N18 Ennis Bypass
and N85 Western Relief Road

Site AR131, Claureen, Co. Clare

Final Archaeological Excavation Report

for Clare County Council

Licence No: 04E0026

by Graham Hull

Job J04/02

(NGR 132527 178047)

14th August 2006

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Summary

Site name: N18 Ennis Bypass and N85 Western Relief Road, Site AR131, Claureen, Co. Clare

Townland: Claureen

Parish: Drumcliff

Barony: Islands

County: Clare

SMR/RMP Number: N/A

Planning Ref. No: N/A

Client: Clare County Council, New Road, Ennis, Co. Clare

Landowner: Clare County Council, New Road, Ennis, Co. Clare

Grid reference: 132527 178047 (OSI Discovery Series, 1:50,000, Sheet 58. OS 6" Clare Sheet 33)

Naturally occurring geology: Cream coloured boulder clay with limestone pieces

TVAS Ireland Job No: J04/02

Licence No: 04E0026

Licence Holder: Graham Hull

Report author: Graham Hull

Site activity: Excavation

Site area: 1679m^2

Sample percentage: 100%

Date of fieldwork: 27th January to 3rd February 2004

Date of report: 14th August 2006

Summary of results: A small ring-ditch with a diameter of 6m was excavated. Cremated human bone and glass beads were recovered. The site has been radiocarbon dated to the late Iron Age.

Monuments identified: Late Iron Age funerary ring-ditch

Location and reference of archive: The primary records (written, drawn and photographic) are currently held at TVAS Ireland Ltd, Ahish, Ballinruan, Crusheen, Co. Clare.

Report edited/checked by: Kate Taylor ✓14.08.06

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Report J04/02x

Introduction

This report documents the final results of an archaeological excavation of an Iron Age funerary enclosure (Site AR131) on the route of the N18 Ennis Bypass and N85 Western Relief Road at Claureen, Co. Clare (NGR 132527 178047) (Fig. 1). The excavation forms part of the Ennis Bypass Archaeological Contract 7.

A preliminary archaeological report for this site was produced in May 2004 (Hull 2004).

The National Monuments Act 1930 (as amended) provides the legislative framework within which archaeological excavation can take place and the following government publications set out many of the procedures relating to planning/development and archaeology:

Framework and Principles for the Protection of the Archaeological Heritage (DAHGI 1999a)

Policy and Guidelines on Archaeological Excavation (DAHGI 1999b)

Code of Practice between the National Roads Authority and the Minister for Arts, Heritage, Gaeltacht and the Islands (NRA/MAHGI 2001)

Project background

As part of the National Roads Authority scheme for upgrading the N18 Limerick to Galway Road, Clare County Council, in consultation with NRA Project Archaeologist Sébastien Joubert, requested a series of archaeological investigations along the route of the proposed Ennis Bypass and a Western Relief Road. The proposed scheme has an overall length of 21km and involves the construction of a 13.8km eastern bypass of Ennis from Latoon, north of Newmarket-on-Fergus, to Cragard, north of Barefield. The Western Relief Road is 7.1km long and is to link Killow and Claureen (Fig. 1).

A number of sites of archaeological interest were known to lie on the route of the new roads and the mitigation strategy agreed by the Project Archaeologist and the national licensing authorities for these sites was preservation by record, i.e. full archaeological excavation. Further sites, without surface expression, were located as the result of intensive test trenching along the course of the road (03E1291 Hull 2003 and 03E1293 Roger 2004). As preservation *in situ* was not a reasonable option, the resolution strategy for these new sites was also preservation by record.

The archaeological excavation and post excavation work were funded by Clare County Council through the National Roads Authority and part-financed by the European Union under the National Development Plan 2000-2006.

Location, topography and geology

The site was located in the townland of Claureen, in the parish of Drumcliff, barony of Islands, approximately 1.5km north-west of Ennis town centre (the O'Connell Monument) and was centred on NGR 132527 178047 (Figs 1 and 2).

The site was located in a field that sloped gently to the south and was good pasture. Bedrock was seen to outcrop at the extreme north-east of the field.

The topsoil was between 0.15m and 0.20m thick and overlay ploughsoil with a depth of between 0.15m at the north and 0.25m at the south. This ploughsoil was a mid orangish brown clayey sandy silt with frequent small limestone pieces. Below the ploughsoil, naturally deposited cream coloured boulder clay was observed. Frequent plough scars cut this natural geology.

The archaeological deposits lay at approximately 5.9m above OD.

Archaeological background

As part of the environmental assessment process for the road scheme, Clare County Council commissioned desk-based and walkover surveys that formed part of an Environmental Statement (Babtie Pettit 2000) and an archaeological study for the Environmental Impact Statement (Doyle 1999). A total of 36 sites of known or potential cultural heritage significance were identified along the entire route of the proposed Ennis Bypass and Western Relief Road.

Earthwork and geophysical survey were undertaken on potential archaeological sites and invasive testing and excavation took place in 2002 and 2003 on some of the above ground sites affected by the proposed road (Aegis 2002, IAC 2003, Geoquest 2002, Earthsound 2003).

A systematic programme of testing along the new road route, involving the mechanical excavation of a central linear trench with offsets, took place in Summer/Autumn 2003. Twenty-two previously unknown sites, including cremation cemeteries, burnt stone spreads, enclosures and brick clamps were found (03E1291 Hull 2003 and 03E1293 Roger 2004). Monuments dating from the Bronze Age to the modern period were found.

Earlier phases of archaeological intervention on newly constructed stretches of the N18 (Dromoland to Carrigoran), to the immediate south of this road project, have demonstrated that the locality has a rich range of prehistoric and later monuments (99E0350 Hull and Tarbett-Buckley 2001).

Recent archaeological work on the BGE Gas Pipeline to the West in the neighbourhood of the new road route has tended to support the picture of continuous human activity in Co. Clare from the Neolithic and even becoming intensive from the Bronze Age. A number of burnt stone spreads and burnt mounds were excavated near the route of the new road in the summer of 2002 (MGL 2002).

A near perfectly circular gully with a diameter of 6m was discovered during testing (03E1291 Hull 2003). This enclosure was allocated the number AR131 and is the subject of this report.

Excavation aims and methodology

A licence to excavate was granted to Graham Hull by the National Monuments Section of the Department of the Environment, Heritage and Local Government, in consultation with the National Museum of Ireland, on behalf of the Minister for the Environment, Heritage and Local Government. The licence number is 04E0026.

The aims of the excavation were to:

1) Preserve by record all archaeological deposits and features within the excavation area
2) Produce a high quality report of the findings

The fieldwork took place between 27th January and 3rd February 2004 and was directed by Graham Hull, supervised by Richard Oram and assisted by Frank Mulcahy.

The excavation area was rectangular, centred on the enclosure seen during testing and examined 1679m^2. Topsoil and overburden were removed by a 15 tonne, 360º, tracked machine, operated under direct and continuous archaeological supervision. The spoil was visually scanned for artefacts.

A full written, drawn and photographic record was made following procedures outlined in the TVAS Ireland Field Recording Manual (First Edition 2003).

Excavation results (Figs 3 and 4 and Plates 1 to 4)

Two phases of activity were recorded, Iron Age and post-medieval. A complete context list is given as Appendix 1.

Topsoil and ploughsoil were removed by machine. The topsoil was between 0.15m and 0.20m thick and overlay ploughsoil with a depth of between 0.15m at the north and 0.25m at the south. This ploughsoil was a mid orangish brown clayey sandy silt with frequent small limestone pieces. Below the ploughsoil, naturally deposited cream coloured boulder clay was observed. Frequent plough scars cut this natural geology.

Iron Age

Beneath the ploughsoil and cutting the geological deposits, a penannular gully was recorded. This gully had a diameter of 6m and was typically 0.5m wide and 0.15m deep. The internal edge of the gully was steeper than the outside edge. The gully was given the Group Number 15.

Two stratigraphically distinct deposits were recognised within the gully. The primary fill (numbered 2,8,11, 13, 14, 17 and 18 for sampling and given Group Number 16) was a mid brown to black coloured sandy silt with moderate inclusions of charcoal and cremated bone. This deposit was found exclusively on the inner edge of the gully and was up to 0.15m thick. The secondary gully fill (3 and 12) was a mid reddish brown sandy silt with occasional sub-rounded small stones. Small pieces of clay pipe and brick and tile were found at the surface of this deposit and suggest that ploughing had introduced intrusive modern material.

Given the presence of probable cremated human bone, the entire gully fill was 100% sampled for post-excavation processing (sieving). The gully was divided into five lengths (and given five context numbers) for the purpose of identifying possible concentration of bone deposits. No patterning of bone distribution was apparent at excavation.

Post-medieval

A rectangular pit (4) was seen at the north-west of the circular gully. This pit measured 1.2m by 0.9m and was 0.25m deep. The pit sides were steep and the base was flattish. A singular fill (6) was recorded. This fill was a mid reddish brown sandy silt with moderate inclusions of angular stones, 0.05m to 0.1m across. Late post-medieval material (brick and tile, clay tobacco pipe) was recorded in the fill. The feature is likely to be a soakaway. No direct relationship between the soakaway and the circular gully could be discerned at excavation, even though a section across both features was dug to attempt to resolve the stratigraphic relationship.

No other features were found within the excavation area.

Finds

Finds numbers were allocated to twenty objects or collections of objects. A catalogue of finds is given as Appendix 2. The finds are glass beads, pottery, cremated bone, pieces of iron, fragments of quartz and slag.

The finds have been cleaned, numbered, labelled, properly packed and will be deposited with the National Museum of Ireland in accordance with *Advice Notes for Excavators* (NMI 1997).

Glass by Graham Hull

Three small glass beads (04E0026:1–3), deriving from the primary gully fill (contexts 2, 3 and 13), were recovered during sieving (Fig. 5 and Plate 5). The beads are perforated discs with rounded edges.

Bead 04E0026:1 is dark blue, has a diameter of 4.5mm and is 2mm thick. The central threading hole has a diameter of 1mm.

Bead 04E0026:2 is yellow, has a diameter of 3mm and is 1.5mm thick. The central threading hole has a diameter of 1mm.

Bead 04E0026:3 is yellow, has a diameter of 2.5mm and is 1.5mm thick. The central threading hole has a diameter of 1mm.

In the absence of a specifically Irish glass bead typology, the categories proposed by Guido (1978) have been used. The yellow glass beads are Guido's (*ibid*.) Class 8 – small opaque annular beads with flattened surfaces. The yellow glass was produced by an admixture of lead, antimony and tin and the colour was probably chosen to imitate amber. It is likely that the beads have a Mediterranean origin and may have been made in Carthage or Phoenicia in the period 250 BC to AD 50 (Guido 1978, 16-17 and 73-76).

The blue glass bead is Guido's (1978, 17-18.) Group 6 (ivb) – undecorated annular. The blue hue comes from cobalt and this bead colour was relatively rare until the Roman period.

Similar glass and amber beads have been recovered from other Irish Iron Age ring barrows/ditches.

Doyle's excavation at Kilmahuddrick, Co. Dublin (2006) recovered part of an amber bead (diameter 5mm and threading hole 2mm - 00E0448:3) and a probably originally yellow glass bead (diameter 3mm and threading hole 1.5mm – 00E0448:4). These beads were heat affected suggesting, in contest to the Claureen examples, that they with the body when cremated. The Kilmahuddrick beads are from contexts that produced radiocarbon dates of cal BC 393 to 192 and cal BC 992 to 822.

Up to fifty tiny yellow glass beads were found during the excavation of an Iron Age ring ditch with human cremation burial at Ferns, Wexford (Ryan 1999) and similarly sized beads (including yellow and blue) were found during the excavation of an Iron Age ring ditch at Ballydavis, Co. Laois (Keeley 1999).

Pottery by Graham Hull

A single base sherd of a small ceramic vessel (04E0026:4) was found in the topsoil. This piece of pottery is probably delft and dates to the late 18th/early 19th century.

Bone analysis by Sîan Anthony

Methodology

Bone from nine contexts from Site AR131 was examined. All deposits were part of the fill of a small ring gully and represented cremation burials and redeposited pyre debris or potentially cenotaph-type memorial deposits (McKinley 2000). The contexts were subject to whole-earth recovery and then wet-sieved to a 2mm fraction, all small pieces of bone were scanned rapidly as in many cases deposits only produced fragments under 1 or 2mm in size. The bones were not separated into size, so percentage fragmentation could not be calculated however the majority of fragments were less than 2mm leaving a lack of recognisable pieces throughout the assemblage.

Human osteological analysis followed recommendations from McKinley (1994, 2000) and Brickley and McKinley (2004). Mammalian bones were identified using standard texts (Hillson 1992 and Getty 1975), all were rapidly scanned and bones damaged on excavation were rejoined and counted as one bone.

The majority of the cremated bones were relatively well preserved, although some deposits retained a slightly worn and chalky appearance, trabecular bone was poorly represented with general limb bones and skull pieces often noted. However this is more likely from the easily identifiable nature of these pieces rather than any recognisable pattern in deposition. It has been demonstrated that trabecular bone and easily recognised articular surfaces are lost in adverse soil conditions (Neilson-Marsh et al 2000).

The small amount of cremated material may be a result of truncation; much of the original deposit may simply not have been recovered. However in some cases the weight of bone is unlikely to represent a true cremation burial deposit, often they are likely to represent redeposited pyre debris.

Results

Six deposits produced very small amounts of cremated human bone weighing 117g (Table 1). Identified bones include skull, scapula and pelvis fragments, however many pieces were recognised only as limb bone pieces without even being identifiable to upper or lower limbs. Maximum fragment size was not higher than 22mm and the majority of fragments measured less than 2mm, almost all were completely oxidised indicating high temperatures upon cremation.

Discussion

The weight of the bone in each deposit indicates that they may not be in situ pyre deposits but redeposited material or like sites AR100 (Hull 2006) and AR104 (Taylor 2006) only representative memorial or cenotaph burials. No deposit produced demographic data limiting interpretation of individuals.

Table 1: Catalogue of bone

Find Number	Cut	Deposit	Sample Number	Species	Pres.	Burnt?	Colour	Total	Weight (g)	Maximum fragment size (mm)	Comments
04E0026:5	5	13	6	Human		70	White	70	40	21	Fragments, 9 skull inc frontal and 1 orbital, 1 radius fragment, 1 pelvis, 2 phalange shafts
04E0026:6	10	14	7	Human		30	White, some grey	30	10	23	Fragments
04E0026:7	10	11	5	Human		20	White	20	6		Upper limb bones observed
04E0026:8	19	17	8	Human		30	White	30	11	16	Fragments, 1 upper limb, 1 rib, 1 tooth root
04E0026:9	20	18	9	Human		40	White, occ grey colour	40	27	22	Fragments, 1 ilium, large flatter pieces, 1 phalange fragment
04E0026:10	5	8	4	Human		40	White	40	16	17	Fragments
04E0026:11	5	7	3	Human		14	White	14	3		Limb bone fragments observed
04E0026:12	1	3	2	Human		15	White, occ grey colour	15	2	13	1 fragment of acetabulum or scapula head
04E0026:13	1	2	1	Human		17	White	17	2		Fragments

Metal by Graham Hull

Pieces of iron (04E0026:14–18) were recovered from five contexts within the gully. Two of these pieces (04E0026:14 and 04E0026:16) were x-rayed and conserved by ArchCon Labs and proved to be square section nails. As these objects came from a context disturbed by modern agricultural activity that also included transfer print china (not retained), it is thought that the nails are not ancient. The other pieces of metal were ferruginous but were very small undiagnostic fragments and it is not possible to state if these were artefactual.

Slag by Graham Hull

A very small quantity of what appears to be ferruginous slag (04E0026:21) was recovered by sieving from a disturbed portion of the gully fill (cut 5). This material may represent ancient metalworking or be intrusive modern deposits.

Lithics by Dr Steve Ford

A collection comprising nineteen lithic items was recovered from two contexts (Table 2). The material was recovered from sieved samples, which accounts for some of the minute finds recovered. All nineteen items were minute fragments of quartz. It is unclear how much if any of this material was a product of flaking as quartz does not, by and large, exhibit conchoidal fractures. Yet the material can produce sharp edges (cf Knight 1991) and its presence here in areas where the natural material does not outcrop but may be found locally in drift deposits (Briggs 1988) suggests it was brought to the site and used. The minute fragments here are too small for use *per se* but might represent retouch chips.

Table 2: Catalogue of lithics

Find No.	Cut	Deposit	Sample	Description	Weight
04E0026:19	5	8	4	6 fragments quartz, 1 purple	<1g
04E0026:20	10	11	5	13 fragments quartz	<1g

Samples

Bulk soil samples were taken from nine contexts. These samples were floated and then wet sieved through 300micron and then 2mm sieves in order to recover charred plant remains and small finds. Large quantities of charcoal (approximately 1300g in total) were recovered from each of the nine sampled contexts. A catalogue of samples and results is given as Appendix 3.

Charred plant macrofossils and other remains by Val Fryer

Introduction

Nine samples for the extraction of the plant macrofossil assemblages were taken from the ditch/gully fills.

Methods

The samples were floated and wet sieved by TVAS Ireland Ltd, and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed below on Table 3. Nomenclature within the table follows Stace (1997). All plant remains were charred. The density of material within

each assemblage is expressed in the table as follows: x = 1 – 10 specimens, xx = 10 = 100 specimens and xxx = 100+ specimens.

Results

Plant macrofossils

Charcoal fragments formed the principal component of all nine assemblages. A single fragment of hazel (*Corylus avellana*) nutshell was noted in sample 3, and a poorly preserved dock (*Rumex* sp.) fruit was recovered from sample 4. Small pieces of charred root/stem were present in samples 4, 5, 7, 8 and 9.

Other materials

Small fragments of burnt bone were noted in samples 2, 3, 4, 6 and 9. The fragments of black 'cokey' and tarry deposits are probably either derived from the cremation processes or are residues of the combustion of other organic materials at very high temperatures.

Table 3: Charred plant macrofossils and other remains

Sample No	1	2	3	4	5	6	7	8	9
Cut No	1	1	5	5	10	5	10	19	20
Deposit No	2	3	7	8	11	13	14	17	18
Corylus avellana L.			x						
Rumex sp.				xcf					
Charcoal <2mm	xx	xx	xx	xxx	x	xxx	xxx	xxx	xxx
Charcoal >2mm	xx	x	xx	xxx	xx	xxx	xxx	xxx	xxx
Charred root/stem				x	x		x	x	x
Indet seed				x					
Black porous 'cokey' material		x	x	x	x	x			
Black tarry material		x	x	x	x		x	x	x
Bone		xb	xb	xb		xb		x	xb
Burnt/fired clay									x
Burnt stone								x	
Small coal fragments			x	x	x	x			
Sample volume (litres)	7	8	10	15	10	20	7	8	20
Volume of flot (litres)	<0.1	<0.1	<0.1	0.6	<0.1	0.6	0.5	0.5	0.7
% flot sorted	100%	100%	100%	25%	100%	25%	25%	25%	25%

b = burnt

Conclusions

It would appear that wood/charcoal was the principal fuel used for the cremation processes at this site.

Charcoal by Simon Gannon

Introduction

Eight samples of charcoal fragments were retrieved from eight contexts from the site, consisting of a ring ditch. Identification of taxa of the retrieved charcoal may assist in the reconstruction of the local, contemporary woodland-environment and the use of the woodland resources by the people responsible for the archaeological features.

Methods

In sorting fragments suitable for identification a guide size of at least 2mm in radial cross-section was used. In this sort some samples were found to contain an unusually large number of fragments and sub-samples were taken, as detailed in Analysis Results.

Initially the grain direction of the fragments was identified before fracturing across their transverse plains. Identifications were made under microscopic examination, in most cases. Further fractures were made to reveal radial and/or tangential plains in cases where identification was more difficult. Magnification of between x10 (hand lens) to x400 was used. Structural elements of the fragments were examined to allow for identification of roundwood, heartwood, and sapwood features.

Reference material comprised a reference collection of charred samples of taxa and reference publications, *Microscopic Wood Anatomy* (Schweingruber 1990) and *The Identification of the Northern European Woods* (Hather 2000).

Analysis Results

The results are summarized in Table 4. Classification follows that of *Flora Europae* (Tutin *et al*. 1964-1980). Certain related taxa cannot be securely differentiated on the basis of their anatomical characteristics and are assigned to their respective family groups as with the genera *Salix* and *Populus*, and the genera *Craetaegus*, *Malus* and *Sorbus*. Provisional identifications have been given in cases where the condition of the charcoal was degraded.

The various identifications of wood taxa were consistent with taxa from the following groups:

<u>Broadleaf taxa</u>
Betulaceae. *Alnus* sp., alder.
Corylaceae. *Corylus* sp., hazel.
Fagaceae. *Quercus* sp., oak.
Oleaeceae. *Fraxinus* sp., ash.
Rosaceae.
Subfamily Pomoideae. *Craetagus* sp., hawthorn; *Malus* sp., apple; *Sorbus* spp., *Sorbus aucuparia*, rowan; *S. aria*, whitebeam; *S. hibernica*, Irish whitebeam, and other *Sorbus* species.
Prunus sp., *Prunus avium*, wild cherry; *P. spinosa*, blackthorn; *P. padus*, bird cherry.
Salicaceae. *Salix* sp., willow; *Populus* sp. poplar.

Table 4: Number of identified fragments per sample

Sample	Cut	Deposit	Context type	*Alnus*	*Betula*	*Corylus*	*Corylus/ Alnus*	*Fraxinus*	*Pomoideae*	*Prunus*	*Quercus*	*Salicaceae*	*Taxus*	*Ulmus*
1	1	2	Gully fill	-	-	-	-	104	-	-	-	-	-	-
2	1	3	Gully fill	-	-	-	-	14	-	-	-	-	-	-
3	5	7	Gully fill	-	-	-	-	5	-	-	-	-	-	-
4	5	8	Gully fill	-	-	99	-	1	3	-	3	-	-	-
5	10	11	Gully fill	-	-	-	-	33	-	1	-	-	-	-
6	5	13	Gully fill	-	-	-	-	101	3	-	-	-	-	-
7	10	14	Gully fill	-	-	-	-	52	-	-	-	-	-	-
8	19	17	Gully fill	-	-	3	-	99	1	-	-	-	-	-
9	20	18	Gully fill	-	-	-	1	100	3	-	1	1	-	-

Discussion

Anatomical characteristics from charcoal fragments do not allow for identification of individual species in every case. Several species belong to groups of species, species of genera, of sub-families and of families that cannot be separated anatomically (Schweingruber 1990, Hather 2000). It is possible that a narrow range of species and, occasionally, one or two species can be indicated with a degree of confidence due to established factors, principally their native status and history of introduction by people (Huntley and Birks 1983, Peterken 1996 and Scannell and Synott 1987). The following section places the given charcoal based taxa identifications in the context of defined tree species allowing for implications related to their environmental characteristics and possible use by ancient peoples to be drawn. Consulted reference works pertaining to environmental factors included Goldstein *et al* 1984, Hather 2000, Huntley and Birks 1983, Mitchell 1978, Scannell and Synott 1987 and Tutin *et al* 1964-1980. Kelly 1998, O'Sullivan 1996, Rackham 1976-1990 and Raftery 1996, were consulted in relation to the uses different tree species may have served in antiquity.

Taxa descriptions

Alder

The sole native species is *Alnus glutinosa*, Common Alder, Irish fearnóg (family – Betulaceae).
Environment indications. Tolerant of nearly all soil types including relatively infertile soils, such as ironpan and peaty soils. Particularly tolerant of water logged conditions and is often a streamside tree. Has the ability to 'pioneer' into previously disturbed land. Native distribution throughout Ireland.
Uses in antiquity. A hardwood suitable for a variety of artefacts and smaller structural timber. Tends to harden when in contact with water and therefore suitable for making piles etcetera. It burns quickly when used for firewood but has been found suitable for charcoal production.

Hazel

There is a single native species, *Corylus avellana*, hazel, coll (family - Corylaceae).
Environmental indications. Botanically a shrub, but does not flower and fruit without sunlight, so is really a canopy tree preferring woodland edges and clearings though it bears moderate shade and is also found as understorey, typically in oak woodlands. Fairly tolerant of poor soils but does not grow on acid soils and preferring chalky, fertile, deep soil. Growing throughout Ireland.
Uses in antiquity. A tough and flexible wood, useful for small implements and small structural elements. Also grows easily in coppice-like form producing rods suitable for wattle and basketry type structures. Makes useful firewood.

Ash

There is a single native species, *Fraxinus excelsior*, ash, fuinseog (family - Oleaceae).
Environmental indications. Requiring deep, fertile, moist but well drained, soils. Grows well in mixed stands when not shaded. Widespread throughout Ireland.
Uses in antiquity. A strong but elastic wood suitable for many purposes including structural timber (not where in prolonged contact with water or soil). Coppices readily. Burns well even when green, partly due to low water content.

Hawthorn/ *Sorbus*

The represented species is probably one or more of the following native members of the sub-family Pomoideae that includes several *Sorbus* species. (Family - Rosaceae).

Crab Apple, *Malus sylvestris*, cran fia-úll; hawthorn, *Crataegus monogyna*, sceach geal.

Environmental indications. Both species. Very rugged and adaptable to almost any climate and most soil types, requiring moist soil and can grow in semi-shade or no shade. Natural distribution throughout Ireland.
Uses in antiquity. Both species produce a very hard close grained wood, suitable for small implements such as mallets and splitting wedges. Both species make excellent fuel; *C. monogyna* can also make livestock barriers and is noted for being the hottest firewood.

Sorbus. One or more of the native group of at least six species that includes, the most widespread rowan, *Sorbus aucuparia*, caorthann, as well as whitebeam, *Sorbus aria*, fionncholl coiteann; and Irish whitebeam, *Sorbus hibernica*, fionncholl ghaelach.
Environmental indications. General. Very tolerant of soil quality generally, though requiring moist soil. Tolerating light shade, though fruiting better in a sunny position. Effective pioneer, Rowan natural to all of Ireland. Other *Sorbus* species native to Ireland have a much more restricted range within Ireland and elsewhere, with Irish whitebeam found only in Ireland.
Uses in antiquity. Heavy, close grained hard wood suitable for carving and useful for making bows, tool handles, mallet heads and, if sizable, beams etcetera. Coppices well.

Oak

There are two native species, pedunculate oak, *Quercus robur*, dair ghallda and sessile oak, *Quercus petraea*, dair ghaelach. (Family - Fagaceae).
Environmental indications. Broadly soil tolerant. Q. robur preferring alkaline or neutral soils rich in minerals, particularly damp clay soils and usually found in mixed woodland. Q. petraea preferring acid and lighter well drained soils, often in pure stands. Both species are naturally distributed throughout Ireland.
Uses in antiquity. Both species produce a hard wood resistant to abrasion and water degradation, particularly useful for structural timber and implements, poles and fencing. Woodland trees can be coppiced to produce stakes, straight poles etcetera. The density of oak wood makes for an optimum long lasting fire fuel (Rossen and Olson 1985).

Willow /poplar

The Salicaceae family provides various possible individual species, native to Ireland, including ten or more from the genera of willows and one from the genera of poplars.
Willow
There are ten or more willow species native to Ireland, though some having restricted range. Examples of the more widespread species being eared willow (*Salix aurita*), crann sníofa; goat willow (*Salix caprea*), sailchearnach; and grey willow (*Salix cinerea*), saileach liath.
Environmental indications. Extremely hardy and tolerant of a wide range of soils and habitats, often growing in, though not restricted to, wet places. Not tolerant of drought. *S. cinerea* and *S. purpurea* are not particularly shade tolerant, *S. caprea* is reputably more tolerant of shade. These are ‘pioneer’ species and can move into areas where the soil has been disturbed such as cleared woodland.
Uses in antiquity. Very tough and flexible wood useful for woven structures. Brittle branchwood not suitable as timber breaks violently when burnt. The stems are very flexible. Coppiceable, it can produce stout poles.

Poplar
Aspen, *Populus tremula*, crann creathach.
Environmental indications. Tolerant of poor soils growing on scrub, frequent on damp sites on hillsides, in rocky valley bottoms. A woodland tree where not under canopy. Moderately tolerant of drought as mature tree, not at all as a seedling. A short-lived pioneer tree. Native to Ireland.
Uses in antiquity. Wood is very soft with limited usefulness, of low flammability but making good charcoal.

The total range of taxa from AR131, Claureen, comprises hazel (*Corylus*), alder (*Alnus*), ash (*Fraxinus*), hawthorn/apple/*Sorbus*-group (Pomoideae), cherry/blackthorn (*Prunus*), oak (*Quercus*) and willow/poplar (Salicaceae). The represented taxa belong to the groups of species represented in the native Irish flora and, conversely, non-native tree species such as lime (*Tilia*) and beech (*Fagus*) are not represented.

Generally, there are various, largely unquantifiable, factors that effect the representation of species in charcoal samples including bias in contemporary collection, inclusive of social and economic factors, and various factors of taphonomy and conservation (Schweingruber 1990). On account of these considerations the identified taxa are not considered to be proportionately representative of the availability of wood resources in the environment in a definitive sense and are possibly reflective of particular choice of fire making fuel from those resources.

Ash (*Fraxinus*) is the most numerous of the identified taxa at this site, and in all the site samples except Sample 4. Ash (*Fraxinus*) is a typically common charcoal from the Ennis Bypass sites, the second most numerous taxon overall, and is a particularly useful fire fuel as well as being a commonly used structural/artefactual wood that may have had subsequent use as fire fuel. Sample 4 is almost wholly hazel (*Corylus*) and may represent an activity distinct from those responsible for the creation of the ash (*Fraxinus*) dominated charcoal debris.

Conclusion

The identified taxa are broadly consistent with the picture of wood use from the other Ennis Bypass sites with ash (*Fraxinus*), hazel (*Corylus*), hawthorn/apple/*Sorbus*-group (Pomoideae), oak (*Quercus*), cherry/blackthorn (*Prunus*) and willow/poplar (Salicaceae) represented. Ash (*Fraxinus*) is particularly dominant in this site and is a probable preferred fire fuel from a local environment providing a ready access to this species.

Radiocarbon date

One radiocarbon determination was made by Beta Analytic Inc, Miami, Florida, from charcoal from the fill of the ring-ditch (Table 5).

Table 5: Radiocarbon determination

Sample material	Cut	Deposit	Sample	Lab code	Radiometric age	Calendrical calibrations
Charcoal Fraxinus	10	14	7	Beta-207732	2010±40 BP	2 sigma (95%) Cal BC 100 to Cal AD 70 1 sigma (68%) Cal BC 50 to Cal AD 40

The sample material was selected from a relatively short-lived tree species to avoid the ‘old wood effect’. The date is therefore likely to fairly accurately reflect the backfilling of the ring-ditch.

The radiocarbon determination indicates that the burial was taking place at the ring-ditch at the very end of the 1st millennium BC and very beginning of the 1st millennium AD (the later Iron Age).

Discussion

The excavation of Site AR131 at Claureen, Co. Clare has examined a small ring-ditch, dated to the Iron Age and used as a funerary monument.

The distribution of cremated bone, charcoal and finds suggests a bias of deposition to the west half of the monument (see Fig. 3). A similar, and at present undated, monument was excavated on an earlier phase of N18 road works at Ballyconneely, Co. Clare, 10km to the south-west (Hull 2001). This ring-ditch demonstrated discrete structured deposition of cremated bone within the ditch fill. The cremated bone in the Claureen ring-ditch did not seem to have been so precisely placed as might be expected if the bone were placed in a container (for example a bag).

As already noted (bone report above), the small amount of cremated material may be a result of truncation and much of the original deposit may simply not have been recovered. However in some cases the weight of bone is unlikely to represent a true cremation burial deposit, often they are likely to represent redeposited pyre debris. The burials are therefore likely to be cenotaph (or memorial) and may therefore reflect the symbolic collection of small amounts of material from the pyre.

The three small glass beads and possibly the quartz crystals were not heat affected and are likely to be offerings deposited with the cremated bone. The probable Mediterranean origin of the beads might suggest that these pieces were valuable commodities. Similarly, the charred hazelnut shell may have been from food for the dead but it could equally have derived from accidental burning in the pyre.

Cremation burial was the dominant form of disposal of the dead for the last millennium BC up to the 5th century AD and the placing of personal ornaments (such as beads) and other artefacts with the burnt remains seems to have commenced from the last centuries BC onwards (McGarry forthcoming) and site AR131 is, in this respect, typical of its time as parallels for the glass beads and monument form itself have been recognised (see for example Doyle 2005, Hull 2001, Ryan 1999 and Keeley 1999)

Burial in the Iron Age was commonly within monuments such as barrows or in ‘flat’ sites. The Claureen ring-ditch is clearly of the former type and, given the degree of truncation noted on the site, was probably once a larger monument – perhaps a ring barrow with a low bank complimenting the circular gully.

Archaeological potential off the road CPO

The archaeological deposits were excavated in their entirety within the road CPO. Further archaeology off the CPO in this area cannot be ruled out.

Publication plan

A summary of the findings of the excavation has been submitted to *Excavations 2004*.

Copies of this final excavation report will be deposited with the Clare County Museum and the Local Studies Library, Ennis, Co. Clare

A summary article, describing the findings of this road project has been published in the local journal *The Other Clare* (Hull and Taylor 2005).

An illustrated information brochure describing the findings of this road project has been published by Clare County Council.

The stated aim of the National Roads Authority with regard to archaeological publication is clear, (O'Sullivan 2003) and it is anticipated that the results of this excavation will be disseminated as a component of a monograph dedicated to the archaeology of the Ennis Bypass. Publication is expected to take place in 2006/7 at the latest.

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TVAS Ireland Ltd
14th August 2006

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Appendix 1: Catalogue of features and deposits

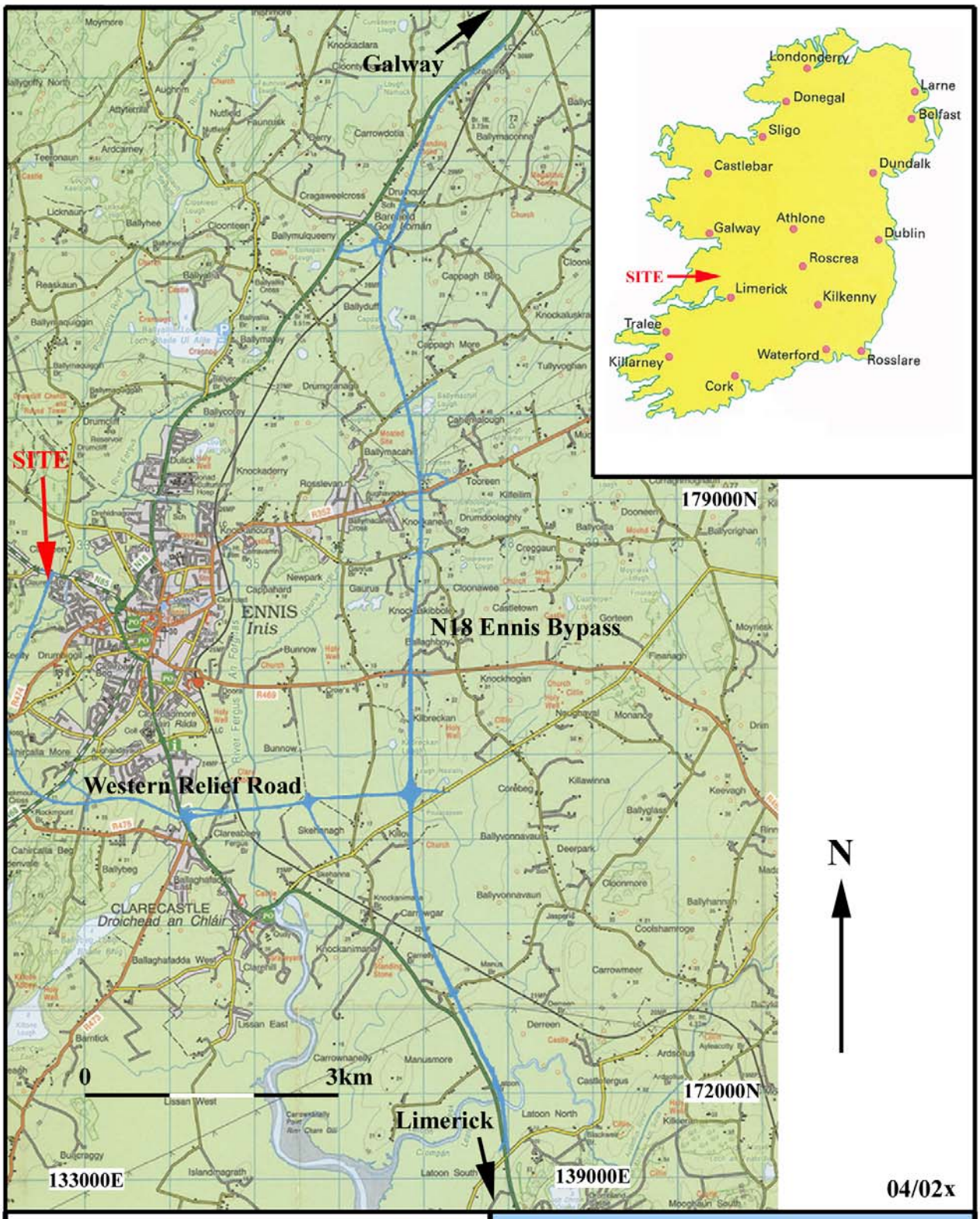
Context No.	Slot	Description	Sample No.	Finds
1	1	Gully cut	-	-
2	1	Fill of 1	1	Glass bead; cremated bone
3	1	Fill of 1	2	Cremated bone
4	2	Pit cut	-	-
5	2	Gully cut	-	-
6	2	Fill of 4	-	-
7	2	Fill of 5	3	Cremated bone
8	2	Fill of 5	4	Glass bead; cremated bone; metal fragments; quartz
9	2	Fill of 5	-	-
10	3	Gully cut	-	-
11	3	Fill of 10	5	Cremated bone; metal fragments; quartz
12	3	Fill of 10	-	-
13	2	Fill of 5	6	Glass bead; cremated bone; metal fragments
14	3	Fill of 10	7	Cremated bone
15	All	Group No. Gully cut – composed of 1, 5, 10, 19 and 20	-	-
16	All	Group No. Gully fill – composed of 2, 8, 11, 13, 14 and 17	-	-
17	5	Fill of 19	8	Cremated bone; metal fragments
18	4	Fill of 20	9	Cremated bone; metal fragments
19	5	Gully cut	-	-
20	4	Gully cut	-	-

Appendix 2: Catalogue of finds

Find No	Cut	Deposit	Sample	Category	Description	No pieces	Weight
1	1	2	1	Glass	Blue bead	1	<1
2	5	8	4	Glass	Yellow bead	1	<1
3	5	13	6	Glass	Yellow bead	1	<1
4	-	Topsoil		Pottery	Base of vessel	1	7
5	5	13	6	Bone	Cremated bone fragments (human)	70	40
6	10	14	7	Bone	Cremated bone fragments (human)	30	10
7	10	11	5	Bone	Cremated bone fragments (human)	20	6
8	19	17	8	Bone	Cremated bone fragments (human)	30	11
9	20	18	9	Bone	Cremated bone fragments (human)	40	27
10	5	8	4	Bone	Cremated bone fragments (human)	40	16
11	5	7	3	Bone	Cremated bone fragments (human)	14	3
12	1	3	2	Bone	Cremated bone fragments (human)	15	2
13	1	2	1	Bone	Cremated bone fragments (human)	17	2
14	5	8	4	Metal	Iron nail?- square sectioned shaft	2	1
15	10	11	5	Metal	Metal fragments	ca.30	1
16	5	13	6	Metal	Iron nail?- square sectioned shaft	2	1
17	20	18	9	Metal	Metal fragments	3	<1
18	19	17	8	Metal	Metal fragments	2	<1
19	5	8	4	Stone	Quartz fragments	6	<1
20	10	11	5	Stone	Quartz fragments	13	<1
21	5	8	4	Slag	Slag? Microslag?	12	<1

Appendix 3: Catalogue of samples

Sample No	Cut	Deposit	Volume sieved (L)	Volume floated (L)	Finds?	Flot weight (gm)
1	1	2	7	7	Cremated bone; bead	>10
2	1	3	8	8	Cremated bone	>10
3	5	7	10	10	Cremated bone	>10
4	5	8	15	15	Cremated bone; bead; metal; quartz	220
5	10	11	10	10	Cremated bone; metal; quartz	>10
6	5	13	20	20	Cremated bone; bead; metal	330
7	10	14	7	7	Cremated bone	200
8	19	17	8	8	Cremated bone; metal	160
9	20	18	20	20	Cremated bone; metal	390



N18 Ennis Bypass, Site AR131,
Claureen, Co. Clare
04E0026

Figure 1: Site location

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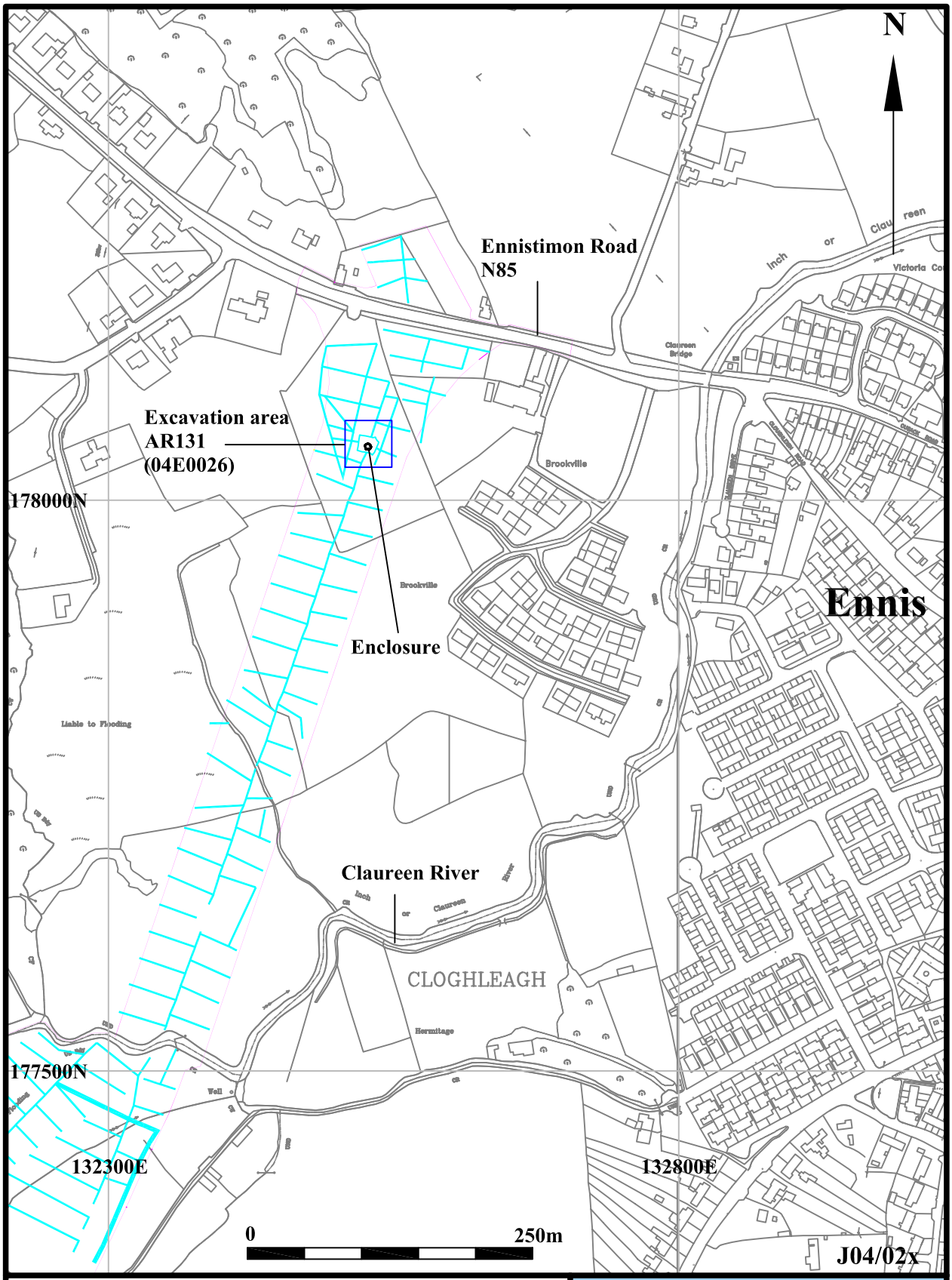

N18 Ennis Bypass, Site AR131, Claureen, Co. Clare

04E0026

Figure 2: Location of site within local landscape. Showing test trenches (03E1291)

Scale 1:5000 OSI Licence: AR0049406 Copyright OSI & Govt. of Ireland

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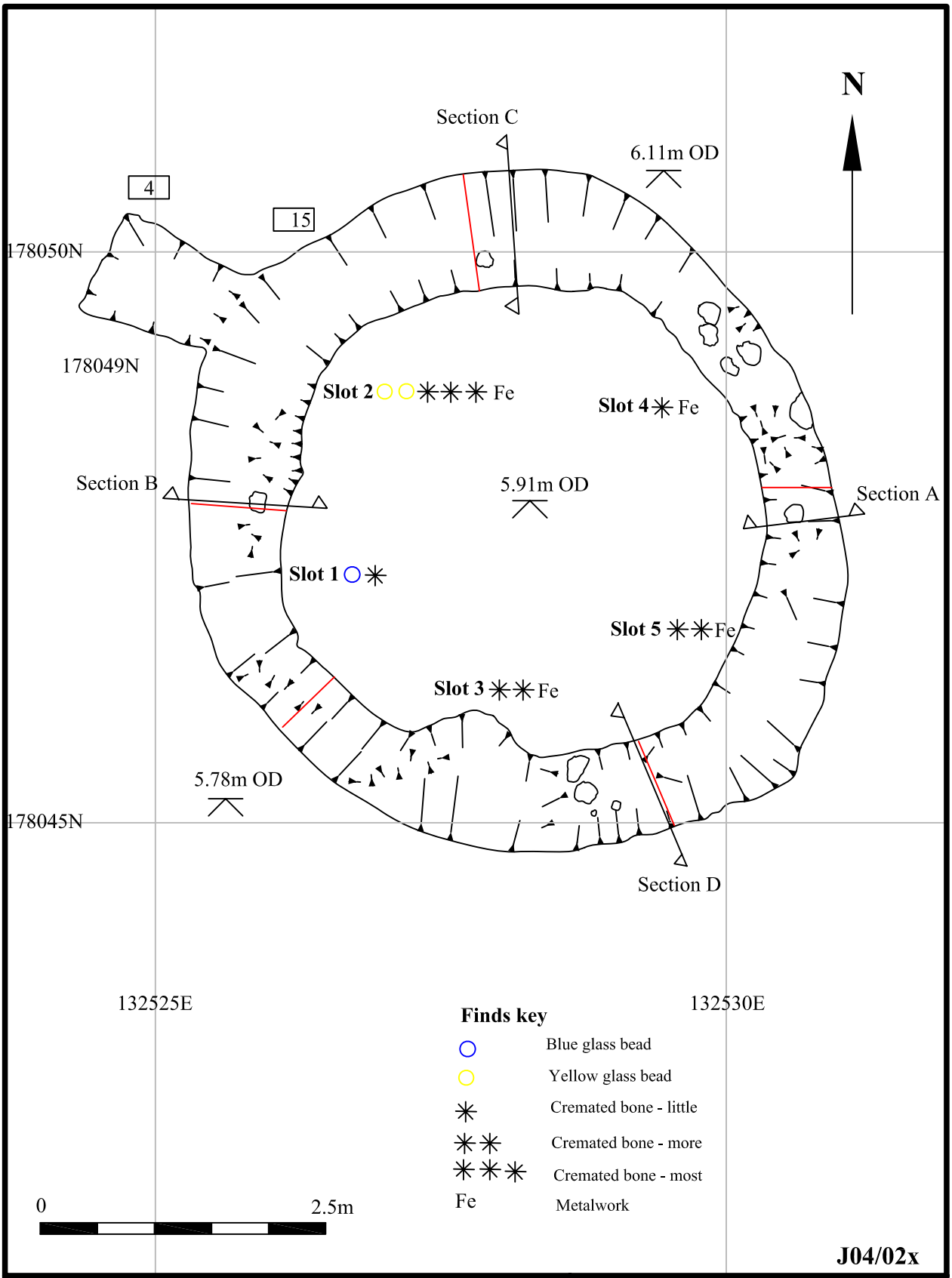

N18 Ennis Bypass, Site AR131, Claureen, Co. Clare

04E0026

Figure 3. Enclosure (Group Number 15)
Showing location of finds

Scale 1:50

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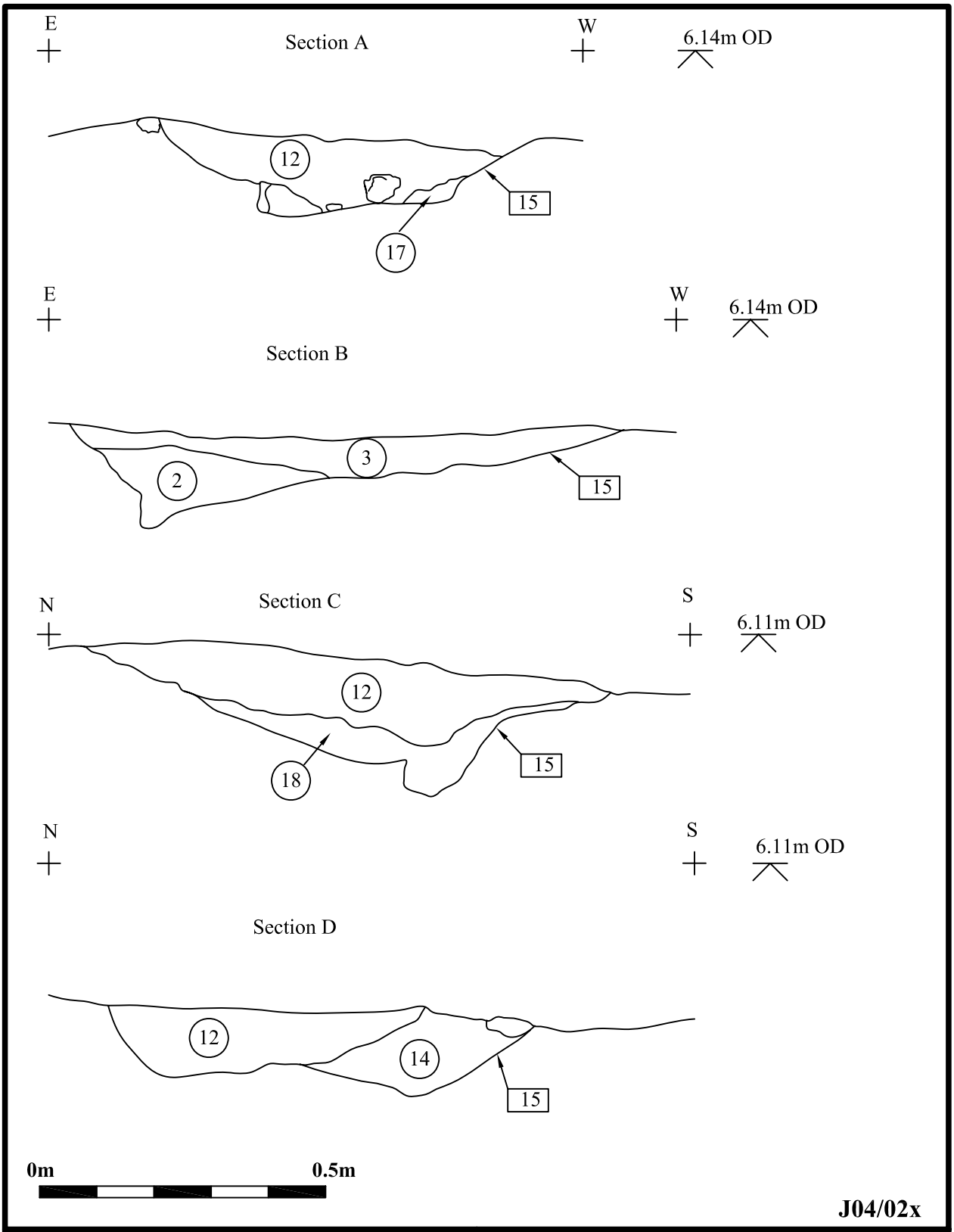

J04/02x

N18 Ennis Bypass, Site AR131, Claureen, Co. Clare
04E0026

Figure 4: Sections across gully of enclosure 15

Scale 1:10

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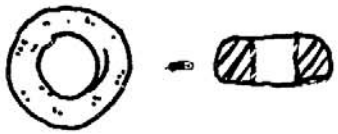
04E0026:1 Blue glass bead, cut 1, fill 2

04E0026:2 Yellow glass bead, cut 5, fill 8



04E0026:3 Yellow glass bead, cut 5, fill 13

0 15mm

J04/02x

N18 Ennis Bypass, Site AR131, Claureen, Co. Clare, 04E0026

Figure 5: Glass beads from ring-ditch

Drawn Astrid Nathan

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Plate 1: Site AR131. Pre-excavation. Looking south-east

Plate 2: Site AR 131. Ring-ditch fully excavated. Looking south-east. Scales 1m and 0.3m

04E0026

Plate 3: Slot 10 across ring-ditch. Looking north-east. Scales 0.3m and 0.1m

Plate 4: Ring-ditch during excavation. Looking north-west

04E0026:1 04E0026:2 04E0026:3

0 5mm

Plate 5: Glass beads