Digital Archaeology and the Neolithic of the Peak

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Volume 2

Figures, Bibliography and Appendix A

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for the degree of Doctor of Philosophy

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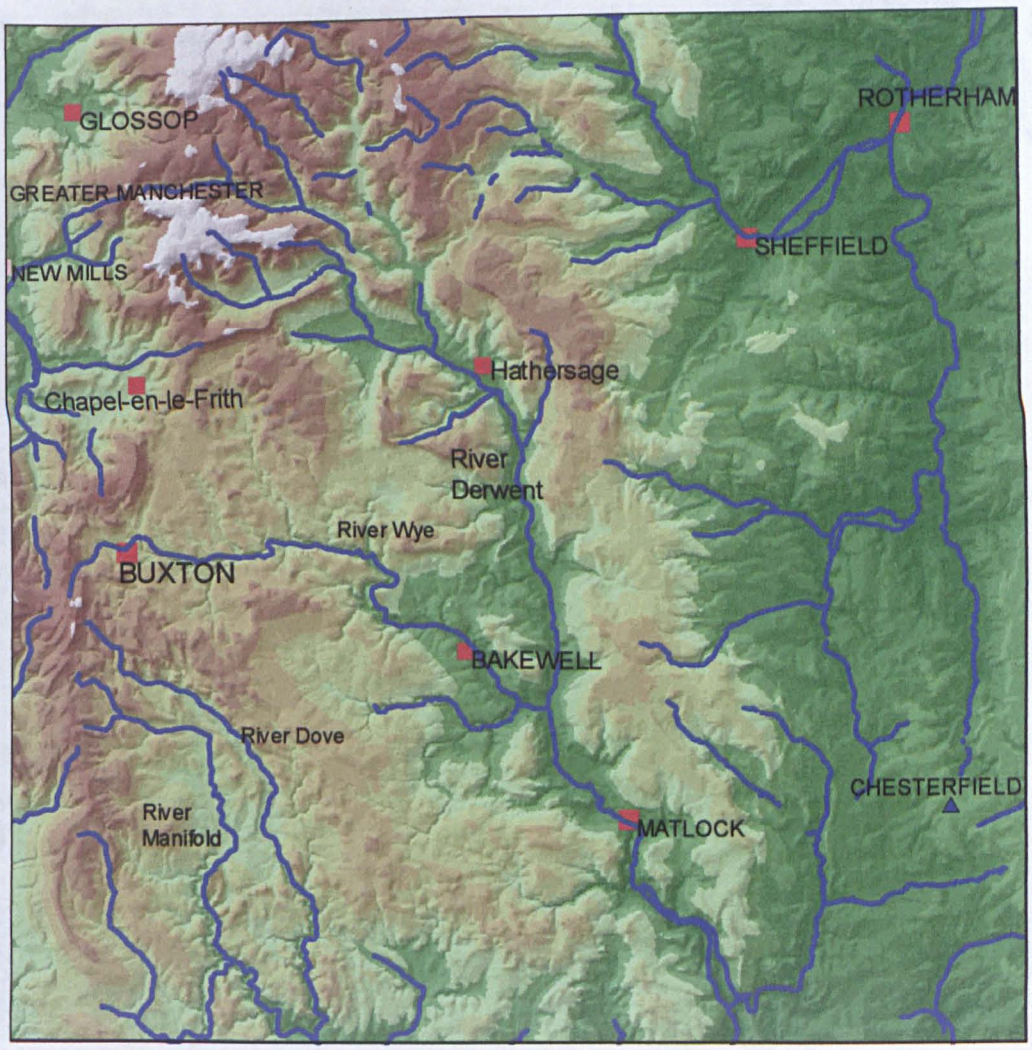


Figure 2.1 – The Peak District, showing nearby towns and main rivers.

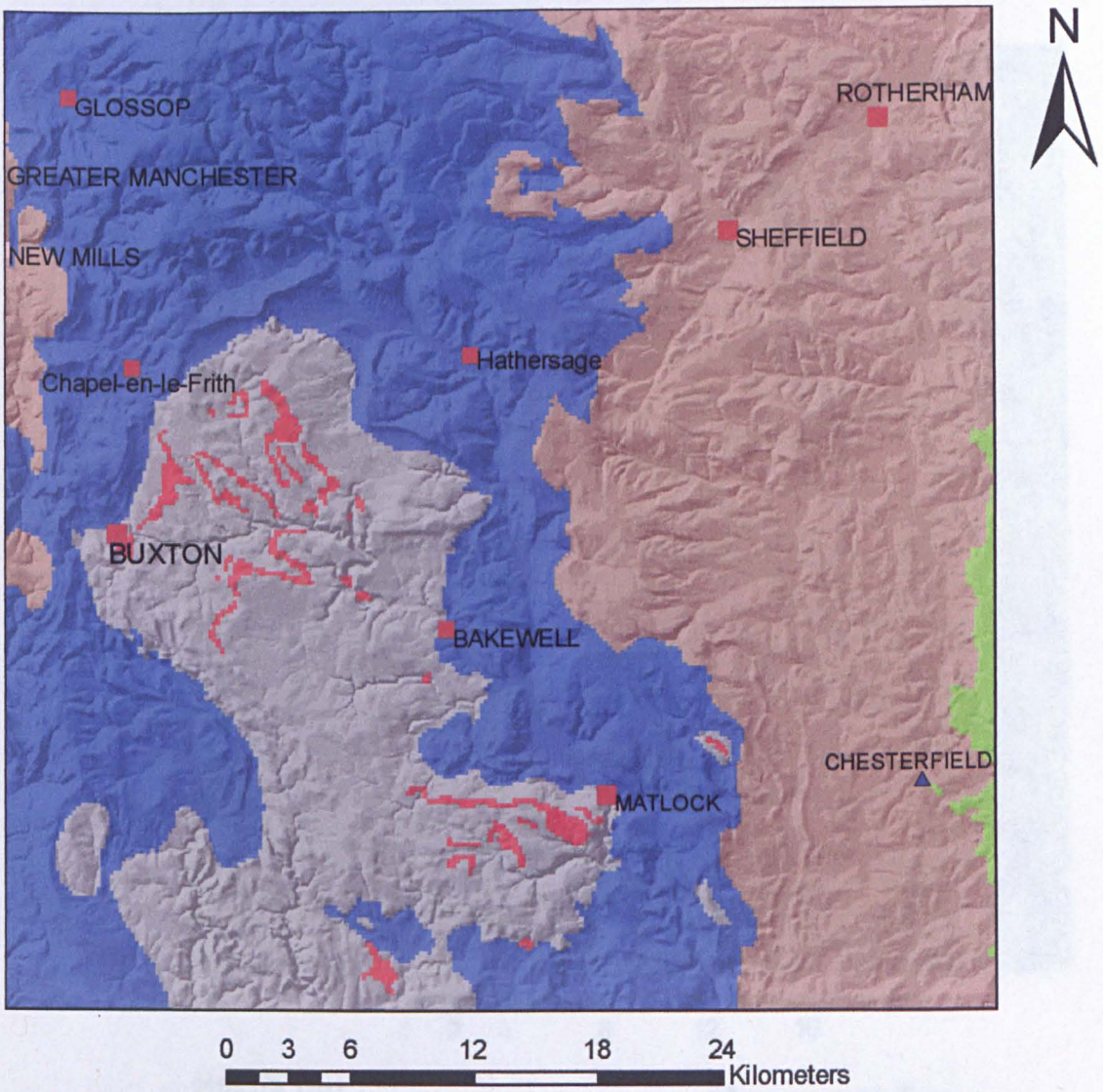


Figure 2.2 – The underlying geology of the Peak District.

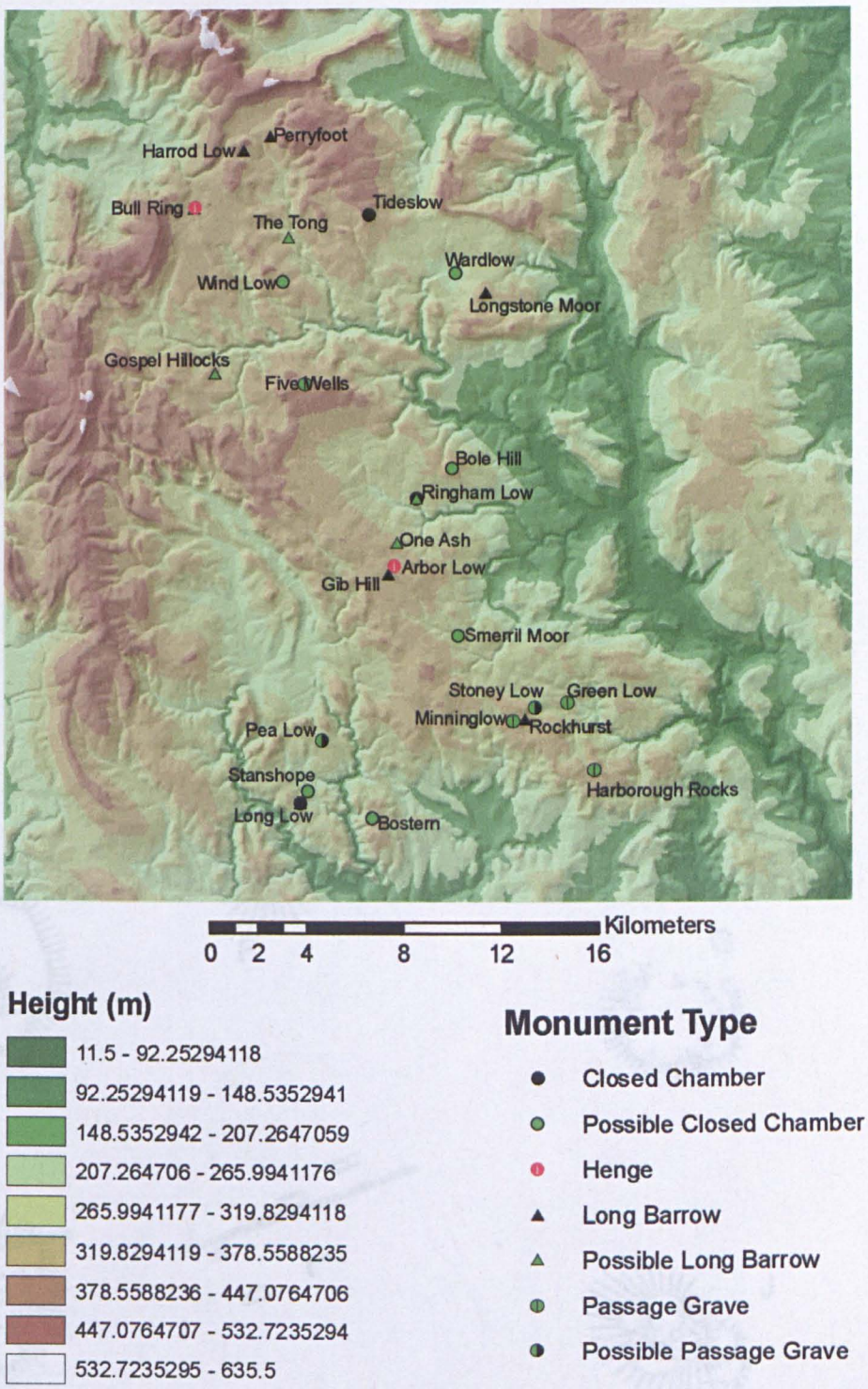


Figure 2.3 - Location of All Neolithic Monuments in this study.

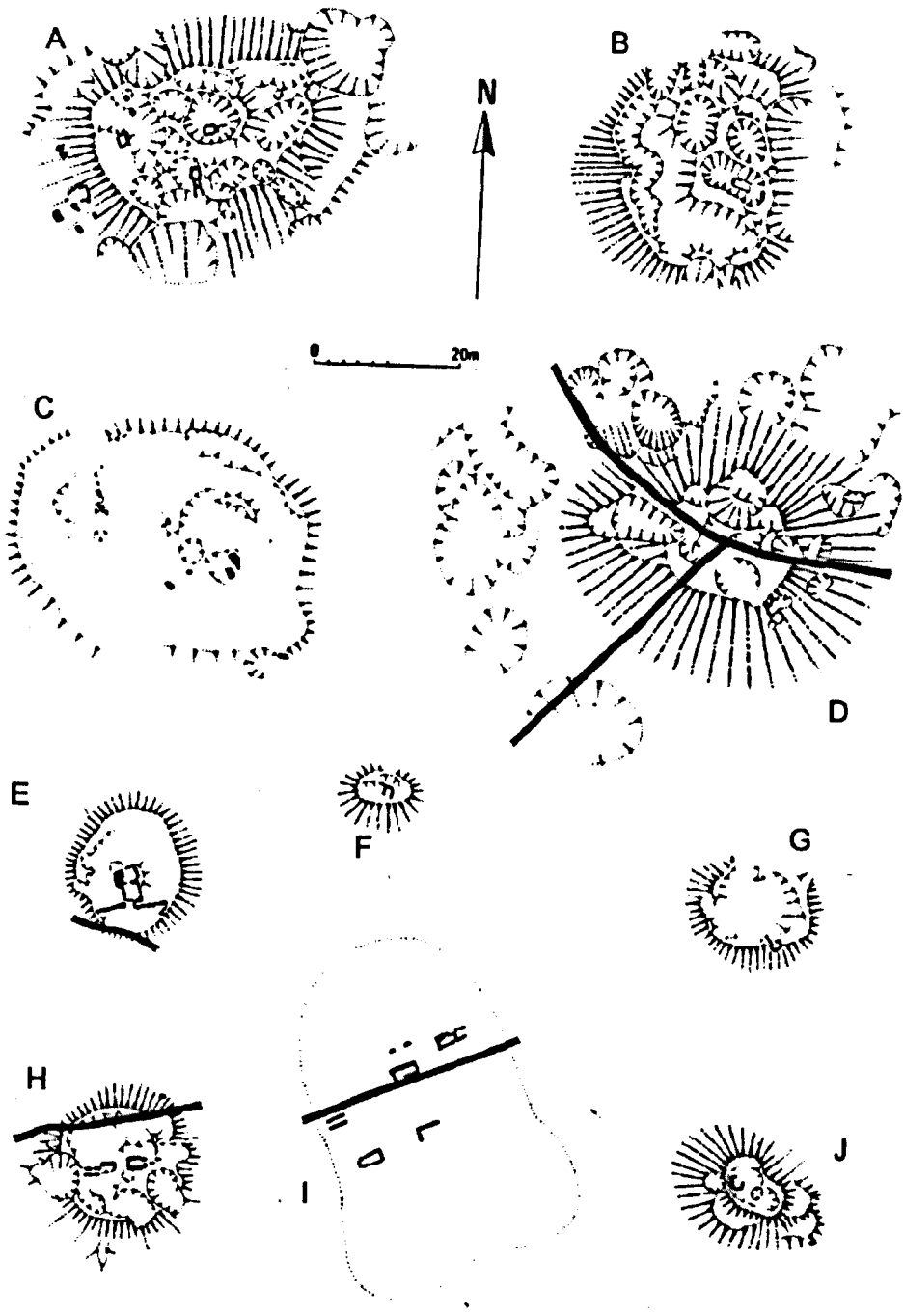


Figure 2.4 – Neolithic Barrows in the Peak District
A: Minninglow, B: Tideslow, C: Stoney Low, D: Pea Low, E: Green Low, F: Smerril Moor, G: Harborough Rocks, H: Five Wells, I: Ringham Low, J: Minninglow (Closed Chamber phase). From Barnatt and Collis 1996.

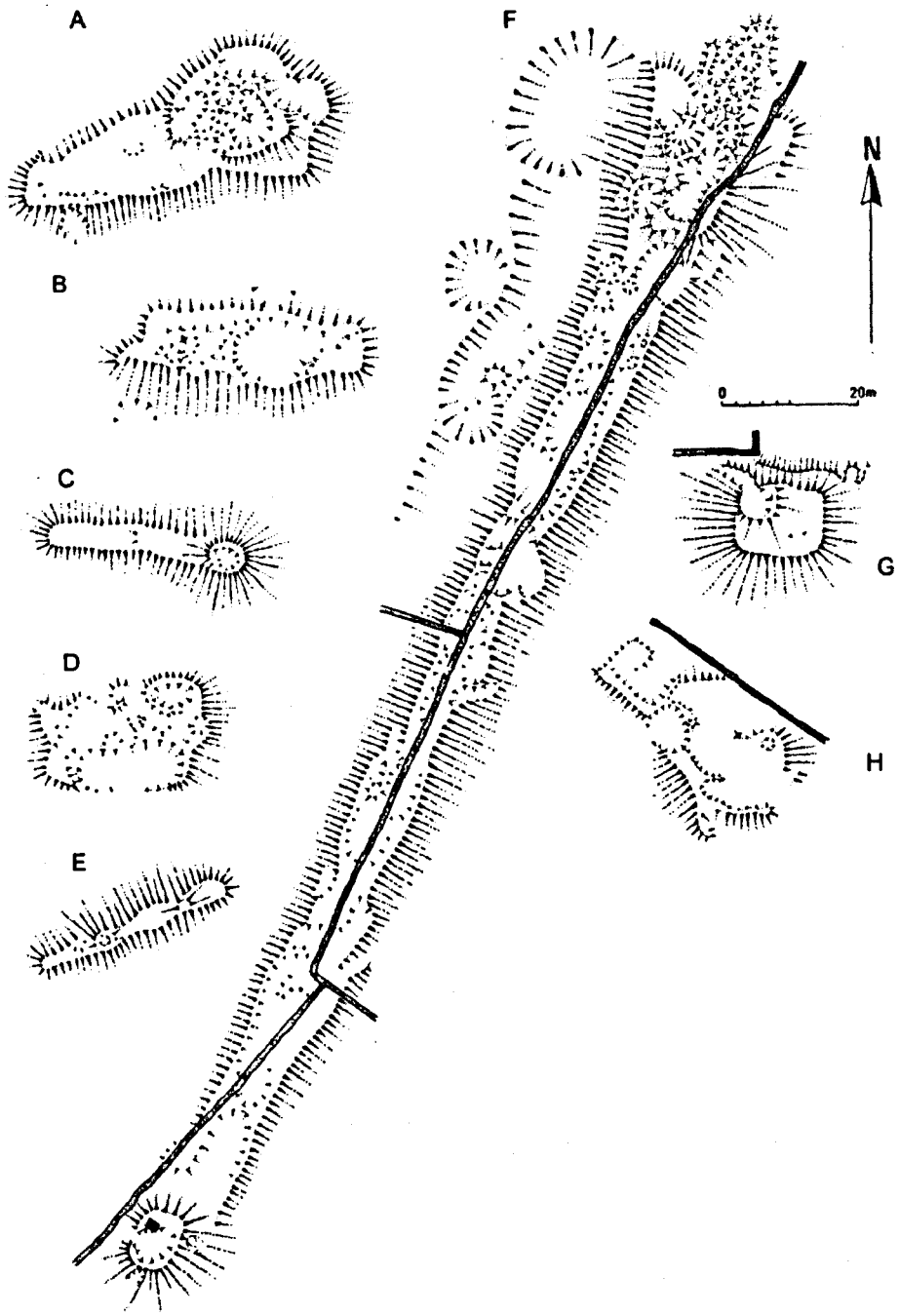


Figure 2.5 – Neolithic Barrows in the Peak District
A: Perryfoot, B: Harrod Low, C: Longstone Moor, D: Gospel Hillocks, E: Rockhurst, F: Long Low, G: The Bull Ring, H: The Tong. From Barnatt and Collis 1996

Figure 4.1 - Viewshed areas for Closed Chamber tombs

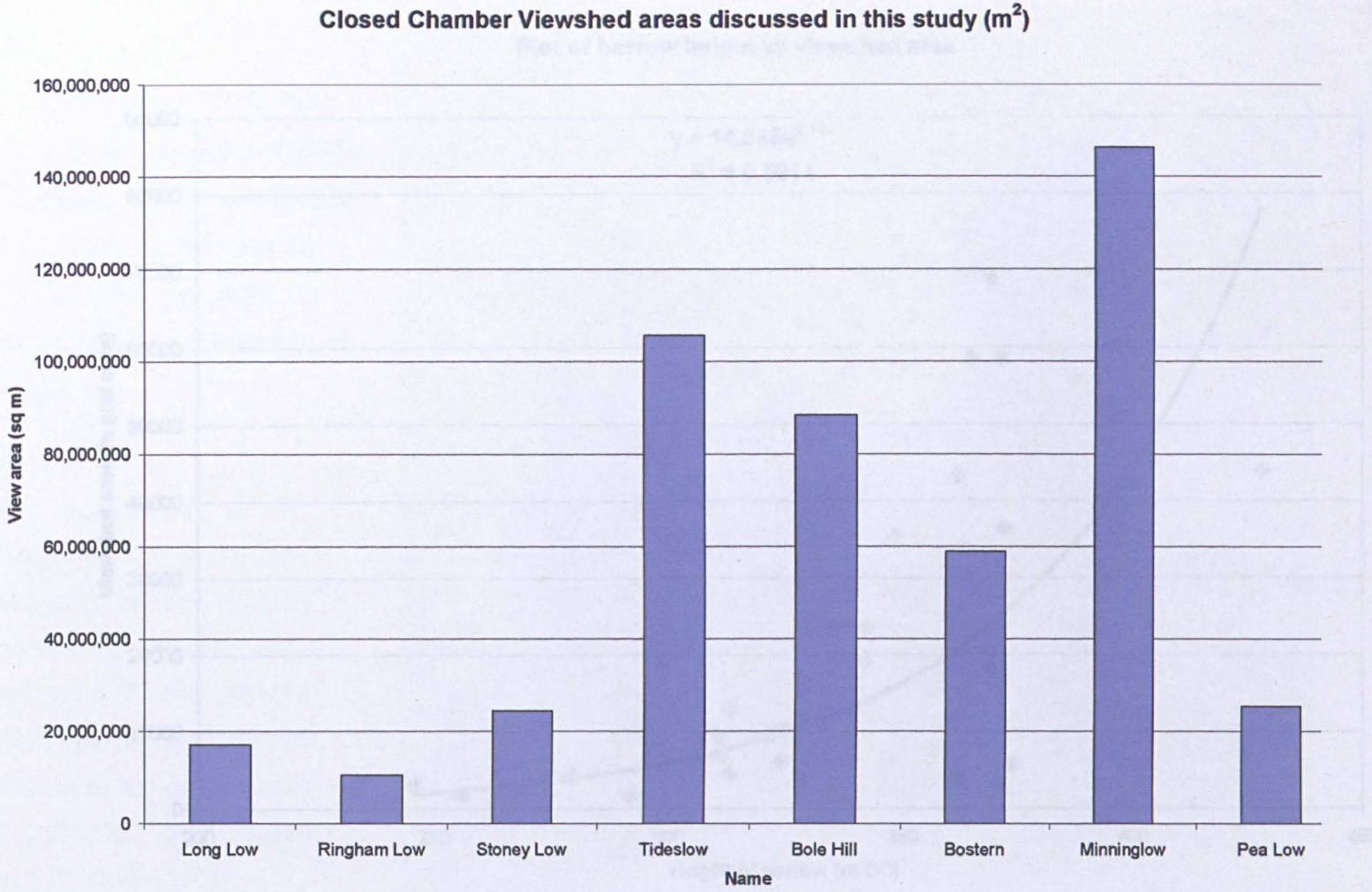


Figure 4.2 - Viewshed areas plotted against elevation of monument location for all Neolithic tombs

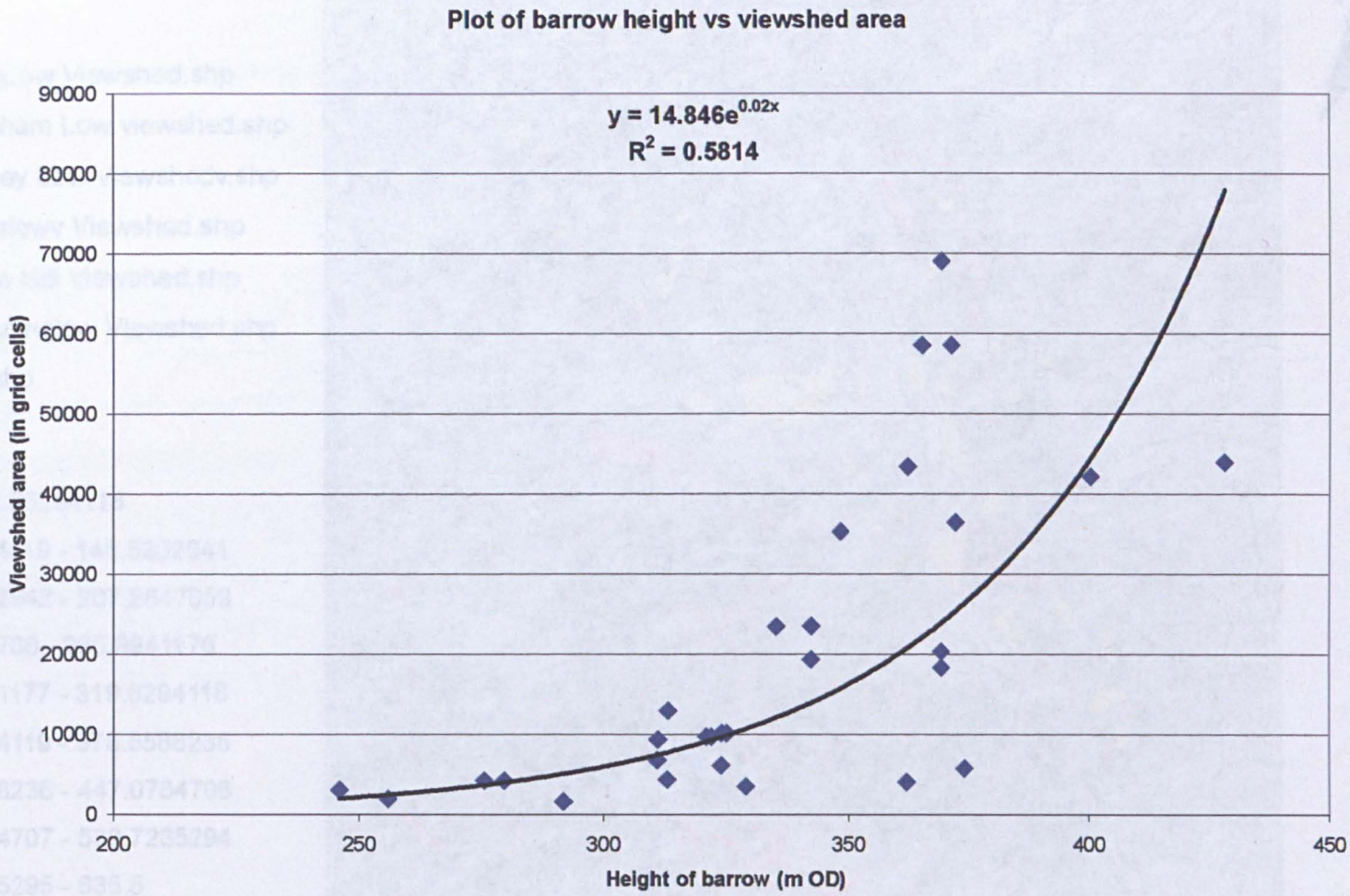


Figure 4.3 - Viewsheds of definite Closed Chamber tombs, including the Bole Hill, Ringham Low and Minninglow Great Barrows

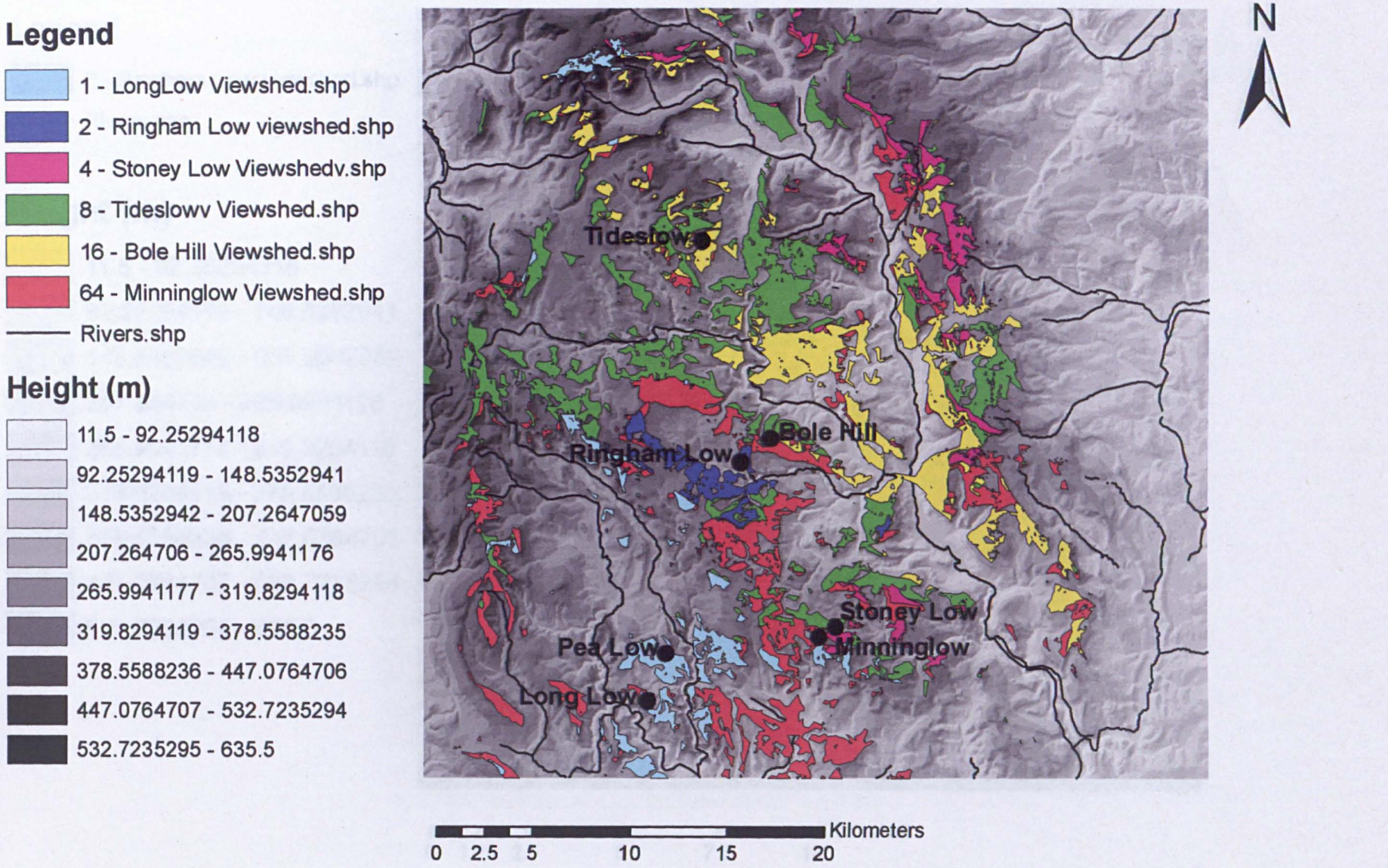


Figure 4.4 - Viewshed for Ringham Low

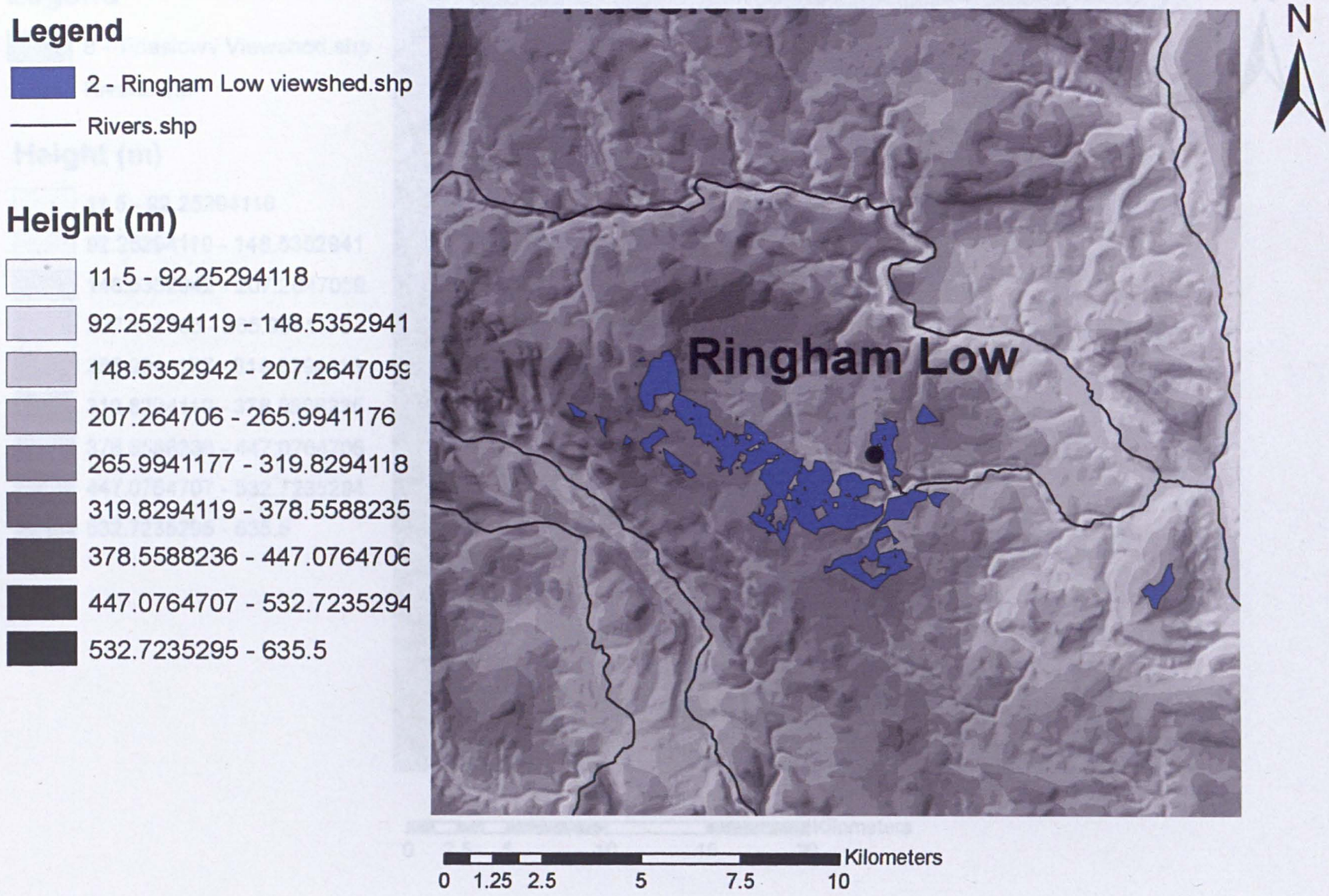


Figure 4.5 - Viewshed of Tideslow

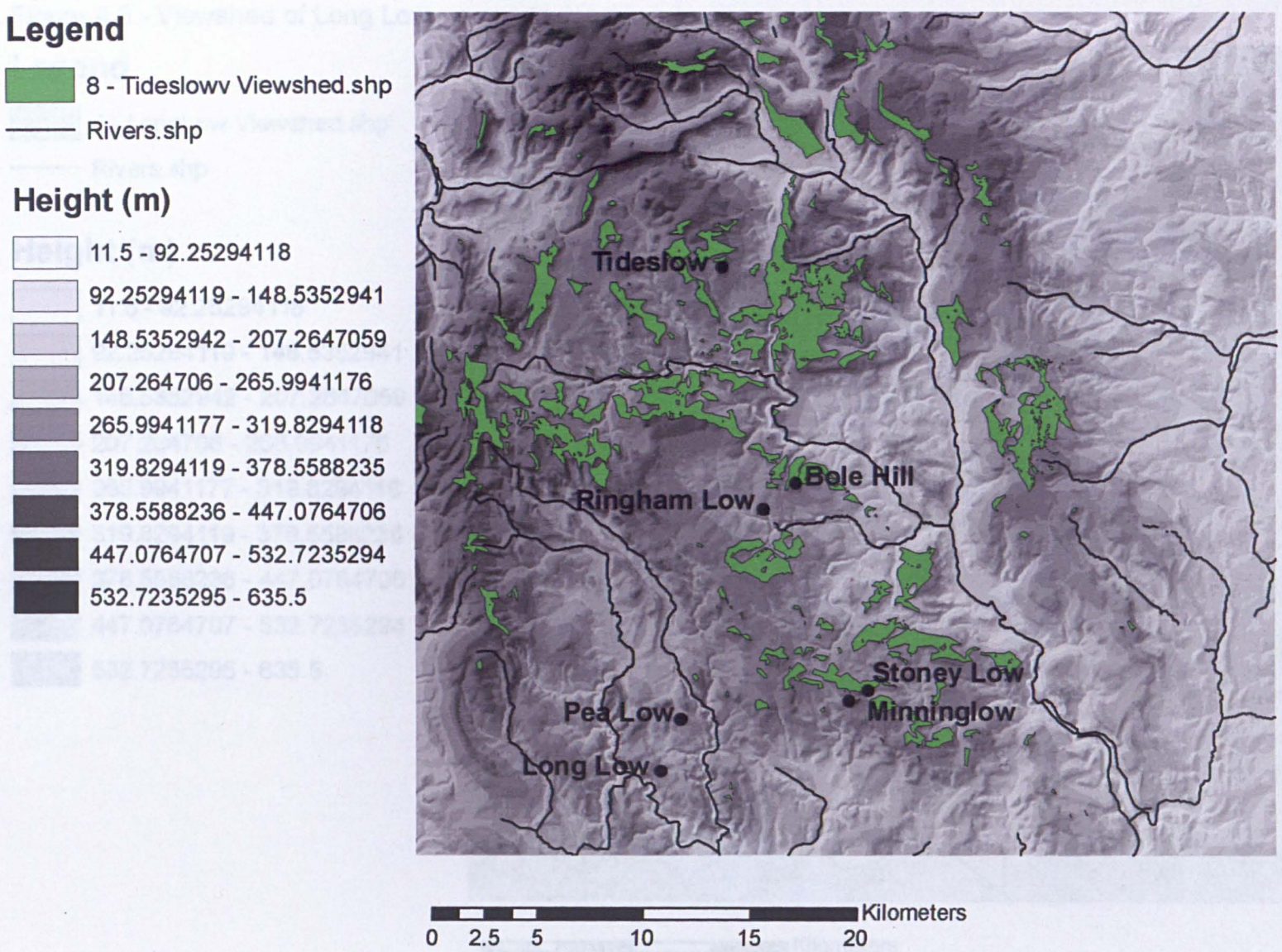


Figure 4.6 - Viewshed of Long Low

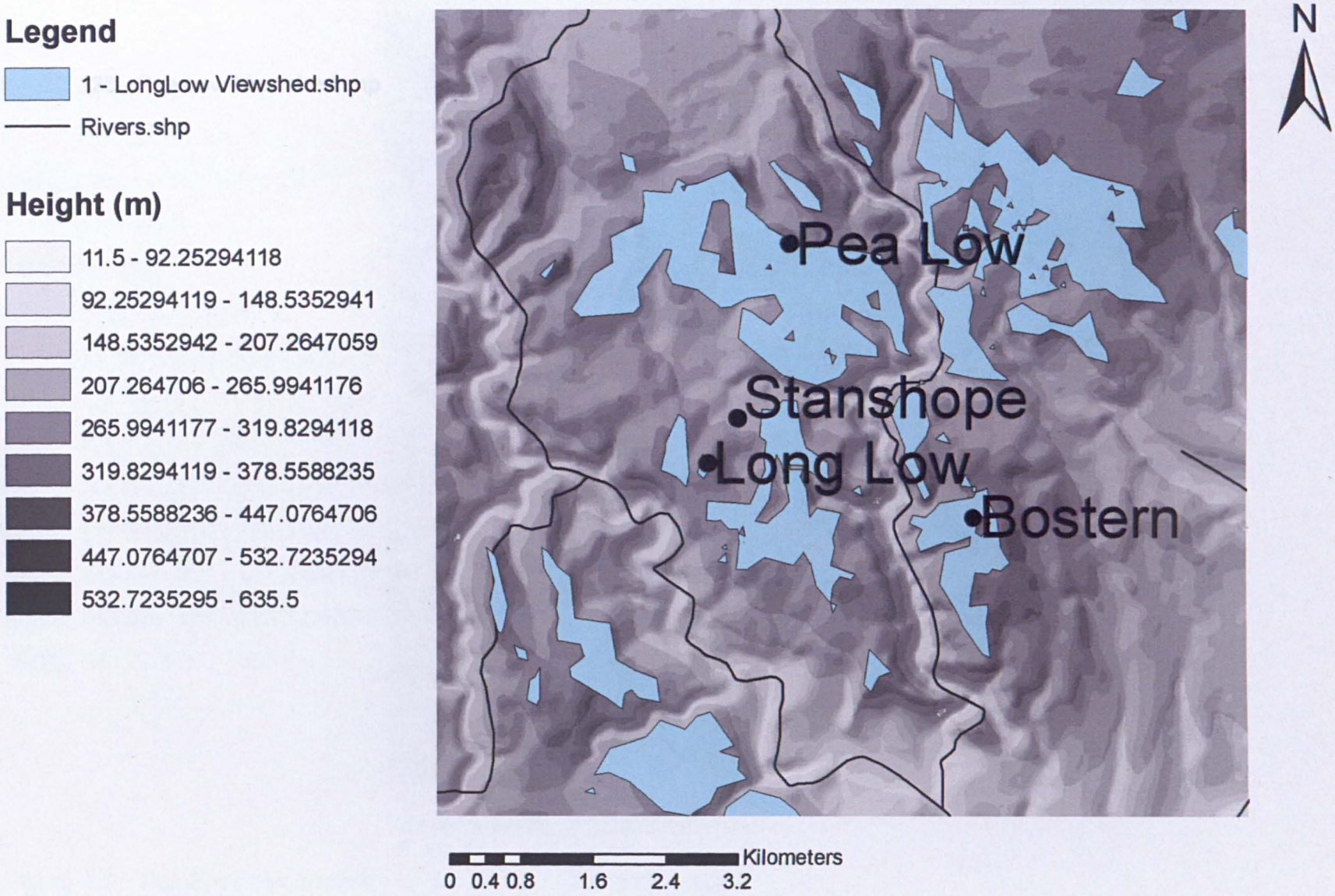


Figure 4.7 - Viewshed of Pea Low

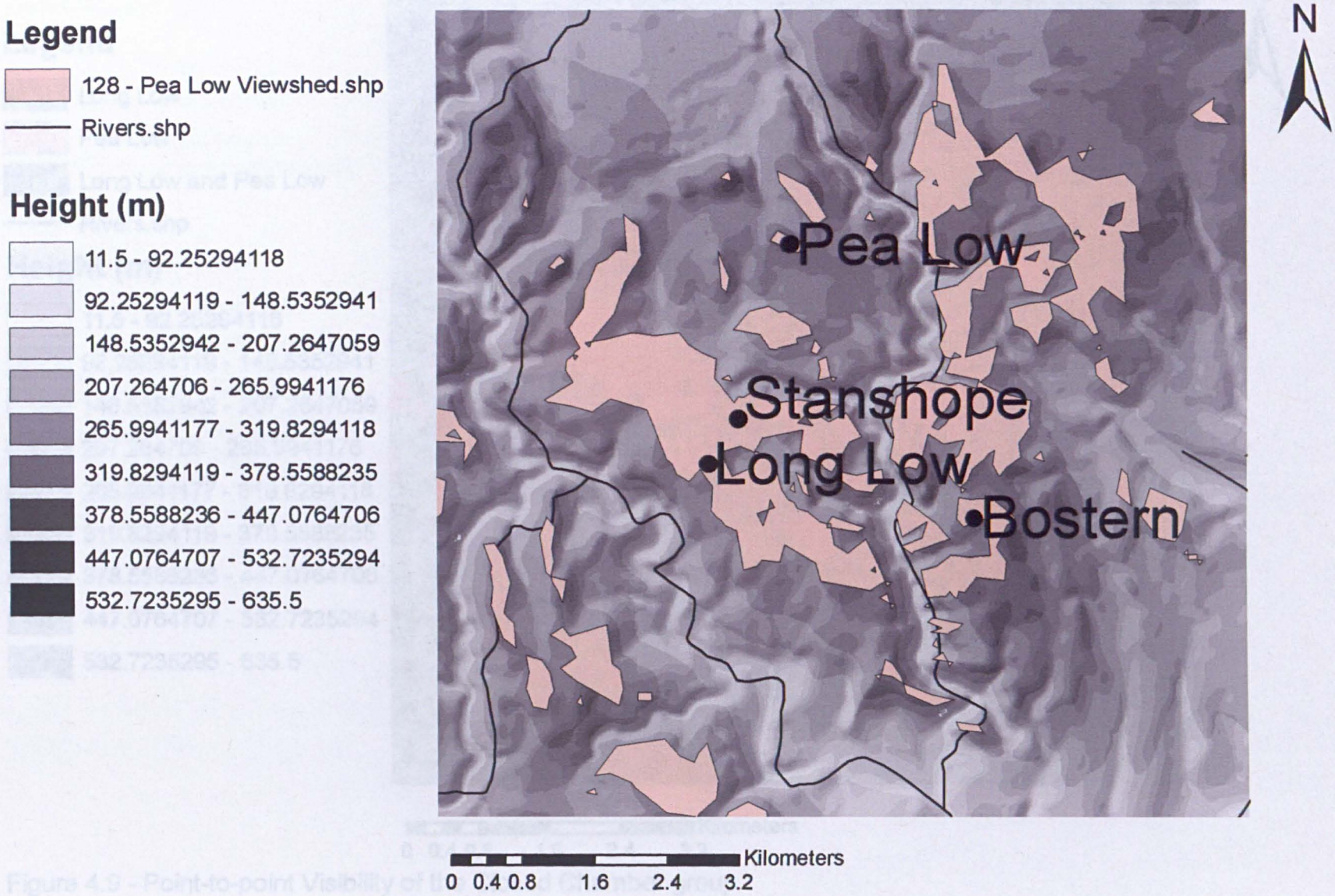


Figure 4.8 - Cumulative viewshed of Long Low and Pea Low

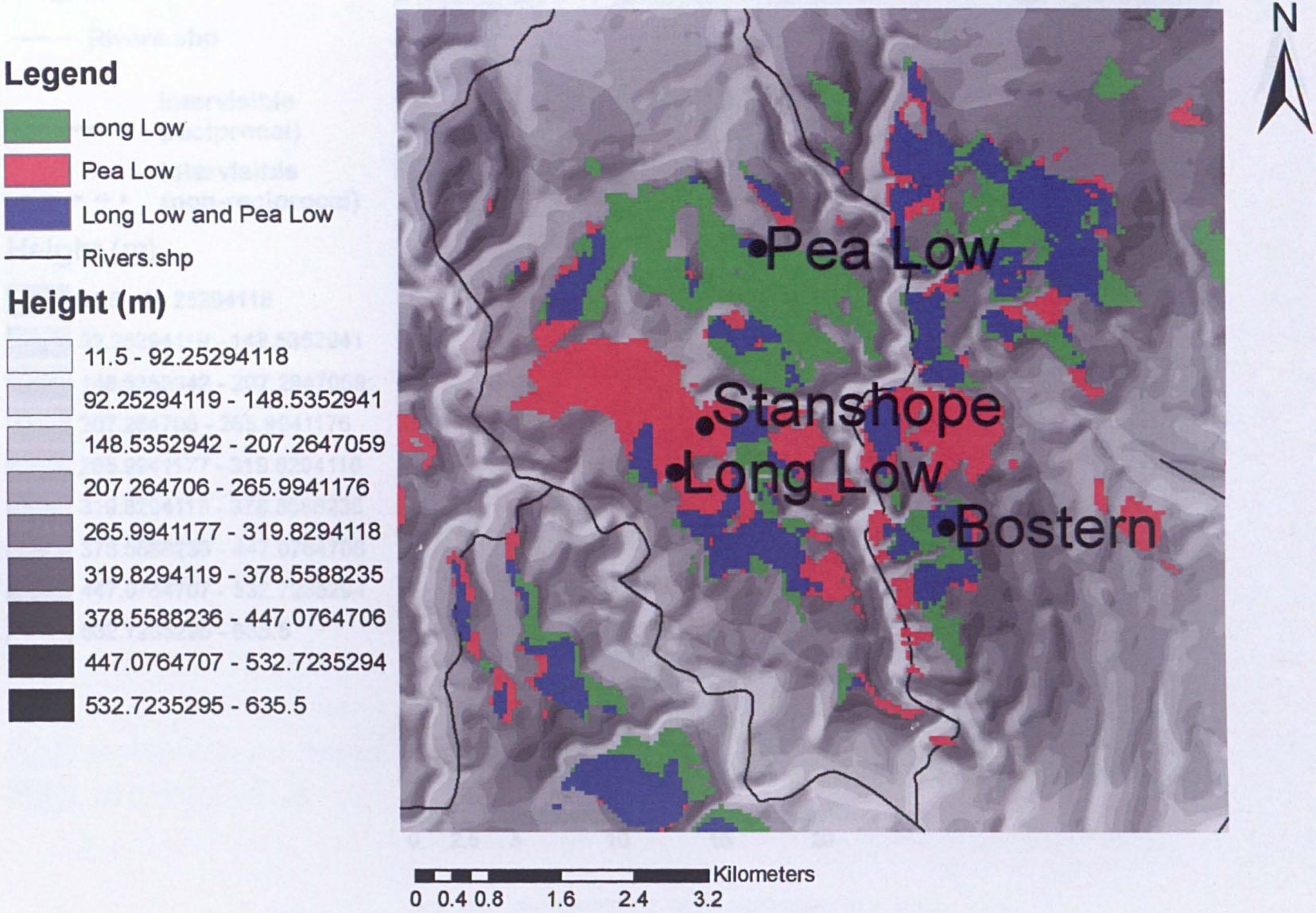


Figure 4.9 - Point-to-point Visibility of the Closed Chamber group

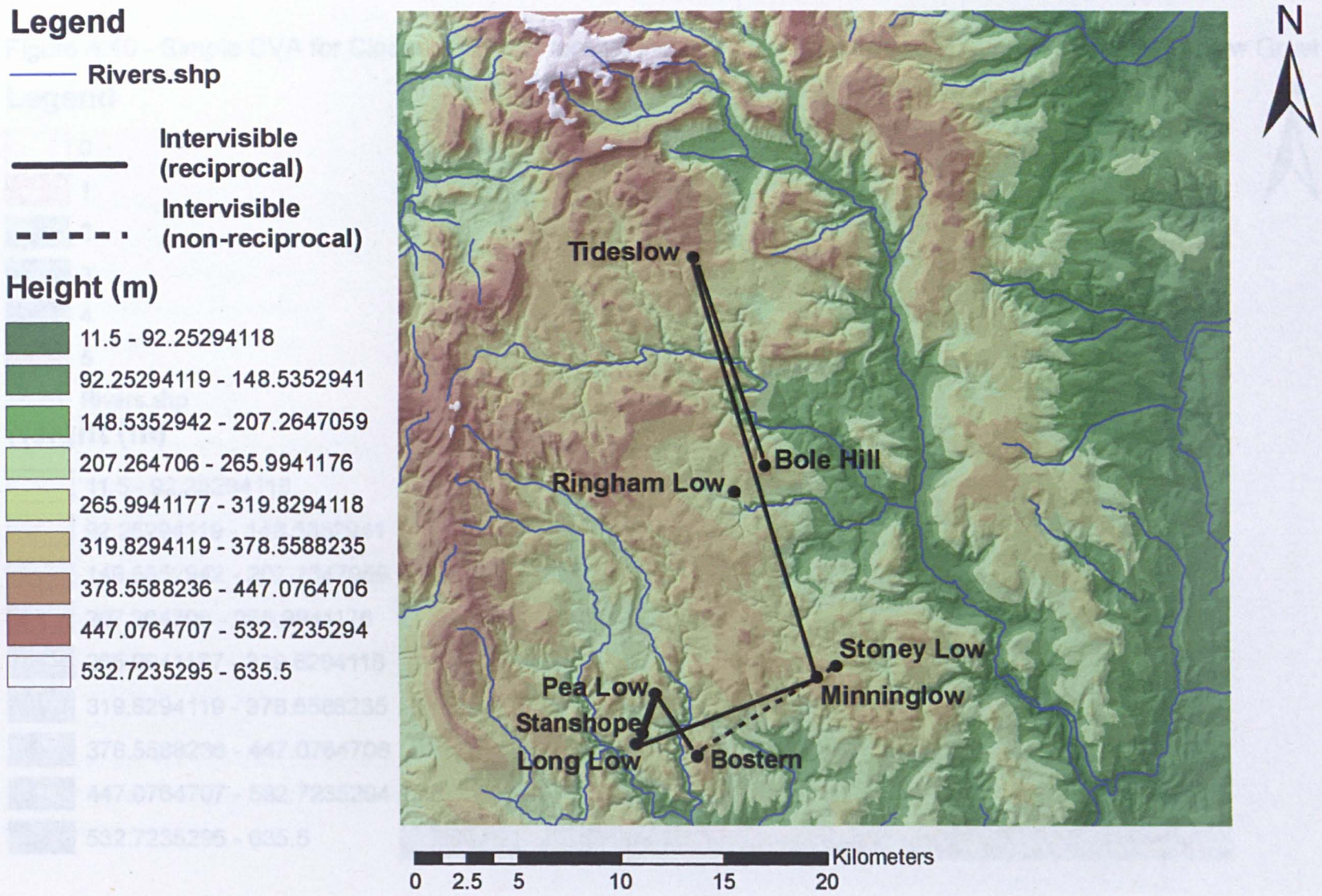

Legend
Rivers.shp
Intervisible (reciprocal)
Intervisible (non-reciprocal)
Height (m)
11.5 - 92.25294118
92.25294119 - 148.5352941
148.5352942 - 207.2647059
207.264706 - 265.9941176
265.9941177 - 319.8294118
319.8294119 - 378.5588235
378.5588236 - 447.0764706
447.0764707 - 532.7235294
532.7235295 - 635.5
Tideslow
Bole Hill
Ringham Low
Stoney Low
Minninglow
Pea Low
Stanshope
Long Low
Bostern
N
Kilometers
0 2.5 5 10 15 20

Figure 4.10 - Simple CVA for Closed Chamber tombs, including the Bole Hill, Ringham Low and Minninglow Great Barrows

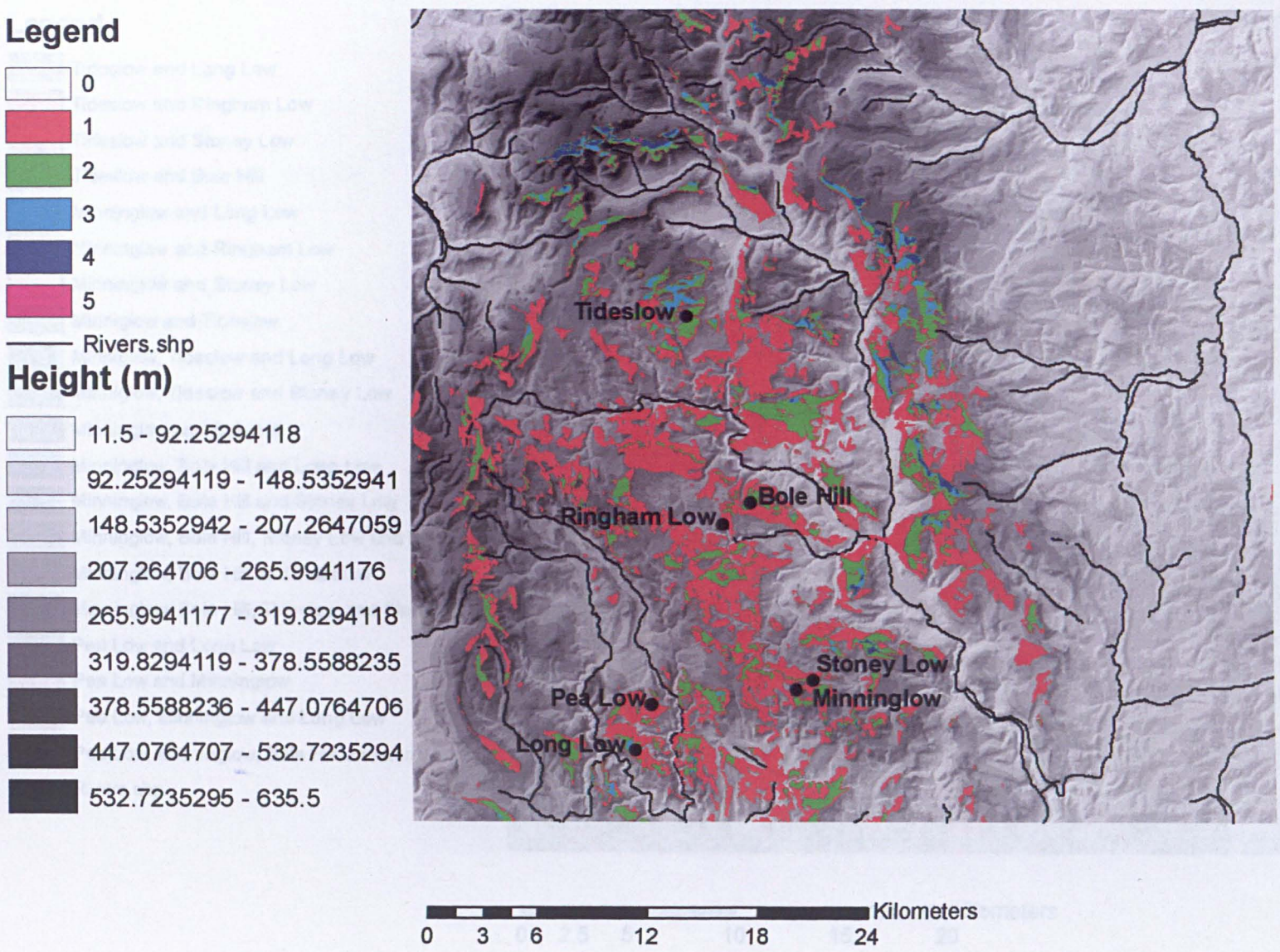


Figure 4.11 - 2 Series CVA Overlaps for Closed Chamber tombs, including the Bole Hill, Ringham Low and Minninglow Great Barrows

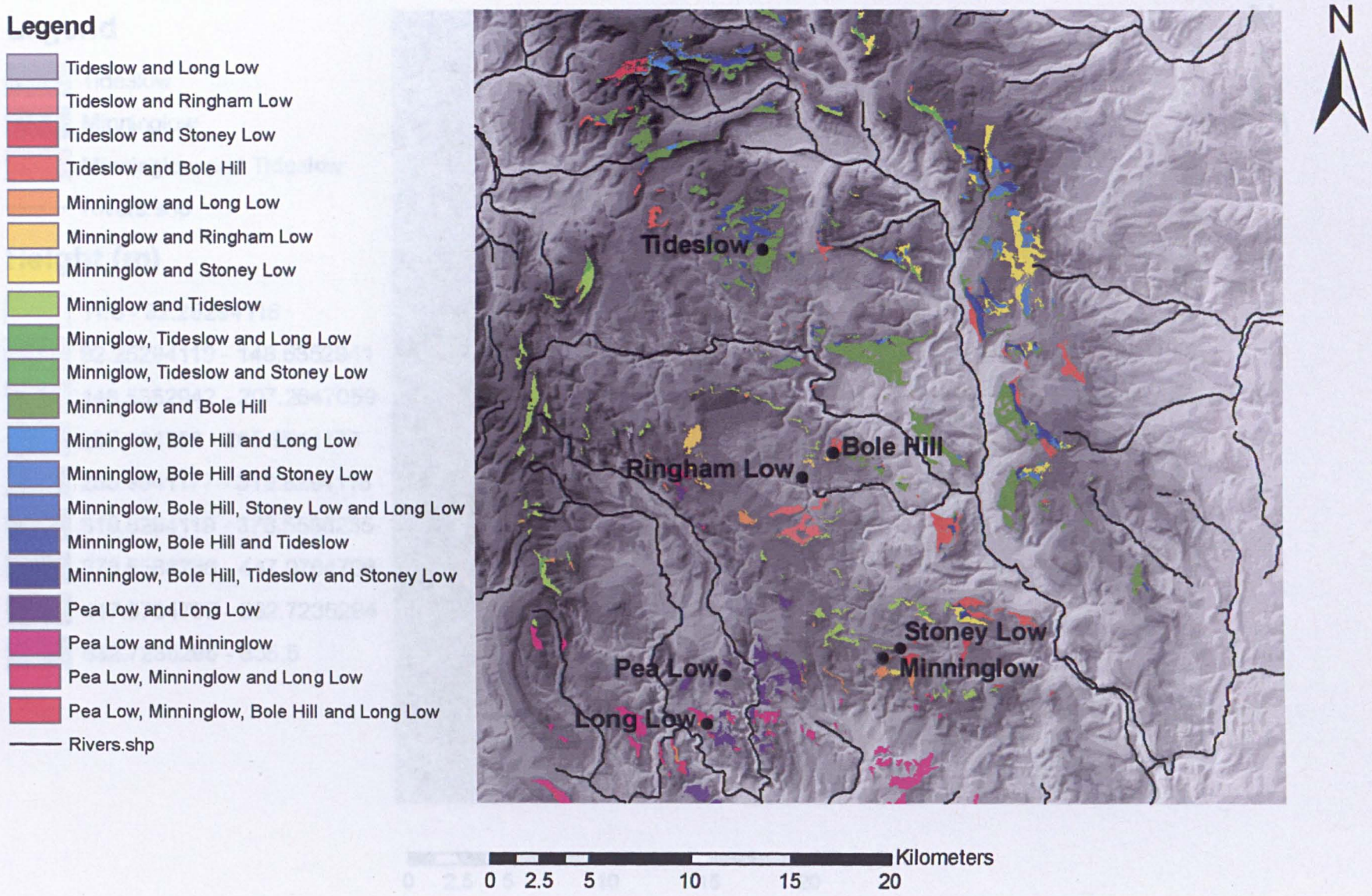


Figure 4.12 - Cumulative Viewshed for Tideslow and Minninglow

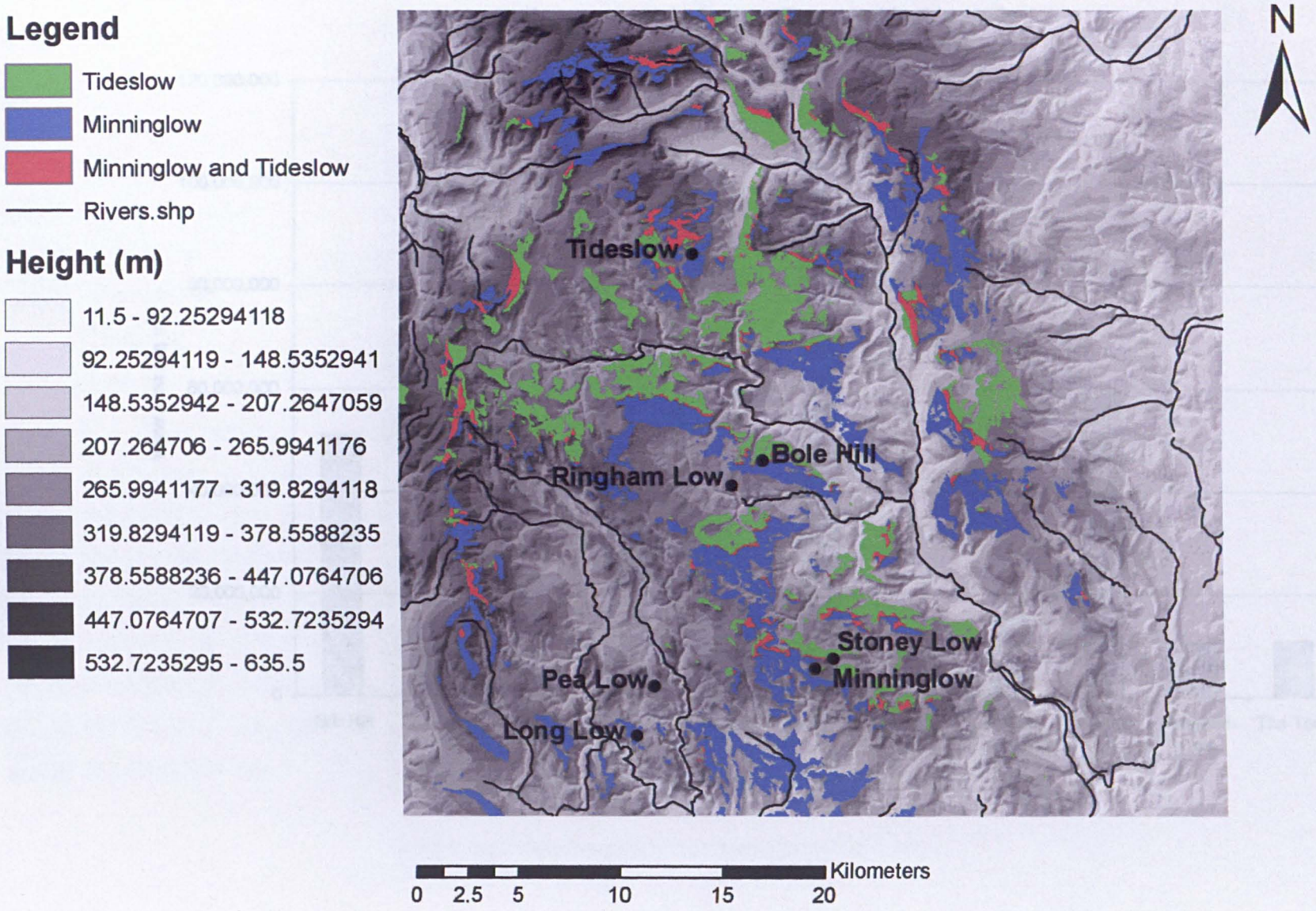


Figure 4.13 - Viewshed areas for Long Barrows

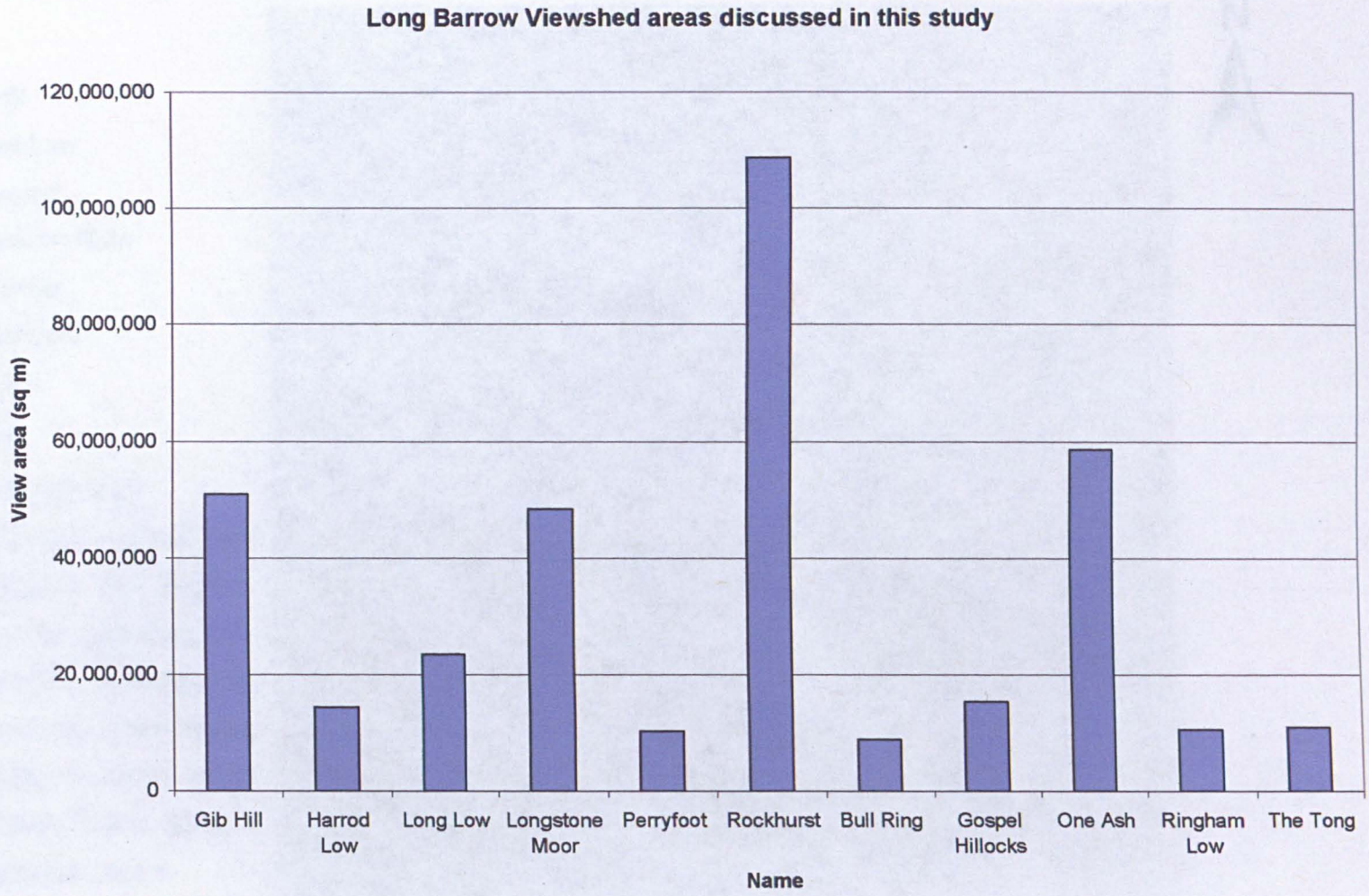


Figure 4.14 - Viewsheds for Long Barrows

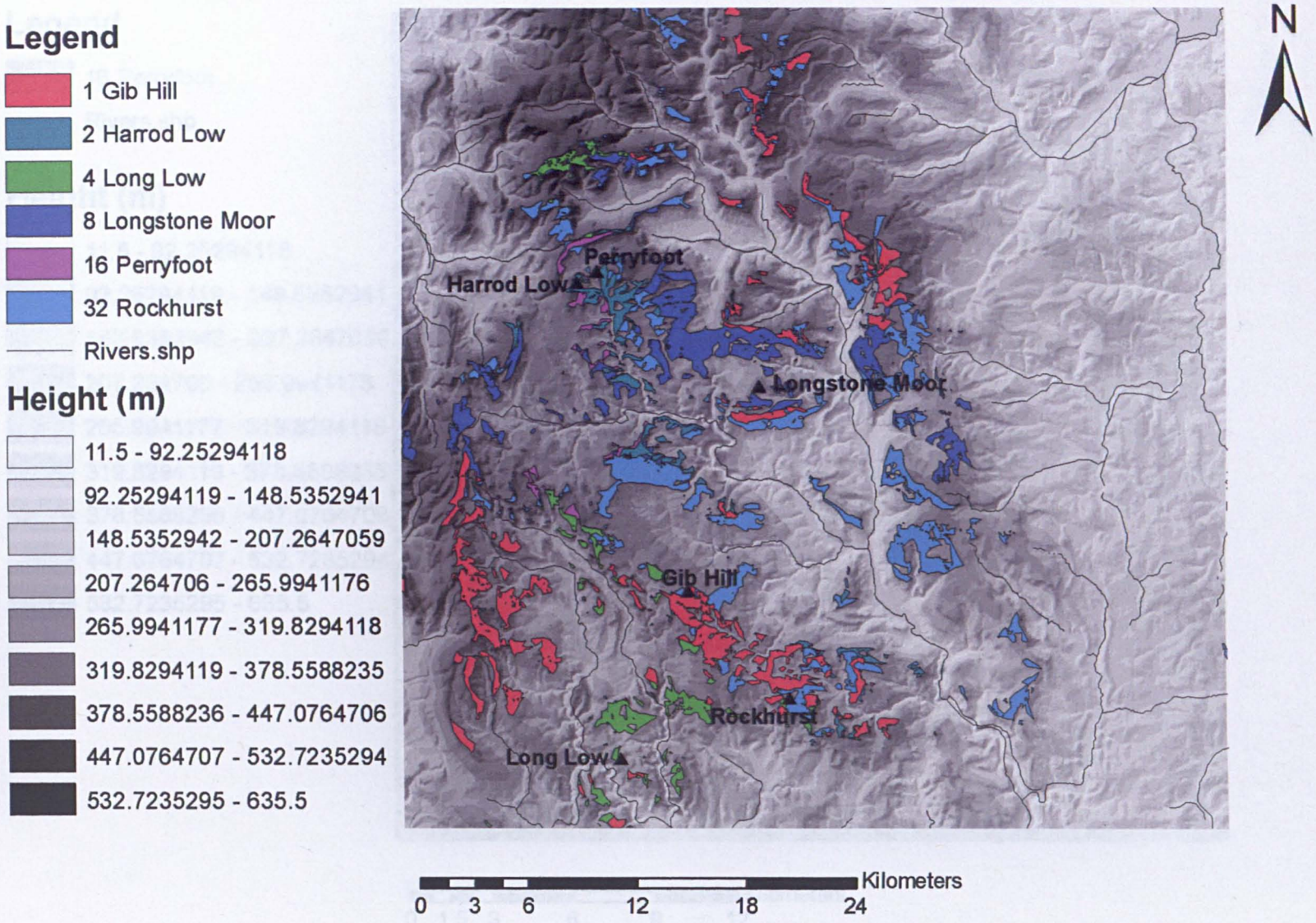


Figure 4.15 - Viewshed of Perryfoot

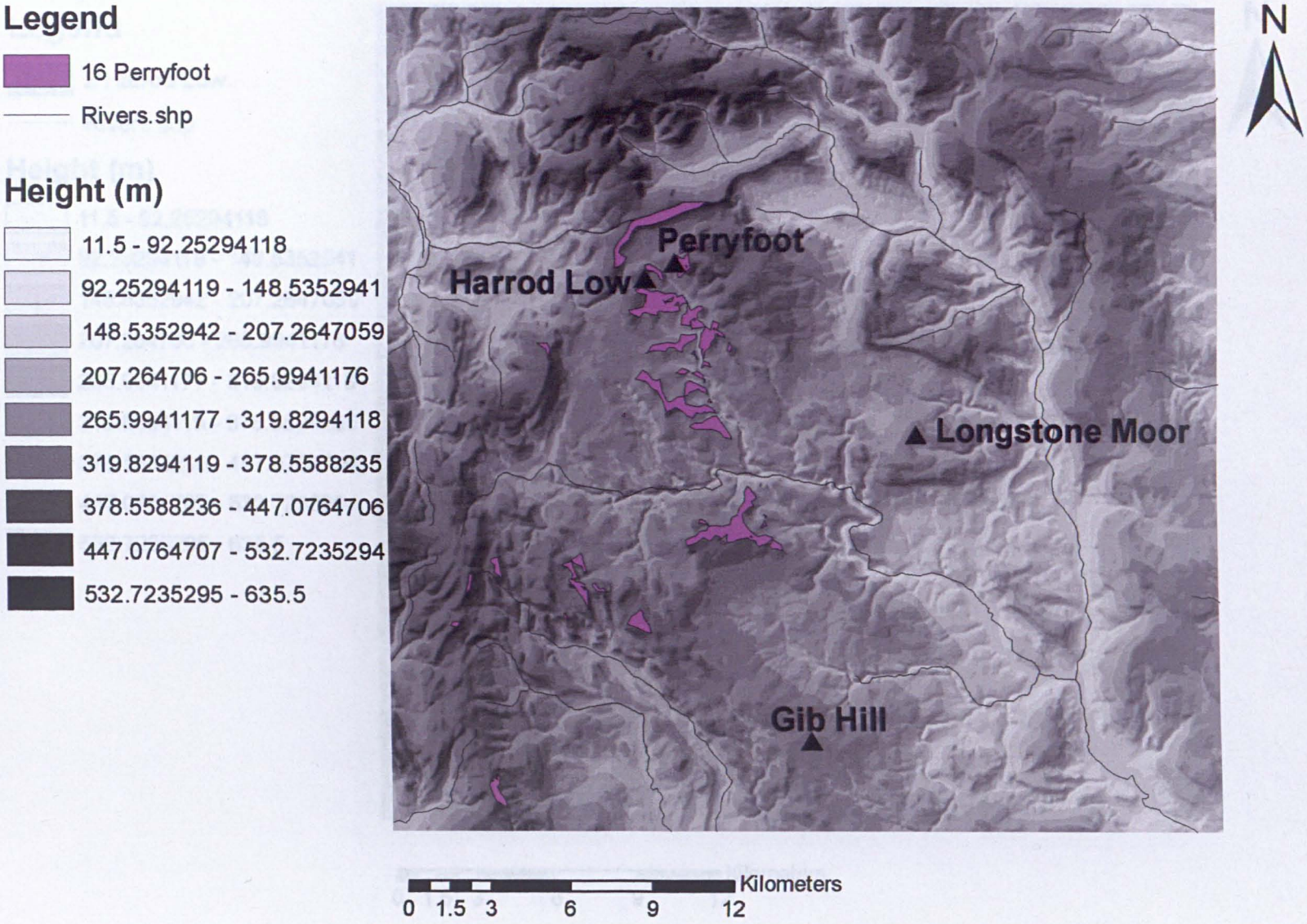


Figure 4.16 - Viewshed of Harrod Low

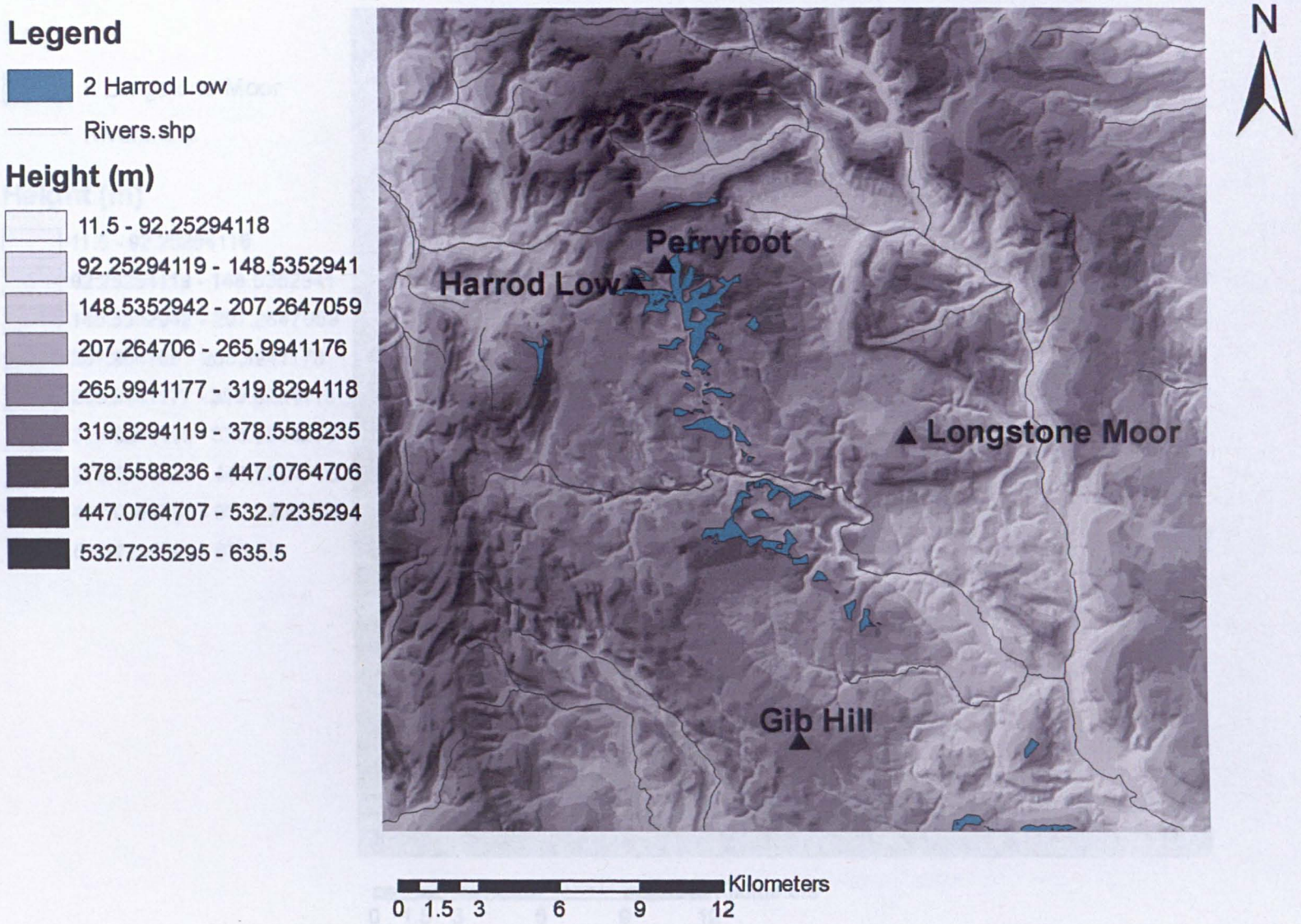


Figure 4.17 - Viewshed of Longstone Moor

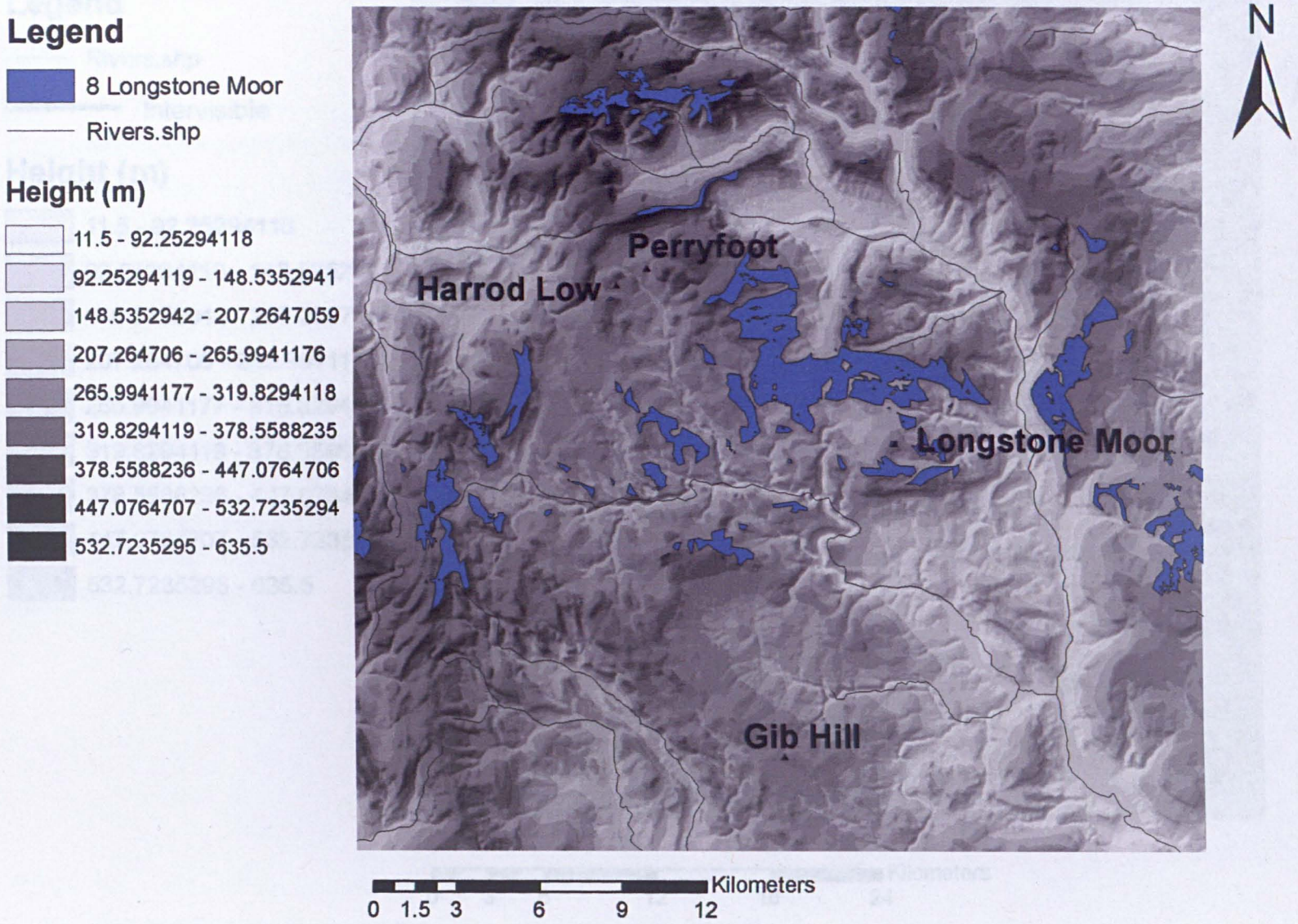


Figure 18 - Point-to-point visibility within the Long Barrow group

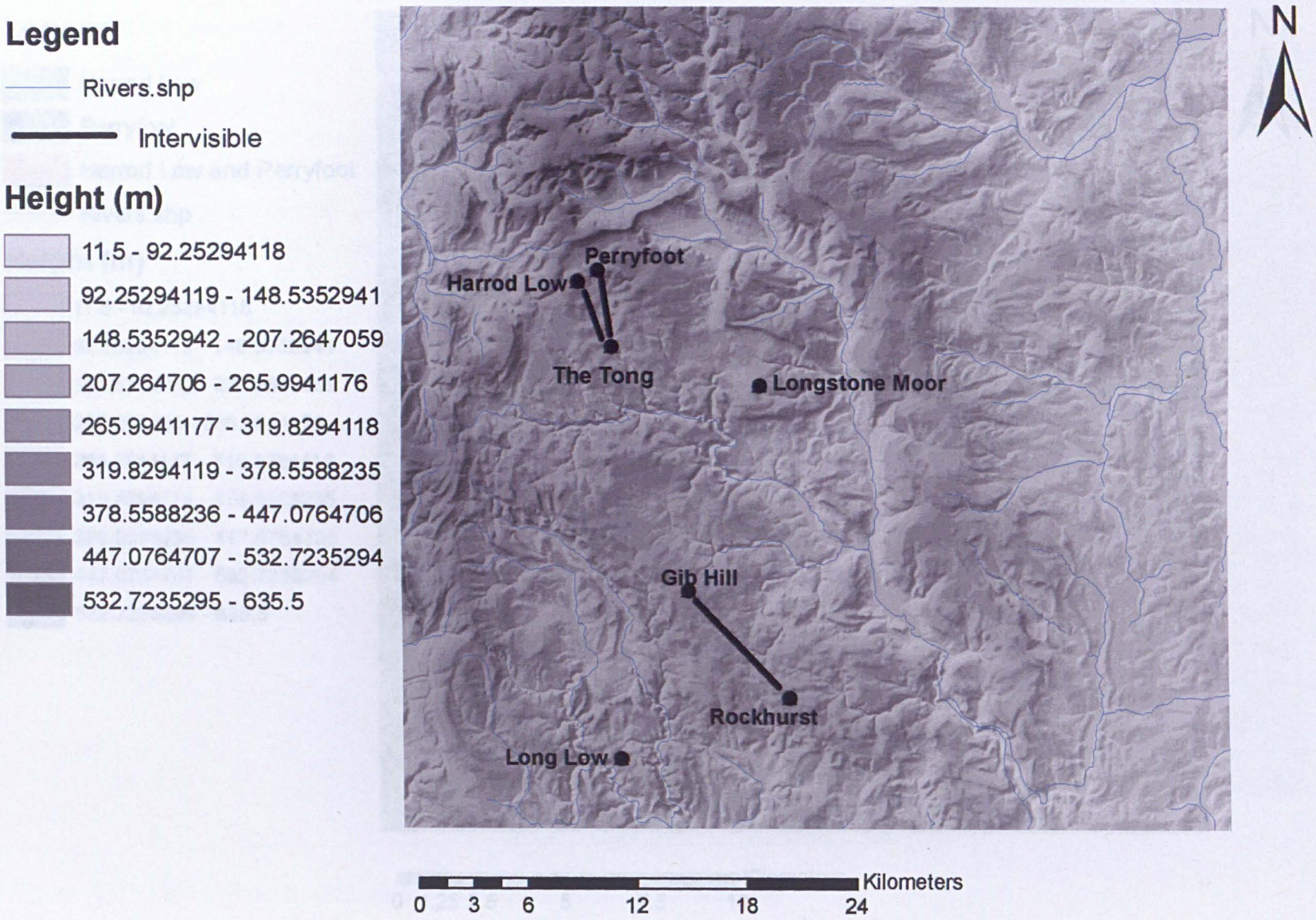
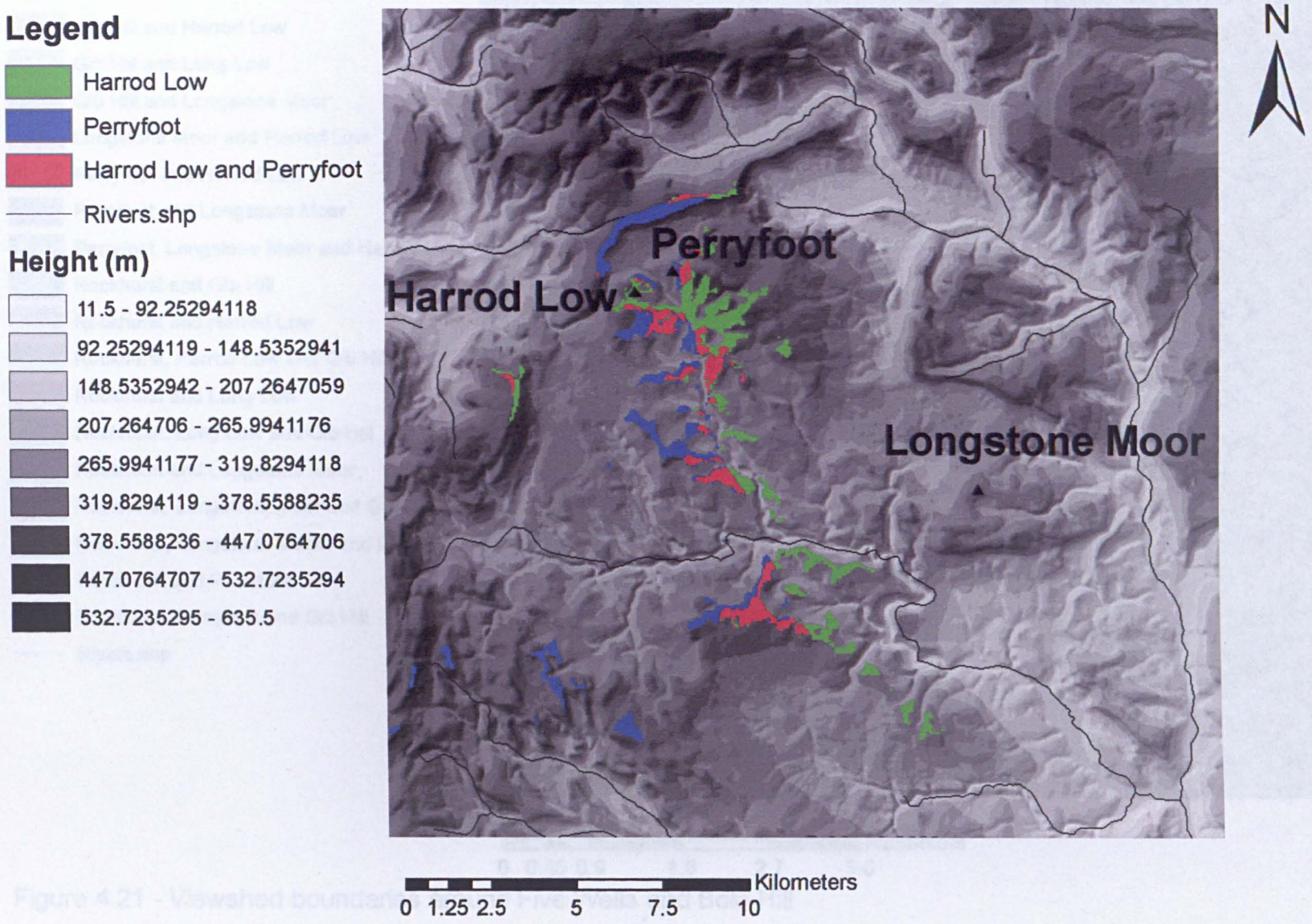


Figure 4.19 - CVA for Perryfoot and Harrod Low



4.20 - Viewshed boundaries around Dam Dale and Peak Forest

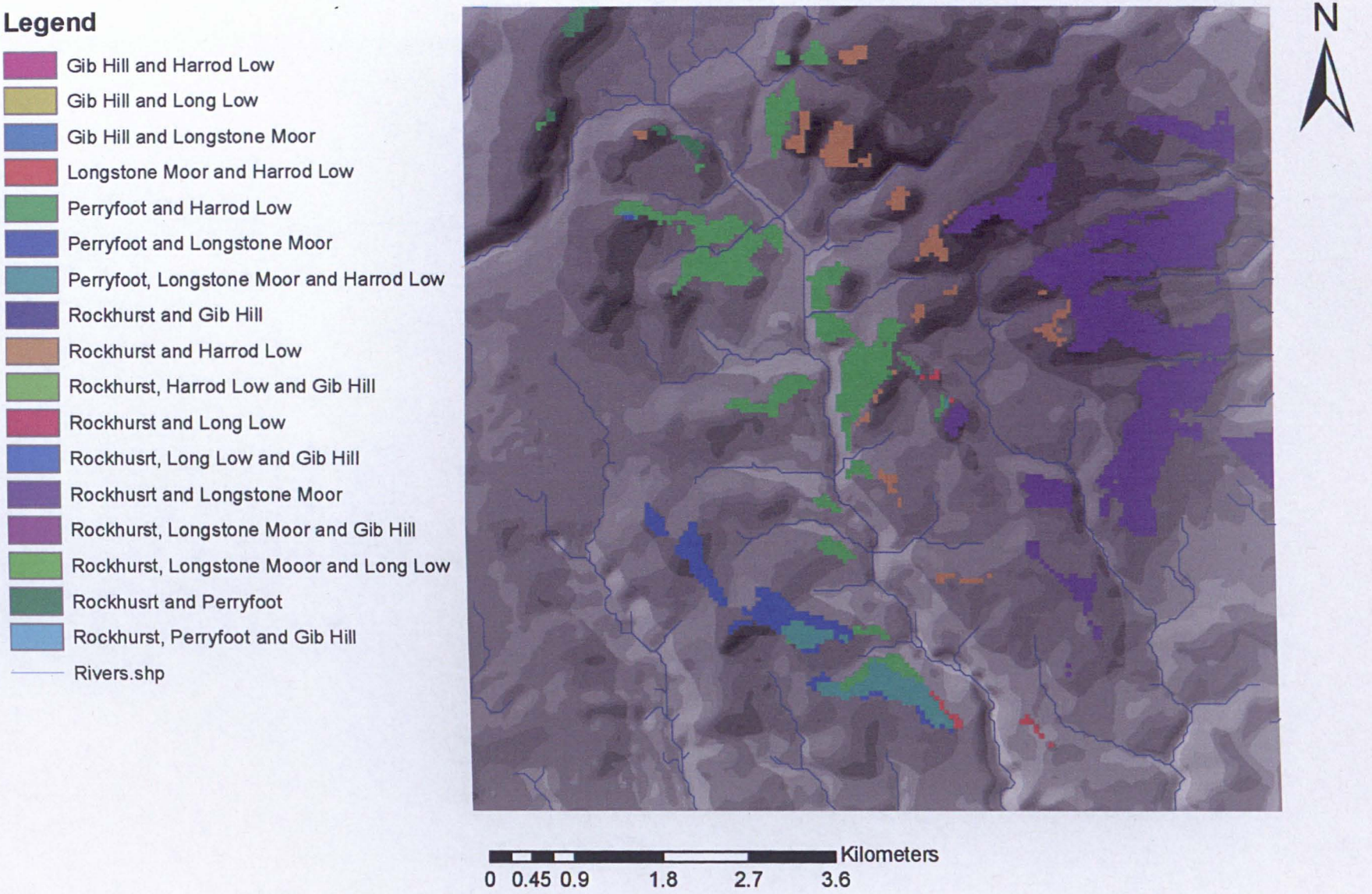


Figure 4.21 - Viewshed boundaries around Five Wells and Bole Hill

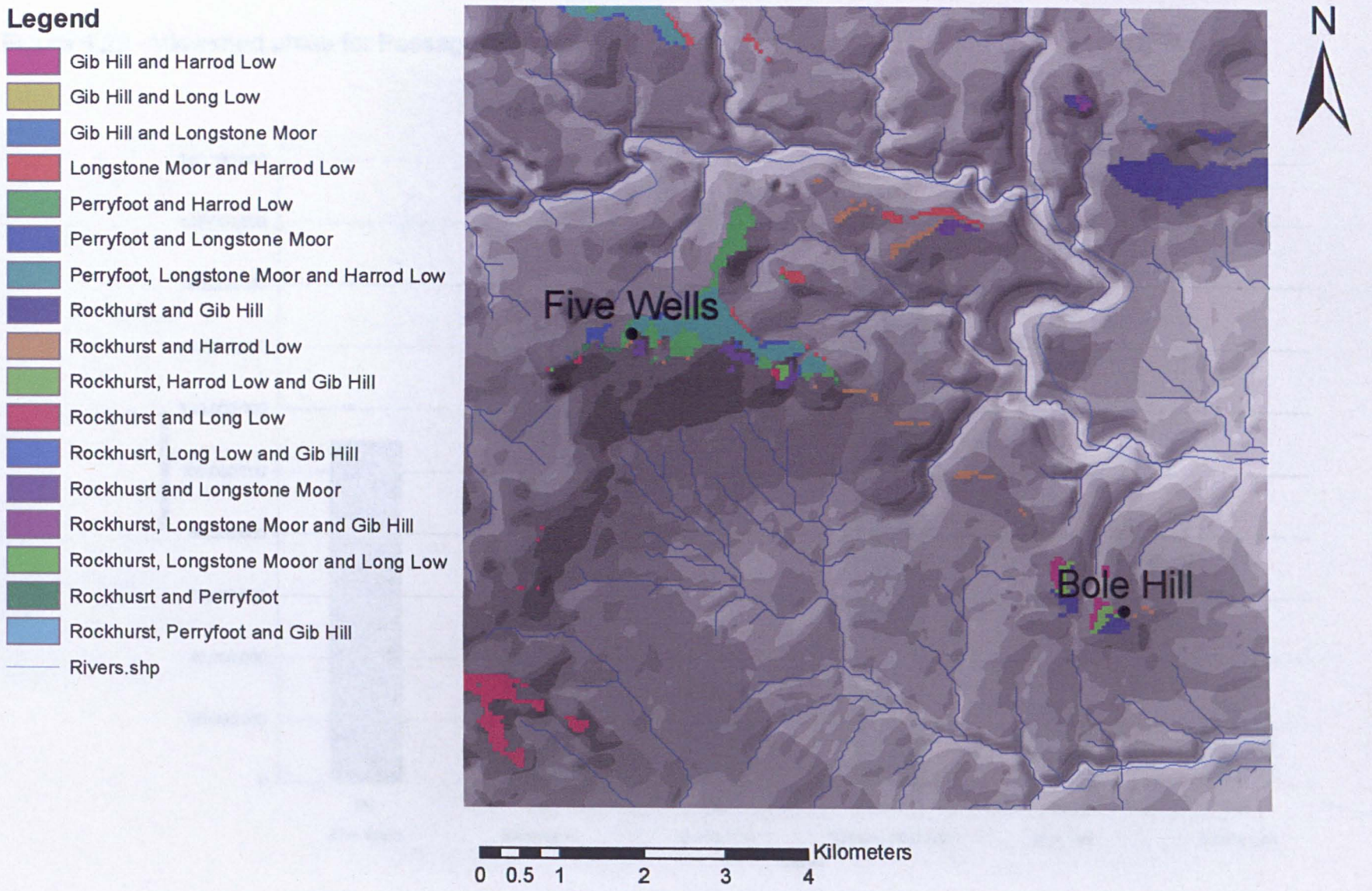

Legend
Gib Hill and Harrod Low
Gib Hill and Long Low
Gib Hill and Longstone Moor
Longstone Moor and Harrod Low
Perryfoot and Harrod Low
Perryfoot and Longstone Moor
Perryfoot, Longstone Moor and Harrod Low
Rockhurst and Gib Hill
Rockhurst and Harrod Low
Rockhurst, Harrod Low and Gib Hill
Rockhurst and Long Low
Rockhusrt, Long Low and Gib Hill
Rockhusrt and Longstone Moor
Rockhurst, Longstone Moor and Gib Hill
Rockhurst, Longstone Mooor and Long Low
Rockhusrt and Perryfoot
Rockhurst, Perryfoot and Gib Hill
Rivers.shp
Five Wells
Bole Hill
N
0 0.5 1 2 3 4
Kilometers

Figure 4.22 - Viewshed areas for Passage Graves

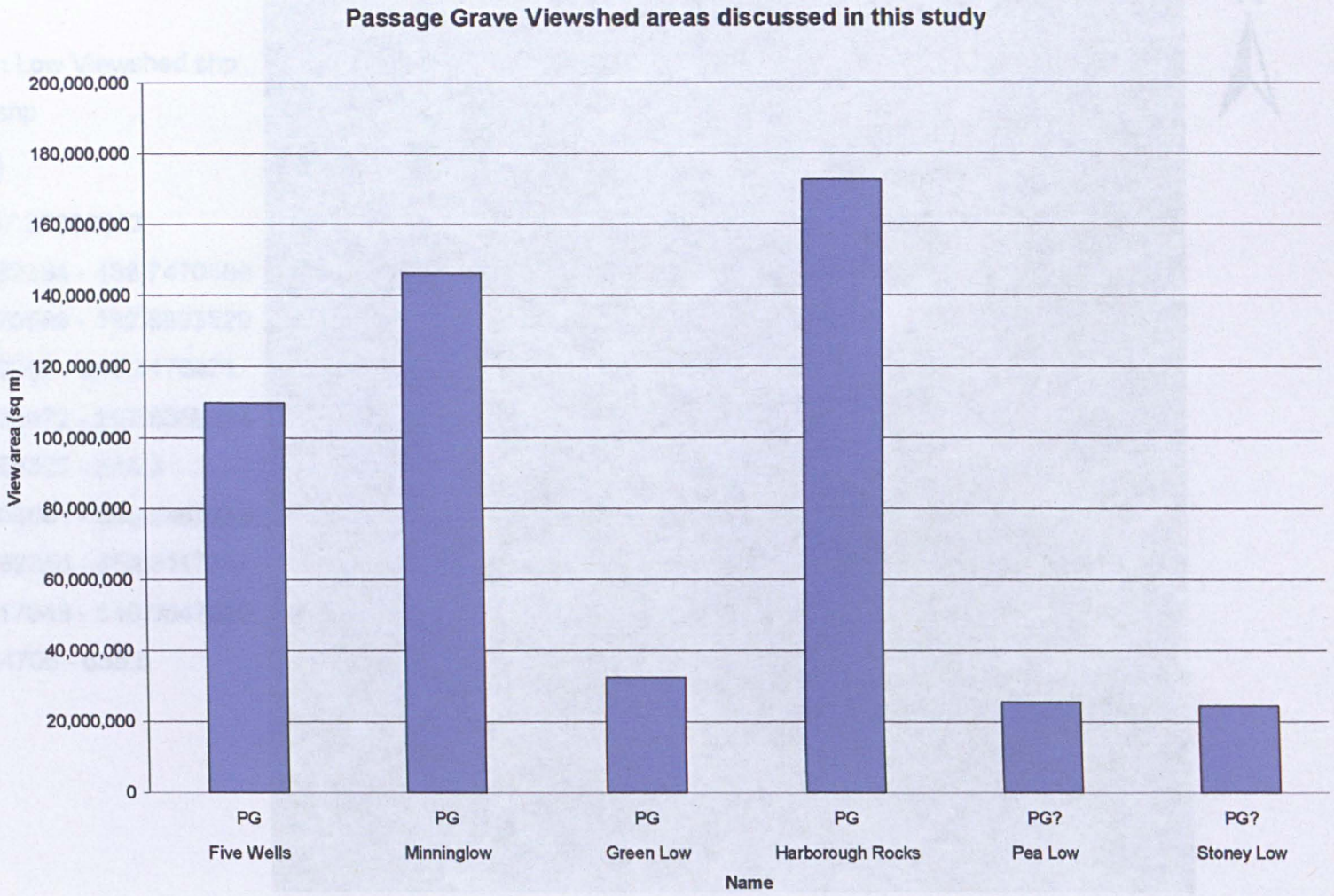


Figure 4.23 - Viewshed of Green Low

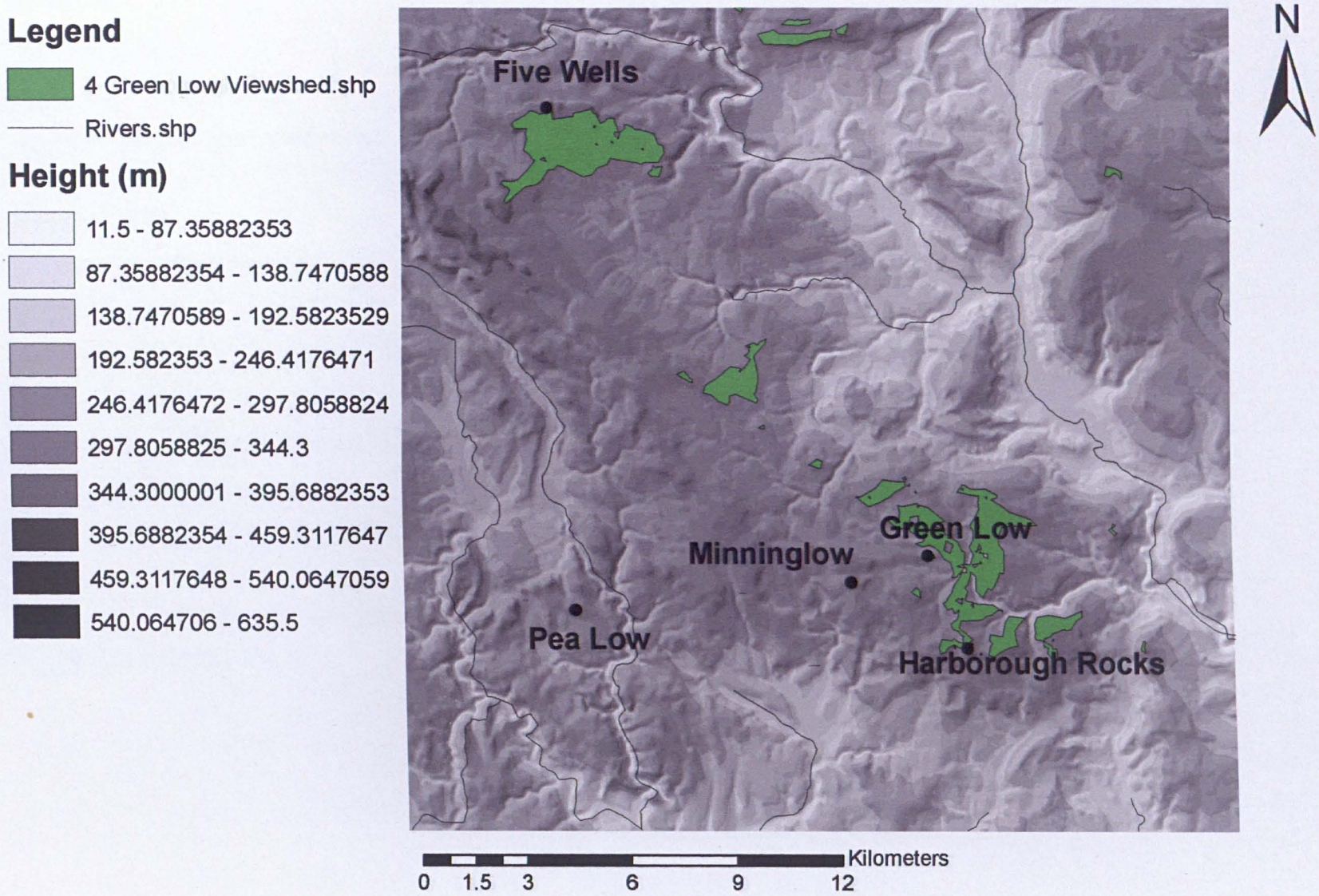


Figure 4.24 - Viewshed of Harborough Rocks

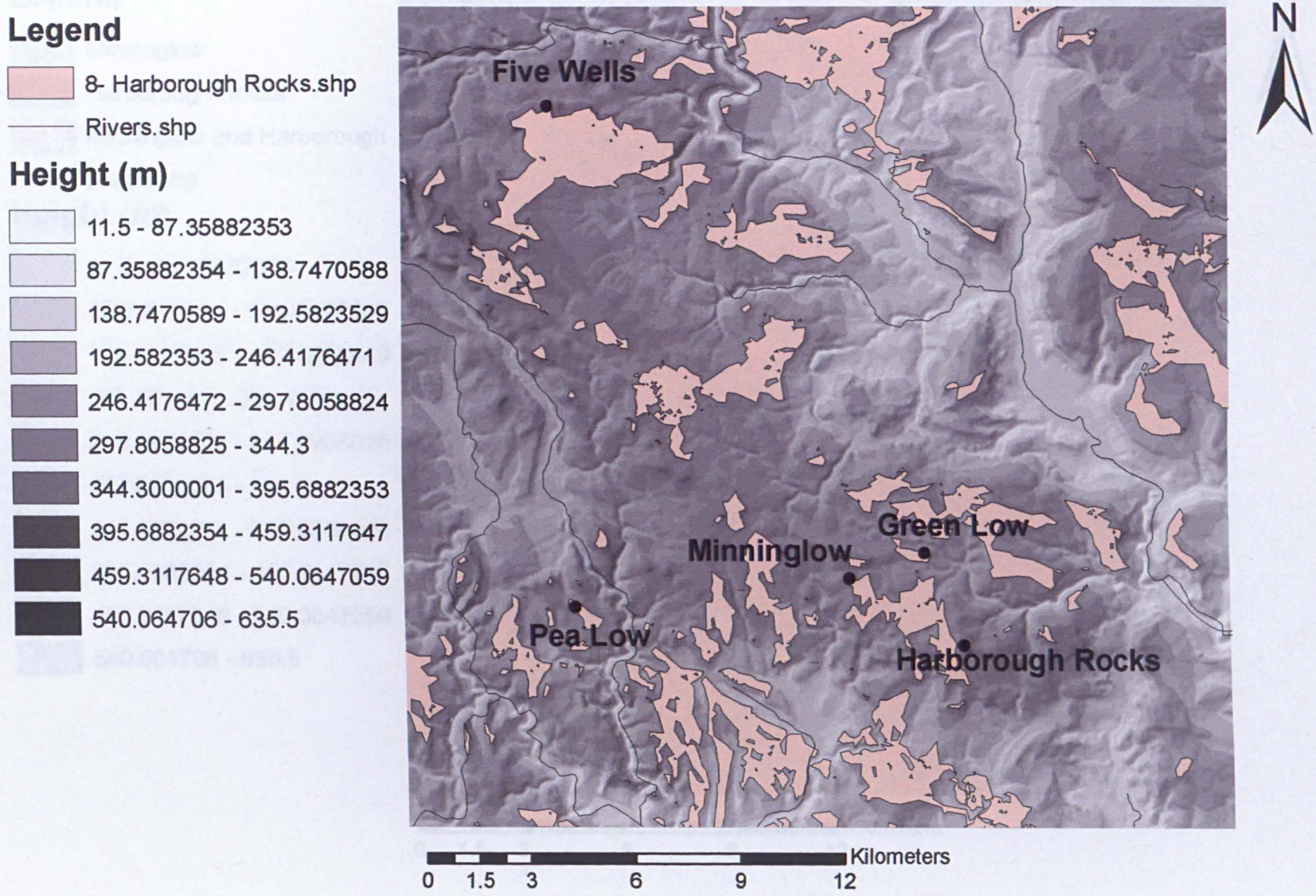


Figure 4.25 - Cumulative viewshed for Harborough Rocks and Minninglow

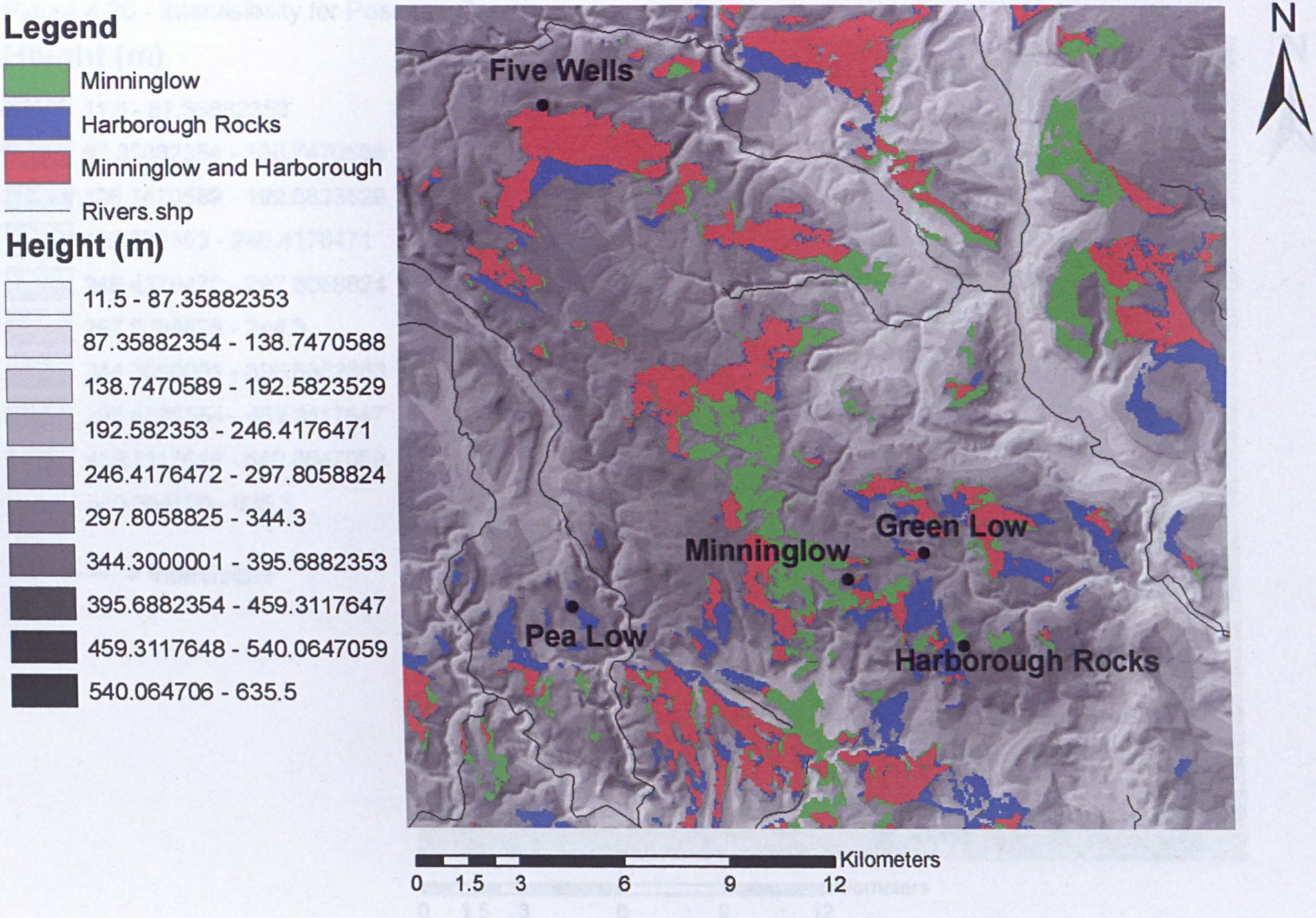


Figure 4.26 - Intervisibility for Passage Graves

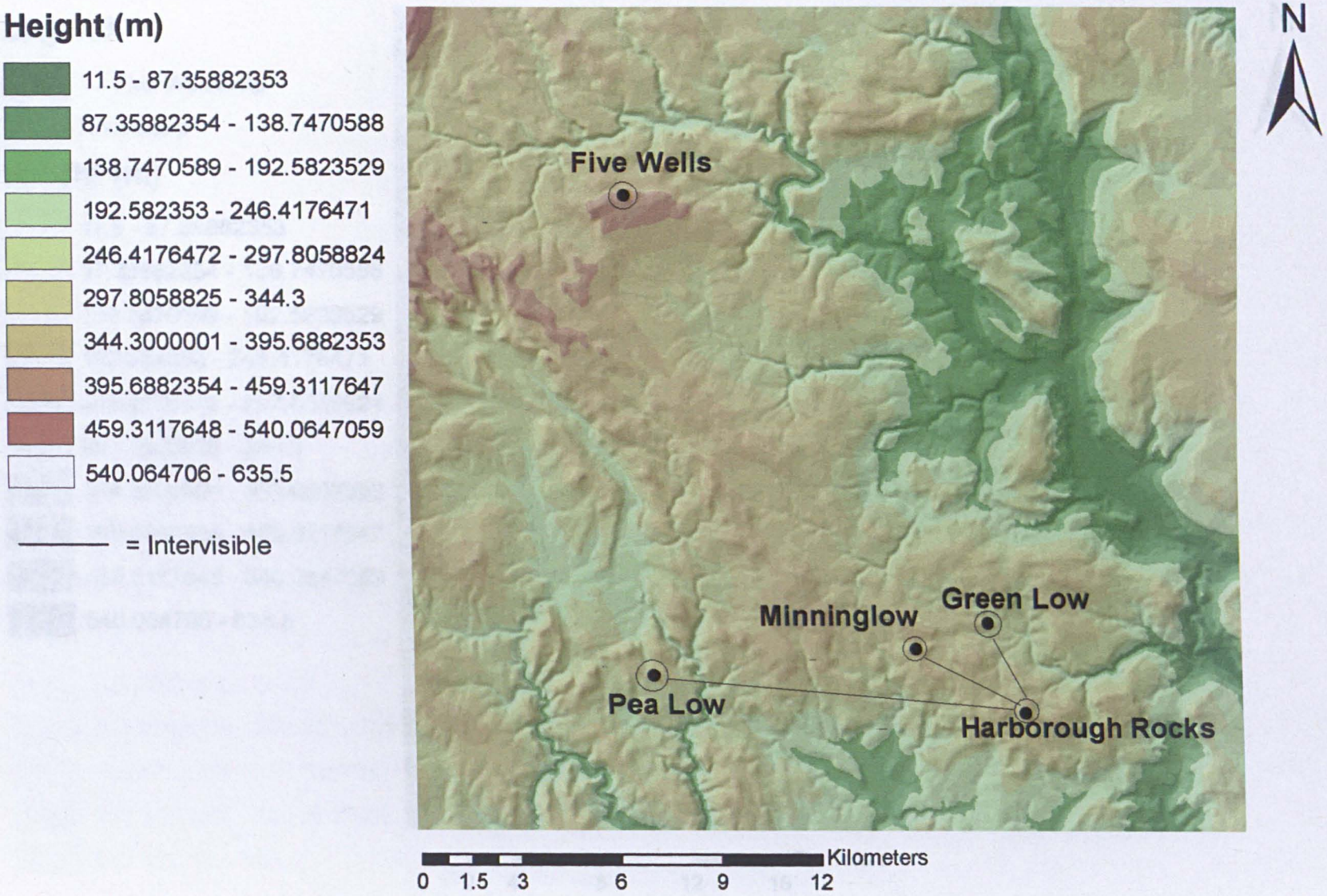


Figure 4.27 - Viewshed of Five Wells

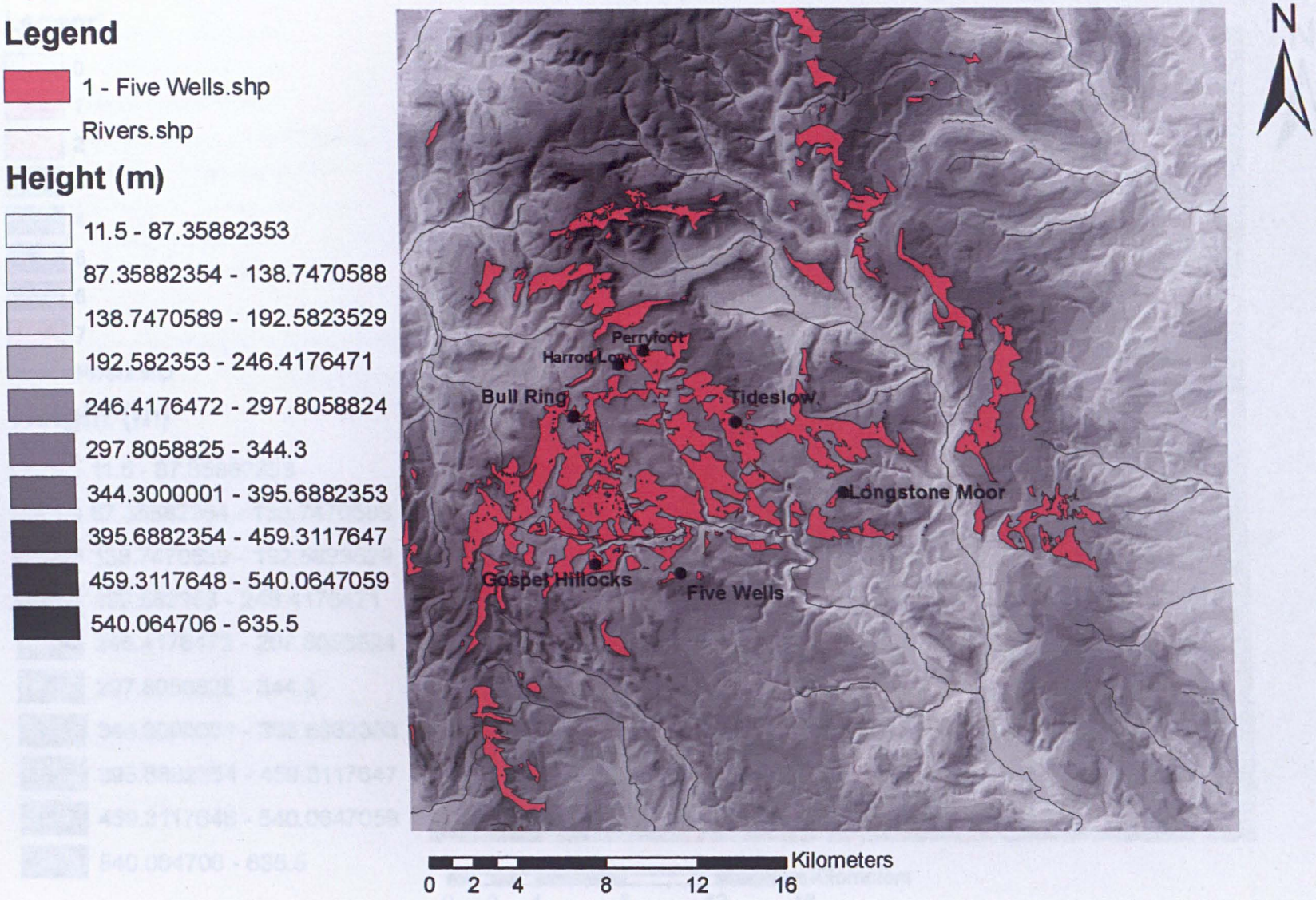


Figure 4.28 - Simple CVA for Passage Graves

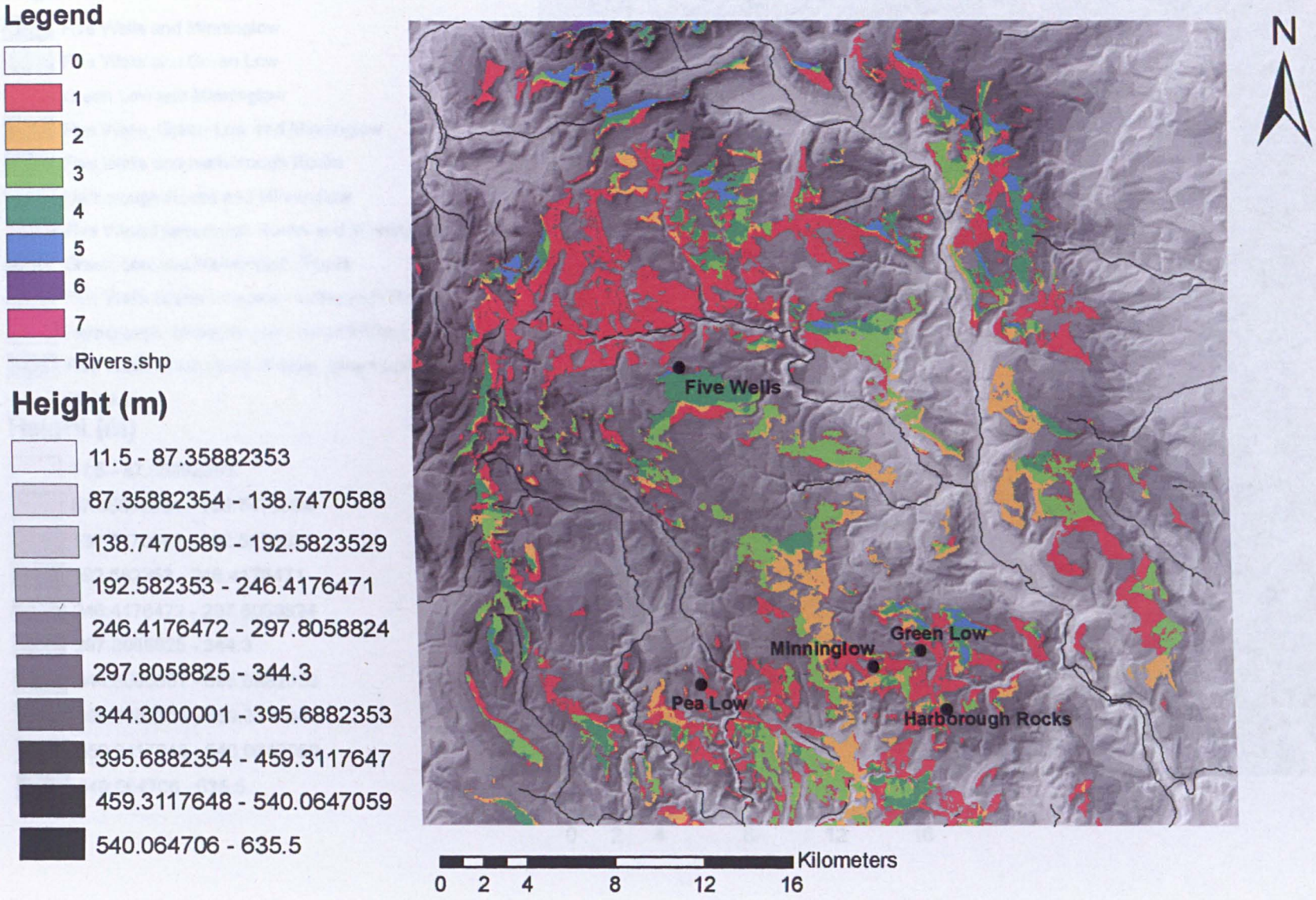


Figure 4.29 - 2 Series CVA overlaps for Passage Graves

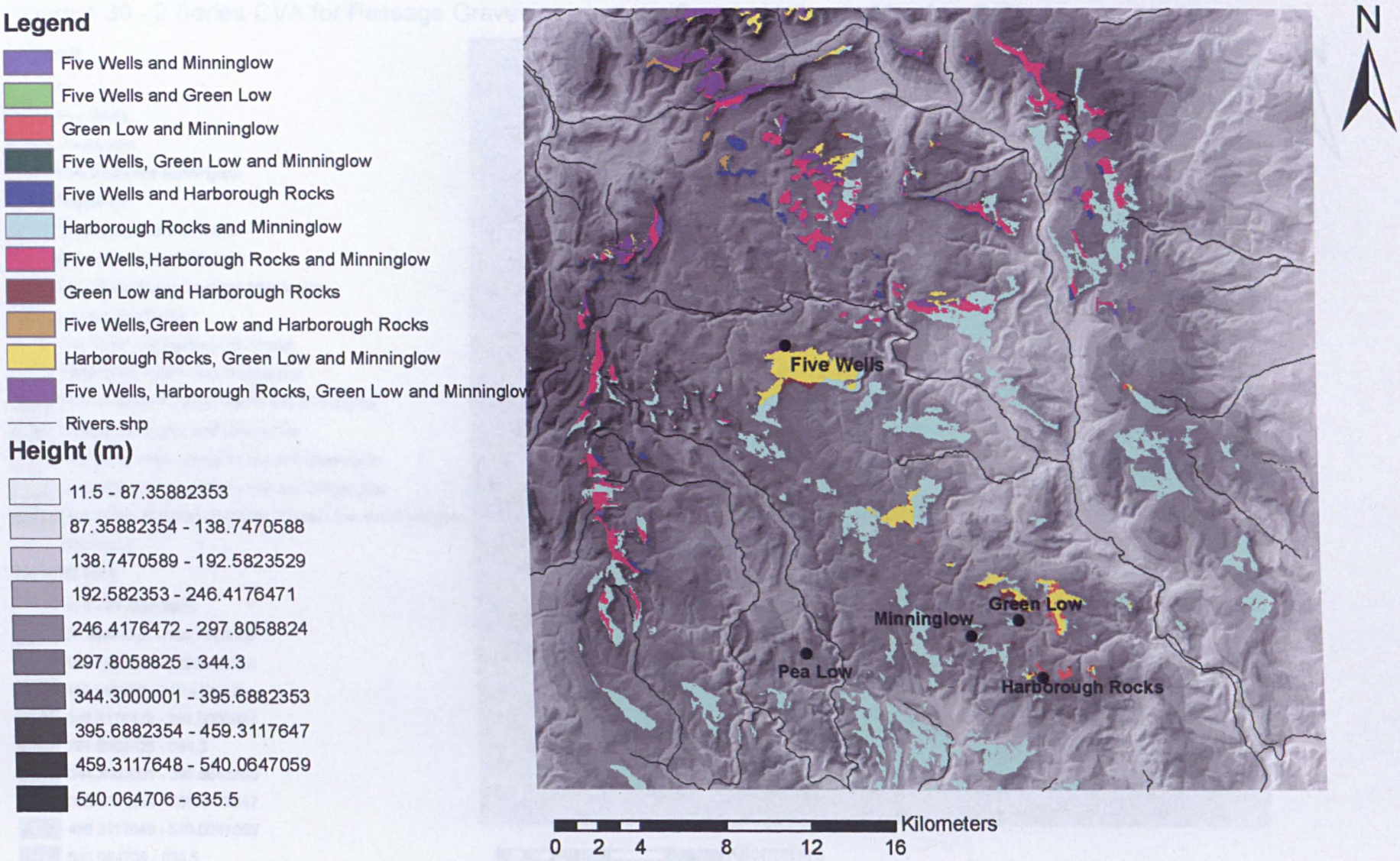


Figure 4.30 - 2 Series CVA for Passage Graves overlooking Grange Valley and the Via Gellia

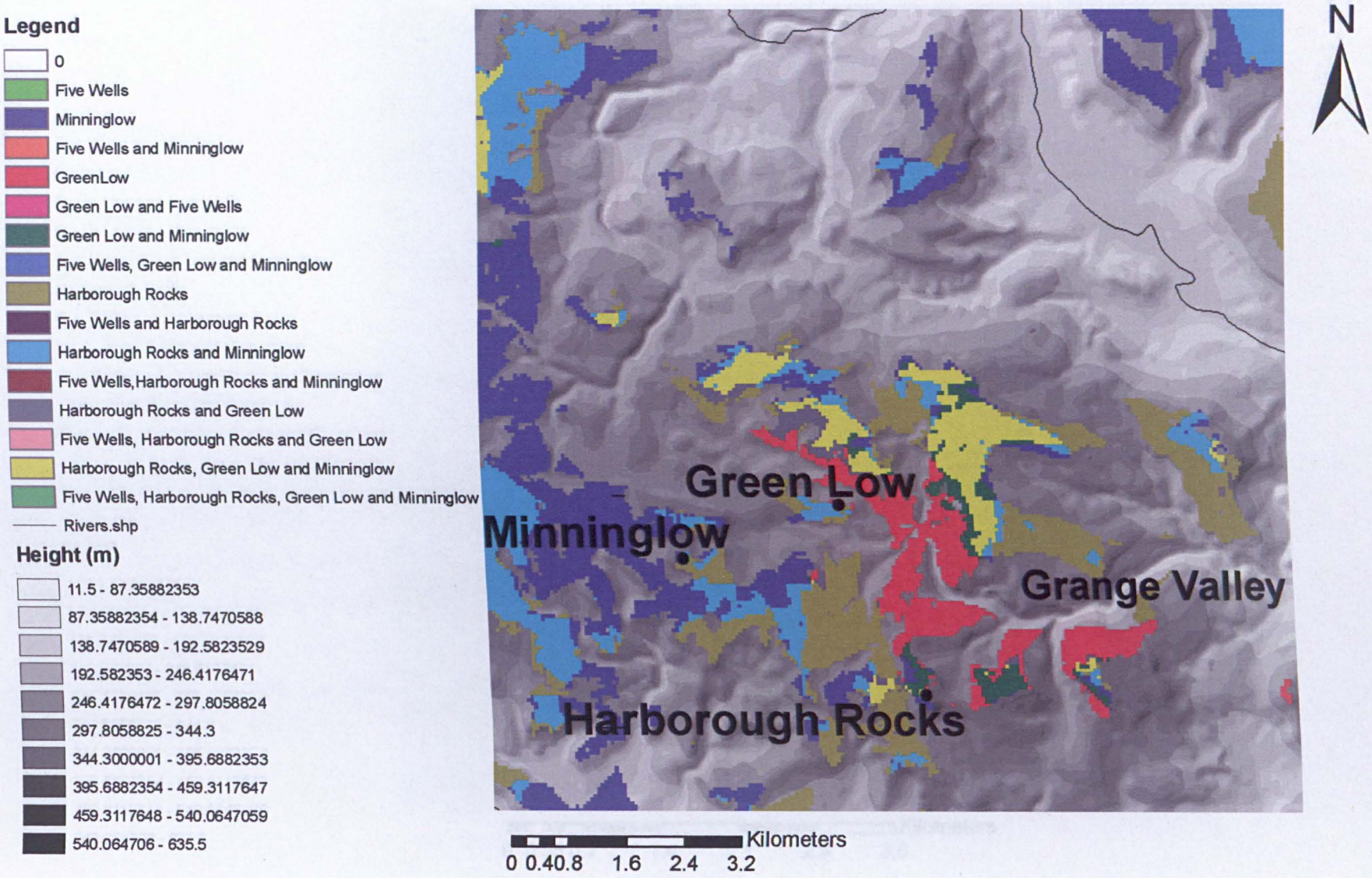


Figure 4.31 - Tideslow Great Barrow sitting in the viewshed of Five Wells, Harborough Rocks and Minninglow

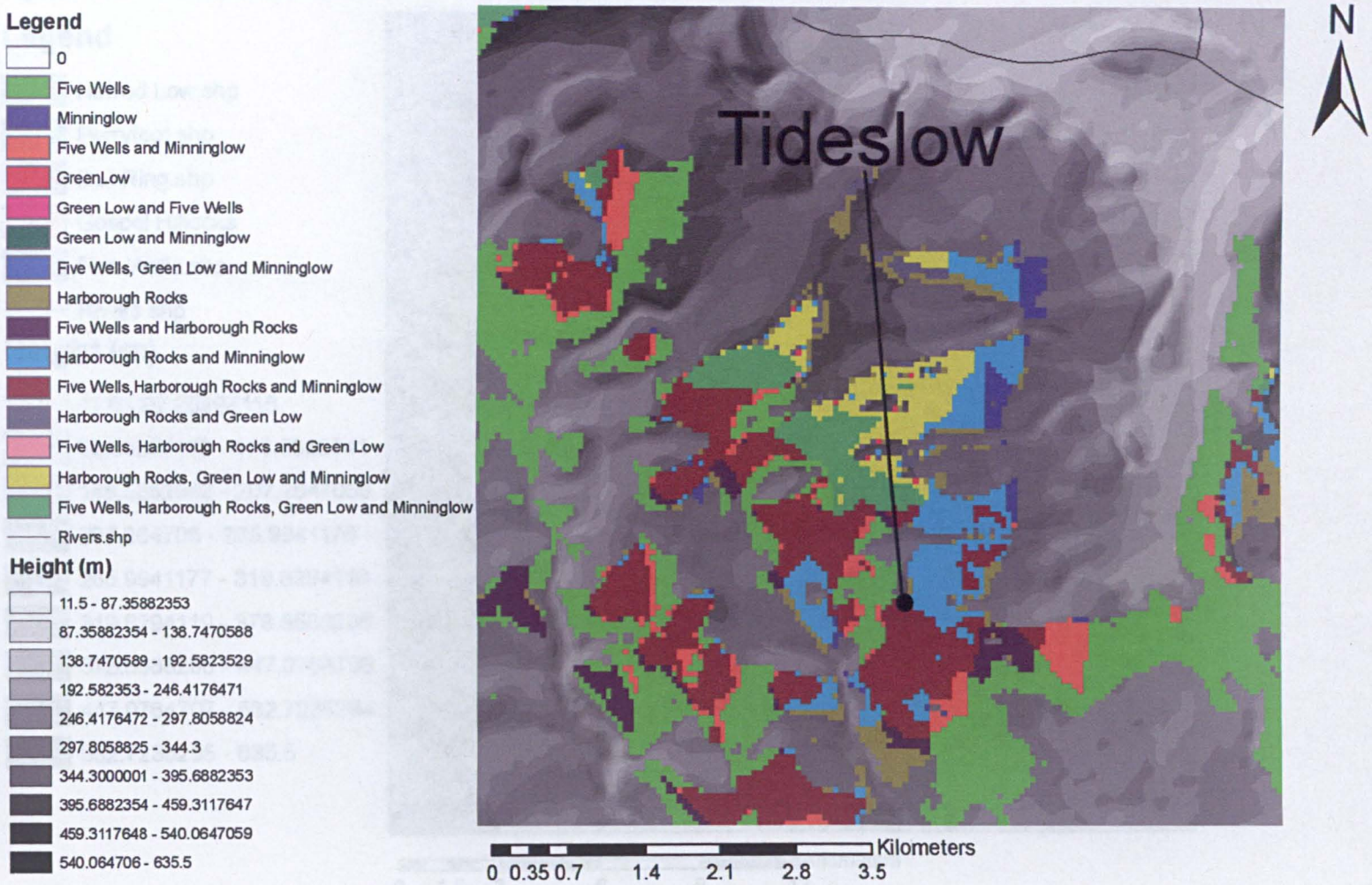


Figure 4.32 - Viewsheds of Neolithic tombs in the North West of the White Peak

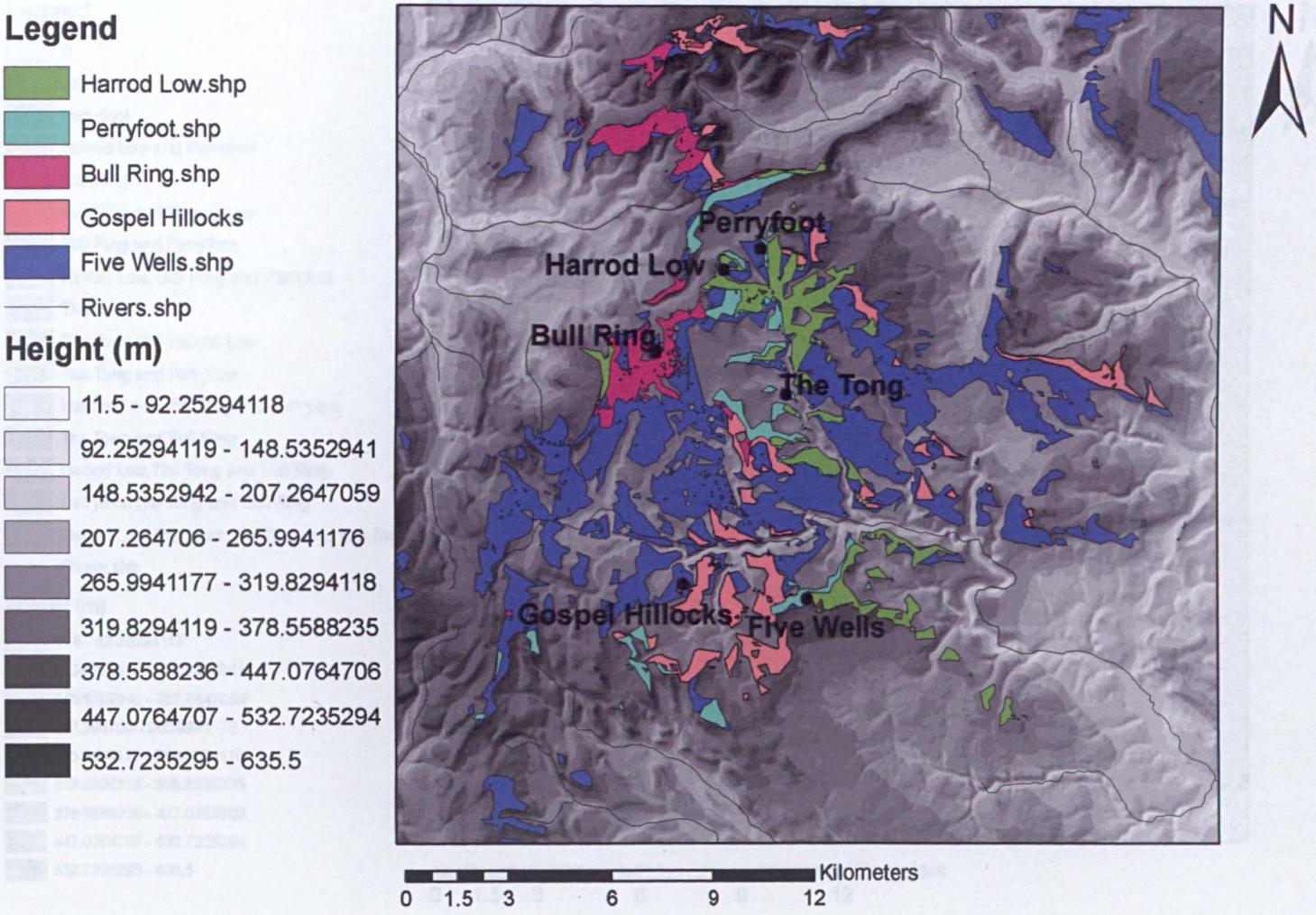


Figure 4.33 - 2 Series CVA for Neolithic tombs in the North West of the White Peak

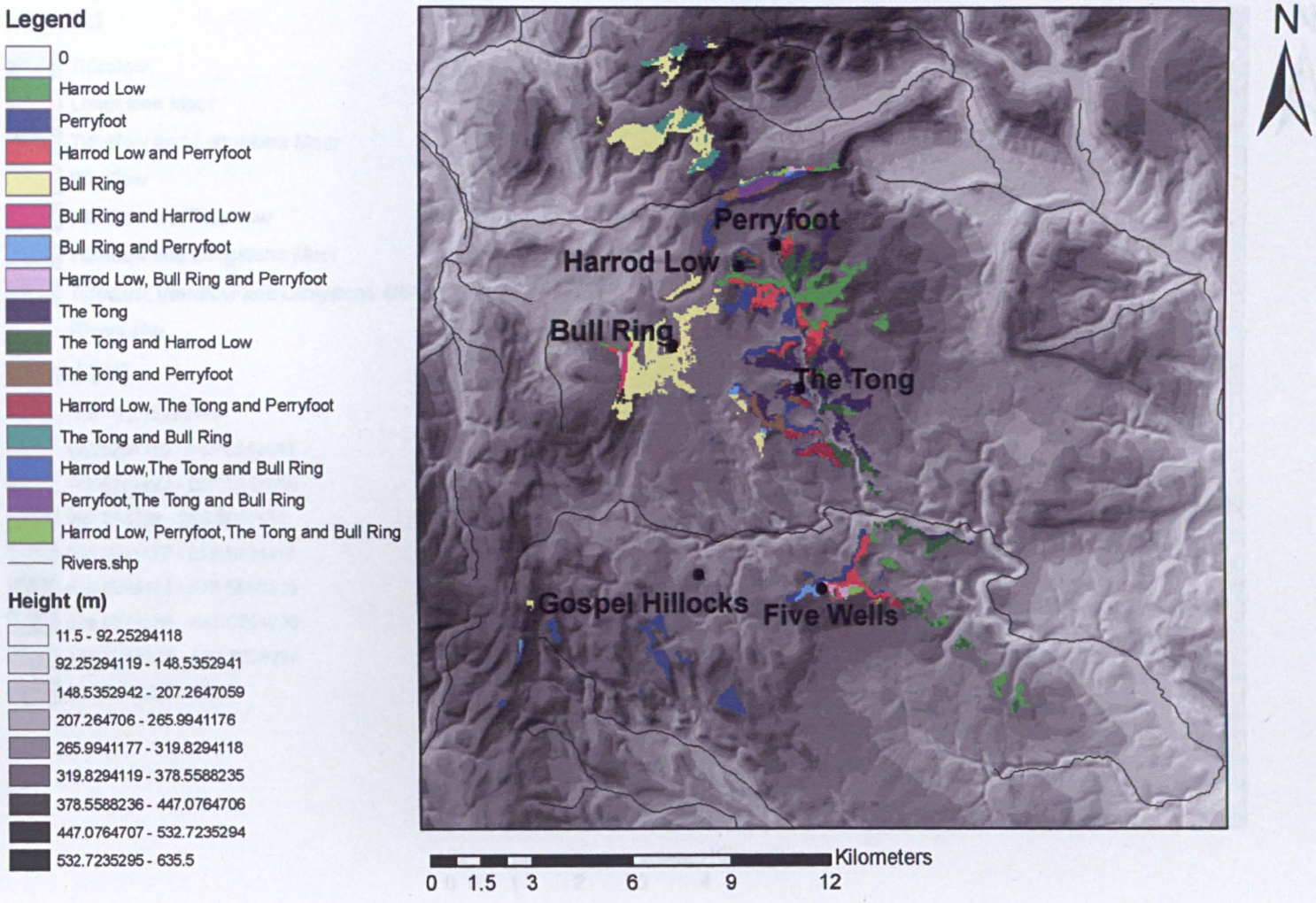


Figure 4.34 - 2 Series CVA for Tideslow, Longstone Moor and Wardlow

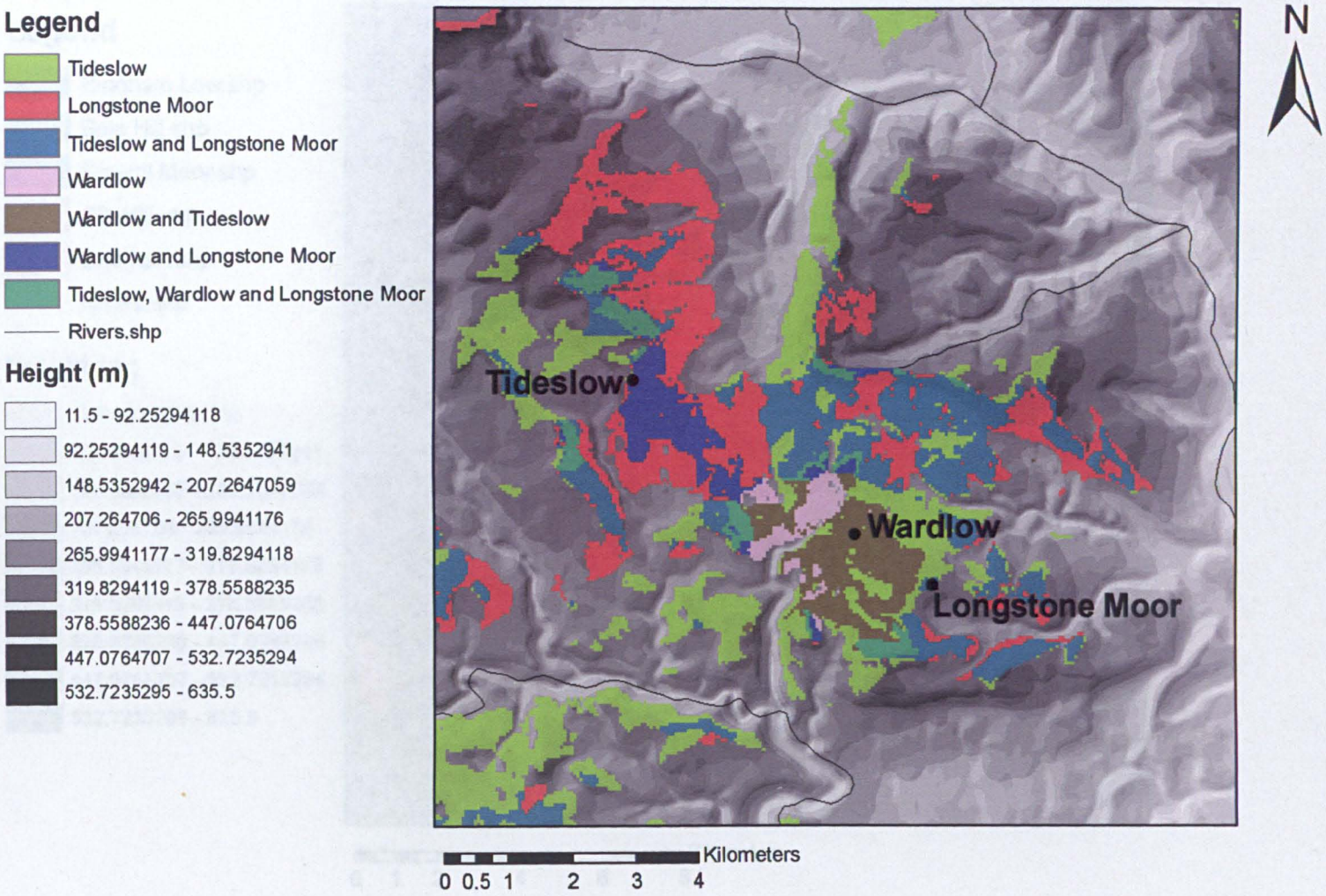


Figure 4.35 - Viewsheds of Neolithic tombs in the Central area of the White Peak

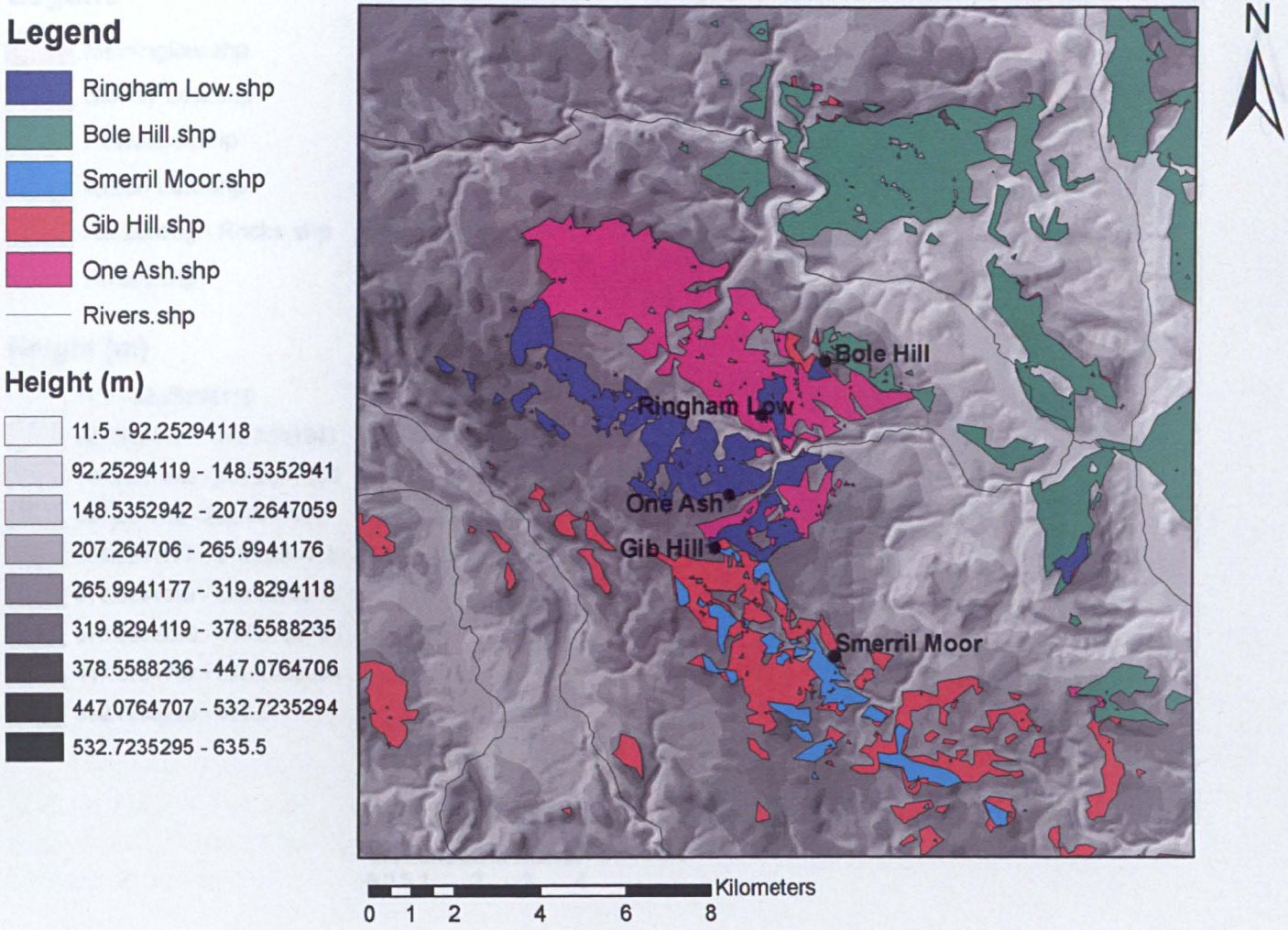


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Figure 4.36 - Viewsheds of Neolithic tombs in the South East of the White Peak

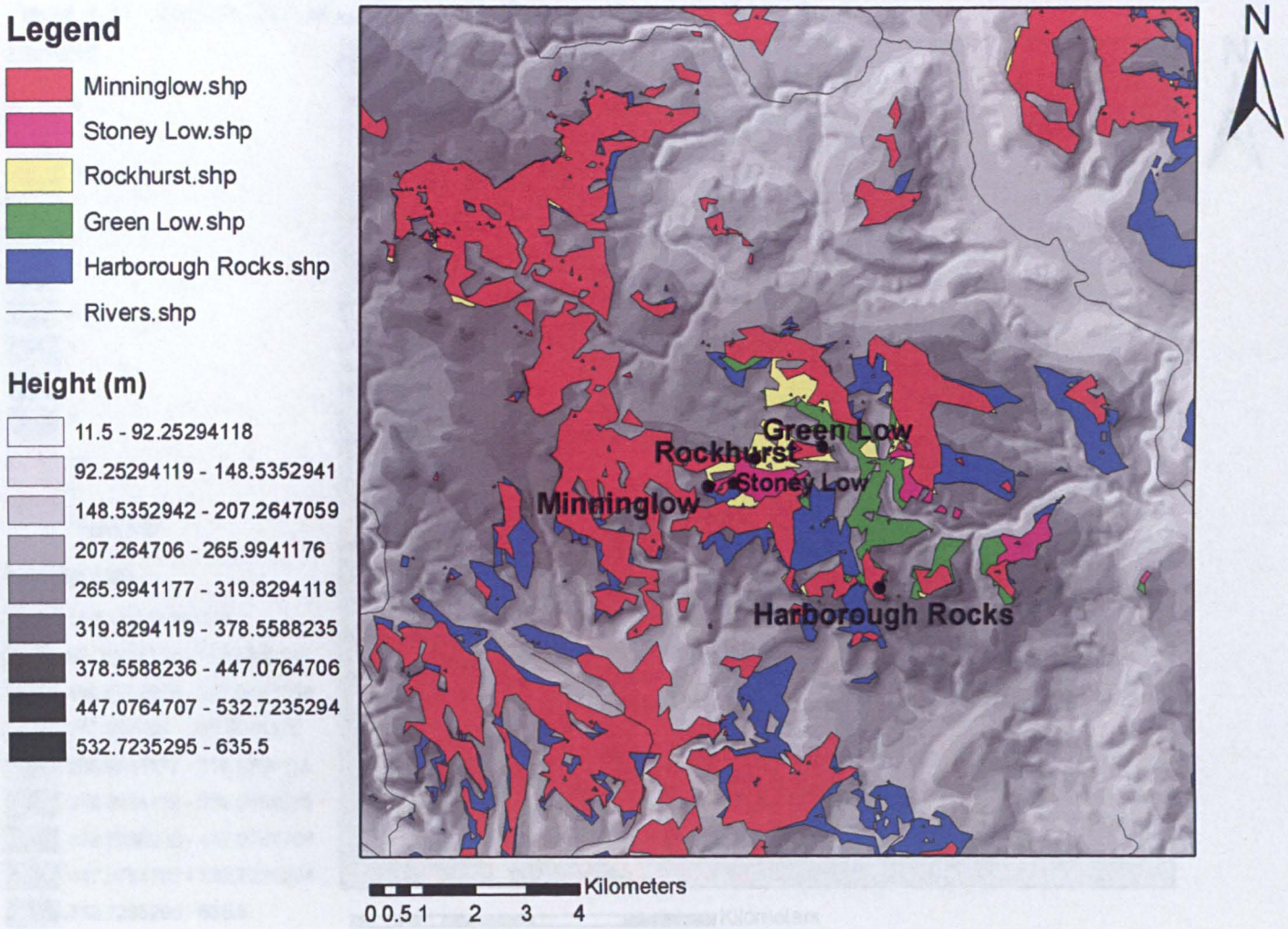


Figure 4.37 - Simple CVA of all definite Neolithic tombs in the White Peak

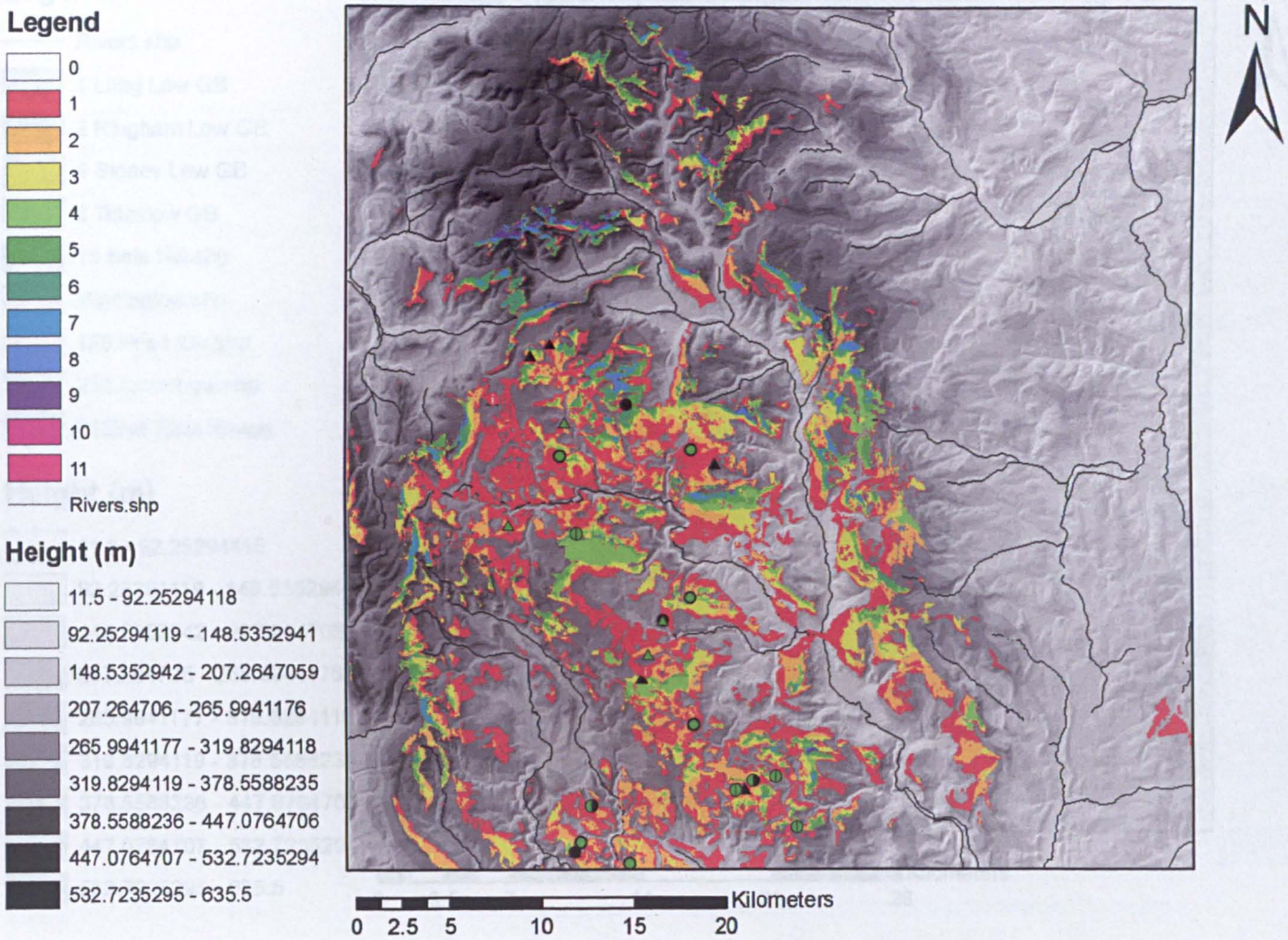


Figure 4.38 - Viewsheds for Great Barrows and Henges

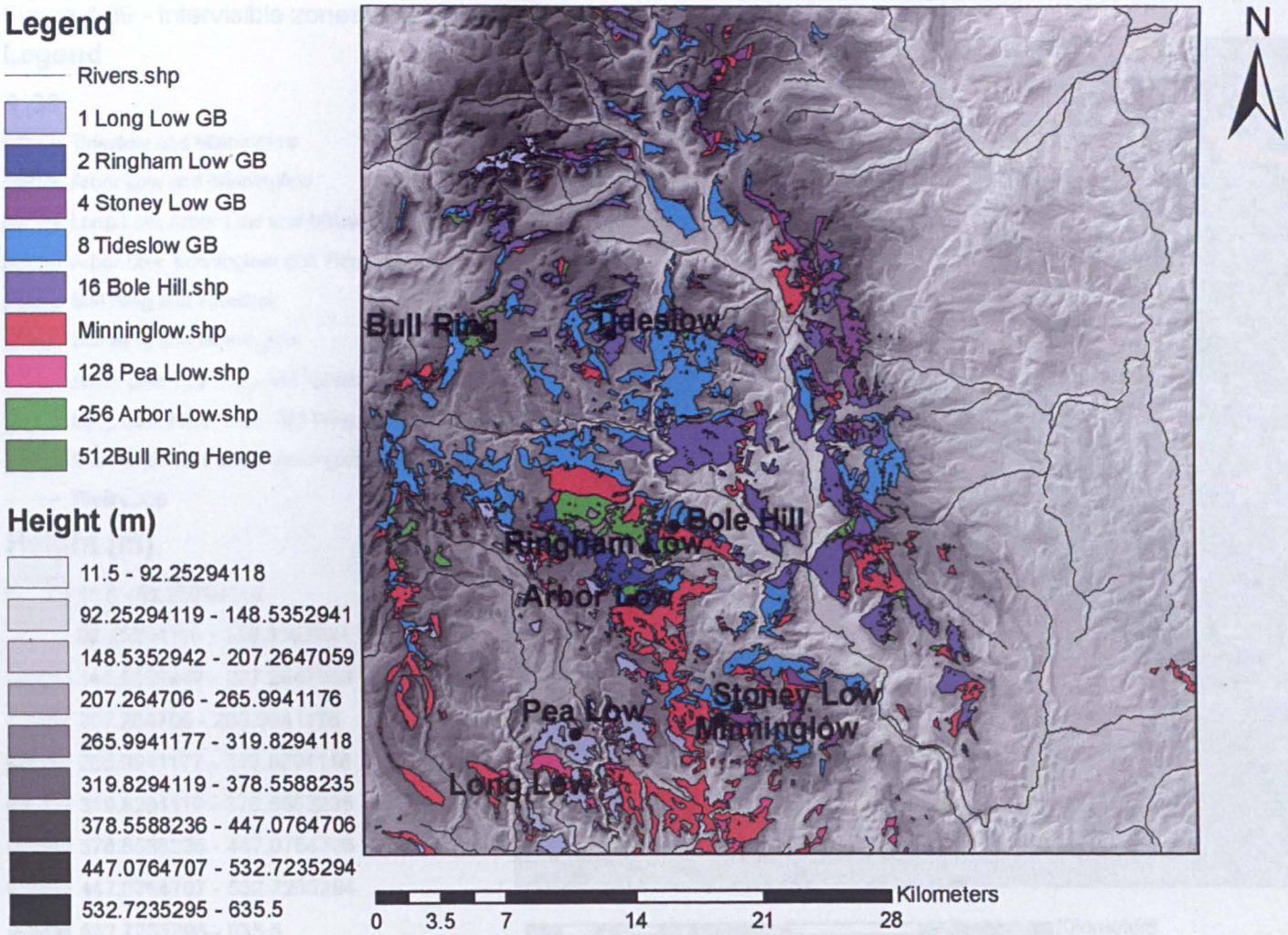


Figure 4.39 - Intervisible zones near Five Wells

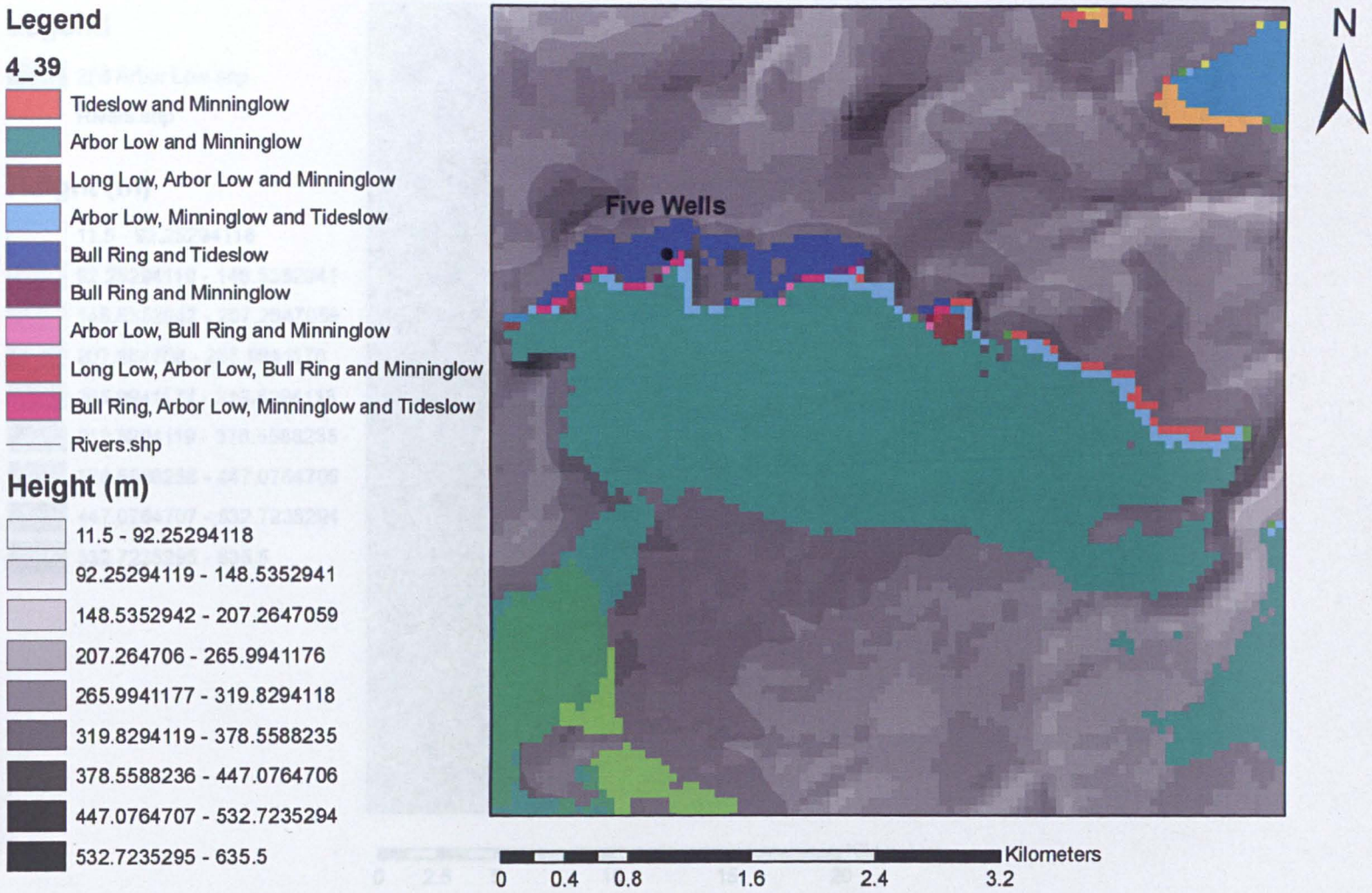


Figure 4.40 - Viewshed of Arbor Low

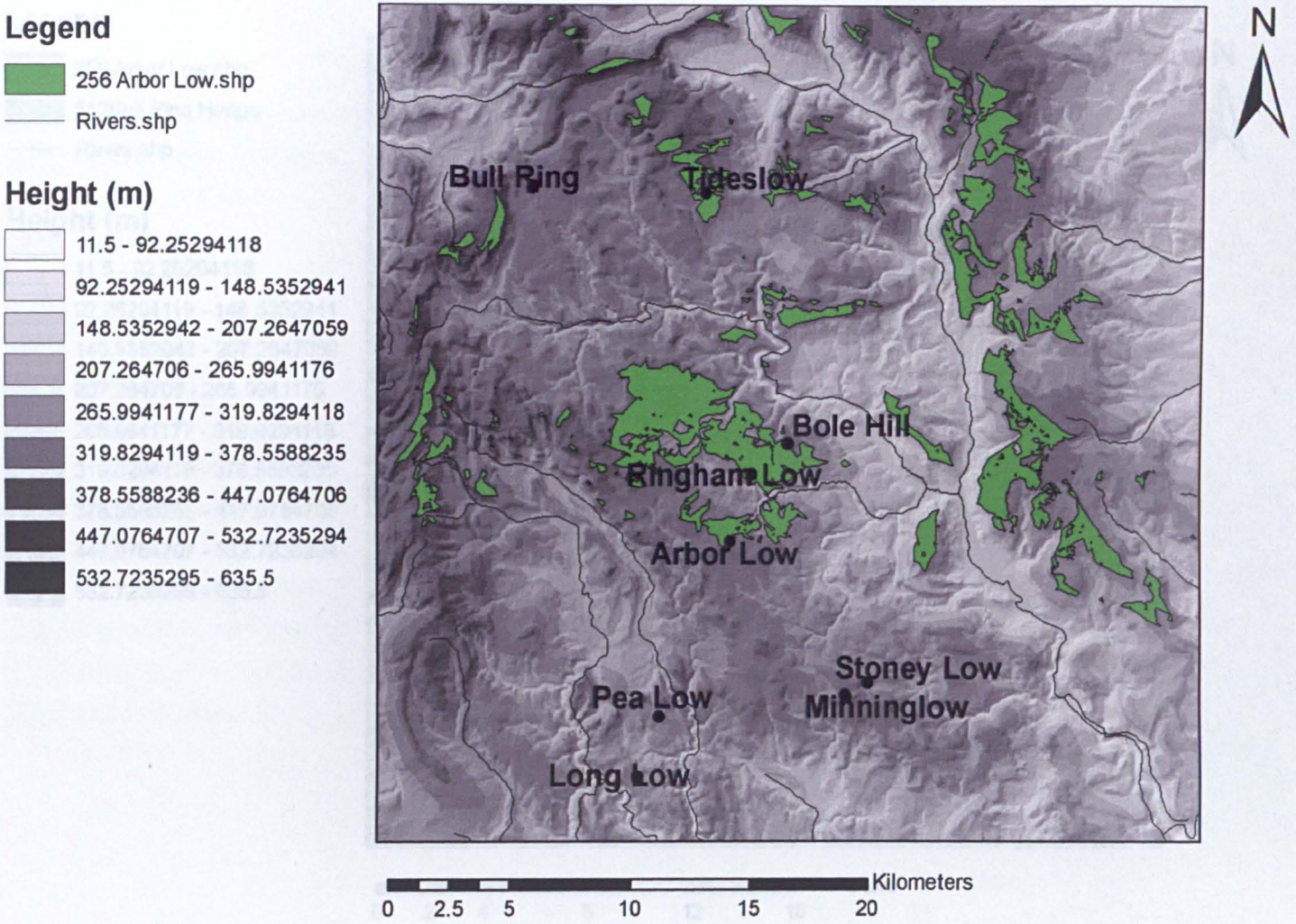


Figure 4.41 - Contrasting Viewsheds of Arbor Low and Bull Ring

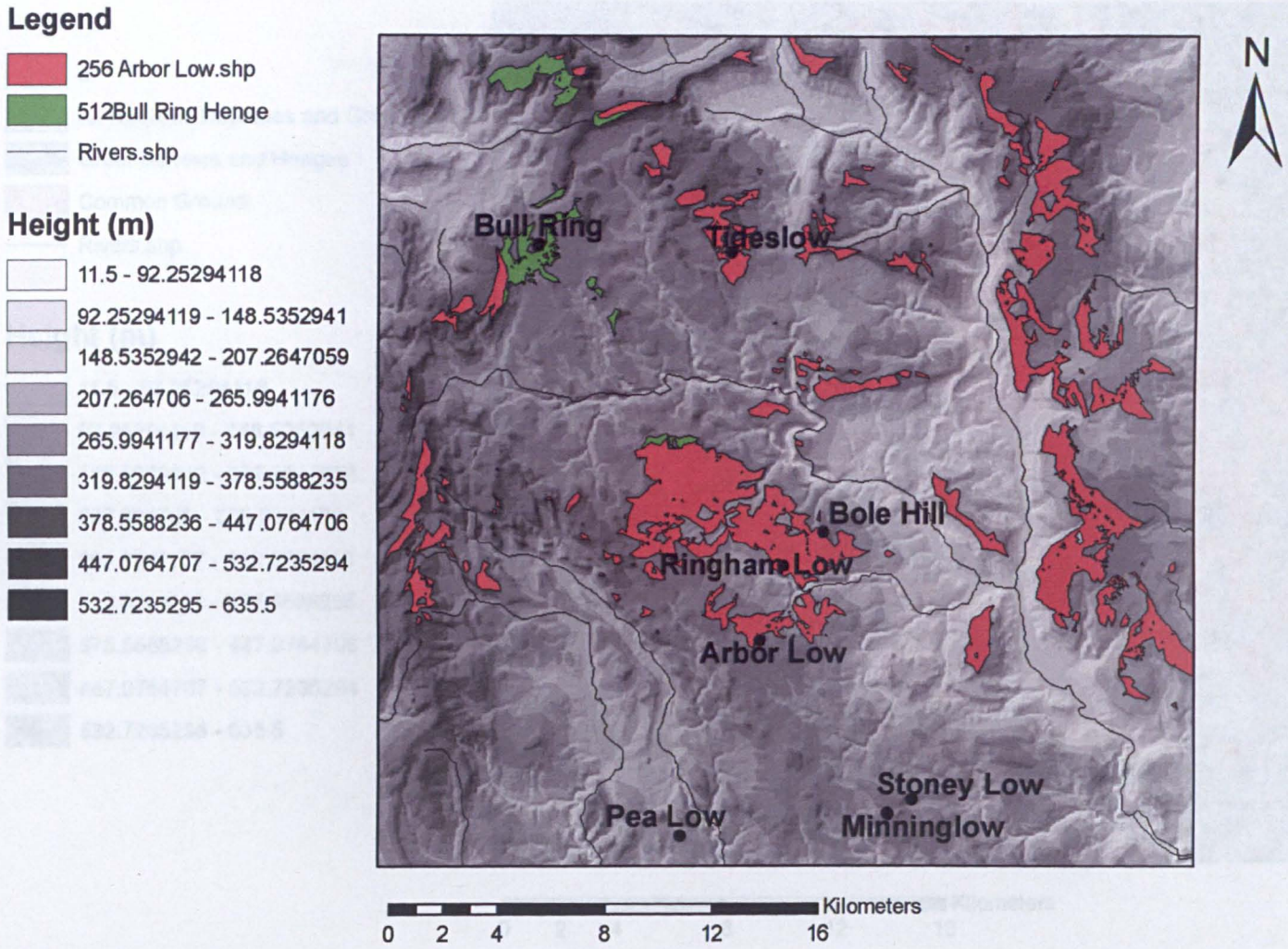


Figure 4.42 - Viewshed discrepancy between all definite Early Neolithic tombs and Later Neolithic monuments (including henges)

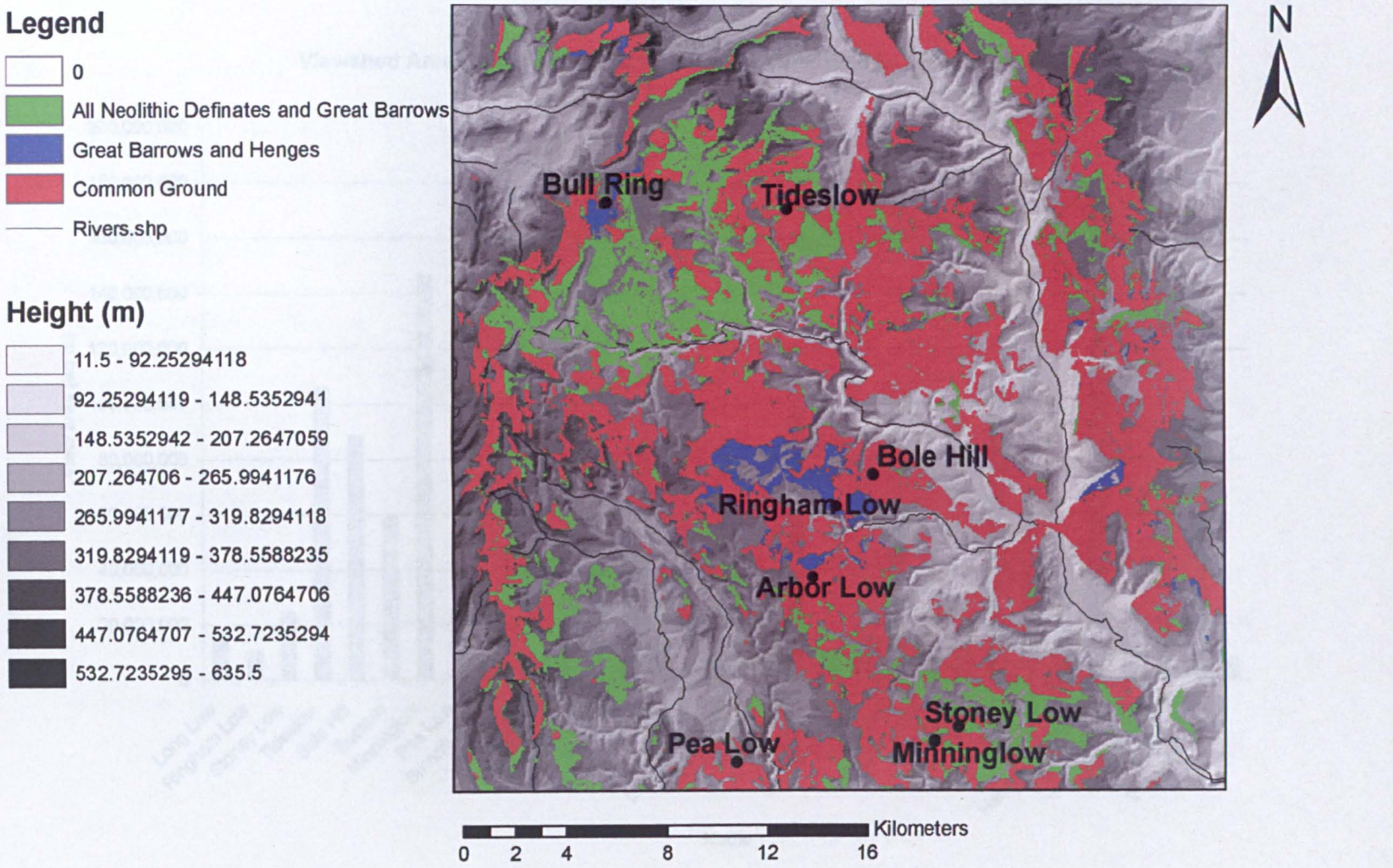


Figure 4.43 - Viewshed areas for all Neolithic tombs

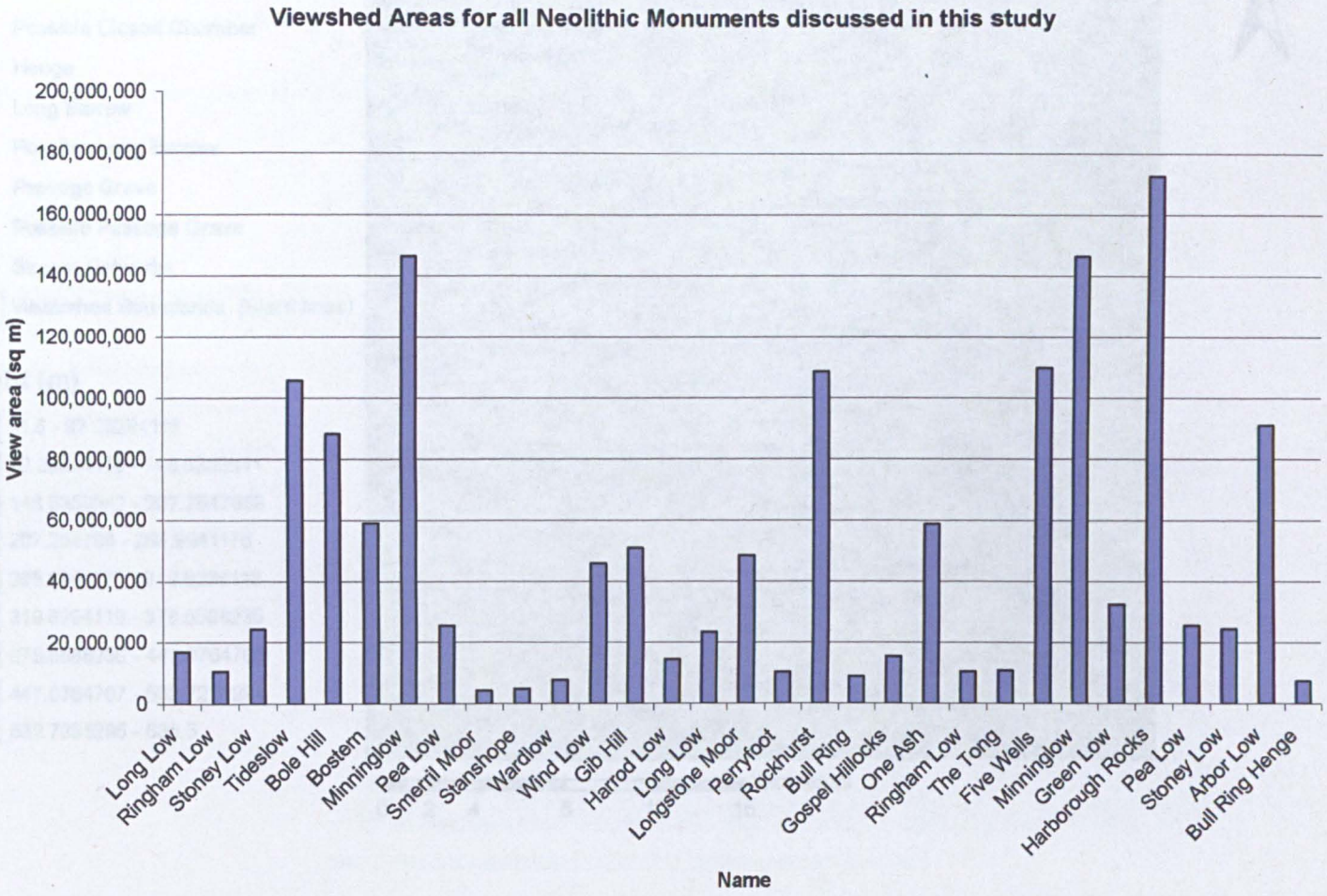


Figure 4.44 - Calculated Watershed boundaries (black lines) and stream networks (blue lines)

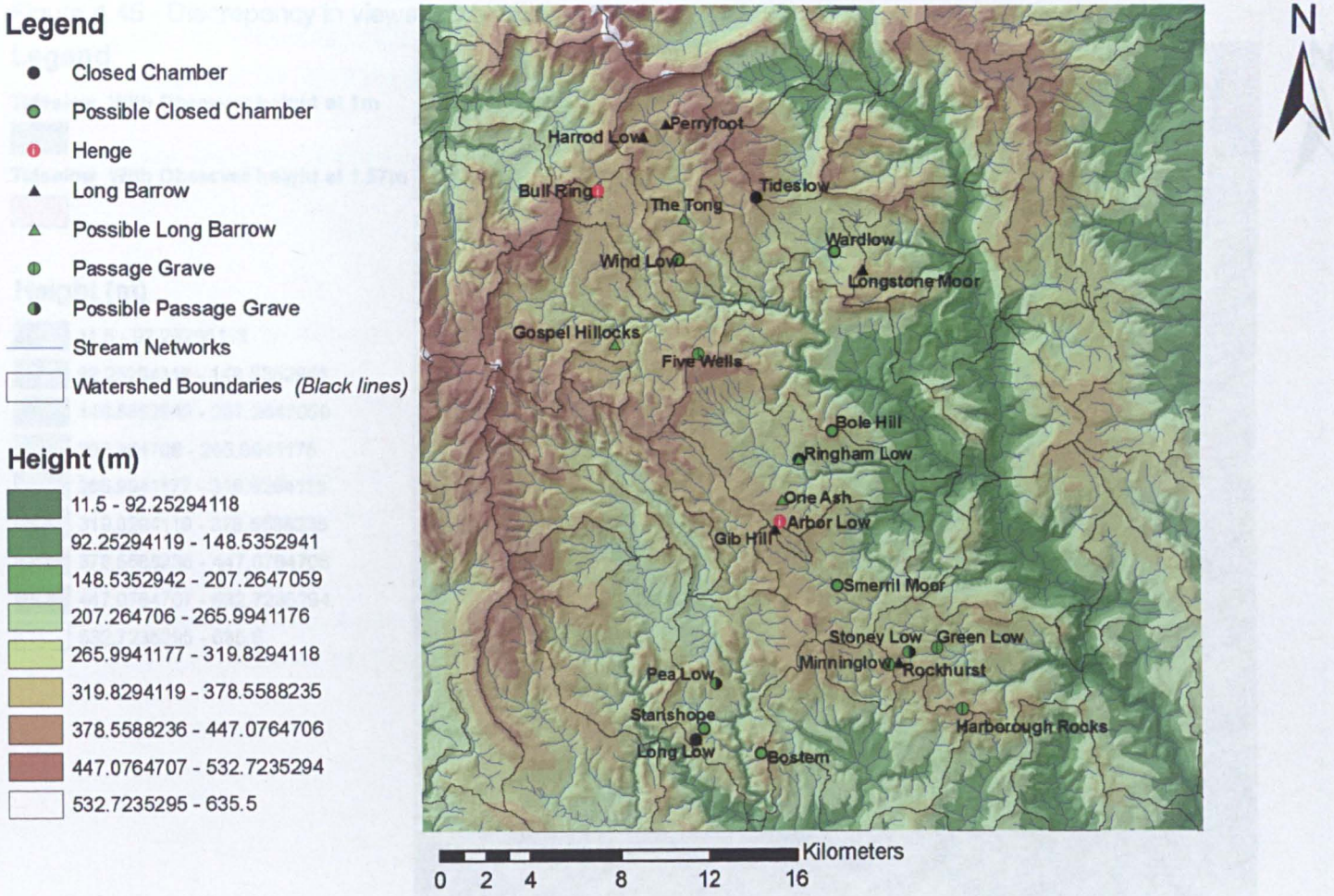


Figure 4.45 - Discrepancy in viewshed between observer height at 1m (blue) and 1.57 metres (red).

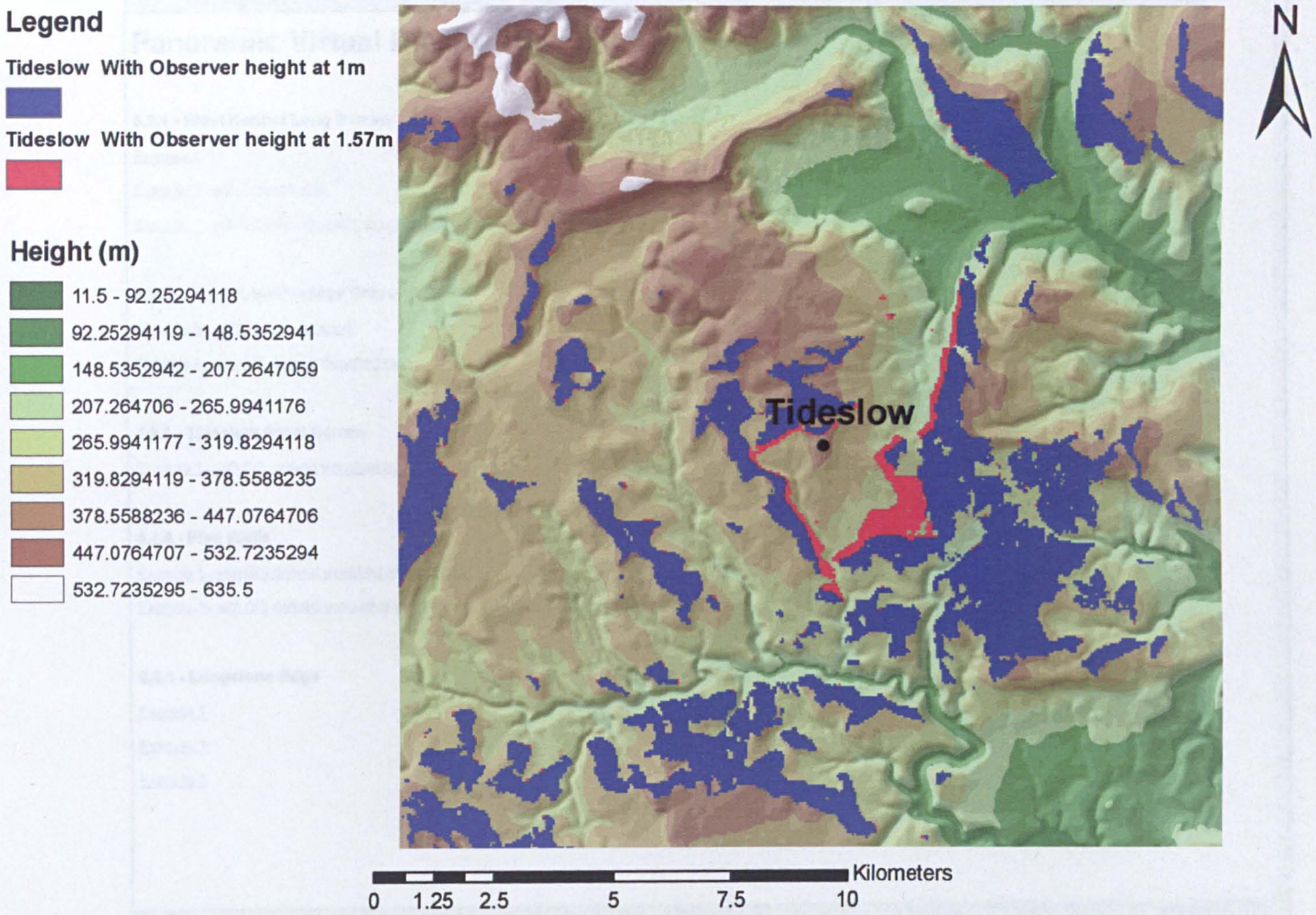


Figure 6.1 - PVR Case Study Index Page, in full-screen mode (press F11 to toggle)

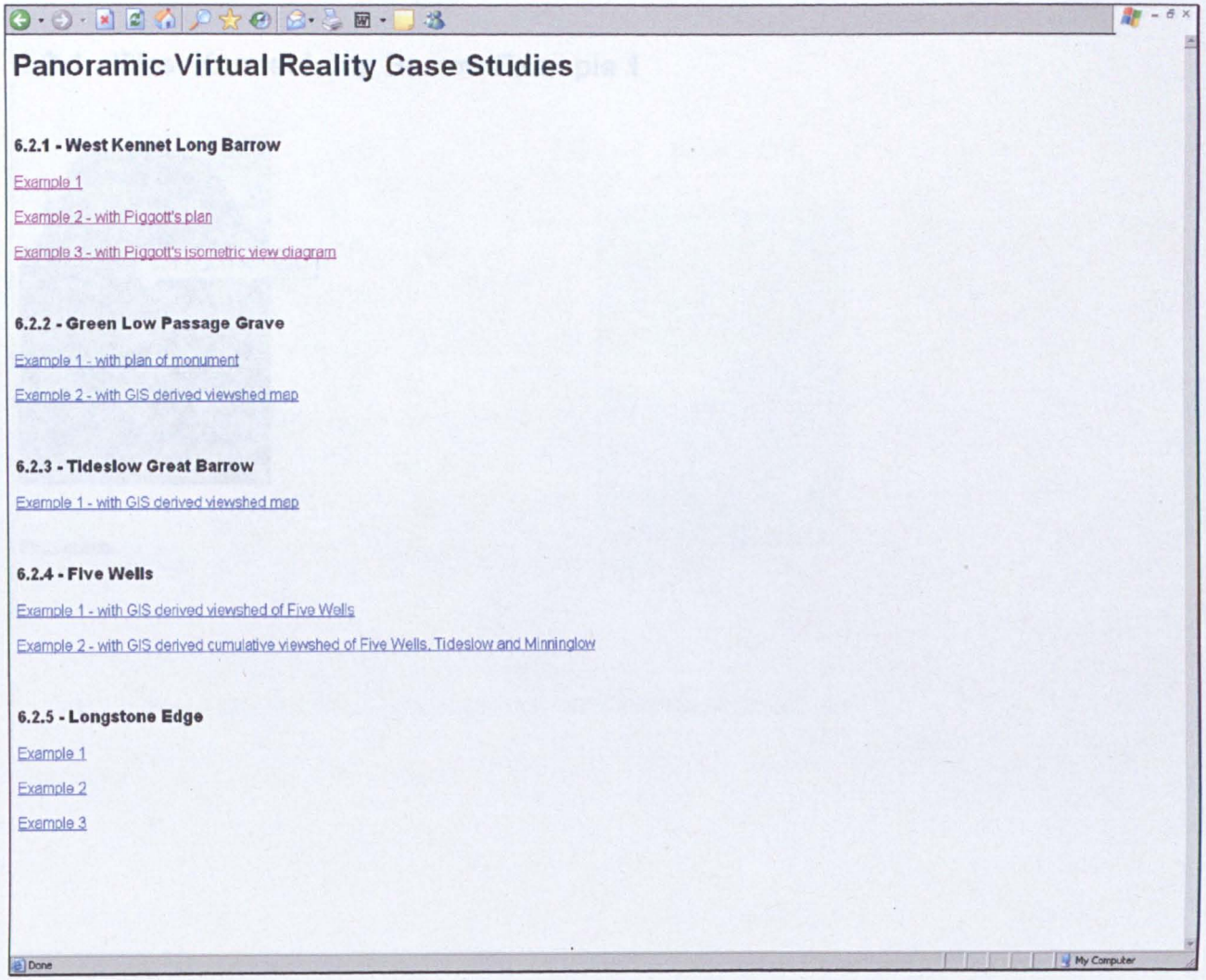


Figure 6.2 - 6.2.1 Example 1.

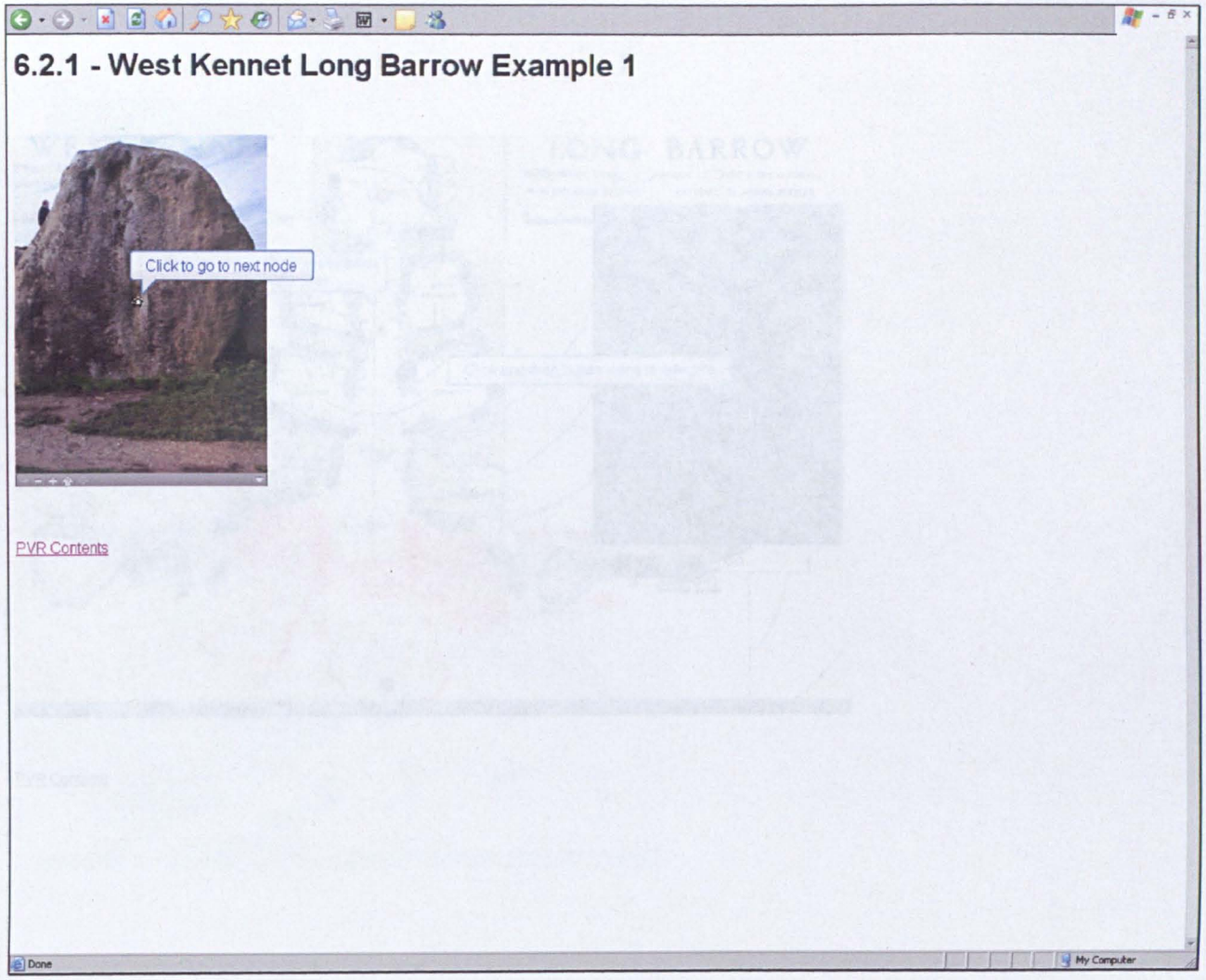


Figure 6.3 - 6.2.1 Example 2. Panorama linked to Piggott's plan (after Piggott 1962).

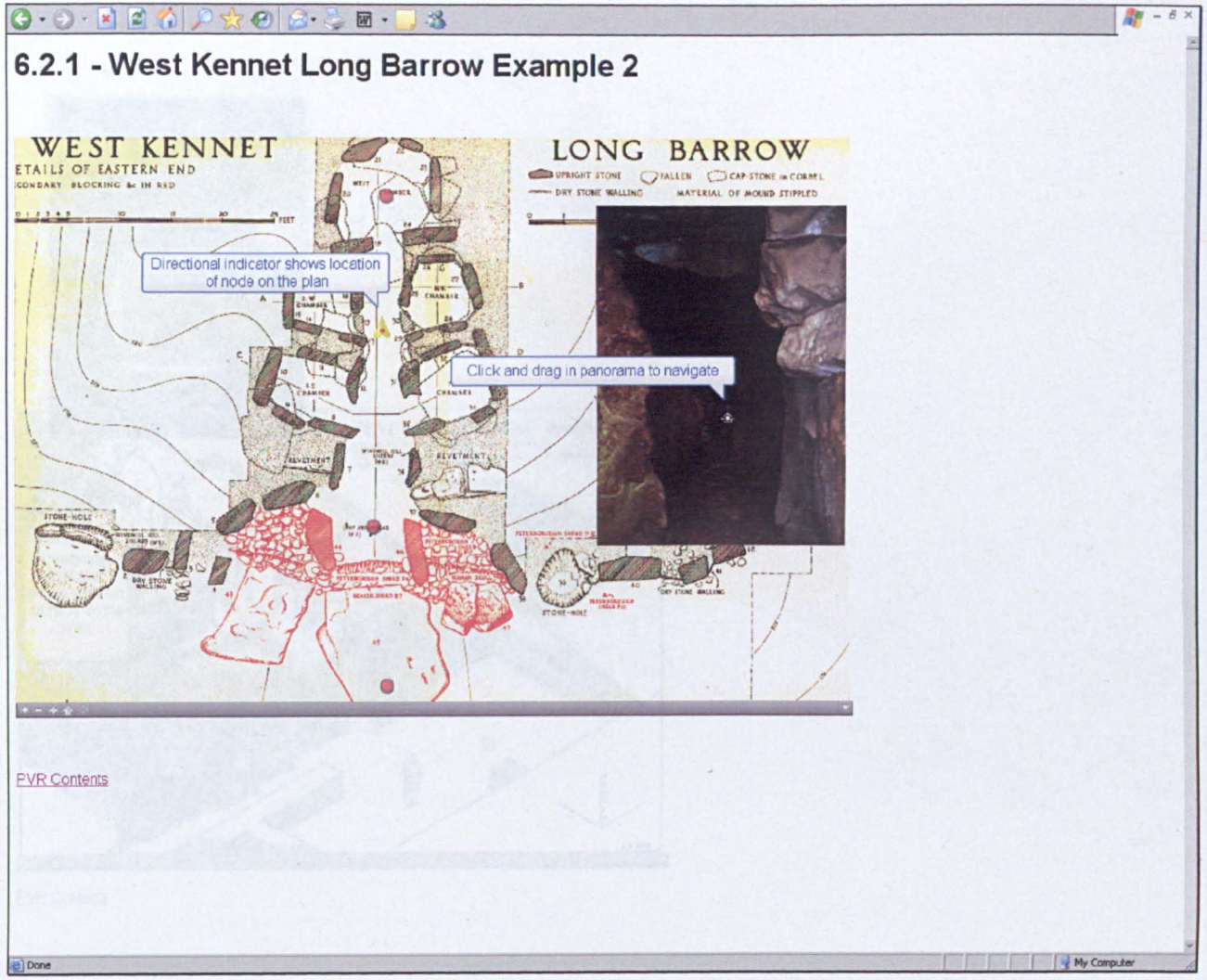


Figure 6.4 - 6.2.1 Example 3. Panorama linked to Piggott's isometric diagram (after Piggott 1962).

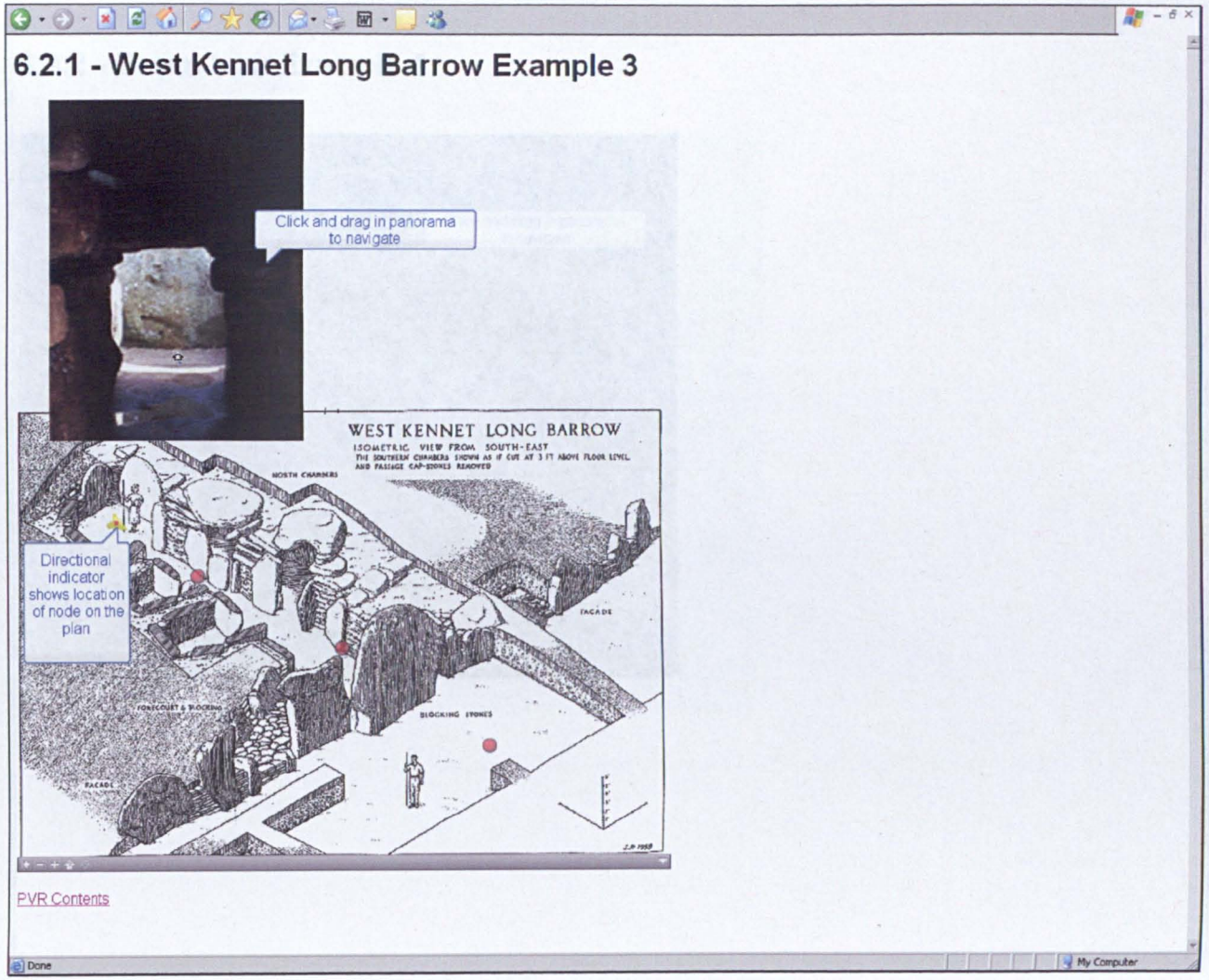


Figure 6.5 - 6.2.2 Example 1. Green Low panorama linked to plan (after Barnatt and Collis 1996).

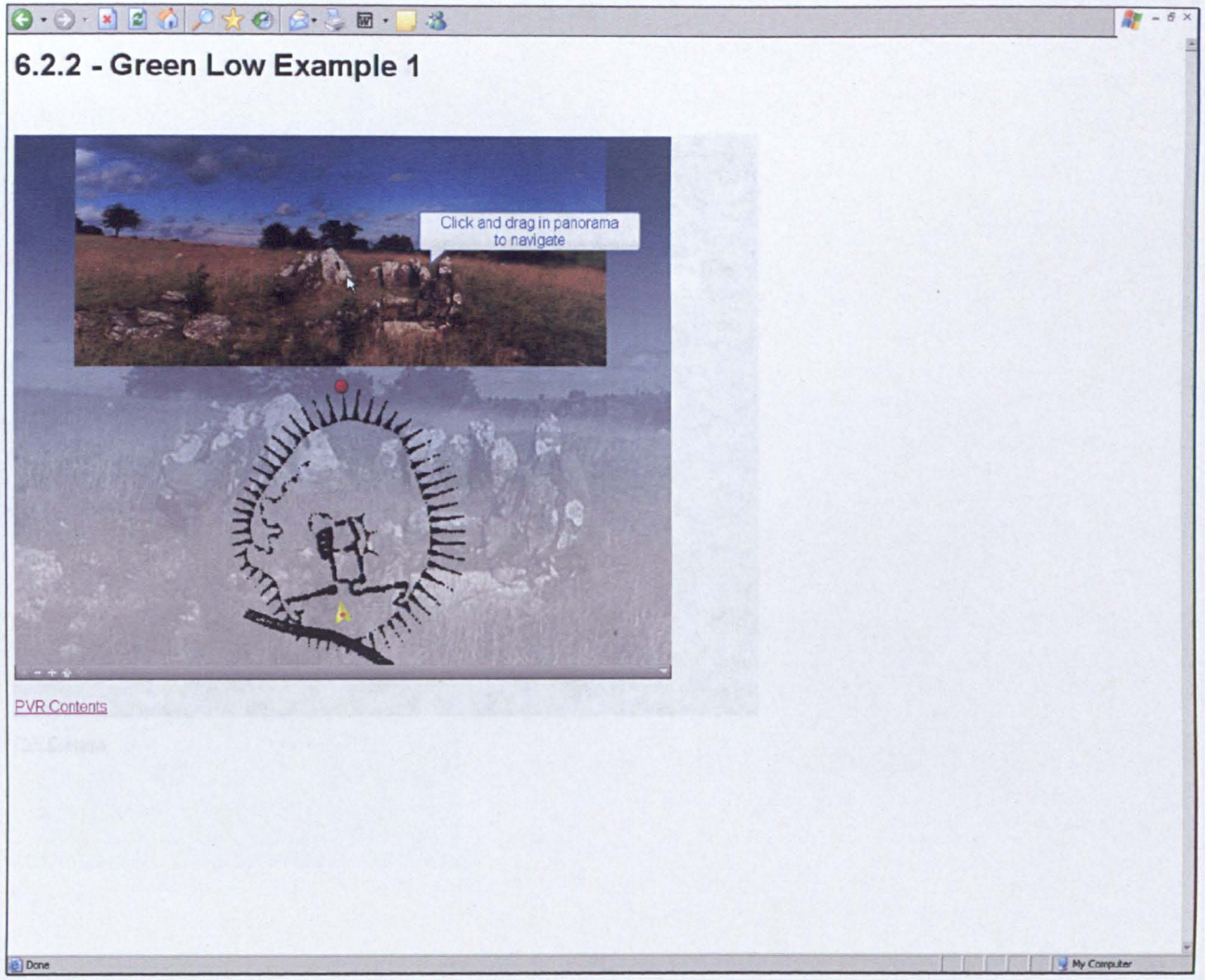


Figure 6.6 - 6.2.2 Example 2. Green Low panorama linked to viewshed map.

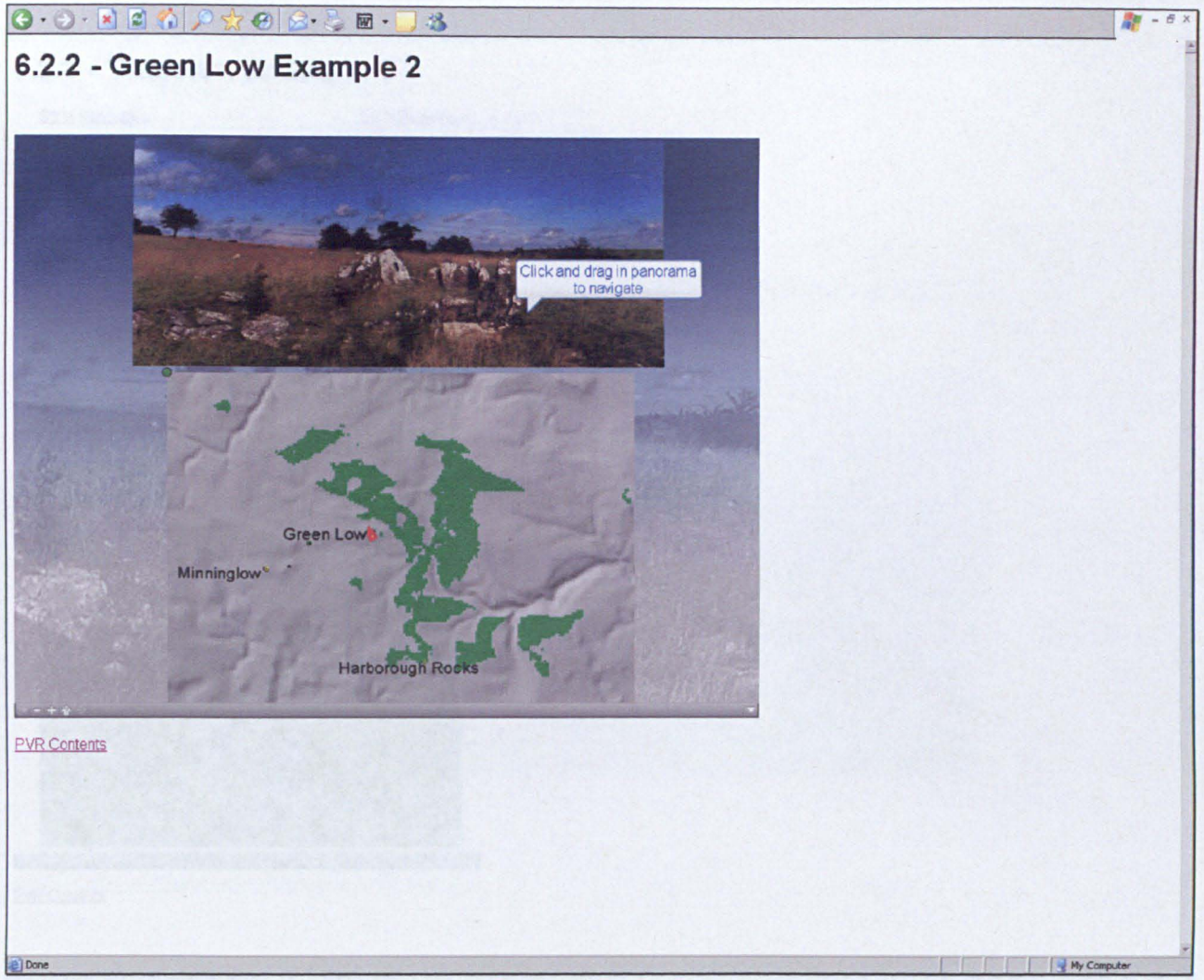


Figure 6.7 - 6.2.3 Example 1. Tideslow Great Barrow panorama linked to viewshed map.

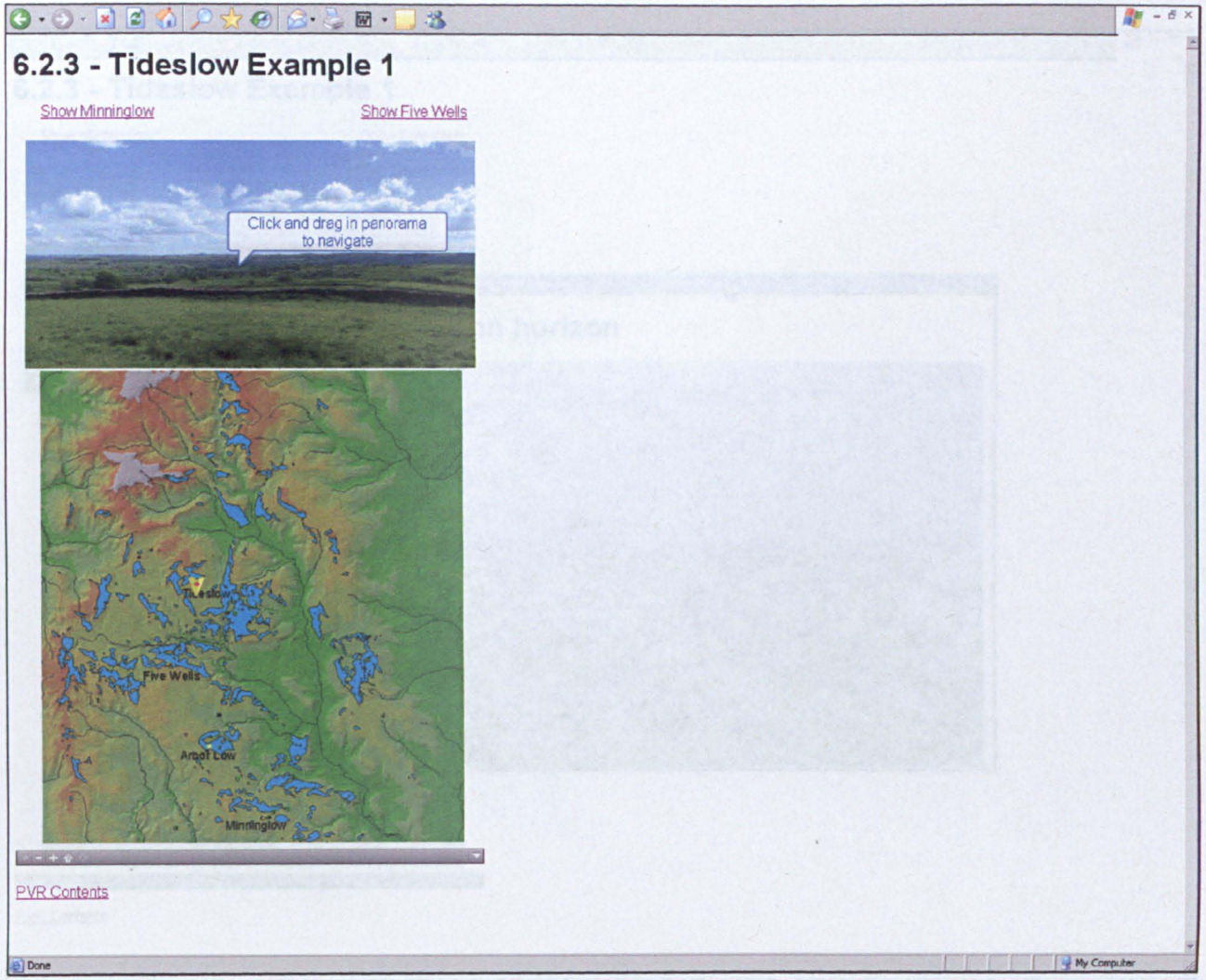


Figure 6.8 - 6.2.3 Example 1. Panorama and viewshed map, with higher resolution image of Minninglow on horizon.

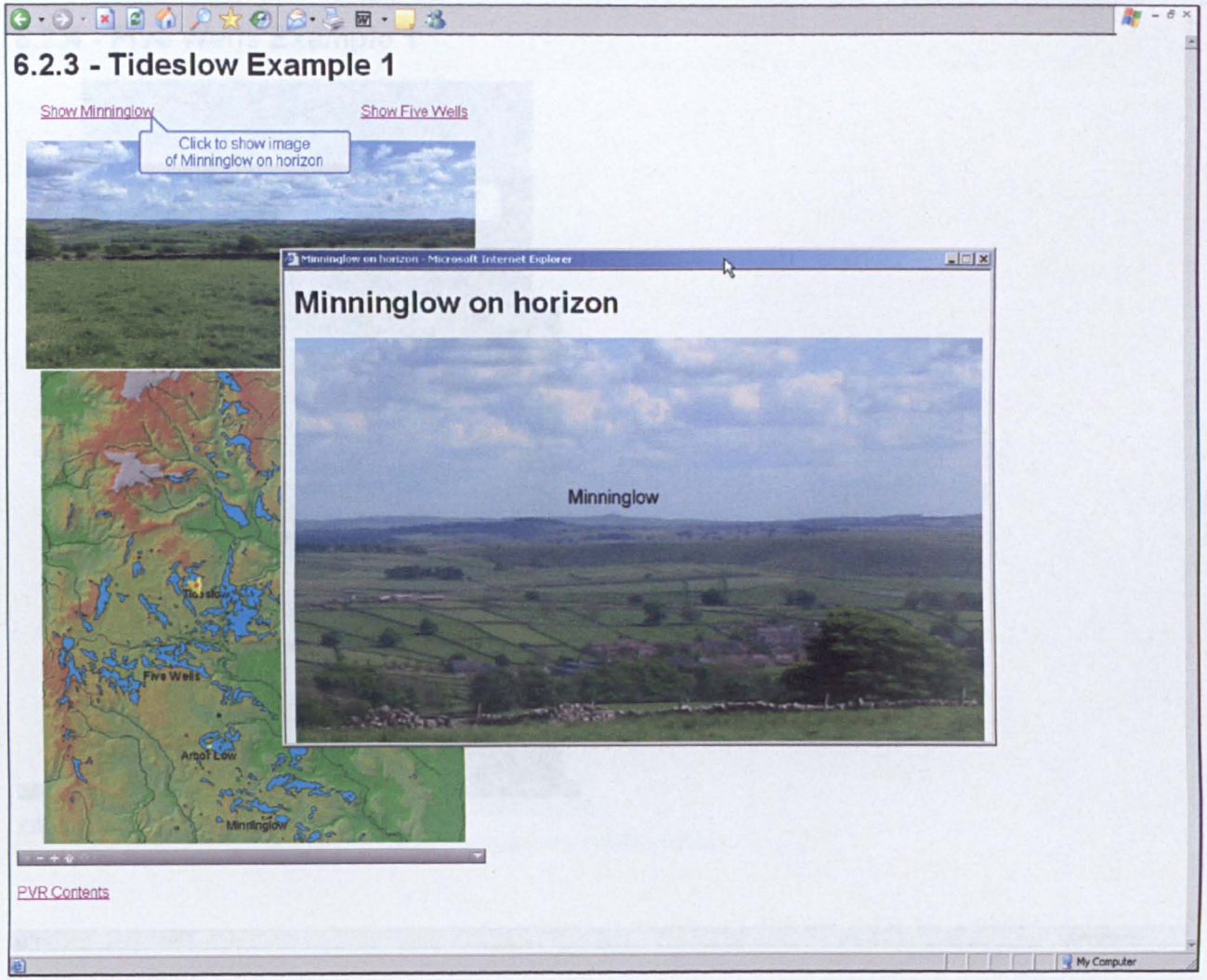


Figure 6.9 - 6.2.4 Example 1. Five Wells panorama linked to viewshed map.

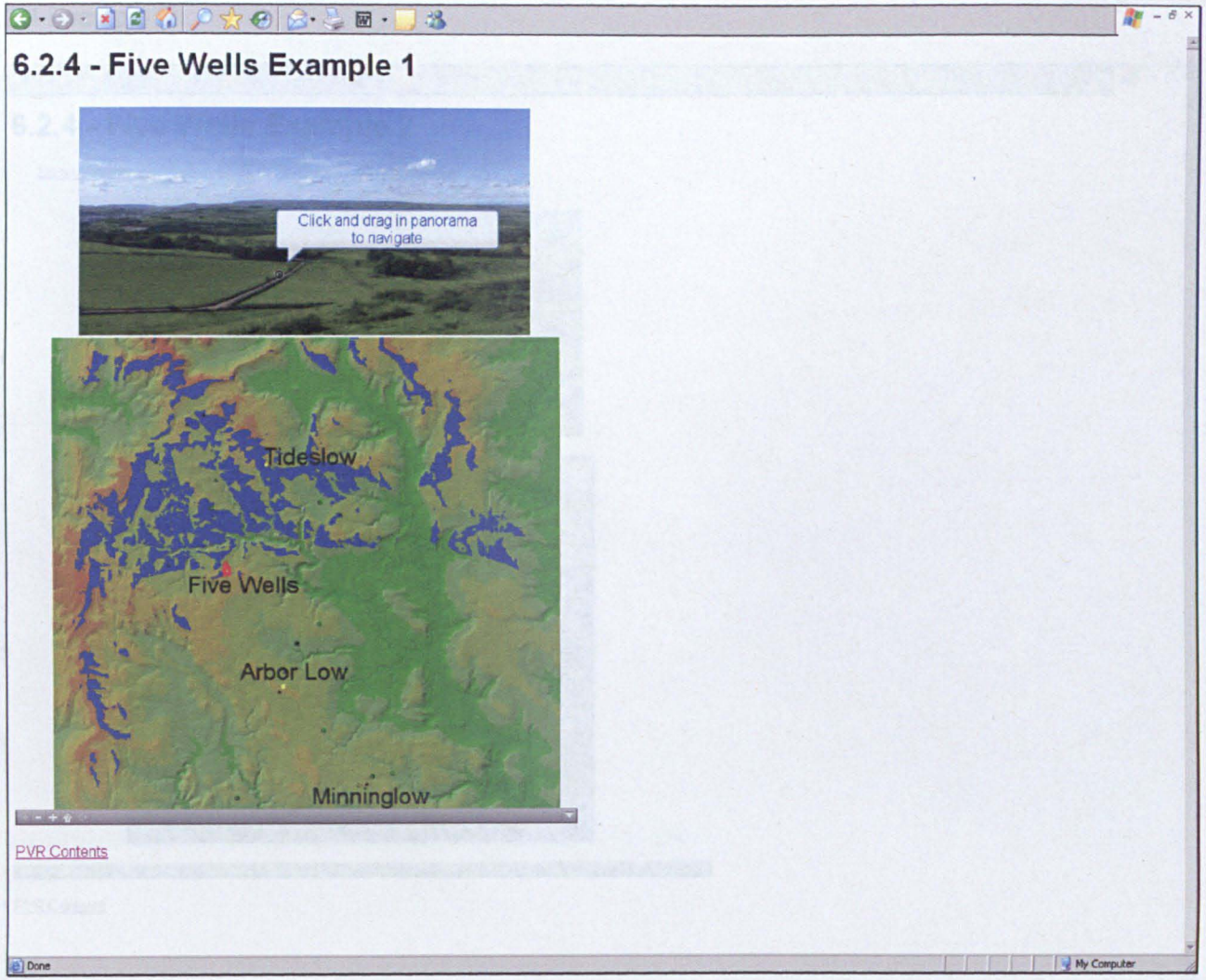


Figure 6.10 - 6.2.4 Example 2. Five Wells panorama linked to cumulative viewshed map, showing first node in panorama (node 7), with mouse pointer over link to node 1. Node numbers correspond to numbering in the text (6.2.4 Example 2)

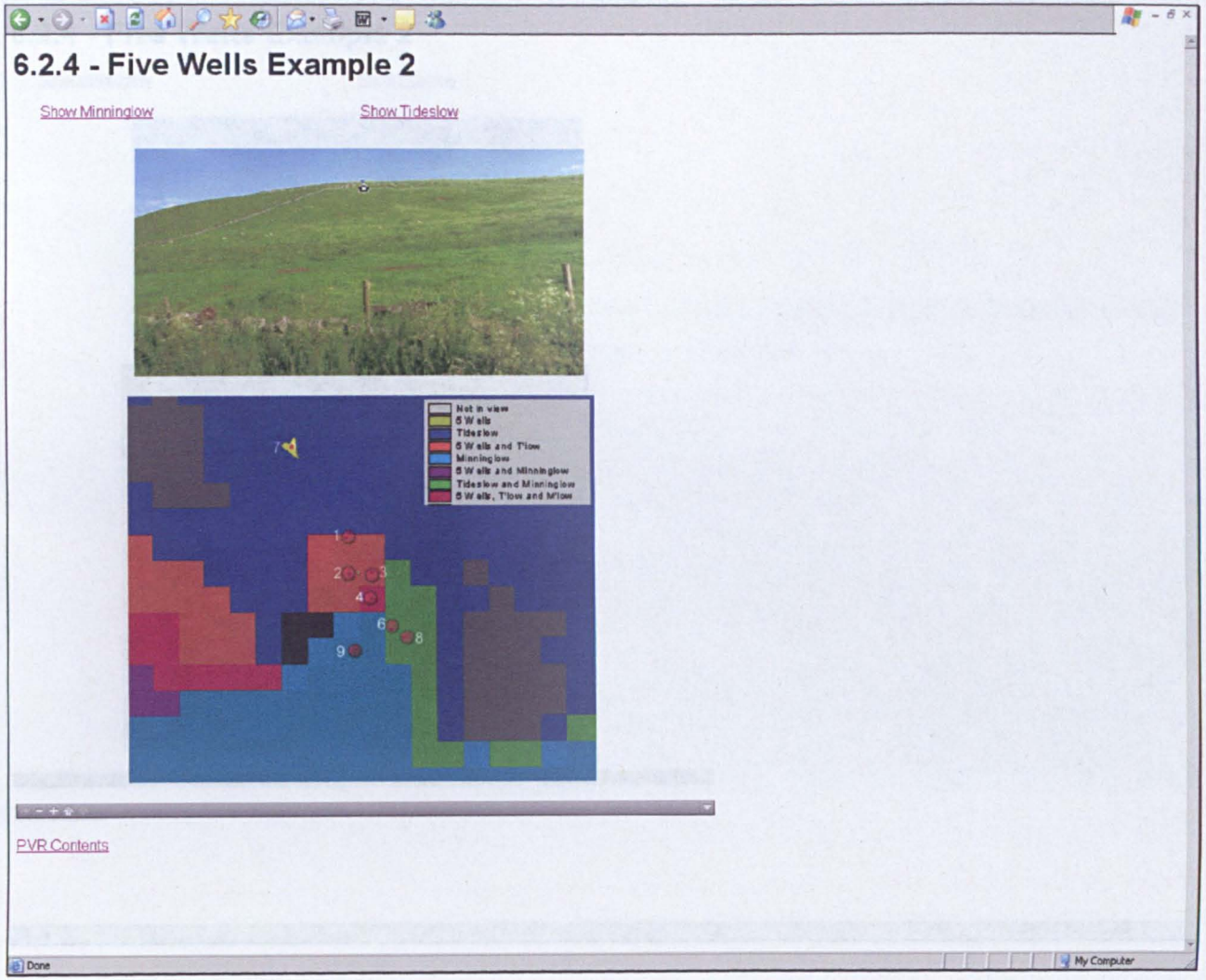


Figure 6.11 - 6.2.4 Example 2. Five Wells panorama linked to cumulative viewshed map, showing zone of intervisibility between Five Wells, Tideslow and Minninglow (at node 4).

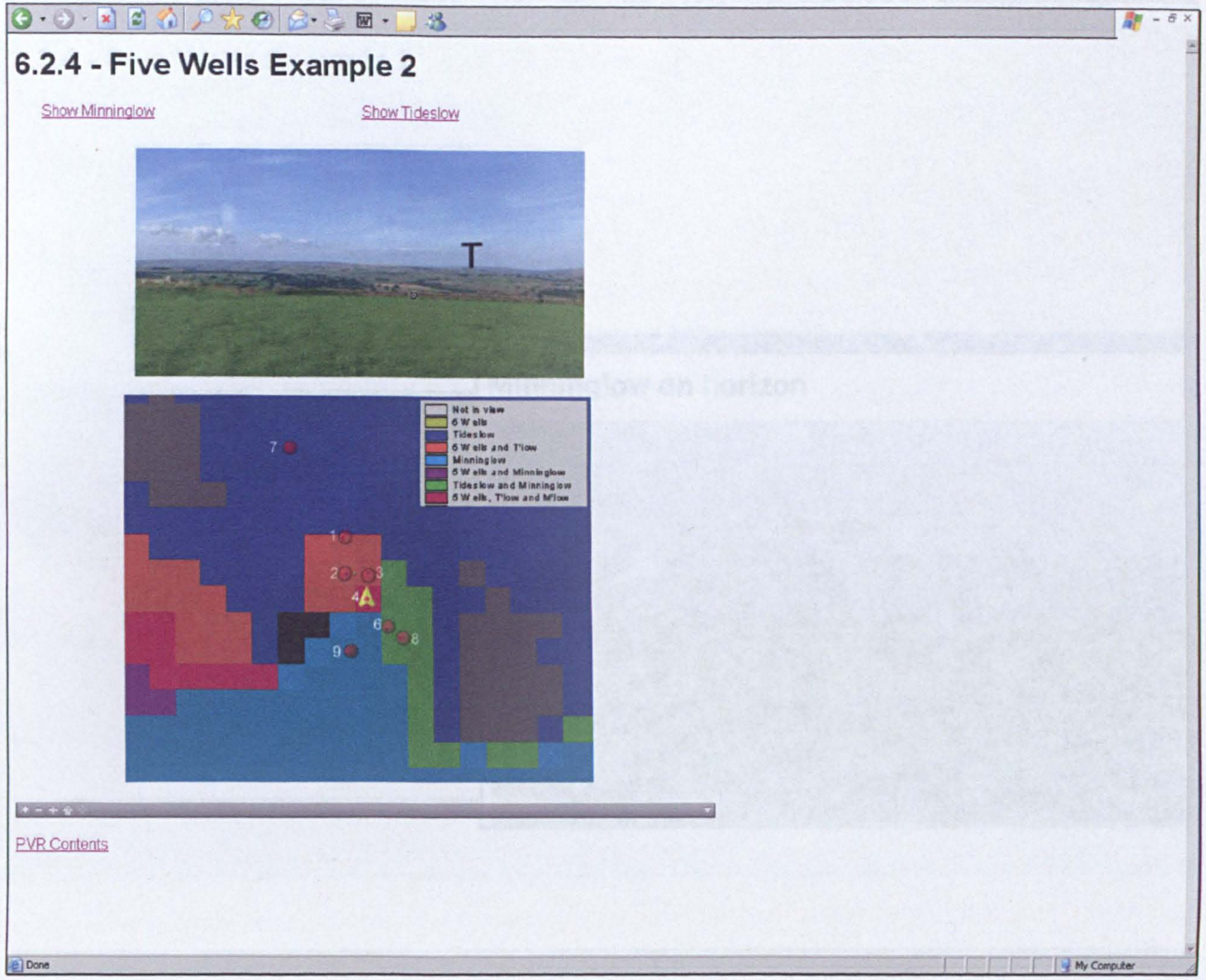


Figure 6.12 - 6.2.4 Example 2. Five Wells panorama linked to cumulative viewshed map, with higher resolution image of Minninglow on horizon.

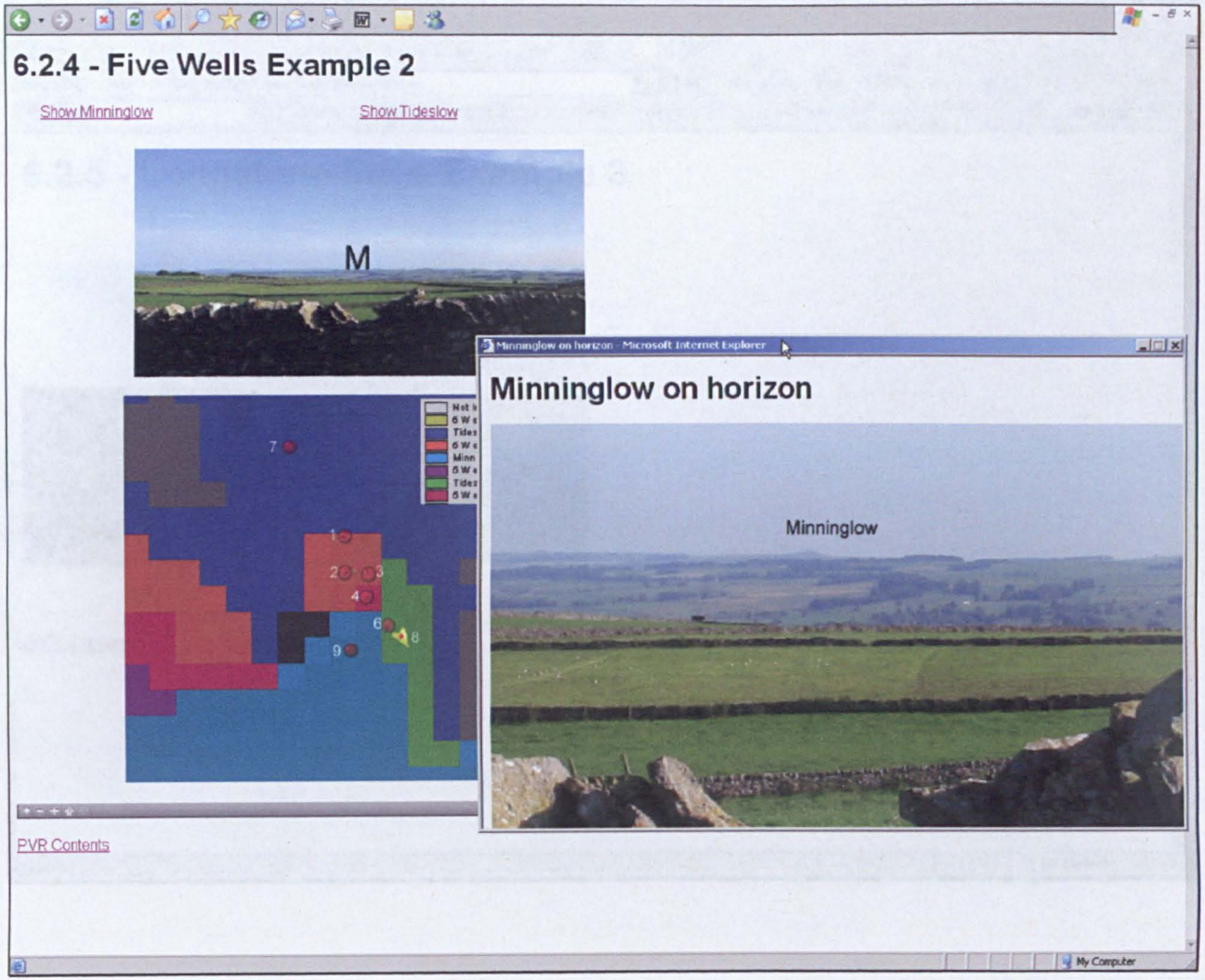


Figure 6.13 - Longstone Edge Example 3

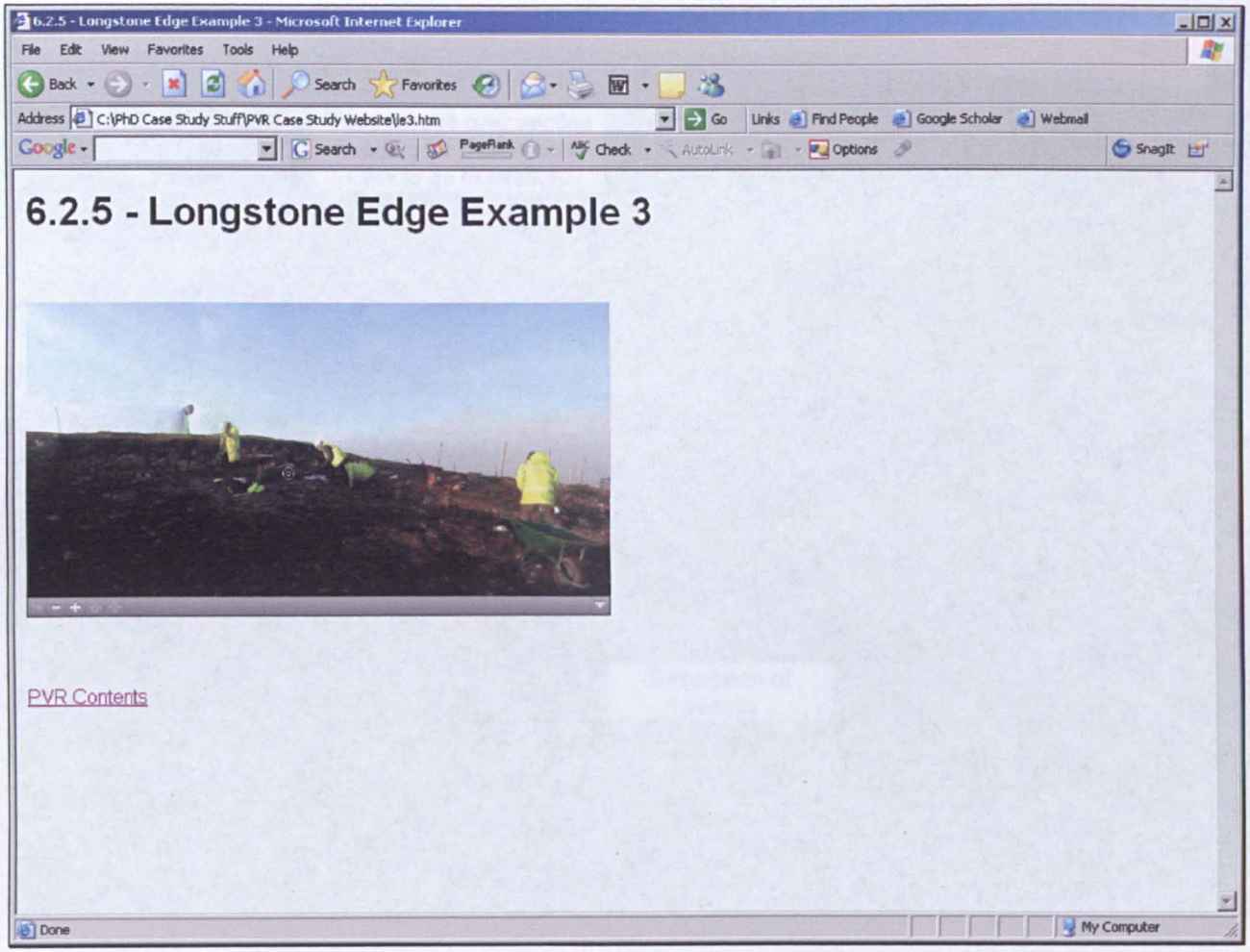


Figure 7.1 - Main Menu screen

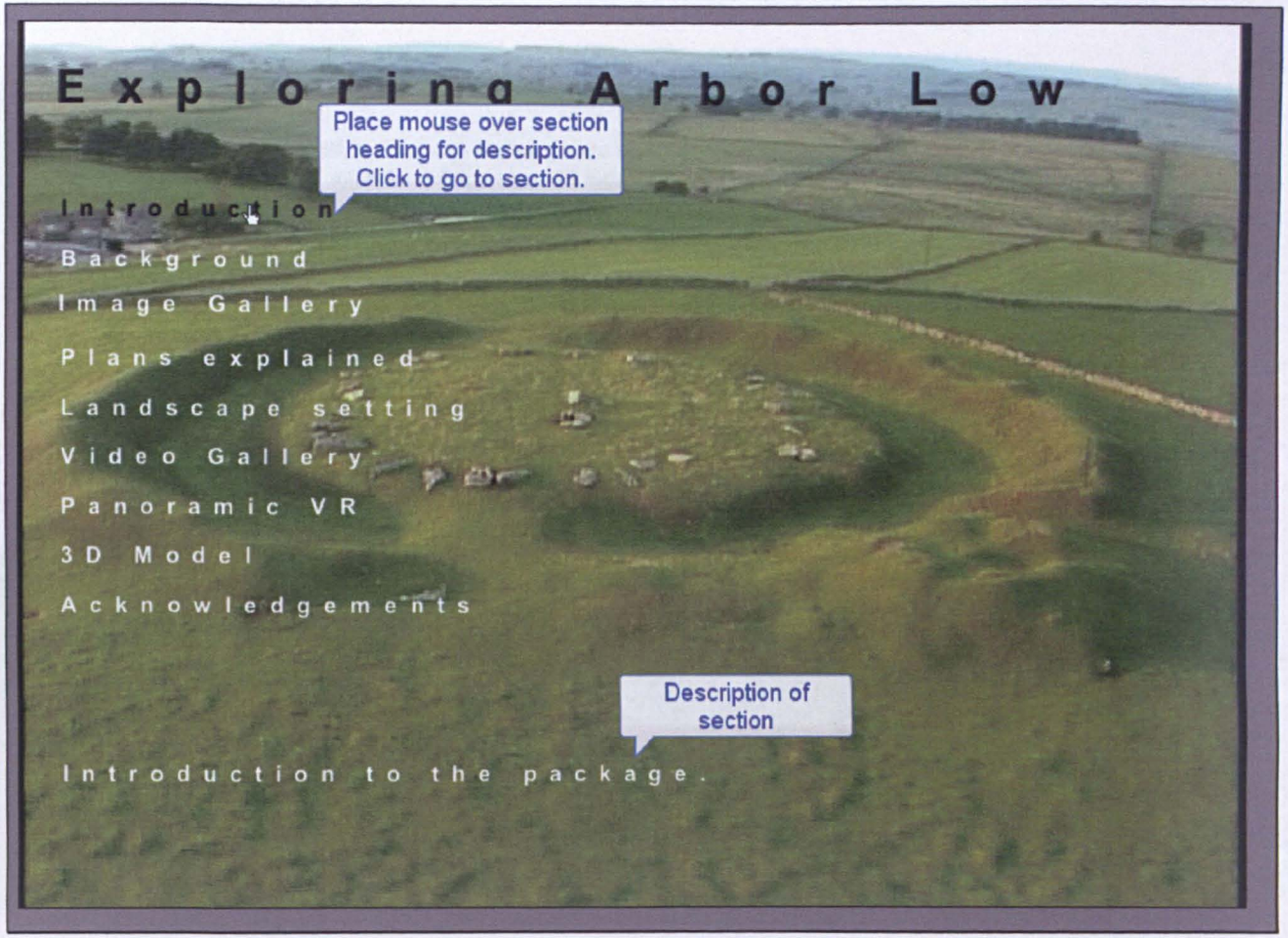


Figure 7.2 - Introduction, showing main navigation buttons

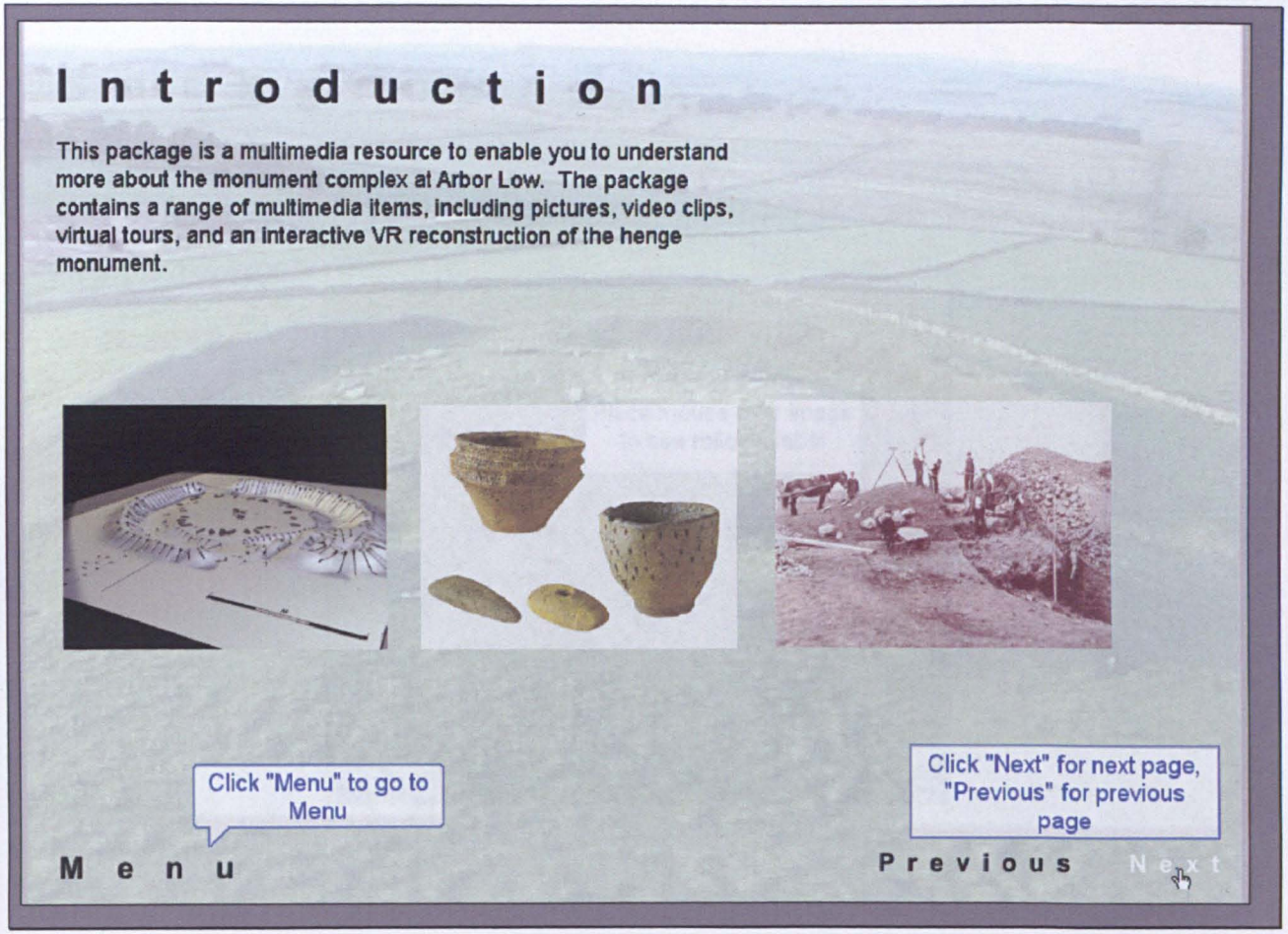


Figure 7.3 - Rollover image identifying key components of the Arbor Low complex

Figure 7.4 - Gallery of images

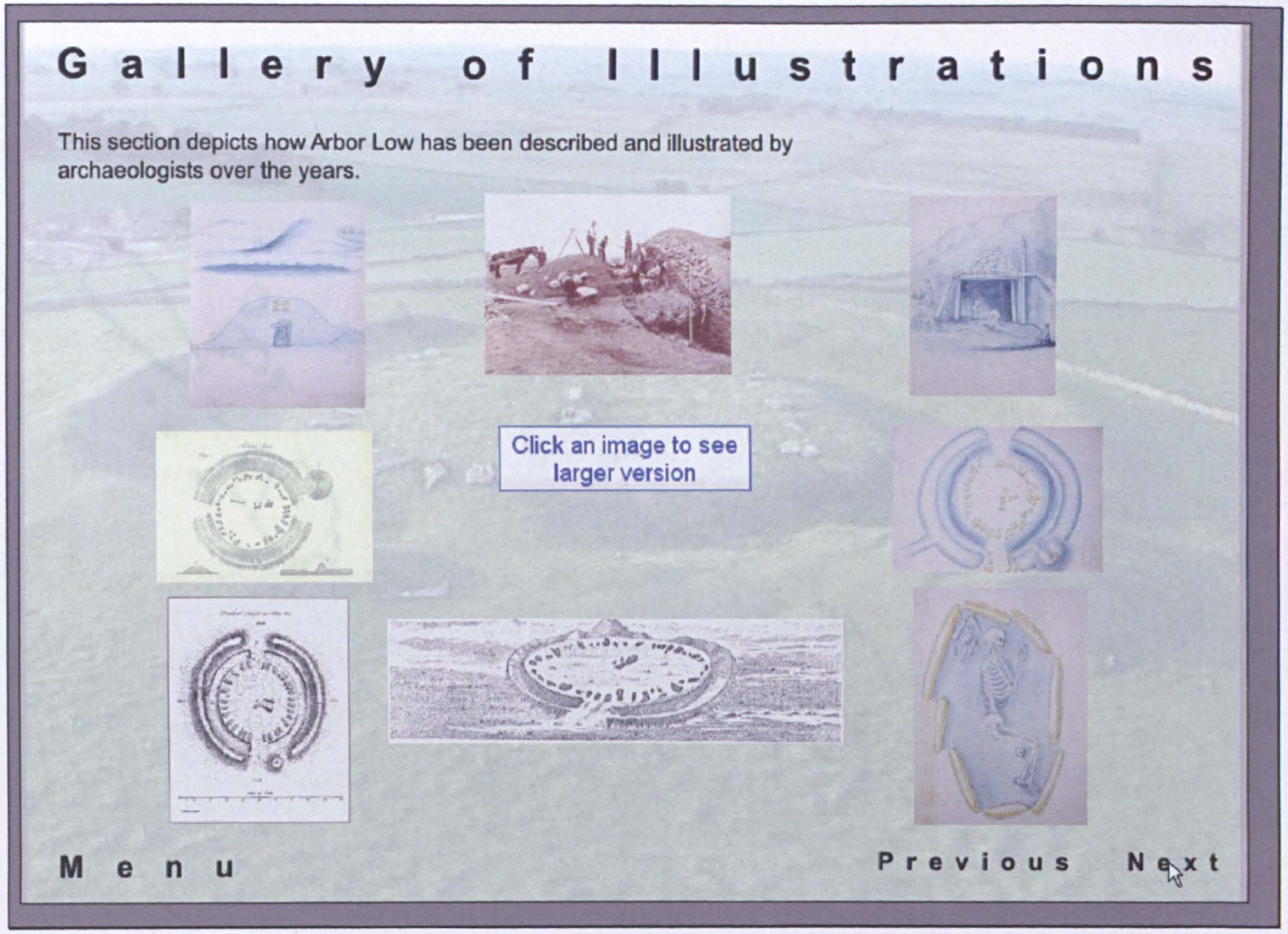


Figure 7.5 - Rollover highlighting plan in monument

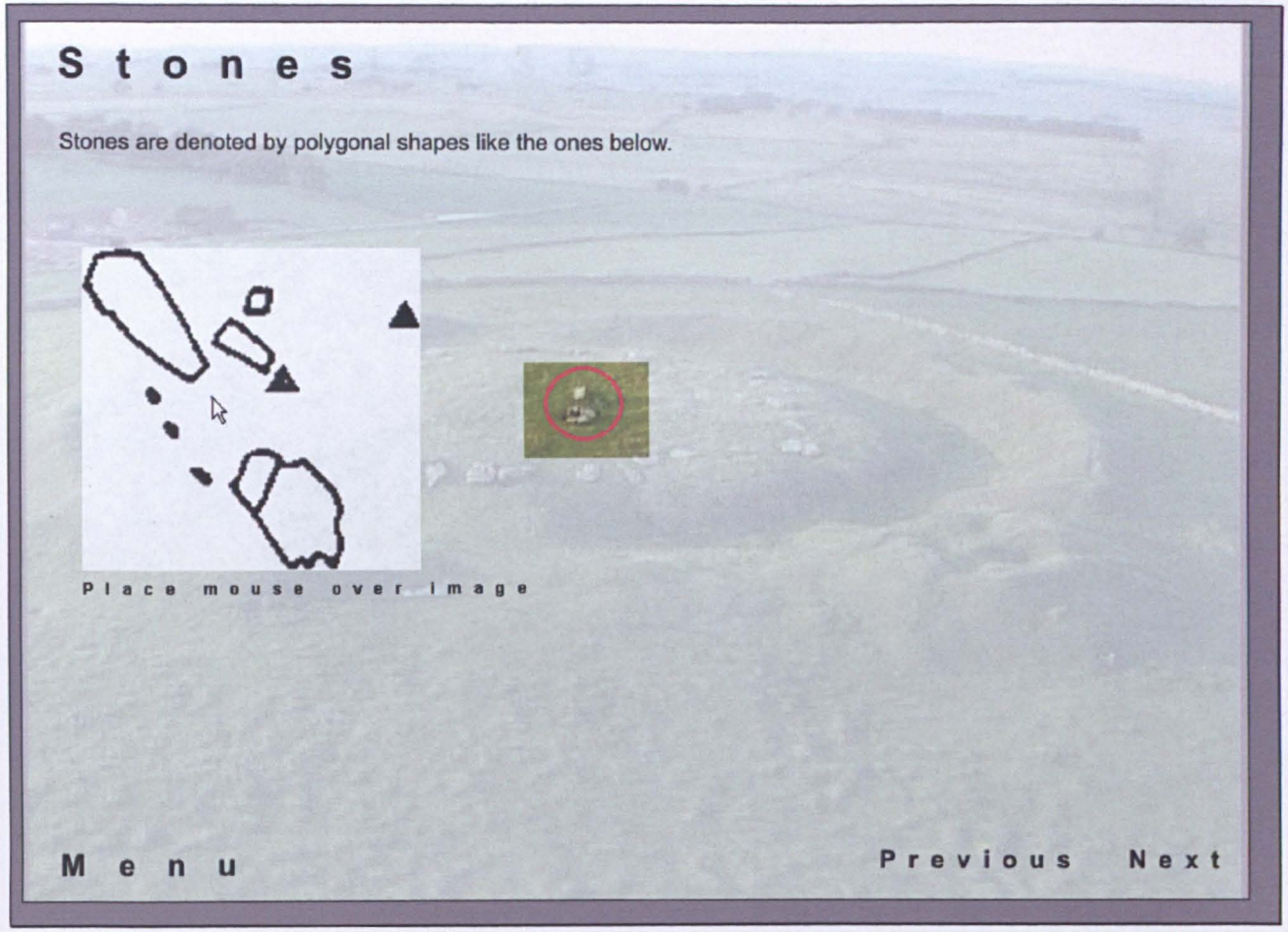


Figure 7.6 - 3D model of henge with plan draped over

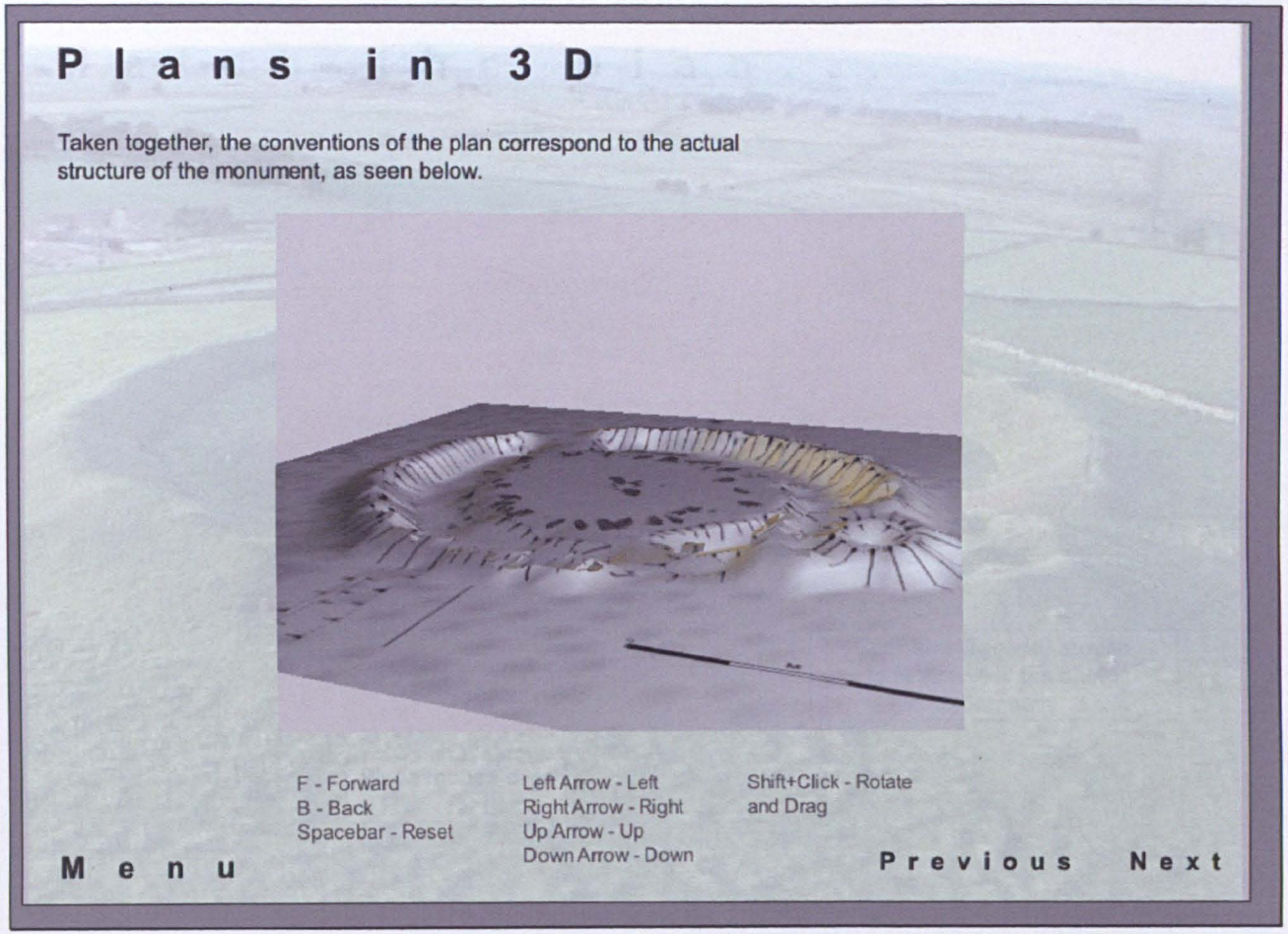


Figure 7.7 - "Click and stretch" plan exercise.

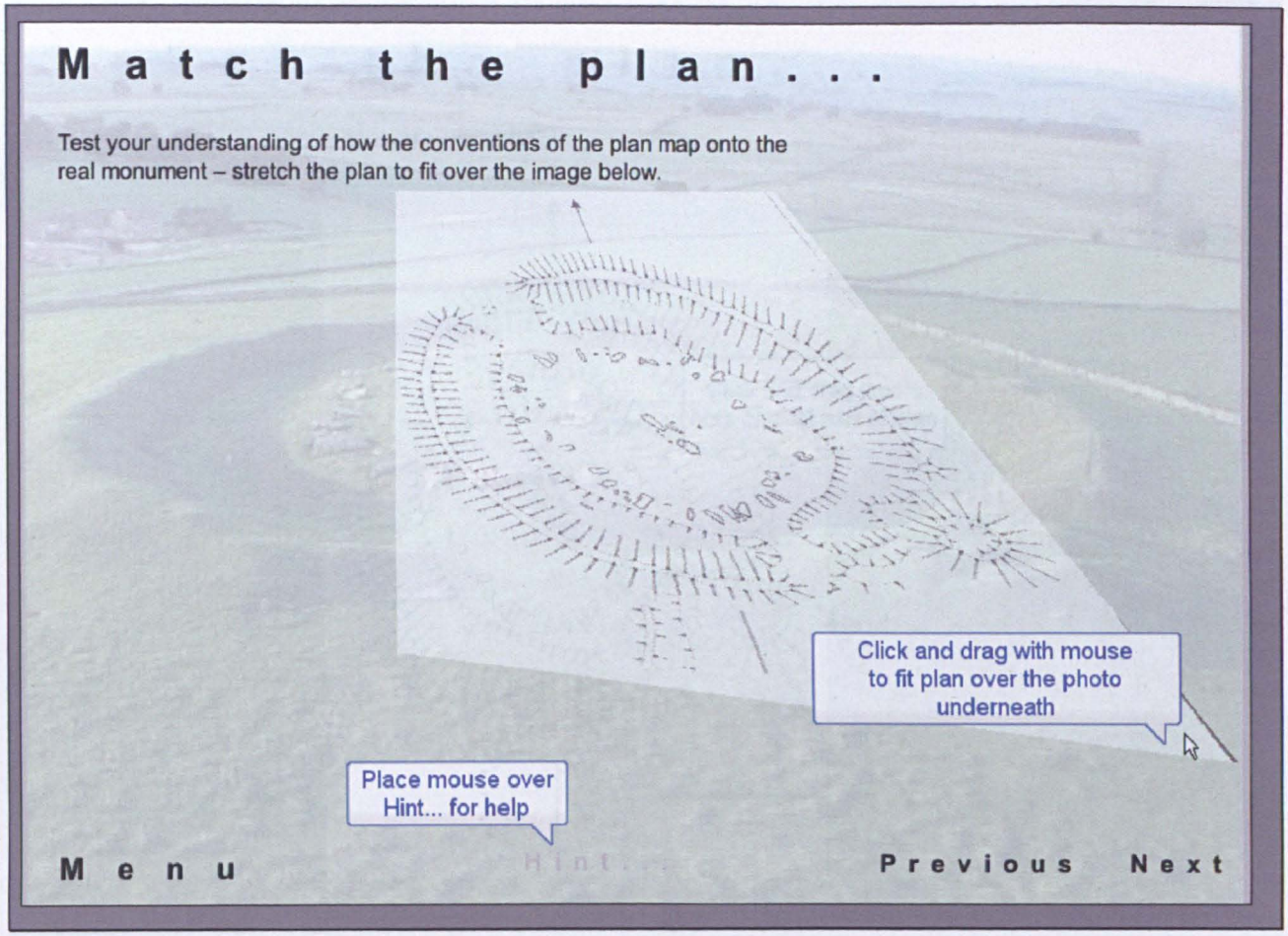


Figure 7.8 - Drag and Drop plan quiz.

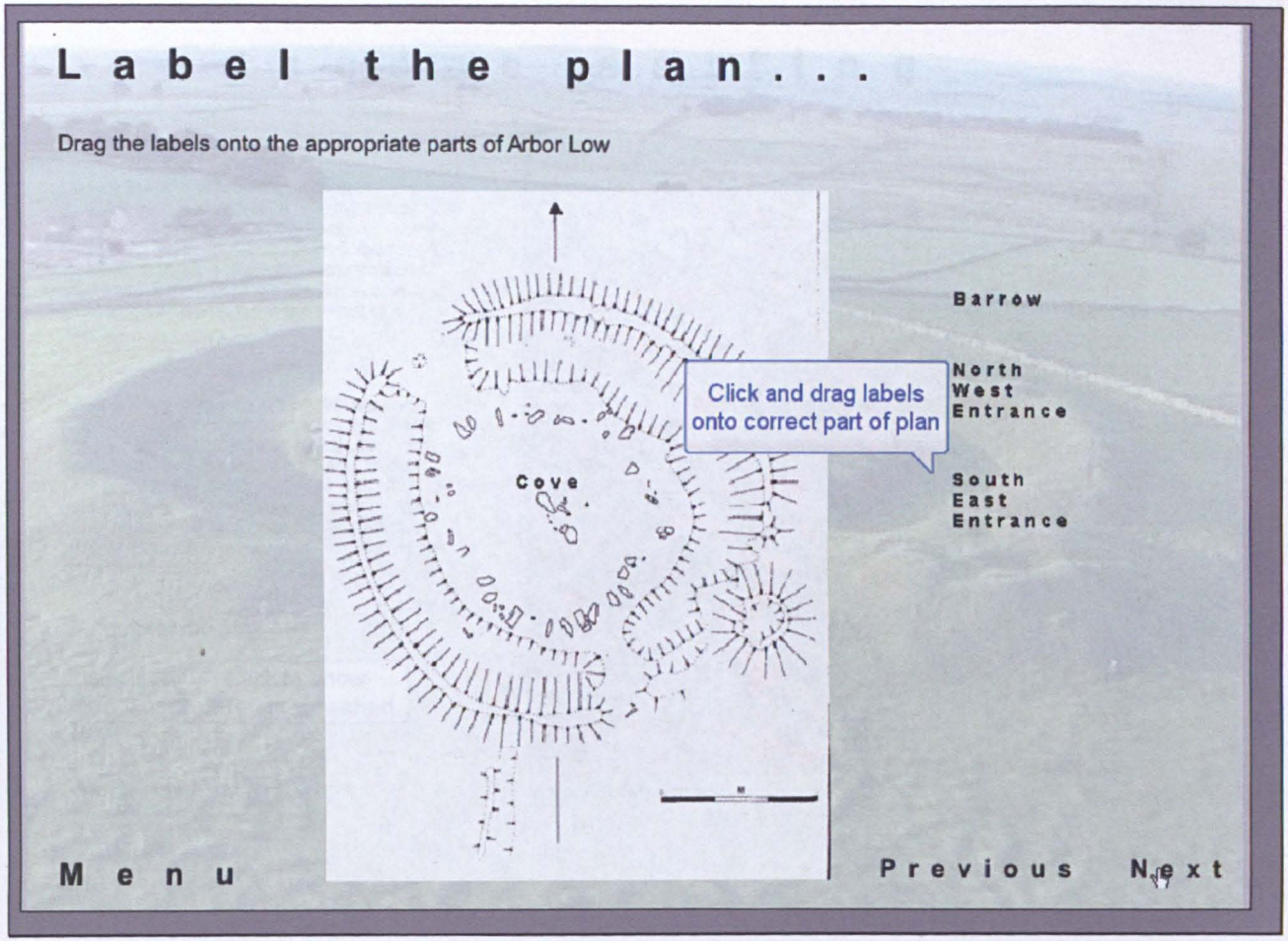


Figure 7.9 - Landscape setting section, showing how different viewsheds can be shown on same screen

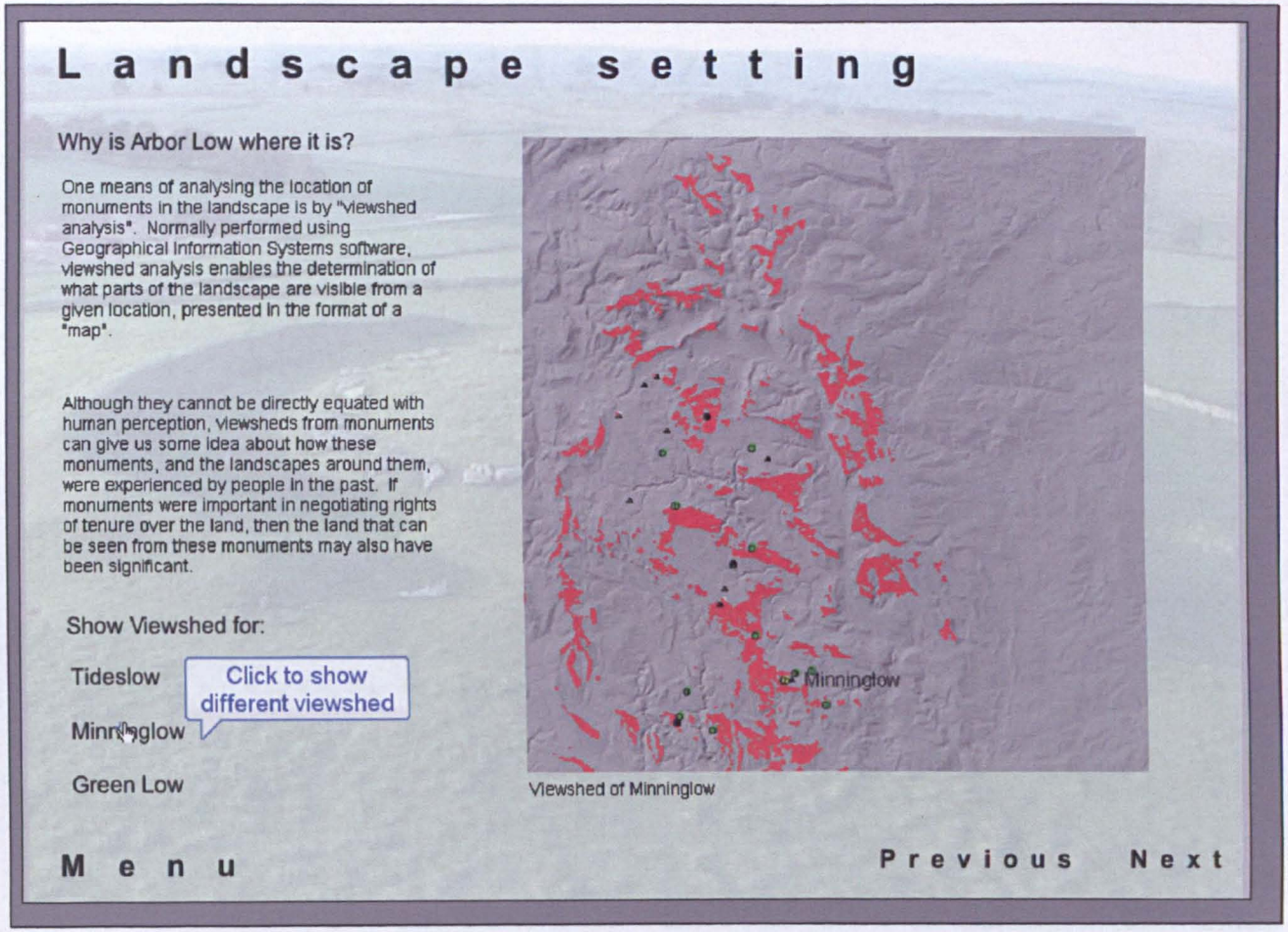


Figure 7.10 - Video Gallery screen

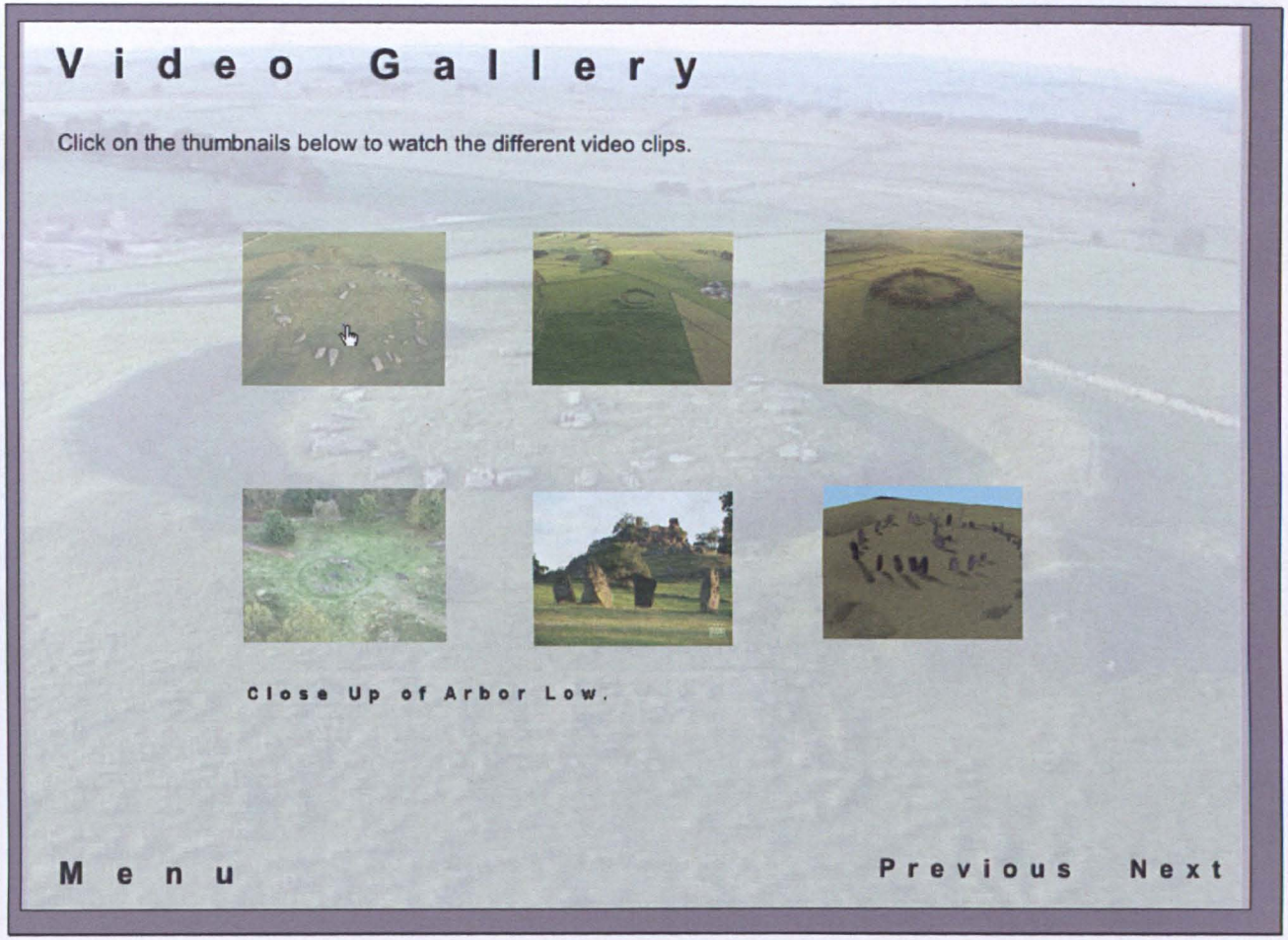


Figure 7.11 - Video clip with instructions for controlling clip

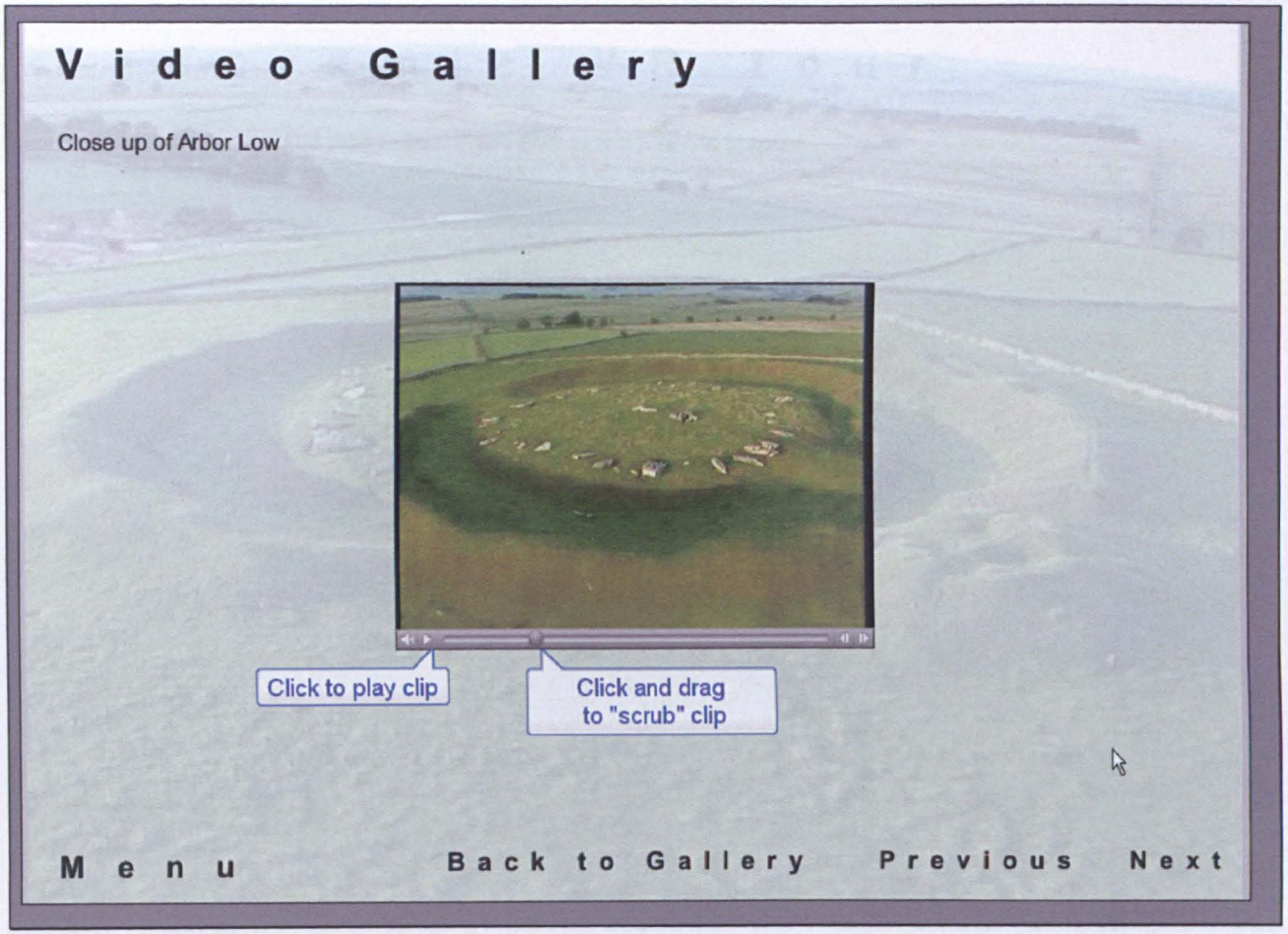


Figure 7.12 - Panoramic VR representation, with navigation system

Figure 7.13 - PVR representation with viewshed

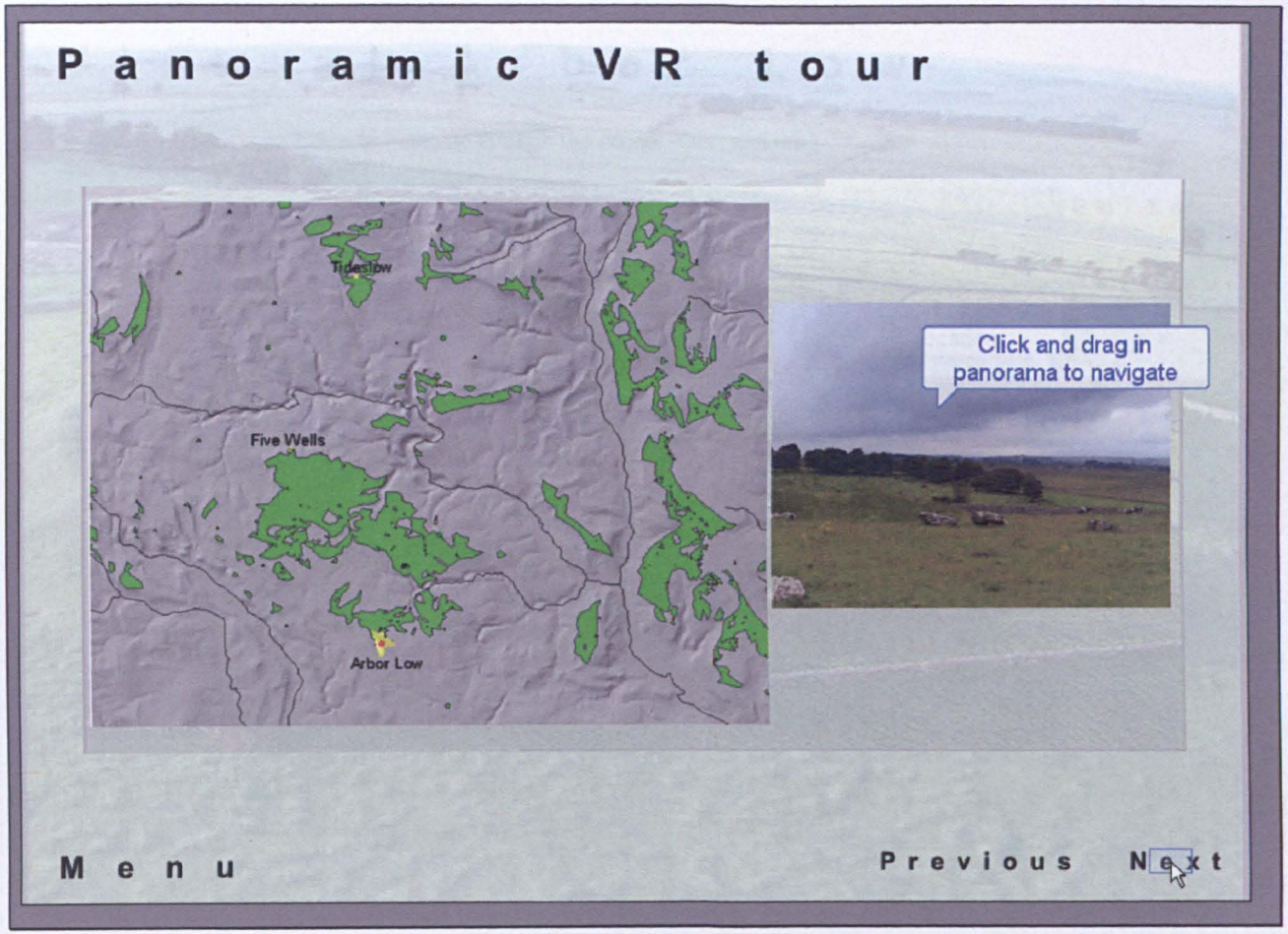


Figure 7.14 - 3D model with recumbent stones

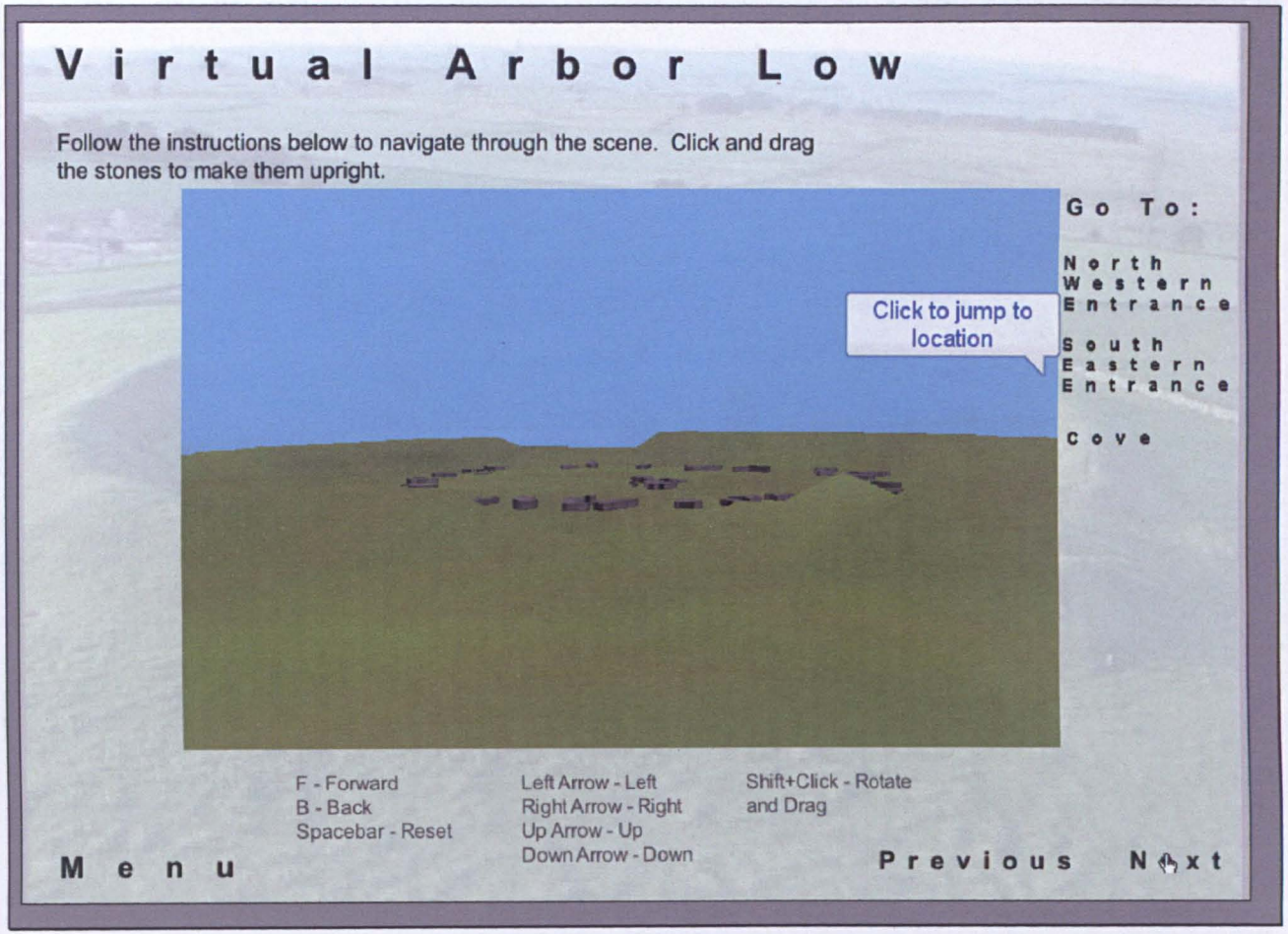


Figure 7.15 - 3D model, with stone being dragged upright (note mouse cursor changes to indicate when over a stone)

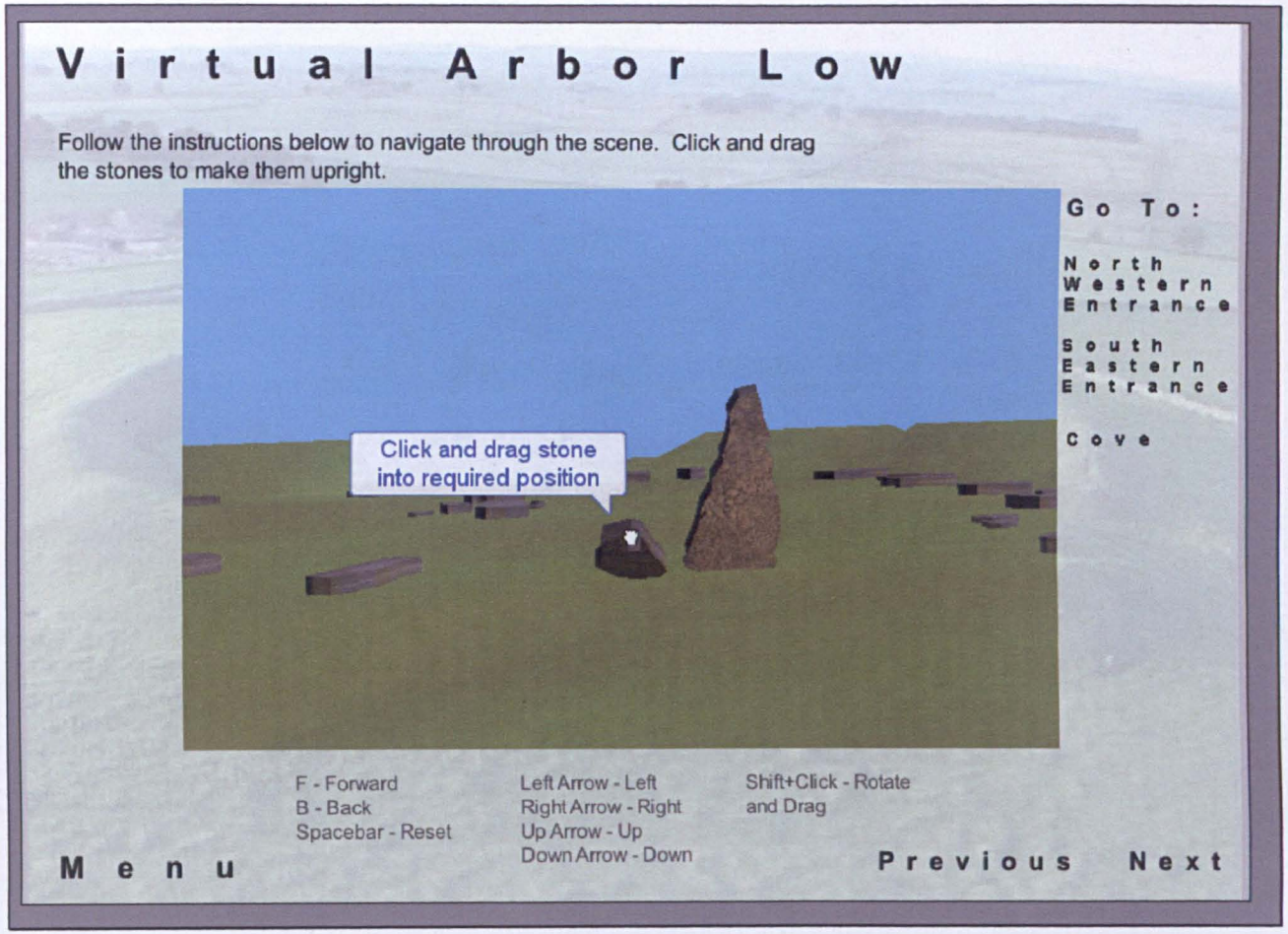


Figure 7.16 - PVR and 3D representations combined, with linked navigation.

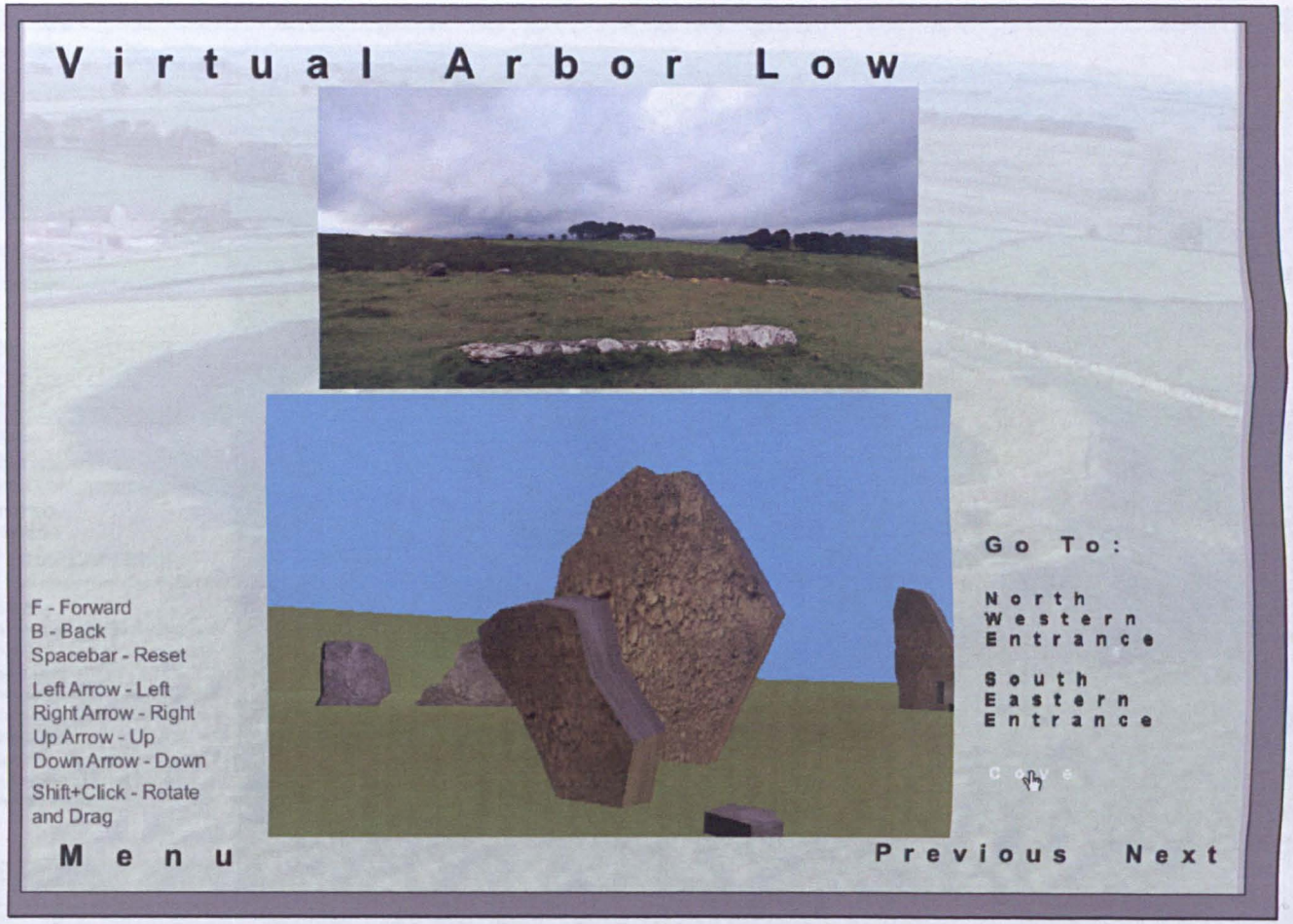
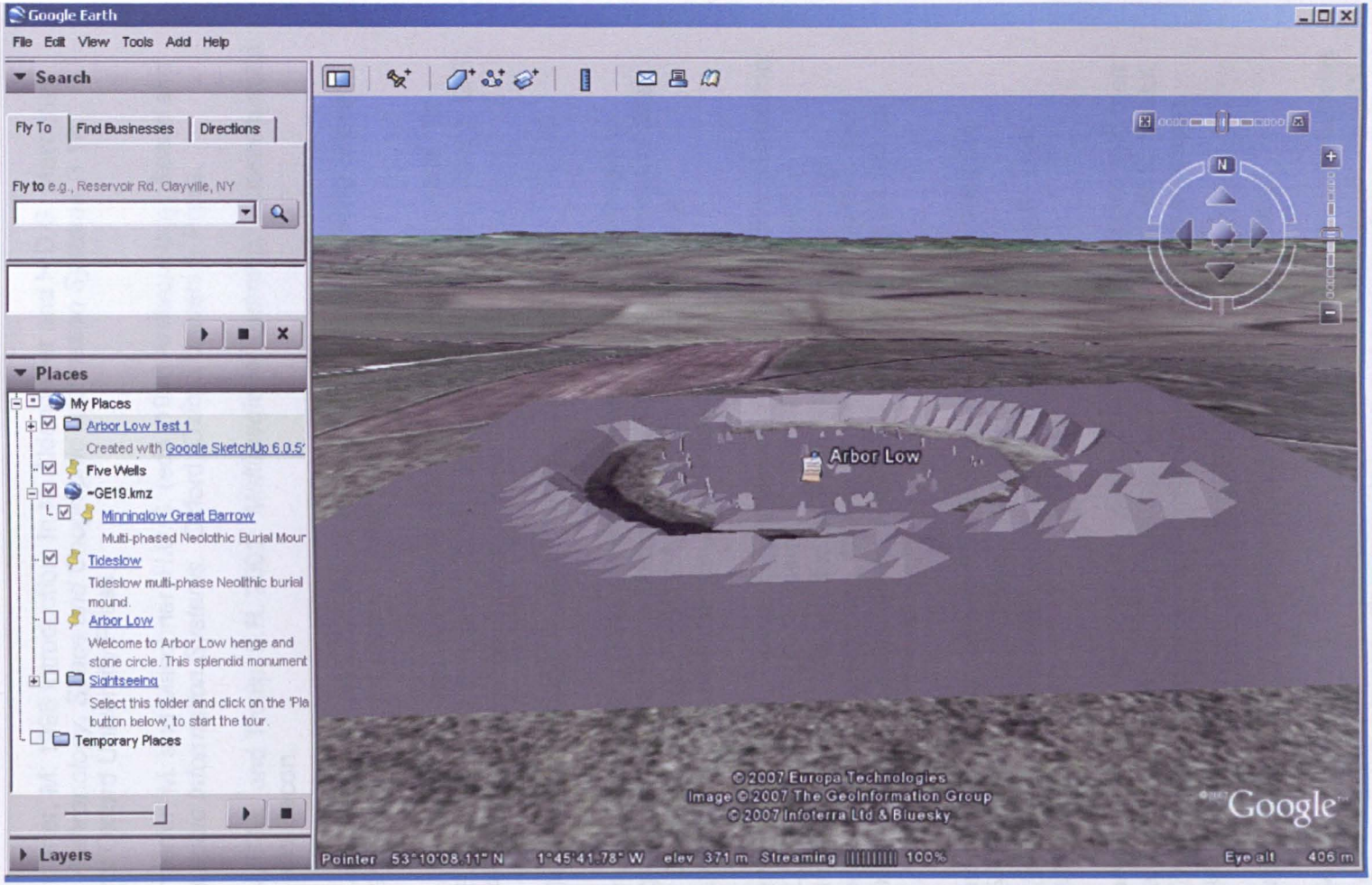


Figure 8.1 – Preliminary test example of placing the Arbor Low model within Google Earth



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Appendix A – Instructions on loading the Exploring Arbor Low CD

NB – the CD requires QuickTime to be installed to view the video clips and PVR representations

1. Please insert the disk labelled Exploring Arbor Low into your CD drive
2. Navigate to the Arbor Low folder
3. Double click on the EAL.exe icon
4. Please wait for the package to load – this can take a few minutes.

In some situations, the CD may report the following error on loading:

"The ordinal 984 could not be located in the dynamic link library DIRAPI.DLL"

This is a benign error, and after clicking on the OK button several times, the program will function fully.

In case of any problems please contact g.mcelearney@sheffield.ac.uk.