Bryn Celli Ddu passage tomb revisited

S. Griffiths,B. Edwards, A. Wilson, F. Reynolds & A. Stanford

Introduction

Bryn Celli Ddu, Anglesey, UK (OS 250759 370184) is a passage tomb, a type of monument found in Ireland (e.g. in County Meath and County Sligo) and Britain, on Orkney and Anglesey, as well as on mainland Europe. Despite the single, shared name for these sites—and similarities in decorative motifs and spatial organisation—passage tombs exhibit significant variability, in form, materials and construction. Bryn Celli Ddu is significant in late Neolithic north-west Atlantic Europe because of its finds—including rock art indicative of Irish connections (Lynch *et al.* 2000)—and its complex, multi-phase development, including five sixth-millennium cal BC Mesolithic postholes (Burrow 2010).

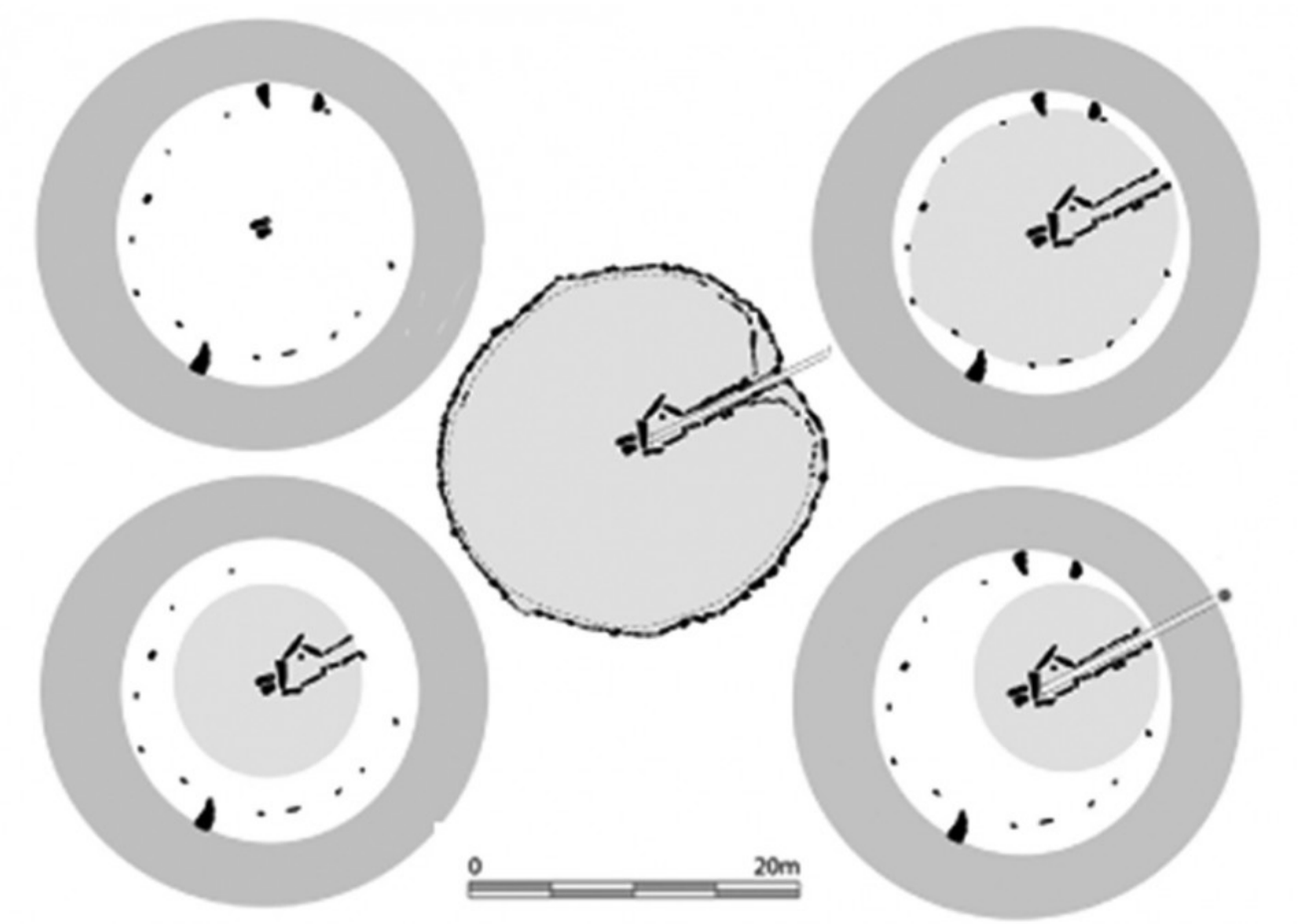


Figure 1. Reconstructed first and final Neolithic phases at Bryn Celli Ddu redrawn from Burrow (2010); clockwise from top left: first phase after O'Kelly (1969), first phase after Eogan (1983), first phase after Bradley (1998), first phase after Burrow (2010), the final phase in the centre.

Excavated in 1929 (Hemp 1930), Bryn Celli Ddu comprises the heavily reconstructed remains of a passage tomb with at least two phases of construction. The site's development has been variously interpreted (O'Kelly 1969; Eogan 1983; Bradley 1998; Figure 1), with differing assessments of the encircling ditch. O'Kelly (1969; Lynch 1991) suggested that the first Neolithic phase comprised a henge followed by the construction of the passage tomb—a sequence that inverts established chrono-typologies. Burrow (2010; cf. Bradley 1998), however, drawing on discussion by Eogan (1983), has questioned the identification of an early henge. O'Kelly's henge thesis rests on whether or not the ditch was accompanied by an external bank, for which there is no evidence, either as a positive feature, or from fill layers in the ditch (Burrow 2010). A deposit within the ditch has been suggested to be the stabilisation layer within a feature open for some time, with the ditch spoil forming an exterior bank (O'Kelly 1969; Lynch 1991; Burl 2000).

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Our new survey aimed to identify evidence for an external bank and to locate other unrecorded archaeological features within the scheduled area. Evidence for a bank would potentially inform understanding of the chrono-typological development of later Neolithic monuments across north-west Atlantic Europe, in Ireland, Wales and Scotland.

Method and results

An electrical resistance tomography (ERT) survey of the mound and its immediate surroundings was undertaken. ERT is based upon the principles of resistivity, producing transects of varying depths. We surveyed half the monument, with transects at parallel 2m intervals (Figure 2). The array and specification are detailed in Table 1.

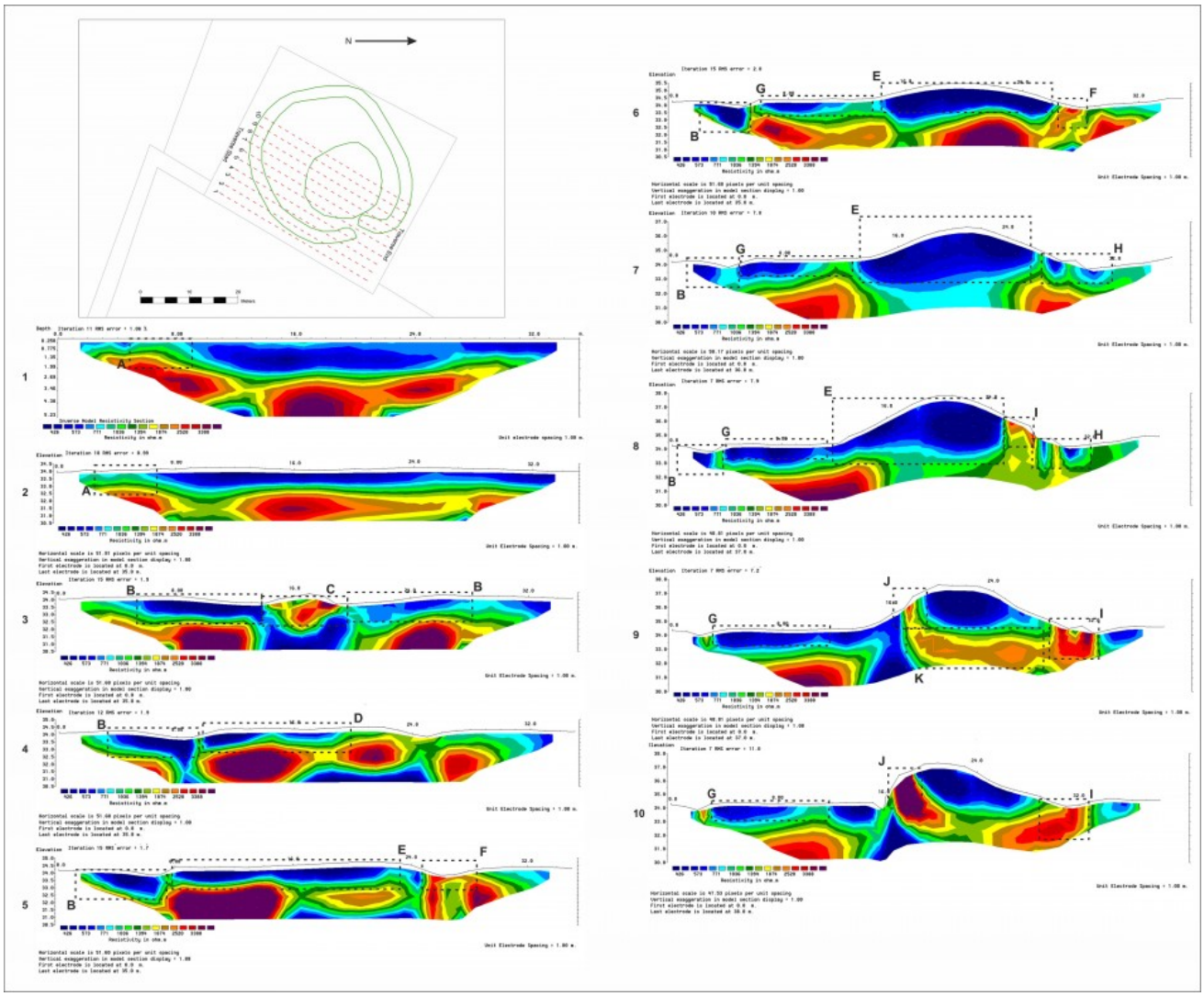


Figure 2. Bryn Celli Ddu: ERT transect locations and results.

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Electrical resistance tomography survey	
Traverse length	36–38m
Equipment	Allied Tigre 64
Sample interval	1m
Number of transects	10
Traverse interval	2m
Geo-location & set-out	Leica TS06 Total Station
Data processing	Res2DInv
Map data	OS Mastermap Multiscale

Table 1. The ERT array and specification.

Excluding the mound transects, all meaningful variations in resistivity occurred in the upper three metres, with green/blue responses representing variation in bedrock (Figure 2). Anomalies A–K have been identified. Only anomalies associated with the ditch, bank and mound are discussed here.

Anomaly A, located in transects 1 and 2, represents a potential outer bank. Its position and width are congruent with this interpretation. The slightly higher resistance of this anomaly compared to the topsoil outside and within the ditch would also be consistent with a denuded bank, which now exists only below ground level, comprising compacted humic topsoil. The distance from the centre of the ditch to the crest of the 'bank' is approximately 2m. The ditch itself is well represented in many transects as anomaly B. Near the entrance, the ditch shows as an area of higher resistance, probably as a result of twentieth-century reconstruction. The reconstructed mound (anomaly E) shows clear differentiation from other features. The survey detected probable stone elements around the entrance (anomaly I) and the artificial southern opening (anomaly J).

Discussion and conclusion

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As the first application of ERT on this type of monument in the UK, this survey has demonstrated the technique's effectiveness. The results include an anomaly, a possible outer bank that might have been a component of a henge or other earthwork enclosure. If this is the case, both the standard interpretation that henges post-date British passage tombs and the conventional late typo-chronology may require revision. This could indicate important and dynamic relationships between north Wales and Ireland during this period. Along the north-west Atlantic seaboard, stone circles, passage graves, henges and other earthwork enclosures may have had more variable traditions within more closely related sets of practices than previously anticipated (cf. Bradley 1998).

That said, the survey was limited by both access and time; further work to characterise this tantalising anomaly must be undertaken. The potential for a more complicated monument sequence than the single or double phases advocated might be suggested by the monument's relatively late construction date, which is towards the end of the timespan of dated Irish examples (Griffiths 2015). The presence of an undated animal burial near the entrance passage, and the Mesolithic postholes, demonstrates that other aspects of the monument are also atypical. The ERT evidence from Bryn Celli Ddu is another indication of the variability that may exist within the passage tomb class of monuments.

Acknowledgements

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