

ZTV / Visibility Report

Chiltern scarp above Wendover, HP22

SCREENING VERDICT

Theoretical visibility to 2.0 km: 26.6% of the study area on bare earth, 7.3% once woodland and buildings screen it.

A zone of theoretical visibility bounds where the site could be seen from if the line of sight is geometrically clear. It is the starting point for a landscape and visual assessment — it sets the study area and directs where viewpoints are chosen — and it is not a finding about how noticeable the site is.

Screening is doing most of the work here: existing woodland, hedgerows and buildings remove 73% of the bare-earth zone. Much of that screening is vegetation, which can be felled, can die and changes with the seasons — the bare-earth figure is what remains if it goes.

MEASURED AND INFERRED VALUES

Study radius	2.0 km from the site boundary, on a 10 m ground lattice.
Bare-earth visibility	26.6% of the surveyed study area (37,327 of 140,281 cells). Landform only.
Screened visibility	7.3% (10,183 cells). Woodland, hedgerows and buildings remove 73% of the bare-earth zone.
Observers	5 points around the site boundary at 1.6 m eye height. Computed from the development, not a single pin — a long frontage is visible from places its centre is not.
Target height	0 m — the answer is "is the ground at the site visible". A proposed structure would be visible from strictly more places; that is a different figure, not a caveat on this one.
Curvature	$d^2(1''k)/2R \text{ with } k=0.13, R=6371000 \text{ m. } 0.27 \text{ m at } 4 \text{ km.}$
Sampled positions	48 positions on 16 bearings at three distances. 2 have a clear view on both surfaces; 13 are visible on bare earth but screened out. These are sampled positions, not assessment viewpoints — GLVIA3 viewpoints are chosen by a landscape architect for who uses them and what they represent.

WHAT A FULL LANDSCAPE AND VISUAL IMPACT ASSESSMENT ADDS

Surveyed levels to a known datum rather than remote-sensed ones; the modelled flood level for the design event, obtained from the Environment Agency or by modelling; the sequential and exception tests where they apply; residual risk behind defences and in a breach; a drainage strategy; safe access and egress; and a signed professional opinion

your local planning authority can rely on. This pack is the evidence base those start from, not a replacement for any of them.

Screening assessment from remote-sensed data (EA composite, surveyed 2020, ± 15 cm RMSE (composite-level)) — not a substitute for a site survey or a professional Landscape and Visual Impact Assessment.

METHOD AND LIMITATIONS

Study radius 2.0 km from the site boundary, computed on a 10 m ground lattice.

Observers: 5 points spaced around the site boundary, eye height 1.6 m above ground. A zone of theoretical visibility is computed from the development, not from a single pin — a long frontage is visible from places its centre is not.

Target height 0 m, i.e. the answer is "is the ground at the site visible". A proposed structure of height H would be visible from strictly more places; that variant is available and is a different figure, not a caveat on this one.

Two surfaces, reported separately and never blended. Bare earth: the Environment Agency LIDAR composite digital terrain model — landform only, the conservative maximum. Screened: the first-return digital surface model — landform plus woodland, hedgerows and buildings as they stood when flown.

Earth curvature and atmospheric refraction are applied throughout: $\text{drop} = d^2(1.25 \times 10^{-6})$ k, 6,371,000 m, which is 0.27 m at 2 km and 1.09 m at 4 km. Omitting it would over-state visibility against distant ridge lines.

Survey vintage — terrain: EA composite, surveyed 2020. Surface: EA composite, surveyed 2020. Accuracy ± 15 cm RMSE (composite-level). The surface model is a snapshot: anything built, demolished, grown or felled since is not represented.

Line of sight is tested per cell by marching to each observer, rather than by casting a fixed number of rays. Rays diverge with distance, and at kilometre range the gap between them exceeds a cell — thin ridges and embankments fall between beams and read as visible when they are not.

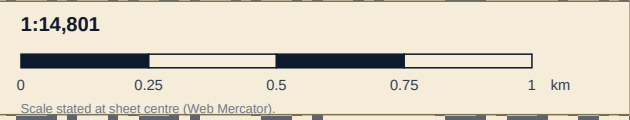
Theoretical visibility means the line of sight is geometrically clear in the model. It is not a statement that the site will be noticed, or that it will be seen in typical weather, or by anyone facing that way.

© ENVIRONMENT AGENCY COPYRIGHT AND/OR DATABASE RIGHT 2026

PRODUCED WITH PLANNING CONSTRAINTS · PLANNINGCONSTRAINTS.COM



ZTU — bare earth, 2.0 km
terrain and surface; EA composite,
surveyed 2020 ±15 cm RMSE
(composite-level)
observer 1.6 m target 0 m 5
boundary observers 10 m lattice
applied, $d0(1-k)/2R$ with
371000 m
ent Agency copyright
base right 2026



LEGEND

— Site boundary (redline)

DATA VINTAGES

ATTRIBUTION

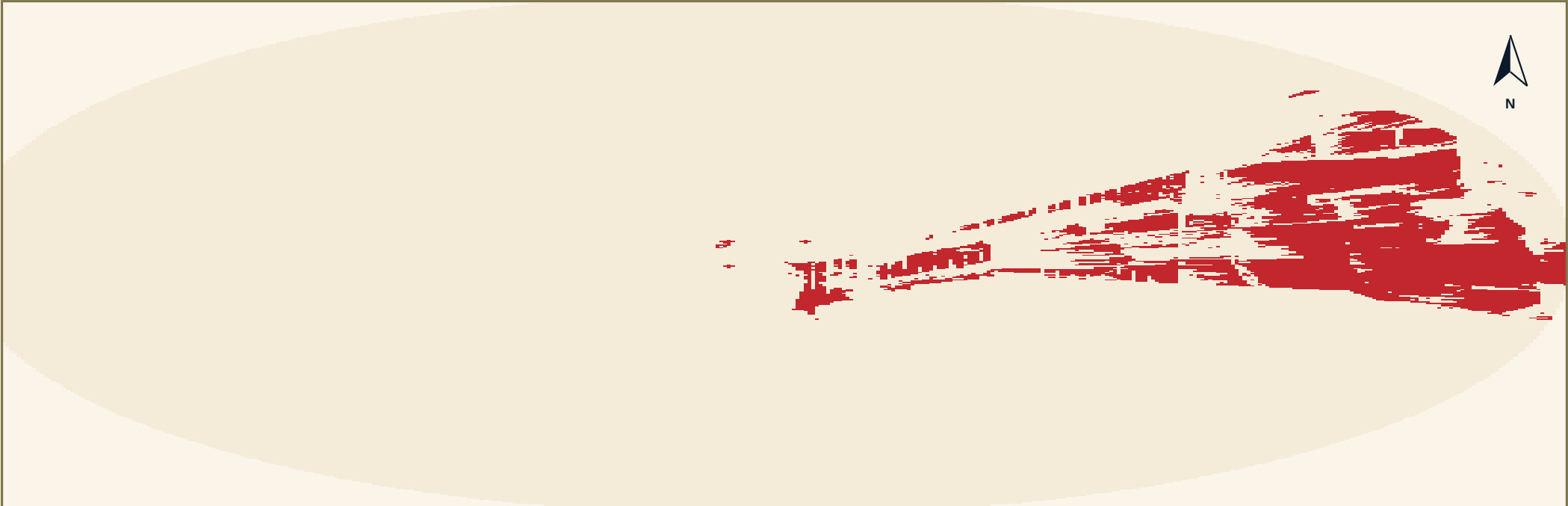
© Environment Agency copyright and/or database right 2026
Crown copyright and database rights 2026 and is reproduced with the permission of HM
Land Registry.
© Crown copyright and database rights 2026 Ordnance Survey AC0000851063.

PLANNING CONSTRAINTS

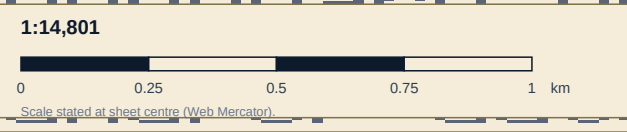
SITE
Chiltern scarp above Wendover, HP22
SHEET
01

CLIENT
—
DATE
09 Aug 2026

PROJECT
ZTV / Visibility Report
DRAWN BY
Planning Constraints



ZTV — screened by surface model, 2.0 km terrain and surface: EA composite, surveyed 2020 ±15 cm RMSE (composite-level) observer 1.6 m target 0 m 5 boundaries observers 10 m lattice from first-return DSM; 10 m DTM
Environment Agency copyright
Ordnance Survey database right 2026



LEGEND

— Site boundary (redline)

DATA VINTAGES

ATTRIBUTION

© Environment Agency copyright and/or database right 2026
Crown copyright and database rights 2026 and is reproduced with the permission of HM Land Registry.
© Crown copyright and database rights 2026 Ordnance Survey AC0000851063.

PLANNING CONSTRAINTS

SITE
Chiltern scarp above Wendover, HP22
SHEET
02

CLIENT
—
DATE
09 Aug 2026

PROJECT
ZTV / Visibility Report
DRAWN BY
Planning Constraints