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Landscape Sensitivity to Wind and Solar Energy Development in North Dorset District

Prepared by LUC
April 2014

Planning & EIA
Design
Landscape Planning
Landscape Management
Ecology
Mapping & Visualisation

LUC LONDON
43 Chalton Street
London NW1 1JD
T 020 7383 5784
F 020 7383 4798
london@landuse.co.uk

Offices also in:
Bristol
Glasgow
Edinburgh



FS 566056
EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD

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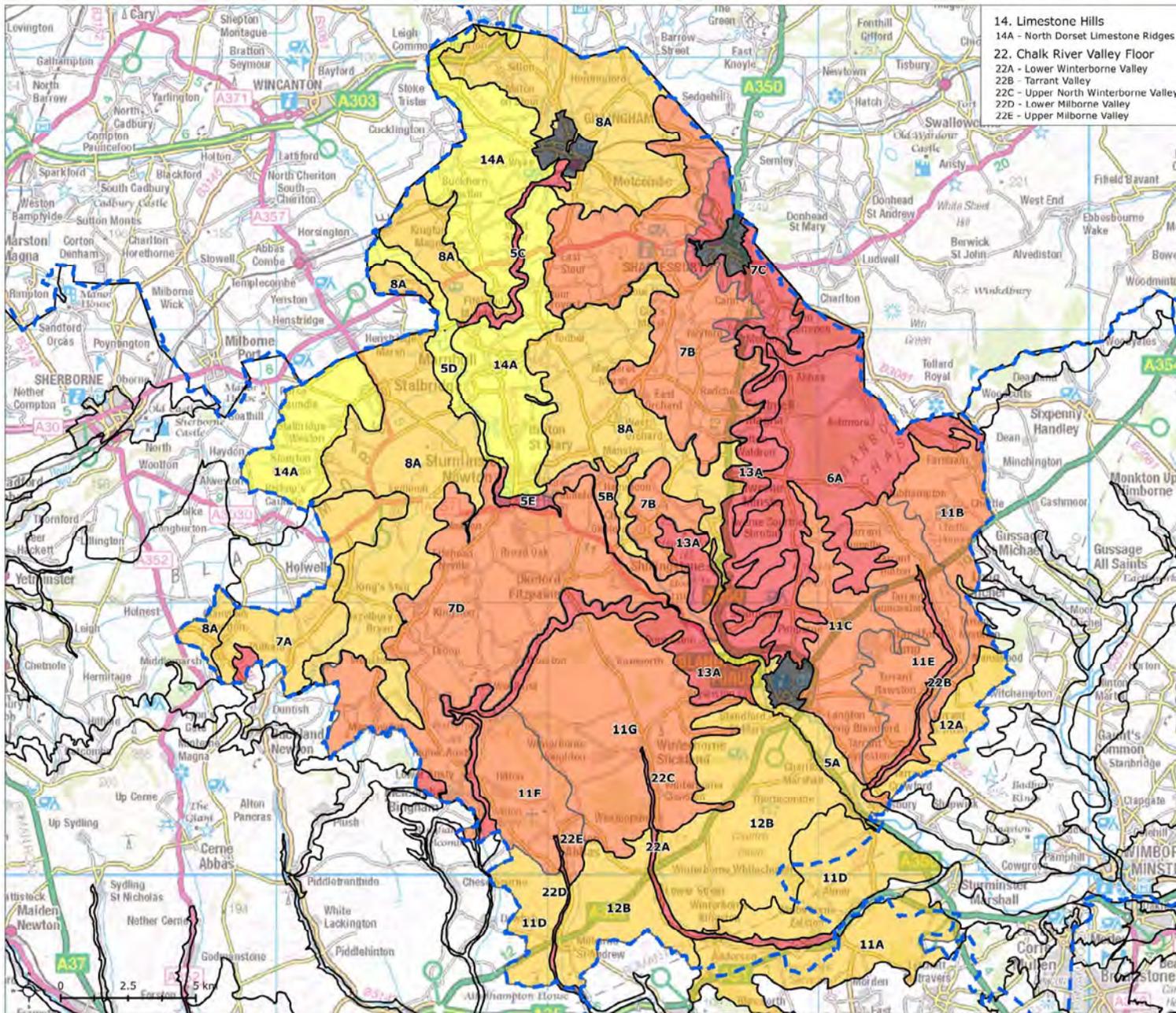
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8 Wind Energy Sensitivity Summary

- 8.1 The maps shown in **Figures 15 – 25** illustrate the sensitivity ratings set out in **Section 7**, with a separate map for each combination of turbine height category and cluster size category.
- 8.2 In summary it can be stated that North Dorset District has a generally high level of sensitivity to wind energy development. In every part of the District sensitivity to turbines of over 65m to tip – is judged to be ‘high’. Sensitivity to developments of more than 4 turbines is also high in all areas.
- 8.3 Even for smaller scales of development, there are no locations where sensitivity is assessed as being ‘low’. Sensitivity ratings reflect the high quality and value associated with the chalk landscapes that dominate the southern and eastern parts of the District, with over a third of the land area falling within either the Cranborne Chase and West Wiltshire Downs AONB or the Dorset AONB. This is in line with Natural England’s view that the presence of landscapes with statutory protection (i.e. National Parks and AONBs) will substantially reduce the degree to which wind energy development can be accommodated¹⁶.
- 8.4 Remoteness, tranquillity, historic rural character and the distinctive open, undulating downs with strong, uncluttered skylines are ‘special qualities’ applicable to both AONBs which could be diminished by wind energy development. Where a landscape is valued for its open, uncluttered character, as is the case in the chalk downs, a small, fast-moving turbine can in some locations have an effect on the perceptual qualities of that landscape that belies its size. The Cranborne Chase and West Wiltshire Downs AONB is also notable for its chalk river valley settlements, and development in the vicinity of these valleys could affect their intimate character.
- 8.5 A moderate level of sensitivity to the smallest category of turbine size – 15-35m to tip – is judged to apply to the larger scale, flatter landscapes of Blackmore Vale, but larger turbines are sensitive in these locations primarily because of the ‘human’ scale of land cover and traditional pastoral land use but also in many locations because landscapes can be considered to form part of the setting of one or other of the AONBs, contributing to their special qualities.
- 8.6 The least sensitive locations are the broader river valley areas or chalk downs outside of AONBs where modern development has had some impact on character, and the settled landscapes that do not have a small landform and land use scale.
- 8.7 Whilst this sensitivity assessment provides an initial indication of the relative landscape sensitivities of different areas to wind energy development, it should not be interpreted as a definitive statement on the suitability of a certain location for a particular development proposal. It is not a replacement for detailed studies on specific siting and design, and all developments will need to be assessed on their individual merits.
- 8.8 This assessment does not consider cumulative impact of wind energy developments, other than within the guidance notes in **Section 10** below, and it is important to note that, however low the sensitivity rating for an individual turbine or cluster, the cumulative effect of a proliferation of turbines can be significant, regardless of turbine size. Cumulative assessment of any specific wind energy proposal on landscape character and qualities will be a key aspect of the development process.

¹⁶ As set out in the 2010 report *Making Space for Renewable Energy: Natural England’s Approach to Assessing On-Shore Wind Energy Development* (Catalogue Code: NE254), table 2, page 11.



- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

North Dorset Landscape Sensitivity Assessment

Figure 15
Sensitivity - Single Turbine - 15-35 Metres to Blade Tip

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

- Landscape Character Types and Areas**
- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
 - 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
 - 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
 - 8. Clay Vale
 - 8A - Blackmore Vale
 - 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
 - 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
 - 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

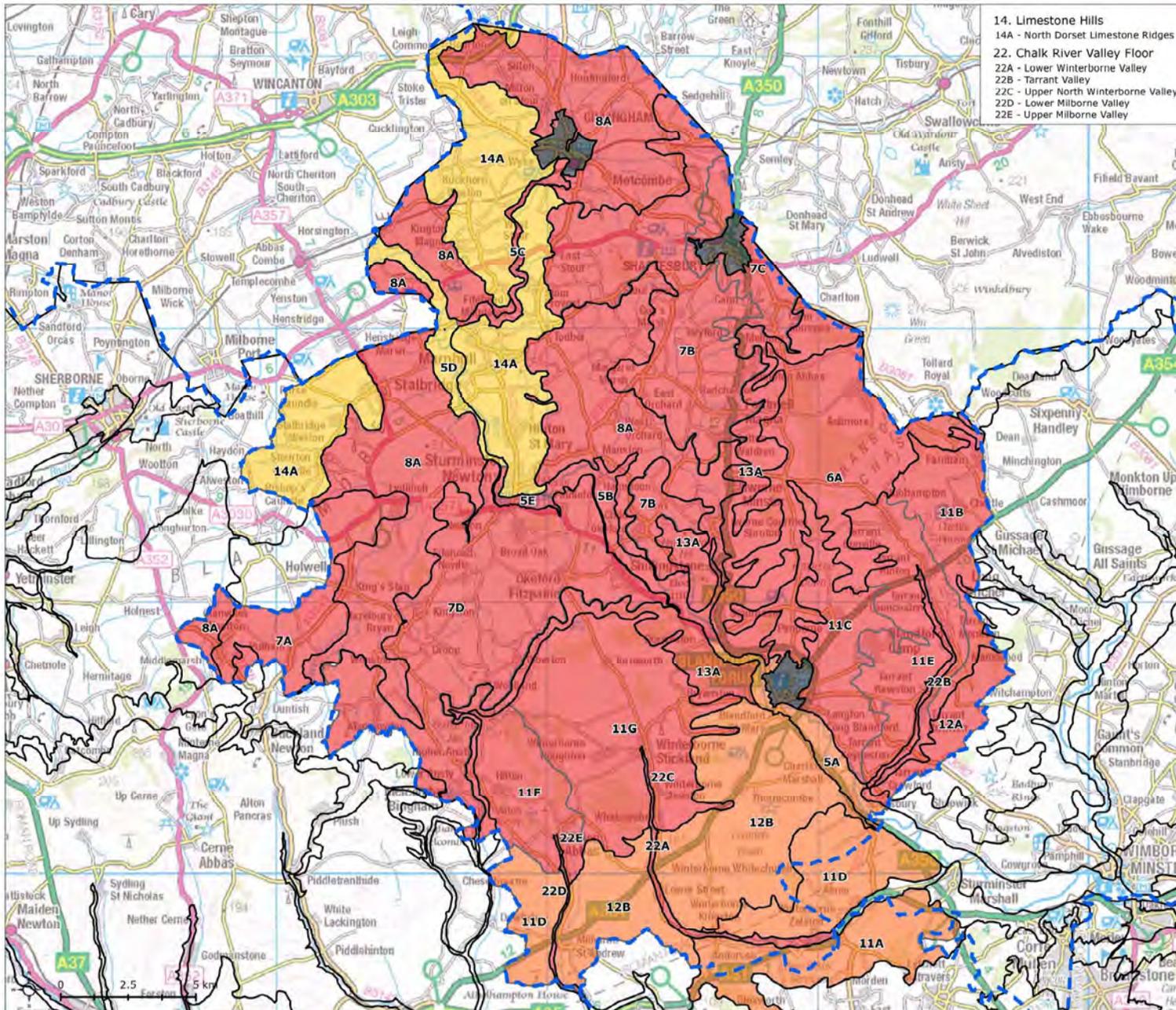
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North Dorset Landscape Sensitivity Assessment

Figure 16

Sensitivity - Single Turbine - 36-65 Metres to Blade Tip

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

- Landscape Character Types and Areas**
- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
 - 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
 - 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
 - 8. Clay Vale
 - 8A - Blackmore Vale
 - 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
 - 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
 - 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

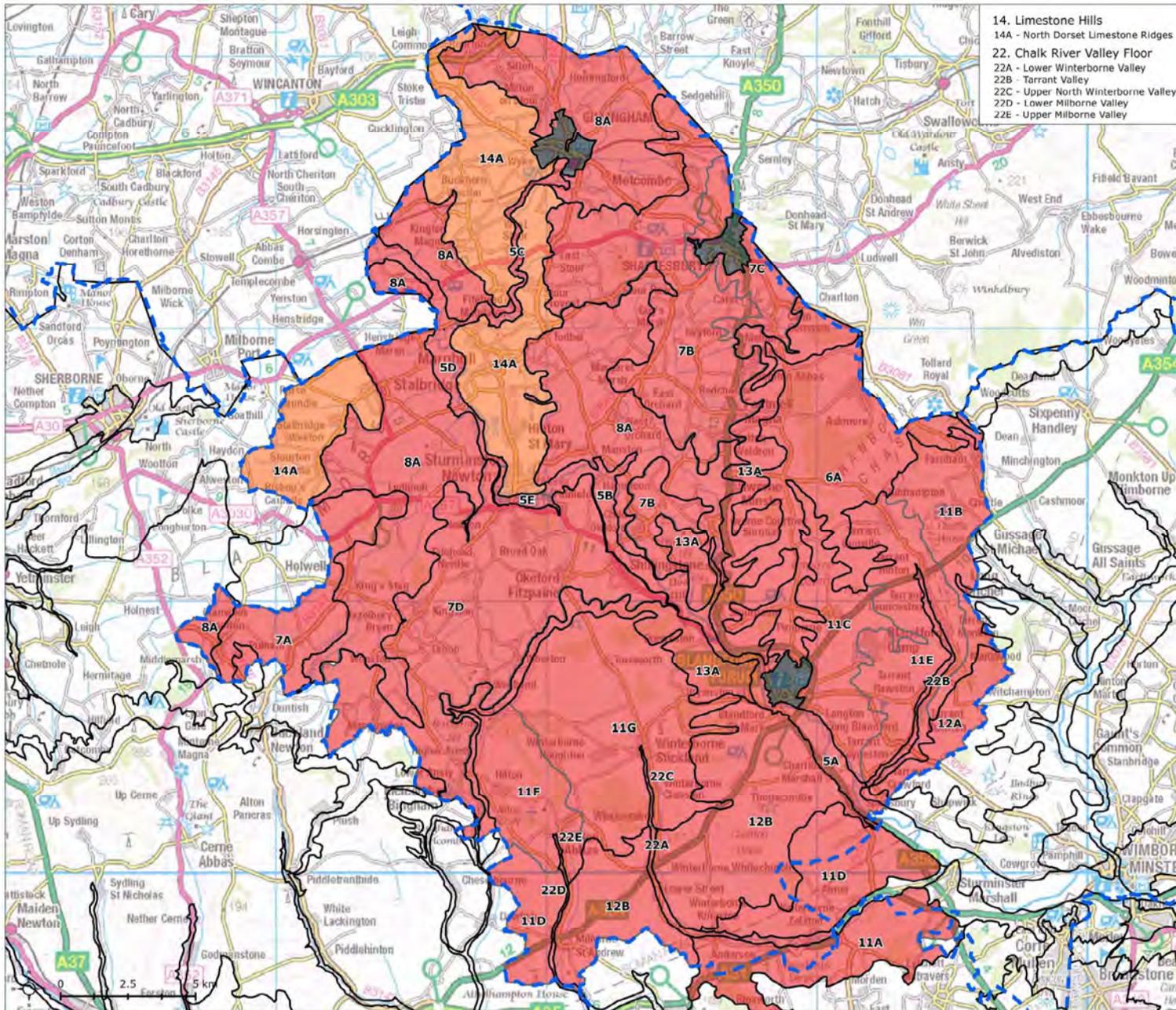
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North Dorset Landscape Sensitivity Assessment

Figure 17

Sensitivity - Single Turbine - 66-99 Metres to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries

- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
- 8. Clay Vale
 - 8A - Blackmore Vale
- 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

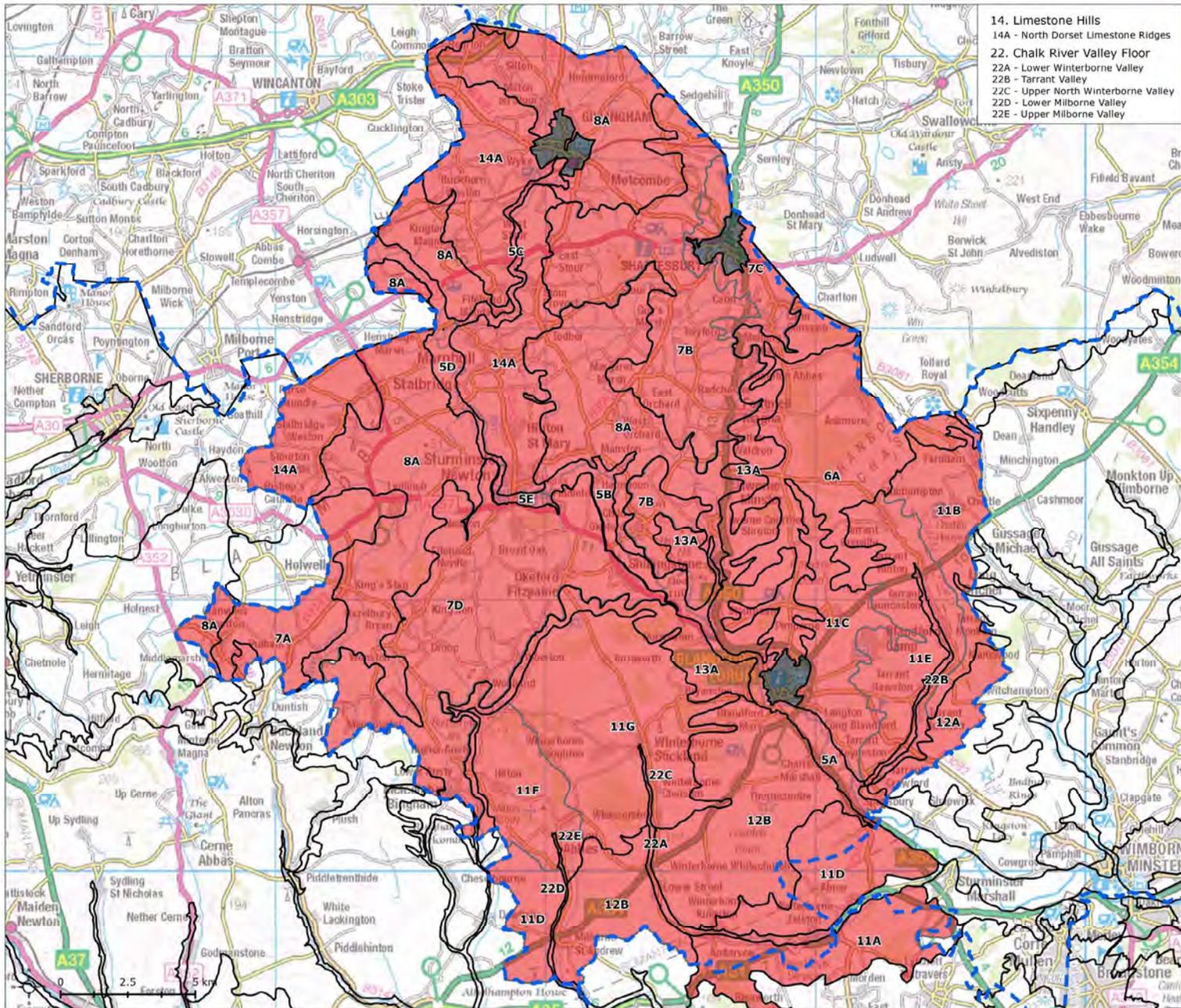
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North Dorset Landscape Sensitivity Assessment

Figure 18

Sensitivity - Single Turbine - 100 Metres or More to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries

- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
- 8. Clay Vale
 - 8A - Blackmore Vale
- 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

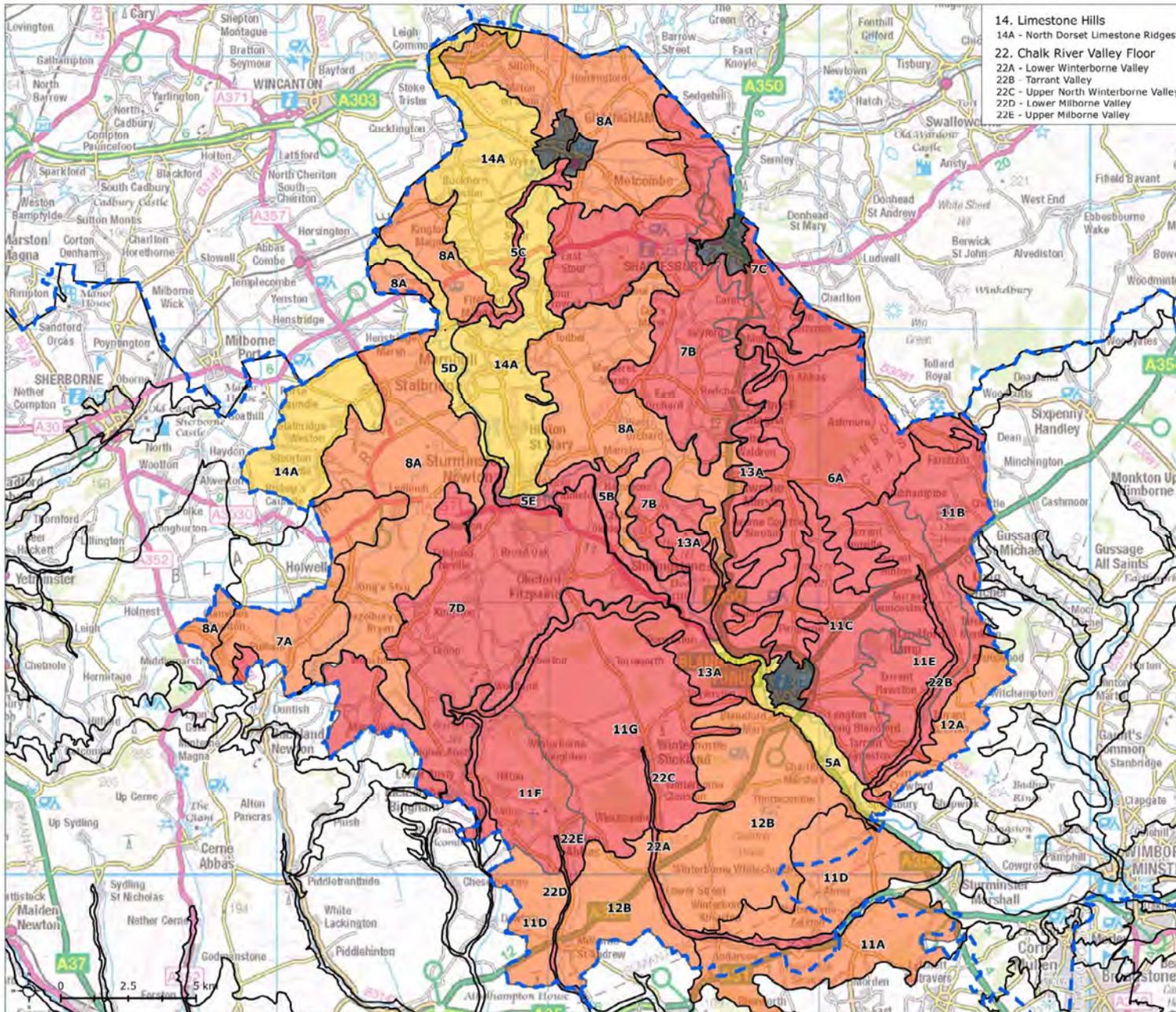
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North Dorset Landscape Sensitivity Assessment

Figure 19
Sensitivity - 2-4 Turbines - 15-35 Metres to Blade Tip

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

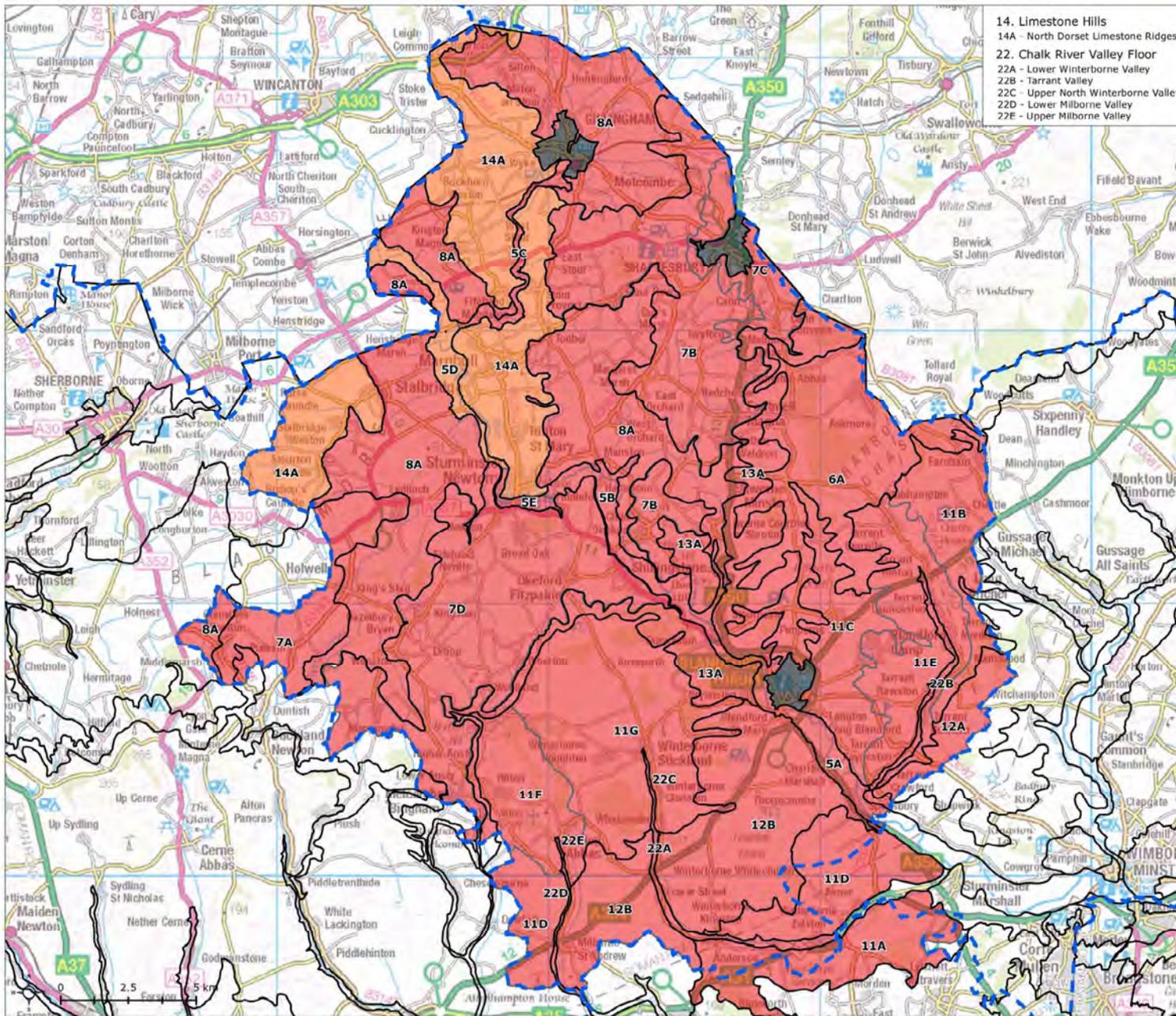
- Landscape Character Types and Areas**
- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
 - 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
 - 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
 - 8. Clay Vale
 - 8A - Blackmore Vale
 - 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbecroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
 - 12. Open Chalk Downland
 - 12A - Chettle/Abbecroft Downs
 - 12B - South Blandford Downs
 - 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

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North Dorset Landscape Sensitivity Assessment

Figure 20

Sensitivity - 2-4 Turbines - 36-65 Metres to Blade Tip

District boundaries
 LCT boundaries
 LCA boundaries

Sensitivity
 High
 Moderate-high
 Moderate
 Moderate-low
 Low
 Urban

Landscape Character Types and Areas

5. Valley Pasture
 5A - Mid Stour Valley
 5B - Upper Stour Valley: South of Gillingham
 5C - Upper Stour Valley: North of Sturminster Newton
 5D - Upper Stour Valley: Sturminster Newton to Durweston
 5E - Upper Stour Valley: Sturminster Newton

6. Wooded Chalk Downland
 6A - Cranborne Chase Wooded Chalk Downland

7. Rolling Vales
 7A - Blackmore Vale
 7B - North Blackmore Rolling Vales
 7C - Shaftesbury Greensand Ridges
 7D - South Blackmore Rolling Vales

8. Clay Vale
 8A - Blackmore Vale

11. Chalk Valley & Downland
 11A - Bloxworth/Charborough Downs
 11B - Chettle/Abbeycroft Downs
 11C - East Blandford/Pimperne Downs
 11D - South Blandford Downs
 11E - Tarrant Valley
 11F - Upper Milborne Valley
 11G - Upper North Winterborne Valley

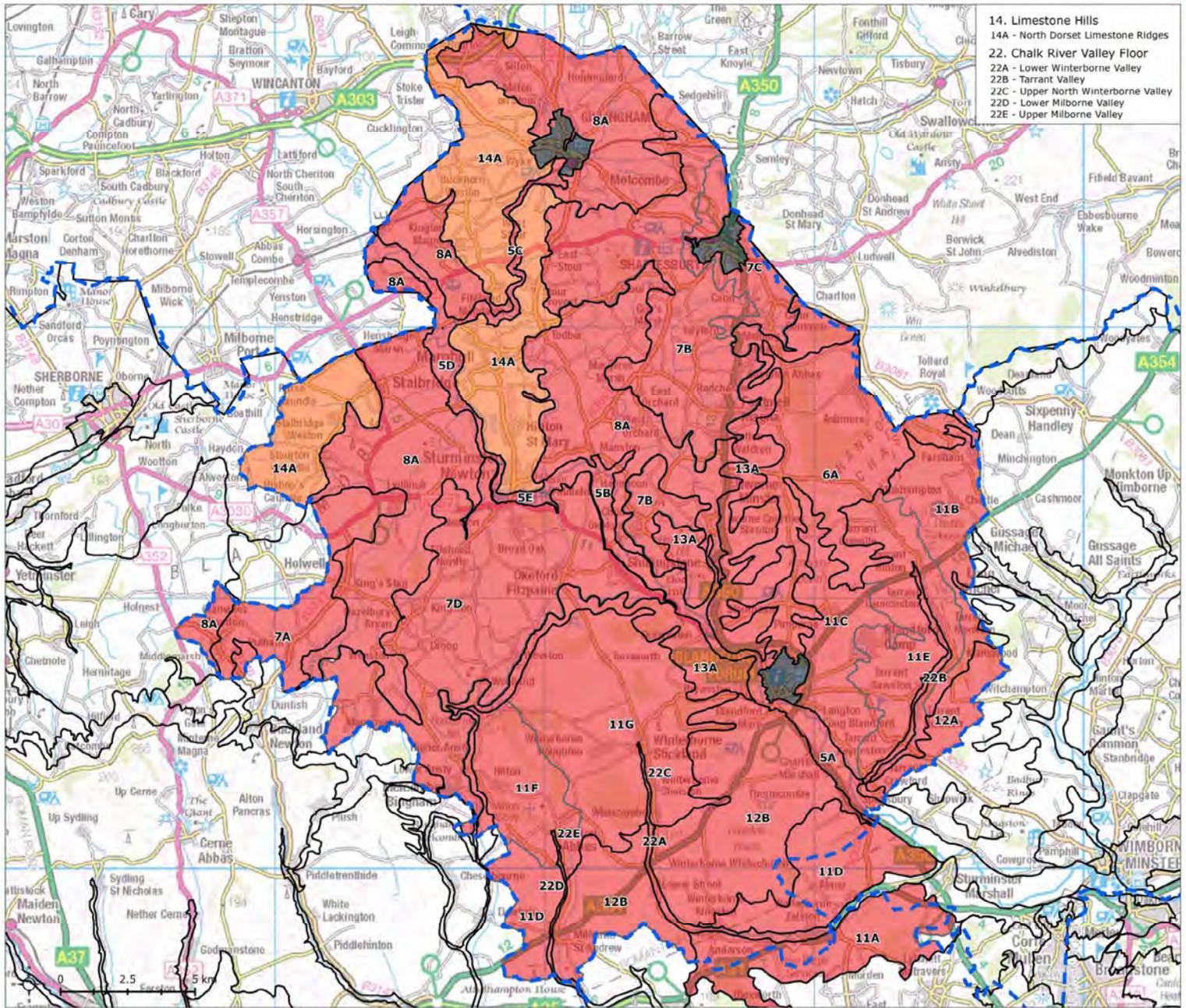
12. Open Chalk Downland
 12A - Chettle/Abbeycroft Downs
 12B - South Blandford Downs

13. Chalk Ridge/Escarpment
 13A - North Dorset Chalk Escarpment

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- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

North Dorset Landscape Sensitivity Assessment

Figure 21
Sensitivity - 2-4 turbines - 66-99 Metres to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries
- Sensitivity**
- High
- Moderate-high
- Moderate
- Moderate-low
- Low
- Urban

- Landscape Character Types and Areas**
- 5. Valley Pasture
- 5A - Mid Stour Valley
- 5B - Upper Stour Valley: South of Gillingham
- 5C - Upper Stour Valley: North of Sturminster Newton
- 5D - Upper Stour Valley: Sturminster Newton to Durweston
- 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
- 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
- 7A - Blackmore Vale
- 7B - North Blackmore Rolling Vales
- 7C - Shaftesbury Greensand Ridges
- 7D - South Blackmore Rolling Vales
- 8. Clay Vale
- 8A - Blackmore Vale
- 11. Chalk Valley & Downland
- 11A - Bloxworth/Charborough Downs
- 11B - Chettle/Abbeycroft Downs
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- 12A - Chettle/Abbeycroft Downs
- 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
- 13A - North Dorset Chalk Escarpment

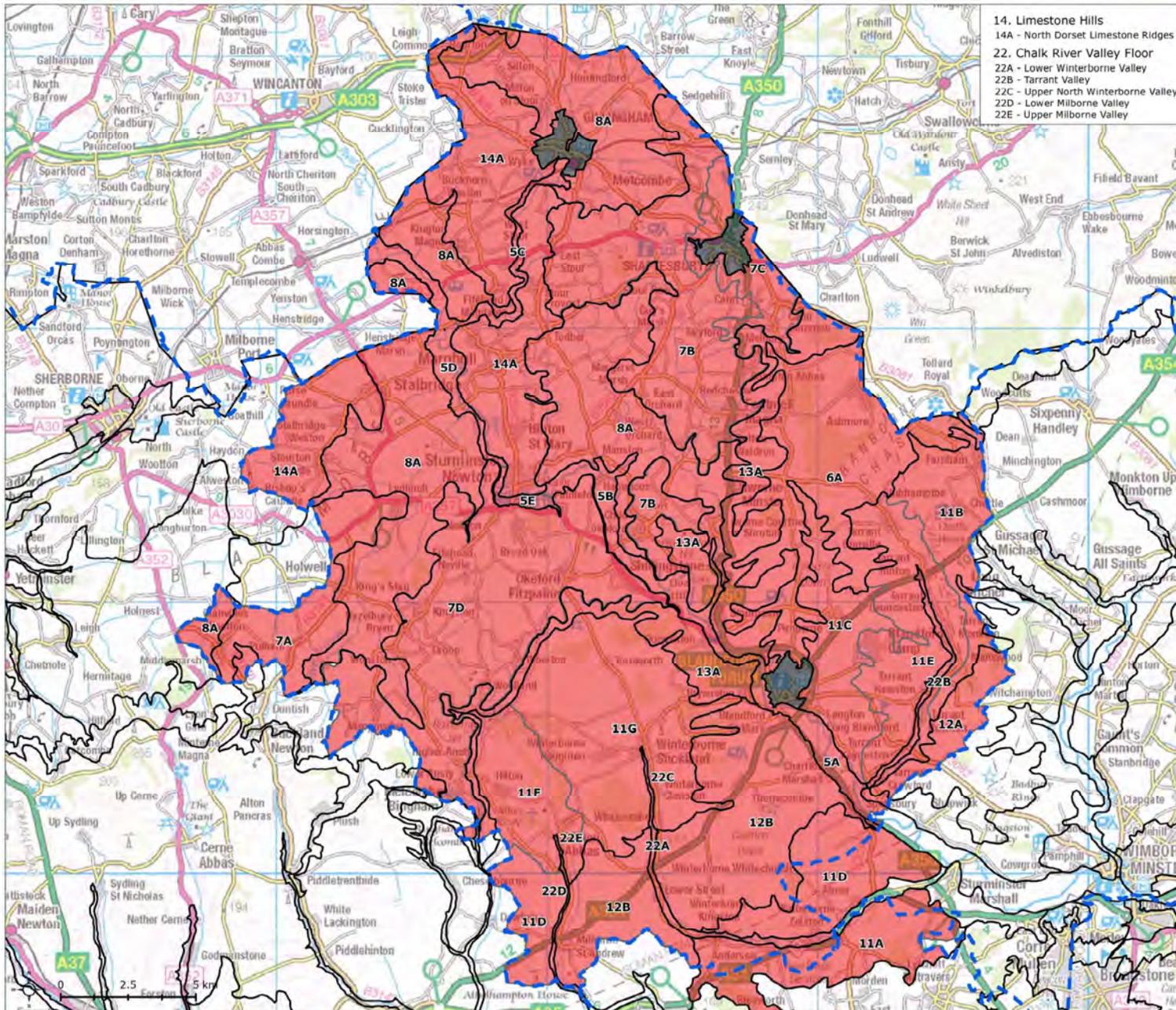
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North Dorset Landscape Sensitivity Assessment

- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

Figure 22

Sensitivity - 2-4 Turbines - 100 Metres or More to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries

Sensitivity

- High
- Moderate-high
- Moderate
- Moderate-low
- Low
- Urban

Landscape Character Types and Areas

- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
- 8. Clay Vale
 - 8A - Blackmore Vale
- 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbecroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
 - 12A - Chettle/Abbecroft Downs
 - 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

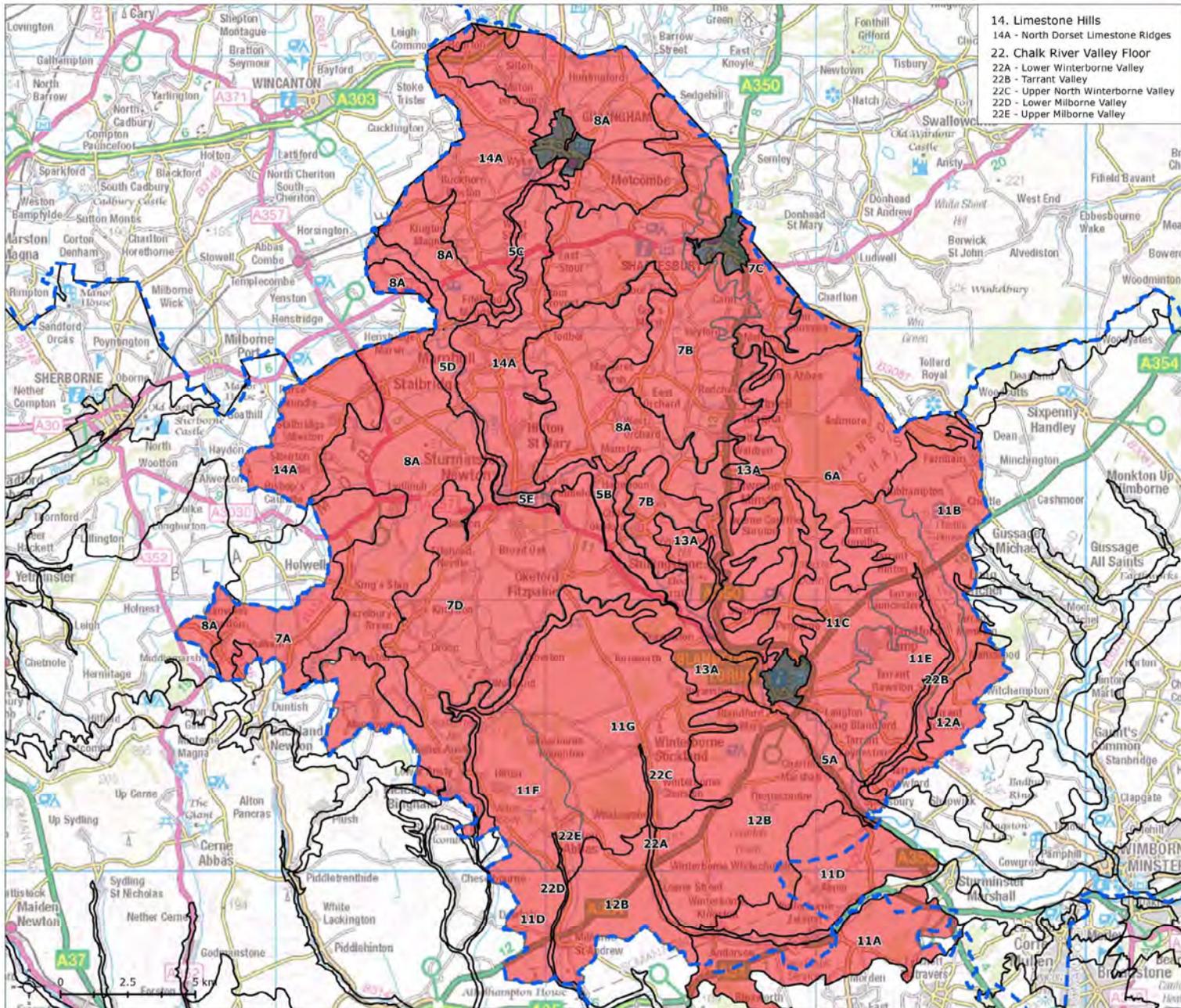
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North Dorset Landscape Sensitivity Assessment

Figure 23

Sensitivity - 5 or more turbines - 36-65 Metres to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries

- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
- 8. Clay Vale
 - 8A - Blackmore Vale
- 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Primper Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

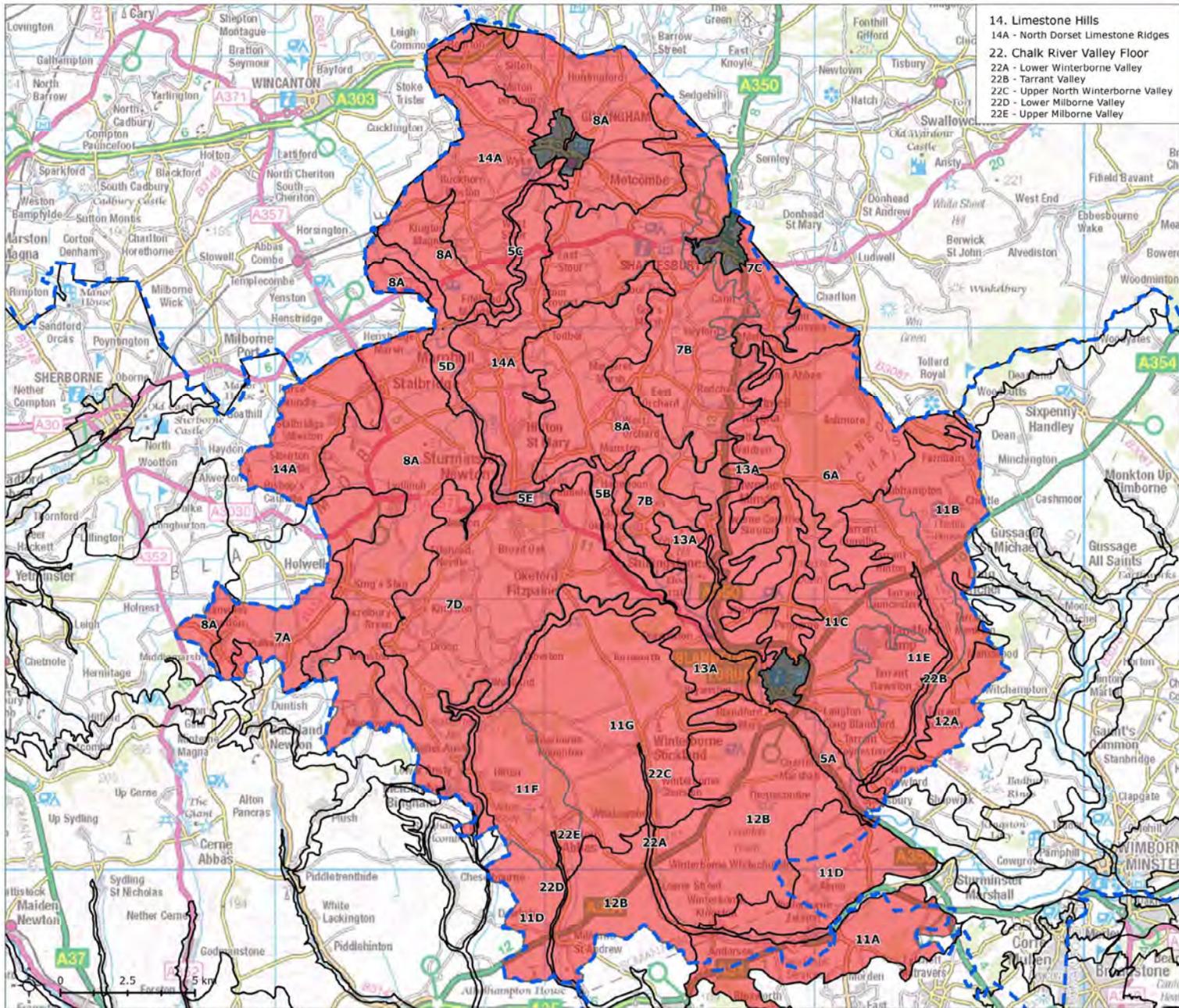
Map Scale @ A4: 1:200,000



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LUC LDR 5864-01_046_North_Dorset_Context_Sensitivity_CB_12/03/2014



North Dorset Landscape Sensitivity Assessment

- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

Figure 24

Sensitivity - 5 or More Turbines - 66-99 Metres to Blade Tip

- District boundaries
- LCT boundaries
- LCA boundaries

- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
- 5A - Mid Stour Valley
- 5B - Upper Stour Valley: South of Gillingham
- 5C - Upper Stour Valley: North of Sturminster Newton
- 5D - Upper Stour Valley: Sturminster Newton to Durweston
- 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
- 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
- 7A - Blackmore Vale
- 7B - North Blackmore Rolling Vales
- 7C - Shaftesbury Greensand Ridges
- 7D - South Blackmore Rolling Vales
- 8. Clay Vale
- 8A - Blackmore Vale
- 11. Chalk Valley & Downland
- 11A - Bloxworth/Charborough Downs
- 11B - Chettle/Abbeycroft Downs
- 11C - East Blandford/Primper Downs
- 11D - South Blandford Downs
- 11E - Tarrant Valley
- 11F - Upper Milborne Valley
- 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
- 12A - Chettle/Abbeycroft Downs
- 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
- 13A - North Dorset Chalk Escarpment

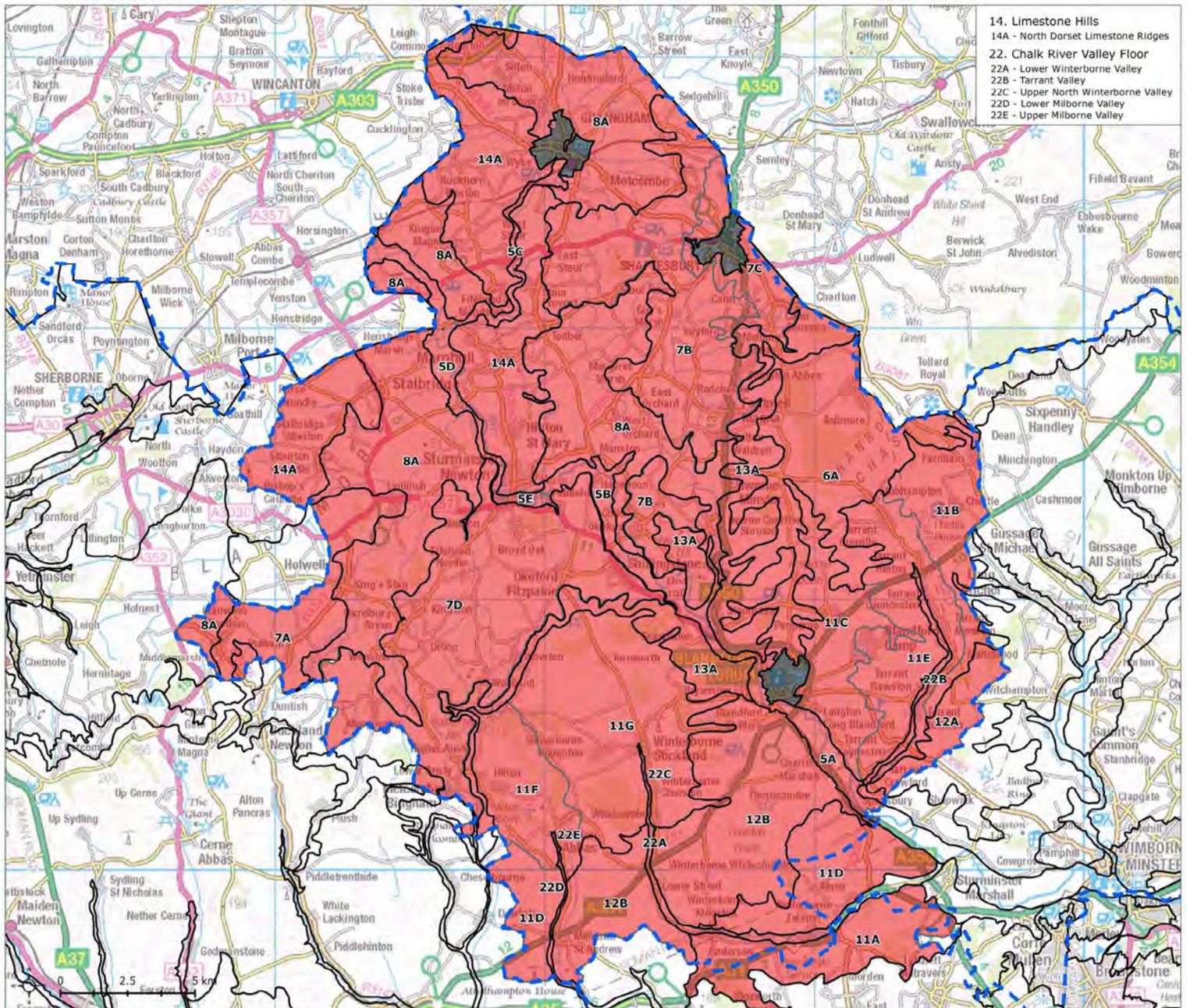
Map Scale @ A4: 1:200,000



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LUC LDR 5864-01_047_North_Dorset_Context_Sensitivity_CC 12/03/2014



North Dorset Landscape Sensitivity Assessment

- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

Figure 25

Sensitivity - 5 or More Turbines - 100 Metres or More to Blade Tip

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
- 5A - Mid Stour Valley
- 5B - Upper Stour Valley: South of Gillingham
- 5C - Upper Stour Valley: North of Sturminster Newton
- 5D - Upper Stour Valley: Sturminster Newton to Durweston
- 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
- 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
- 7A - Blackmore Vale
- 7B - North Blackmore Rolling Vales
- 7C - Shaftesbury Greensand Ridges
- 7D - South Blackmore Rolling Vales
- 8. Clay Vale
- 8A - Blackmore Vale
- 11. Chalk Valley & Downland
- 11A - Bloxworth/Charborough Downs
- 11B - Chettle/Abbeycroft Downs
- 11C - East Blandford/Pimperne Downs
- 11D - South Blandford Downs
- 11E - Tarrant Valley
- 11F - Upper Milborne Valley
- 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
- 12A - Chettle/Abbeycroft Downs
- 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
- 13A - North Dorset Chalk Escarpment

Map Scale @ A4: 1:200,000



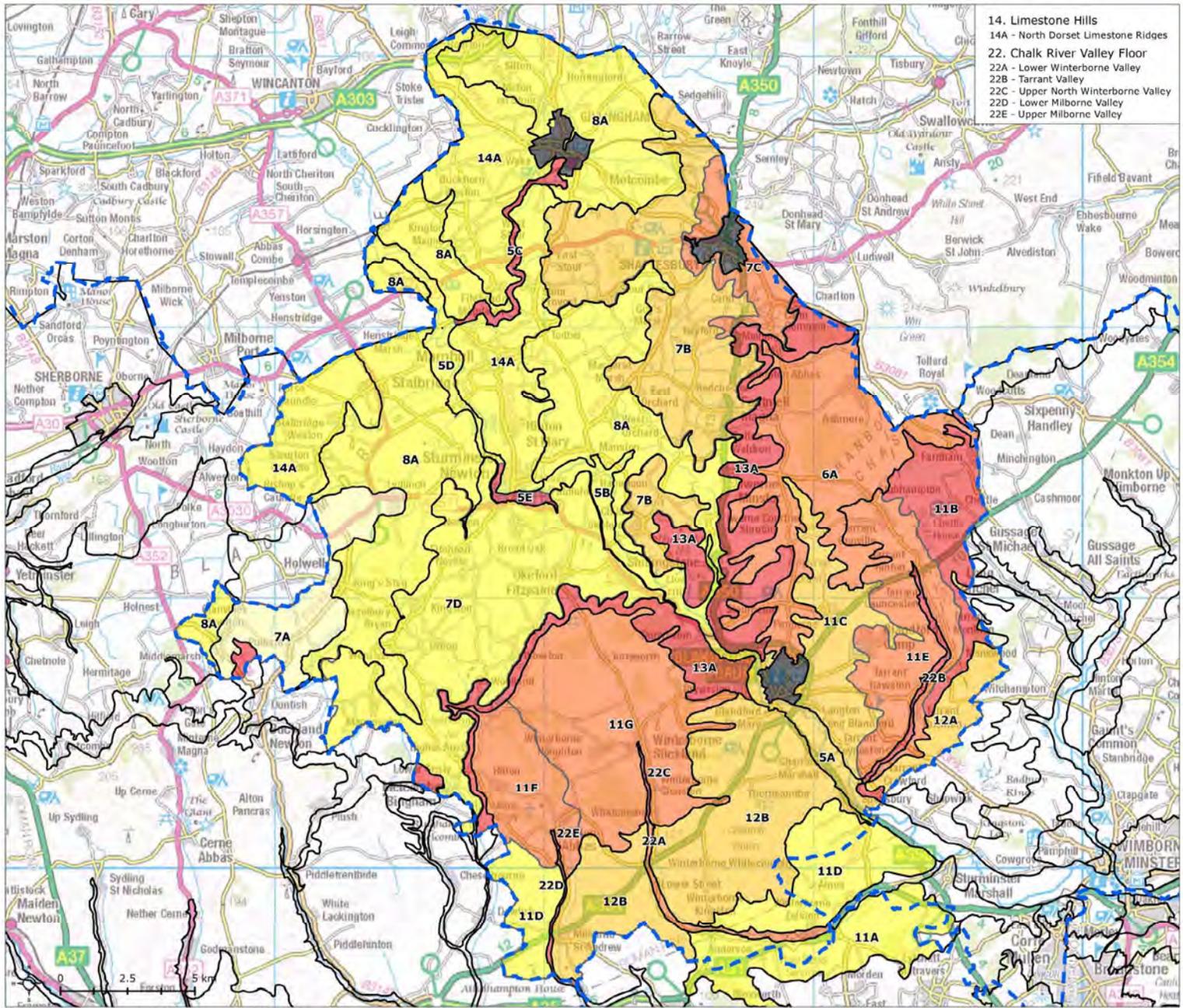
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LUC LDN 3064-01_048_North_Dorset_Context_Sensitivity_CD 12/03/2014

9 Solar PV Energy Sensitivity Summary

- 9.1 The maps shown in **Figures 26 – 29** illustrate the sensitivity ratings set out in **Section 7**, with a separate map for each scale of solar PV development.
- 9.2 In summary it can be stated that North Dorset District typically has a moderately high level of sensitivity to large-scale solar PV development. Scale of landform and landscape pattern are important considerations with regard to size of development, and where the scale of these elements is potentially large enough to be of lower sensitivity the quality and character of those landscapes is often such that major solar schemes would be likely to have a significant adverse impact.
- 9.3 This is particularly the case in the chalk landscapes that have AONB designation' a number of the 'special qualities' of both the Cranborne Chase and West Wiltshire Downs AONB and the Dorset AONB, notably their remote, tranquil and historic rural character, could be diminished by solar PV development. Where the chalk downs are closer to the Stour Valley, less remote from modern development and major roads and less undulating in character, sensitivity is reduced.
- 9.4 In chalk areas, sensitivity to small-scale solar PV is typically still relatively high because developments are likely to stand out in the open downland landscape, but in more enclosed landscapes to the north and west of the District there is lower sensitivity to developments which fit in with the scale of the landscape. In Blackmore Vale the small scale of land cover pattern elevates sensitivity to larger developments but in landscapes with a larger field pattern and some areas of arable cultivation on relatively even terrain, such as in parts of the Limestone Ridges LCT, there is slightly lower sensitivity to larger schemes.
- 9.5 Solar development will usually result in a change in land use for the duration of its operation, (which planning approval usually limits to 25 years, so where the current land cover or land use is more valued, such as heathlands or traditional pastures in river valleys, there will be a higher level of sensitivity than is the case where land has been converted to arable or devalued through industrial activity (e.g. quarrying).
- 9.6 Whilst this sensitivity assessment provides an initial indication of the relative landscape sensitivities of different areas to solar PV energy development, it should not be interpreted as a definitive statement on the suitability of a certain location for a particular development proposal. It is not a replacement for detailed studies on specific siting and design, and all developments will need to be assessed on their individual merits.
- 9.7 This assessment does not consider cumulative impact of solar PV energy developments, other than within the guidance notes in **Section 11** below, and it is important to note that, however low the sensitivity rating for an individual development, the cumulative effect of a proliferation of schemes can be significant, regardless of size. Cumulative assessment of any specific solar PV energy proposal on landscape character and qualities will be a key aspect of the development process.



North Dorset Landscape Sensitivity Assessment

Figure 26
Sensitivity - Solar Farm - Up to 1 Hectare

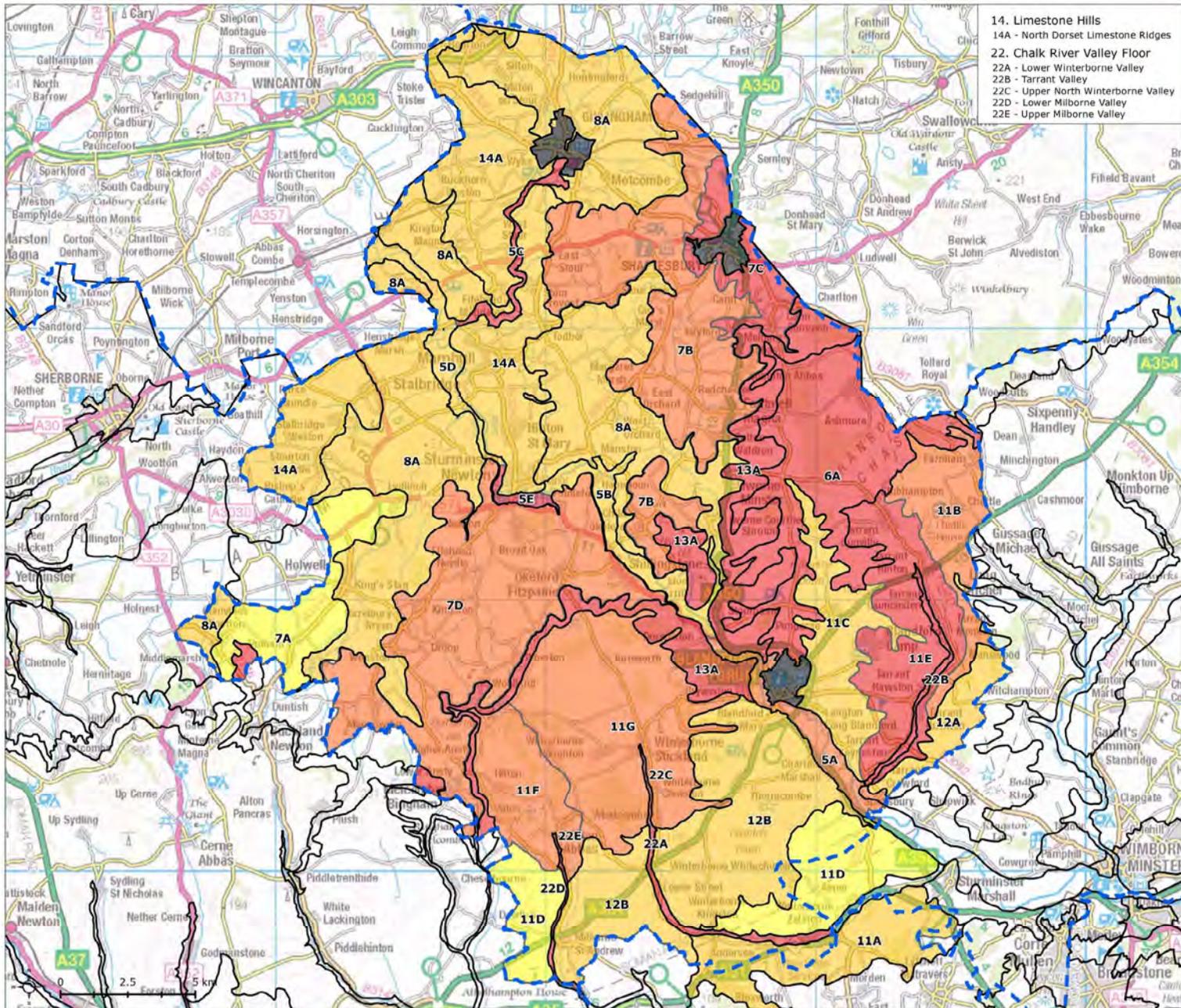
- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

- Landscape Character Types and Areas**
- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
 - 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
 - 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
 - 8. Clay Vale
 - 8A - Blackmore Vale
 - 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
 - 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
 - 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

Map Scale @ A4: 1:200,000



Source: North Dorset District Council



North Dorset Landscape Sensitivity Assessment

Figure 27

Sensitivity - Solar Farm - 1 to 10 Hectares

- District boundaries
- LCT boundaries
- LCA boundaries

Sensitivity

- High
- Moderate-high
- Moderate
- Moderate-low
- Low
- Urban

Landscape Character Types and Areas

- 5. Valley Pasture**
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland**
 - 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales**
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
- 8. Clay Vale**
 - 8A - Blackmore Vale
- 11. Chalk Valley & Downland**
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Primper Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland**
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment**
 - 13A - North Dorset Chalk Escarpment

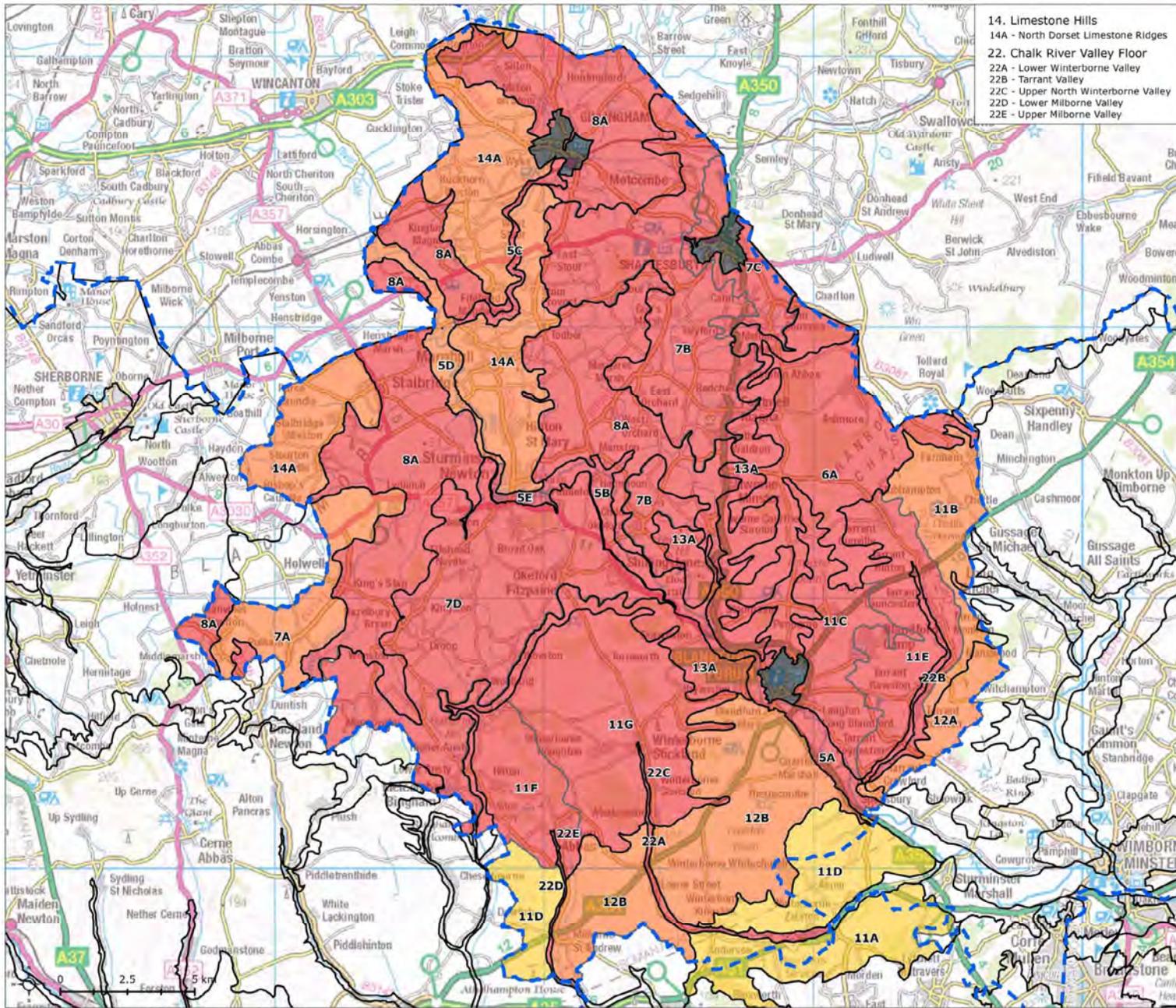
Map Scale @ A4: 1:200,000



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North Dorset Landscape Sensitivity Assessment

- 14. Limestone Hills
- 14A - North Dorset Limestone Ridges
- 22. Chalk River Valley Floor
- 22A - Lower Winterborne Valley
- 22B - Tarrant Valley
- 22C - Upper North Winterborne Valley
- 22D - Lower Milborne Valley
- 22E - Upper Milborne Valley

Figure 28

Sensitivity - Solar Farm - 10 to 30 Hectares

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

Landscape Character Types and Areas

- 5. Valley Pasture
- 5A - Mid Stour Valley
- 5B - Upper Stour Valley: South of Gillingham
- 5C - Upper Stour Valley: North of Sturminster Newton
- 5D - Upper Stour Valley: Sturminster Newton to Durweston
- 5E - Upper Stour Valley: Sturminster Newton
- 6. Wooded Chalk Downland
- 6A - Cranborne Chase Wooded Chalk Downland
- 7. Rolling Vales
- 7A - Blackmore Vale
- 7B - North Blackmore Rolling Vales
- 7C - Shaftesbury Greensand Ridges
- 7D - South Blackmore Rolling Vales
- 8. Clay Vale
- 8A - Blackmore Vale
- 11. Chalk Valley & Downland
- 11A - Bloxworth/Charborough Downs
- 11B - Chettle/Abbeycroft Downs
- 11C - East Blandford/Pimperne Downs
- 11D - South Blandford Downs
- 11E - Tarrant Valley
- 11F - Upper Milborne Valley
- 11G - Upper North Winterborne Valley
- 12. Open Chalk Downland
- 12A - Chettle/Abbeycroft Downs
- 12B - South Blandford Downs
- 13. Chalk Ridge/Escarpment
- 13A - North Dorset Chalk Escarpment

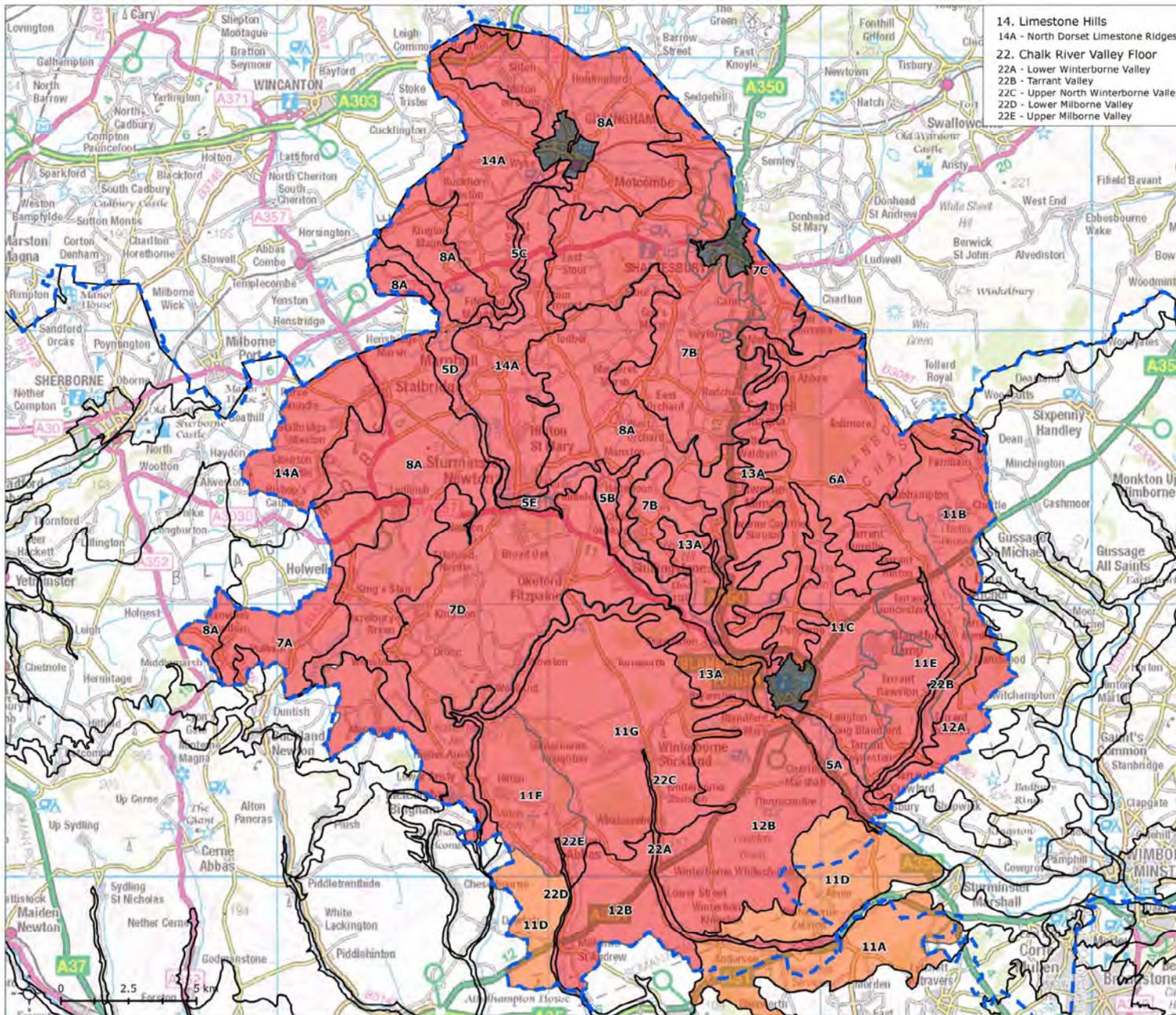
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North Dorset Landscape Sensitivity Assessment

Figure 29
Sensitivity - Solar Farm - Over 30 Hectares

- District boundaries
 - LCT boundaries
 - LCA boundaries
- Sensitivity**
- High
 - Moderate-high
 - Moderate
 - Moderate-low
 - Low
 - Urban

- Landscape Character Types and Areas**
- 5. Valley Pasture
 - 5A - Mid Stour Valley
 - 5B - Upper Stour Valley: South of Gillingham
 - 5C - Upper Stour Valley: North of Sturminster Newton
 - 5D - Upper Stour Valley: Sturminster Newton to Durweston
 - 5E - Upper Stour Valley: Sturminster Newton
 - 6. Wooded Chalk Downland
 - 6A - Cranborne Chase Wooded Chalk Downland
 - 7. Rolling Vales
 - 7A - Blackmore Vale
 - 7B - North Blackmore Rolling Vales
 - 7C - Shaftesbury Greensand Ridges
 - 7D - South Blackmore Rolling Vales
 - 8. Clay Vale
 - 8A - Blackmore Vale
 - 11. Chalk Valley & Downland
 - 11A - Bloxworth/Charborough Downs
 - 11B - Chettle/Abbeycroft Downs
 - 11C - East Blandford/Pimperne Downs
 - 11D - South Blandford Downs
 - 11E - Tarrant Valley
 - 11F - Upper Milborne Valley
 - 11G - Upper North Winterborne Valley
 - 12. Open Chalk Downland
 - 12A - Chettle/Abbeycroft Downs
 - 12B - South Blandford Downs
 - 13. Chalk Ridge/Escarpment
 - 13A - North Dorset Chalk Escarpment

Map Scale @ A4: 1:200,000



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10 Wind Energy Development Guidelines

- 10.1 These guidelines relate to landscape sensitivity only, and do not address sensitivities relating to other areas of potential environmental impact or other non-landscape considerations which might affect the feasibility of wind energy development.
- 10.2 The guidelines are generic across the four local authority areas for which sensitivity assessment has been carried out – North Dorset, East Dorset, Purbeck and Christchurch – so not all comments will be relevant to all districts.

Consideration of Landscape Characteristics

- 10.3 Consideration of the characteristics of the landscape in the vicinity of the site, but also in any area which either has an existing visual relationship with the site or from which the site will be visible, should be a fundamental and early step in the consideration of a location for wind energy development. Published District and County landscape character assessments (and, where applicable, documents associated with AONB designation) are a start point for this but more specific site assessment will be needed to identify the extent to which the typical characteristics identified in published assessments apply to the site in question.

Scale and Complexity of Landform

- In functional terms a wind turbine will operate more efficiently in a position which has higher wind speed, and there is also a case in terms of landscape and visual impact for locating a turbine in a position that makes functional sense. A turbine will typically appear less out of place if it is located in an open, exposed location than if it is located in a sheltered area.
- An exposed location could be a low but wide vale landform but is also likely to be a more elevated area. The scale of landform in which a wind development will best 'fit' depends on the scale of the proposed development, but in general terms the broader and flatter the landform the more suitable it will be for tall turbines or schemes with multiple turbines. Conversely a dramatic, distinctive landform, with sharp changes in elevation, will be a prominent landscape feature, and will typically be valued as a scenic landmark. Many such sites also have cultural heritage value – e.g. Iron Age hill forts.
- Whilst locating a turbine on a distinctive landform is very likely to be sensitive, the sense of scale that such features give to the landscape means that a small turbine situated on lower ground in the vicinity of a strong landform could appear relatively smaller, and consequently less intrusive (the turbine, 24.5m to tip, at West Melbury Farm, beneath Melbury Hill in North Dorset, is an example of this). There may however be a fine line between the landform diminishing the sense of scale of the turbine and, conversely, the turbine diminishing the sense of scale of the landform, to the detriment of landscape character.
- An undulating or sloping site will be more sensitive to multi-turbine schemes due to the discordant visual effect of having different turbine heights. In an undulating landscape a hilltop will be a more natural location for a single turbine than a valley or dip. A turbine blade appearing above the crest of a valley will have a more disruptive effect on views from higher ground, in which the valley form might not otherwise be perceptible (as is often the case with the narrow river valleys that cut into the chalk downs), than would be the case if it were located on high ground.
- A convex slope will also, particularly if it is wooded, help to reduce visibility of high ground from an adjacent valley.

Scale and Complexity of Land Use and Field Pattern

- A more open landscape is generally considered to be more suitable for wind energy than a more enclosed landscape, although the scale of the proposed development makes a big difference in this respect. The presence of high field boundary hedgerows and woodland blocks, forming a very localised horizon, can create an intimate landscape which would be

compromised by the introduction of a disconnected, out-of-scale background feature. If the proposed development is smaller, a well-treed landscape could have a positive screening effect, blocking views from sensitive receptors (e.g. settlements or important viewpoints).

- A simple landscape, with large areas of consistent, uniform vegetation and a regular structure, will generally be less sensitive to larger turbines than a more complex landscape with irregular patterns and smaller scale ('human' scale) features. However, consideration needs to be given as to whether the simplicity of the landscape creates a distinctiveness which gives the area a particular value that could be adversely affected by turbines (see **Valued Landscapes** below). The combination of landscape pattern and landform is important: a simple land cover is likely to be more sensitive when combined with a distinctive or varied landform than when set in a flatter area.
- Access routes for construction traffic need to be considered. Even if a development site has lower sensitivity there may be landscape effects associated with narrow access routes where roadside trees, hedges or verges have to be cleared or altered.
- A certain amount of vegetation is desirable even in a generally open landscape, to provide screening of the low-level ancillary features associated with wind development, such as access tracks, transformers and security fencing.
- Certain landscapes represent the survival of historic land use types, often with a strong connection with the natural environment, and as such contribute to local character and distinctiveness and should therefore be avoided when siting wind turbines. In Dorset the prime examples of this are lowland heaths, ancient woodlands, water meadows and unimproved pastures.
- There are also more localised survivals of field patterns, such as strip fields, which suggest medieval origins, and a number of sites with ridges and hummocks that represent the remains of abandoned settlements. These are similarly sensitive to modern development.

Visual Exposure

- Locations should be chosen to avoid significant changes in views from important viewpoints, scenic tourist routes and settlements, and in views towards important, scenic landmarks. Key viewpoints may be identified in County or District Landscape Character Assessments, AONB Management Plans, AGLV Supplementary Planning Guidance, Parish Action Plans, Town and Village Design Statements or other Settlement Appraisals.
- Turbines should not be located where they have a significant effect on the understanding or appreciation of historic monuments. Consideration should be given to visual relationships between historic landmarks which could be affected – e.g. views from one hill fort to another.
- Turbines will frequently have an effect on skyline views. A higher level of sensitivity will be attached to more distinctive or undeveloped skylines, or skylines featuring prominent landmarks from which the presence of a turbine could detract.

Development and Activity

- The relationship between level of development and activity and sensitivity to wind energy is not a straightforward one. At one end of the scale an area valued for its remoteness and wildness and absence of human intervention would be highly sensitive in landscape terms, but at the other extreme a wind turbine would be unlikely to fit comfortably into very settled landscape, with many human-scale features.
- In Dorset there are few locations which could be considered wild and untamed but there are areas valued for their historic, rural landscape character, lack of modern development and tranquillity. These will typically have high sensitivity but there may be locations where smaller scale turbines could be sited in association with farm complexes, particularly ones which feature large, modern barns.
- There are particular sensitivities associated with undeveloped coastlines. The Purbeck Heritage Coast, within the Dorset AONB, can be considered as undeveloped coast.
- In more developed landscapes there could be potential to minimise adverse impact by locating turbines in association with large scale built development, such as industrial complexes or business parks, which may already be focal points in the landscape, or on brownfield/reclaimed land.
- Pylons are intrusive features which detract from landscape character but the extent to which they make a landscape less sensitive to further development will depend on the extent to

which the addition of turbines would add 'clutter' to views. If the arrangement of pylons is fairly simple then adverse impact is more likely than would be the case if the area is crossed by more than one transmission line, or if other tall elements add complexity to the landscape.

Valued Landscapes

- 10.4 Consideration should be given to any particular value attributed to the landscape, either recognised by statutory (AONB) or non-statutory (AGLV) designation or noted in District and County landscape character assessments:
- Most landscapes have some degree of value to some people but the two AONBs that cover large parts of the County represent the areas which are afforded statutory recognition of landscape quality. It might be that when assessed under the individual headings above a location does not appear to have a particularly high sensitivity to wind energy development, but if any of the distinctive qualities and special characteristics identified in the AONB Management Plans would be affected by a scheme then sensitivity is increased.
 - An elevated level of sensitivity also applies to locations which form part of the setting of a designated landscape. This applies to AONBs and also the New Forest National Park, which in places is very close to the Dorset border.
 - Consideration should be given to any potential adverse effect on the character of the setting of a Listed Building or Conservation Area (where the setting is an important aspect of the value of the building/designated area), or on views to and from a Registered Park or Garden (in particular any 'designed views').
 - Both County and District level assessments may make reference to landscape qualities which reflect a level of value attached to that landscape, such as tranquillity.

Site Design

- 10.5 Size and number of turbines are clearly the major factors that will affect the landscape sensitivity of a proposed development, but the design of individual turbines and ancillary elements can also have a significant impact, particularly in a relatively undeveloped location.

Turbine design considerations

- Different combinations of mast height and rotor blade diameter are available but from a visual point of view a ratio of close to 1:1 looks most balanced.
- All turbines on a site should be of the same dimensions and should rotate in the same direction and at the same speed.
- Small turbines commonly have faster blade rotation speeds. Faster moving blades tend to draw the eye more, and have a greater impact on an otherwise inactive scene, than slower moving blades, so consideration should be given to limiting speeds where location is exposed.
- Pale grey is the least intrusive colour for a turbine when viewed against a sky backdrop, but depending on the setting other shades, or graduated colouring (usually from green at the base through to light grey) may be effective.
- Use of advertising on turbines will increase landscape and visual impact.

Design considerations associated with ancillary scheme elements

- The creation of new tracks for access to turbines will add landscape impact, particularly if they are exposed to view and more so if they are out of character with the current pattern of roads and tracks. Where new tracks are needed they should as far as possible follow field edges, hedges/trees and contours.
- Although ongoing maintenance access will be needed, some surfaced areas required for construction could be removed/grassed over afterwards (e.g. crane pads).
- Earthworks and clearance of vegetation to facilitate access and construction should be minimised.

- The location of any ancillary buildings or structures, such as substation, control buildings and transformers should be as unexposed as possible, and in rural areas in particular should minimise urbanising features such as hard surfacing, fencing and lighting and should consider the local vernacular in terms of appearance.
- If aircraft warning lighting is required it should be infra-red, to minimise visual impact.
- Cables should be buried where possible. If overhead grid connections are required these will add impact, potentially introducing new linear landscape forms and adding visual ‘clutter’.

Layout of Multiple Turbine Schemes

- Typically the cluster size that is feasible will be dictated by the scale of the landscape, with a smaller scale landscape being able to accommodate only a small cluster (if any). The more localised variation there is in landform or land cover the harder it will be to create a group of turbines that have a coherent appearance.
- The layout should consider the pattern and form of the landscape, so that it appears balanced with turbines being grouped rather than disparate. Typically this will mean spacing turbines evenly, so that an individual turbine(s) does not sit apart from the main group, but in some cases difference distances may suit better if it enables turbines to be located at consistent heights, when considered from key viewpoints.
- A linear arrangement may sometimes suit the terrain better than a cluster but consideration should be given to avoiding creating alignments in which turbines may appear ‘stacked’ in principal directions of view.
- Developments with more than one turbine will tend to have a greater impact if they span more than one landscape character area or, even if within one character area, there are distinct differences in setting – e.g. topography, field size or surrounding land use.

Land Use and Landscaping

- The presence of a wind turbine should not preclude continuation of agricultural land use and management of hedgerows and other landscape elements.
- Opportunities to enhance land use and management to strengthen positive aspects of landscape character (as noted in District and County assessments or observed on site) should be explored. This may include the strengthening of existing field boundaries, or introduction of new planting, to assist with screening of intrusive wind energy ancillary elements (such as access tracks and buildings).
- Synergies with habitat creation and biodiversity enhancement should be explored.
- A landscape management plan for the area surrounding a turbine, or cluster of turbines, would be a positive way of demonstrating that the landscape will be managed to provide benefits beyond those of energy generation.
- As a temporary development (usually permitted for 25 years), it will be important to demonstrate that on decommissioning the landscape can be restored to at least as good a condition as it was prior to the development taking place.

Minimising Cumulative Impact

- 10.6 The sensitivity assessment presented in this document makes no reference to the potential cumulative impact on landscape character resulting from wind energy developments. The cumulative addition of turbines to a landscape could on the one hand be seen as gradually reducing sensitivity to future schemes, as they become a more characteristic element of the landscape character, or on the other as increasing sensitivity by threatening valued aspects of character and decreasing robustness.
- 10.7 The question of how much wind development is too much cannot be answered by a landscape sensitivity assessment, because policy considerations beyond landscape character have a key influence on determining strategies for landscape capacity (see paragraph 1.11), but consideration of the following points can assist with minimising the effects of locating a new development in a landscape which already includes wind turbines:

- When assessing potential effects of a proposed scheme, reference should be made to the relationship between the proposal and i) any existing wind energy developments, but also ii) any consented and iii) any proposed schemes, whether within the District or in a neighbouring District or County.
- The character of existing developments in relation to landscape should be considered. If there is a distinct pattern – e.g. developments are typically small single turbines attached to farm complexes – then continuation of this pattern is less likely to have a significant impact on landscape character than introduction of a new size/form of wind development in a different landscape context.
- The closer developments are to each other, and the more likely they are to be viewed in combination from the same viewpoint, the more important it is that they have some consistency of character (unless the existing development is poorly related to its environment). The presence of developments perceived as being of different scales, whether due to height or cluster size being different or due to the landscape setting being different, is likely to increase the level of cumulative impact. The introduction of turbines that, through their scale and relative position, have a distorting effect on perspective in a view will also have greater impact.
- In determining whether cumulative effects are likely to add significantly to any impacts resulting from a proposed development it is useful to identify the focal points that exist in the landscape at present, to identify whether there is any hierarchy amongst them, and to assess the extent to which the introduction of a new development will affect appreciation of these relationships.
- The location of key viewpoints will be important in determining whether a site will have a significant cumulative landscape impact relative to an existing scheme. In general it is better to avoid locations in which separate schemes will appear to coalesce, but there may be situations where this effect is preferable to introducing a more distinctly separate development.
- It is important to avoid creating any sense of turbines having an overbearing or oppressive effect on residential locations, or other valued receptor locations such as popular rights of way or, on a larger scale, a designated landscape area. Maximising distance from such locations is clearly important in this respect, but avoiding developing on sites that would give a sensitive location a feeling of being surrounded by turbines is also important.

11 Solar PV Energy Development Guidelines

- 11.1 These guidelines relate to landscape sensitivity only, and do not address sensitivities relating to other areas of potential environmental impact or other non-landscape considerations which might affect the feasibility of solar PV energy development.
- 11.2 The guidelines are generic across the four local authority areas for which sensitivity assessment has been carried out – North Dorset, East Dorset, Purbeck and Christchurch – so not all comments will be relevant to all districts.

Consideration of Landscape Characteristics

- 11.3 Consideration of the characteristics of the landscape in the vicinity of the site, but also in any area which either has an existing visual relationship with the site or from which the site will be visible, should be a fundamental and early step in the consideration of a location for solar PV energy development. Published District and County landscape character assessments (and, where applicable, documents associated with AONB designation) are a start point for this but more specific site assessment will be needed to identify the extent to which the typical characteristics identified in published assessments apply to the site in question.

Scale and Complexity of Landform

- A flat, gently sloping or gently undulating site, either on lower ground or on a plateau, will be more suitable than a steep, sharply undulating site or an exposed upper slope.
- A development located in an area with a small-scale landform, with significant variations over the site or in its locality, will be more likely to stand out in the landscape than one located on a flatter site or an even slope.

Scale and Complexity of Land Use and Field Pattern

- A more enclosed landscape is generally considered to be more suitable for solar energy than a more open landscape, although the scale of the proposed development will be a key factor in determining the enclosure size that would be most appropriate. Ideally the solar farm should not dilute or distort the enclosure pattern, either by spanning multiple fields or subdividing a larger field to create an area of homogeneous land use that is a different size or shape to its surroundings.
- A patchwork landscape, with a variety of land uses, will be less sensitive than a more homogeneous land cover.
- A landscape in which geometric forms (e.g. field boundaries and woodland blocks) predominate will be less sensitive than a more irregular landscape, or one in which rounded forms predominate.
- Certain landscapes represent the survival of historic land use types, often with a strong connection with the natural environment, and as such contribute to local character and distinctiveness and should therefore be avoided when siting solar PV developments. In Dorset the prime examples of this are lowland heaths, ancient woodlands, water meadows and unimproved pastures.
- There are also more localised survivals of field patterns, such as strip fields, which suggest medieval origins, and a number of sites with ridges and hummocks that represent the remains of abandoned settlements. These are similarly sensitive to modern development.

Visual Exposure

- Locations should be chosen to avoid significant changes in views from important viewpoints, scenic tourist routes and settlements, and in views towards important, scenic landmarks. Key viewpoints may be identified in County or District Landscape Character Assessments, AONB

Management Plans, AGLV Supplementary Planning Guidance, Parish Action Plans, Town and Village Design Statements or other Settlement Appraisals.

- Solar developments should not be located where they have a significant effect on the understanding or appreciation of historic monuments. Consideration should be given to visual relationships between historic landmarks which could be affected – e.g. views from one hill fort to another.

Development and Activity

- A landscape influenced by modern development, containing hard elements such as buildings, brownfield sites or horticulture (e.g. glasshouses or poly tunnels) will be less sensitive than a more natural or remote location.
- Intensively farmed, arable land is likely to be less sensitive than extensive pasture.
- There are particular sensitivities associated with undeveloped coastlines. The Purbeck Heritage Coast, within the Dorset AONB, can be considered as undeveloped coast.

Valued Landscapes

11.4 Consideration should be given to any particular value attributed to the landscape, either recognised by statutory (AONB) or non-statutory (AGLV) designation or noted in District and County landscape character assessments:

- Most landscapes have some degree of value to some people but the two AONBs that cover large parts of the County represent the areas which are afforded statutory recognition of landscape quality. It might be that when assessed under the individual headings above a location does not appear to have a particularly high sensitivity to solar PV energy development, but if any of the distinctive qualities and special characteristics identified in the AONB Management Plans would be affected by a scheme then sensitivity is increased.
- An elevated level of sensitivity also applies to locations which form part of the setting of a designated landscape. This applies to AONBs and also the New Forest National Park, which in places is very close to the Dorset border.
- Consideration should be given to any potential adverse effect on the character of the setting of a Listed Building or Conservation Area (where the setting is an important aspect of the value of the building/designated area), or on views to and from a Registered Park or Garden (in particular any 'designed views').
- Both County and District level assessments may make reference to landscape qualities which reflect a level of value attached to that landscape, such as tranquillity.

Site Design

11.5 The size of a solar farm is the major factor that will affect the landscape sensitivity of a proposed development, but the arrangement of panel arrays and ancillary elements can also have a significant impact, particularly in a relatively undeveloped location or where a site is overlooked by higher ground.

Layout considerations

- Developments will tend to have a greater impact if they span more than one landscape character area or, even if within one character area, there are distinct differences in setting – e.g. topography or field size.
- The appearance of a development will be quite different from the sides or back in comparison to the front, due to the visibility of supporting frames.
- The arrangement of panels should try and fit with the form and enclosure of the site; a straight edged layout will not sit comfortably in an irregular field. It will be much easier to achieve a more acceptable fit in a geometric landscape, given the shape of the individual panels, but the use of a curving or staggered arrangement of arrays could in some cases provide a better fit than a rectilinear layout.

- Within a field, spacing between panels should be consistent, without outlying or remote clusters.
- The removal of boundary vegetation within a site than spans multiple fields will typically have a negative landscape and visual impact (and is likely also to have adverse ecological effects). Panels should be set back from boundaries to maintain the legibility of field patterns (and also to assist with hedgerow management and potentially to provide habitat).
- Panels should not be positioned where they would be shaded by vegetation, if that would result in vegetation being cut back or removed.
- Panel heights should be kept as low as possible, to minimise visual impact.
- Pile-driven or screw-anchored bases are preferable to concrete foundations.

Design considerations associated with ancillary scheme elements

- The creation of new tracks for access to solar arrays will add landscape impact, particularly if they are exposed to view and more so if they are out of character with the current pattern of roads and tracks. Where new tracks are needed they should as far as possible follow field edges, hedges/trees and contours.
- Although ongoing maintenance access will be needed, consideration should be given as to whether some surfaced areas required for construction could be removed (e.g. perhaps using temporary trackway) and grassed over afterwards. Regular tracks between rows of arrays should be avoided.
- Earthworks and clearance of vegetation to facilitate access and construction should be minimised, although where it does not have a significant adverse effect on landscape character or views, landform remodelling, with appropriate ongoing management, may assist with screening a solar PV development.
- The location of any ancillary buildings or structures, such as substations, transformers and inverters should be as unexposed as possible, and in rural areas in particular should minimise urbanising features such as hard surfacing, fencing and lighting and should consider the local vernacular in terms of appearance. Existing buildings should be utilised where possible.
- Consideration should be given to using deer-stop type fencing in preference to welded mesh fencing, and to minimising its height (subject to insurance requirements). Likewise CCTV camera should not be mounted on unnecessarily high posts.
- Dark, recessive colours in non-reflective materials are generally considered less visually intrusive for panel frames, fencing and ancillary structures than bright colours and reflective materials.
- Cables should be buried where possible. If overhead grid connections are required these will add impact, potentially introducing new linear landscape forms and adding visual 'clutter'.
- The use of security lighting should be minimised, using passive infra-red (PIR) where possible and minimising any glare or light-spill.

Land Use and Landscaping

- Existing and new landscaping will be important in screening views of the site, but consideration must be given as to whether letting hedges grow higher, or planting new hedges or trees, would be out of keeping with local landscape character. Depending on landscape terrain and character, the use of other forms of screening, such as bunding or tall crops, may be beneficial.
- Fences should be set back from surrounding hedges, to reduce their apparent height when viewed from beyond the boundary.
- Efforts should be made to maintain land uses on the site that fit in with the character of the surrounding area. The space between and surrounding rows of solar arrays can be utilised productively, e.g. for grazing. The potential for heathland restoration should also be explored, where appropriate. Mulching of large areas, in particular the use of plastics to prevent weed growth, should be avoided.
- Maintaining a diversity of land cover types in an area will help to prevent solar PV arrays from having a dominating effect on landscape character.
- Opportunities to enhance land use and management to strengthen positive aspects of landscape character (as noted in District and County assessments or observed on site) should

be explored. Hedgerows can be managed to provide ecological benefit as well as screening, which may include the strengthening of existing field boundaries, or introduction of new planting.

- Synergies with habitat creation and biodiversity enhancement should be explored. Any new planting should use native, locally appropriate species.
- A landscape management plan for the site would be a positive way of demonstrating that the landscape will be managed to provide benefits beyond those of energy generation.
- As a temporary development (usually permitted for 25 years), it will be important to demonstrate that on decommissioning the landscape can be restored to at least as good a condition as it was prior to the development taking place.

Minimising Cumulative Impact

11.6 The sensitivity assessment presented in this document makes no reference to the potential cumulative impact on landscape character resulting from solar PV energy developments. The cumulative addition of solar farms to a landscape could on the one hand be seen as gradually reducing sensitivity to future schemes, as they become a more characteristic element of the landscape character, or on the other as increasing sensitivity by threatening valued aspects of character and decreasing robustness.

11.7 The question of how much solar development is too much cannot be answered by a landscape sensitivity assessment, because policy considerations beyond landscape character have a key influence on determining strategies for landscape capacity (see paragraph 1.11), but consideration of the following points can assist with minimising the effects of locating a new development in a landscape which already includes solar arrays:

- When assessing potential effects of a proposed scheme, reference should be made to the relationship between the proposal and i) any existing solar PV energy developments, but also ii) any consented and iii) any proposed schemes, whether within the District or in a neighbouring District or County.
- The character of existing developments in relation to landscape should be considered. If there is a distinct pattern of development in a particular type of landscape then continuation of this consistent design response is likely to have less of an impact on character than the introduction of a different size/form of solar development.
- The closer developments are to each other, and the more likely they are to be viewed in combination from the same viewpoint, the more important it is that they have some consistency of character (unless the existing development is poorly related to its environment). This is particularly the case where an existing development is being extended. The presence of developments perceived as being of different scales, whether due to the physical area covered or due to the landscape setting being different, is likely to increase the level of cumulative impact.
- In determining whether cumulative effects are likely to add significantly to any impacts resulting from a proposed development it is useful to identify the focal points that exist in the landscape at present, to identify whether there is any hierarchy amongst them, and to assess the extent to which the introduction of a new development will affect appreciation of these relationships.
- The location of key viewpoints will be important in determining whether a site will have a significant cumulative landscape impact relative to an existing scheme. In general it is better to avoid locations in which separate schemes will appear to coalesce, but there may be situations where this effect is preferable to introducing a more distinctly separate development.
- It is important to avoid developing on sites that would give a sensitive location a feeling of being surrounded by solar PV developments.