419	62.74	15.0%	65.33	15.6%	0.6%
98	Chirk	Wrexham	172	24.11	14.1%	23.58	13.7%	-0.3%
133	Coedpoeth	Wrexham	120	8.73	7.3%	8.70	7.2%	0.0%
16	Colwyn Bay Penrhyn Bay Llanddulas	Conwy	1268	216.73	17.1%	215.27	17.0%	-0.1%
10	Connah's Quay Shotton Hawarden Ewloe Northop Hall	Flintshire	1582	248.64	15.7%	242.84	15.3%	-0.4%
92	Conwy	Conwy	203	45.29	22.3%	45.02	22.1%	-0.1%
103	Cowbridge	Vale of Glamorgan	160	27.08	16.9%	27.39	17.1%	0.2%
194	Creigiau	Cardiff	65	11.69	18.1%	11.36	17.6%	-0.5%
176	Criccieth	Gwynedd	83	10.70	12.9%	10.36	12.5%	-0.4%
140	Crickhowell Llangattock	Powys	114	17.80	15.7%	16.75	14.7%	-0.9%
190	Croeserw Cymer	Neath Port Talbot	67	8.43	12.6%	8.79	13.2%	0.5%
206	Crynant	Neath Port Talbot	53	10.83	20.5%	10.61	20.1%	-0.4%

97	Cwmafan Pontrhydyfen	Neath Port Talbot	174	32.20	18.5%	32.23	18.5%	0.0%
11	Cwmbran	Torfaen	1542	365.32	23.7%	359.86	23.3%	-0.4%
185	Cwmfelinfach Ynysddu	Caerphilly	69	11.64	16.9%	11.74	17.0%	0.1%
156	Cwmtwrch Uchaf Ystradowen Cwmllynfell Cefn-bryn-brain	Neath Port Talbot	99	19.18	19.4%	19.92	20.1%	0.7%
71	Denbigh	Denbighshire	301	27.14	9.0%	28.56	9.5%	0.5%
113	Dolgellau	Gwynedd	150	38.98	26.0%	39.92	26.7%	0.6%
173	Dyserth	Denbighshire	84	13.85	16.5%	14.60	17.4%	0.9%
19	Ebbw Vale Waunlwyd Cwm	Blaenau Gwent	1022	206.90	20.2%	215.68	21.1%	0.9%
57	Ferndale Tylorstown Penrhys	Rhondda Cynon Taf	351	67.72	19.3%	71.54	20.4%	1.1%
123	Fishguard	Pembrokeshire	141	22.43	15.9%	22.51	16.0%	0.1%
50	Flint	Flintshire	394	56.32	14.3%	55.82	14.2%	-0.1%
226	Fochriw	Caerphilly	26	0.73	2.7%	0.95	3.6%	0.8%
96	Gelligaer Penpedairheol Penybryn	Caerphilly	176	19.77	11.2%	22.53	12.8%	1.6%
127	Gilfach Goch	Rhondda Cynon Taf	132	16.18	12.3%	17.24	13.1%	0.8%

179	Gilwern	Monmouthshire	80	16.24	20.2%	15.47	19.2%	-1.0%
91	Glanaman	Carmarthenshire	203	58.70	28.9%	59.06	29.0%	0.2%
182	Glyncoch	Rhondda Cynon Taf	71	8.83	12.4%	8.91	12.5%	0.1%
219	Glyncorrwg	Neath Port Talbot	40	8.10	20.2%	8.21	20.4%	0.3%
85	Glynneath	Neath Port Talbot	245	55.95	22.9%	56.57	23.1%	0.3%
163	Goodwick	Pembrokeshire	88	15.94	18.2%	15.90	18.2%	0.0%
35	Gorseinon	Swansea	519	64.15	12.4%	64.53	12.4%	0.1%
93	Gresford	Wrexham	192	47.54	24.7%	47.04	24.5%	-0.3%
202	Gwaun-cae-gurwen Cwmgors	Neath Port Talbot	56	7.39	13.1%	7.07	12.5%	-0.6%
221	Gwaun-Cau-Gurwen	Neath Port Talbot	37	2.41	6.4%	2.52	6.7%	0.3%
214	Gwaun-Lleision & Tairgwaith	Neath Port Talbot	44	6.13	14.0%	8.63	19.7%	5.7%
227	Gwernaffield	Flintshire	21	1.93	9.1%	1.91	9.1%	-0.1%
218	Gwernymynydd Cadole	Flintshire	41	7.59	18.5%	7.53	18.4%	-0.1%
78	Gwersyllt	Wrexham	268	46.59	17.4%	46.44	17.3%	-0.1%
136	Harlech	Gwynedd	118	20.05	17.1%	21.02	17.9%	0.8%

30	Haverfordwest	Pembrokeshire	574	81.43	14.2%	83.71	14.6%	0.4%
197	Hay on Wye	Powys	61	7.20	11.8%	7.62	12.5%	0.7%
87	Hirwaun	Rhondda Cynon Taf	229	39.60	17.3%	39.40	17.2%	-0.1%
58	Holyhead	Anglesey	351	23.97	6.8%	21.84	6.2%	-0.6%
27	Holywell Bagillt Greenfield Whelston Carmel	Flintshire	621	117.82	19.0%	117.96	19.0%	0.0%
192	Johnston	Pembrokeshire	66	7.20	11.0%	7.13	10.9%	-0.1%
154	Kidwelly	Carmarthenshire	102	12.17	11.9%	11.80	11.6%	-0.4%
155	Kilgetty Begelly Pentlepoir	Pembrokeshire	101	12.62	12.4%	12.77	12.6%	0.2%
144	Knighton	Powys	109	13.39	12.3%	12.81	11.7%	-0.5%
129	Lampeter	Ceredigion	131	17.23	13.2%	16.66	12.8%	-0.4%
200	Leeswood	Flintshire	58	6.29	10.9%	6.38	11.1%	0.2%
201	Llanberis	Gwynedd	57	10.81	19.1%	10.66	18.8%	-0.3%
175	Llanbradach	Caerphilly	83	16.00	19.2%	16.71	20.1%	0.9%
195	Llandeilo	Carmarthenshire	62	7.91	12.7%	7.98	12.9%	0.1%
125	Llandovery	Carmarthenshire	135	19.49	14.4%	19.31	14.3%	-0.1%

79	Llandrindod Wells	Powys	268	57.49	21.5%	56.60	21.1%	-0.3%
52	Llandudno	Conwy	392	30.46	7.8%	31.70	8.1%	0.3%
149	Llandybie	Carmarthenshire	106	10.37	9.8%	10.13	9.6%	-0.2%
189	Llandysul	Ceredigion	67	7.00	10.4%	6.84	10.1%	-0.2%
8	Llanelli	Carmarthenshire	1768	224.02	12.7%	223.99	12.7%	0.0%
169	Llanfair Pwllgwyngyll	Anglesey	85	11.37	13.4%	11.24	13.2%	-0.1%
109	Llanfairfechan	Conwy	152	35.68	23.4%	35.95	23.6%	0.2%
81	Llangefni	Anglesey	259	42.00	16.2%	41.06	15.8%	-0.4%
116	Llangennech Brynhyfryd	Carmarthenshire	148	25.06	16.9%	25.27	17.0%	0.1%
111	Llangollen	Denbighshire	152	38.35	25.2%	37.95	24.9%	-0.3%
161	Llanharry	Rhondda Cynon Taf	92	15.84	17.1%	15.62	16.9%	-0.2%
152	Llanidloes	Powys	104	12.30	11.8%	11.97	11.5%	-0.3%
132	Llanmorlais Crofty Penclawdd	Swansea	122	14.29	11.7%	14.26	11.7%	0.0%
208	Llanrug	Gwynedd	51	3.87	7.7%	4.02	8.0%	0.3%
143	Llanrwst	Conwy	112	13.39	11.9%	13.81	12.3%	0.4%

204	Llansanffraid Glan Conwy	Conwy	54	8.46	15.7%	8.67	16.1%	0.4%
41	Llantrisant Talbot Green Pontyclun Miskin Brynsadler	Rhondda Cynon Taf	456	63.15	13.8%	62.39	13.7%	-0.2%
115	Llantrisant Ynysmaerdy	Rhondda Cynon Taf	149	39.68	26.7%	40.30	27.1%	0.4%
63	Llantwit Major	Vale of Glamorgan	334	35.23	10.6%	34.92	10.5%	-0.1%
60	Llantwit Major Eglwys Brewis St Athan	Vale of Glamorgan	348	18.96	5.4%	19.30	5.5%	0.1%
75	Llay	Wrexham	287	72.08	25.1%	70.01	24.4%	-0.7%
184	Machen	Caerphilly	70	11.61	16.6%	11.76	16.8%	0.2%
174	Machynlleth	Powys	84	6.48	7.8%	6.72	8.0%	0.3%
32	Maesteg	Bridgend	546	86.29	15.8%	89.03	16.3%	0.5%
108	Magor	Monmouthshire	152	22.78	14.9%	21.60	14.2%	-0.8%
196	Marshfield	Newport	61	7.34	12.0%	7.27	11.9%	-0.1%
134	Menai Bridge	Anglesey	119	22.74	19.1%	22.24	18.7%	-0.4%
13	Merthyr	Merthyr Tydfil	1490	281.90	18.9%	284.22	19.1%	0.2%
47	Milford Haven	Pembrokeshire	405	38.28	9.5%	37.89	9.4%	-0.1%

49	Mold	Flintshire	398	60.27	15.2%	60.94	15.3%	0.2%
53	Monmouth	Monmouthshire	379	64.55	17.1%	63.73	16.8%	-0.2%
203	Mostyn	Flintshire	55	3.54	6.4%	3.49	6.3%	-0.1%
64	Mountain Ash	Rhondda Cynon Taf	332	77.69	23.4%	78.01	23.5%	0.1%
90	Murch	Vale of Glamorgan	212	36.01	17.0%	36.52	17.2%	0.2%
167	Narberth	Pembrokeshire	85	12.66	14.8%	12.38	14.5%	-0.3%
6	Neath Briton Ferry Bryncoch Cilfrew Aberdulais Skewen Tonna	Neath Port Talbot	1914	452.52	23.6%	457.62	23.9%	0.3%
148	Nelson	Caerphilly	106	8.54	8.0%	8.58	8.1%	0.0%
107	New Tredegar	Caerphilly	154	38.34	24.8%	38.50	24.9%	0.1%
159	Newcastle Emlyn Adpar	Carmarthenshire	93	15.67	16.8%	15.24	16.4%	-0.5%
3	Newport	Newport	4571	829.57	18.1%	839.20	18.4%	0.2%
37	Newtown	Powys	475	65.57	13.8%	65.18	13.7%	-0.1%
141	Neyland	Pembrokeshire	113	11.02	9.8%	10.99	9.7%	0.0%
80	Pembroke	Pembrokeshire	260	33.51	12.9%	33.20	12.8%	-0.1%

42	Pembroke Dock	Pembrokeshire	443	62.40	14.1%	62.23	14.1%	0.0%
187	Pen-y-Groes Carmarthenshire	Carmarthenshire	68	6.81	10.1%	7.38	10.9%	0.8%
22	Penarth	Vale of Glamorgan	712	127.09	17.8%	125.46	17.6%	-0.2%
62	Pencoed	Bridgend	336	50.55	15.0%	51.02	15.2%	0.1%
112	Penllergaer	Swansea	151	18.94	12.6%	19.20	12.7%	0.2%
160	Penmaenmawr	Conwy	93	20.62	22.2%	20.69	22.3%	0.1%
183	Penrhyndeudraeth	Gwynedd	71	12.62	17.8%	12.29	17.4%	-0.5%
191	Pentyrch	Cardiff	66	6.24	9.5%	6.49	9.8%	0.4%
170	Penyffordd	Flintshire	84	10.44	12.4%	10.44	12.4%	0.0%
209	Penygroes Gwynedd	Gwynedd	49	3.62	7.4%	3.63	7.4%	0.0%
211	Pont Lliw	Swansea	46	9.96	21.7%	9.99	21.8%	0.1%
220	Pont-Rhyd-y-Cyff	Bridgend	38	4.41	11.5%	4.42	11.5%	0.0%
59	Pontarddulais Hendy	Swansea	349	59.61	17.1%	60.44	17.3%	0.2%
145	Pontyberem	Carmarthenshire	107	17.91	16.7%	17.86	16.6%	-0.1%
130	Pontycymer	Bridgend	128	18.98	14.8%	19.41	15.1%	0.3%

23	Pontymister Risca Crosskeys Abercarn	Caerphilly	694	168.72	24.3%	172.50	24.8%	0.5%
18	Pontypool Abersychan Varteg	Torfaen	1203	275.86	22.9%	274.16	22.8%	-0.1%
20	Pontypridd Treforest	Rhondda Cynon Taf	1004	215.07	21.4%	213.93	21.3%	-0.1%
4	Port Talbot Margam Aberafon Sandfields Baglan	Neath Port Talbot	2301	187.76	8.2%	189.77	8.2%	0.1%
33	Porthcawl	Bridgend	541	33.66	6.2%	32.91	6.1%	-0.1%
110	Porthmadog	Gwynedd	152	29.23	19.2%	28.90	19.0%	-0.2%
21	Prestatyn	Denbighshire	729	96.27	13.2%	95.68	13.1%	-0.1%
172	Presteigne	Powys	84	9.45	11.2%	9.47	11.3%	0.0%
114	Price Town Nant y Moel OgmoredValley	Bridgend	150	27.08	18.1%	27.91	18.7%	0.6%
94	Pwllheli	Gwynedd	180	13.87	7.7%	14.23	7.9%	0.2%
40	Pyle Kenffig Hill Cefn Cribwr	Bridgend	465	62.26	13.4%	61.11	13.1%	-0.2%
181	Resolfen	Neath Port Talbot	74	12.23	16.6%	12.16	16.5%	-0.1%
151	Rhayader	Powys	105	16.13	15.4%	15.85	15.1%	-0.3%
12	Rhondda	Rhondda Cynon Taf	1538	278.14	18.1%	282.94	18.4%	0.3%

124	Rhose	Vale of Glamorgan	136	8.85	6.5%	8.83	6.5%	0.0%
56	Rhosllanerchrugog Penycae	Wrexham	352	54.82	15.6%	53.94	15.3%	-0.2%
131	Rhuddlan	Denbighshire	125	9.33	7.4%	9.28	7.4%	0.0%
24	Rhyl	Denbighshire	659	36.38	5.5%	39.43	6.0%	0.5%
70	Rhymney	Caerphilly	308	50.80	16.5%	50.57	16.4%	-0.1%
210	Rogiet	Monmouthshire	46	3.86	8.3%	3.51	7.6%	-0.8%
153	Rossett	Wrexham	103	17.86	17.4%	15.85	15.4%	-2.0%
46	Ruabon Cefn Mawr	Wrexham	406	91.84	22.6%	91.12	22.4%	-0.2%
84	Ruthin	Denbighshire	247	28.71	11.6%	32.36	13.1%	1.5%
101	Saltney	Flintshire	163	8.84	5.4%	7.99	4.9%	-0.5%
102	Saundersfoot	Pembrokeshire	161	28.04	17.4%	28.90	17.9%	0.5%
162	Seven Sisters	Neath Port Talbot	90	8.92	9.9%	8.83	9.8%	-0.1%
212	Soughton	Flintshire	46	4.72	10.3%	4.79	10.5%	0.2%
178	Southgate	Swansea	82	9.86	12.1%	11.44	14.0%	1.9%
100	St Asaph	Denbighshire	165	29.35	17.8%	30.83	18.7%	0.9%

164	St Clears	Carmarthenshire	87	10.13	11.6%	9.91	11.3%	-0.2%
199	St Davids	Pembrokeshire	58	7.39	12.6%	7.26	12.4%	-0.2%
2	Swansea Mumbles Clydach Birchgrove Glais	Swansea	6319	1167.55	18.5%	1160.38	18.4%	-0.1%
216	Swffryd	Blaenau Gwent	42	4.58	10.9%	4.64	11.1%	0.2%
126	Taffs Well	Rhondda Cynon Taf	135	28.94	21.4%	29.45	21.8%	0.4%
99	Tenby	Pembrokeshire	169	28.09	16.6%	28.55	16.9%	0.3%
89	Tonyrefail	Rhondda Cynon Taf	224	35.34	15.8%	34.51	15.4%	-0.4%
36	Towyn Kinmel Bay	Conwy	512	32.61	6.4%	34.01	6.6%	0.3%
177	Trebanos Pontardawe Rhos Rhydyfro Ynysmeudwy Godregraig	Neath Port Talbot	83	15.40	18.6%	15.52	18.8%	0.1%
25	Tredegar	Blaenau Gwent	657	121.49	18.5%	122.99	18.7%	0.2%
77	Treharris	Merthyr Tydfil	275	83.40	30.3%	83.19	30.3%	-0.1%
147	Trimsaran	Carmarthenshire	107	36.14	33.9%	36.26	34.0%	0.1%
120	Tumble Drefach	Carmarthenshire	145	14.41	9.9%	15.31	10.6%	0.6%
95	Tycroes Capel Hendre Saron	Carmarthenshire	177	25.13	14.2%	26.84	15.2%	1.0%

55	Tywyn Deganwy Llandudno Junction	Conwy	354	40.31	11.4%	40.68	11.5%	0.1%
117	Tywyn Gwynedd	Gwynedd	148	6.75	4.6%	7.03	4.8%	0.2%
222	Underwood	Newport	37	3.56	9.6%	3.66	9.9%	0.3%
165	Usk	Monmouthshire	87	14.24	16.3%	14.06	16.1%	-0.2%
188	Valley	Anglesey	68	5.75	8.5%	5.41	8.0%	-0.5%
67	Wunarlwydd Gowerton	Swansea	325	69.87	21.5%	68.75	21.2%	-0.3%
83	Welshpool	Powys	251	29.68	11.8%	31.78	12.7%	0.8%
14	Wrexham	Wrexham	1471	206.73	14.1%	205.35	14.0%	-0.1%
186	Y Felinheli	Gwynedd	69	14.93	21.7%	15.22	22.1%	0.4%
171	Ynysybwl	Rhondda Cynon Taf	84	14.66	17.4%	15.22	18.1%	0.7%
121	Ystalyfera Cwmtwrch Isaf	Neath Port Talbot	144	31.50	21.9%	34.23	23.8%	1.9%
51	Ystrad Mynach Maersycymmer Hengoed	Caerphilly	392	68.27	17.4%	72.20	18.4%	1.0%
73	Ystradgynlais Cwmtwrch Isaf	Powys	294	53.74	18.3%	54.71	18.6%	0.3%

Table 2: Urban Area canopy cover 2019

10. References

Natural Resources Wales. 2016. Tree Cover in Wales' Towns and Cities. Understanding canopy cover to better plan and manage our urban trees.

<https://naturalresources.wales/media/680678/revised-english-wales-urban-canopy.pdf>

10. Data Archive Appendix

Data outputs associated with this project are archived on server-based storage at Natural Resources Wales.

The data archive contains:

The final report in Microsoft Word and Adobe PDF formats.

A series of GIS layers on which the maps in the report are based with a series of word documents detailing the data processing and structure of the GIS layers

Metadata for this project is publicly accessible through Natural Resources Wales' Library Catalogue <https://libcat.naturalresources.wales> (English Version) and <https://catllyfr.cyfoethnaturiol.cymru> (Welsh Version) by searching 'Dataset Titles'. The metadata is held as record no [124851]

© Natural Resources Wales. All rights reserved. This document may be reproduced with prior permission of Natural Resources Wales.

Further copies of this report are available from library@cyfoethnaturiolcymru.gov.uk