

Tranquillity & Place Theme 6 full resource - connecting sound and visually tranquil places

Report No: 807

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- Securing our data and information;
- Having a well resourced proactive programme of evidence work;
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Crynodeb gweithredol

Comisiynodd Cyfoeth Naturiol Cymru (CNC) Land Use Consultants (LUC) a Noise Consultants Ltd, i greu adnodd cenedlaethol cyson newydd Thema 6, Llonyddwch a Lle. Mae Thema 6 yn cyfuno'r holl themâu Llonyddwch a Lle i gysylltu sŵn a lleoedd o lonyddwch gweledol. Mae'n nodi adnoddau gwerthfawr ar lefelau strategol a lleol i helpu i lywio polisïau, arferion, a gwasanaethau sydd â'r nod o wella llesiant.

Mae adnodd llawn newydd Thema 6, Llonyddwch a Lle, wedi'i greu gan ddefnyddio 'themâu' wedi'u mapio sy'n uno i greu map Llonyddwch a Lle cyfan. Mae'r themâu fel a ganlyn:

Thema 1 – helaethrwydd, canfyddiad neu brofiad cymharol o ran natur, tirweddau a mannau gwyrdd naturiol.

Thema 2 – rhyddid cymharol rhag elfennau gweledol ymwthiol a dylanwad dynol.

Thema 3 – awyr gymharol dywyll.

Thema 4 – amgylcheddau sŵn lle mae synau naturiol yn fwy amlwg na sŵn dynol, ac yn briodol i'r cyd-destun. Mae Thema 4 wedi'i hisrannu ymhellach i:

Rhan 1. Synau heblaw sŵn ffyrdd a rheilffyrdd

Rhan 2. Sŵn ffyrdd a rheilffyrdd

Rhan 2 gyfun. Cyfuno rhan 1 a rhan 2 o Thema 4

Mae'r themâu hyn wedi'u coladu i greu'r themâu cyfun:

Thema 5 – lleoedd o lonyddwch gweledol (Themâu 1, 2 a 3)

Thema 6 – yr adnodd Llonyddwch a Lle yn llawn (Themâu 1, 2, 3 a 4).

Nod yr astudiaeth hon

Comisiynodd CNC yr astudiaeth hon gan gydnabod bod Llonyddwch yn elfen hanfodol o'r dirwedd ac yn nodwedd ddiwylliannol o bwys. Mae Llonyddwch yn cael ei werthfawrogi'n fawr ac yn cyfrannu at werth y dirwedd a'i hunaniaeth. Mae Llonyddwch hefyd yn cyfrannu at iechyd, llesiant, budd ysbrydol ac ansawdd bywyd. Fodd bynnag, mae Llonyddwch hefyd yn fregus, a gall newidiadau bach o ran sŵn, ymwthiad gweledol a llygredd golau gael effeithiau amlwg ar leoliadau naturiol a'r Llonyddwch sydd yno.

Mae'n bwysig cael adnodd cyson, cenedlaethol ar gyfer Llonyddwch a Lle i'w ddefnyddio fel sylfaen tystiolaeth i lywio bwriad polisïau, arferion, a gwasanaethau sy'n gwella llesiant pobl.

I gyflawni hyn, creodd yr astudiaeth yr adnoddau canlynol:

- Set ddata Cymru gyfan a mapiau llonyddwch ar gyfer Thema 6, sy'n dod â holl gydrannau blaenorol yr astudiaeth at ei gilydd
- Set o fapiau ac ystadegau ynghylch parthau ar gyfer Thema 6 yn erbyn cyd-destunau daearyddol amrywiol
- Adroddiad tystiolaeth

Yr hyn a gwmpesir gan yr adroddiad hwn

Mae'r adroddiad hwn yn nodi manylion y dull a ddefnyddiwyd i greu'r haenau map ar gyfer Thema 6.

Pan fo modd, cyflwynir y canfyddiadau yn weledol trwy fapiau a siartiau, wedi'u hategu gan dablau o'r prif ffigurau.

Nid yw'n cynnwys manylion y methodolegau a ddefnyddiwyd i greu'r setiau data ar gyfer Themâu 1 i 5. Mae'r rhain ar gael yn yr adroddiadau ategol ar gyfer pob un o'r elfennau hynny o'r adnodd Llonyddwch a Lle.

Trosolwg o brif ganfyddiadau Thema 6

Mae prif ganfyddiadau'r astudiaeth fel a ganlyn:

- Mae 9.85% o Gymru (2,092 o gilometrau sgwâr) yn y ddau gategori llonyddwch uchaf o set ddata gyfunol Thema 6. Mae 60.4% o Gymru (12,825 o gilometrau sgwâr) yn y trydydd categori mwyaf llonydd. Gyda'i gilydd, mae'r niferoedd hyn yn dangos bod gan lawer o ardaloedd yng Nghymru nifer o ffactorau sy'n cyfrannu at lonyddwch.
- Ar y llaw arall, nid oes yr un ardal yng Nghymru yn y categori lleiaf llonydd yn ôl set ddata gyfunol Thema 6.
- Mae 1.9% o ardaloedd trefol Cymru yn y tri chategori uchaf o ran llonyddwch. Y categori Thema 6 mwyaf cyffredin ar gyfer yr ardaloedd trefol yw categori 6, ac mae 49.6% o ardaloedd trefol Cymru yn perthyn i'r categori hwn. Mae hyn yn awgrymu, hyd yn oed mewn ardaloedd trefol, nid yw ardaloedd cymharol lonydd yn anghyffredin.
- Mae gan bob un o'r parciau cenedlaethol a thirweddau cenedlaethol (Ardaloedd o Harddwch Naturiol Eithriadol), heblaw un, dros 99% o'u hardaloedd yn y pedwar categori llonyddwch uchaf. Yr eithriad yw Ynys Môn, ac mae mwy na 97% o'i harwynebedd yn dal i fod yn y pedwar categori uchaf. Mae hyn yn adlewyrchu eu pwysigrwydd o ran llonyddwch.

Ar gyfer pob cyd-destun daearyddol yn yr astudiaeth hon, mae'r ardaloedd sydd â'r ganran uchaf yn y ddau gategori mwyaf llonydd fel a ganlyn:

- Awdurdod Lleol – Gwynedd (24.3%)
- Rhanbarth Cymru'r Dyfodol – Gogledd Cymru (14.8%)
- Y Dirwedd Genedlaethol (Ardal o Harddwch Naturiol Eithriadol) – Gŵyr (50.2%)
- Parc Cenedlaethol – Eryri (31.9%)
- Ardal weithredol / Datganiad ardal CNC – Gogledd-orllewin Cymru (19.3%)

- Ardal cymeriad tirwedd genedlaethol – Gŵyr (35.45%)

Executive summary

Natural Resources Wales (NRW) commissioned Land Use Consultants (LUC) and Noise Consultants Ltd to develop a new nationally consistent terrestrial Tranquillity & Place Theme 6. All of the Tranquillity & Place Themes are brought together in Theme 6 to connect sound and visually tranquil places, identifying the strategic and local resource for use as an evidence base to inform policy intent, practice and provision for well-being benefits.

The new Tranquillity & Place Theme 6 full resource, has been developed using mapped 'themes' that merge to produce an overall relative Tranquillity & Place map. The themes are as follows:

Theme 1 - relative abundance, perception or experience of nature, natural landscapes and greenspaces.

Theme 2 - relative freedom from intrusive visual disturbance and human influence.

Theme 3 - relative dark skies.

Theme 4 – sound environments where natural sounds are more prominent than noise and are appropriate to context. Theme 4 is further subdivided into:

- Part 1. Sounds other than road and railway noise.
- Part 2. Road and rail noise
- Part 2 Combined. Joining Theme 4 part 1 and part 2.

These themes are collated to develop the combined themes:

Theme 5 - visually tranquil places (Themes 1, 2 and 3)

Theme 6 – the full tranquillity and place resource (Themes 1, 2, 3 and 4).

What is the aim of this study

NRW commissioned this study out of recognition of the importance of tranquillity as a landscape asset and important cultural service. Tranquillity is highly valued and contributes to landscape value and identity. Tranquillity also contributes to health, well-being, spiritual benefit and quality of life. But it has limited resilience, and subtle changes in noise, visual intrusion and light pollution may have marked effects on natural settings and tranquillity.

It is important to have a nationally consistent Tranquillity and Place resource to use as an evidence base to inform policy intent, practice, and provision for well-being benefits.

To achieve this, the study involved the creation of the following:

- A Wales-wide dataset and maps of tranquillity for Theme 6 bringing all previous components of the study together.

- A set of maps and zonal statistics for Theme 6 against various geographical contexts.
- An evidence report..

What does this report cover

This report provides details of the method used to create the map layers for Theme 6.

Wherever possible, the findings are presented visually through maps and charts, supported by tables of key figures.

It does not contain details of the methodologies used to create the datasets for themes 1 – 5. These can be found in the supporting reports for each of those components of the Tranquillity and Place.

Overview of key findings for Theme 6

The key findings of the study are:

- 9.85% of Wales (2,092km²) is in the top two tranquillity categories of the combined Theme 6 dataset. A further 60.4% of Wales (12,825km²) falls into the third most tranquil category. These numbers combined indicate that large areas of Wales are associated with multiple contributors to tranquillity.
- Conversely, nowhere in Wales falls within the bottom tranquillity category of the combined Theme 6 dataset.
- 1.9% of Wales' urban areas are in the top 3 tranquil categories. The most common Theme 6 category for the urban areas is category 6, within which 49.6% of the urban area falls. This suggests that, even within urban areas, areas of relative tranquillity are not uncommon.
- All but one of the National Parks and National Landscapes (Areas of Outstanding Natural Beauty) have more than 99% of their area within the top four tranquillity categories. The one that doesn't, Ynys Môn – Anglesey, still has more than 97% of its area within the top four categories. This reflects their importance for tranquillity.
- For each geographical context within this study, the highest percentage area within the two most tranquil categories are as follows; Local Authority – Gwynedd (24.3%)
- Future Wales Region – North Wales (14.8%)
- National Landscape (Area of Outstanding Natural Beauty) – Gower (50.2%)
- National Park – Snowdonia (31.9%)
- NRW Operational Area / Area Statement – North West Wales (19.3%)
- National Landscape Character Area – Gower (35.45%)

Introduction

Natural Resources Wales (NRW), with Land Use Consultants (LUC) and Noise Consultants, have developed a new nationally consistent terrestrial Tranquillity & Place resource that identifies the strategic and local resource in remote, rural, peri-urban and urban areas for use as an evidence base to inform policy intent, practice and provision for well-being benefits.

Tranquillity is associated with the degree to which places and ecosystems deliver a state of quiet, calm, peace and well-being. This can be described as a relative abundance, perception or experience of nature, natural landscapes and features (e.g. birdsong, natural sounds, moving water, stars and perceived wildness) and/or a relative freedom from unwanted visual disturbance, signs of human influence and artificial noise (e.g. from people, transport, development, light pollution or power lines).

Tranquillity, as a landscape asset and important cultural service, is highly valued and contributes to landscape value and identity. Tranquillity also contributes to health, well-being, spiritual benefit and quality of life. This in turn can bring economic benefits from tourists and visitors to tranquil places. Tranquillity has limited resilience in that subtle changes in noise, visual intrusion and light pollution may have marked effects on natural settings and tranquillity.

Tranquillity as a natural resource is most often experienced in the rural landscape. With continued expansion of the urban population, the importance of finding relatively tranquil places in urban parks and open spaces is growing. This can be possible where positive soundscapes outweigh sounds like traffic, where peace and quiet coincides with visual beauty/aesthetics and where there is a sense of nature, personal safety and freedom of access. Areas of urban tranquillity provide an important contrast and break from the built environment with benefits to quality of life.

Themes

The new Tranquillity & Place resource has been developed using mapped 'themes' that merge to produce an overall relative Tranquillity & Place Theme 6 map. The themes are as follows:

Theme 1 - relative abundance, perception or experience of nature, natural landscapes and greenspaces.

Theme 2 - relative freedom from intrusive visual disturbance and human influence.

Theme 3 - relative dark skies.

Theme 4 - sound environments where natural sounds are more prominent than noise and are appropriate to context. Theme 4 is further subdivided into:

- Part 1 - Sounds other than road and railway noise.

- Part 2 – Road and rail noise
- Part 2 combined - joining Theme 4 part 1 and part 2.

These themes are collated to develop the combined themes:

Theme 5 - visually tranquil places, which includes themes 1, 2 and 3.

Theme 6 – the full tranquillity resource, including themes 1, 2, 3 and 4.

This report covers the methodology and results for Theme 6, and by extension, gives the overall findings for the whole study.

Aims and objectives

The aims of this study are to:

- Create a Wales-wide GIS dataset of Tranquillity & Place for Theme 6.
- Generate a set of Wales-wide maps of Tranquillity & Place for Theme 6.
- Generate a set of maps displaying Tranquillity & Place Theme 6 data against the following geographies:
 - Local Authority areas.
 - The 4 regions of Future Wales.
 - Designated landscapes (National Landscapes (Areas of Outstanding Natural Beauty) and National Parks).
 - NRW Operational Areas / Area Statements.
 - National Landscape Character Areas.
- Create zonal statistics for the various geographical contexts listed above, plus LANDMAP Visual & Sensory aspect areas.
- Document the findings in an evidence report which summarises the method and findings of the study.

Methodology

This section sets out the methodology followed to combine the datasets that form the basis of this Theme 6 study.

For the purposes of understanding the outputs of this report, it is not necessary to have a full understanding of this method. In summary; the data is divided into 10 categories, from 1 to 10; the lower the value, the less likely an area is to be tranquil, and the higher the value, the more likely it is to be tranquil.

Previous studies

The work carried out under this project combines the Theme 4 (Sound Environment), and the Theme 5 (Visually Tranquil Places) datasets that have previously been published.

These two themes are further comprised of data from other studies. A complete breakdown of the previous studies, in order of publication, is as follows;

Theme 3 - relative dark skies.

[Green C, Manson D, Chamberlain K 2021. Tranquillity and Place – Dark Skies. NRW Report No: 514, 70pp, NRW.](#)

[Accompanying dashboard.](#)

Themes 1, 2 and 5 – collectively forming, along with Theme 3, visually tranquil places.

[Green C, Manson D, Chamberlain K 2022. Tranquillity and Place. NRW Report No: 569 \(version 2\), 192 pp, NRW](#)

[Accompanying Story Map](#)

Theme 4 Part 1 - Sounds other than road and railway noise.

[Green C, Manson D, Chamberlain K, Grace I 2023. Tranquillity and Place Sound Environment \(Part 1\). NRW Report No: 660, 100pp, NRW.](#)

Theme 4 Part 2 - sound environments where natural sounds are more prominent than noise and are appropriate to context

[Gibbs G, Sims J 2024. Tranquillity and Place Sound Environment \(Part 2\). NRW Report No: 736, 94pp, NRW.](#)

For this final stage of the study, LUC and Noise Consultants Ltd worked in partnership. This ensured that all the elements of Theme 6 were correctly interpreted and integrated into the final map.

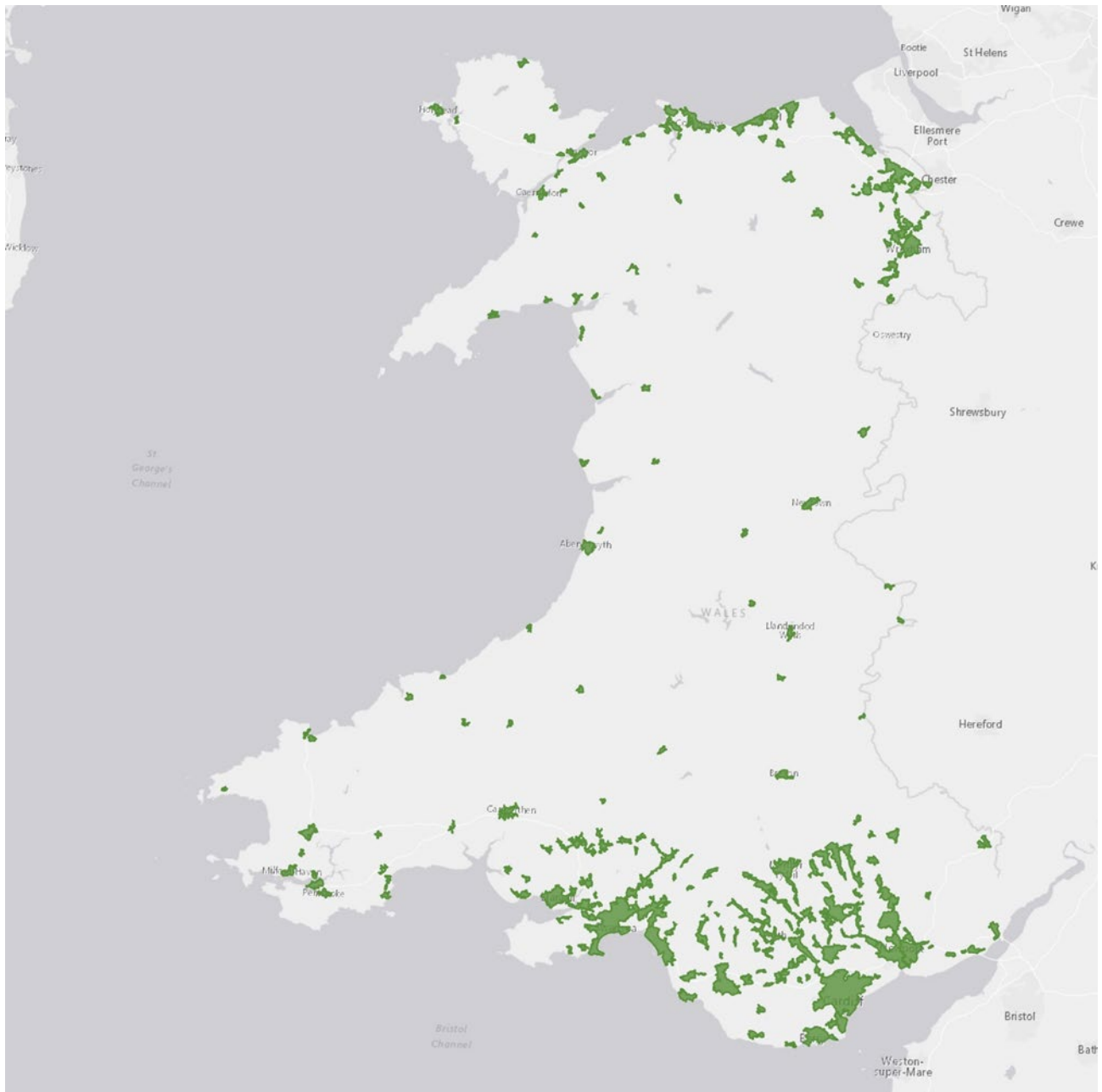
Rural / all-Wales and Urban split

The purpose of the Tranquillity and Place study is to categorise areas of relative tranquillity across Wales. It is recognised that relative tranquillity can be expected to be experienced within urban areas, and that some areas are relatively tranquil, given the urban context, even though these areas may not be as tranquil as rural areas.

In the Theme 5 study, a two-level approach was taken. A dataset was produced which covered the entirety of Wales (including rural and urban areas), referred to as the all-Wales dataset, a second dataset was produced which only included urban areas. The same aspects of tranquillity were considered for both of these datasets.

The urban areas have been defined using the extent of the study areas mapped in the Urban Tree Cover data from the [Tree Cover in Wales' Towns and Cities project](#), as shown in Figure 1.

Figure 1 Urban areas from Urban Tree Cover data



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For the Theme 4 data, only an all-Wales dataset was produced. The Theme 4 results have therefore been reprocessed to provide datasets that are consistent with the Theme 5 all-Wales and urban data. Details of this reprocessing are set out below.

Data Processing

The all-Wales data set produced for Theme 5 consisted of a 50-metre resolution grid of tranquillity scores for the entirety of Wales. The urban data set consisted of a 10-metre grid of tranquillity scores over only those areas identified as urban in the Visually Tranquil Places assessment. The Theme 4 data set, however, consisted of 10-metre resolution data derived from the Strategic Noise Mapping for Wales, overlaid on the all-Wales data set from Theme 4 Part 1. Full details of the methodology used are set out in the Theme 4 Part 2 report.

For consistency with the Theme 5 results, the Theme 4 results have therefore been reprocessed in the following ways:

- For the **urban data**, the Theme 4 Part 2 (road and rail) data at 10m resolution has been combined with the urban Theme 4 Part 1 (Sounds other than road and railway noise) data at 10m resolution using the same procedure as described in the Theme 4 Part 2 report.
- For the **all-Wales data**, the Theme 4 Part 2 (road and rail) data at 10m resolution has been down sampled to 50 m x 50 m resolution using nearest neighbour interpolation. This down sampled dataset has then been combined with the 50m all-Wales Theme 4 Part 1 (Sounds other than road and railway noise) dataset using the same procedure as described in the Theme 4 Part 2 report.

Combination of themes

Following the above processing, the Theme 4 and 5 datasets were normalised, as described in the Visually Tranquil Places Report. This resulted in the Theme 5 dataset having a maximum theoretical range of 0 – 3 for its dataset and, similarly, 0 – 1 for the Theme 4 dataset. The scores of each pixel were then arithmetically summed to provide a combined dataset with a maximum theoretical range of 0 – 4.

As a final step this normalised dataset was then reclassified to give a final tranquillity score from 0 to 10. This reclassification was performed using the conversion set out in Table 1.

Table 1 Normalised score classification

Normalised Score value	Tranquillity Class
0.0 – 0.4	1
0.4 – 0.8	2
0.8 – 1.2	3
1.2 – 1.6	4

1.6 – 2.0	5
2.0 – 2.4	6
2.4 – 2.8	7
2.8 – 3.2	8
3.2 – 3.6	9
3.6 – 4.0	10

Headline figures and statistics

Using GIS (ESRI's Spatial Analyst extension), quantitative analysis has been undertaken to explore the Theme 6 data in more detail. This section presents the findings of the national and regional analysis. The analysis has been based on the rural tranquillity dataset.

The following geographic boundaries have been analysed:

- All Wales.
- NRW operational areas, these also relate to Area Statements.
- Designated landscapes - National Parks and National Landscapes (Areas of Outstanding Natural Beauty).
- National Landscape Character Areas.
- Local authorities.
- The 4 regions of Future Wales.
- LANDMAP Visual and Sensory aspect areas (downloaded November 2024) - due to the number of aspect areas across Wales, the findings are not presented in this report. This data is presented visually on the interactive StoryMap, which is discussed later in this report, and in the accompanying spreadsheet.

National findings

For ease of analysis, understanding and presentation, the Theme 6 map has been divided into 10 equal categories, based on the theoretical minimum and maximum values of 0 – 4. 10 represents the most tranquil places and 1 the least tranquil places. This is detailed in Table 1 above.

Table 2, Figure 2 and Figure 3 show the breakdown of land coverage across Wales into these ten categories. These statistics are based on the land areas of Wales, as defined by Ordnance Survey. There are no areas in Wales that fall within the least tranquil category.

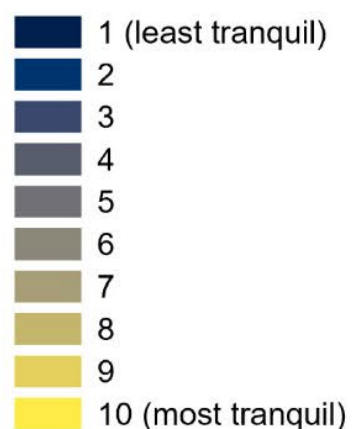
In all 9.85% of Wales (2,092km²) is in the top two tranquillity categories of the combined Theme 6 dataset. A further 60.4% of Wales (12,825km²) falls into the third most tranquil category. These numbers combined indicate that large areas of Wales are associated with multiple contributors to tranquillity.

1.9% of Wales' urban areas are in the top 3 tranquil categories. The most common Theme 6 category for the urban areas is category 6, within which 49.6% of the urban area falls. This suggests that, even within urban areas, areas of relative tranquillity are not uncommon.



EB:Horton_K LUC 13081_NRW_Tranquillity_Report 12/02/2025

Figure 2: Theme 6 – Map of Tranquillity & Place Theme 6 full resource (all Wales)

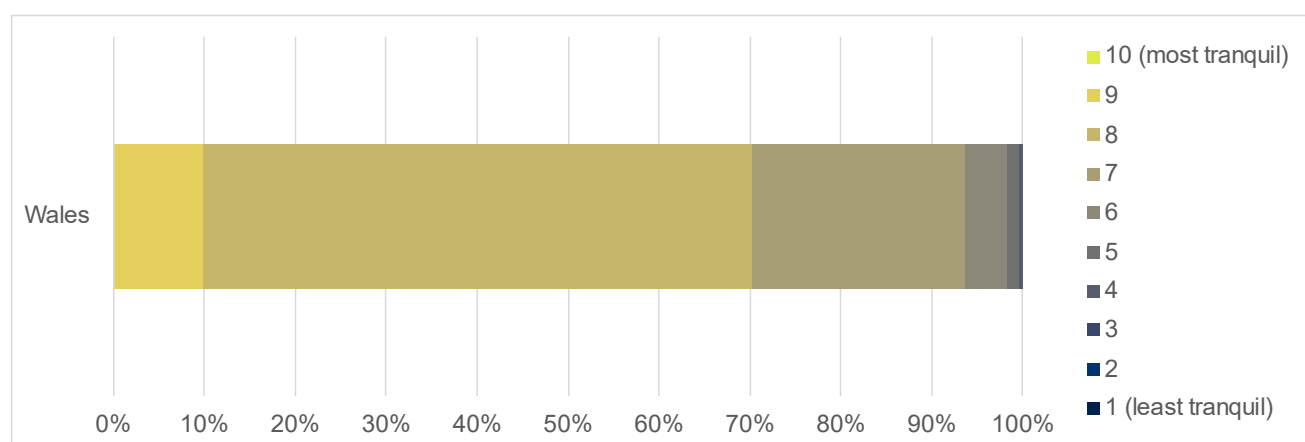


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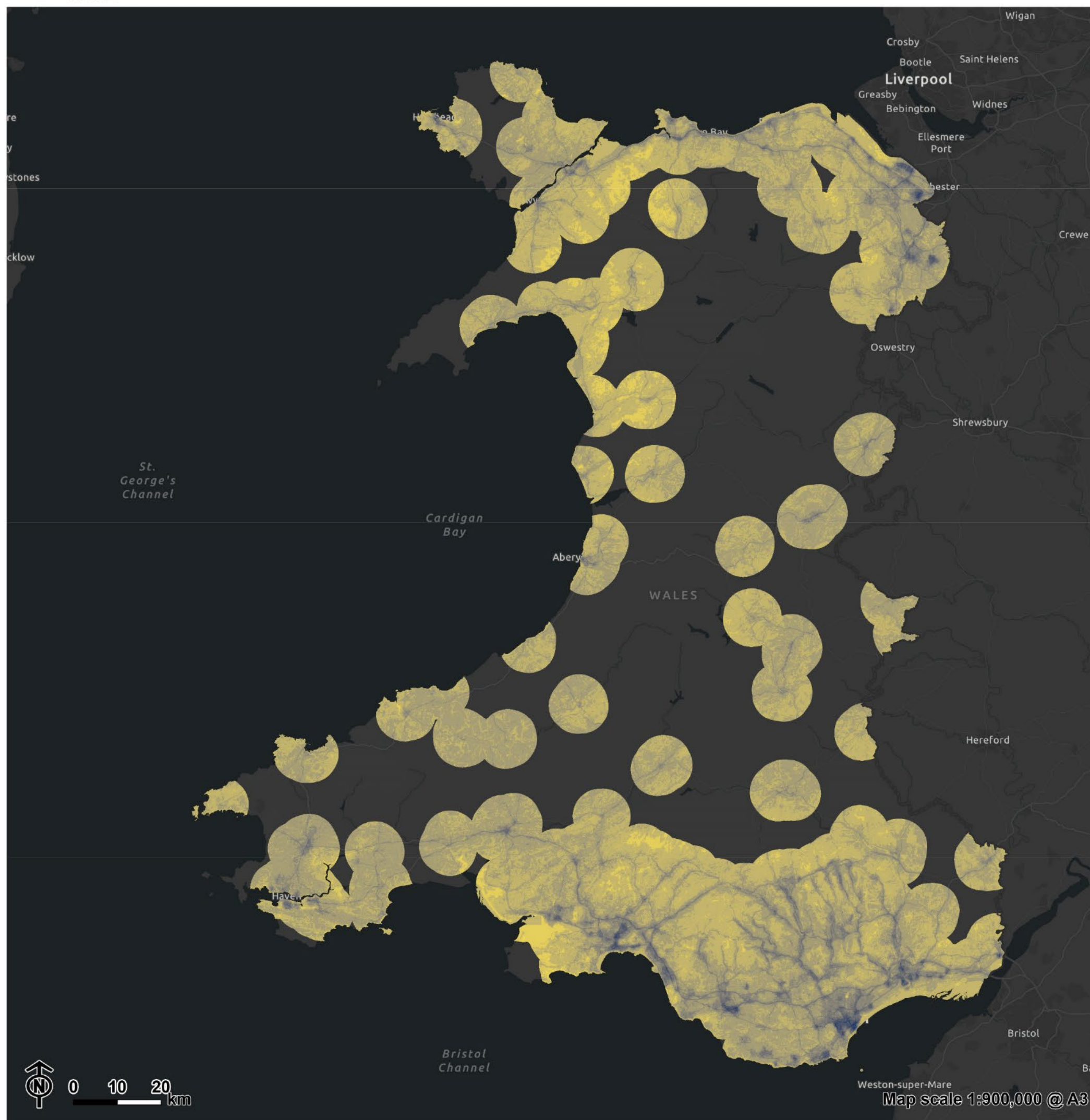
Table 2 Percentage and area of Wales falling into each tranquillity category for Theme 6 (all-Wales)

Category	% of total area	Area (km ²)
1 (least tranquil)	0.00%	0.0
2	0.00%	0.4
3	0.05%	9.7
4	0.29%	60.7
5	1.36%	289.4
6	4.64%	985.4
7	23.38%	4,963.0
8	60.42%	12,825.1
9	9.84%	2,088.8
10 (most tranquil)	0.01%	3.1

Figure 3 Percentage of Wales falling into each tranquillity category for Theme 6 (all Wales)

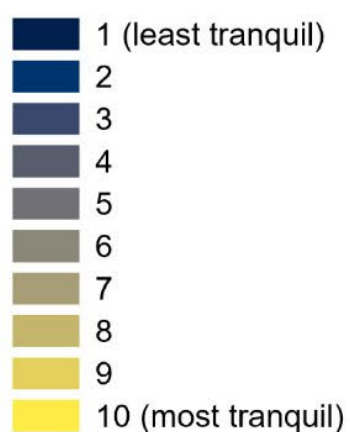


For the urban tranquillity dataset, the assessed areas are divided as per Table 3 and Figure 4.



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Figure 4: Theme 6 – Map of Tranquillity & Place Theme 6 full resource (urban)



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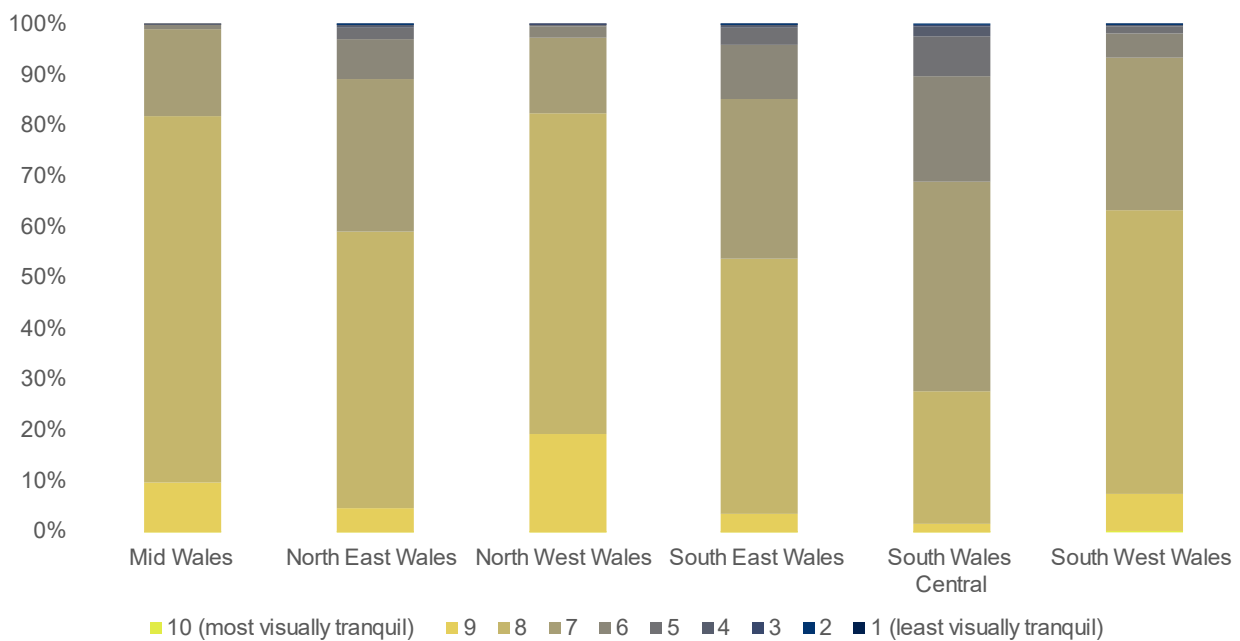
Table 3 Percentage and area of urban area falling into each tranquillity category for Theme 6

Category	% of total for all urban areas	Urban Area with highest percentage in this category
1	0.00	Cardiff (<0.01%)
2	0.07	Cardiff (0.63%)
3	1.16	Broughton (17.66%)
4	4.93	Broughton (28.04%)
5	18.16	Abercanaid & Troed-y-rhiw (57.13%)
6	49.63	Beddau, Church Village & Llantwit Fardre (84.29%)
7	24.14	Aberporth (82.09%)
8	1.90	Trimsaran (60.80%)
9	0.02	Trimsaran (2.07%)
10	0.00	N/A

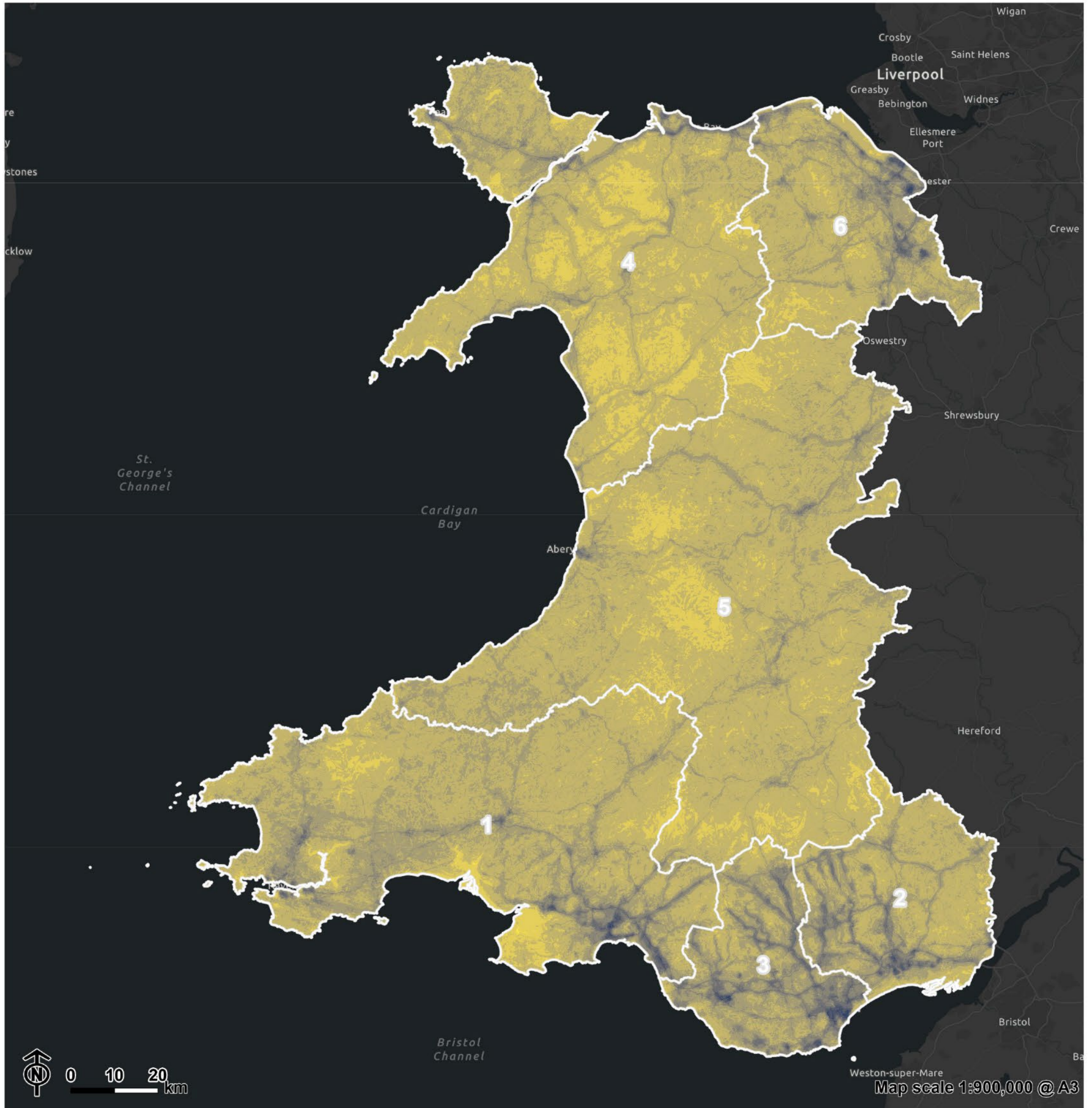
NRW operational areas

Figure 5 shows the breakdown between the categories by NRW operational areas, which also reflect Area Statement geographies. These areas are shown against the data in Figure 6.

Figure 5 Percentage of each NRW operational area falling into tranquillity category for Theme 6 (all-Wales)



Appendix 1 contains a full breakdown of the proportion of each area in each category, both as a percentage and in km².



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Figure 6: Tranquillity & Place Theme 6 full resource and NRW operational areas



Designated landscapes

All but one of the National Parks and National Landscapes (Areas of Outstanding Natural Beauty) have more than 99% of their area within the top four tranquillity categories. The one that doesn't, Ynys Môn – Anglesey, still has more than 97% of its area within the top four categories. This reflects their importance for tranquillity.

The results for the 3 National Parks (Figure 7) and 5 National Landscapes (AONBs) (Figure 8) in Wales are presented below.

Figure 7 Percentage of each National Park falling into each tranquillity category for Theme 6 (all-Wales)

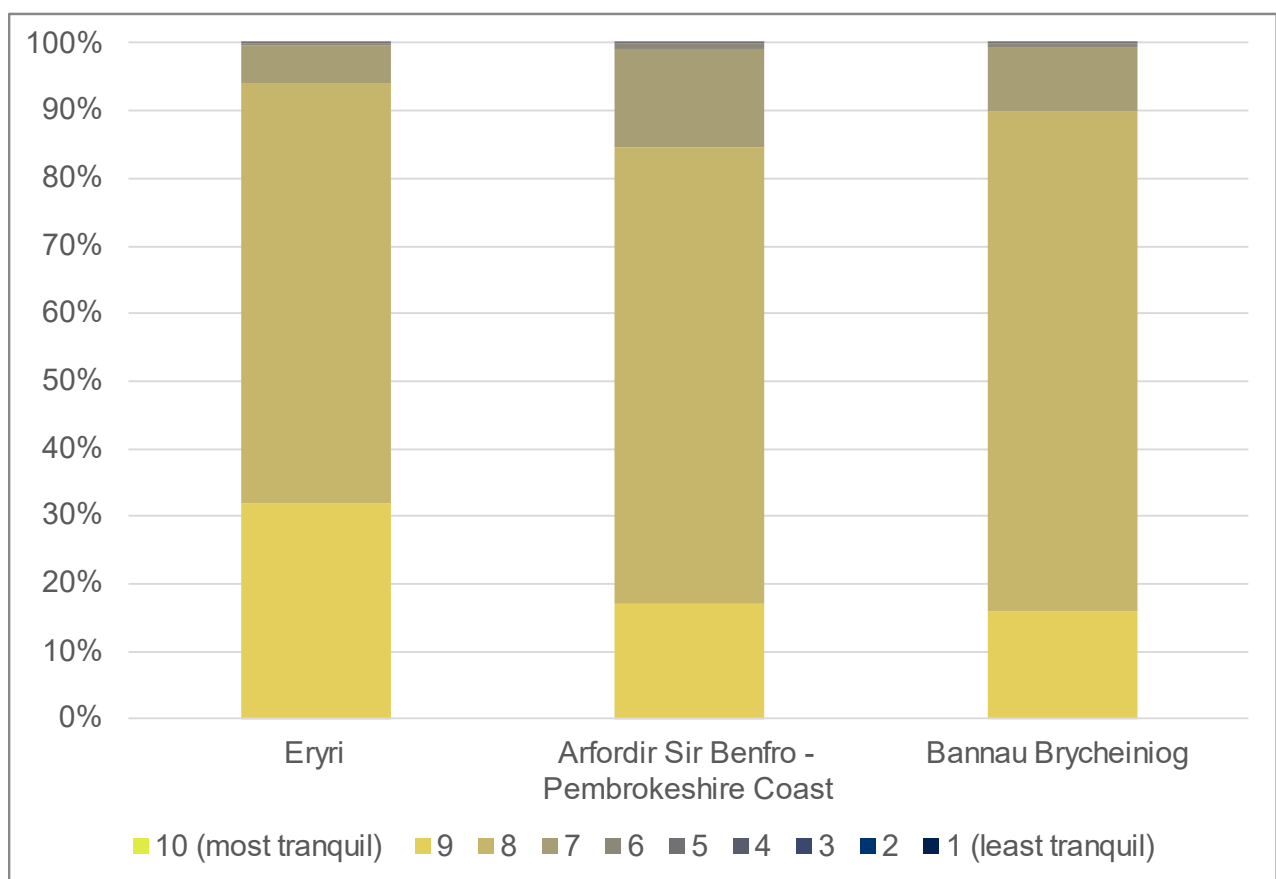
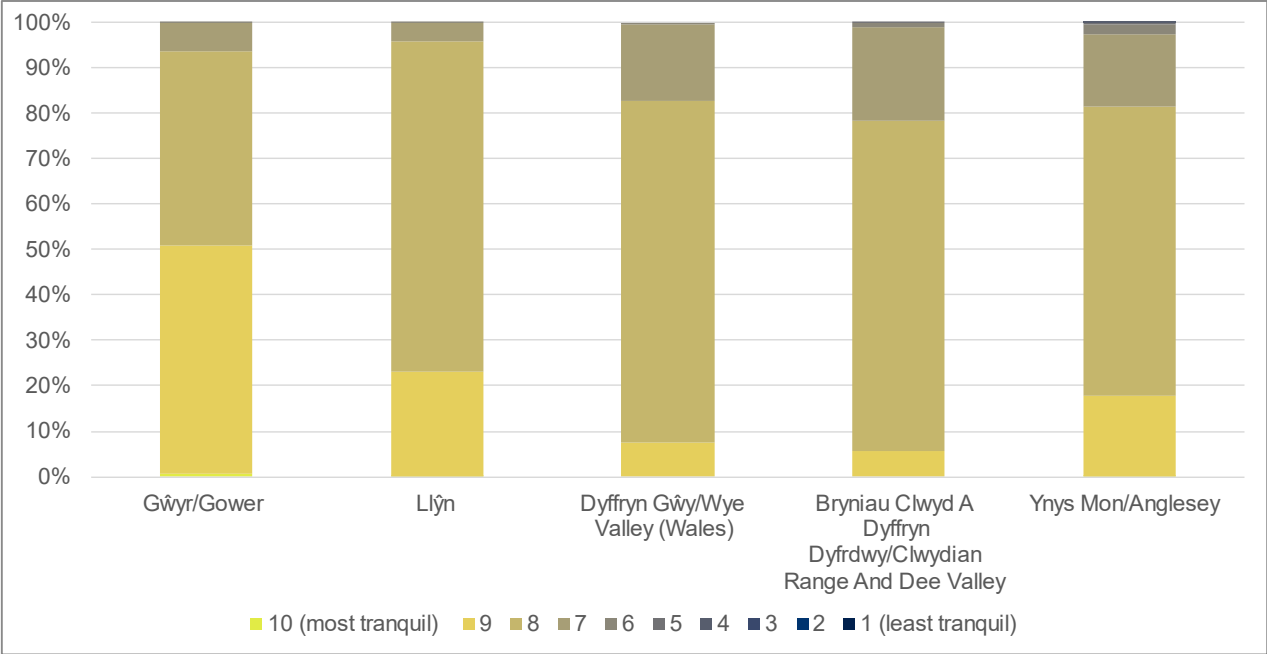


Figure 8 Percentage of each National Landscape falling into each tranquillity category for theme 6



Appendix 2 contains a full breakdown of the proportion of each area in each category, both as a percentage and in km2.



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Figure 9: Tranquillity & Place Theme 6 full resource and designated landscapes



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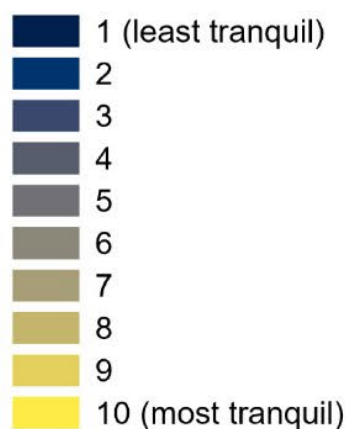
National Landscape Character Areas

The Theme 6 data is shown against the National Landscape Character Areas (also known as NLCAs) in Figure 10. An index for the reference numbers shown on the map is provided in Table 4.



EB:Horton_K LUC 13081_NRW_Tranquillity_Report 12/02/2025

Figure 10: Tranquillity & Place Theme 6 full resource and National Landscape Character Areas



National Landscape Character Area

Refer to Table 4 for national landscape character area names

Appendix 3 contains a full breakdown of the proportion of each area in each category, both as a percentage and in km².

Table 4 National landscape character area reference table

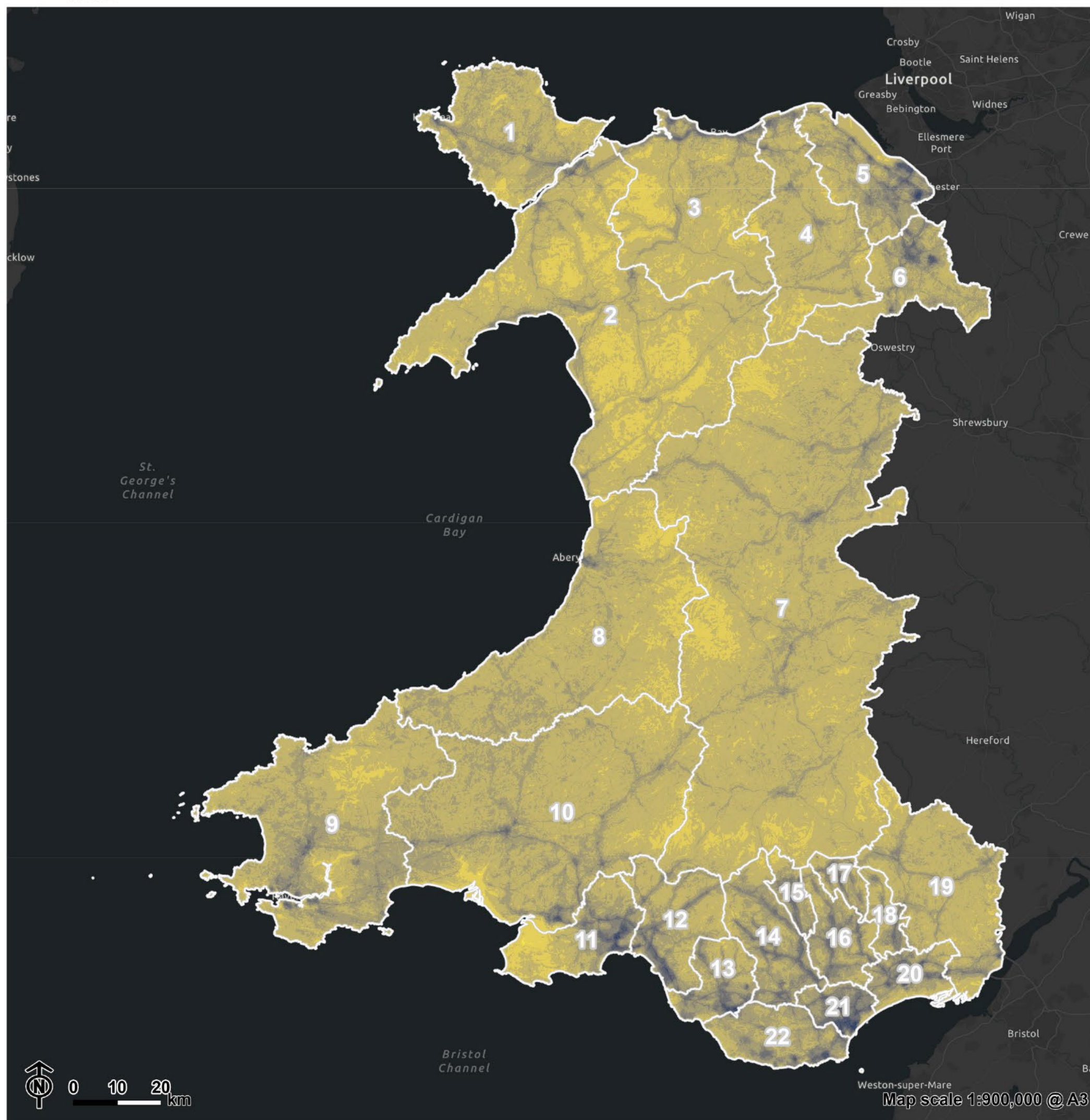
Reference Code	Name
1	Arfordir Môn - Anglesey Coast
2	Canolbarth Men - Central Anglesey
3	Arfon - Arfon
4	Llŷn - Llŷn
5	Bae Tremadog - Tremadoc Bay
6	Eryri
7	Dyffryn Conwy - Conway Valley
8	Arfordir Colwyn ayr Gogledd - Colwyn and Northern Coastline
9	Bryniau Rhos - Rhos Hills
10	Mynydd Hiraethog - Denbigh Moors
11	Dyffryn Clwyd - Vale of Clwyd
12	Bryniau Clwyd - Clwydian Range
13	Glannau Dyfrdwy a Wrecsam - Deeside and Wrexham
14	Maelor Saesneg - Maelor
15	Dyffryn Dyfrdwy a Llangollen - Llangollen and the Vale of Dee
16	Y Berwyn - Berwyn
17	Bryniau a Dyffrynnoedd Trefaldwyn - Montgomeryshire Hills and Vales

Reference Code	Name
18	Bryniau Sir Amwythig (rhan) - Shropshire Hills (part)
19	Dyffryn Hafren - Severn Valley
20	Bryniau Maesyfed - Radnorshire Hills
21	Uwchdiroedd Cymru - Cambrian Mountains
22	Glannau Aberdyfi - Aberdovey Coast
23	Dyffrynnoedd a Bryniau Rheidol ac Ystwyth - Rheidol and Ystwyth Hills and Valleys
24	Arfordir Ceredigion - Ceredigion Coast
25	Ceredigion - Ceredigion
26	Dyffryn Tefi - Teifi Valley
27	Pen Uchaf Dyffryn Gwy - Upper Wye Valley
28	Ffynhonnau Durol Canolbarth Cymru - The Spas and Wells of Central Wales
29	Dyffrynnoedd Gwy a Gwysg - Wye and Usk Vales
30	Lwyfandir a Dyffrynnoedd Epynt - Epynt Plateau and Valleys
31	Bannau Brycheiniog ayr Mynyddoedd Du - Brecon Beacons and the Black Mountains
32	Dyffrynnoedd Gwendraeth - Gwendraeth Vales
33	Dyffryn Tywi - Tywi Valley
34	Troedfrynïau Penfro a Chaerfyrddin - Pembroke and Carmarthen Foothills

Reference Code	Name
35	Arfordir Gorllewin a Gogledd Sir Benfro - West and North Pembrokeshire Coast
36	Bryniau Preseli - Preseli Hills
37	Dyffrynnoedd Taf ayr Cleddau - Taf and Cleddau Vales
38	Hafan Milffwrdd - Milford Haven
39	Arfordir De Sir Benfro - South Pembrokeshire Coast
40	Aber Afonydd Taf, Tywi a Gwendraeth - Taf, Tywi and Gwendraeth Estuaries
41	Gŵyr - Gower
42	Bae Abertawe - Swansea Bay
43	Dyffrynnoedd y De - South Wales Valleys
44	Canolbarth Mynwy - Central Monmouthshire
45	Dyffryn Gŵy a Choed Gwent - Wye Valley and Wentwood
46	Gwastadeddau Gwent - Gwent Levels
47	Casnewydd, Caerdydd ayr Barri - Newport, Cardiff and Barry
48	Bro Morgannwg - Vale of Glamorgan

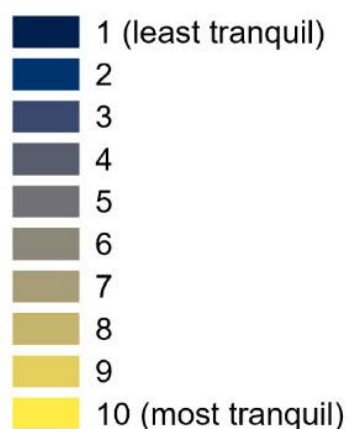
Local authorities

The Theme 6 data is shown against the local authority boundaries in Figure 11. An index for the reference numbers shown on the map is provided in Table 5.



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Figure 11: Tranquillity & Place Theme 6 full resource and local authorities



Local authority area

Refer to Table 5 for local authority area names

Appendix 4 contains a full breakdown of the proportion of each area in each colour category, both as a percentage and in km².

Table 5 Local authority area reference table

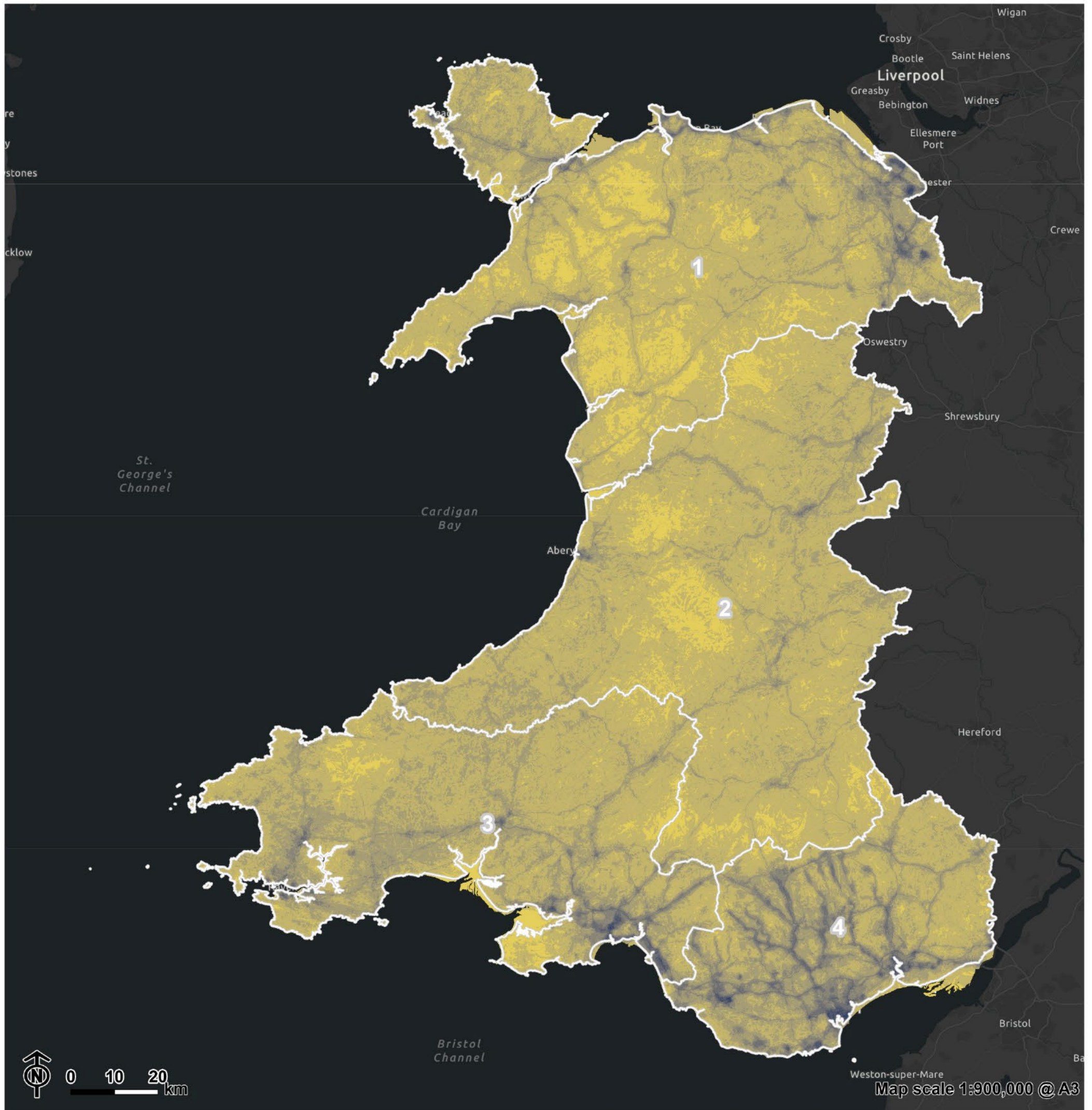
Reference Code	Name
1	Sir Ynys Môn - Isle of Anglesey
2	Gwynedd - Gwynedd
3	Conwy - Conwy
4	Sir Ddinbych - Denbighshire
5	Sir y Fflint - Flintshire
6	Wreccsam - Wrexham
7	Powys - Powys
8	Sir Ceredigion - Ceredigion
9	Sir Benfro - Pembrokeshire
10	Sir Gaerfyrddin - Carmarthenshire
11	Abertawe - Swansea
12	Castell-nedd Port Talbot - Neath Port Talbot
13	Pen-y-bont ar Ogwr - Bridgend
14	Rhondda Cynon Taf - Rhondda Cynon Taf
15	Merthyr Tudful - Merthyr Tydfil
16	Caerffili - Caerphilly
17	Blaenau Gwent - Blaenau Gwent

Reference Code	Name
18	Tor-faen - Torfaen
19	Sir Fynwy - Monmouthshire
20	Casnewydd - Newport
21	Caerdydd - Cardiff
22	Bro Morgannwg - the Vale of Glamorgan

4 regions of Future Wales

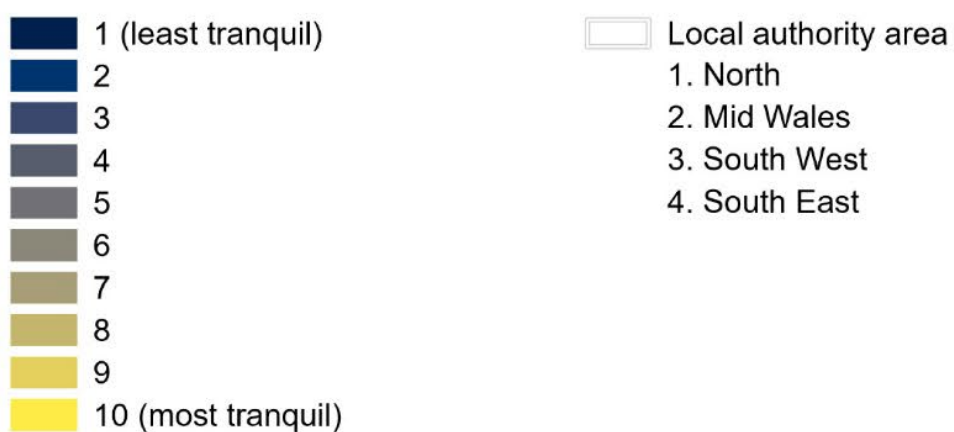
The Theme 6 data is shown against the 4 regions of Future Wales in Figure 12.

Appendix 5 contains a full breakdown of the proportion of each area in each colour category, both as a percentage and in km².



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Figure 12: Tranquillity & Place Theme 6 full resource and Future Wales Areas



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Case studies

The following case studies show how the method built up through all the previous studies has combined to form a final relative tranquillity categories for the example areas. The two case studies, Eryri National Park, and Caerdydd/Cardiff local authority have been chosen as they show areas with completely different tranquillity profiles. Additionally, they each use a different version of the final data – the all-Wales data for Eryri, and the urban data for Caerdydd/Cardiff.

Eryri National Park

Eryri National Park has been identified as one of the most tranquil places in Wales. More than 94% (2,012 km²) of the National Park falls within the top three tranquillity categories for Theme 6. A full map of tranquillity for all 6 themes is shown in Figure 13.

This map shows that much of Eryri falls within the top tranquillity bands for every theme, especially in the more mountainous regions in the north and centre of the National Park. The areas of lowest tranquillity are around roads, as highlighted in the maps for Themes 2 and 4. This is due to the visibility of roads and road noise respectively.

The town of Dolgellau is the largest settlement in the National Park, and it is clearly visible as an area of lower tranquillity in the maps for Themes 2, 4, and especially 3. It is not prominent in Theme 1, representing that it still is subject to a large number of positive indicators for visual tranquillity. These factors combined make it visible in the final Theme 6 map, although not especially prominent when compared to other urban areas outside of the National Park.

The town of Blaenau Ffestiniog is outside of the National Park, and is an area of lower tranquillity relative to the area within the National Park, across all themes.

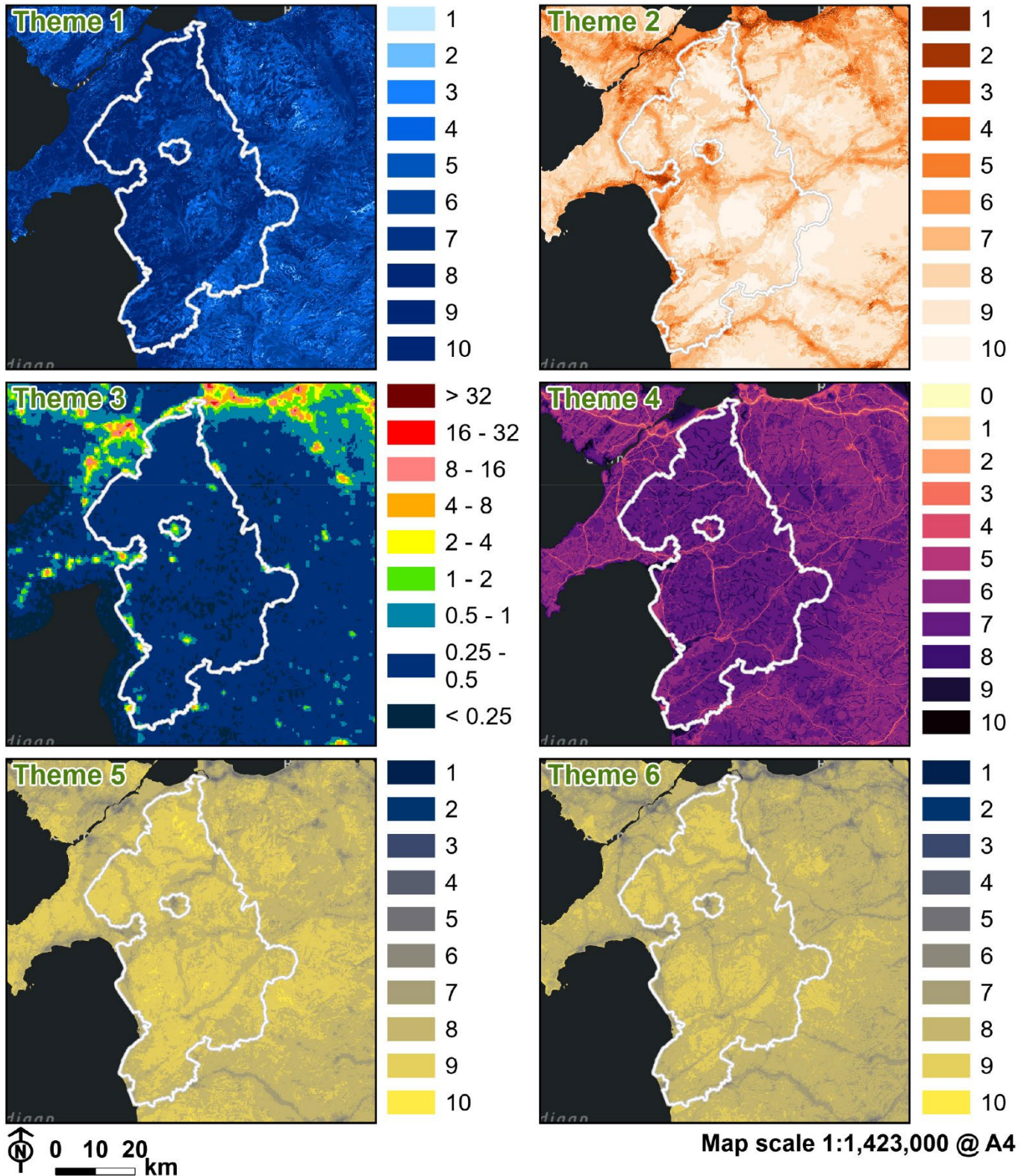


Figure 13: Results for all Themes for Eryri National Park

For all legends, relatively least tranquil values are at the top, and relatively most tranquil values are at the bottom.

Caerdydd/Cardiff

Caerdydd/Cardiff has been identified as one of the least tranquil places in Wales. More than 95% of the area falls within the bottom six tranquillity categories for Theme 6, with less than 0.1% falling within the top three. A full map of tranquillity for all 6 themes is shown in Figure 14.

The map shows that most of Caerdydd/Cardiff falls within lower tranquillity categories across all themes, particularly themes 2, 3 and 4. The more rural areas to the north-west score higher across all themes, especially those areas to the north of the M4, with themes 3 and 4 showing a significant increase in tranquillity.

There are pockets of relative tranquillity within the urban area, however, with the coastal area at the mouth of the Rhymney River and into the Severn Estuary being particularly tranquil. Being water, this is not an area most people would have regular access too.

A second pocket of tranquillity is the area around the Lisvane & Llanishen Reservoirs in the north of the urban area. This is especially visible on the Theme 4 map.

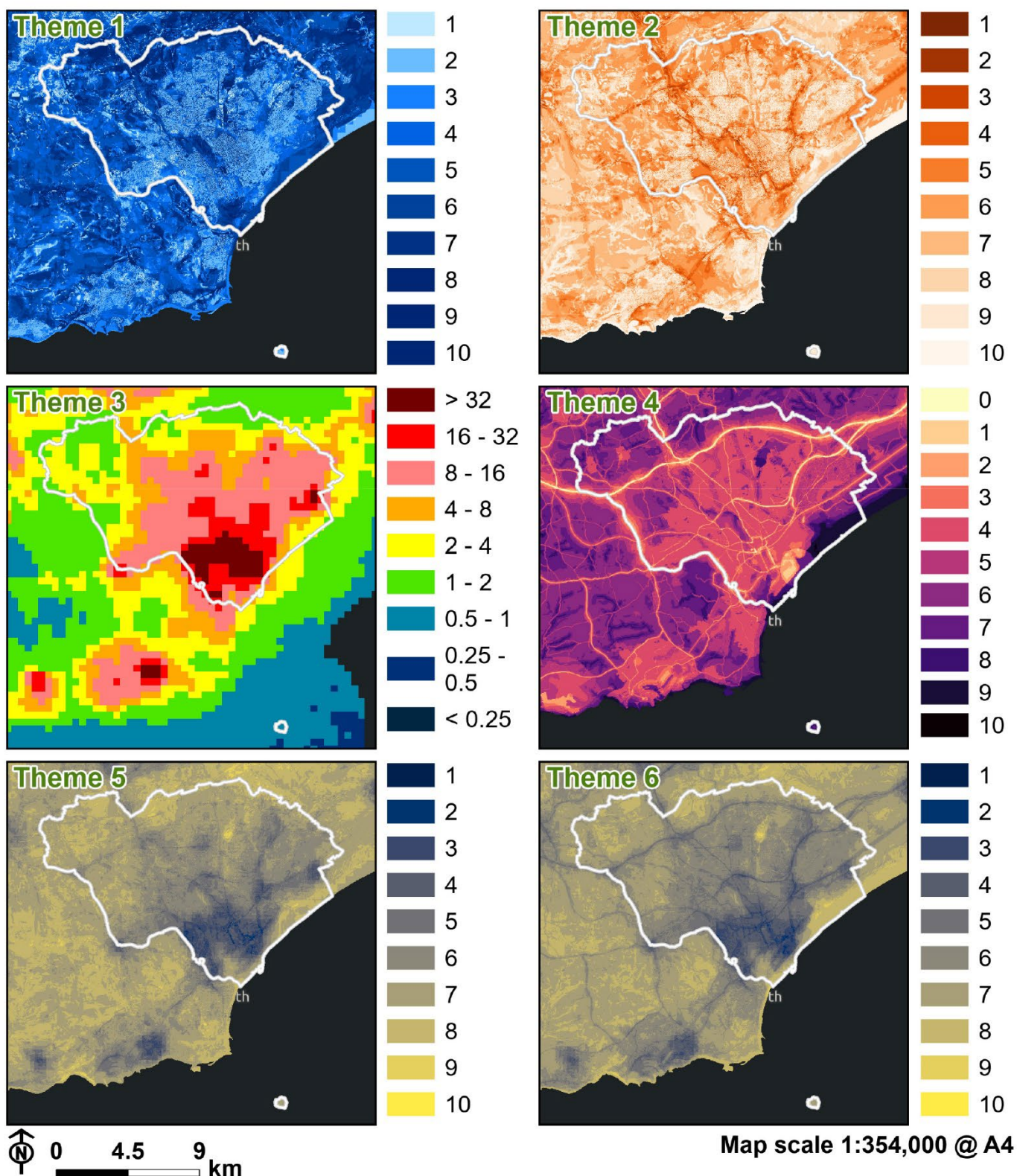


Figure 14: Results for all Themes for Caerdyff/Cardiff

For all legends, relatively least tranquil values are at the top, and relatively most tranquil values are at the bottom.

Limitations and future enhancements

As this study has not involved any data creation, there are no new limitations or future enhancements to the methodology that are not detailed in the relevant report for the previous themes.

The methodology for this Theme 6 study is sufficiently detailed to allow for the entire process to be repeated in the future. This could include expanding the study to include a specific marine and/or coastal area assessment.

Using the information

The results of this study are intended to be used in a number of ways, including:

- Providing evidence and information that may be beneficial to and align with the Welsh Government Noise and Soundscape Action Plan, an updated TAN 11 Air quality, noise and soundscape and a potential national soundscapes strategy.
- Providing evidence that can be incorporated into plans, assessments and evidence reports such as the State of Natural Resources Reporting (SoNaRR), Green Infrastructure Assessments, Area Statements, designated landscapes state of reports and management plans, local landscape character assessments and Well-being Assessments.
- Identifying contributing and detracting sound environments that can help to inform policy, strategy and development management applications. Including the potential to consider tranquillity and its conservation and enhancement linked to design, placemaking and the Placemaking Charter.
- Providing new landscape evidence for the LANDMAP Visual & Sensory dataset and landscape monitoring programme.
- Highlighting the contribution and effect of the sound environment to landscapes. identifying places and areas of tranquillity close to where people live, connecting this to placemaking, nature and health, well-being, spiritual benefit and quality of life.
- Over time, if this study were to be repeated, changes in tranquillity could be measured and monitored, for example by refreshing the data for dark skies and light pollution and renewable energy. Assessments could be made around awareness of the importance of tranquillity, and the use of the data in making a positive difference.

Appendices

Appendix 1 Full Results of NRW Operational Areas Analysis

Percentage of NRW Operational Area in each category

Name	1	2	3	4	5	6	7	8	9	10
Mid Wales	0.00	0.00	0.00	0.00	0.07	0.82	17.32	72.02	9.77	0.00
North East Wales	0.00	0.00	0.09	0.60	2.27	7.93	30.07	54.49	4.55	0.00
North West Wales	0.00	0.00	0.00	0.04	0.42	2.11	14.98	63.15	19.27	0.01
South East Wales	0.00	0.00	0.03	0.49	3.40	10.88	31.49	50.11	3.59	0.00
South Wales Central	0.00	0.03	0.43	1.79	7.98	20.79	41.20	26.16	1.62	0.00
South West Wales	0.00	0.00	0.04	0.34	1.34	4.93	29.90	55.97	7.43	0.04

Area (km²) of NRW Operational Area in each category

Name	1	2	3	4	5	6	7	8	9	10
Mid Wales	0.00	0.00	0.00	0.15	4.68	57.35	1212.61	5042.21	683.94	0.15
North East Wales	0.00	0.01	1.67	11.05	41.75	145.78	552.84	1001.77	83.65	0.01
North West Wales	0.00	0.00	0.10	1.93	19.14	95.40	677.61	2856.68	871.82	0.66
South East Wales	0.00	0.01	0.54	7.95	54.99	175.80	508.86	809.71	58.00	0.01
South Wales Central	0.00	0.33	5.50	22.90	102.18	266.15	527.37	334.81	20.72	0.04
South West Wales	0.00	0.04	1.91	16.68	66.62	244.74	1483.37	2776.30	368.45	2.19

Appendix 2 Full Results of Designated Landscapes Analysis

Percentage of National Parks in each category

Name	1	2	3	4	5	6	7	8	9	10
Arfordir Sir Benfro - Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.06	0.83	14.48	67.63	16.99	0.01
Bannau Brycheiniog	0.00	0.00	0.00	0.00	0.02	0.58	9.64	73.78	15.99	0.00
Eryri	0.00	0.00	0.00	0.00	0.00	0.26	5.71	62.10	31.89	0.03

Area (km²) of National Parks in each category

Name	1	2	3	4	5	6	7	8	9	10
Arfordir Sir Benfro - Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.36	5.07	88.25	412.24	103.58	0.04
Bannau Brycheiniog	0.00	0.00	0.00	0.00	0.23	7.80	130.10	996.26	215.85	0.00
Eryri	0.00	0.00	0.00	0.00	0.04	5.64	122.28	1328.81	682.42	0.61

Percentage of National Landscapes in each category

Name	1	2	3	4	5	6	7	8	9	10
Bryniau Clwyd A Dyffryn Dyfrdwy - Clwydian Range And Dee Valley	0.00	0.00	0.00	0.00	0.01	0.87	20.68	72.88	5.56	0.00
Dyffryn Gŵy - Wye Valley	0.00	0.00	0.00	0.00	0.00	0.28	16.92	75.26	7.54	0.00
Gŵyr - Gower	0.00	0.00	0.00	0.00	0.00	0.16	6.16	42.66	50.24	0.77
Llŷn	0.00	0.00	0.00	0.00	0.00	0.07	3.96	72.83	23.13	0.01
Ynys Môn - Anglesey	0.00	0.00	0.00	0.01	0.35	2.07	16.13	63.56	17.86	0.01

Area (km²) of National Landscapes in each category

Name	1	2	3	4	5	6	7	8	9	10
Bryniau Clwyd A Dyffryn Dyfrdwy - Clwydian Range And Dee Valley	0.00	0.00	0.00	0.00	0.04	3.40	80.50	283.73	21.64	0.00
Dyffryn Gŵy - Wye Valley	0.00	0.00	0.00	0.00	0.00	0.33	19.83	88.24	8.84	0.00
Gŵyr - Gower	0.00	0.00	0.00	0.00	0.00	0.30	11.49	79.51	93.64	1.44
Llŷn	0.00	0.00	0.00	0.00	0.00	0.11	6.33	116.33	36.94	0.02
Ynys Môn - Anglesey	0.00	0.00	0.00	0.03	0.77	4.55	35.41	139.49	39.19	0.02

Appendix 3 Full Results of National Landscape Character Areas Analysis

Percentage of National Landscape Character Areas in each category

Name	1	2	3	4	5	6	7	8	9	10
Aber Afonydd Taf, Tywi a Gwendraeth - Taf, Tywi and Gwendraeth Estuaries	0.00	0.00	0.00	0.00	0.01	1.08	25.45	61.71	11.70	0.05
Arfon	0.00	0.00	0.00	0.11	1.58	6.96	27.15	59.89	4.32	0.00
Arfordir Ceredigion - Ceredigion Coast	0.00	0.00	0.00	0.00	0.00	0.59	24.26	72.44	2.71	0.00
Arfordir Colwyn a'r Gogledd - Colwyn and Northern Coastline	0.00	0.00	0.00	0.61	8.07	21.11	38.51	30.57	1.13	0.00
Arfordir De Sir Benfro - South Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.05	2.52	33.73	55.19	8.47	0.03
Arfordir Gorllewin a Gogledd Sir Benfro - West and North Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.00	0.83	15.17	76.05	7.95	0.00
Arfordir Môn - Anglesey Coast	0.00	0.00	0.02	0.18	0.64	3.29	25.53	63.28	7.05	0.00

Name	1	2	3	4	5	6	7	8	9	10
Bae Abertawe - Swansea Bay	0.00	0.01	0.64	5.25	16.92	36.19	30.38	9.97	0.63	0.00
Bae Tremadog - Tremadoc Bay	0.00	0.00	0.00	0.00	0.12	3.48	25.62	64.88	5.90	0.00
Bannau Brycheiniog a'r Mynyddoedd Du - Brecon Beacons and the Black Mountains	0.00	0.00	0.00	0.00	0.02	0.49	7.96	72.30	19.23	0.00
Bro Morgannwg - Vale of Glamorgan	0.00	0.01	0.27	1.26	6.67	19.39	48.17	23.85	0.38	0.00
Bryniau a Dyffrynnoedd Trefaldwyn - Montgomeryshire Hills and Vales	0.00	0.00	0.00	0.00	0.00	0.65	25.58	72.80	0.97	0.00
Bryniau Clwyd - Clwydian Range	0.00	0.00	0.00	0.00	0.06	2.11	30.32	63.69	3.82	0.00
Bryniau Maesfed - Radnorshire Hills	0.00	0.00	0.00	0.00	0.01	0.37	17.80	78.32	3.50	0.00
Bryniau Preseli - Preseli Hills	0.00	0.00	0.00	0.00	0.00	0.14	11.22	68.23	20.40	0.00
Bryniau Rhos - Rhos Hills	0.00	0.00	0.00	0.00	0.02	0.75	23.70	72.76	2.77	0.00
Bryniau Sir Amwythig (rhan) - Shropshire Hills (part)	0.00	0.00	0.00	0.00	0.01	0.97	36.18	60.22	2.61	0.00
Canolbarth Môn - Central Anglesey	0.00	0.00	0.00	0.00	0.22	3.75	44.59	49.40	2.04	0.00

Name	1	2	3	4	5	6	7	8	9	10
Canolbarth Mynwy - Central Monmouthshire	0.00	0.00	0.00	0.00	0.14	3.00	28.29	67.66	0.91	0.00
Casnewydd, Caerdydd a'r Barri - Newport, Cardiff and Barry	0.00	0.11	1.74	7.08	21.07	37.52	24.94	7.48	0.06	0.00
Ceredigion	0.00	0.00	0.00	0.00	0.00	0.55	29.28	69.14	1.03	0.00
Dyffryn Clwyd - Vale of Clwyd	0.00	0.00	0.00	0.00	0.21	4.03	33.68	61.65	0.44	0.00
Dyffryn Conwy - Conway Valley	0.00	0.00	0.00	0.07	0.97	3.94	19.72	68.57	6.73	0.00
Dyffryn Dyfrdwy a Llangollen - Llangollen and the Vale of Dee	0.00	0.00	0.00	0.00	0.02	1.71	22.92	69.92	5.43	0.00
Dyffryn Gŵy a Choed Gwent - Wye Valley and Wentwood	0.00	0.00	0.00	0.05	0.29	2.83	20.94	70.38	5.51	0.00
Dyffryn Hafren - Severn Valley	0.00	0.00	0.00	0.01	0.92	7.63	44.68	46.39	0.37	0.00
Dyffryn Tefi - Teifi Valley	0.00	0.00	0.00	0.00	0.01	1.02	33.37	63.56	2.03	0.00
Dyffryn Tywi - Tywi Valley	0.00	0.00	0.00	0.10	0.99	5.05	32.85	59.04	1.96	0.00
Dyffrynnoedd a Bryniau Rheidol ac Ystwyth - Rheidol and Ystwyth Hills and Valleys	0.00	0.00	0.00	0.05	0.87	2.79	23.70	69.68	2.91	0.00

Name	1	2	3	4	5	6	7	8	9	10
Dyffrynnoedd Gwendraeth - Gwendraeth Vales	0.00	0.00	0.00	0.01	0.23	2.70	32.85	62.54	1.67	0.00
Dyffrynnoedd Gwy a Gwysg - Wye and Usk Vales	0.00	0.00	0.00	0.00	0.02	1.32	21.69	74.36	2.61	0.00
Dyffrynnoedd Taf a'r Cleddau - Taf and Cleddau Vales	0.00	0.00	0.00	0.00	0.17	4.19	50.55	44.65	0.45	0.00
Dyffrynnoedd y De - South Wales Valleys	0.00	0.00	0.00	0.17	3.78	14.28	41.24	39.42	1.10	0.00
Eryri	0.00	0.00	0.00	0.00	0.01	0.33	5.27	62.76	31.60	0.03
Ffynhonnau Durol Canolbarth Cymru - The Spas and Wells of Central Wales	0.00	0.00	0.00	0.00	0.08	2.86	35.72	60.99	0.36	0.00
Glannau Aberdyfi - Aberdovey Coast	0.00	0.00	0.00	0.00	0.05	2.95	23.85	67.69	5.47	0.00
Glannau Dyfrdwy a Wrecsam - Deeside and Wrexham	0.00	0.00	0.40	2.63	9.02	25.27	43.41	18.79	0.48	0.00
Gwastadeddau Gwent - Gwent Levels	0.00	0.00	0.21	2.96	9.73	20.67	44.35	21.59	0.49	0.00
Gŵyr - Gower	0.00	0.00	0.00	0.00	0.00	0.83	13.04	50.68	34.89	0.56

Name	1	2	3	4	5	6	7	8	9	10
Hafan Milffwrdd - Milford Haven	0.00	0.00	0.00	0.29	4.25	17.72	37.54	34.68	5.51	0.00
Llŷn	0.00	0.00	0.00	0.00	0.00	0.06	4.36	78.87	16.71	0.00
Lwyfandir a Dyffrynnoedd Epynt - Epynt Plateau and Valleys	0.00	0.00	0.00	0.00	0.00	0.06	10.04	86.52	3.39	0.00
Maelor Saesneg - Maelor	0.00	0.00	0.00	0.00	0.22	4.78	45.25	48.86	0.89	0.00
Mynydd Hiraethog - Denbigh Moors	0.00	0.00	0.00	0.00	0.00	0.20	11.68	77.18	10.93	0.00
Pen Uchaf Dyffryn Gwy - Upper Wye Valley	0.00	0.00	0.00	0.00	0.00	0.63	22.82	73.07	3.48	0.00
Troedfrynau Penfro a Chaerfyrddin - Pembroke and Carmarthen Foothills	0.00	0.00	0.00	0.00	0.00	0.52	27.20	71.47	0.79	0.00
Uwchdiroedd Cymru - Cambrian Mountains	0.00	0.00	0.00	0.00	0.00	0.17	8.65	71.88	19.29	0.00
Y Berwyn - Berwyn	0.00	0.00	0.00	0.00	0.00	0.07	5.12	73.21	21.59	0.01

Area (km²) of National Landscape Character Areas in each category

Name	1	2	3	4	5	6	7	8	9	10
Aber Afonydd Taf, Tywi a Gwendraeth - Taf, Tywi and Gwendraeth Estuaries	0.00	0.00	0.00	0.00	0.01	1.46	34.26	83.05	15.75	0.07
Arfon	0.00	0.00	0.00	0.27	3.90	17.19	67.06	147.91	10.67	0.00
Arfordir Ceredigion - Ceredigion Coast	0.00	0.00	0.00	0.00	0.00	1.23	50.06	149.45	5.58	0.00
Arfordir Colwyn a'r Gogledd - Colwyn and Northern Coastline	0.00	0.00	0.01	1.02	13.52	35.36	64.50	51.20	1.90	0.00
Arfordir De Sir Benfro - South Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.06	2.97	39.65	64.87	9.96	0.04
Arfordir Gorllewin a Gogledd Sir Benfro - West and North Pembrokeshire Coast	0.00	0.00	0.00	0.00	0.01	2.34	42.46	212.86	22.25	0.00
Arfordir Môn - Anglesey Coast	0.00	0.00	0.09	0.66	2.33	12.00	93.17	230.94	25.74	0.01
Bae Abertawe - Swansea Bay	0.00	0.04	1.91	15.77	50.80	108.60	91.18	29.94	1.89	0.00

Name	1	2	3	4	5	6	7	8	9	10
Bae Tremadog - Tremadoc Bay	0.00	0.00	0.00	0.00	0.29	8.73	64.33	162.93	14.81	0.01
Bannau Brycheiniog a'r Mynyddoedd Du - Brecon Beacons and the Black Mountains	0.00	0.00	0.00	0.00	0.21	5.29	85.29	775.15	206.22	0.00
Bro Morgannwg - Vale of Glamorgan	0.00	0.05	1.08	5.05	26.74	77.78	193.21	95.67	1.52	0.00
Bryniau a Dyffrynnoedd Trefaldwyn - Montgomeryshire Hills and Vales	0.00	0.00	0.00	0.00	0.02	3.59	141.93	403.95	5.36	0.00
Bryniau Clwyd - Clwydian Range	0.00	0.00	0.00	0.00	0.27	9.39	134.96	283.55	17.00	0.00
Bryniau Maesyfed - Radnorshire Hills	0.00	0.00	0.00	0.00	0.07	4.01	195.20	858.64	38.40	0.00
Bryniau Preseli - Preseli Hills	0.00	0.00	0.00	0.00	0.00	0.35	27.34	166.18	49.68	0.00
Bryniau Rhos - Rhos Hills	0.00	0.00	0.00	0.00	0.06	2.43	76.40	234.59	8.93	0.00
Bryniau Sir Amwythig (rhan) - Shropshire Hills (part)	0.00	0.00	0.00	0.00	0.02	1.03	38.30	63.74	2.76	0.00
Canolbarth Môn - Central Anglesey	0.00	0.00	0.00	0.01	0.75	13.08	155.62	172.40	7.12	0.00

Name	1	2	3	4	5	6	7	8	9	10
Canolbarth Mynwy - Central Monmouthshire	0.00	0.00	0.00	0.00	0.65	14.34	135.2 2	323.40	4.36	0.00
Casnewydd, Caerdydd a'r Barri - Newport, Cardiff and Barry	0.00	0.29	4.65	18.90	56.28	100.2 1	66.62	19.99	0.15	0.00
Ceredigion	0.00	0.00	0.00	0.00	0.02	2.85	151.7 2	358.21	5.34	0.00
Dyffryn Clwyd - Vale of Clwyd	0.00	0.00	0.00	0.00	0.31	6.11	51.06	93.46	0.67	0.00
Dyffryn Conwy - Conway Valley	0.00	0.00	0.00	0.06	0.85	3.47	17.35	60.34	5.92	0.00
Dyffryn Dyfrdwy a Llangollen - Llangollen and the Vale of Dee	0.00	0.00	0.00	0.00	0.02	1.97	26.46	80.74	6.28	0.00
Dyffryn Gŵy a Choed Gwent - Wye Valley and Wentwood	0.00	0.00	0.00	0.11	0.67	6.52	48.23	162.08	12.6 9	0.00
Dyffryn Hafren - Severn Valley	0.00	0.00	0.00	0.03	1.87	15.55	91.10	94.60	0.76	0.00
Dyffryn Tefi - Teifi Valley	0.00	0.00	0.00	0.00	0.04	3.80	124.0 2	236.22	7.56	0.00
Dyffryn Tywi - Tywi Valley	0.00	0.00	0.00	0.25	2.42	12.37	80.37	144.42	4.80	0.00
Dyffrynnoedd a Bryniau Rheidol ac Ystwyth - Rheidol and Ystwyth Hills and Valleys	0.00	0.00	0.00	0.13	2.24	7.21	61.25	180.08	7.52	0.01

Name	1	2	3	4	5	6	7	8	9	10
Dyffrynnoedd Gwendraeth - Gwendraeth Vales	0.00	0.00	0.00	0.03	1.04	11.96	145.54	277.02	7.39	0.00
Dyffrynnoedd Gwy a Gwysg - Wye and Usk Vales	0.00	0.00	0.00	0.00	0.04	3.45	56.80	194.73	6.84	0.00
Dyffrynnoedd Taf a'r Cleddau - Taf and Cleddau Vales	0.00	0.00	0.00	0.00	1.54	38.99	470.30	415.37	4.17	0.00
Dyffrynnoedd y De - South Wales Valleys	0.00	0.00	0.01	2.75	59.64	225.10	649.91	621.23	17.27	0.00
Eryri	0.00	0.00	0.00	0.00	0.20	7.22	113.53	1352.54	681.14	0.61
Ffynhonnau Durol Canolbarth Cymru - The Spas and Wells of Central Wales	0.00	0.00	0.00	0.00	0.21	7.50	93.78	160.14	0.93	0.00
Glannau Aberdyfi - Aberdovey Coast	0.00	0.00	0.00	0.00	0.06	3.10	25.08	71.19	5.75	0.00
Glannau Dyfrdwy a Wrecsam - Deeside and Wrexham	0.00	0.01	1.67	10.94	37.46	104.96	180.35	78.05	1.98	0.00
Gwastadeddau Gwent - Gwent Levels	0.00	0.01	0.27	3.81	12.56	26.66	57.22	27.85	0.64	0.00
Gŵyr - Gower	0.00	0.00	0.00	0.00	0.00	1.46	22.95	89.20	61.41	0.99

Name	1	2	3	4	5	6	7	8	9	10
Hafan Milffwrdd - Milford Haven	0.00	0.00	0.00	0.67	9.69	40.35	85.48	78.96	12.5 5	0.00
Llŷn	0.00	0.00	0.00	0.00	0.00	0.14	10.48	189.45	40.1 3	0.01
Lwyfandir a Dyffrynnoedd Epynt - Epynt Plateau and Valleys	0.00	0.00	0.00	0.00	0.00	0.23	40.64	350.22	13.7 1	0.00
Maelor Saesneg - Maelor	0.00	0.00	0.00	0.01	0.38	8.28	78.30	84.55	1.53	0.00
Mynydd Hiraethog - Denbigh Moors	0.00	0.00	0.00	0.00	0.00	0.88	51.11	337.74	47.8 5	0.01
Pen Uchaf Dyffryn Gwy - Upper Wye Valley	0.00	0.00	0.00	0.00	0.00	0.43	15.57	49.85	2.37	0.00
Troedfryniau Penfro a Chaerfyrddin - Pembroke and Carmarthen Foothills	0.00	0.00	0.00	0.00	0.03	3.31	171.5 0	450.59	5.01	0.00
Uwchdiroedd Cymru - Cambrian Mountains	0.00	0.00	0.00	0.00	0.01	3.42	170.1 8	1414.7 1	379. 72	0.07
Y Berwyn - Berwyn	0.00	0.00	0.00	0.00	0.00	0.38	29.25	417.99	123. 29	0.08

Appendix 4 Full Results of Local Authority Areas Analysis

Percentage of Local Authority Areas in each category

Name	1	2	3	4	5	6	7	8	9	10
Abertawe - Swansea	0.00	0.01	0.33	1.94	5.64	13.01	22.43	35.08	21.21	0.34
Blaenau Gwent - Blaenau Gwent	0.00	0.00	0.00	0.09	3.45	20.61	41.41	33.84	0.60	0.00
Bro Morgannwg - the Vale of Glamorgan	0.00	0.00	0.12	1.01	4.55	16.44	48.24	28.21	1.41	0.01
Caerdydd - Cardiff	0.00	0.19	2.72	8.83	21.95	35.27	24.74	6.28	0.03	0.00
Caerffili - Caerphilly	0.00	0.00	0.00	0.20	6.95	20.65	44.70	27.13	0.37	0.00
Casnewydd - Newport	0.00	0.00	0.24	3.02	10.51	19.23	33.63	27.22	6.15	0.00
Castell-nedd Port Talbot - Neath Port Talbot	0.00	0.00	0.09	1.40	5.04	11.77	33.44	46.89	1.37	0.00
Conwy - Conwy	0.00	0.00	0.00	0.09	1.02	3.09	14.64	65.16	15.98	0.03
Gwynedd - Gwynedd	0.00	0.00	0.00	0.01	0.16	1.23	9.80	64.48	24.32	0.01
Merthyr Tudful - Merthyr Tydfil	0.00	0.00	0.00	0.47	7.94	21.36	42.39	23.74	4.10	0.00
Pen-y-bont ar Ogwr - Bridgend	0.00	0.02	0.40	1.61	7.22	19.48	37.43	31.85	2.00	0.00

Name	1	2	3	4	5	6	7	8	9	10
Powys - Powys	0.00	0.00	0.00	0.00	0.05	0.83	16.58	73.52	9.03	0.00
Rhondda Cynon Taf - Rhondda Cynon Taf	0.00	0.00	0.00	0.39	6.28	19.80	43.29	28.73	1.52	0.00
Sir Benfro - Pembrokeshire	0.00	0.00	0.00	0.04	0.64	4.44	33.07	54.73	7.08	0.00
Sir Ceredigion - Ceredigion	0.00	0.00	0.00	0.01	0.13	0.79	19.46	67.71	11.90	0.00
Sir Ddinbych - Denbighshire	0.00	0.00	0.00	0.01	0.44	2.87	23.01	66.82	6.85	0.00
Sir Fynwy - Monmouthshire	0.00	0.00	0.00	0.05	0.43	3.60	25.12	66.16	4.64	0.00
Sir Gaerfyrddin - Carmarthenshire	0.00	0.00	0.00	0.06	0.40	2.62	28.39	62.09	6.41	0.03
Sir y Fflint - Flintshire	0.00	0.00	0.33	1.52	4.54	15.45	38.10	37.88	2.18	0.00
Sir Ynys Môn - Isle of Anglesey	0.00	0.00	0.01	0.09	0.42	3.43	33.66	55.63	6.76	0.00
Tor-faen - Torfaen	0.00	0.00	0.00	0.21	4.18	17.74	35.00	41.52	1.35	0.00
Wrecsam - Wrexham	0.00	0.00	0.01	0.70	3.14	9.10	34.08	49.99	2.97	0.00

Area (km²) of Local Authority Areas in each category

Name	1	2	3	4	5	6	7	8	9	10
Abertawe - Swansea	0.00	0.04	1.39	8.13	23.66	54.58	94.09	147.14	88.96	1.44
Blaenau Gwent - Blaenau Gwent	0.00	0.00	0.00	0.09	3.75	22.41	45.02	36.79	0.66	0.00
Bro Morgannwg - the Vale of Glamorgan	0.00	0.00	0.41	3.43	15.47	55.86	163.90	95.84	4.79	0.04
Caerdydd - Cardiff	0.00	0.28	4.07	13.20	32.79	52.69	36.96	9.38	0.04	0.00
Caerffili - Caerphilly	0.00	0.00	0.00	0.57	19.28	57.27	124.01	75.26	1.03	0.00
Casnewydd - Newport	0.00	0.01	0.51	6.57	22.85	41.81	73.10	59.17	13.37	0.01
Castell-nedd Port Talbot - Neath Port Talbot	0.00	0.01	0.43	6.31	22.74	53.13	151.00	211.75	6.20	0.00
Conwy - Conwy	0.00	0.00	0.01	0.99	11.72	35.50	168.33	749.18	183.68	0.35
Gwynedd - Gwynedd	0.00	0.00	0.00	0.27	4.12	32.14	256.44	1687.96	636.54	0.29
Merthyr Tudful - Merthyr Tydfil	0.00	0.00	0.00	0.52	8.89	23.92	47.45	26.58	4.59	0.00
Pen-y-bont ar Ogwr - Bridgend	0.00	0.05	1.02	4.10	18.41	49.68	95.47	81.25	5.09	0.00
Powys - Powys	0.00	0.00	0.00	0.03	2.36	43.08	861.14	3819.55	468.97	0.10

Name	1	2	3	4	5	6	7	8	9	10
Rhondda Cynon Taf - Rhondda Cynon Taf	0.00	0.00	0.01	1.66	26.63	83.98	183.61	121.87	6.43	0.00
Sir Benfro - Pembrokeshire	0.00	0.00	0.00	0.67	10.48	73.22	545.70	903.04	116.83	0.04
Sir Ceredigion - Ceredigion	0.00	0.00	0.00	0.13	2.32	14.22	351.38	1222.79	214.91	0.06
Sir Ddinbych - Denbighshire	0.00	0.00	0.00	0.10	3.70	24.31	194.69	565.41	58.01	0.01
Sir Fynwy - Monmouthshire	0.00	0.00	0.02	0.46	3.84	31.85	222.49	585.99	41.12	0.00
Sir Gaerfyrddin - Carmarthenshire	0.00	0.00	0.10	1.58	9.73	63.83	692.56	1514.61	156.38	0.70
Sir y Fflint - Flintshire	0.00	0.01	1.62	7.44	22.22	75.64	186.48	185.41	10.68	0.00
Sir Ynys Môn - Isle of Anglesey	0.00	0.00	0.09	0.68	3.12	25.58	251.31	415.29	50.45	0.02
Tor-faen - Torfaen	0.00	0.00	0.00	0.27	5.28	22.38	44.14	52.37	1.70	0.00
Wrecsam - Wrexham	0.00	0.00	0.05	3.51	15.84	45.83	171.66	251.75	14.98	0.00

Appendix 5 Full Results of the 4 regions of Future Wales Analysis

Percentage of the 4 regions of Future Wales in each category

Name	1	2	3	4	5	6	7	8	9	10
Mid Wales	0.00	0.00	0.00	0.00	0.07	0.82	17.35	72.09	9.66	0.00
North	0.00	0.00	0.03	0.21	0.98	3.78	19.59	60.62	14.79	0.01
South East	0.00	0.01	0.21	1.09	5.55	15.56	36.46	39.14	1.97	0.00
South West	0.00	0.00	0.04	0.34	1.37	5.01	30.58	56.90	5.73	0.02

Area (km²) of the 4 regions of Future Wales in each category

Name	1	2	3	4	5	6	7	8	9	10
Mid Wales	0.00	0.00	0.00	0.15	4.65	57.18	1212.06	5035.37	674.92	0.15
North	0.00	0.01	1.77	12.96	60.30	233.15	1209.55	3743.51	913.55	0.65
South East	0.00	0.34	6.02	30.58	156.14	437.82	1025.95	1101.17	55.51	0.01
South West	0.00	0.04	1.89	16.57	66.04	241.12	1471.50	2738.16	275.84	1.15

Data Archive Appendix

Data outputs associated with this project are archived in [NRWDMSh^{https://cyfoethnaturiolcymru.sharepoint.com/:f:/r/teams/advice/Landscape/Im/Work%20Programme/1.%20Work%20plan,%20contracts,%20finance%202024-25/Tranquillity%20%26%20Place%20Theme%206/FINAL%20Outputs%20T%20%26%20P%20T6?csf=1&web=1}] on server-based storage at Natural Resources Wales.

The data archive contains:

- [A] The final report in Microsoft Word and Adobe PDF formats.
- [B] A full set of maps produced in JPEG format.
- [C] A set of raster files in ESRI and ASCII grid formats.
- [D] An Excel spreadsheet containing the zonal statistics analysis.

Metadata for this project is publicly accessible through Natural Resources Wales' Data Discovery Service <https://metadata.naturalresources.wales/geonetwork/srv> (English version) and <https://metadata.cyfoethnaturiol.cymru/geonetwork/cym/> (Welsh Version). The metadata is held as record no [NRW_DS161335].

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