Excavations of 'The Cleaven Carraig', CV004-059, Burren, Co. Cavan

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Acknowledgements

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Short summary

Set amongst the karst landscape of the Burren, Co. Cavan, the 'Cleaven Carraig' (CV004-059) is a sandstone erratic which has been split into three pieces. This site was chosen for excavation as it appeared that at this site people had begun to fashion a stone to use as a portal tomb capstone, but had never finished building the monument. Prior to excavation the stone to the south (Stone A) was clearly propped up by two smaller stones at its southern end while the eastern part of the stone was earthfast. Two cupmarks had been added to the southern and higher end of this stone. The second part of the erratic, Stone B was level with the ground. A prop could be seen under the south-western edge of this stone, and a further five cupmarks were identified on the surface of the stone. A smaller fragment of Stone B lies to the north (Stone C).

The excavation trench measured 5m x 4m with a small extension to the east and was positioned to incorporate the majority of Stone A (003), the northern side of Stone B (004) and an area of limestone paving to the west. A series of later walls ran up to and incorporated the three large stones of Cleaven Carraig. Excavation revealed that Stone A was set over an elongated 'horseshoe' shaped pit [014] cut vertically into the limestone pavement. As surmised from pre-excavation observations, the north-east corner of Stone A had collapsed into this pit, and the supports either dislodged or broken. No material culture or human remains were found in the pit or surrounding Stone A. In contrast, there was no large cut pit beneath Stone B: instead a much shorter irregular cut [034] was visible on the southern and eastern side of Stone B, where it created the northern side of a limestone 'tongue' projecting between the eastern end of both stones A and B.

The Cleaven Carraig is clearly the remains of a stone which has been split into two main pieces. Possible flake scars on the edge of the stones indicate that this splitting was done by people as opposed to natural processes, and the cupmarks pecked into the surfaces of Stones A and B suggest that this took place either in, or prior to, the Bronze Age. The excavation revealed that a large elongated U-shaped pit had been cut into the limestone pavement beneath Stone A. The pit was completely devoid of any material culture or human remains, even though it could have functioned as a basic form of burial chamber. Since all other known forms of megalithic monument from the Neolithic and Bronze Age contain some form of deposit, the most likely interpretation for this site, therefore, is that it is not a monument *per se*, but it is the remains of a stone or stones which were designed to be made into a monument which was never completed. Indeed, the pit underneath Stone A would have been ideal for placing the stone onto a sled or

roller to be moved. Its location close to two other known portal tombs, and a wedge tomb is highly suggestive that this stone was being fashioned to make a capstone.

Introduction

Portal tombs in Ireland and portal dolmens in Britain, referred to collectively here as 'dolmens', are one of the best known, yet least understood, types of monument in Britain and Ireland (Kytmannow 2008). These monuments have seen very little modern excavation or investigation, and at those sites which have been excavated the excavator has explored the use of the site by focussing on the chamber (e.g. Lynch 2014). This means that we have only limited understanding of how these monuments were constructed, even though some monuments employ enormous stones, the moving and raising of which must have been extraordinary feats of engineering. In order to build these monuments people were quarrying, hauling and lifting stones that were up to 150 tonnes in weight. The 'Building the Great Dolmens' research project has therefore focussed on how people extracted and worked the stones of a dolmen prior to them being incorporated into a monument.

As part of this broader project, a small research excavation on CV004-059 on the Burren, Co. Cavan (from here on referred to as the Cleaven Carraig). This site was chosen for excavation as it appeared that here people had begun to fashion a stone to use as a dolmen capstone, but had never finished the monument. Instead, it survived as a 'construction site', potentially invaluable for investigating the kinds of technology involved in dolmen construction.

The Cleaven Carraig (CV004-059)

The Cleaven Carraig is located in a forestry plantation on the upland karst landscape of the Burren, Co. Cavan. It is surrounded on all sides by dense, mature coniferous forestry. The site sits in a landscape filled with megalithic monuments, glacial erratics, rock art panels, hut circles, enclosures and field walls. These have been systematically surveyed by Gaby Burns and Jim Nolan and are therefore not considered in any further detail here (for full details on these sites see Burns and Nolan forthcoming). Of particular significance to this project, two portal tombs are also found in the immediate vicinity. The Calf House (CV004-004) is located approximately 450 metres NNE of the Cleaven Carraig. This portal tomb comprises a number of uprights and a capstone which has slid from its original position. The capstone is enormous but the site's recent use as an animal shelter means it has seen substantial modification and its precise original form is difficult to ascertain. A second, smaller portal tomb is located roughly 200 metres SW of the Cleaven Carraig. Subsumed in dense vegetation, this portal tomb, known as Cairn Dolmen (CV004-001), appears to be intact and sitting within a cairn.

The site of Cleaven Carraig comprises three large stones. Prior to excavation the large stone to the south (from here on referred to as Stone A) was clearly propped up by two smaller stones at

its southern end. The eastern part of the stone was earthfast. Two cupmarks had been added to the southern and higher end of this stone. A second stone, Stone B, was positioned relatively level with the ground surface. A small prop-stone could be seen under the south-western edge of this stone, and a further five cupmarks were identified on the surface of the stone. A previous investigation had also highlighted that this stone had been flaked around its edges – perhaps as part of the splitting process (Kytmannow *et al*. 2008). A smaller stone (Stone C) was found to the north, which had come away from Stone B. Walls were visible running up to, and incorporating, these stones.

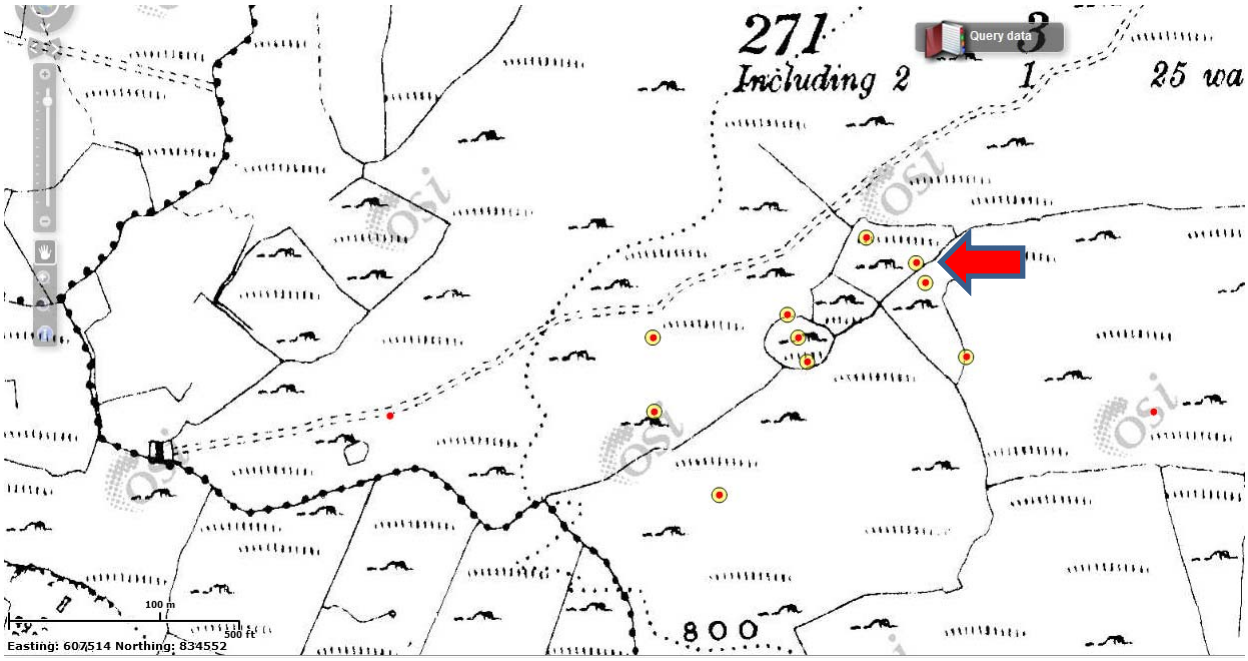

Figure 1. Location of the Cleaven Carraig on the historic Cassini 6" map. Note the field walls in the immediate vicinity of the site

Excavation methodology

The trench was de-turfed by hand and all contexts and features were excavated by trowel and hand shovel and were fully recorded. All contexts barring the topsoil which had a mass of modern roots were dry sieved on site. Cut features were sampled for wet sieving wherever possible (contamination from roots was a limiting factor in selecting suitable contexts for sampling). All finds were retained and recorded in three dimensions using a total station tied into ITM co-ordinates. The site was excavated down to undisturbed natural subsoil/bedrock. At the end of the excavation the site was returned to the condition it was found prior to excavation.

Figure 2. The site prior to excavation (looking east), with Stone A to the left of the picture, Stone B to the right

Context narrative

The excavation trench measured 5m x 4m and was positioned to incorporate the majority of Stone A (003), the northern side of Stone B (004) and an area of limestone paving to the west. It did not incorporate the broken tip of Stone B (named Stone C or 005) which lay further to the north. Before excavation commenced it was clear that whilst Stone B was relatively level, Stone A was angled down towards its north-east corner, which was buried beneath several blocks forming a later wall (013) running in an easterly direction. Indeed, Stone A had the appearance of being slumped into a depression on its east - particularly north-east - side. The angle of rest was accentuated by its south-west corner being propped up by two stones, piled one on top of another (lower (009) and upper (008)).

Excavation commenced by removing the topsoil which was a combination of decayed and compacted pine needles covering a dark brown loam (001). This material varied in depth between 5cm – 23cm and completely covered the trench area; tree roots also ran within and beneath the topsoil over the limestone bedrock. The removal of topsoil revealed the limestone pavement (007) which entered the trench at its highest point in the north and gently ran downslope to the west more sharply in the south, and had been partially cut-away to the east.

Projecting west and south-west from the propped Stone A, a spread of sandstone blocks (002) lay haphazardly on the limestone pavement. Given their close proximity to Stone A (the frequency dropped with distance away from the large stone), they may well relate to some form of blocking of the opening beneath Stone A or an adjunct to a the later wall (010 and 017) running c. N – S which incorporates Stones A, B and C in its construction. Larger sandstone blocks (011) had fallen and spread the wall in the south-eastern area of the trench. An additional boulder wall (013) ran in an easterly direction from Stone A. Beneath the topsoil and sandstone blocks, a lower soil horizon of light-brown silty loam (018) gave way to a fine gravel layer (006) had formed in patches over the limestone pavement and its removal revealed the grikes and karrens which formed a series of clints running SW – NW. An orange-yellow glacial till (019) filled the grikes and karrens.

Stone A

After removing the topsoil, Stone A was clearly seen to be elevated by the prop stones noted above over an elongated 'horseshoe' shaped pit [014] cut vertically into the limestone pavement. As surmised from pre-excavation observations, the north-east corner of Stone A had indeed collapsed into the pit [014], the northern side of which ran the entire length of the stone and was clearly defined. In the narrow strip between Stones A and B, where the cut limestone projected like a tongue to the east, a fill of loose stone rubble (015) had collected up against the cut edge of the limestone pavement, probably as a component of the eastern stone wall (013). Once this rubble was removed the irregular line of the cut [014] was clearly visible running roughly parallel with the northern face of Stone A at a distance of c. 0.10m – 0.15m.

Excavation at the eastern end of Stone A was restricted due to the conjoining boulder stone wall (013). Removal of a number of stone slabs, including a large boulder, revealed the broken south-east corner of Stone A. This corner had clearly been fractured and it slipped off its stone support (a large 'flake' had also been removed from its upper surface). Identifying the collapsed support stone proved problematic due to the later activity in this area represented by the construction of the adjoining boulder wall (013). For example, a sub-rectangular stone (031), in a vertical position was wedged against the broken outer surface of Stone A, and at first glance it appeared a likely candidate for the original displaced support stone. However, it was wedged in place to the east by a large boulder of wall (013). For stone 031 to be wedged in place as was uncovered by excavation would require wall 013 to be present when Stone A collapsed (and indeed this may be the case and the building of the boulder wall (013) may have precipitated the collapse of Stone A). As a caveat to this interpretation it should be noted that the missing 'flake' from the north-east corner of Stone A was not discovered in the excavated area demonstrating a degree

of stone movement/removal/ disturbance since the time of collapse. Equally, a rectangular/angular shaped stone (031) was uncovered trapped beneath the east end of Stone A, which may be the original support (see below and Figure 4).

Figure 3. Multi-context plan of the site after removal of the topsoil (001)

Overall it is clear that Stone A had been raised into an elevated position over an elongated 'U' shaped pit. The south-west corner of Stone A was elevated to a height of c. 0.65m above the limestone paving by the two stone supports placed one upon the other (lower (009) and upper (008)). Another small sandstone block (033) had originally supported the north-west corner of Stone A, but due to a tilting of the stone caused through the collapse of its north-east corner into the pit [014], there was a gap of c. 0.04m between its upper point and the lower surface of Stone A. The collapse of the north-east corner of Stone A served to shift its angle of rest, exaggerating the apparent height of the south-west corner. Indeed, given the convex shape of its underside (original outer surface of the split boulder), such height was necessary to elevate it above the base of the pit. This tilting may have dislodged a further stone support, as an atypical angular

stone (030) was located lying horizontally beneath the stone in the southern area. Interestingly, a similar shaped stone (031) was present trapped beneath Stone A near the collapsed north-east corner, which may be the collapsed south-east supporting stone, as opposed to stone (031) described above.

Figure 4. Possible collapsed support stone (031) under the eastern tip of Stone A. Broken support stone (016) for Stone B is visible in the background.

Excavation of pit [014] was restricted to the western fill. A layer of limestone slabs (028) provided a fairly level upper surface to the pit cavity, beneath which was a layer of dark-brown silty loam (026) of variable thickness (c. 0.08m – 0.24m). Below (026), the basal fill of pit [014] was a mid-brown silty loam (027) which varied in thickness between c. 0.06m – 0.18m according to the undulating limestone base of the cut. The limestone base of the pit contained a grike running parallel to its northern edge which was filled with glacial till (019).

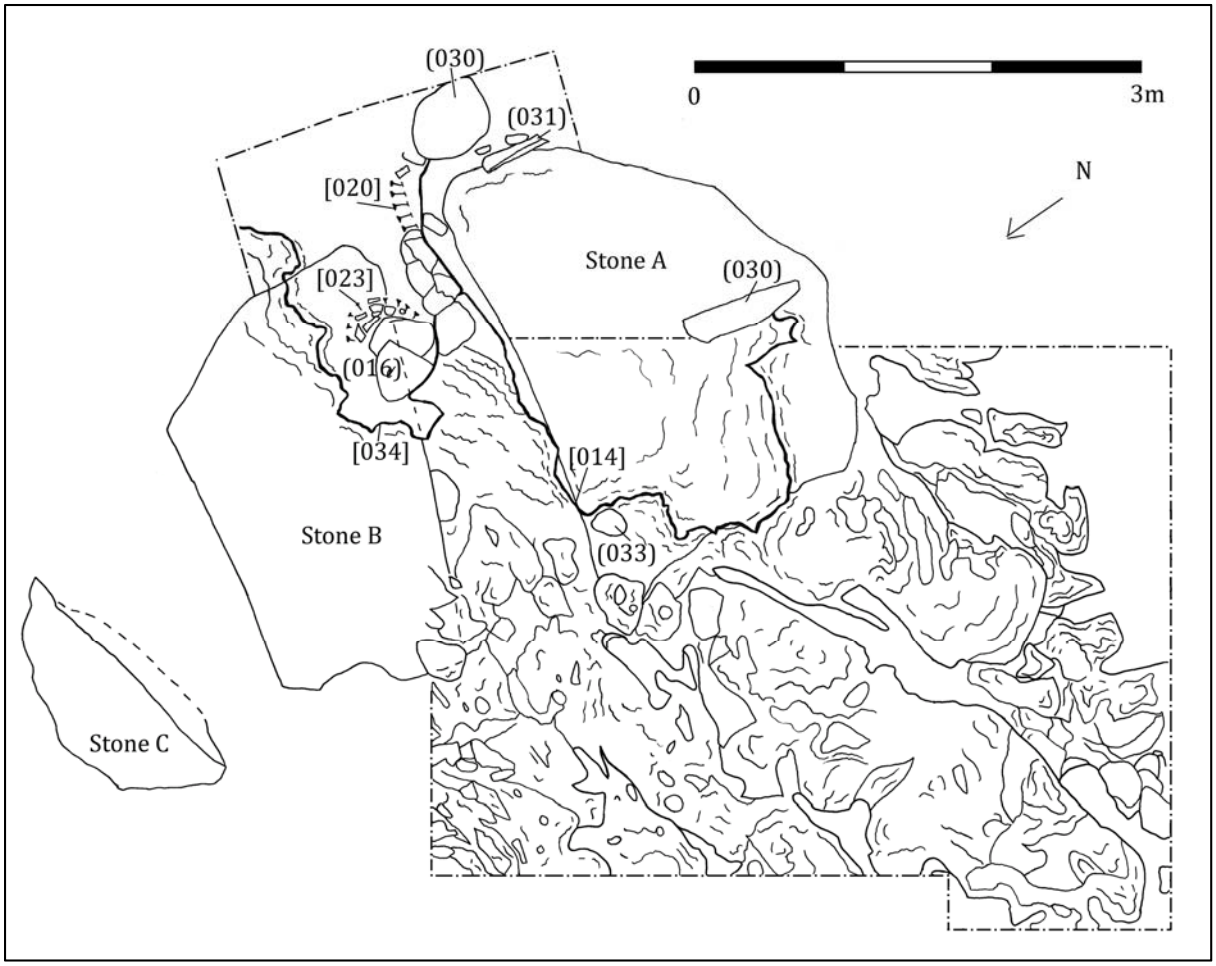

Figure 5. Post-excavation plan of the trench

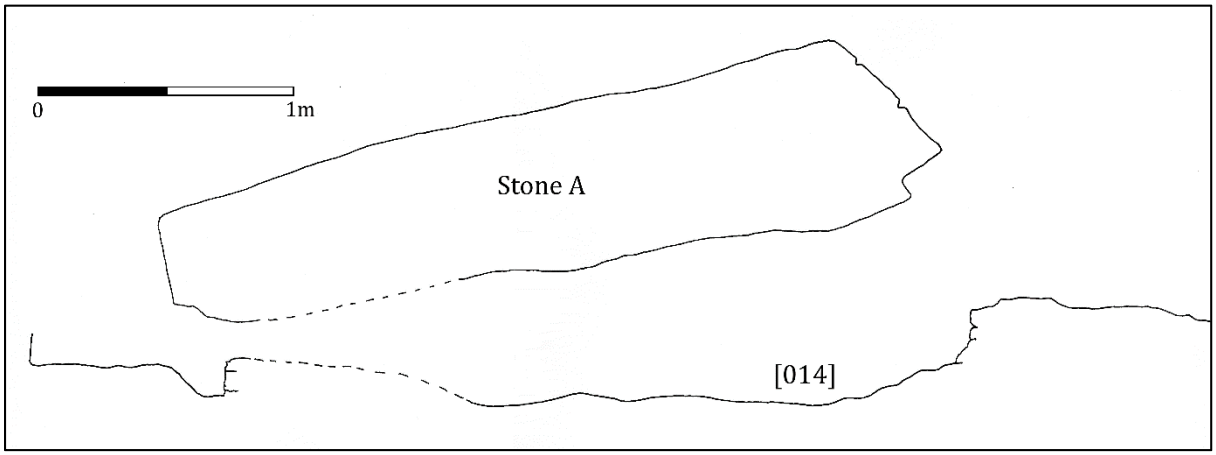

Figure 6. East-west profile through Stone A and pit [014]

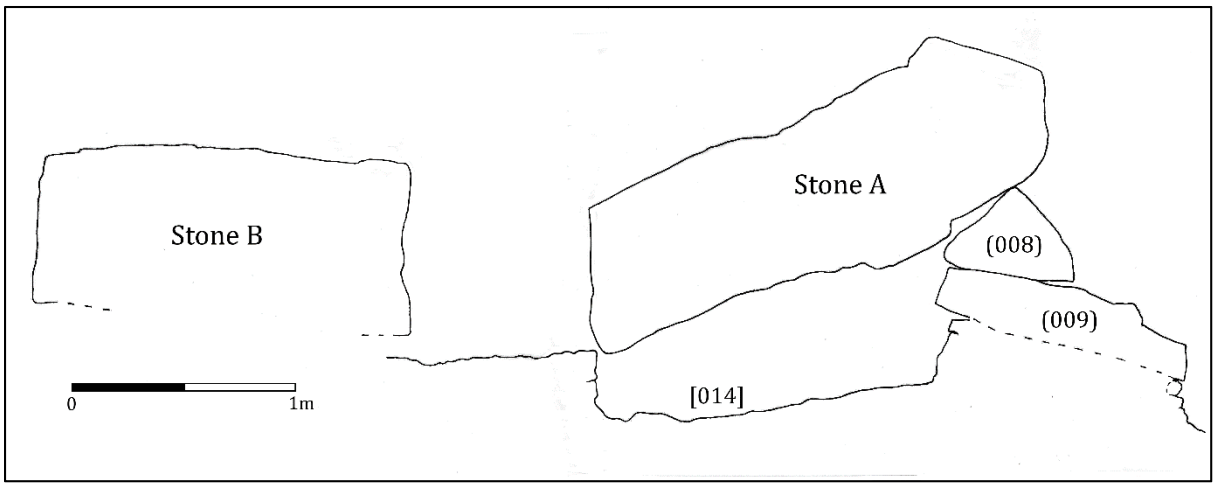

Figure 7. North-south profile through Stone A and B and pit [014]

Figure 8. The pit [014] under Stone A, with the two prop stones (008 and 009) to the right

Overall, it is clear that Stone A had been laid on stone supports over an elongated 'U' shaped pit, running its entire length, cut sharply into the limestone pavement. The two pit fills (026 and 027) represent soil washed into the cut subsequent to the positioning of Stone A elevated above it. The limestone slabs (028) covering the fills would appear to be a purposeful act of sealing or levelling at a later time.

Stone B

The treatment afforded Stone B bore both similarities and differences to that of Stone A. For example, no elongated cut pit was present beneath Stone B. On excavation a much shorter irregular cut [034] was visible on the southern side of Stone B, where it created the northern side of the limestone 'tongue' projecting between the eastern end of both stones A and B. This showed that whilst beneath Stone A, a substantial pit ran its entire length, the pit beneath stone B was much smaller and restricted to its eastern end. Wedged against the northern limestone face of cut [034] was two pieces of a broken sandstone boulder (016) that had originally supported (and still did at a lower level) the south-east corner of Stone B. This support stone had been carefully set in a shallow socket [023] c. 0.12m deep and packed with several small stones (032). A corresponding stone (035) lay 0.32m north which provided support for the north-east corner of Stone B. Together these stones would have held and levelled the east end of Stone B. Since the western end of the stone was not investigated by excavation it is unclear whether this was originally elevated by supporting stones. Running laterally across Stone B at a distance of c. 2.05m from its eastern end was a line of limestone paving, preserved to the highest level observed in the trench. Although practically difficult to assess due to restricted space, Stone B appeared to be resting on this surface. Even if there had been a small degree of clearance above the limestone pavement Stone B was not positioned over an elongated pit nor would it potentially be raised any distance above ground by stone supports.

Discussion

The Cleaven Carraig is clearly the remains of a stone which has been split into two main pieces. The flakes on the edge of the stones indicate that this splitting was done by people as opposed to natural processes, and the cupmarks pecked into the surfaces of Stones A and B suggest that this took place either in, or prior to, the Bronze Age. One stone (Stone A) is propped up at its SW end by two support stones, but it is presently earth-fast on its NE tip. The excavation has revealed that a supporting stone, or several supporting stones, have slid out of place at the NE tip. Clearly, the stone was originally supported at this point, and perhaps at other points along its edge. The excavation has also revealed a large U-shaped pit under Stone A which was cut into the limestone pavement and which lies directly underneath Stone A. The pit was completely devoid of any material culture or human remains, even though it could have functioned as a basic form of burial chamber. Since all other known forms of megalithic monument from the Neolithic and Bronze Age contain some form of deposit (covering the full spectrum from cists to chambered tombs), the most likely interpretation for this site, therefore, is that it is not a monument *per se*, but it is the remains of a stone or stones which were designed to be made into

a monument which was never completed. Indeed, the pit underneath Stone A would have been ideal for placing the stone onto a sled or roller to be moved. Moreover, the elongated pit at Cleaven Carraig is very reminiscent of the position of a collapsed monolith overlying a pit at the Neolithic quarry site of Vestra Fiold, Orkney (Richards 2013). The favoured interpretation of the Cleaven Carraig is that this was a stone being shaped and raised for manoeuvre which was abandoned before being moved.

It seems most likely that this was a stone which was designed to form the capstone of a dolmen (portal tomb). The size and shape of the stone is in-keeping with the capstones of other monuments nearby, although the Calf House dolmen employs a larger, thinner stone. The location of two portal tombs to the NNE and SW also supports this idea as there are a number of examples of dolmens occurring in clusters of twos and threes in both Britain and Ireland (e.g. Carn Wen, Pembrokeshire and Ballyvenaught, Co. Antrim), and in one exceptional example, in a line of six (Malin Mhor, Co. Donegal). If we are able to obtain a date from this site (from short-lived material acquired through flotation) we would be better able to support this argument if the dates were contemporary.

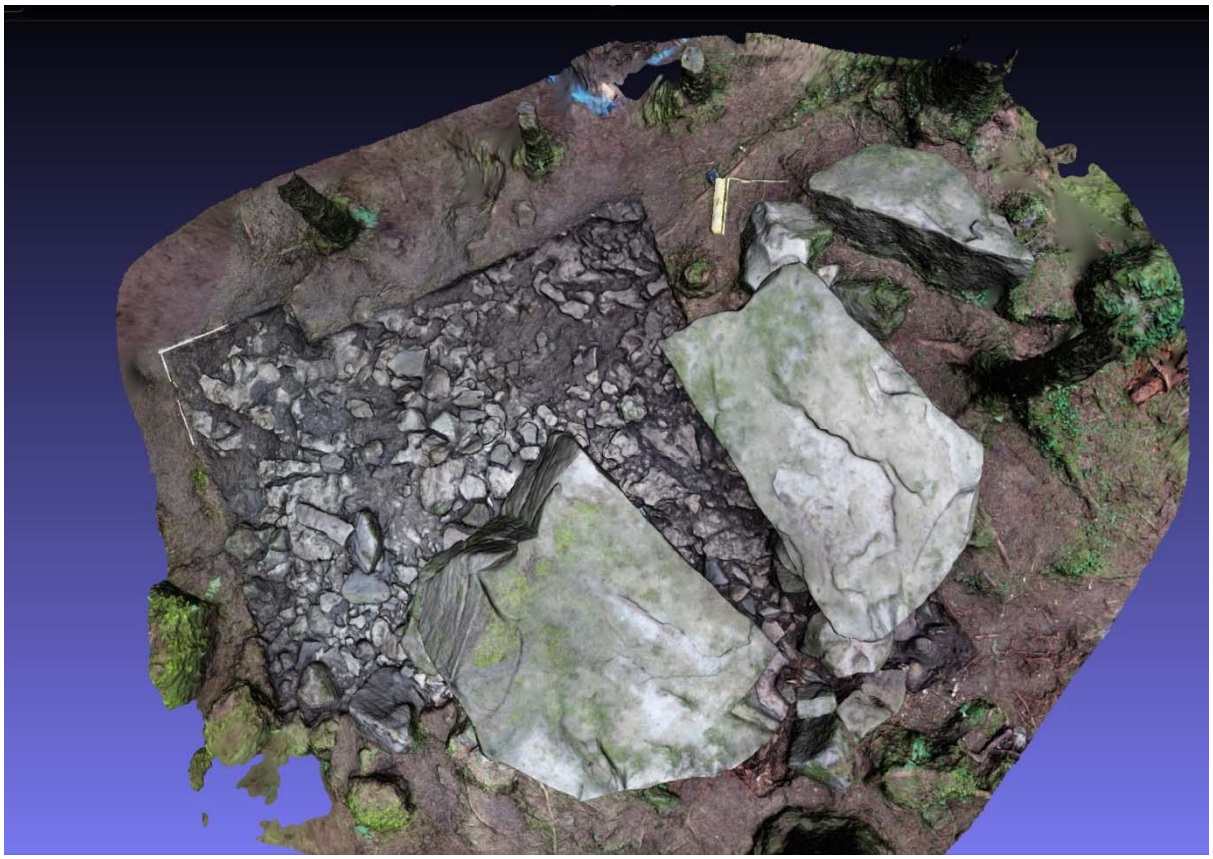

Figure 9. Photogrammetry of site after topsoil removed (image courtesy of Gaby Burns)

The question which we may never fully answer was why this project was abandoned. It is possible that the collapse of the NE tip of Stone A was considered catastrophic enough to abandon the entire project. Certainly its collapse in this location would have made it much harder to insert a sled or rollers here, although presumably this was not insurmountable. Stone B had also fractured at some point, resulting in a smaller piece coming away from the main part of the stone (Stone C). Perhaps a combination of these two events persuaded the builders that this was an inauspicious project which was better abandoned than pursued.

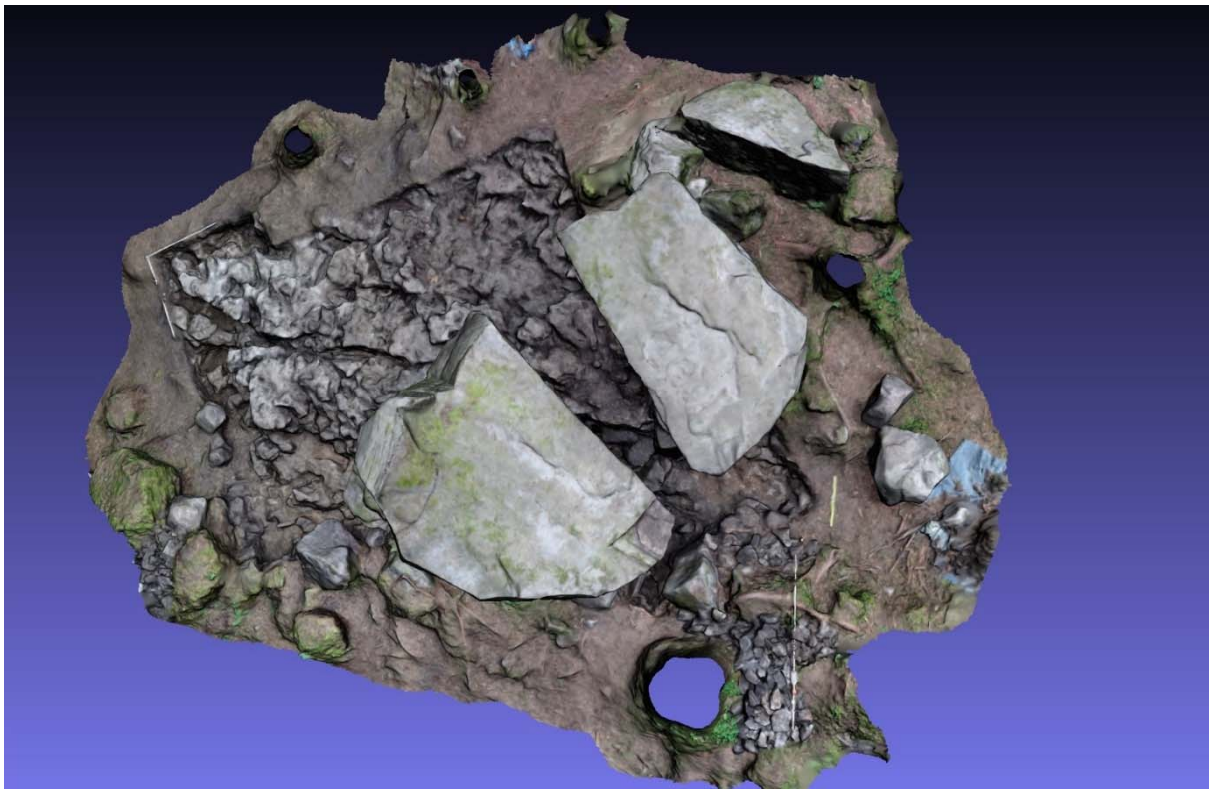

Figure 10. Photogrammetry of site post-excavation (image courtesy of Gaby Burns)

Report on the lithics

A total of 12 pieces of flint were recovered from the site, all within the topsoil and all from a small area between stones A and B. All pieces are debitage: five are angular shatter, six are small chips and one is a flake. The flint is grey or patinated, and four pieces have secondary cortex. The cortex indicates a terrestrial source, as opposed to beach-derived flint, so may have originated from Antrim. The flake has a bipolar termination perhaps indicative of how this material was worked. Such a small assemblage is probably the remains of a single knapping event – perhaps the sharpening of a flint tool here.

A hammerstone was also recovered from the site. This stone has clear evidence for being used along its sides as there are indentations in this area.

References

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REGISTERS

1. Context register

Context no	Description
001	Topsoil
002	Small wall running east-west west side of trench
003	Stone A
004	Stone B
005	Stone C
006	Gravelly layer of degraded limestone and chert
007	Natural limestone paving
008	Smaller prop stone under stone A
009	Larger prop stone under stone A
010	Large wall running south of stone A
011	Tumble off wall 010
012	Small patch of peat found in south of trench
013	Wall to east of stones A and B
014	Cut into limestone paving under A and B
015	Sandstone boulders sitting in [014]
016	Broken prop stone for stone B
017	Boulder wall outside trench to the NE
018	Soil found in patches under 001
019	Glacial till
020	Cut for prop at east end of stone A
021	Fill of [020]
022	Possible cut into limestone paving between A and B
023	Cut for prop 016
024	Fill of [023]
025	Cut placed centrally beneath stone A
026	Upper fill of [025]
027	Lower fill of [025]
028	Flat slabs found on surface under stone A
029	Fill immediately beneath stone B
030	Possible collapsed prop stone under A
031	Original prop for stone A NE side
032	Packing stones for 016
033	Small sandstone block – support for A?
034	Cut into limestone under stone B
035	Stone support under Stone B NE side

2. Photographic register

Photo no	Date	Description	Direction
1	02-Aug	Pre-excavation	NE
2	02-Aug	Pre-excavation	W
3	10-Aug	001 removed multi-context	W
4	10-Aug	001 removed multi-context	N
5	10-Aug	013 wall to E of trench	E
6	11-Aug	[014] cut in limestone	SW
7	11-Aug	Area to east of A and B	E
8	11-Aug	Area to east of A and B	S
9	11-Aug	Area to east of A and B	W
10	11-Aug	Possible cut [022] in limestone	Vertical
11	12-Aug	[020] and (021) *in situ*	S
12	12-Aug	[020] and (021) *in situ*	W
13	13-Aug	[025] in section	E
14	14-Aug	Post-ex general	N
15	14-Aug	Post-ex [014] cut in limestone	E
16	14-Aug	Post-ex [014] close up	E
17	14-Aug	Post-ex props 008 and 009	N
18	14-Aug	Post-ex [014] cut in limestone	W
19	14-Aug	Post-ex (016) broken prop	S
20	14-Aug	Post-ex (030) possible prop	NE
21	14-Aug	Post-ex stone A	S

3. Finds register

Number	Context	Object	Easting	Northing	Height
1	001	Flint	607344.098	834682.425	251.258
2	001	Flint	607344.225	834682.716	251.249
3	001	Flint	607344.225	834682.716	251.249
4	001	Flint	607343.813	834682.622	251.266
5	001	Flint x3	607344.238	834682.909	251.257
6	001	Flint	607344.225	834682.716	251.249
7	001	Flint	607344.078	834683.066	251.246
8	001	Flint	607344.103	834683.279	251.241
9	001	Flint x2	607343.997	834682.957	251.225
10	001	Animal tooth	607343.084	834680.405	250.939
11	006	Hammerstone	607342.379	834680.855	250.734
12	006	Retouched chert	607342.148	834680.71	250.759
13	006	Animal tooth	607341.607	834680.673	250.688
14	026	Animal bone	Sieve find	Under stone A	

4. Drawing register

Number	Description	Scale	Date
1	Multi-context plan removal 001	1:20	07-Aug
2	As above to east of trench plus stones A, B and C	1:20	07-Aug
3	Overlay plan indicating location of 006 gravel	1:20	07-Aug
4	Cut [014] into limestone paving plan	1:20	11-Aug
5	Overlay plan showing 011 after removal 006	1:20	12-Aug
6	[020] and (021) overlay plan by stone A	1:20	12-Aug
7	Plan [014] full extent under stones A and B	1:20	14-Aug
8	Bedrock in west side of trench plan	1:20	17-Aug
9	East-west profile through A and [014]	1:10	19-Aug
10	North-south profile through A, B and [014]	1:10	19-Aug

5. Samples register

Sample no	Context	Description	Purpose	Date
1	021	Fill of [020] W end	Flotation	11-Aug
2	021	Fill of [020] E end	Flotation	12-Aug
3	026	Fill of [025] mixed	Flotation	13-Aug
4	026	Fill of [025] by (027)	Flotation	13-Aug