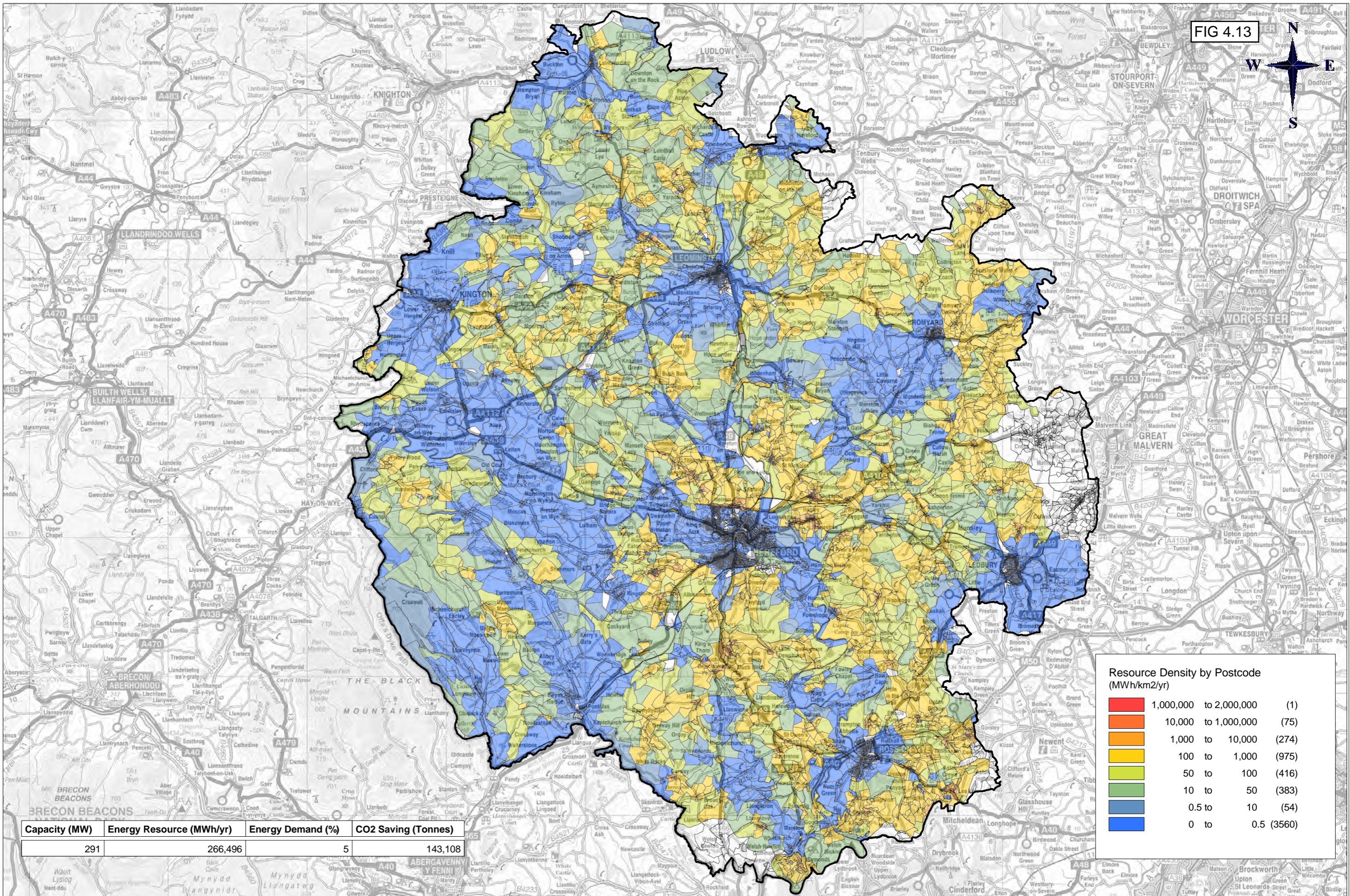


FIG 4.13



**Resource Density by Postcode (MWh/km<sup>2</sup>/yr)**

■	1,000,000 to 2,000,000	(1)
■	10,000 to 1,000,000	(75)
■	1,000 to 10,000	(274)
■	100 to 1,000	(975)
■	50 to 100	(416)
■	10 to 50	(383)
■	0.5 to 10	(54)
■	0 to 0.5	(3560)

Capacity (MW)	Energy Resource (MWh/yr)	Energy Demand (%)	CO2 Saving (Tonnes)
291	266,496	5	143,108

Scale: 1:250,000 @ A3

Wardell Armstrong International  
Wheat Jane, Balduh, Truro, Cornwall, TR3 6EH  
Tel: +44 (0) 1872 560738  
Fax: +44 (0) 1872 561079  
w@wardell-armstrong.com

**Drawing Notes:**

Wind resource energy values have been based on the following benchmarks:  
 The wind speeds used were taken from the NOABL database at reference height of 10m and 25m. These were adjusted using a wind speed up calculation to estimate the wind speed at 6m  
 Installed capacity was estimated based on the assumption that domestic, commercial and industrial buildings could support a 1.5kW, 6kW, 15kW turbine dependent on building classification (See Appendix for building classification and representative turbine used)  
 Individual buildings were identified using the LLP database. Addresses with the same coordinates were counted as single buildings.  
 Total energy output was derived by matching the wind speed for each turbine with either the Swift 1.5kW, Proven 6kW or Proven 15kW energy curve. Areas with wind speeds below 4.5m/s were excluded from the study  
 Energy output for each turbine varied based on the wind speed at the relevant hub height above ground level which was linked back with the turbine energy curve  
 The thematic map (colouring) represents the potential energy production (MWh/yr) or energy resource density (MWh/km<sup>2</sup>/yr)  
 The % shown on the map represent the contribution to Herefordshire's electricity demand in 2007 - 1037.8450553 GWh/yr and total energy demand in 2007 - 5176.62131103582 GWh/y (DECC)  
 The carbon saving was calculated based on 0.537kg of carbon / kilowatt hour of electricity produced (DEFRA).

Registered Office: Sir Henry Doulton, Forge Lane, Etnusa, Stoke-on-Trent, ST1 5BD, United Kingdom

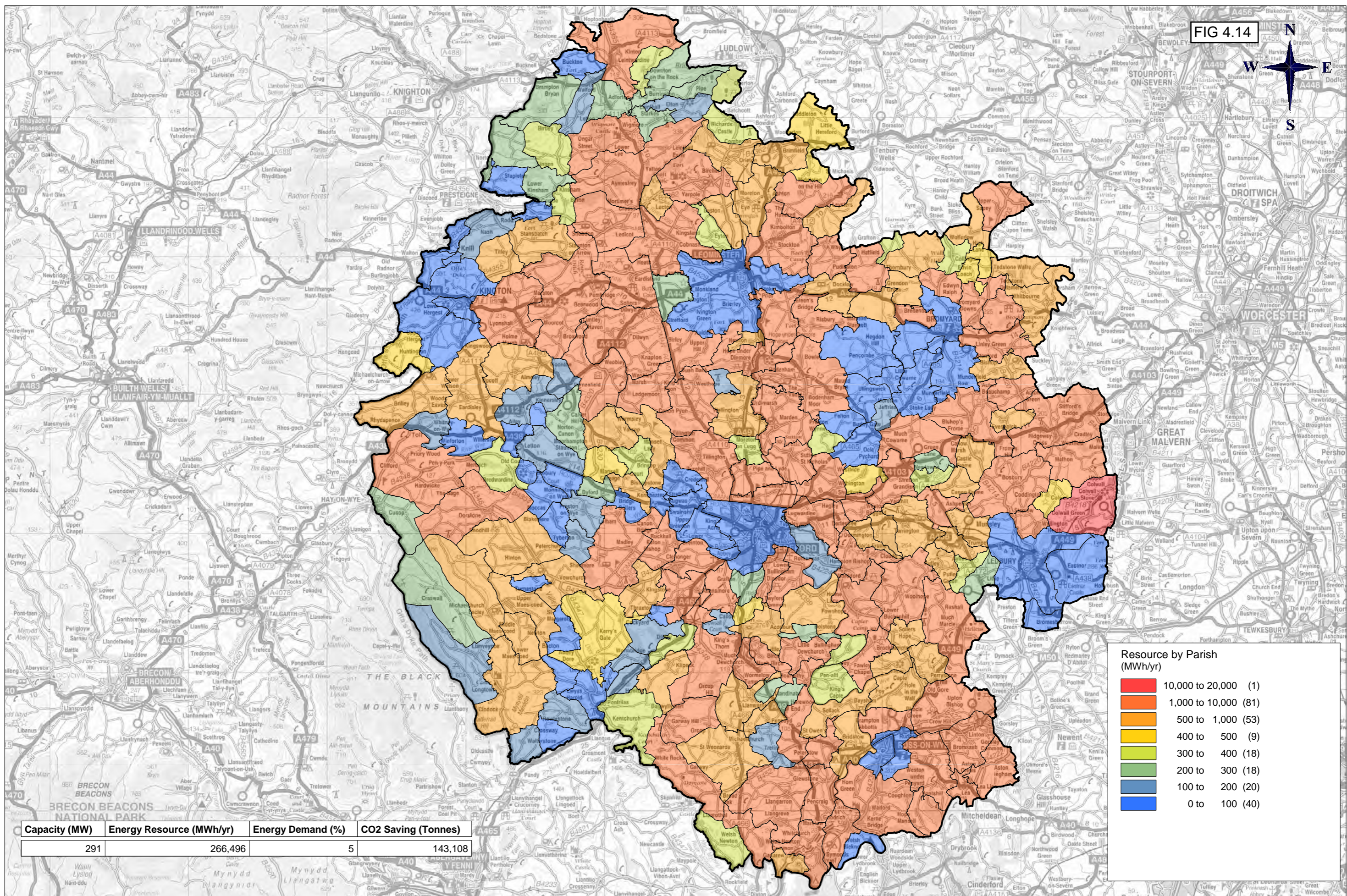
Figure 4.13  
 Herefordshire Renewable Energy Study  
 Small Scale Wind  
 Resource Density by Postcode

Project Ref: 42-0347	Dwg. Ref: SSWD_PC_RD_420347
Drawn: C. Bines	Date: 28 JUL 2010
Checked: S. Clarke	Date: 28 JUL 2010

Contains Ordnance Survey data © Crown copyright and database right 2010



FIG 4.14



**Resource by Parish (MWh/yr)**

- 10,000 to 20,000 (1)
- 1,000 to 10,000 (81)
- 500 to 1,000 (53)
- 400 to 500 (9)
- 300 to 400 (18)
- 200 to 300 (18)
- 100 to 200 (20)
- 0 to 100 (40)

Scale: 1:250 000 @ A3

Wardell  
armstrong

Herefordshire  
Council

Wardell Armstrong International  
Wheat Jane, Balduh, Truro,  
Cornwall, TR3 6EH

Tel: +44 (0) 1872 560738  
Fax: +44 (0) 1872 561079  
wail@wardell-armstrong.com

**Notes:**

Wind resource energy values have been based on the following benchmarks:  
 The wind speeds used were taken from the NOABL database at reference height of 10m and 25m. These were adjusted using a wind speed up calculation to estimate the wind speed at 6m  
 Installed capacity was estimated based on the assumption that domestic, commercial and industrial buildings could support a 1.5kW, 6kW, 15kW turbine dependent on building classification (See Appendix for building classification and representative turbine used)  
 Individual buildings were identified using the LPG database. Addresses with the same coordinates were counted as single buildings.  
 Total energy output was derived by matching the wind speed for each turbine with either the Swift 1.5kW, Proven 6kW or Proven 15kW energy curve. Areas with wind speeds below 4.5m/s were excluded from the study  
 Energy output for each turbine varied based on the wind speed at the relevant hub height above ground level which was linked back with the turbine energy curve  
 The thematic map (colouring) represents the potential energy production (MWh/yr) or energy resource density (MWh/km<sup>2</sup>/yr)  
 The % shown on the map represent the contribution to Herefordshire's electricity demand in 2007 - 5176.62131103582 GWh/y (DECC)  
 The carbon saving was calculated based on 0.537kg of carbon / kilowatt hour of electricity produced (DEFRA)

Project Ref: 348600E - 245900N Map Ref: Landranger Map:149 - OS 100K Ref: S0

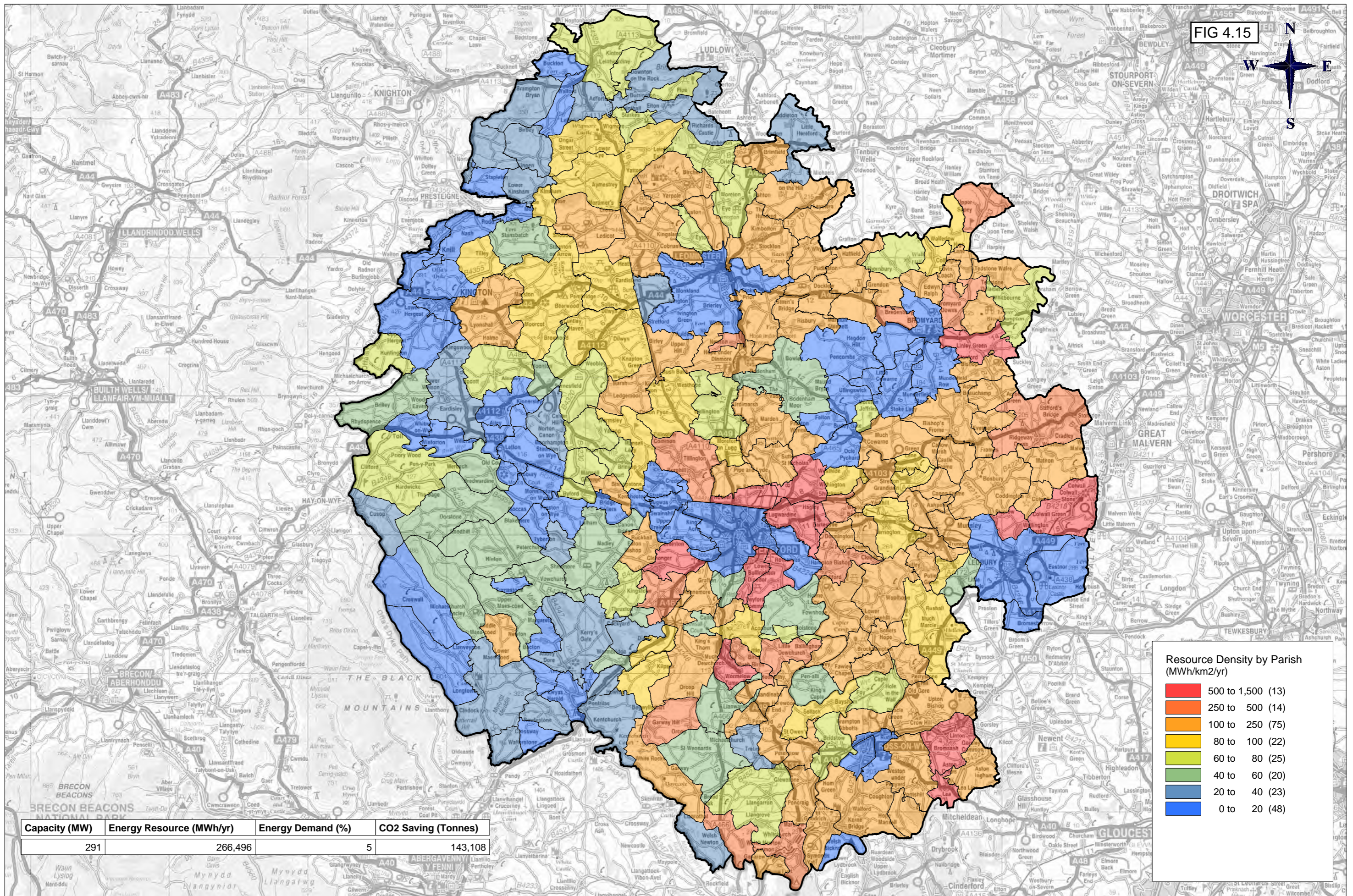
Figure 4.14  
 Herefordshire Renewable Energy Study  
 Small Scale Wind  
 Resource by Parish

Project Ref: 42-0347  
 Drawn: C. Bines  
 Checked: S. Clarke

Project Ref: SSWD\_PSH\_R\_420347  
 Date: 28 JUL 2010  
 Date: 28 JUL 2010



FIG 4.15



**Resource Density by Parish (MWh/km2/yr)**

Red	500 to 1,500 (13)
Orange	250 to 500 (14)
Yellow	100 to 250 (75)
Light Green	80 to 100 (22)
Green	60 to 80 (25)
Light Blue	40 to 60 (20)
Dark Blue	20 to 40 (23)
Blue	0 to 20 (48)

Capacity (MW)	Energy Resource (MWh/yr)	Energy Demand (%)	CO2 Saving (Tonnes)
291	266,496	5	143,108

Scale: 1:250,000 @ A3

Wardell Armstrong International  
Wheat Jane, Baldhu, Truro,  
Cornwall, TR3 6EH

Tel: +44 (0) 1872 560738  
Fax: +44 (0) 1872 561079  
wail@wardell-armstrong.com

**Notes:**

Wind resource energy values have been based on the following benchmarks:  
 The wind speeds used were taken from the NOABL database at reference height of 10m and 25m. These were adjusted using a wind speed up calculation to estimate the wind speed at 6m  
 Installed capacity was estimated based on the assumption that domestic, commercial and industrial buildings could support a 1.5kW, 6kW, 15kW turbine dependent on building classification (See Appendix for building classification and representative turbine used)  
 Individual buildings were identified using the LLPG database. Addresses with the same coordinates were counted as single buildings.  
 Total energy output was derived by matching the wind speed for each turbine with either the Swift 1.5kW, Proven 6kW or Proven 15kW energy curve. Areas with wind speeds below 4.5m/s were excluded from the study  
 Energy output for each turbine varied based on the wind speed at the relevant hub height above ground level which was linked back with the turbine energy curve  
 The thematic map (colouring) represents potential energy production (MWh/yr) or energy density (MWh/km2/yr)  
 The %s shown on the map represent the contribution to Herefordshire's electricity demand in 2007 - 5176.62131103582 GWh/y (DECC)  
 The carbon saving was calculated based on 0.537kg of carbon / kilowatt hour of electricity produced (DEFRA)

WGS Ref: 348600E : 245900N Map Ref: Landranger Map:149 - OS 100K Ref: S0

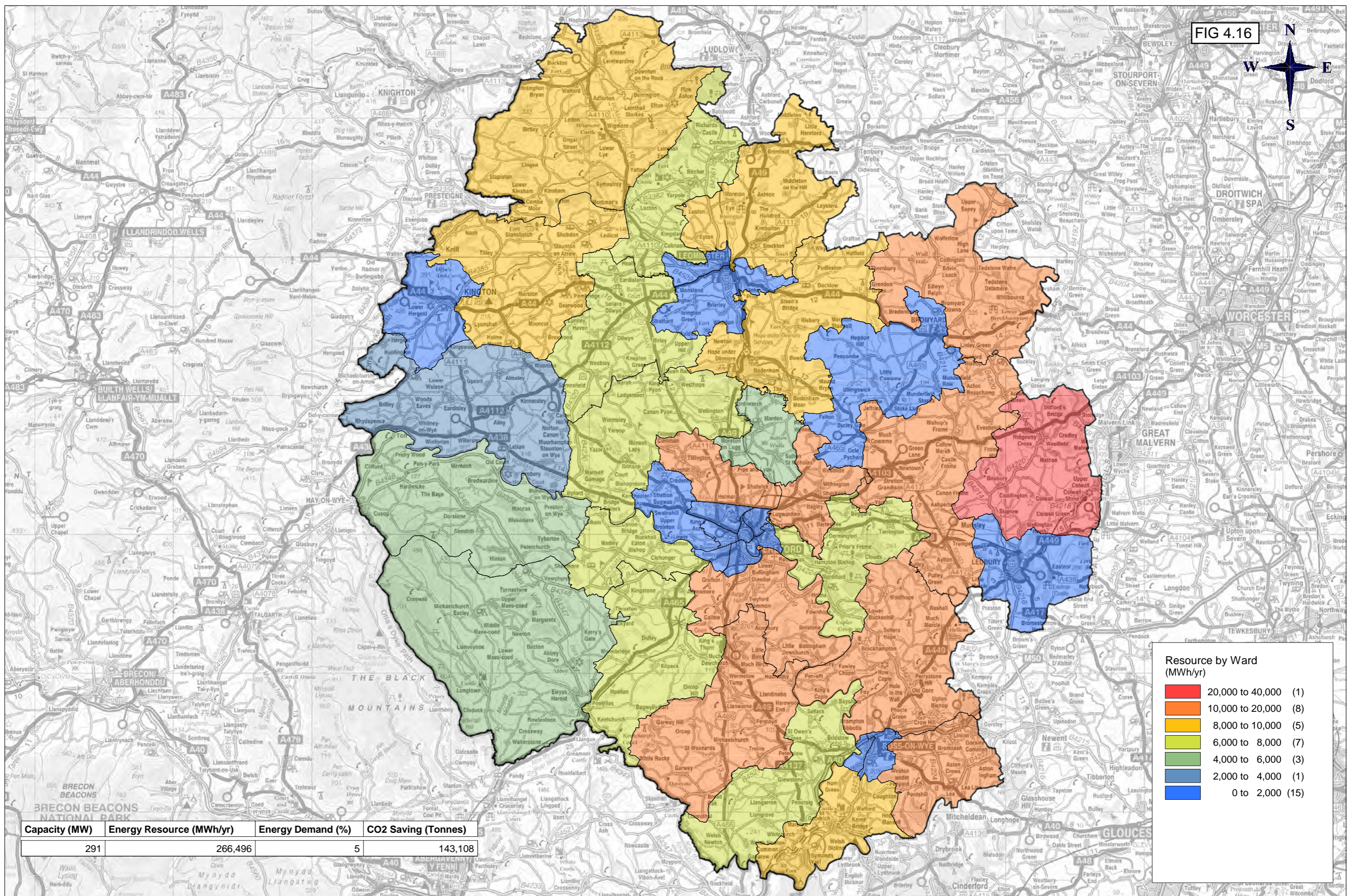
Figure 4.15  
 Title: Herefordshire Renewable Energy Study  
 Small Scale Wind  
 Resource Density by Parish

Project Ref: 42-0347  
 Drawn: C. Bines  
 Checked: S. Clarke

Project Ref: SSWD\_PSH\_RD\_420347  
 Date: 28 JUL 2010  
 Date: 28 JUL 2010



FIG 4.16



**Resource by Ward (MWh/yr)**

Red	20,000 to 40,000	(1)
Orange	10,000 to 20,000	(8)
Yellow	8,000 to 10,000	(5)
Light Green	6,000 to 8,000	(7)
Green	4,000 to 6,000	(3)
Blue-Green	2,000 to 4,000	(1)
Blue	0 to 2,000	(15)

Capacity (MW)	Energy Resource (MWh/yr)	Energy Demand (%)	CO2 Saving (Tonnes)
291	266,496	5	143,108

Scale: 1:250 000 @ A3

Wardell Armstrong International  
Wheat Jane, Balduh, Truro,  
Cornwall, TR3 6EH

Tel: +44 (0) 1872 560738  
Fax: +44 (0) 1872 561079  
wail@wardell-armstrong.com

**Drawing Notes:**

Wind resource energy values have been based on the following benchmarks:  
 The wind speeds used were taken from the NOABL database at reference height of 10m and 25m. These were adjusted using a wind speed up calculation to estimate the wind speed at 6m  
 Installed capacity was estimated based on the assumption that domestic, commercial and industrial buildings could support a 1.5kW, 6kW, 15kW turbine dependent on building classification (See Appendix for building classification and representative turbine used)  
 Individual buildings were identified using the LPG database. Addresses with the same coordinates were counted as single buildings.  
 Total energy output was derived by matching the wind speed for each turbine with either the Swift 1.5kW, Proven 6kW or Proven 15kW energy curve. Areas with wind speeds below 4.5m/s were excluded from the study  
 Energy output for each turbine varied based on the wind speed at the relevant hub height above ground level which was linked back with the turbine energy curve  
 The thematic map (colouring) represents potential energy production (MWh/yr) or energy resource density (MWh/yr/km<sup>2</sup>)  
 The %s shown on the map represent the contribution to Herefordshire's electricity demand in 2007 - 1037.8450553 GWh/yr and total energy demand in 2007 - 5176.62131103582 GWh/yr (DECC)  
 The carbon saving was calculated based on 0.537kg of carbon / kilowatt hour of electricity produced (DEFRA)

Client: **Herefordshire Council**

Project Ref: 348600E : 245900N  
Map Ref: Landranger Map:149 - OS 100K Ref: SO

Figure 4.16  
Herefordshire Renewable Energy Study  
Small Scale Wind  
Resource by Ward

Project Ref: 42-0347	Dwg. Ref: SSWD_WD_R_420347
Drawn: C. Bines	Date: 28 JUL 2010
Checked: S. Clarke	Date: 28 JUL 2010

Copyright: Performance Surveys Ltd © Crown copyright and database right 2010