# Building the Great Dolmens
# Excavations at Garn Turne, Pembrokeshire, 2011

## Data Structure Report
## November 2011

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## 1. Introduction: Building the Great Dolmens project

Dolmens are one of the best known, yet least understood, types of monument in Britain and Ireland. These monuments have seen virtually no modern excavation or investigation, and we still have no definite date for the construction of these monuments, although there is the suggestion that this was at a potentially early date in the Neolithic (Cummings and Whittle 2004; Kytmannow 2008). If this is the case, dolmens may well be the earliest form of monumentality in Britain and Ireland and may be able to inform our understanding of the transition to the Neolithic. In addition to this we have little understanding of how these monuments were constructed, even though some dolmens employ enormous stones. These were extraordinary feats of engineering, where people were quarrying, hauling and lifting stones that were up to 150 tonnes in weight. It is also obvious that many dolmens were architectural failures, in the sense that at some sites the capstone was never successfully placed on top of uprights, yet this idea of monumental failure, and its impact on society, has not been explored in any depth. Moreover, we have only a very limited understanding of how these sites were used once they were constructed, either successfully or unsuccessfully. Did people abandon monumental failures, or did they use them as if they were successful constructions? And did these sites all start off as burial chambers, or was this a 'secondary' use? The other key element of the project involves thinking beyond typological classification. We advocate a critical approach to the traditional monument typology of Britain and Ireland by focussing instead on the construction processes involved, and the overall ‘effect’ that people were trying to achieve when building these sites, instead of the minutiae of typological classification. Since this is the case, some sites that have not been previously classified as dolmens will need to reclassified and considered as part of our project. Overall, then, a new project addressing all these issues is being initiated in order to understand this crucial class of monument, and potentially the beginnings of monumentality in Britain and Ireland.

In order to answer our research questions we will approach the Neolithic monumental record of Britain and Ireland in three key ways:

1. Survey: by undertaking geophysical survey around a number of dolmens, we can look for traces of the construction methods used to build the dolmens (pits, ramps, quarries and so on).
2. Geological assessment: we have already noted that many dolmens are built from stones that are both local and non-local. In order to fully understand the biography of these

monuments, the geological assessment of multiple sites in different areas is an essential component of the project.

3. Excavation: five sites will be selected in Wales, England and Ireland that appear to be ruinous but, for our purposes, will allow us to focus on their construction. We will also select sites for excavation that show signs of monumental disaster, and where we can identify and excavate a nearby quarry or pit. Because dolmens are relatively simple constructions, and since they very rarely produce large quantities of material culture, it is realistic to excavate one site a year. This report details the excavation of our first target site, Garn Turne in SW Wales.

**Fig. 1.** Garn Turne dolmen prior to excavation

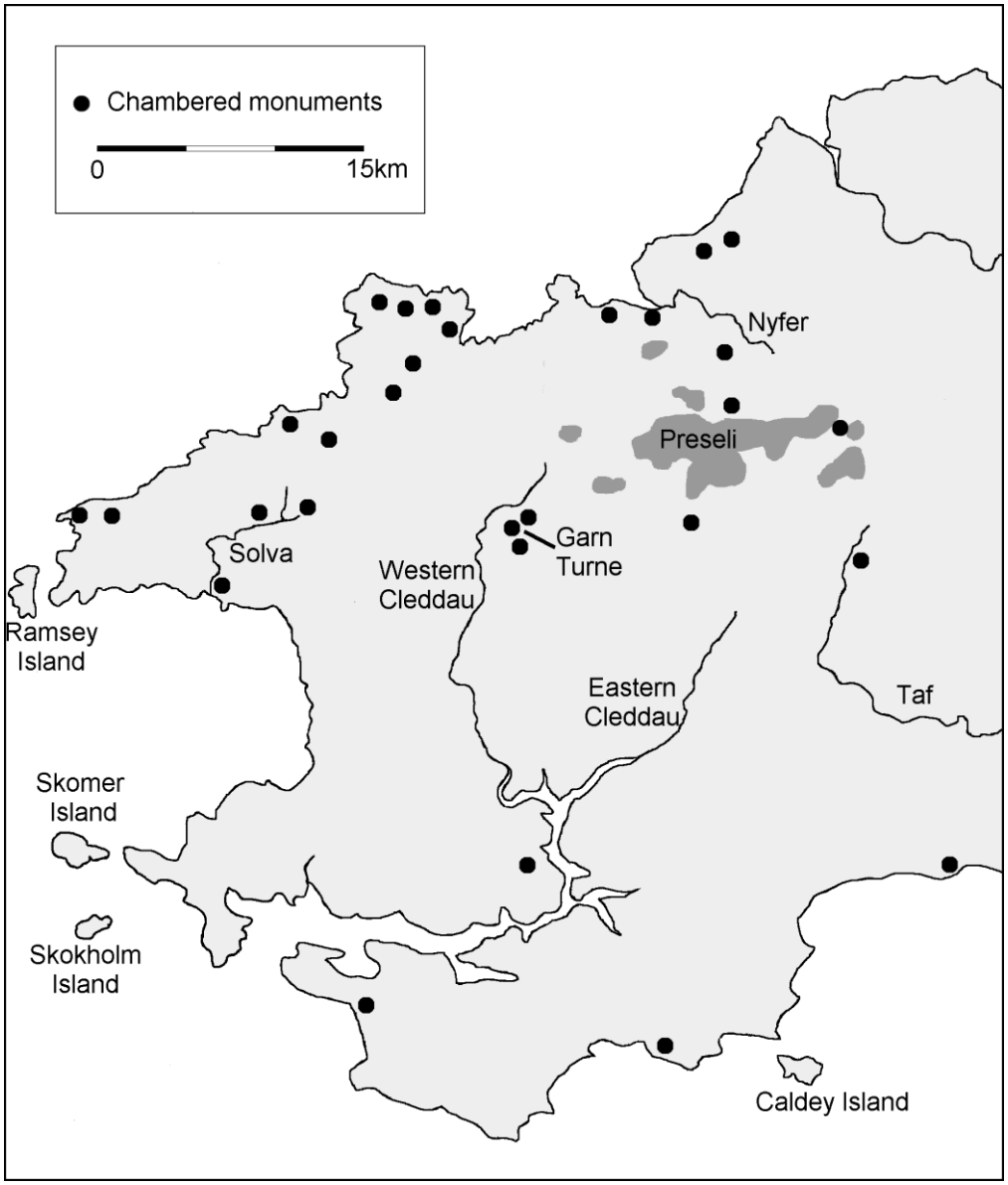


**Fig. 2.** The location of Garn Turne in south-west Wales, and in relation to other dolmen monuments in the region

## 2. Garn Turne excavation methodology

Garn Turne was chosen as our first site for investigation for a number of key reasons:

1. It was a monument that appears to have collapsed during construction. This means it offers excellent potential for exploring our aim of identifying construction processes, and we can investigate whether it was used in the same way that a successful construction would have been. Indeed, the collapsed nature of the site means that elements of construction may well be preserved *in situ*.
2. We identified a possible quarry site for the capstone, allowing us to further explore the source and extraction methods employed.
3. It has not been previously investigated, so any archaeological deposits should not be disturbed.

Prior to excavation a detailed measured survey using a total station was made of the monument and geophysical survey was conducted (Fig. 3).

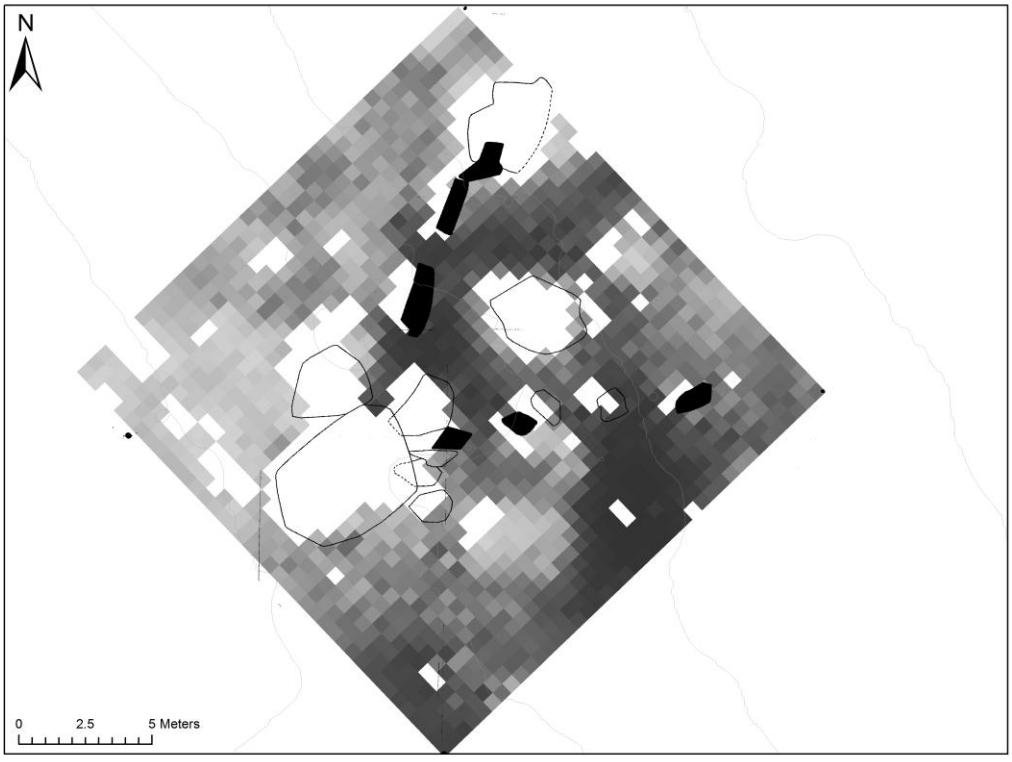


**Fig. 3.** Geophysical survey of Garn Turne conducted in June 2011 prior to excavation

We opened two trenches at Garn Turne. The first was in the forecourt area of the monument (Fig. 4), specifically in order to look for remnants of the construction process (site code

GT11). We also opened a second trench over the possible quarry site (site code GTQ11). All trenches were deturfed and excavated by hand. The deposits were recorded in plan and section. Find locations were recorded in three dimensions and by context using a total station. All archaeological deposits were dry sieved to recover finds. The recovery of samples for palaeobotanical analysis followed English Heritage guidelines (2002). Accordingly any sealed archaeological contexts that were excavated were sampled for flotation, as well as a random selection of other contexts.

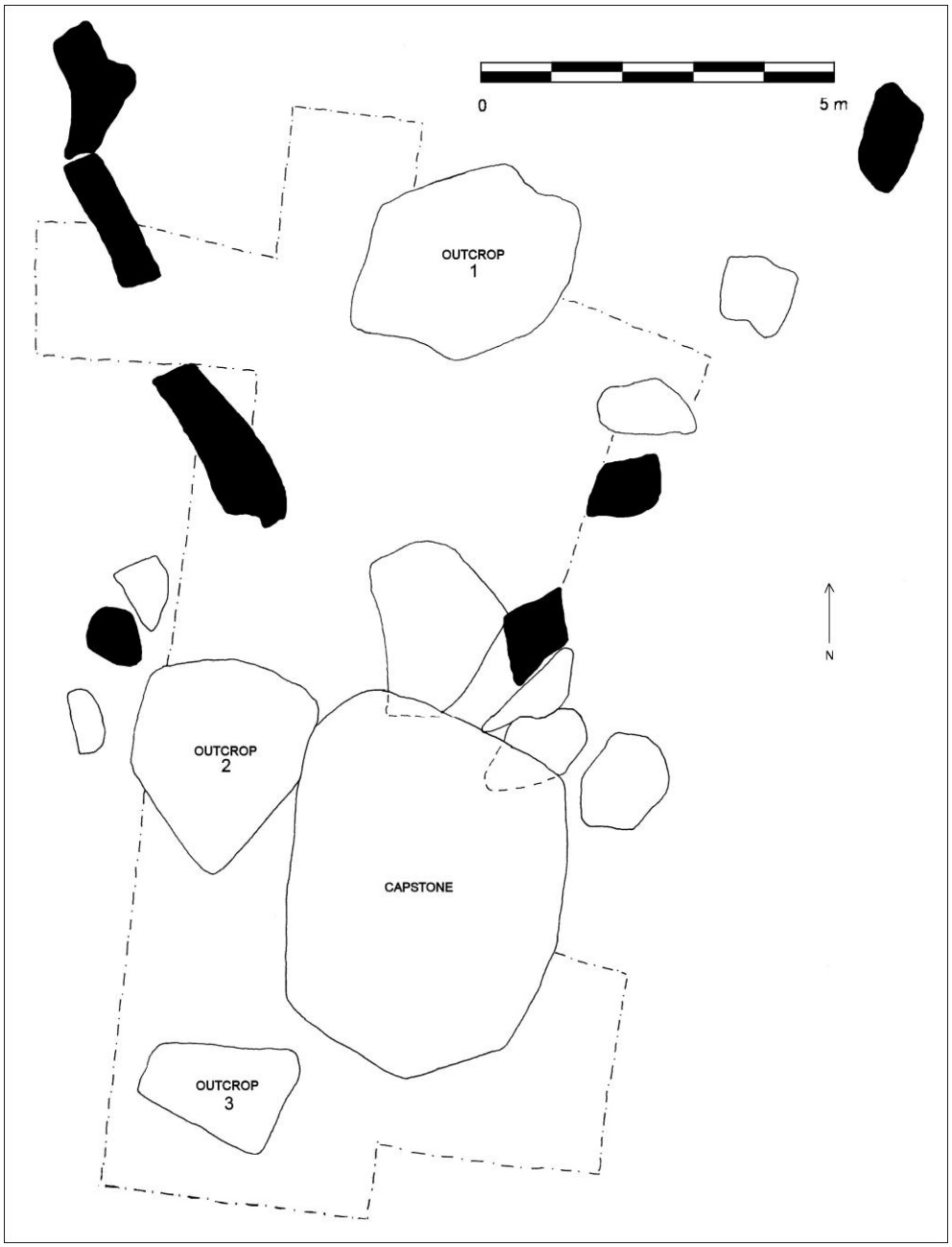


**Fig. 4.** The location of the main trench over the dolmen at Garn Turne

The documents and finds that result from the excavations – comprising photographs, drawn plans, written documents and artefacts – will be preserved and maintained as a record of the fieldwork. Digital data – photographs, geospatial data, CAD drawings etc. – will be prepared and archived in accordance with industry standards of good practice (Eiteljorg *et al*. 2003; Gillings and Wise 1998; Richards and Robinson 2000). The deposition of the archive will be prepared and undertaken in consultation with CADW and in accordance with current best practice (Archaeological Archives Forum 2007; Richards and Robinson 2000).

## 3. Context narratives

**Garn Turne (GT11)**

Many components of the monument were visible in this trench prior to excavation. These stones were given separate numbers, as detailed in Figure 5. This included the stones which make up a 'façade', some of which are still standing (stones 1, 2, 3, 5, 8 and 11) and some of which have fallen over (stones 4, 6, 7, 9 and 10) . These create a 'forecourt' area. There were also several slabs which appeared to be natural outcrops. Those within the forecourt were numbered ('outcrop 1' and 'outcrop 2'): these were subsequently given context numbers, (052) and (048) respectively. The forecourt was situated in a hollow, which was clearly visible prior to excavation.

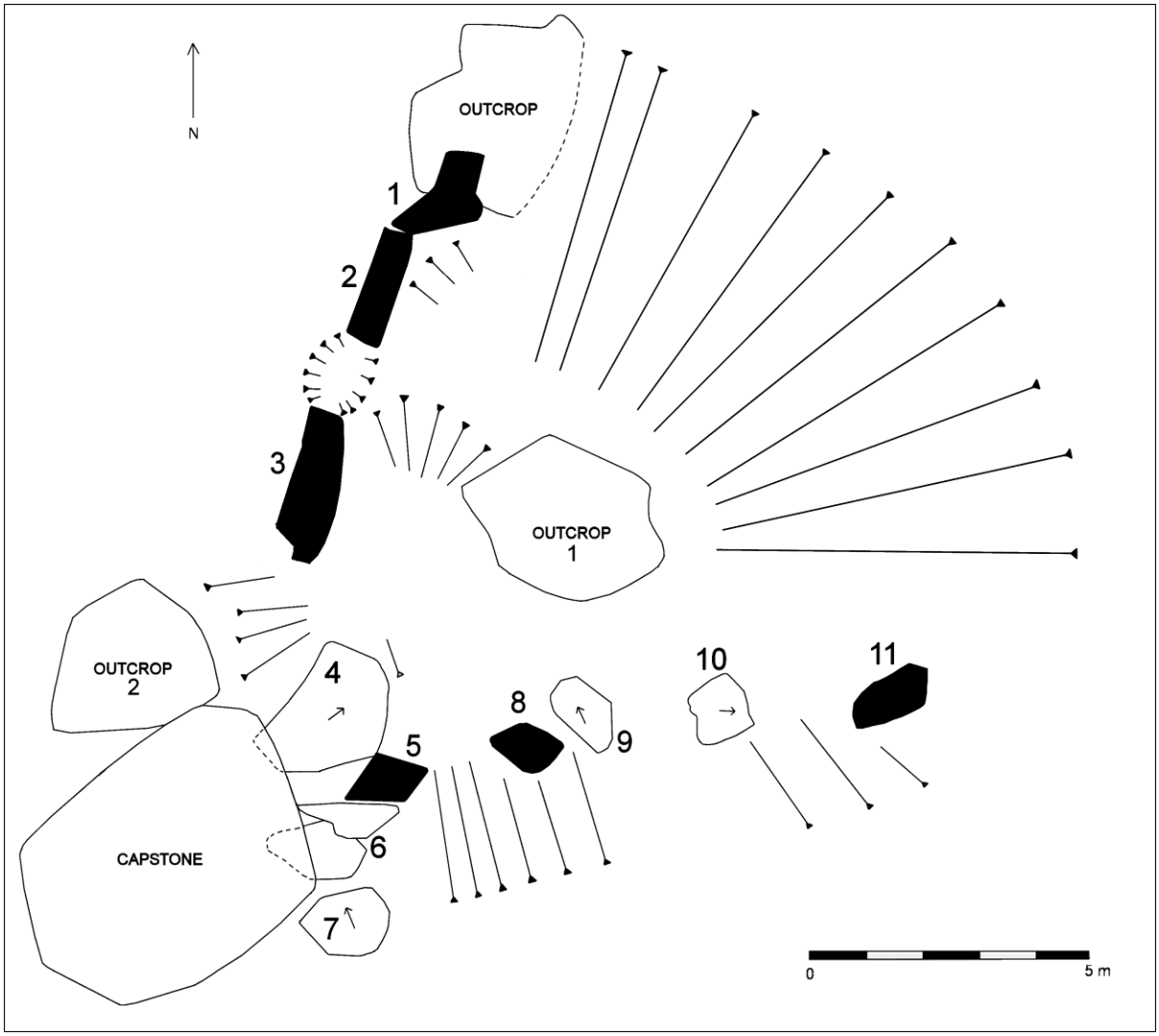


**Fig. 5.** The pre-ex plan of the dolmen prior to excavation also showing the numbering of the main stones of the monument, as used throughout this report

We stripped off the topsoil by hand (001) and this contained three modern finds (clay pipe and coins, including a pound coin from 1985: small finds numbers *3, 5, 7*) and three prehistoric finds (flints: small finds numbers *6, 231, 233*). Upon removing the topsoil (001) we came down onto a layer found across the entire trench (003). On the surface this context was very mixed, comprising patches of dry silty clay through to more compacted clay-silts. It was variable in thickness, with much thicker deposits found at the centre of the hollow and around stone 4. Although it was not immediately apparent, this was the upper fill of a very large pit (007). Indeed, this pit is so large that none of its edges were found in the trench. We postulate that this enormous pit was created as a result of digging out a large stone in order to create a capstone (see below). Thus all deposits excavated were essentially fills of this pit. 003 contained a small number of small finds (quartz: small finds numbers *54, 90, 93, 112,*

*114, 130, 173, 184, 203*), flints (small finds numbers *80, 94, 115, 162, 205*) and a single sherd of pottery (small find number *89*). There were also a large number of megalithic flakes: debitage from flaking the rhyolite stones which make up the monument. We collected 40 flakes of rhyolite as small finds, and the remainder were collected as bulk finds by area. Eight possible hammerstones were also recovered from 003.

Once we removed 003 we came down onto various contexts, divided into three sections by a baulk and outcrop 2. The west side of the trench (see Fig. 6) contained various contexts, primarily a grey silty clay found directly under 003 (028). This contained multiple fragments of flaked rhyolite as well as three flints (small finds numbers *293, 300, 353*). Within this was an arc of stones (032) which are probably the top section of a much more widespread context, which we did not reveal during this season's work. More stones (022) were found to the north of the trench which are probably the same layer. Where we removed 028, we came down onto a grey silty clay (031), also recorded as 040. Between stones 2 and 3 was a small cobbled area (013): this peeled off onto 028. Large packing stones were found around stones 2 and 3 (012 around stone 2 and 014 around stone 3), but neither of these stones were set in sockets. Instead they were set directly into the base of the large pit (007) and propped up in place. This has been noted at other dolmen such as Carreg Samson (Lynch 1975).

To the north-west of stone 4 was a dark brown silt (010) which appeared to be a fill of a smaller feature. We could not identify an edge to this fill, and it most likely a silting event and thus an upper fill of 007. Underneath it was a similar brown fill (026), again with no clear edge. This peeled off very cleanly onto 033, a brown-grey clay surface next to orthostat 4. This is a compact clay layer, possible a floor. Underneath this was a stone foundation (034), and under that a loamy clay base for the stones of 034 to sit in (035). Only the surface of these were exposed and were not excavated in 2011.

Directly to the south of orthostat 3 were a series of positive fills (dumps). The first, 017, was a dump of silty loam containing rhyolite flakes and a hammerstone. A small fragment of iron slag was also recovered from this context (spoil heap find). Directly beneath this to the south of orthostat 3 was another dump (029) containing a large number of rhyolite flakes. To the north of outcrop 2 (048), but still under 017, was another orange silty dump (039), not excavated. However, between 039 and the edge of 033, 034 and 035 were two large and broken stones. The largest of these (041) looks like the stump of a broken upright, with a

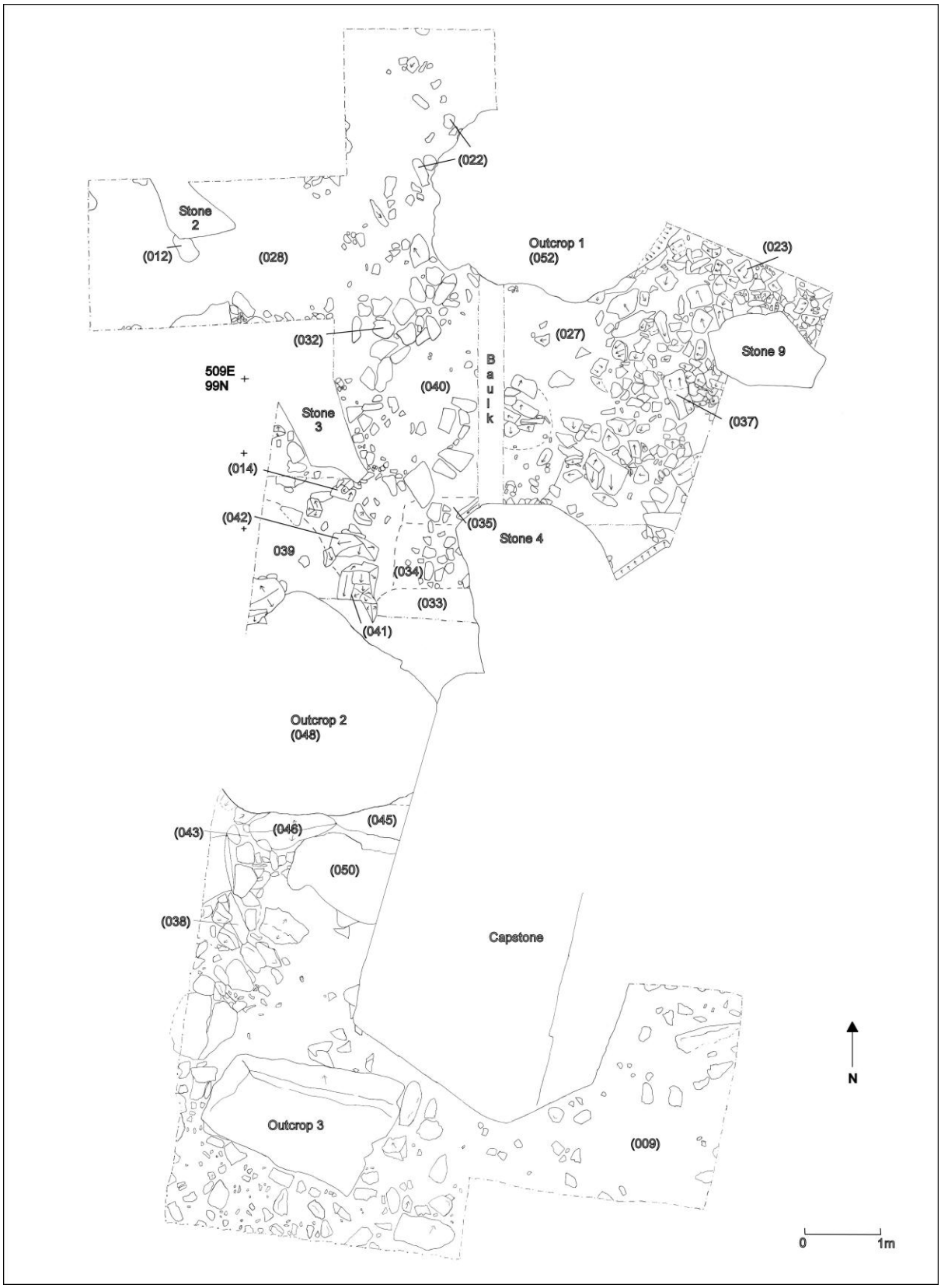


**Fig. 6.** Plan of the main trench at Garn Turne

single packing stone (042) left in place. This may relate to the other possible dolmen (see below) with outcrop 2 (048) being the capstone. This was not investigated further this season.

On the east side of the main trench the removal of 003 revealed two main contexts. An ashy silty clay (018) was found along the baulk, and this is likely to be the same as 031. This contained multiple flakes of rhyolite and a hammerstone. To the east was a brown silty clay (027). In discrete patches within 027 was a charcoal spread within a grainy silt (019). This had been subject to bioturbation (small mammal) and had been moved around in old burrows. Two spreads of stone were revealed, an arc of stone (037) probably the same as those found to the north of the trench (023) and both probably part of one single layer within the great pit (007).

**Fig. 7.** Aerial view of the trench looking site south

The southern part of the main trench lay to the western and southern side of the massive main capstone (051). Beside the capstone, immediately below its western edge, was a section of masonry (006). Once we removed 003 in this portion of the trench we came own onto a stony layer (011) found between outcrop 2 (048) and outcrop 3 to the south of the capstone. This layer of stones may well be part of 006 and when it was removed we came down onto much

larger stones (038). These are large slabs, and the largest, possible structural slabs, have been given separate context numbers (045, 046 and 050). These large stones may have been the remains of a smaller dolmen, with 048 being a capstone (Fig. 9). All are collapsed, with some stones lying underneath the main capstone (051). We exposed the upper fill surrounding these stones (043) but did not excavate any further this year. We also exposed in section beneath the main capstone what appeared to be a thick layer of redeposited natural (047) and a darker silty clay beneath this (049). Neither of these were excavated.

**Fig. 8.** Aerial view of the trench looking site north. The possible smaller and earlier dolmen is highlighted by the box

**Fig. 9.** Possible earlier dolmen, collapsed

**Garn Turne quarry site (GTQ11)**

Prior to excavation, detailed survey of the environs surrounding Garn Turne revealed a large hollow to the north of the monument: it was postulated this may have been the quarry site for the capstone (Fig. 10). As such we opened a 6 x 7m trench over the area, with a small 1m x 5m extension added later on. This was an area that had been heavily trampled by cattle, and we removed the 'topsoil' (002) which was actually a mixture of mud and manure, with numerous large boulders. This came down onto a smooth, quarried surface (004), and to the west and overlying the bedrock in places, a cobbled surface (005), bedded onto the glacial till (009). The small extension was added to find the extent of the cobbled surface. In two places we removed small portions of the cobbled surface (005) which went down onto compacted glacial till.

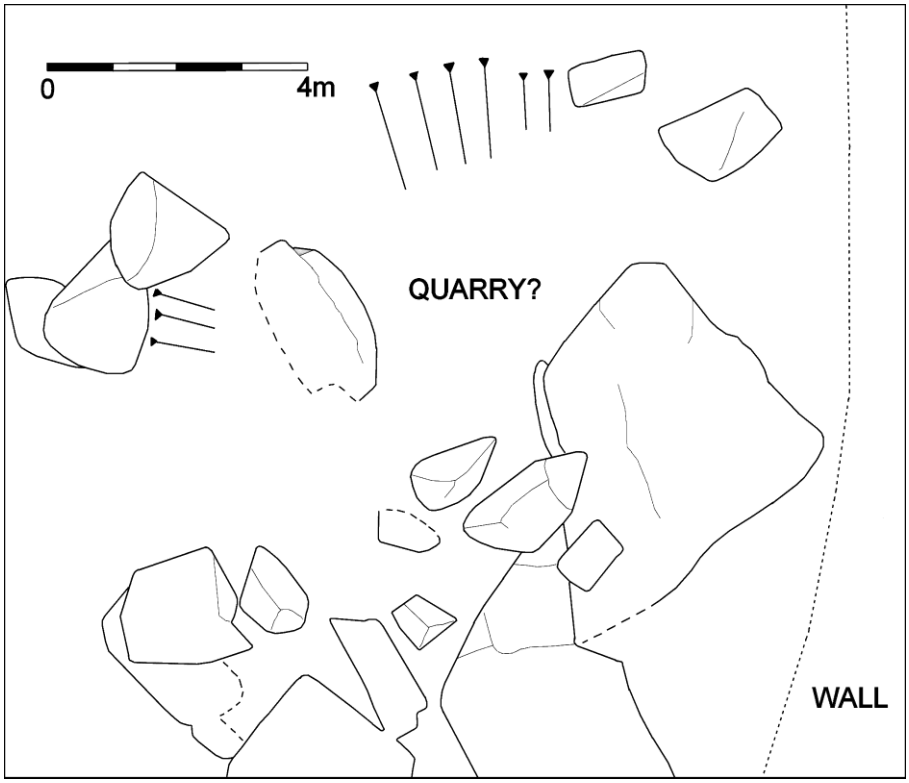


**Fig. 10.** Pre-excavation plan of the quarry site

The trench produced a very small number of finds: six large hammerstones (small finds numbers *9,10, 21,22, 23* and *24*), two pieces of flint (small finds numbers *12* and *19*) and one recorded modern find (clay pipe: *15*). Other very recent finds were not retained, and these included a minstrels packet and a woolly glove. We also observed a dynamite drill hole in the face of the rock at the northern end of the trench.

Our interpretation of this trench is that is represents the remains of a quarry site. The date of this is unknown and it may well date back to the Neolithic, as evidenced by the large hammerstones found on site. However, it is very unlikely to be the source of the capstone. The area that has been blasted by dynamite was almost certainly created in the 19$^{th}$ century in order to create a place for fresh water to accumulate for livestock. The cobbled surface may also have been laid down at that time.

**Fig. 11.** Post-excavation view of the quarry trench looking north, showing the quarried surface (004) and the cobbled surface (005)

**Interpretations**

The main trench at Garn Turne seems to be placed over an enormous pit. We suggest that this enormous pit was the result of people digging up an enormous stone, presumably the 80 ton rhyolite capstone. Once the stone had been extracted from the ground it was shaped and then raised up: uprights were placed underneath it in order to create a dolmen monument. These stones, and the stones of the façade, were simply dropped into place within the pit and then the entire pit was backfilled to stabilise these stones. The backfill contained large numbers of flaked rhyolite and hammerstones as well as charcoal deposits which can be radiocarbon dated. However, at some point during construction something went wrong. The result of this was that the large capstone and its supporters at the front of the monument toppled backwards. It appears that the monument was subsequently abandoned.

We are presently unclear about a number of issues:

1. The size and extent of the pit. It appears that our trench was located within the pit. A priority for next year is to ascertain the size of the pit.

2. The earlier dolmen. We have suggested above that there may have been a smaller and earlier dolmen at Garn Turne, which collapsed and survives in part under the main capstone. Where does this fit into the sequence? Was this a genuinely earlier construction, and if so, it is curious that it appears to be located within the large pit, which gives us an interesting sequence. Or was this an attempt to make a 'double dolmen', which are found elsewhere in Wales and also in Ireland (this is where the larger capstone sits on top of a smaller, pre-existing dolmen)?
3. The 'outcrop' in the façade: is this really an outcrop or a stone brought in to be part of the construction?

A final season at Garn Turne is thus proposed to finish the excavations and to answer these and our original research questions.