

# **Orthostat, The Mound of the Hostages**

by Sean Keir Moriarty

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## Foreword

Stretching back in time to the arrival of the Celts during the Early Iron Age, the Hill of Tara has been the spiritual heart of Ireland, yet little is known about the site, other than what has been gleaned from the ancient manuscripts, which tell us nothing about how it looked during the Neolithic and Bronze Ages. Although the excavations in the 1950's of Ráith na Senad and Duma na nGiall; the Mound of the Hostages, by Professor Sean P. O'Riordain and Professor Ruaidhri de Valera have given us a glimpse into that period of history, they merely scratched the surface. It is therefore the purpose of this paper to examine an 'historical record' that has been overlooked ever since its discovery nearly sixty years ago... one that is quite literally carved in stone.

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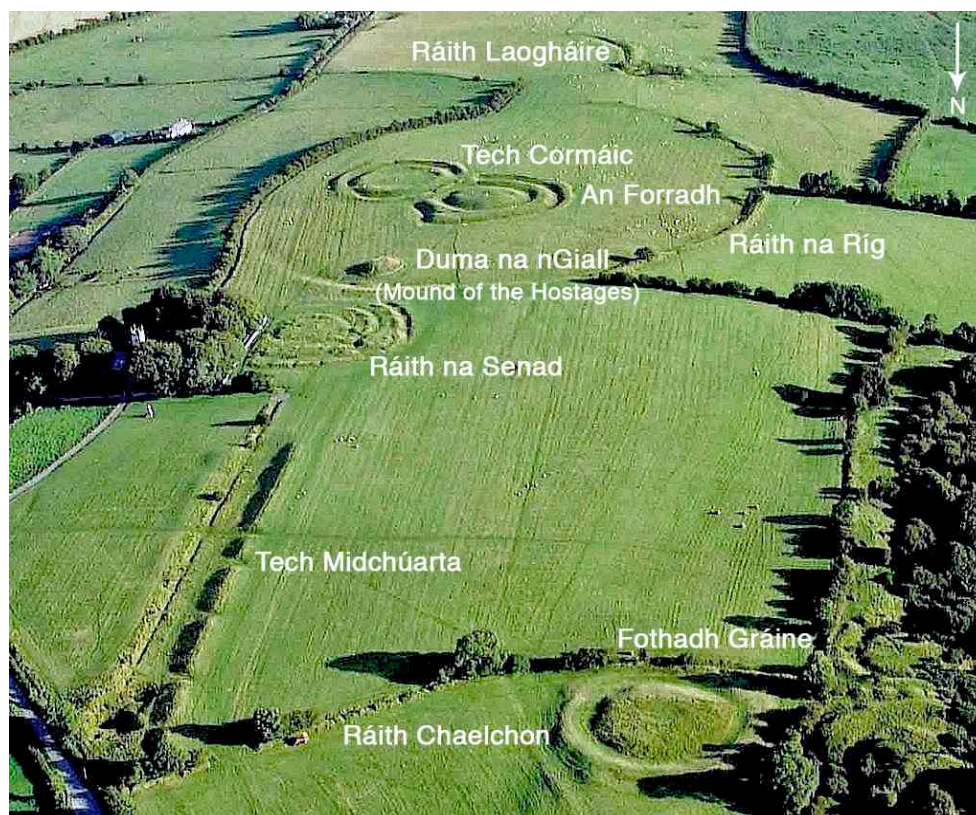
# Orthostat, The Mound of the Hostages

(Hill of Tara, County Meath, Ireland)

## Introduction

So-called theories abound as to the meaning of the rock art found on standing stones, orthostats and kerbstones in Ireland and Britain, yet no one has been able to ‘decipher’ an entire panel by applying those ‘theories’. One reason for that, is each symbol has been interpreted individually and assigned one definition, ignoring the fact that the symbols are likely to have multiple meanings depending on their context. More often than not, they’ve been regarded as being abstract or entoptic visions by shamans of form constants, i.e., non-representational. However, as the following evidence demonstrates, they in many instances depict man-made earthen/stone structures.

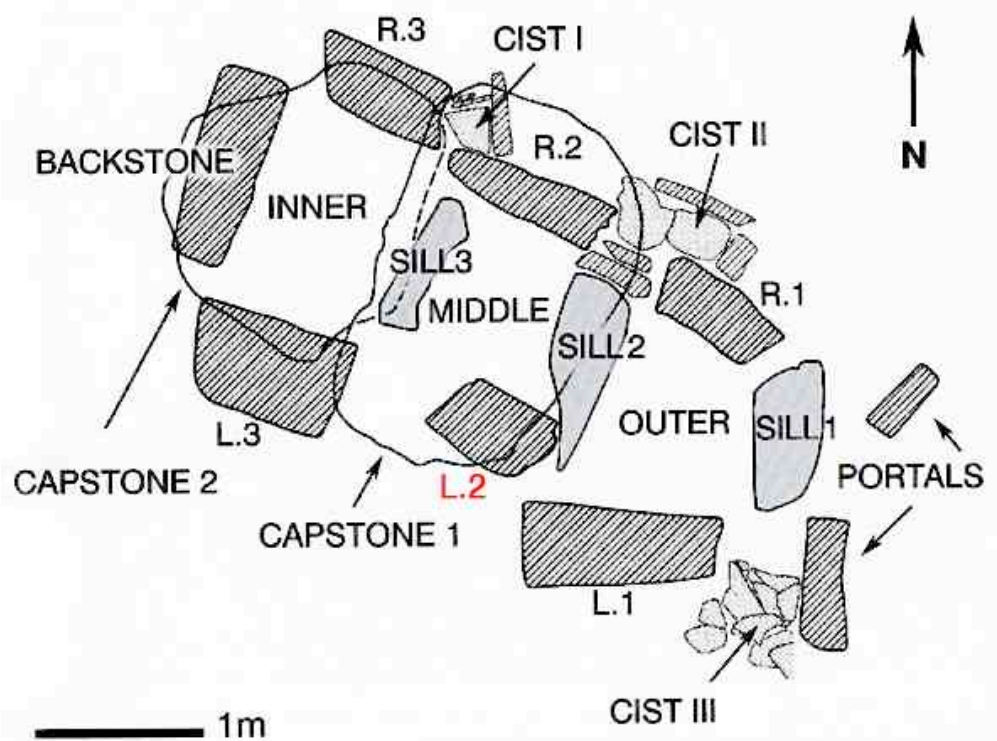
In the case of the symbols on Orthostat L.2 within the passage mound Duma na nGiall; the Mound of the Hostages, the panel depicts a map of the Hill of Tara as it existed during the late Neolithic Age, nearly 3,000 years prior to the monuments receiving the names they now bear.



**Aerial of Tara**



The Mound of the Hostages



Drawing by Ursula Mattenberger from the book 'Duma na nGiall, Tara, The Mound of the Hostages' by Dr. Muiris O'Sullivan

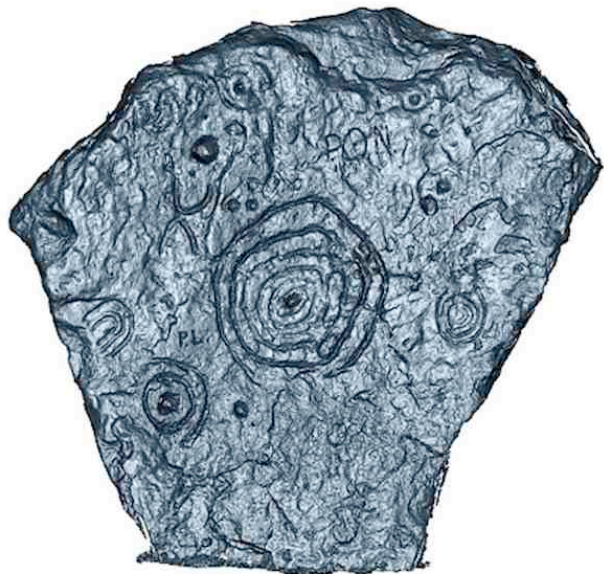
Plan of the Mound of the Hostages



Orthostat L.2

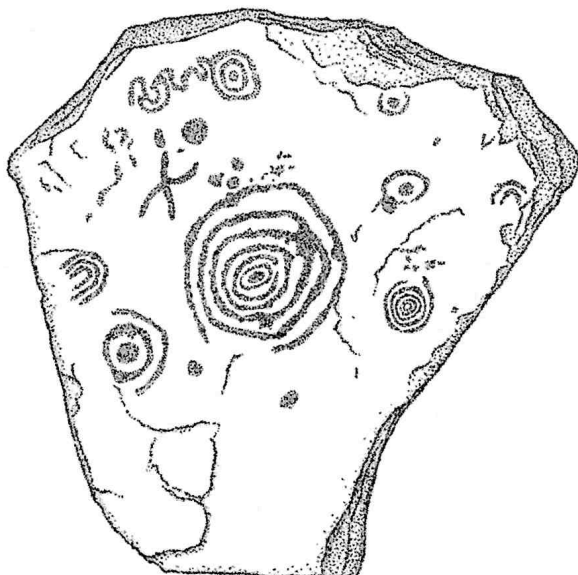


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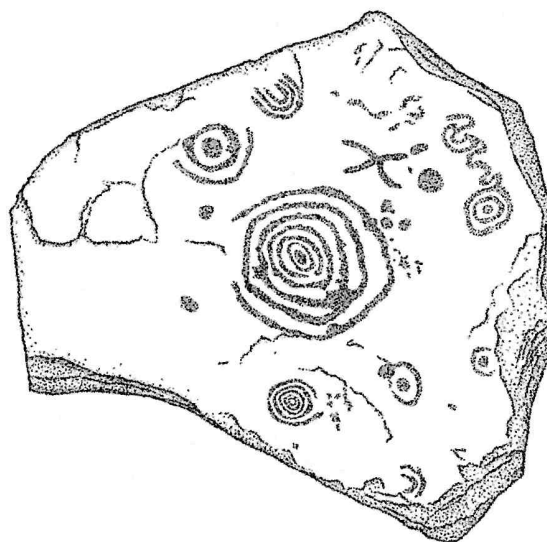
© The Discovery Programme

Laser images of Orthostat L.2



Drawing by Joe Fenwick from the book  
'Tara, An Archaeological Survey'  
by Dr. Conor Newman

**Drawing of Orthostat L.2**



Drawing by Joe Fenwick from the book  
'Tara, An Archaeological Survey'  
by Dr. Conor Newman

**Drawing of Orthostat L.2  
(Rotated)**

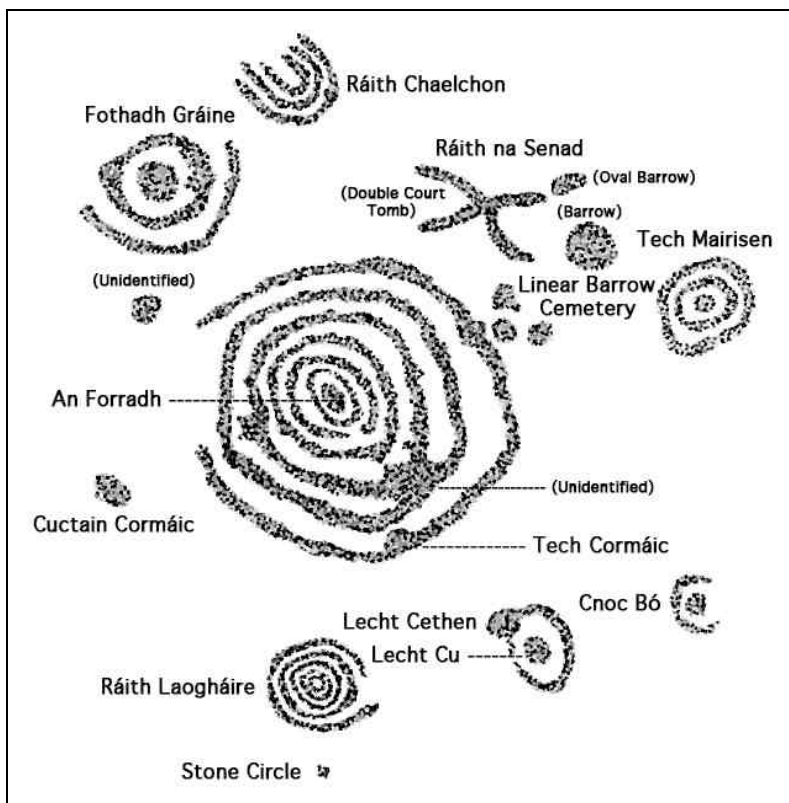
When the drawing of the orthostat is rotated roughly 80 degrees clockwise, the symbols match twelve (12) of the monuments with respect to location, orientation and scale.

Ráith na Senad	An Forradh	Tech Cormáic	Ráith Chaelchon
Fothadh Gráine	Tech Mairisen	Ráith Laogháire	Cuctain Cormáic
Cnoc Bó	Lecht Cu	Lecht Cethen	Stone Circle

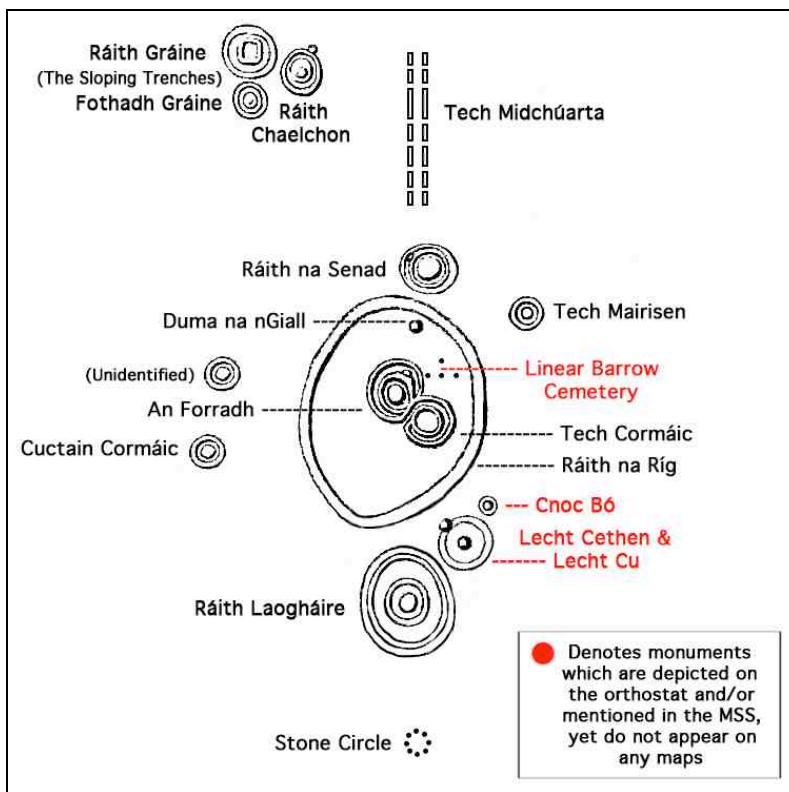
With regards to the drawing, there are several nondescript features which, upon close examination of the orthostat photos, appear to be naturally occurring flaws in the stone, and have therefore been deleted from the rotated drawing. Carving the symbols into the stone, i.e., cups/mounds & rings/ramparts, rather than as reliefs, would have been far less time consuming and made it possible to add symbols as the site evolved. (Note: interpretation of the images is solely the work of this author.)

The location of the monuments depicted on the orthostat vary slightly from the maps, which is due to one or both of the following:

- A)** The surface area on which to carve the monuments was limited.
- B)** The carvings were done over a significant period of time, by various artists. The use of *“conventional plan and section drawing”* is *“a time consuming, highly subjective method that has a low level of accuracy and a high level of error.”* (Brady & Gibson, 2005)

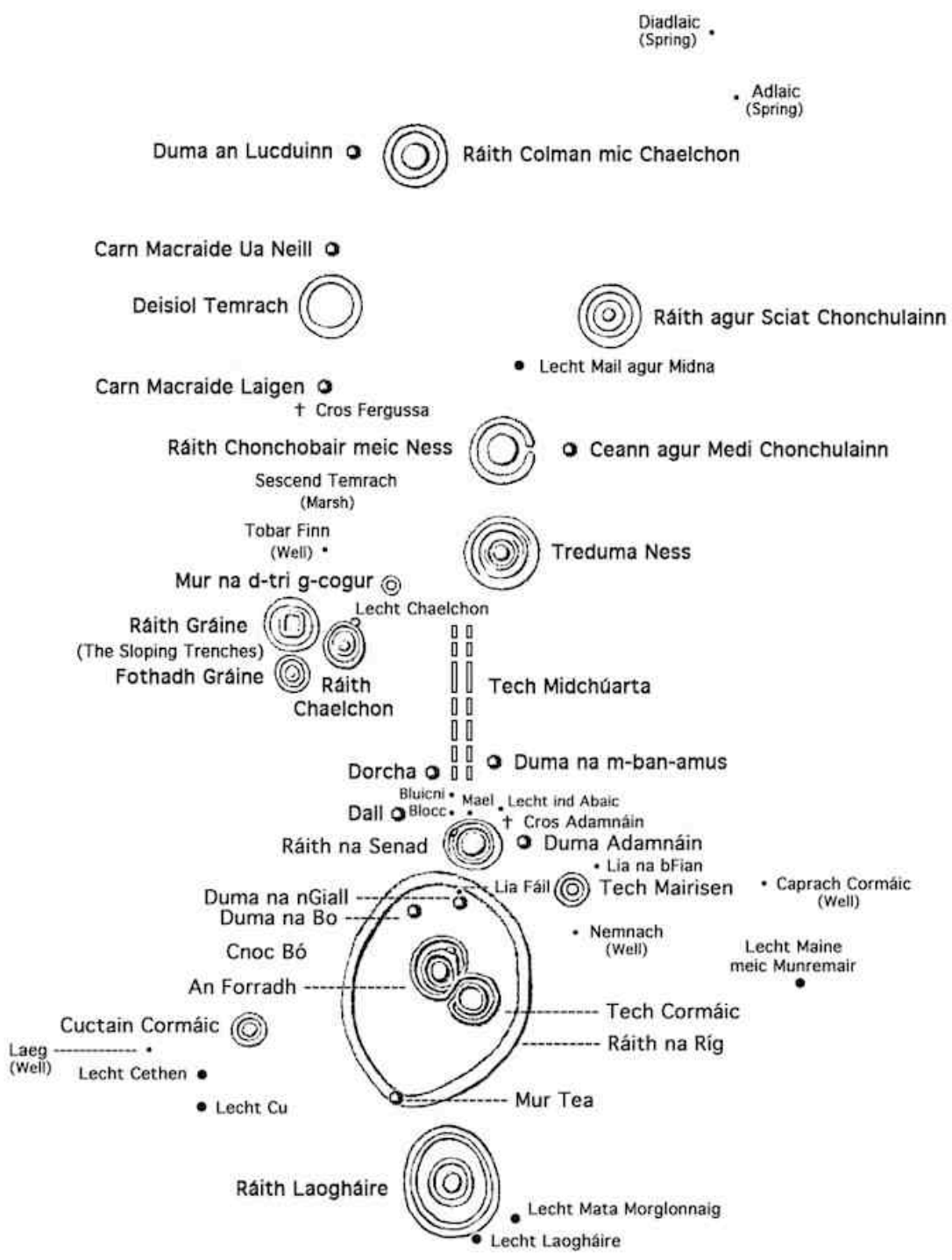


**Drawing of Orthostat L.2**  
(Rotated & Labeled)



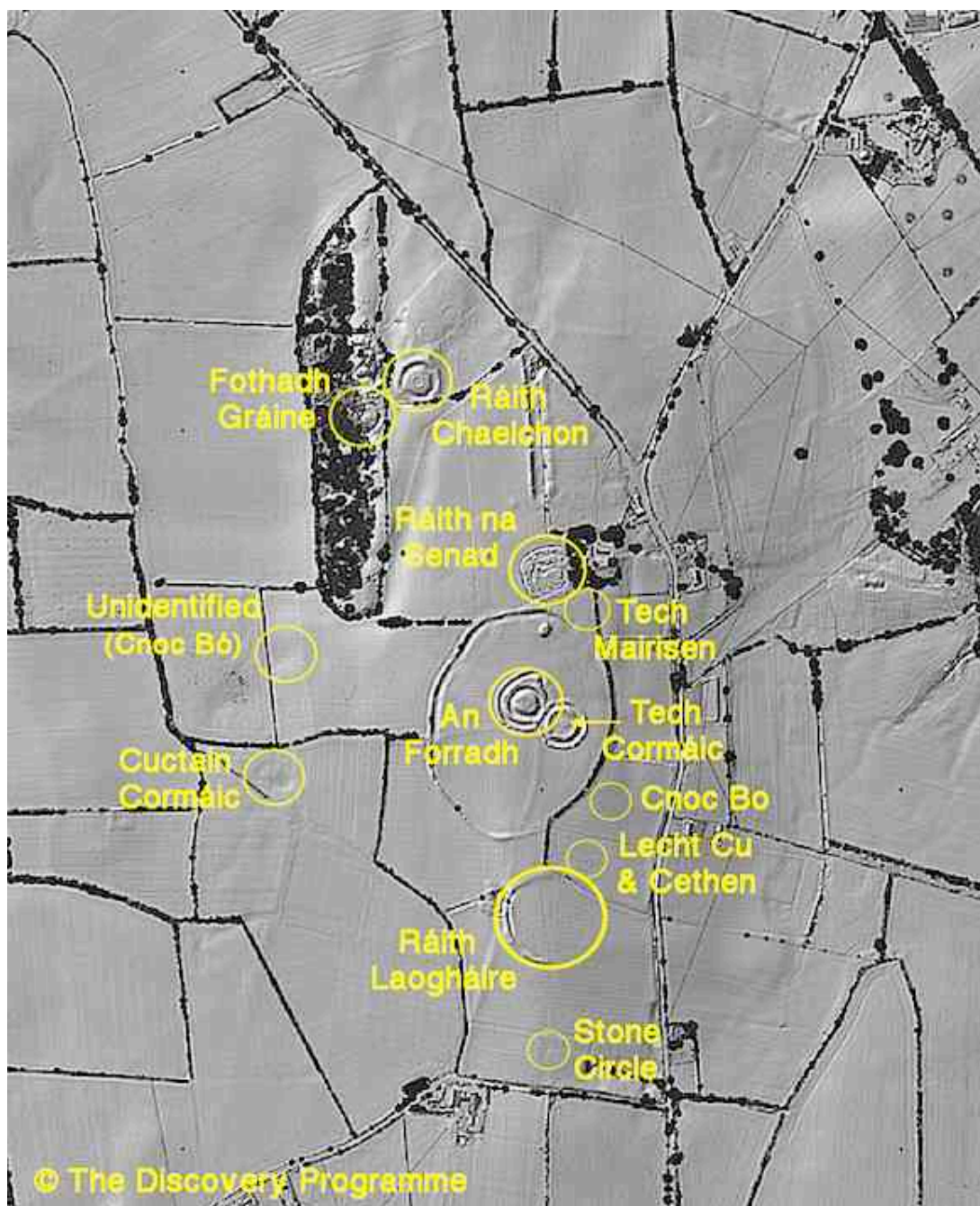
**Insert of Dr. Petrie's Map of Tara c. 1837**





Stone Circle

Dr. Petrie's Map of Tara c. 1837  
(Updated)



Lidar of Tara

The reason the orthostat is not oriented with the monuments, is that it was originally positioned as seen in the rotated drawing, along a path leading to the monuments, and reused in constructing Duma na nGiall upon becoming obsolete.

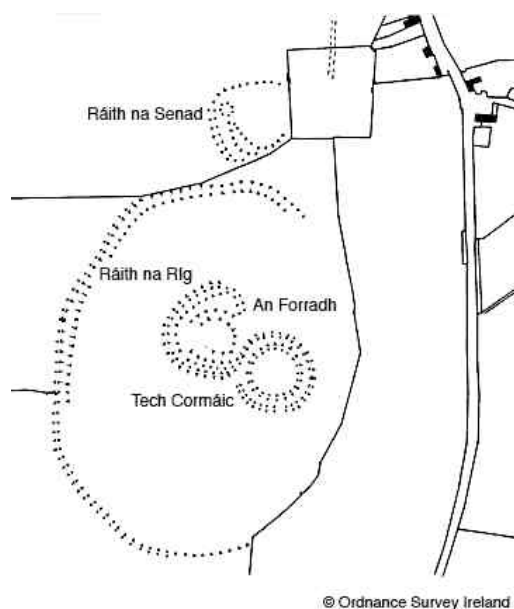
It should be noted that many of the monuments at Tara no longer existed in the landscape at the time of Dr. Petrie's survey, c.1837. As such, he based his identification on the descriptions found in several ancient manuscripts, in particular the Dindshenchas Erenn, and the Rennes

and Metrical Dindshenchas. Therefore, it is the existence and location of the monuments at the time the manuscripts were written, rather than their names, that is relevant. In regards to one monument described in the Dindshenchas Erenn, *“The author wrote of Temair, [Tara] with Temair actually under his eyes... and therefore, whatever we may think of his philology, there is the best of reasons for trusting his topography.”* (Macalister, 1919)

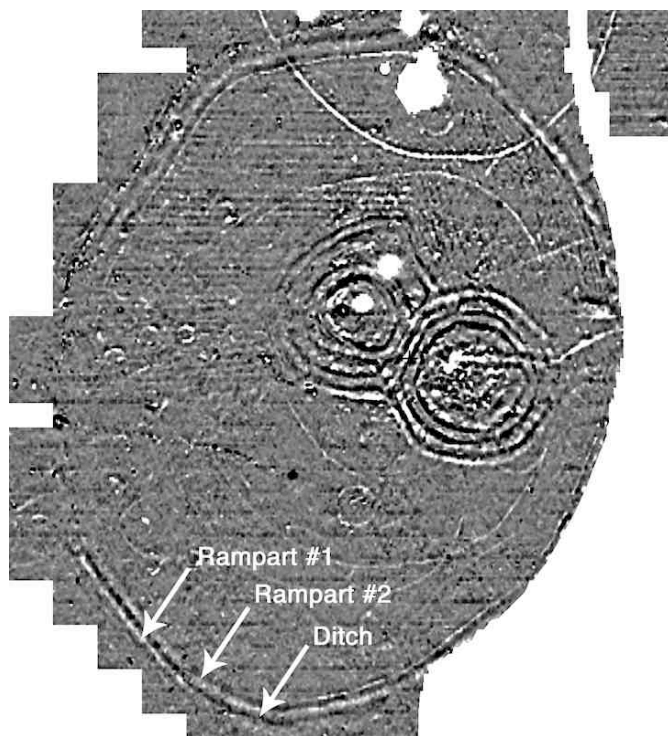
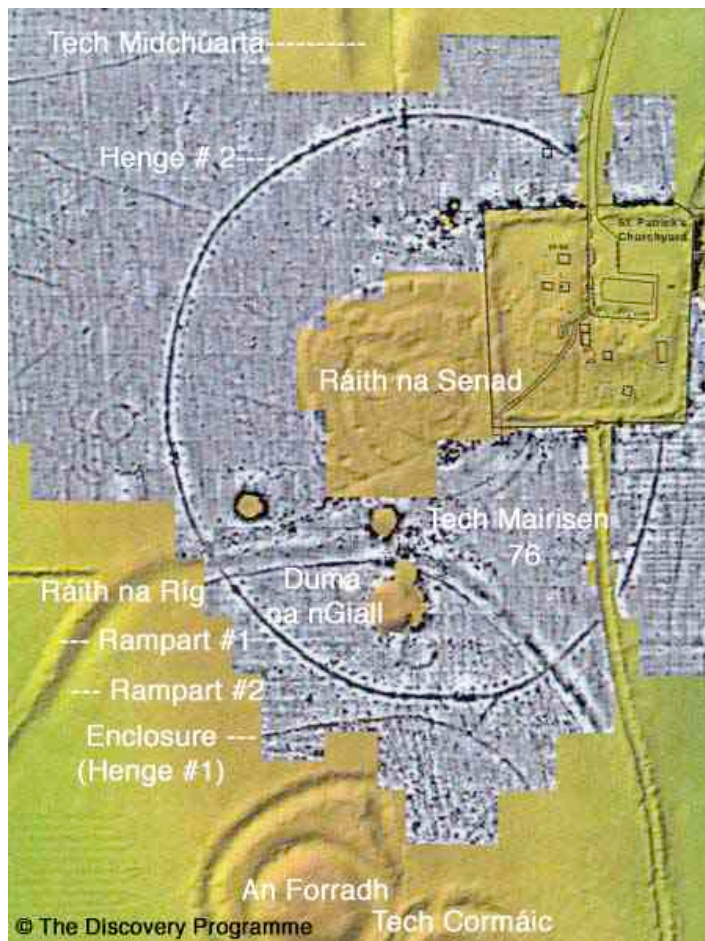
## The Topography of Tara

### Section 1: The Excavation of Ráith na Senad

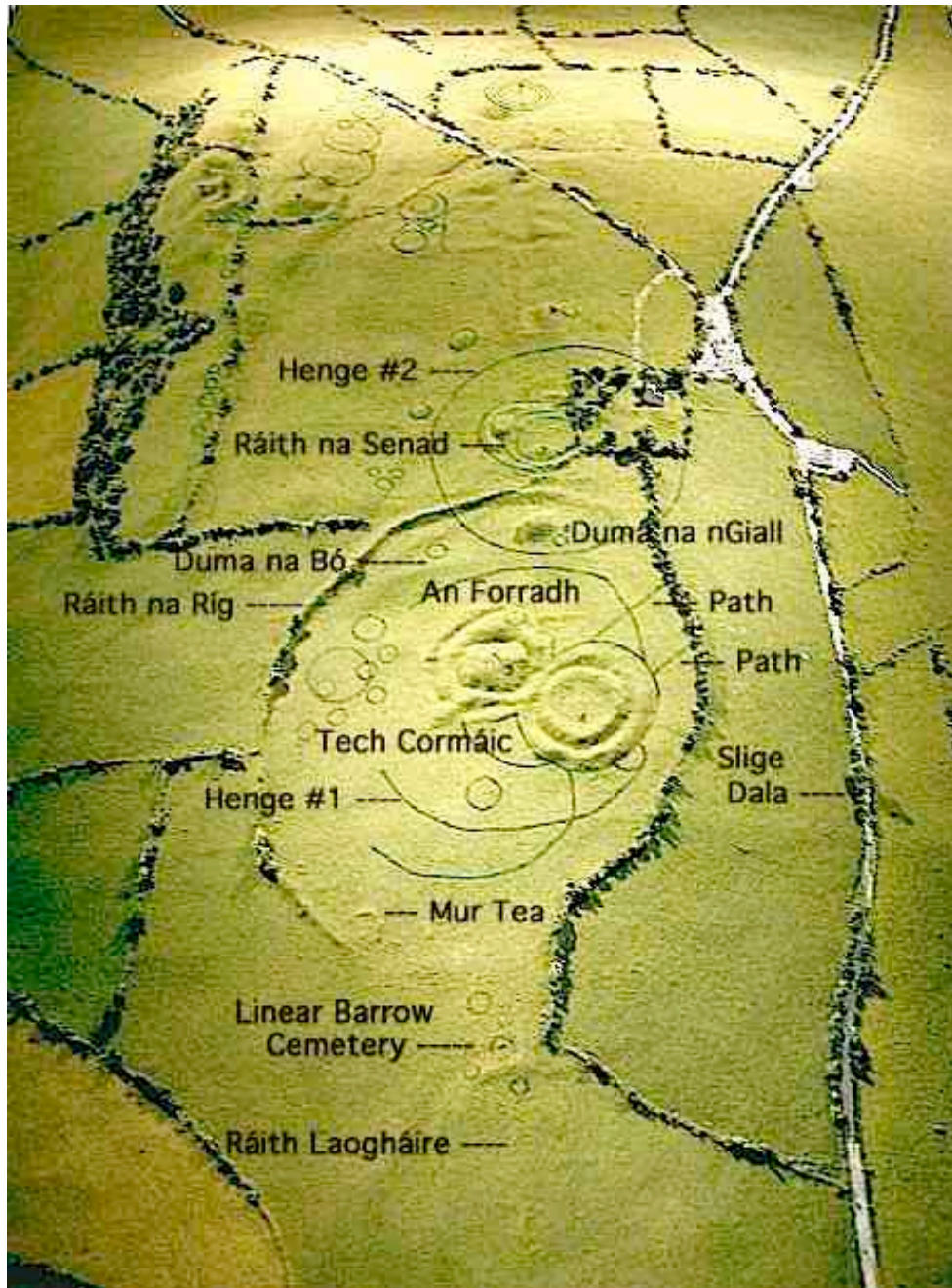
In 1952 – 53 when Professor Sean P. O’Riordain excavated Ráith na Senad, he identified in the pre-earthworks activity *“a series of palisade trenches and post-holes... representing concentric enclosures with concentric pairs of free standing posts... thought to have been part of a large structure.”* (Newman, 1997) *“At Ráith na Senad on the Hill of Tara, the second phase consisted of a series of palisaded enclosures c.16m and 25m in diameter”* (National Roads Authority, 2007) located within a larger enclosure, consisting of a *“huge temple, [henge] once surrounded by about 300 huge posts”*. (Newman, 2002) (see Geo-survey and Model of Tara, pages 9 & 10) During this phase *“the area was used as a burial ground. Nine burials (six inhumations, both crouched and extended and three cremations) were uncovered”*. (Newman, 1997) A 13m palisaded enclosure was also unearthed within the henge by Professor O’Riordain, during his subsequent excavation of Duma na nGiall in 1955 – 56. (see Section 13)



Plan from 1950's excavations



Geo-survey of Tara



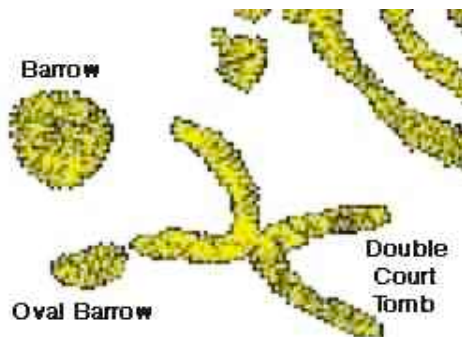
Model of Tara

## Section 2: Ráith na Senad in the Neolithic

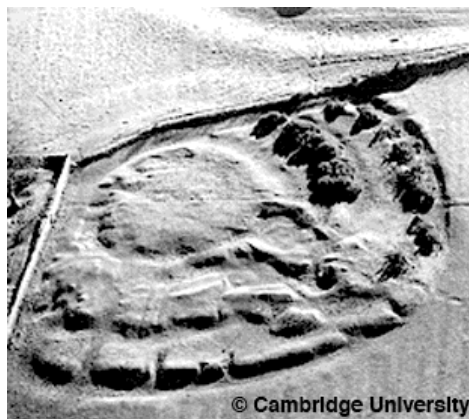
The henge at Tara “probably dates from 2500 to 2300 BC and still had a big physical presence even after the posts were taken out or rotted.” (Newman, 2002) The reason it “still had a big physical presence” was because the area where it once stood, remained in use as a burial site. The time frame cited by Dr. Newman for construction of the henge, falls within the radiocarbon dates of the aforementioned 13m enclosure, 3030 – 2190 BC. (see Section 13)

The shape of Ráith na Senad, as it's depicted on the orthostat, looks quite different than it does today. Its initial earthen structures consisted of a barrow, an oval barrow and double court tomb. The style of the latter in this case *“has a half-court at each end of the monument... built facing away from each other”* and *“sometimes share the same rear stone”*, though *“more often there is some distance between them, ranging from one to ten metres.”* (Megalithomania, 2001 – 11)

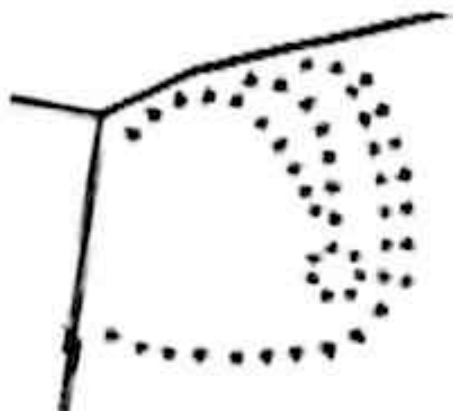
Excavation of the earthworks by Professor O’Riordain, revealed *“a barrow with traces of an enclosing bank with V-sectioned fosse... situated between ramparts 2 and 3”*. *“The barrow had three phases of construction; the first consisted of a 16m in diameter barrow with surrounding bank and V-sectioned fosse, with associated cremation burials and one later crouched inhumation.”* (Newman, 1997) The “barrow” Professor O’Riordain excavated, was actually the forecourt of the northwest facing court tomb which had silted in, leaving “traces of an enclosing bank”. Remains of both forecourts are still visible, as is the ‘arm’ that projects from the southeast facing tomb.



Insert of Ráith na Senad from drawing of Orthostat L.2



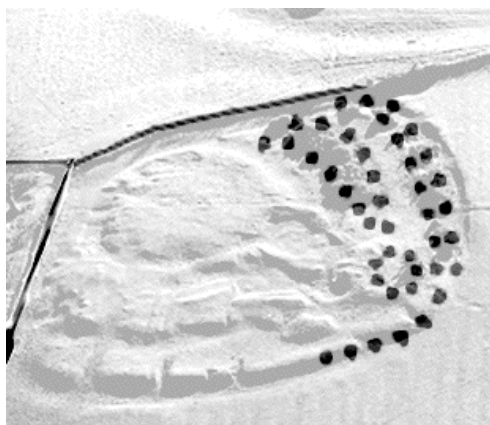
Aerial of Ráith na Senad



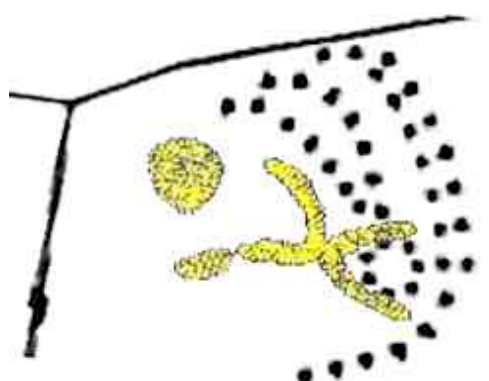
Insert of Ráith na Senad from excavation plan



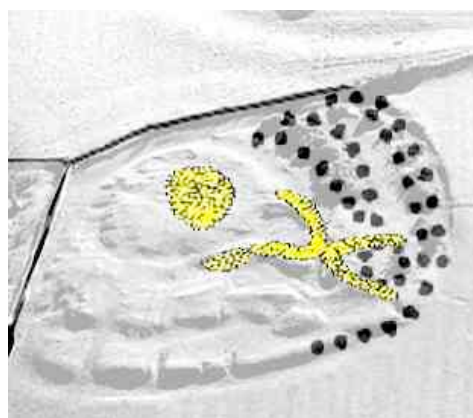
Overlay of Drawing & Aerial



Overlay of Plan & Aerial



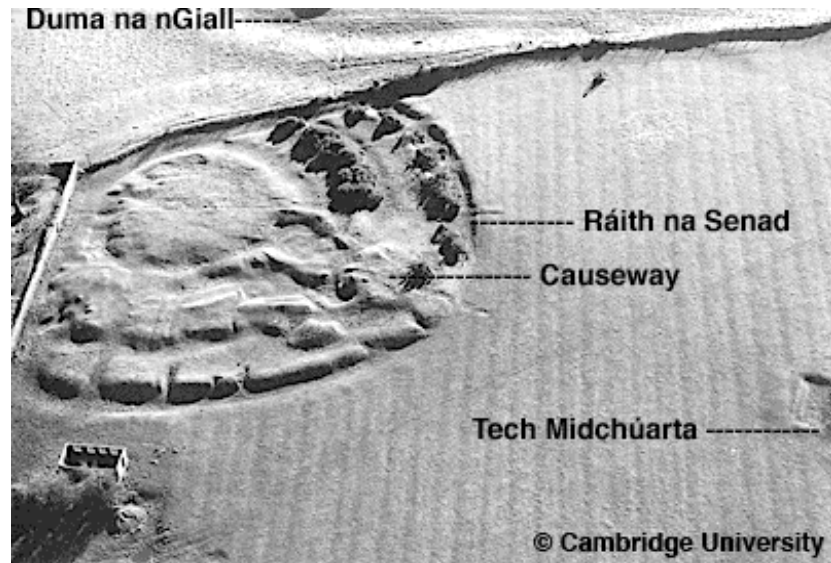
Overlay of Drawing & Plan



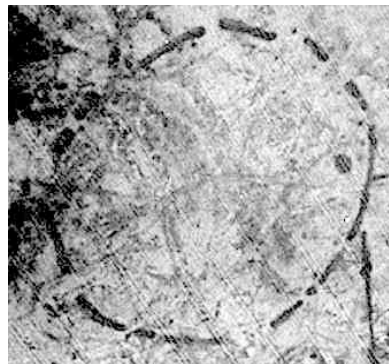
Overlay of Drawing, Plan & Aerial

Considering the shape of the 'arm', which is not a feature of court tombs, and as seen in the drawing is not connected to the tomb, it appears to be an oval barrow, "*a mound of earth and/or stones of roughly elliptical plan covering or containing one or more human burials and/or other ceremonially placed deposits*". (English Heritage, 1988)

During the 3<sup>rd</sup> phase of the earthworks activity a "*quadri-vallate enclosure was also constructed*" though "*nothing of the fourth [rampart] is visible on the surface.*" (Newman, 1997) In other words, Ráith na Senad evolved into an embanked ring ditch, "*A monument comprising an irregularly circular enclosing ditch, interrupted by several causeways, surrounding a central circular area used for funerary activities, often concealed originally beneath an earthen mound.*" (The Discovery Programme, 1997) Professor O'Riordain refers to the area of the double court tomb as the 'causeway', however, it's unlike those associated with ring ditches. If this were a new design element, then it stands to reason that it would have been employed in similar monuments. The concave appearance in the middle of the 'causeway', is due to the cairn collapsing into the gap between the rear stones of the tombs.



Aerial of Ráith na Senad



Aerial of embanked ring ditch

Based on “Associated Roman material of second to fourth century date indicates that... [Ráith na Senad] is pre-Christian.” (The Discovery Programme, 1997) However, there’s no evidence the artifacts are associated with its construction. Moreover, Professor O’Riordain unearthed a bronze knife guard in the pre-earthworks period and bronze pins during the earthworks phase. Although bronze was commonly in use during the Early Iron Age, 500 BC, the henge dates to 3030 – 2190 BC, so the bronze artifacts likely date to the Early Bronze Age.

Assuming for the purposes of argument that the henge and associated 16m & 25m enclosures were constructed between 2500 – 2300 BC, that all three fell into disuse and were “taken out or rotted” away a few hundred years later, and that Ráith na Senad dates to the 2<sup>nd</sup> – 4<sup>th</sup> century AD, then one of two highly improbable scenarios occurred.

**A)** That well over 2,000 years after the timber structures disappeared from the landscape, the “barrow” Professor O’Riordain excavated, was constructed precisely where the 16m enclosure



once was. That the large barrow within Ráith na Senad, was constructed where the 25m enclosure had been, and the earthen ramparts constructed exactly where the concentric palisaded structures stood. On top of which, all three were constructed in the center of where the henge was located.

**B)** That some physical evidence of the henge's inner structures survived for well over 2,000 years in the landscape, and were used as a 'blueprint' in constructing Ráith na Senad.

The logical explanation is that the 25m enclosure was removed, and the barrow we see today constructed in its place, incorporating one or more burial cists. The 16m enclosure was also removed, and the burial site within incorporated into the northwest facing forecourt of the double court tomb. This parallels the discovery at the entrance to Duma na nGiall, where *"Two burials, consisting of the cremated remains of some numbers of individuals, were placed in pots outside the passage before the stone cairn was constructed."* Sometime later, the oval barrow was constructed. After the orthostat was reused in the passageway of Duma na nGiall, Raith na Senad's ramparts were constructed, incorporating the double court tomb, barrow and oval barrow into its current design. *"At Tara there are at least seven cases where barrows have been incorporated into... later monuments"*. (The Discovery Programme, 1997)

### **Section 3: Beneath An Forradh**

As seen in the drawing, An Forradh consisted of six (6) ramparts. Initially, those were identified as being:

**A)** Ráith na Ríg's two (2) ramparts. *"The circumvallation [of Ráith na Ríg] can still be traced all round; and consisted originally of two [2] walls or parapets with a deep ditch between."* (Joyce, 1906) However, *"The [2] rings have been in most parts removed; and, it is to be regretted that, the proprietor is yearly removing more of them to spread on his land."* (Petrie, 1839)

**B)** *"a previously identified enclosure which, if projected, appears to surround the Forradh and Tech Cormáic, and also reflects the curvature of Ráith na Ríg."* (Newman, 1999) (see Geosurvey and Model of Tara, pages 9 & 10)

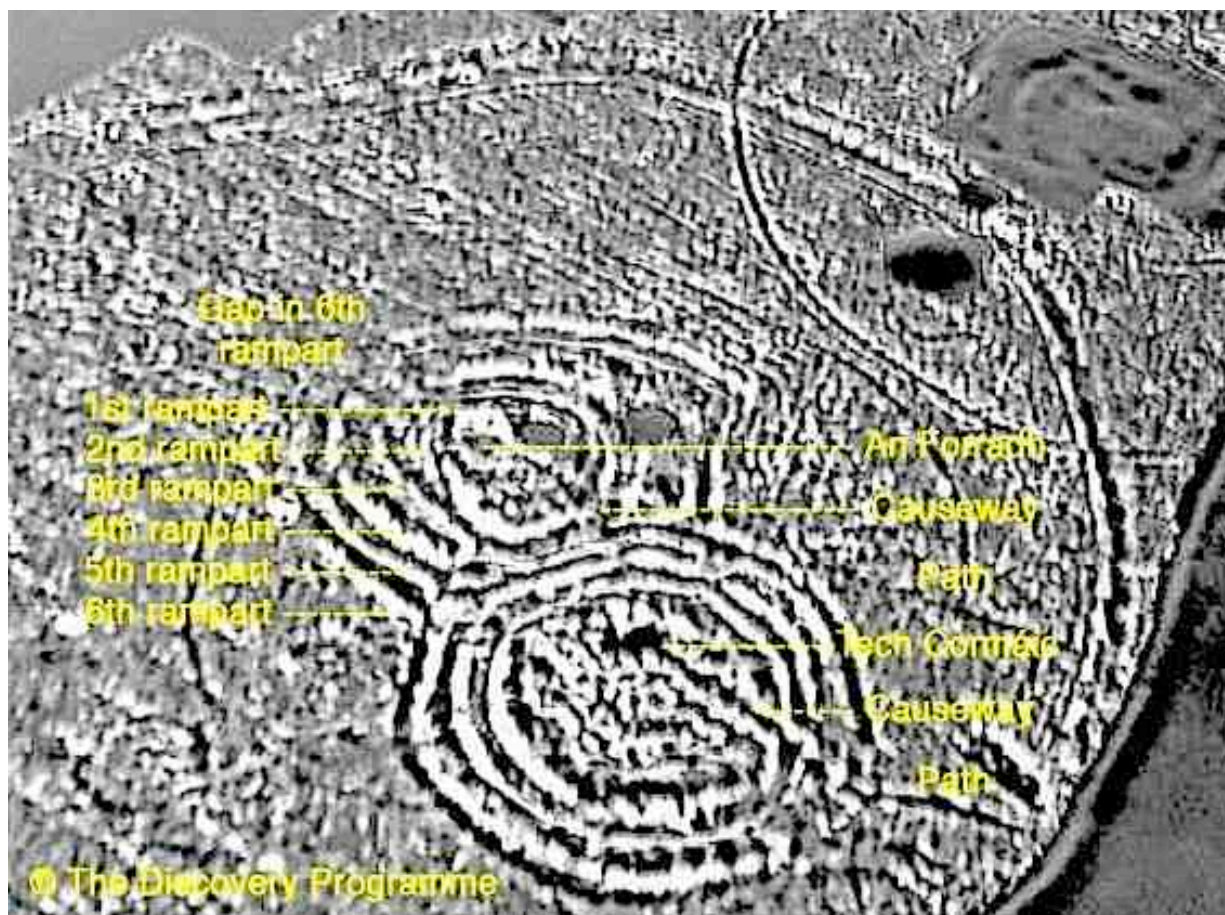
**C)** An Forradh's two existing ramparts.

**D)** A rampart concealed within An Forradh's mound.

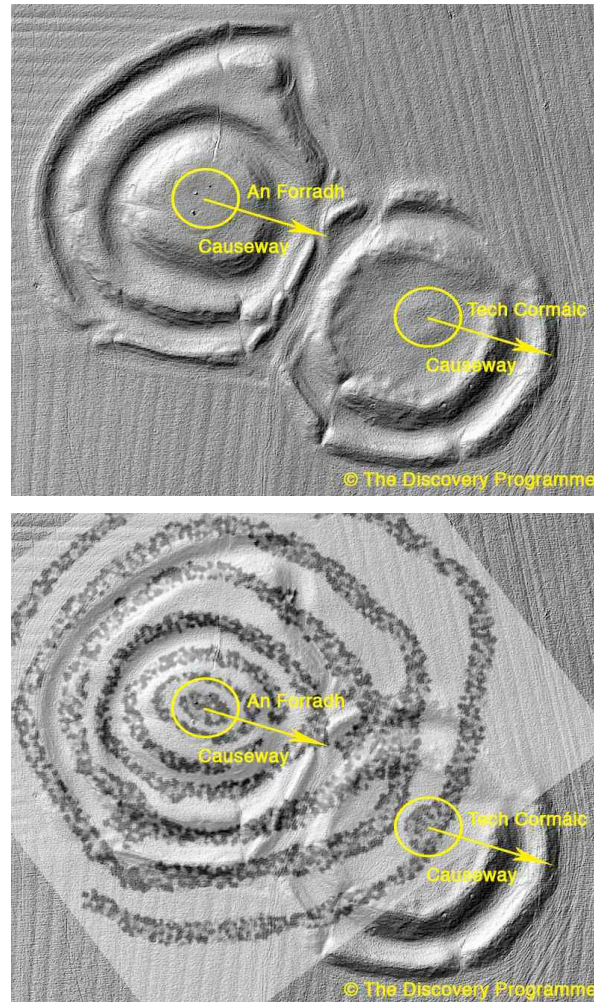
The foregoing seemed to account for all six (6) ramparts. However, based on a Magnetic Gradiometry image, courtesy of The Discovery Programme, An Forradh originally consisted not of two (2) ramparts and a barrow, but six (6) ramparts and a barrow. (Note: interpretation of the images is solely the work of this author.)



Insert of An Forradh from drawing of Orthostat L.2



Magnetic Gradiometry image of An Forradh & Tech Cormáic



**Lidar of An Forradh & Tech Cormaic  
with overlay of drawing**

The evidence clearly shows that the fosses between An Forradh's 4<sup>th</sup> rampart and barrow were infilled, quite likely over time, which eventually necessitated the construction of Ráith na Ríg as an additional defensive structure. (see Sections 4 & 6) The enclosure recently revealed by geo-survey, was probably a henge, which in view of its location, likely predates the one surrounding Ráith na Senad. (see Section 15, Phases 1 – 4 and Geo-survey, page 9)

Considering the elongated shape of the mound within An Forradh today, just as it is on the orthostat, it's possible it was originally an oval barrow, with its six (6) ramparts added over time. The opening in its 6<sup>th</sup> rampart, like those of Fothadh Gráine and Ráith Chaelchon, was probably due to a drop-off in that area. (see images, page 15 also Lidar, page 22)

The addition of the causeway to An Forradh, and the five (5) ramparts and causeway to Tech Cormaic, probably took place prior to the construction of Duma na nGiall, making the orthostat

obsolete, as it would have been impossible to alter the carving to reflect their new design. This pattern of concentric ramparts with causeways, is depicted in rock art throughout Ireland and Britain.



© The Discovery Programme  
Magnetic Gradiometry, Tara



Drumcarbit, Donegal



Rathgeran, Carlow



© Brian Kerr

Chatton, Northumberland



© Brian Kerr

Buttony, Northumberland

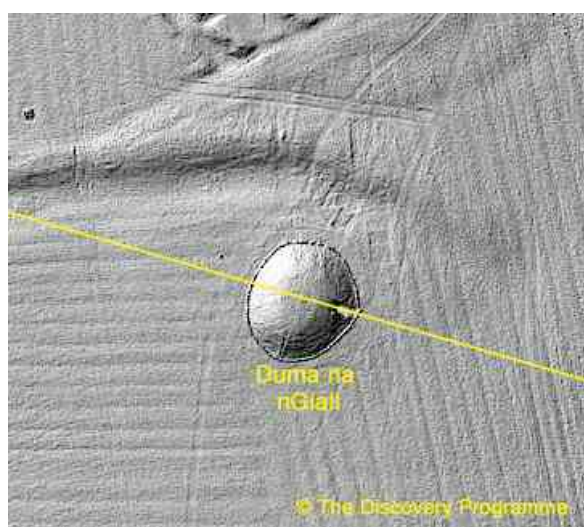


© Brian Kerr

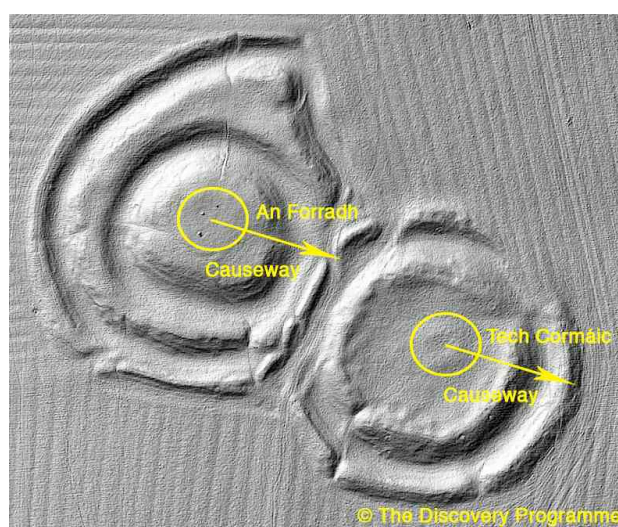
Gled Law, Northumberland

All things considered, there likely would have been a stone at Tara with similar symbols, one that perhaps included even more monuments than the original. If it still exists in the landscape, the most logical location would be on the eastern slope of the hill, just off the ancient road Slige Dala, along a path leading to the causeways. (see Model of Tara, page 10 and Mag Grad, page 15) *“Recent research suggests that many [carved stones] are associated with the fringes of uplands and with important paths of access between lower and higher ground. On occasion, they seem to line the route towards important monument complexes.”* (GardWeb, 1998-99)

Interestingly, the causeways within An Forradh and Tech Cormáic, have exactly the same alignment to the November/February cross-quarter sunrises, as the passageway within Duma na nGiall, which seems rather redundant given their close proximity at the same site. This could indicate Duma na nGiall was constructed well after the ramparts and causeways of An Forradh and Tech Cormáic were constructed, but prior to them being infilled. It should be noted that the Lia Fáil, a standing stone roughly 1.5m in height that now sits atop An Forradh, may originally have been a gnomon within a lunar/solar array used to calculate the alignment. As for other panels found in Ireland and Britain depicting monuments similar to An Forradh and Tech Cormáic, their causeways too are no doubt aligned to astronomical events.



Lidar of Duma na nGiall



Lidar of An Forradh & Tech Cormáic



The Lia Fáil

#### Section 4: The Evolution of An Forradh & Tech Cormáic

As the evidence shows, An Forradh and Tech Cormáic went from being ceremonial monuments to sites of habitation, a decision that was no doubt influenced by the strategic location the hill

commanded, the relatively minimal manpower to transform them from ring barrows to a ring fort, and the wells and springs that surrounded the hill. Why the monuments evolved into what we see today, is due to one or both of the following:

**A)** *“This emphasis on status in the function of the ringfort, over that of defense would explain a number of defensive weaknesses of the ringfort. Banks, or multiples of them would not appear to offer the best return to their builders for their defensive value”* such as *“the general lack of an ability to fight out from the ringforts”*. (Wikipedia, 2010) Having discovered this, An Forradh and Tech Cormáic, over time, underwent a major remodeling, i.e., from concentric ramparts with causeways, to what we see in the landscape today, which as mentioned earlier, would have necessitated the addition of Ráith na Ríg. (see photo & insert of plan, page 20)

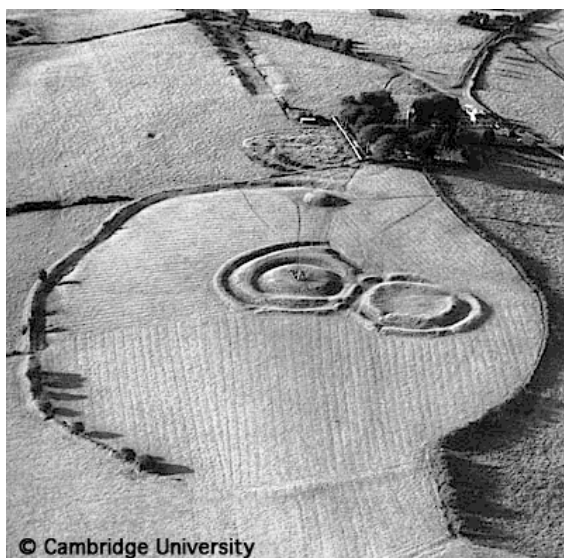
**B)** That the manpower necessary to maintain that many ramparts would have been enormous.

### **Section 5: Tech Cormáic – Dating by Name**

Tech Cormáic is listed last in the construction phases at Tara, during the *“Late Pre-Christian Iron Age – Early Christian Period”*. (The Discovery Programme, 1997) Based on the orthostat, however, it’s clear that the barrow within the monument known today as Tech Cormáic, existed nearly 3,000 years prior to that period. The problem here is that since it has never been excavated, their suggestion is likely based in part on the fact that Cormáic mac Art reigned from 254 – 277 AD. The mere fact that the monument bears his name, does not establish any degree of association regarding its period of construction. Throughout history the names of buildings, streets, cities and countries have changed depending on, in many cases, the political climate of the time. Tara itself underwent numerous name changes over the millennia. *“Temair and Druim Cain ‘Beautiful Ridge’ and Liath Druim ‘Grey Ridge’ and Cathair Crofinn ‘Crofinn’s City’ and Druim nDéscen ‘Prospect Ridge’ those are Tara’s five names.”* (Stokes, 1894) Tech Cormáic, Ráith na Senad, Ráith Laogháire and the other monuments would have been no different. Moreover, it’s highly improbable the monument would have evolved from the barrow seen on the orthostat, to the multi-vallated ring barrow seen on the Magnetic Gradiometry image, to what exists in the landscape today during the course of Cormáic mac Art’s reign.

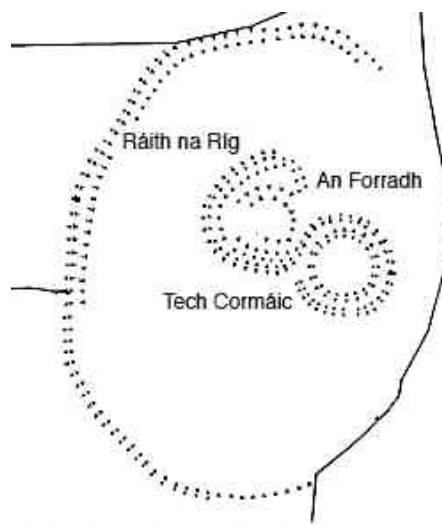
*“Tech Cormáic [was] the only ringfort at Tara... its outer rampart extended figure-of-eight style to surround and enclose the Forrad.”* (The Discovery Programme, 1997) Given the historical record, i.e., the carvings on the orthostat, Tech Cormáic was never a ringfort, but a barrow that

was incorporated into An Forradh's 6<sup>th</sup> rampart. Tech Cormáic, An Forradh and Ráith na Ríg as a whole comprise the ringfort, as evidenced by the palisades erected within their ramparts.



© Cambridge University

**Aerial of Tara**



© Ordnance Survey Ireland

**Drawing from 1950's excavations**

Additionally, one of the four (4) barrows located below the double court tomb, was also incorporated into An Forradh's 6<sup>th</sup> rampart. The four barrows formed one of two linear barrow cemeteries on the hill. (see drawing, page 5 and Model of Tara, page 10) *"Component round barrows arranged in a more or less straight line; the average distance between barrows rarely exceeds 100m. One or two auxiliary barrows off the main axis may be considered part of the cemetery."* (English Heritage, 1988)

### **Section 6: Ráith na Ríg – Ceremonial or Defensive**

*"Ráith na Ríg is a large hengiform enclosure, defined by a bank and internal ditch."* (The Discovery Programme, 1997) *"Reaching a depth of up to 3m... it challenges the generally accepted non-defensive nature of "Royal Sites" with their internal ditches."* (Roche, 1998) Based on the evidence, it's Ráith na Ríg's two (2) ramparts and palisaded enclosures that challenge the "non-defensive nature" of the monument, the ditch was nothing more than the V-sectioned fosse between its two ramparts, as discussed in Section 3-A. *"This great enclosure seems to have been formed of two [2] murs, or parapets, having a ditch between them, as described in the prose account."* (Petrie, 1839) (see photo and insert of plan above)

*"The earliest recognised evidence [of] (O'Riordain's black layer), was found and confirmed to be sealed beneath the bank of the enclosure. Excavation revealed that the source of this black,*

*charcoal-rich layer was debris from a bowl furnace. Throughout the layer and especially around the immediate area of the furnace, quantities of iron slag, tuyère and crucible fragments, some with bronze residue, bronze stems and droplets, were recovered, as well as small iron objects”.* (Roche, 1998) *“Therefore, the bank was, it seems, constructed sometime after the introduction of iron.”* (The Discovery Programme, 1997) This would mean that Ráith na Ríg was constructed over 2,000 years after An Forradh and Tech Cormáic, which is highly unlikely. The following chronology takes into account both the physical and historical evidence.

**A)** Ráith na Ríg’s inner (1<sup>st</sup>) rampart is constructed sometime during the Early Bronze Age. According to the Annals, Eochaidh Eadghadhach was killed by Cearmna in the Battle of Teamhair (Tara) around 1536 BC. This indicates Tara had already evolved from a ceremonial site to that of a residential one, with at least Ráith na Ríg’s inner rampart likely having been constructed prior to that time. Though any dates associated with oral tradition are subject to questioning, this would place the construction of Ráith na Ríg roughly 400 – 600 years after that of An Forradh and Tech Cormáic, which is a more plausible time frame.

**B)** Sometime after An Forradh and Tech Cormáic’s transformation from ring barrows to a ring fort, the furnace is constructed just outside Ráith na Ríg’s V-sectioned fosse and inner rampart during the Early Bronze Age, and remains in use into the Early Iron Age.

**C)** Ráith na Ríg’s outer (2<sup>nd</sup>) rampart is constructed on top of the furnace “sometime after the introduction of iron.”

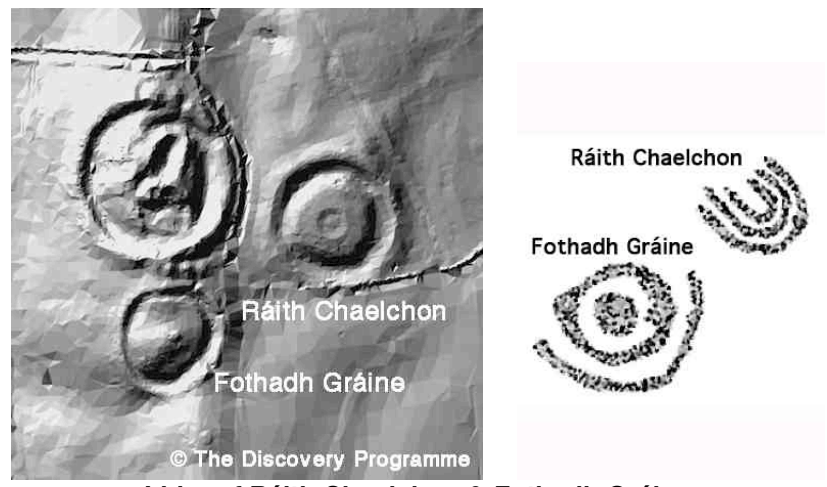
The issue regarding the period of when Ráith na Ríg was constructed, raises the point that only two (2) of the monuments at Tara have ever been excavated, and only one of those fully, that being Duma na nGiall. As such, to assign a period to the construction of Ráith na Ríg, or for that matter any monument at Tara, is extremely problematic, especially in view of the historical record, i.e., the panel on the orthostat.

### **Section 7: Ráith Chaelchon & Fothadh Gráine**

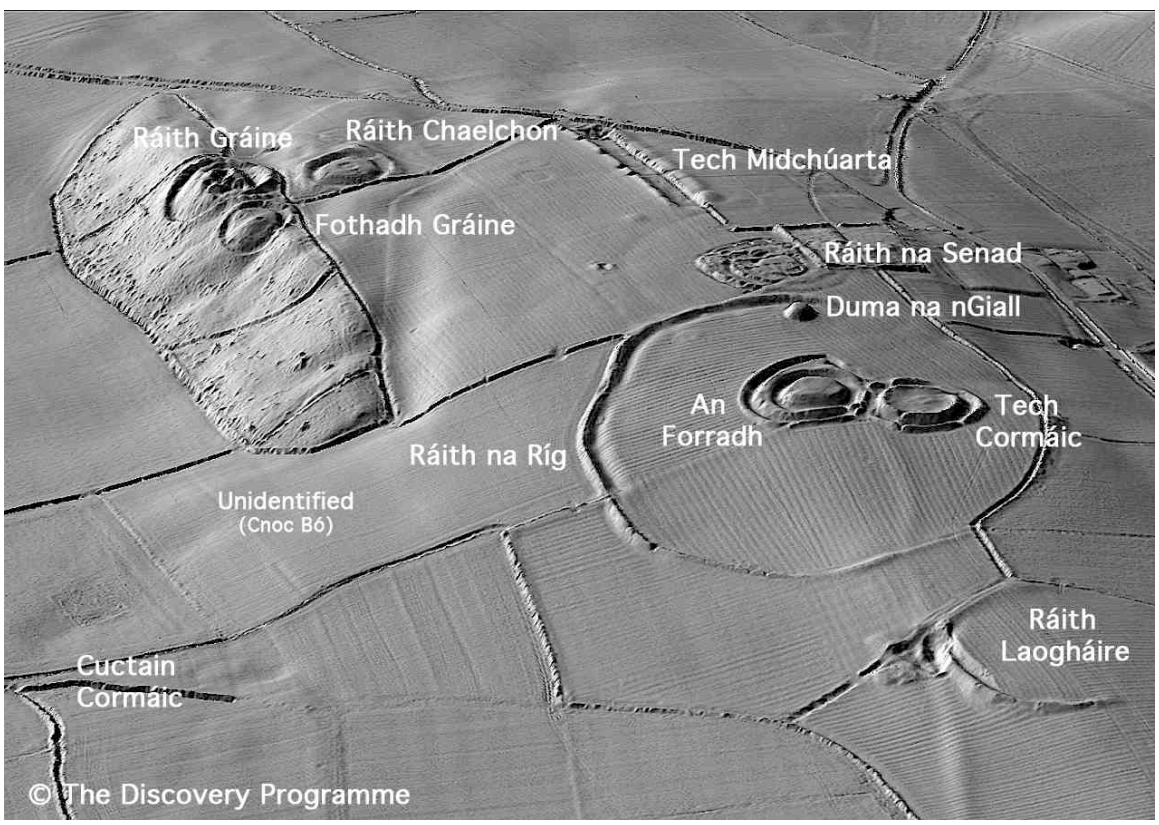
*“the hill drops away rather more steeply on the east, north and west sides”.* (The Discovery Programme, 1997) The drop-off explains why Ráith Chaelchon’s three (3) ramparts and Fothadh Gráine’s outer (2<sup>nd</sup>) rampart are depicted on the orthostat as being open-sided. (see drawing and maps, pages 5 & 6) At some point, the gaps in their ramparts were closed off.



Obviously, both monuments, as depicted on the orthostat, are located too close to An Forradh, however, this is due to the reasons cited in the introduction.



**Lidar of Ráith Chaelchon & Fothadh Gráine & insert from drawing of Orthostat L.2**

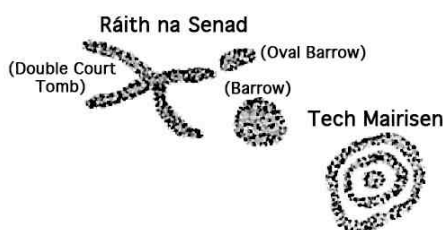


**Lidar of Tara**

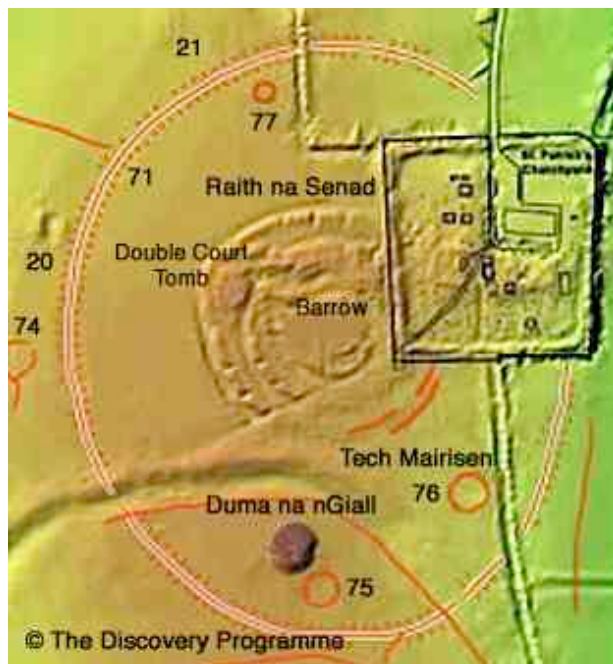
**Section 8: Tech Mairisen – East or South**

According to Dr. Petrie’s literary source, Tech Mairisen was located east of Ráith na Ríg and north of the Well of Nemnach. (see drawing and maps, pages 5 & 6) Even though no monument

was visible in the landscape at the time of his survey, he surprisingly placed Tech Mairisen in the same location as the symbol on the orthostat, which was detected by geo-survey. While it's possible Dr. Petrie misidentified the monument with respect to its name, it is the existence of an earthen monument in that location that is relevant. (see Section 10)



Insert from drawing  
of Orthostat L.2

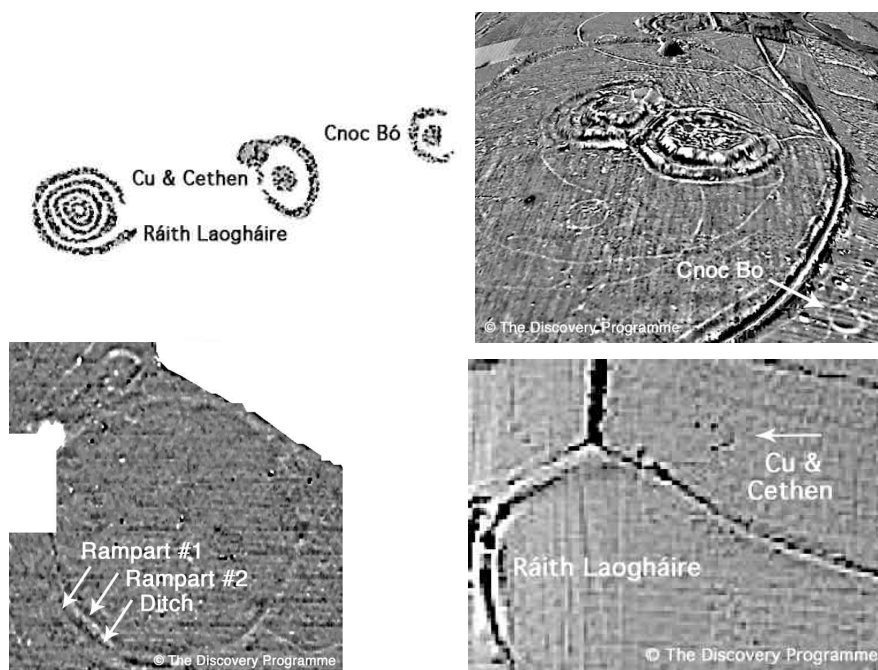


Geo-survey of Tara

Located just above the symbol depicting Tech Mairisen, there's a serpentiform, which may depict a stream. However, considering that virtually all of the springs surrounding the hill have dried up over the millennia, and that the area in which it would have been located is now occupied by a churchyard, it would be extremely difficult to detect.

### Section 9: Ráith Laogháire, Lecht Cu, Lecht Cethen & Cnoc Bó

There are four (4) monuments listed in the Metrical Dindshenchas (Vol. I, Temair III, 23) as being below or south of Ráith na Ríg. The first three, which are no longer visible in the landscape, nor do they appear on any maps, are Lecht Cu, Lecht Cethen and Cnoc Bó. Located northeast of Ráith Laogháire, the graves of Cu and Cethen consisted of a ring barrow with an incorporated barrow, and northeast of them, the ring barrow Cnoc Bó. *"Below from the Rath of the Kings (it is not false) are the Grave of Cu, the Grave of Cethen, the Hill of the Ox"*. (Gwynn, 1903-35) (see drawing, page 5 and maps, pages 5 & 6) Of the three monuments have been detected by either Lidar or Mag Grad imagery. (see images, top of page 24)



**Drawing and images of Ráith Laogháire, Cu, Cethen & Cnoc Bó**

Dr. Petrie places Lecht Cu and Lecht Cethen west of and level with the south end of Ráith na Ríg, and Cnoc Bó; the Hill of the Ox, west of and level with An Forradh, none of which can be seen as being below Ráith na Ríg. The discrepancy lies with the fact that the Rennes Dindshenchas (Temair I, 14) states, *"The Monument of Cú and Cethen on the hillslope as high as (?) the Kings' Fort on the west. Two stones are there, one of them Cú's monument, the other Cethen's"*. (Stokes, 1894) (see Section 10 and maps, pages 5 & 6) On the other hand, based on that same description, Macalister places the graves west of and level with the north end of Ráith na Ríg. Considering the symbols on the orthostat and Lidar image, the Metrical Dindshenchas would appear to be the more reliable source in this instance.

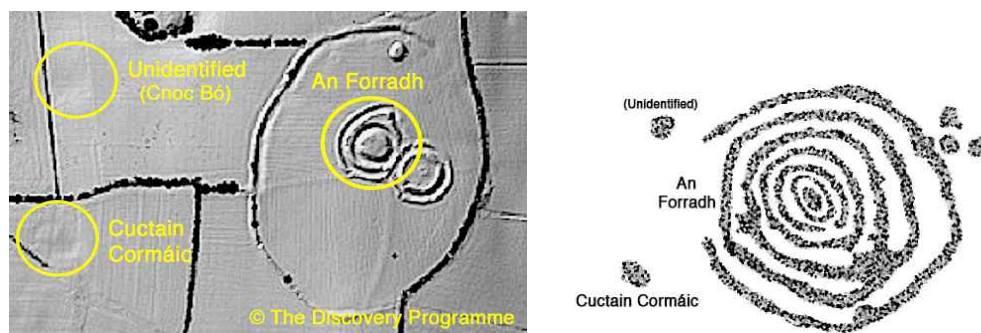
The fourth monument mentioned in the Metrical Dindshenchas (Vol. I, Temair III, 24) is Ráith Laogháire. *"There remains south of the Rath of the King the Rath of Loegaire and his Keep"*. (Gwynn, 1903 – 35) The drawing shows that Ráith Laogháire consisted of five (5) ramparts. The opening in the eastern side of its 5<sup>th</sup> rampart, was likely due to a drop-off in that area at the time it was constructed. (see drawing, page 5 and Lidar, page 22)

As depicted on the orthostat, Ráith Laogháire is much smaller than An Forradh, whereas in the landscape it's significantly larger. (see drawing and maps, pages 5 & 6) The differences in this case are not due to the reasons stated in the introduction, rather that the two ramparts that remain today, were added after the orthostat was reused in constructing Duma na nGiall. *"The*

[outer] rampart was double; but this does not now appear...” (Macalister, 1919) Furthermore, given An Forradh’s importance, it would have dictated the size and possibly the location of the other monuments at Tara. It’s likely, therefore, that Ráith Laogháire’s two outer ramparts were not constructed until after those of An Forradh, i.e., Ráith na Ríg, which is supported in part by the fact that the linear barrow cemetery just above Ráith Laogháire, had to have been constructed prior to its outer ramparts being added. (see Model of Tara, page 10) At some point, a number of fosses between the 5<sup>th</sup> rampart and the center of the monument were infilled. Evidence of at least two inner ramparts can be seen on Petrie’s map. As in the case of Ráith na Ríg’s inner rampart, agriculture over the centuries has erased all five of Ráith Laogháire’s inner ramparts and all but a portion of its two outer ramparts.

### Section 10: Cuctain Cormáic & Cnoc Bó

There are two barrows depicted on the orthostat west of An Forradh. Even though they were no longer visible in the landscape at the time of his survey, Dr. Petrie remarkably identified Cuctain Cormáic, Cormáic’s Kitchen, as being located exactly where the lower barrow appears on the orthostat. However, according to one manuscript, Cuctain Cormáic was located “*on the slope of the hill on the brink of and eastward from, Laogháire*”. (Macalister, 1919) There is a monument depicted on the orthostat located northeast of Ráith Laogháire, Lecht Cu and Lecht Cethen that fits the location, which is identified in the drawing and insert of the map as Cnoc Bó, but it existed over 3,000 years before Cormáic’s reign. Oddly, Dr. Petrie identified the area where the upper barrow is located on the orthostat as being Cnoc Bó, though in this case he enters only the name. (see maps, pages 5 & 6)



Lidar of Tara & insert of drawing

### Section 11: The Stone Circle

The Stone Circle beneath Ráith Laogháire, still exists in the landscape today, and matches the location of the symbol carved on the orthostat. (see drawing, page 5 and maps, pages 5 & 6)

However, it has been suggested that this was actually the location of Tech Mairisen and the Well of Nemnach, rather than that identified by Dr. Petrie. (see Section 8) *“Tech Mairisend was north of Nemnach, and Raith Laoghaire north of that again”*. (Macalister, 1919) Here again, regardless of who’s correct in their identification, it’s the existence of a monument in that location that is relevant.

## **Section 12: Tech Midchúarta – Time, Place & Purpose**

There are two monuments seen on the maps which are conspicuously absent from the orthostat, the first being Tech Midchúarta; the Banqueting Hall. *“Conventional dating suggests that passage tombs and cursus monuments are largely coeval. The reason behind our suggestion that Tech Midchúarta is later than Duma na nGiall is that we think that it may have been aligned on the passage tomb.”* (The Discovery Programme, 1997) To begin with, *“Access to the interiors of cursus was greatly restricted. Entranceways occur most often near one end of the long sides, but may also be found in the centre of the long sides or at the ends.”* (English Heritage, 1988) Tech Midchúarta has 14 entrances; 6 per side with one at either end, which means it’s been misidentified as a being cursus. (see photo, page 1) Taking into consideration the site’s natural topography, and that the core monuments at Tara had been constructed centuries earlier, there would have been little choice as to where to construct Tech Midchúarta. Therefore, any ‘alignment’ with Duma na nGiall is likely due to chance, rather than by design.

As to its purpose, Tech Midchúarta may have been for the raising of livestock, within the protected environment of the enclosure. *“few of the ringforts where buildings have been found inside, would be able to survive... with a herd of cattle brought inside”*. (Wikipedia, 2010) The obvious similarity is to today’s barns, *“and there was an elaborate subdivision of the inner space, with the compartments railed or partitioned off.”* (Joyce, 1906) Though the rest of the description is of a meeting and banqueting hall, it’s likely that during the hundreds of years of oral tradition, the bards took literary license with its description.

*“constant tradition ascribed the building of Tech Midchuarta to Cormaic mac Airt [254 – 277 AD].”* (Macalister, 1919) According to the Annals, however, Slanoll died in the Banqueting Hall in 1257 BC. To add to the confusion, it’s been suggested that Tech Midchúarta was not constructed during the Neolithic Period as a cursus, but rather during the Early Medieval as a processional avenue. (Newman, 2007) Furthermore, the verse and prose text disagree

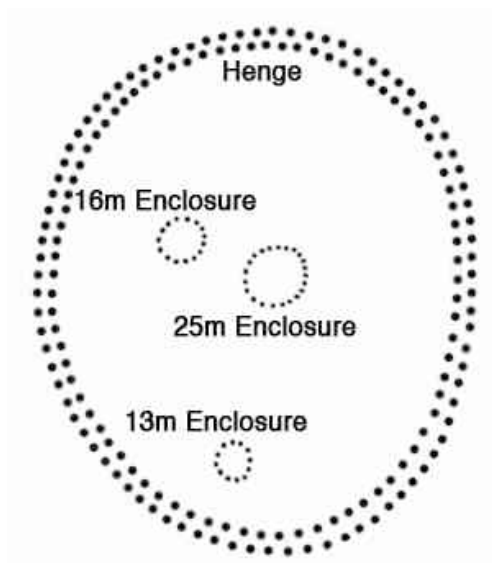
dramatically as to its dimensions, 213m (700 ft.) versus 91m (300 ft.) in length respectively. Given these major discrepancies, the only way to resolve the issues surrounding the date of its construction, dimensions and purpose is through a thorough excavation.

### **Section 13: Duma na nGiall – Errors in Association**

Perhaps the most well-known monument not depicted on the orthostat, is Duma na nGiall, the reason for which is that it was constructed well-after the core monuments at Tara. *“The construction and original use of the tomb has now been radiocarbon dated to 3350 – 3100 BC.”* (Twohig, 2006) However, *“The earliest identifiable monument is a postulated [13m timber] enclosure of Neolithic date, part of which was uncovered in pre-tomb levels during excavation of Duma na nGiall and radiocarbon dated to between 3030 – 2190 B.C.”* *“The construction of... Duma na nGiall... occurred sometime after the [13m] enclosure had fallen into disuse or was burned down.”* (The Discovery Programme, 1997) The obvious issue here, is that it’s impossible for an older monument to have been constructed atop a more recent one.

The logical explanation of the foregoing is that the 13m enclosure, like the 16m & 25m enclosures, was another of the henge’s inner structures, and as in the case of the pre-earthworks activity within the 16m enclosure, the 13m enclosure was also used as a burial site, the remains interred within it, unearthed beneath Duma na nGiall. *“Surrounding the cairn and sometimes located beneath the earthen mantle, the excavators recorded a ring of seventeen bone deposits...”* (O’Sullivan, 2005) *“The difference in the C 14 age of the perimeter burials and of the inhumations and cremations in the passage tomb is not surprising: these perimeter burials pre-date the building of the passage tomb itself.”* (Brindley, Lanting & van der Plicht, 2005) Moreover, *“A ring of fire-pits coinciding spatially with the ring of [17] burials has been radiocarbon dated to more than a millennium later.”* (O’Sullivan, 2005) Obviously, the area where the 13m enclosure once stood was recognized as a sacred burial site, and marked in some manner for the ring of Early Bronze Age fire pits to coincide spatially with the Neolithic burials. *The “cremations were discovered in unprotected pits, and in pits with a small stone setting or protected by slabs at ground level on the perimeter of the mound.”* (Brindley, Lanting & van der Plicht, 2005) The fire pits may have been part of a ceremonial offering prior to the construction of Duma na nGiall. In short, the remains unearthed beneath the ‘tomb’ and dated to 3350 – 3100 BC, with the last Neolithic burials taking place around 2900 BC within the chamber, have been incorrectly associated with the construction of Duma na nGiall.

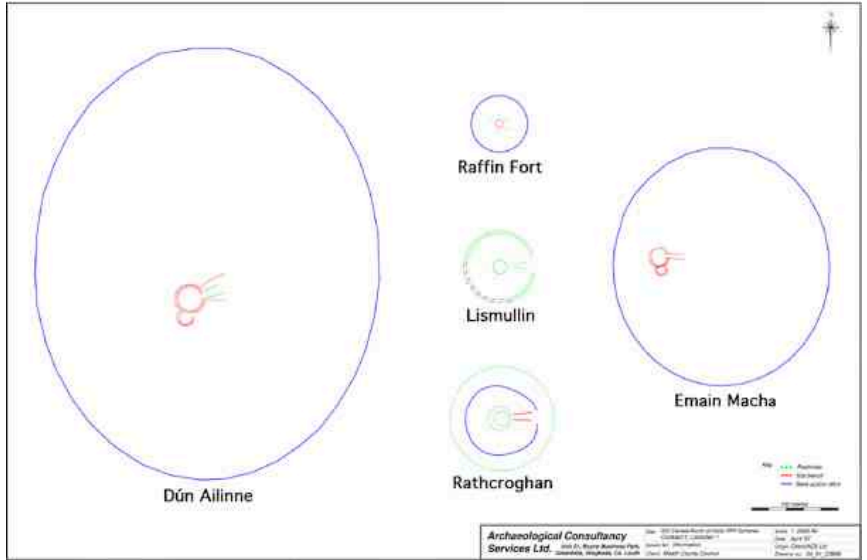
*“Ongoing geophysical survey of Tara has recently revealed the existence of a huge henge-like enclosure... The elliptical ground plan of this monument implies the deliberate incorporation of the Mound of the Hostages”.* (Newman, 1999) If Duma na nGiall and the henge, along with the 16m & 25m enclosures as discussed in Section 1 were contemporary, the henge would have interfered with the alignment of the mound’s passageway to the cross-quarter sunrises. Based on the evidence, the 13m enclosure is the reason why the henge incorporated the area, not Duma na nGiall. This style of enclosure within a henge, matches that of similar monuments in Ireland, none of which include a passage mound.



**Drawing of Henge & Enclosures**

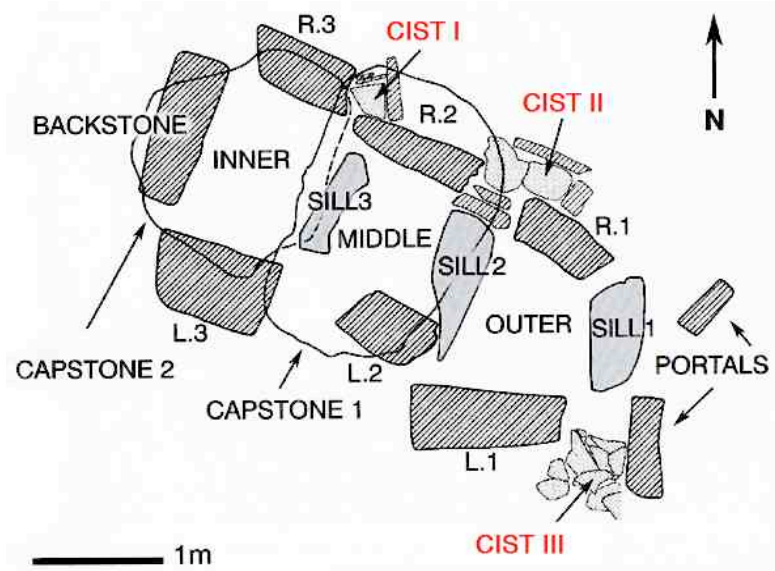


**Illustration of Henge & Duma na nGiall**



Henges of Ireland

Evidence that other remains have been incorrectly associated with Duma na nGiall, are the Neolithic burials of sixty-three (63) or more individuals in "three cists at the back of the orthostats... built within the bedding trench that had been cut into the bedrock to receive the orthostats. This appears to indicate what has often been suggested but can rarely be demonstrated, that the tomb chamber initially functioned as [a] free-standing funerary structure before the cairn was built around and above it." (Scarre, 2006) The "free-standing funerary structure" was the 13m enclosure, not the "tomb chamber".



Drawing by Ursula Mattenberger from the book 'Duma na nGiall, Tara, The Mound of the Hostages' by Dr. Muiris O'Sullivan

Plan of the Mound of the Hostages



*"what is particularly notable is the apparent lull in activity between the last Neolithic deposits in the tomb chamber (c. 2900 BC) and the renewal of interest in the Early Bronze Age, some six or seven centuries later, [four dates 2281 – 1943 BC] when a dozen or so burials were inserted in the chamber."* (Scarre, 2006) The last Neolithic burials were not inserted into the chamber, but rather the 13m enclosure. Several centuries later, the chamber and passageway were erected within the perimeter of the three cists. (see drawing, page 29)

Given that the monument's passageway is aligned with the cross-quarter sunrises, indicates that it was built for religious and/or astronomical purposes, not as a 'tomb', which supports the suggestion that the term 'passage tomb' is a misnomer. As such, its construction predated by a century or more, the enormous number of Early Bronze Age burials interred within the passageway which, as in the case of the henge, would have defeated the purpose of the passageway's alignment. Therefore, not even the Early Bronze Age burials, (2281 – 1943 BC) and the twenty (20) or more individuals buried within the mantle, (fourteen dates, 2131 – 1533 BC) can be assigned to its construction. In view of the evidence, any remains found within the chamber or passageway of Duma na nGiall, were in all probability placed there well-after it was constructed, either by a subsequent generation of the builders, perhaps due to a dramatic shift in religious practices, or by a different culture entirely.



**Excavation of the Mound of the Hostages**

While it is the opinion of some archaeologists that Duma na nGiall was constructed by the same people who built Knowth and Newgrange; based on the radiocarbon dates and similarity of the artwork, the facts don't support that belief. The most striking difference is its size and manner of construction, as compared to Knowth and Newgrange, not to mention the style of artwork at all three monuments appears throughout Ireland and Britain. And while it has also been argued that the henge enclosed the religious heart of Tara, i.e., Duma na nGiall, (Newman, 1999) that too is incorrect. In view of the symbols on the orthostat, An Forradh was always the religious

heart of Tara. Barring a complete re-excavation of Duma na nGiall, and dating any artifacts used in its construction found within the trenches where the orthostats were set, i.e., antler picks etc., determining a range of dates for its construction is extremely problematic.

Assuming for the purposes of argument that the remains have been correctly associated with Duma na nGiall, and therefore correctly date its construction to 3350 – 3100 BC, then two highly improbable events occurred.

**A)** The 13m enclosure was constructed a century or more prior to 3350 – 3100 BC, rather than 3030 – 2190 BC.

**B)** The 13m enclosure was only used for ceremonial purposes, and that during the century or more that it was in use, no artifacts or remains were left behind.

According to O’Sullivan, there is some evidence of activity in the Early Neolithic, based on the radiocarbon dates from two (2) samples of pre-cairn charcoal unearthed beneath Duma na nGiall, as well as some shards of possible Neolithic pottery and a Mesolithic chert flake. Based on the four (4) remaining charcoal samples, it was “suggested” that the 13m enclosure was constructed in the upper range of 3350 – 3100 BC. *“If the dates from Tara are of these materials, [a terrestrial reservoir] I would be very confident in the results, as long as short-lived material like seeds or leaves or twigs were selected for dating.”* (Higham, pers. comm.) Moreover, *“the resulting date measures only the time since the death of a plant... and it is up to the archaeologist to record evidence that the death of the organism is directly related to or associated with the human activities.”* (Morlan, 2001 – 05) There is no indication the charcoal came from the 13m enclosure, or that it and the shard are associated. As for the chert flake, *“this single item can hardly be used to indicate that the site was a ‘sacred place’...”*. (Twohig, 2006) Though the lower range for the Neolithic remains (2900 BC) and upper for the 13m enclosure (3030 BC) are in close agreement, there’s an obvious issue with the dating, as the henge and enclosures were likely constructed between “2500 – 2300 BC”. (see Section 2)

#### **Section 14: Radiocarbon Dating Issues & The Reservoir Effect**

Errors in radiocarbon dating can be attributed to a whole host of factors, one of which is the ‘reservoir effect’. With regards to the remains unearthed beneath Duma na nGiall, this anomaly was never taken into account. *“for the accurate dating of human bone samples when the*

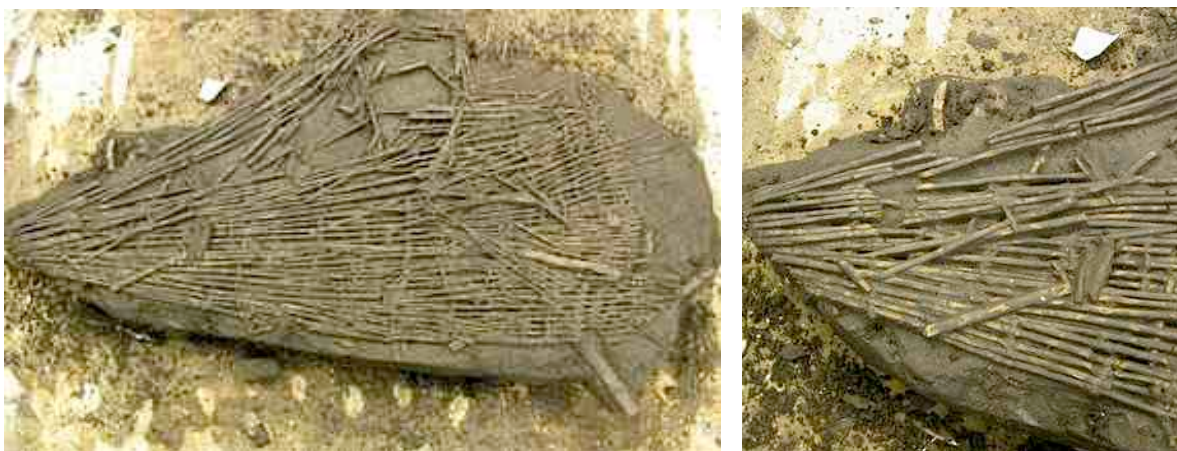
*possibility exists of an aquatic component in the dietary protein... d15N analysis should be undertaken routinely.*" (Cook, Bonsall, Hedges, McSweeney, Boroneant & Pettitt, 2001)

**A)** Ireland is an island. As such, its inhabitants, like every island culture, would have at least had a moderate diet of fish and shellfish. Furthermore...

**B)** Tara is located only a few kilometers from the Irish Sea, two rivers, the Boyne and the Liffey, and numerous tributaries. These would have provided the inhabitants with a readily available source of food. Evidence of this is...

**C)** A fish weir on the Boyne, just below Douth, again only a few kilometers from Tara, and...

**D)** The remains of two Mesolithic fish traps, along with a possible dugout canoe and dock unearthed in 2006 at Clowanstown 1, just southeast of Tara.



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#### **Mesolithic fish traps, Clowanstown 1**

With respect to the reservoir effect on the Carbon 13 & 15 values, *"we do not consider it likely that the dates have been affected by dietary factors."* However, the negative Carbon 13 values suggest a *"diet relatively poor in animal protein."* *"The same negative value could be expected in the case of moderate consumption of freshwater fish/shellfish, in which case the radiocarbon ages of these unburnt bone samples would be too old."* *"These apparent ages are about 400 years for marine fish and shellfish, and may be up to several thousands of years in the case of freshwater fish and shellfish."* *"The difference between a diet poor in protein and a diet including freshwater fish/shellfish is reflected in the d15N values."* *"It is too early to judge the significance of the d15N values. More work on Irish bone collagen is needed."* *"calibrated dates are still*

*affected by 'own age' and 'reservoir age'... and ideally should be corrected... In practice this is usually impossible.” (Brindley, Lanting & van der Plicht, 2005)*

### **Section 15: Tara – Phases of Construction**

Based on the facts presented and the historical record, i.e., the symbols on the orthostat, the following is a brief chronology of Tara.

**Phase 1:** A timber henge is erected, surrounding what later became An Forradh and Tech Cormáic, along with three or four smaller timber enclosures that were employed as burial sites.

**Phase 2:** A second timber henge is erected, surrounding what eventually became Ráith na Senad, along with the 13m, 16m & 25m enclosures that also are employed as burial sites. (3030 – 2190 BC)

**Phase 3:** The henge atop Tara, as well as its smaller enclosures are removed, and the oval or ring barrow An Forradh, along with Tech Cormáic and two other barrows are constructed, incorporating the burial sites within those enclosures.

**A)** The four barrows forming the linear barrow cemetery are constructed. These were satellite tombs, so they had to have been constructed after An Forradh, but added prior to its 6<sup>th</sup> rampart being added.

**B)** Over time, ramparts 3 – 6 are added to An Forradh, incorporating two unidentified barrows into ramparts 4 & 5, and Tech Cormáic, along with one of the barrows from the linear barrow cemetery, into its 6<sup>th</sup> rampart.

**Phase 4:** The henge surrounding Ráith na Senad, along with the 13m, 16m & 25m enclosures are removed, and the burial sites within the latter two remodeled.

**A)** The barrow we see today is constructed in place of the 25m enclosure, incorporating one or more burials.

**B)** The double court tomb is constructed in place of the 16m enclosure, the burials within, incorporated into the forecourt of the northwest facing tomb.

**C)** The oval barrow projecting from the southeast facing double court tomb is constructed.

**D)** The burials within the 13m enclosure are marked in some manner.

**Phase 5:** The remainder of the monuments depicted on the orthostat are constructed, which include Fothadh Gráine, Ráith Chaelchon, Ráith Laogháire, Tech Mairisen, Cuctain Cormáic, Cnoc Bó, Lecht Cu, Lecht Cethen and the Stone Circle.

**Phase 6:** The causeway within An Forradh's second rampart is extended through its inner (1<sup>st</sup>) rampart and ramparts 3 – 6, and Tech Cormáic's five (5) ramparts and causeway are constructed, making the orthostat obsolete.

**Phase 7:** Tara begins to evolve into the site we see today.

**A)** The now outdated orthostat is reused in constructing Duma na nGiall, where the 13m enclosure once stood.

**B)** Over time, the causeway and fosses between the 4<sup>th</sup> rampart and barrow within An Forradh are infilled, as are the causeway and fosses between Tech Cormáic's 3<sup>rd</sup> rampart and barrow, and Ráith na Ríg's inner (1<sup>st</sup>) rampart is constructed. This clears the way for the construction of Ráith Laogháire's 6<sup>th</sup> & 7<sup>th</sup> ramparts, and a number of the fosses between its 5<sup>th</sup> rampart and center are infilled.

**C)** The four ramparts of Ráith na Senad are constructed, incorporating the double court tomb, barrow and oval barrow.

**D)** Tech Midchúarta is constructed.

**Phase 8:** Ráith na Ríg's outer (2<sup>nd</sup>) rampart is added.

## Related Topics

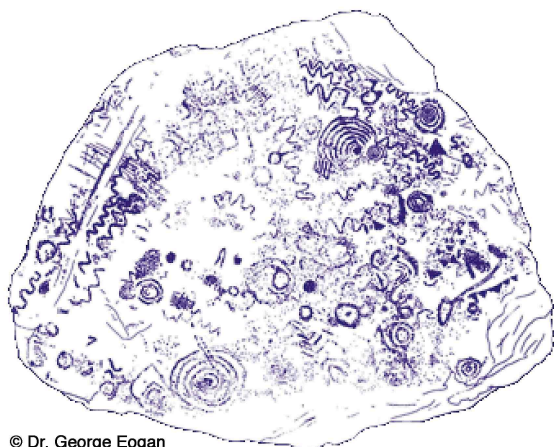
The foregoing evidence lays the foundation for interpreting similarly carved stones, not only in Ireland, but Britain and other parts of Western Europe. One such case is a panel of rock art found on a stone unearthed at Lismullin 1, which may represent at least two more monuments

within the Tara Complex. If in fact the symbols do depict two multi-vallated earthen structures, they perhaps were associated with the timber henge and souterrain also unearthed at the site.

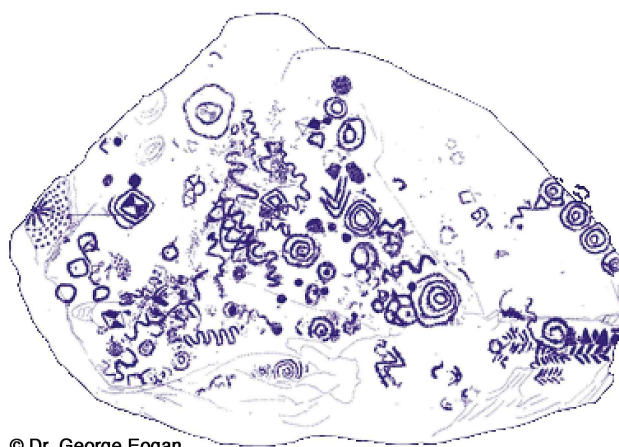


**Lismullin Stone**

An even more complex example than Tara, are the symbols on Orthostat 8 within Site 14 at Knowth. However, there are several issues which make it extremely difficult to match those symbols with what's in the landscape, the most significant being that, unlike Orthostat L.2 where the 'map' is of a relatively confined site, the Knowth 'maps' appear to cover a much broader area, and have several symbols which may represent natural features in the landscape rather than monuments. Additionally, there are monuments which have likely been erased from the landscape due to erosion and/or agriculture, monuments that underwent a major remodeling after being depicted on the orthostat, like An Forradh and Tech Cormáic, as well as monuments that were constructed after the orthostat became obsolete. (see 'Petroglyphs, the Bend in the Boyne')



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**Drawings of Orthostat 8, Site 14, Knowth**  
(Front & Rear Panels)

Lastly, with respect to rock art depicting monuments, there are many instances where groups of cups are surrounded by rings or various other shapes. These likely represent the boundary markers of burial plots, similar to what's seen in cemeteries dating back as far as the Roman occupation of Britain, most notably at Boscombe Down. *“One local trait is the way in which a few graves in all the cemeteries were set within small enclosures, similar to grave gardens or gardens of remembrance.”* (Wessex Archaeology, 2008)



**Boscombe Down**



**Backstone Beck,  
Northumberland**



**Ormaig, Argyll**



**Dodd Law, Northumberland**



**Townhead, Glasgow**



**Gardom's Edge,  
Derbyshire**

Ogham script consists mainly of personal names, particularly on burial and land boundary markers. (Green, 1996) Since it was of such importance for the Celts beginning around the 4<sup>th</sup>

century AD to proclaim themselves with their first written language, it's logical that it would have been just as important for the Neolithic, Bronze and Early Iron Age inhabitants of Ireland to do so as well, using symbols to depict names and land ownership.

Newgrange, Knowth and Dowth are supposedly cemeteries. When you visit any cemetery, be it ancient or modern day, somewhere on the tombs or headstones appear the names of those buried there, perhaps where they were from, along with their dates of birth and dates they died.

**A)** As to the names, it's likely that many of the carvings found on the kerbstones are an early form of heraldry. Comparing them to Irish Coats of Arms, there are designs that both share. This parallels the hypothesis by Dr. Katina Lillios in her book 'Heraldry for the Dead', though hers deals with designs found on Neolithic plaques buried with the remains of individuals in Portugal and Spain.

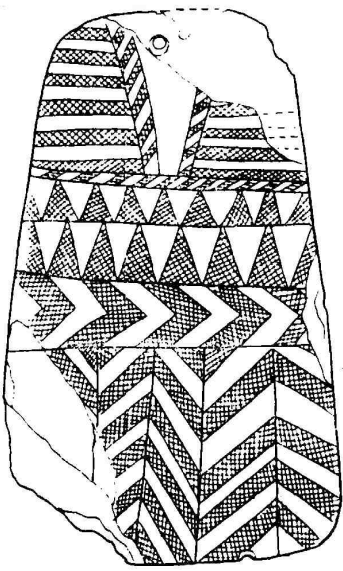


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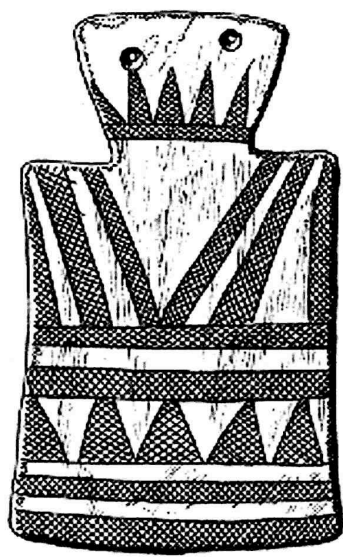


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**Kerbstones 52 & 67, Newgrange**



© Leisner & Leisner  
**Plaque -  
Evora, Portugal**



© Leisner & Leisner  
**Plaque -  
Cáceres, Spain**



**B)** Where they were from might be indicated by carvings depicting the monuments of their respective provincial kingships.

**C)** With respect to the dates, they could be depicted in the form of a lunisolar calendar of some type.

That said, in the case of Knowth, the one hundred and twenty-seven (127) kerbstones far outnumber the remains that have been excavated. So too do the ninety-seven (97) kerbstones at Newgrange. However, in light of the fact that Duma na nGiall was constructed atop the remains buried within the 13m enclosure, it's highly probable there are remnants of enclosures beneath the mantles at Knowth and Newgrange, the identities of the remains within them, corresponding to the kerbstones described above. The possibility of enclosures and burial cists being located beneath the mantles of similar earthen monuments in Ireland and Britain, may well apply to sites such as Silbury Hill in Wiltshire, England.

The foregoing raises three issues. First, whether the artifacts and/or remains unearthed at Knowth and Newgrange have been, as in the case of Duma na nGiall, incorrectly associated with their dates of construction. Secondly, whether the kerbstones and orthostats at both sites formed, or were part of, monuments predating the mounds, which would explain why there are carvings on other faces of the stones. Lastly, whether the inner section of the Western Passage at Knowth, (Site 1) was part of an earlier monument, which would explain the peculiar layout of the passageway as it exists today.

## **Conclusion**

In view of the evidence presented, the 'mapping hypothesis' not only tells us what the art is, but the panel sheds new light on Tara's evolution from a ceremonial site during the Neolithic, to that of a royal residence. More importantly, it serves as guide in locating several heretofore unknown monuments. Additionally, upon excavation, the wealth of artifacts and remains to be recovered from those newly identified monuments, will further rewrite the history of Tara. All things considered, the panel on Orthostat L.2, along with those found on hundreds of standing stones, orthostats and kerbstones throughout Ireland and Britain, are more valuable than any artifacts discovered to date with respect to their cultural and historical significance.

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