





# Overview

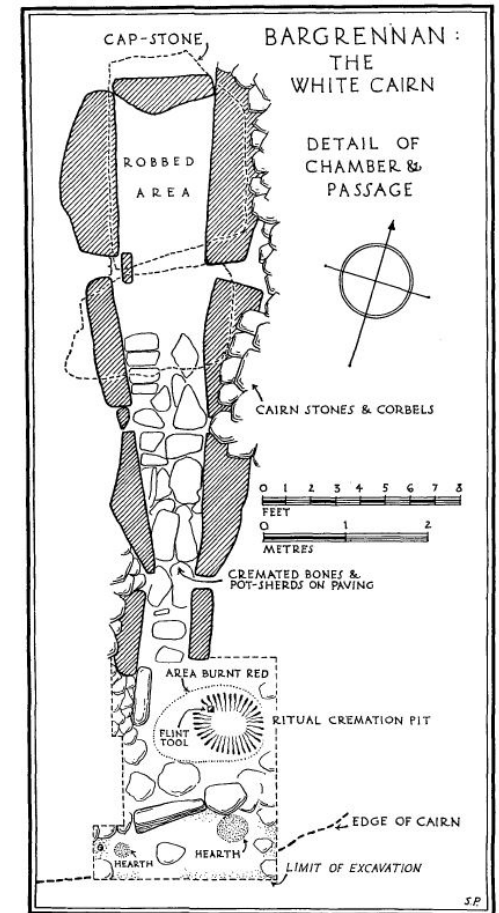
The chambered cairn at White Cairn, Bargrennan is located in commercial forestry 400m W of Glentool, Dumfries and Galloway. The cairn was excavated by Piggott and Powell in 1949, and is well known as an example of the round passage graves of SW Scotland that came to be known as the 'Bargrennan type', standing in contrast to the more widespread 'Clyde' long cairns. The contrasting distribution of Bargrennan and Clyde cairns has been noted, but their place in the chronological development of the megalithic tombs of Scotland is uncertain. Neither the original excavations (Piggott and Powell 1951) and more recent investigations (Cummings and Fowler 2007) produced conclusive evidence for a construction date, largely owing to the level of robbing of the chamber and surrounding cairn in periods following its abandonment. Evidence for both pre-cairn Mesolithic and later Bronze Age activity were recovered from excavations within and around the monument, but the original date of construction and use remains undemonstrated.

The cairn has been considered by previous surveyors to be heavily robbed, which may account for the visibility of the passage and chamber prior to the 1949 excavations, although the decomposition of turf and organic components of the monument should not be discounted as a factor in the low height of the cairn. The cairn body itself is round, measuring 12.5 m in diameter and standing to a maximum of 1.7m in height. The passage is entered from the S, and widens from 0.4 m at the threshold to 0.8 m at the back of the chamber. Only two lintels remain in situ; these are massive, measuring 2.06 m by 1.08 m and 0.25 m thick, and 2.20 m by 1.9 m and 0.25 m thick respectively.

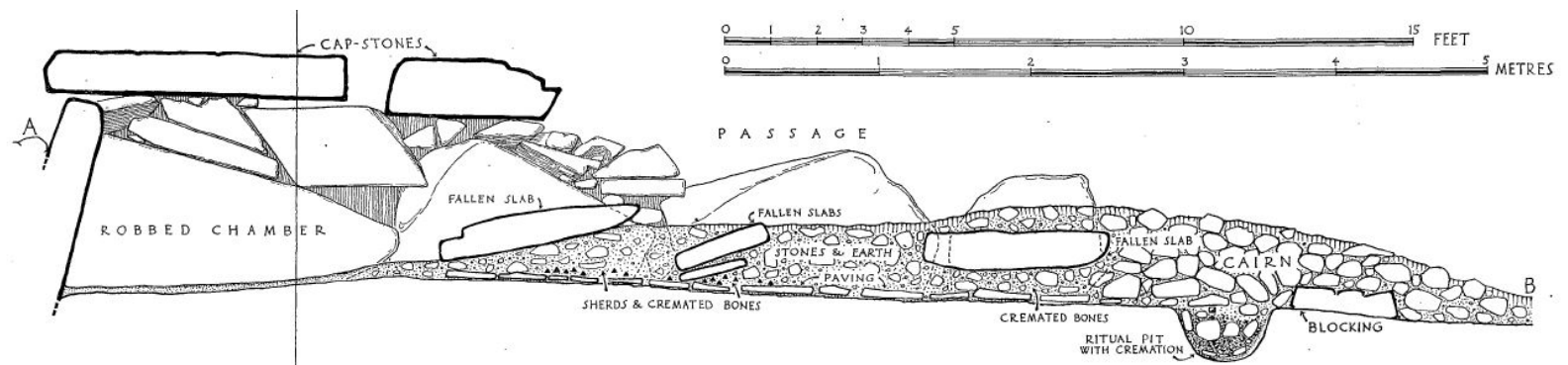
Piggott and Powell recorded four pairs of opposed orthostats forming the passage and chamber; the passage is now overgrown and only seven of the eight slabs are visible. The cairn is otherwise in good condition: bracken and heather grows on the cairn body but the site is kept free of sapling growth. The spoil heaps of the earlier excavations are visible on the E and W sides of the cairn, now overgrown.

## Survey

The site was laser scanned in Mary 2016 using a Faro Focus 3D laser scanner, with control provided by a Trimble S6 total station working from control points established using a Trimble R6 dGPS, using the VRS Now corrections service. A site plan and a series of 3D visualisation have been produced.



Plan (right) and elevation (below) of the chamber made at the time of Piggott and Powell's excavations

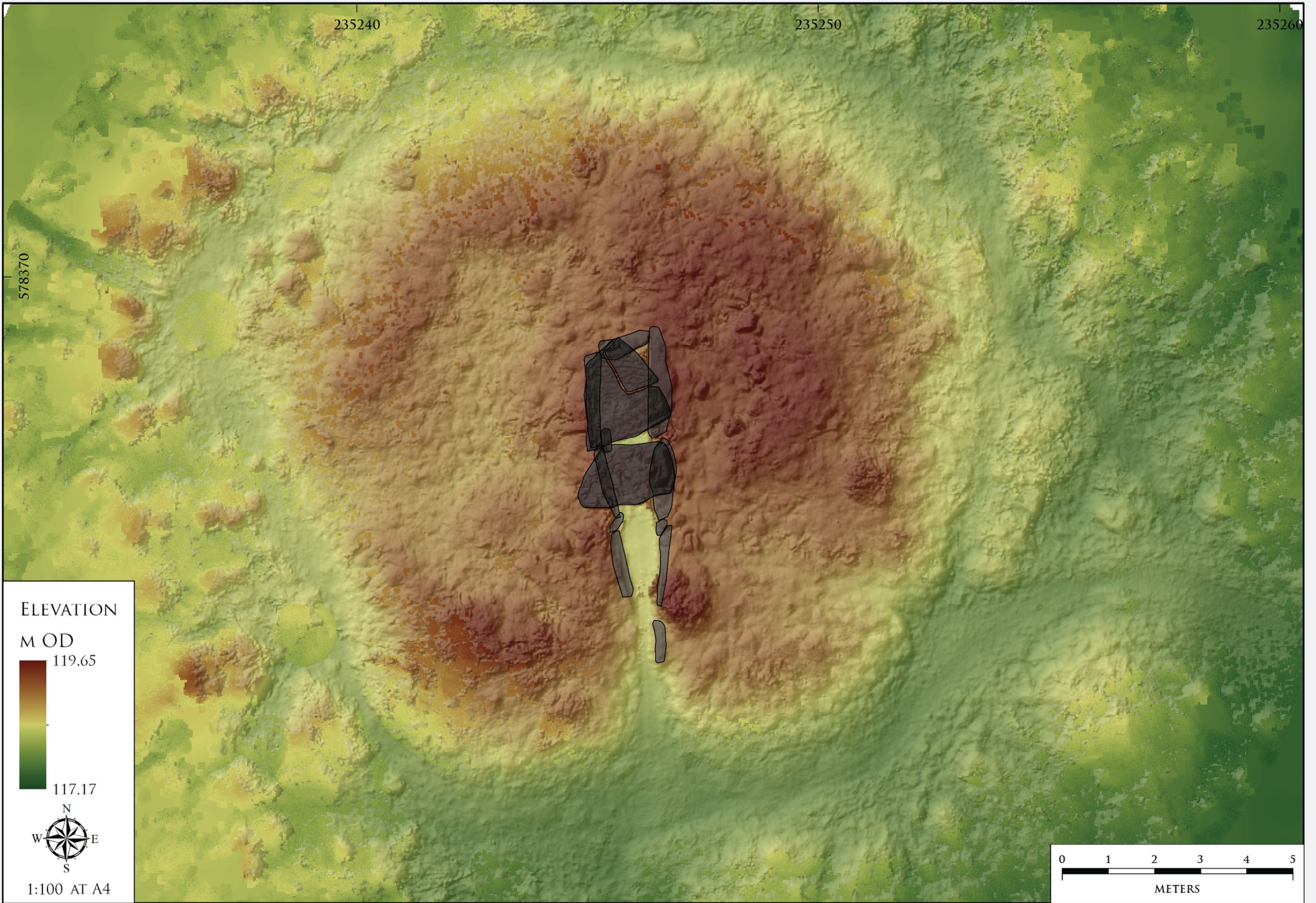


STUART PIGGOTT AND T. G. E. POWELL.

Fig. 12.

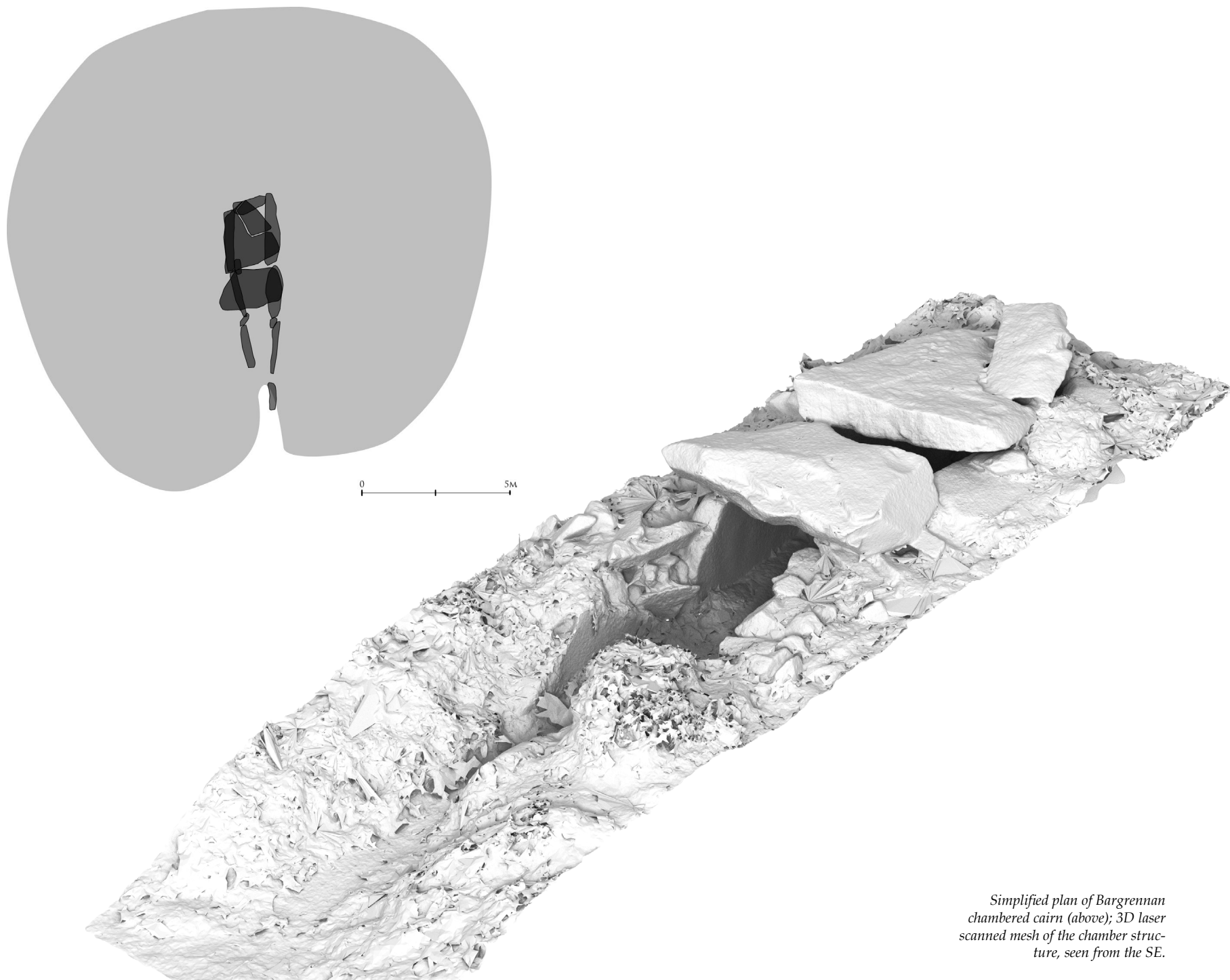
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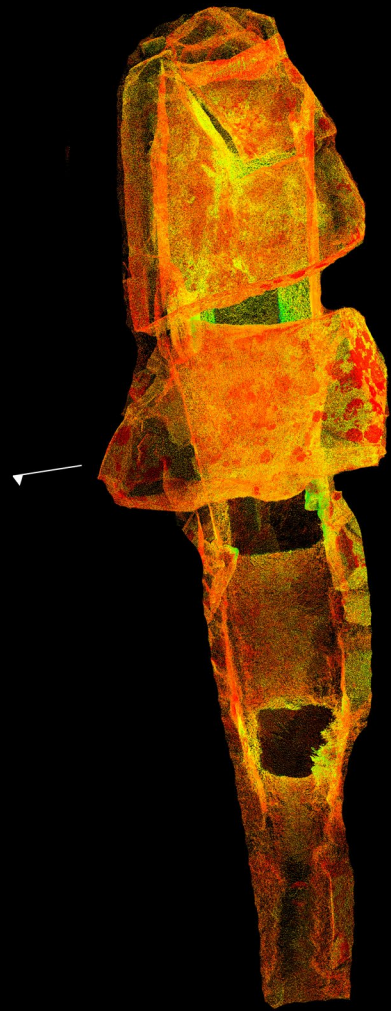
# Chamber



*Simplified plan of Bargrennan chambered cairn (above); 3D laser scanned mesh of the chamber structure, seen from the SE.*

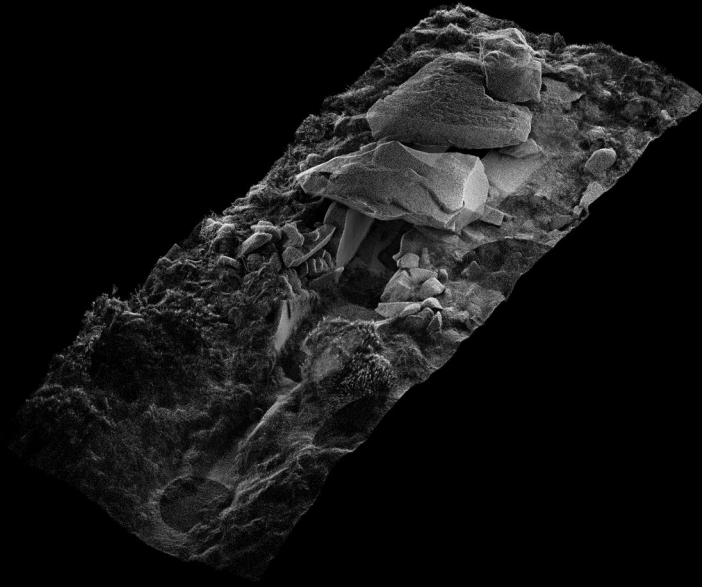


BARGRENNAN: ORTHOIMAGE OF CHAMBER, FRONT VIEW

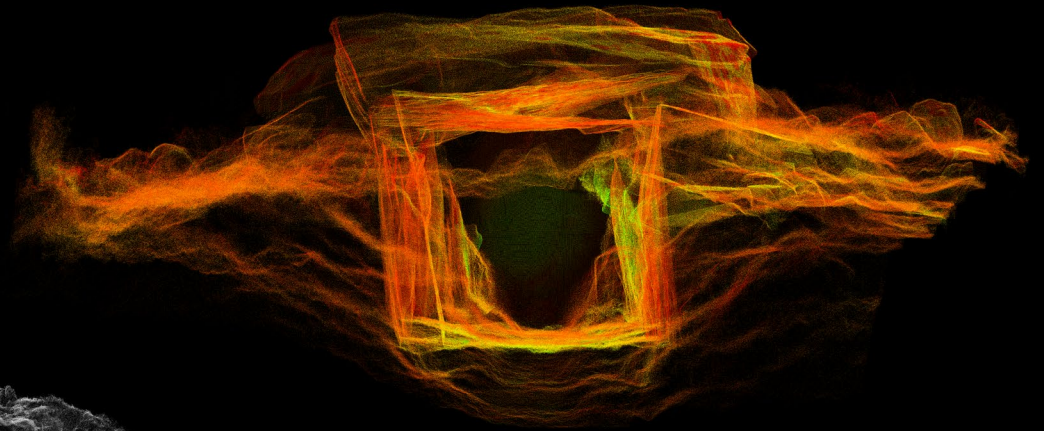


PLAN VIEW OF CHAMBER

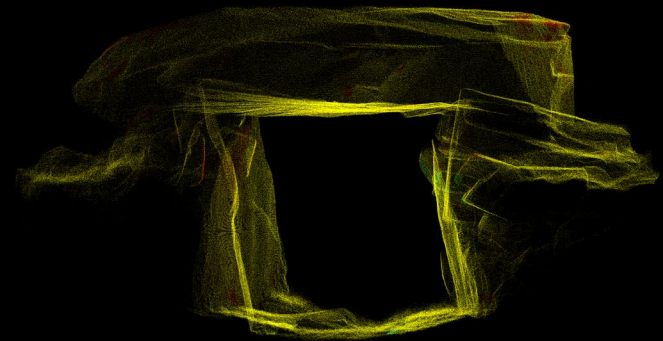
SECTION 1



ISOMETRIC VIEW OF CHAMBER

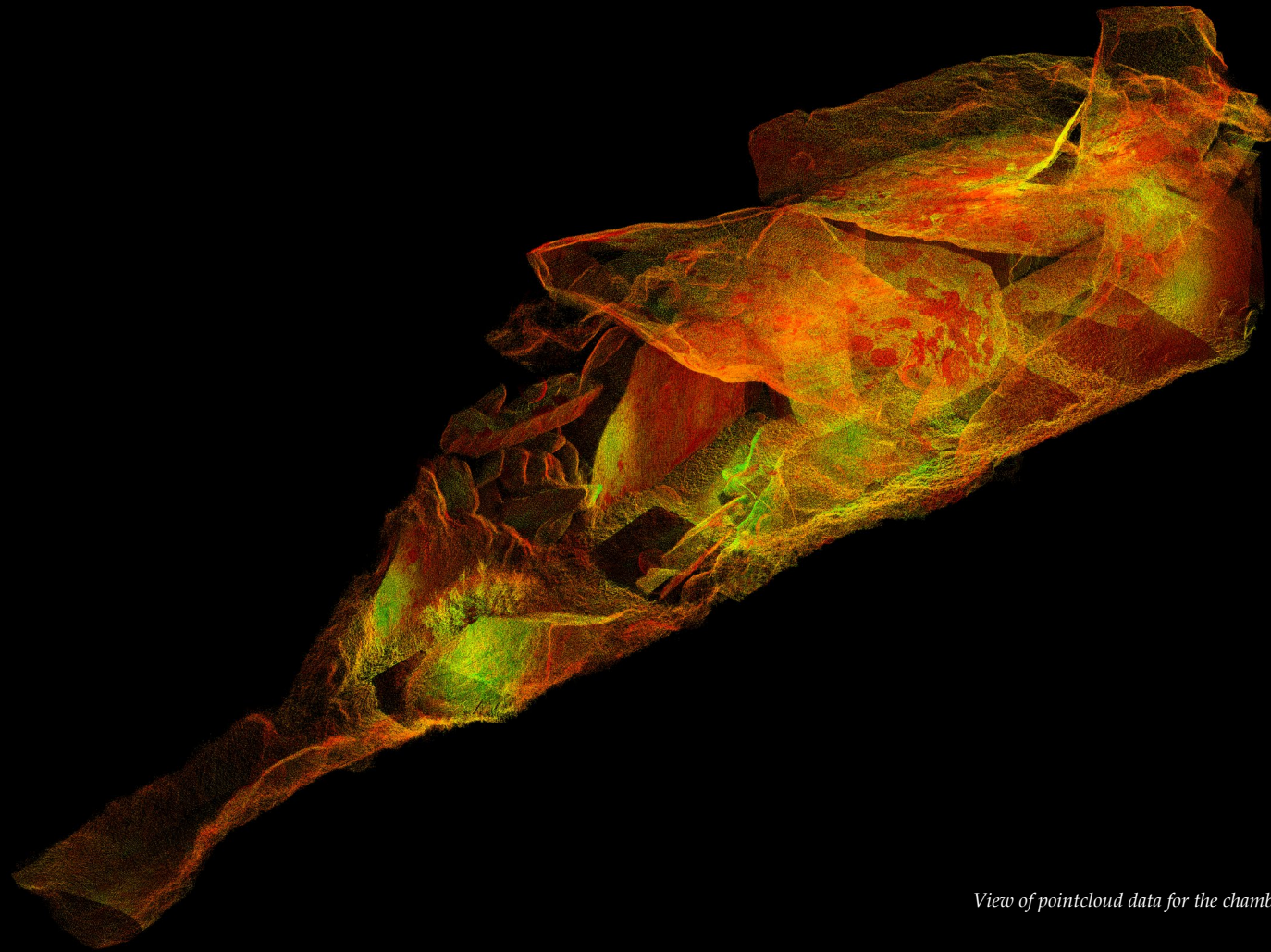


BARGRENNAN: ORTHOIMAGE OF CHAMBER, SECTION 1



0 2M



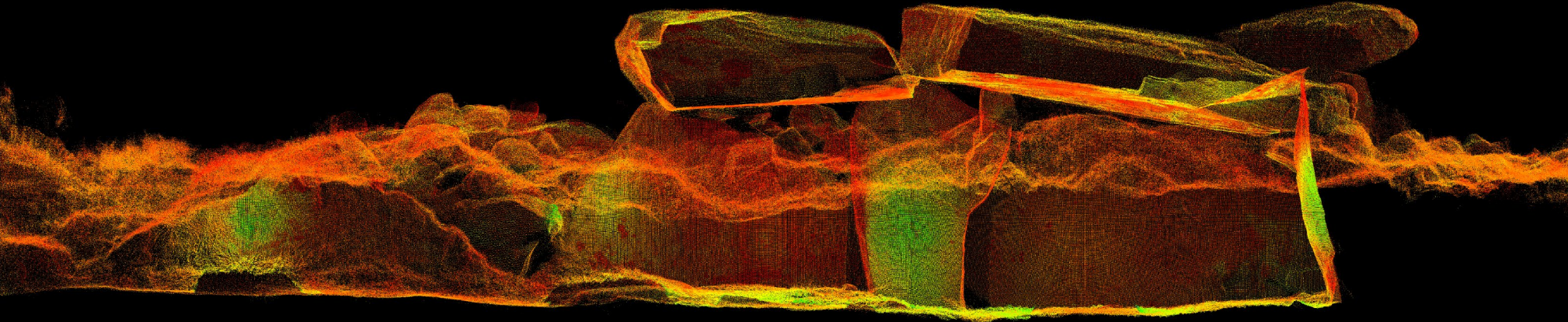
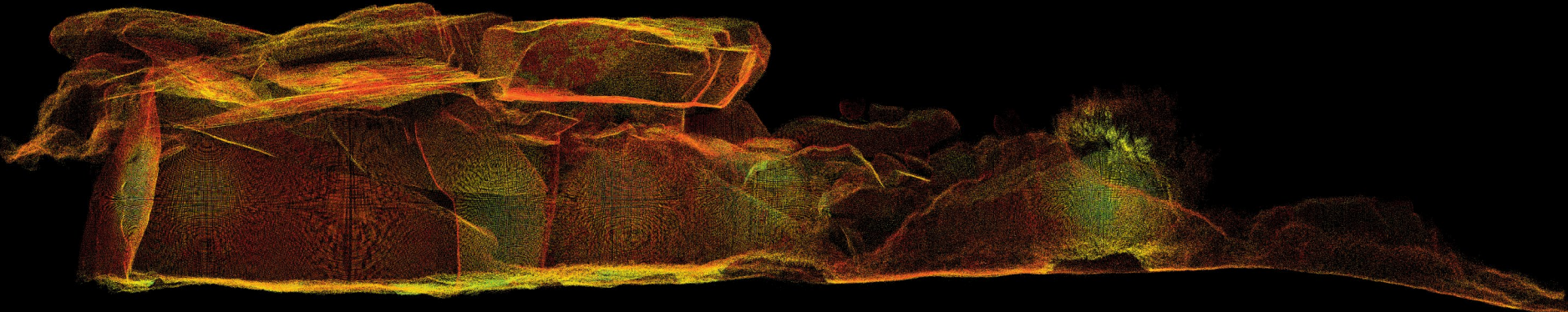


*View of pointcloud data for the chamber at Bargrennan*



# Chamber

BARGRENNAN: ORTHOIMAGE OF CHAMBER, W-FACING ELEVATION

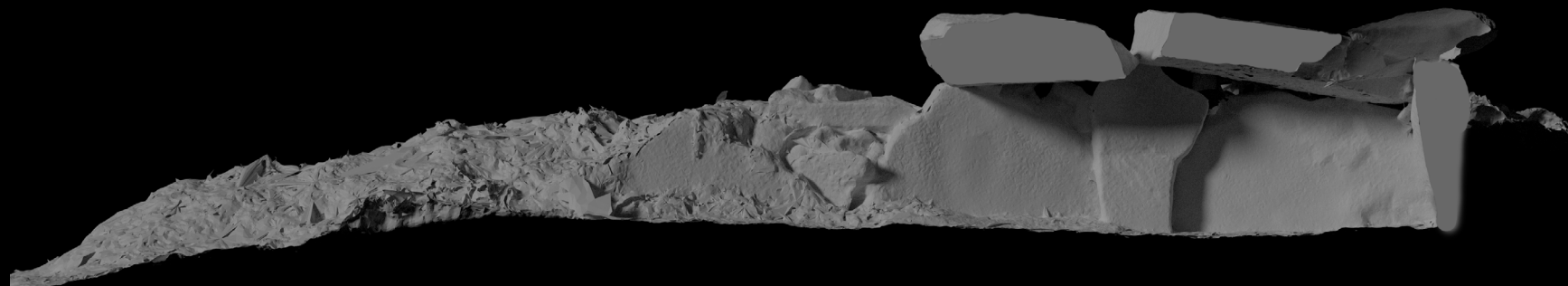


BARGRENNAN: ORTHOIMAGE OF CHAMBER, E-FACING ELEVATION

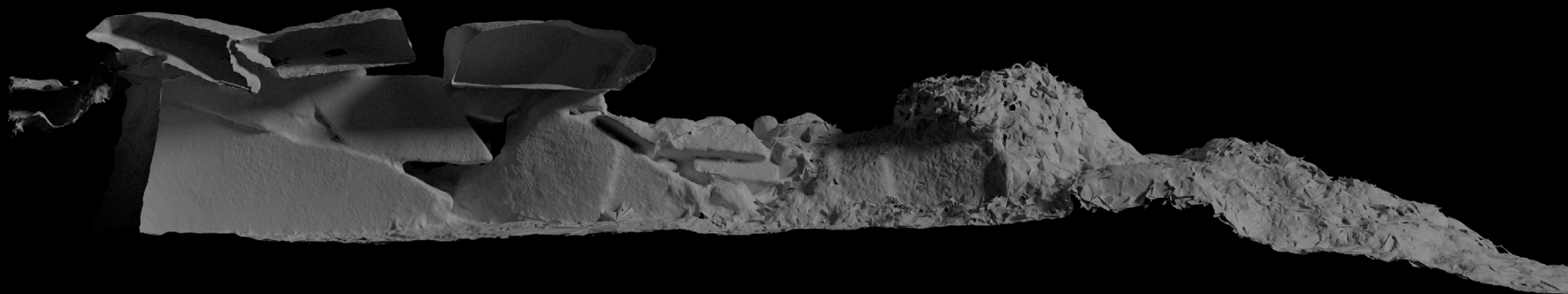




# Orthoimages

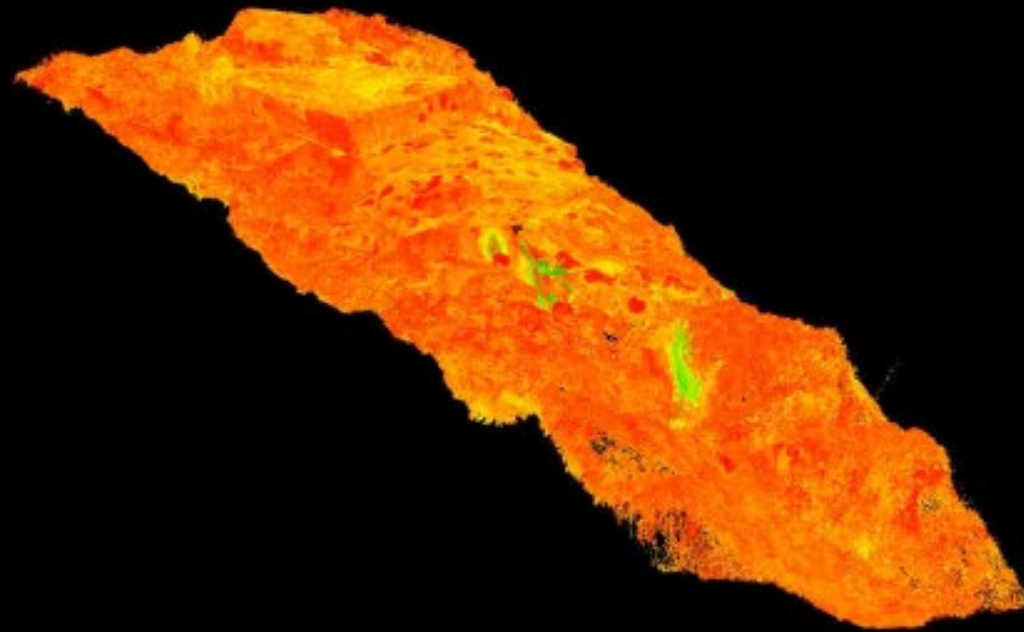


*Internal orthographic views of the chamber at Bargrennan: E-facing (above) and W-facing (below).*













*Top left: General view of the chamber from the SW; top right: view of the capstones from the SE; bottom right: view of the capstones from the SW; bottom left: view of the capstones from the NE.*





*Top left: view into the chamber, from the passage; top right: view of the rear, NE corner of the chamber; bottom right: view out of the chamber to the S; bottom left: view of the NW corner of the chamber.*



# Plates



Top left: graffiti on the W-facing elevation within the chamber; top right: graffiti on the E-facing elevation within the chamber; bottom left: graffiti on the W-facing elevation within the chamber (scratch decoration noted by Piggott is no longer visible); bottom right: working shot taken during laser scanning.





*Panoramic views of the passage and chamber, from the S.*



# Survey Metadata

The measured survey was undertaken using a Trimble FX laser scanner. The FX scanner is a phase comparison system, capable of full dome scanning at ranges of c.0.5m to 50m, at resolutions of up to 92 lines per degree. Scanning was undertaken at Bargrennan yielding a typical point-cloud resolution of 23mm at 30m from the instrument at each station. Overlapping stations mean that the majority of the broch is scanned at a greater resolution. The survey was controlled using spherical targets, located using a Trimble S6 total station with site control provided by a Trimble R6 GPS using the “VRS Now” service. The laser scan data was registered in Trimble Realworks v.9.1.

Interpreted detail was surveyed in the field using the Trimble S6 total station, on the same grid as the control survey, allowing interpretation to be overlain on the laser scan data. The final site illustrations were produced in AutoCAD 2009, Adobe Illustrator, Pointools and Blender.

A detailed photographic record was produced. A detailed descriptive record was compiled in the field which forms the basis for the survey report.



*Key plan showing locations of scanner stations during survey of Bargrennan cairn*



# References

Piggott and Powell, S and T G E. (1951) The excavation of three Neolithic chambered cairns in Galloway, 1949', *Proc Soc Antiq Scot*, vol. 83, 1948-9. Page(s): 144-53

Cummings, V. and Fowler, C 2007 *From Cairn to Cemetery: an archaeological investigation of the chambered cairns and early Bronze Age mortuary deposits at Cairnderry and Bargrennan White Cairn, south-west Scotland*, Oxford: British Archaeological Reports

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Illustration and reporting by: G.Cavers and J.Humble

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