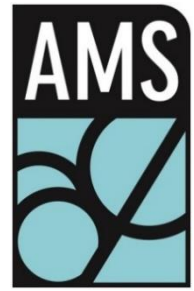


# Appendix C17.06d

## Archaeological Investigations (Testing) Programme Results

### TA4 Murlough Stage (i)a Test Excavation and Stage (i)h Metal Detection Survey Report

# Archaeological Consultancy Services Contract: Stage (i): TEN-T Priority Route Improvement: TA4 Murlough Updated Stage (i)a Test Excavation and Stage (i)h Metal Detection Survey Report



Prepared for Donegal County Council  
By Denis Shine and James McKee

Licence Nos.: 20E0487 and 20R0182

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## TITLE PAGE

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**Project Name:** TEN-T Priority Route Improvement Project: Stage (I), Co. Donegal

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**Site Types:** Non archaeological

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## Executive Summary

This updated report describes the results of Stage (i)a Standard Test Excavations and Stage (i)h Metal Detection Surveys in the townland of Murlough as part of the Archaeological Consultancy Services Contract of the TEN-T Priority Route Improvement Project. This road scheme is covered by the Code of Practice agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs (now the Minister for Housing, Local Government and Heritage) and Transport Infrastructure Ireland (TII) (TII 2017). TII nominated Orlaith Egan as Project Archaeologist with responsibility for the management of all archaeological aspects of the project.

The TEN-T Priority Route Improvement Project is part of the Trans-European Transport Network and comprises the construction of three sections of new road: Section 1: N15/N13 Ballybofey/Stranorlar Urban Region; Section 2: N56/N30 Letterkenny to Manorcunningham; and Section 3: N14 Manorcunningham to Lifford/Strabane/A5 link. Murlough, in Section 3, is one of five Testing Areas (TAs) along the preferred route of the TEN-T project which require Stage (i)a Test Excavations and Stage (i)h Metal Detection Survey Services. The results of works at the other TAs will be reported in separate reports, with works in each location being undertaken under different licence numbers.

The total Stage (i)a testing linear metres excavated at Murlough was 328m, representing a 12% sample of the greenfield area available for test excavations. During the Stage (i)a testing at Murlough, no features of archaeological significance were recorded, and anomalies identified during the geophysical survey were largely explained by modern drainage features. No evidence of a recorded standing stone (DG070-048), or a pit associated with the stone identified through LiDAR analysis, was recorded during testing.

Stage (i)h Metal Detection surveys also uncovered no archaeologically significant artefacts, although a single flint artefact was recovered from topsoil during the archaeological testing.

As no archaeological features were encountered at Murlough, no further archaeological mitigation is recommended at this Testing Area.

## Acknowledgements

This report has been prepared by Archaeological Management Solutions (AMS) Ltd on behalf of Donegal County Council.

All archaeological excavations and surveys and other relevant archaeological works required were carried out under a licence issued by the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (formerly the Department of Culture, Heritage and the Gaeltacht), in consultation with the National Museum of Ireland (NMI).

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## Disclaimer

The results, conclusions and recommendations contained within this report are based on information available at the time of its preparation. Whilst every effort has been made to ensure that all relevant data has been collated, the authors and AMS accept no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

## Abbreviations and Definitions

Abbreviation	Definition
AMS	Archaeological Management Solutions Ltd
EIAR	Environmental Impact Assessment Report
GPS	Global Positioning System
ITM	Irish Transverse Mercator
NMI	National Museum of Ireland
NMS	National Monuments Service
OD	Ordnance Datum
OS	Ordnance Survey
RMP	Record of Monuments and Places
SMR	Sites and Monuments Record
TA	Testing Area
TII	Transport Infrastructure Ireland

## Coordinate System

All coordinates are in Irish Transverse Mercator (ITM)

## 1 Introduction

This report describes the results of Stage (i)a Test Excavations and Stage (i)h Metal Detection Survey Services in the townland of Murlough as part of the Archaeological Consultancy Services Contract of the TEN-T Priority Route Improvement Project (Figures 1–8).

This road scheme is covered by the Code of Practice agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs (now the Minister for Housing, Local Government and Heritage) and Transport Infrastructure Ireland (TII) (TII 2017). TII nominated Orlaith Egan as Project Archaeologist with responsibility for the management of all archaeological aspects of the project.

### 1.1 Brief Description of the Approved Scheme

The TEN-T Priority Route Improvement Project is part of the Trans-European Transport Network and comprises the construction of three sections of new road: Section 1: N15/N13 Ballybofey/Stranorlar Urban Region; Section 2: N56/N30 Letterkenny to Manorcunningham; and Section 3: N14 Manorcunningham to Lifford/Strabane/A5 link. Murlough, in Section 3, is one of five TAs along the preferred route of the TEN-T project which require Stage (i)a Test Excavations and Stage (i)h Metal Detection Survey Services. The results of works at the other TAs will be reported in separate reports, with works in each location being undertaken under different licence numbers.

**Table 1: Names of townlands which contain Testing Areas**

Testing Area	Townland	Civil Parish	ITM	Licence Nos.
<b>TA1</b>	Drumboe Lower	Stranorlar	613410, 895454	20E0455 and 20R0167
<b>TA2</b>	Trimragh and Drumgreggan	Leck	621237, 911224	20E0501 and 20R0183
<b>TA3</b>	Carnshannagh	Drumcliffe	628587, 904423	20E0502 and 20R0184
<b>TA4</b>	Murlough	Drumcliffe	631615, 899290	20E0487 and 20R0182
<b>TA5</b>	Curragehalane	Drumcliffe	632263, 897206	20E0503 and 20R0185

### 1.2 Planning Background

Stage (i)a Test Excavations and Stage (i)h Metal Detection Survey Services in the townland of Murlough were undertaken to provide further information as part of the design and environmental evaluation phase of the TEN-T Priority Route Improvement Project, Co. Donegal.

The investigations described herein are at one of five areas along the preferred route of the TEN-T project and include the areas as listed in Table 1 above.

### 1.3 Statutory Approvals

The test excavations detailed in this report were carried out under Licence No. 20E0487 (Test Excavations). The metal detection survey was undertaken under Licence No. 20R0182. Permits were issued by the Department of Culture, Heritage and the Gaeltacht (now Department of Housing, Local Government and Heritage) in consultation with the National Museum of Ireland (NMI).

### 1.4 Previous Assessments and Documented Archaeological Sites

There have been no previous intrusive archaeological investigations for the TEN-T project. An Environmental Impact Assessment Report (EIAR) is currently being prepared by Kate Robb of John Cronin and Associates but was not available at the time of writing. Geophysical and LiDAR assessments undertaken in 2020 are described in further detail below.

A total of five documented archaeological sites were subject to Stage (i)a Standard Test Excavation Services and Stage (i)h Metal Detection Survey Services, as listed in Table 2 below.

**Table 2: Documented archaeological sites subject to Stage (i)a Standard Test Excavations**

TA No.	Townland	RMP No	ITM	Classification
TA1	Drumboe Lower	DG078-005	613410, 895454	Site of Church
TA2	Trimragh and Drumgreggan	DG53-028 and DG053-28001	621237, 911224	Site of Church and Graveyard
TA3	Carnshannagh	DG062-024	628587, 904423	Site of Enclosure
TA4	Murlough	DG070-048	631615, 899290	Site of Standing Stone
TA5	Curraghalane	DG070-082	632263, 897206	Souterrain

### 1.5 Archaeological and Environmental Context

The TA is located within the townland of Murlough, c.330m from Murlough church and school. The site is currently used for pasture/silage, and historically is recorded as pasture. The preferred route of the road passes directly over the 'site of' standing stone DG070-048, which is located c.335m south of the R264 road (Figure 2). The Sites and Monuments Record (SMR) simply records the following on the standing stone site: 'There is no trace of the 'Standing Stone' marked on the 1st edition of the OS 6-inch map. Situated on the side of a hill, on good land falling away to N and W'.

The TA is in two irregularly shaped pasture fields which fall to the west and north and are surrounded by mature hedgerow. The easternmost of these fields, where testing took place (see below), contains a well-defined north-facing slope. On the first-edition six-inch Ordnance Survey (OS) map (1836), the site is contained in three smaller square fields, with a set of farm buildings/homestead 95m to the

north and a trackway to the east and west, which have since been removed (Figure 3). Murlough school and chapel are shown c.330m to the northeast of the standing stone site.

The 25-inch OS map surveyed 1900–05 indicates that the ‘modern’ field system had been established around the site by this time, with the removal of some field boundaries as well as the trackways and farm buildings (Figure 4). Otherwise, the immediate landscape around the site remains largely unchanged.

Geophysical surveys identified possible pits, stone deposits and ditches, including a possible enclosure; these were concentrated in the eastern field where archaeological testing progressed. A shallow pit was also recorded in LiDAR close to the recorded site of the standing stone, which was interpreted as possibly representing the socket of the original stone’s location.

Within a 0.5km radius of the standing stone site (DG070-048) are a total of two other previously recorded monuments (Table 3), representing early prehistoric settlement in the immediate area of the scheme, possibly dating from the Bronze Age. One other standing stone (DG070-049) is located 185m to the south, while another standing stone DG070-050 is located 250m south of the site under the site of a farmstead which defines the field’s southern boundary (Figure 2).

**Table 3: Recorded archaeological monuments within a 0.5km radius of TA4, Murlough**

SMR No.	Townland	Classification	ITM
<b>DG070-048</b>	Murlough	Standing Stone (site of)	631630, 899335
<b>DG070-049</b>	Murlough	Standing Stone (site of)	631593, 899156
<b>DG070-050</b>	Murlough	Standing Stone (site of)	631563, 899096

## 2 Methods

### 2.1 Aims and Scope of Stage (i) Test Excavations

The overall aim of Stage (i)a Test Excavations was to ascertain the location, nature, date, character, extent and significance of any archaeological features or deposits that may be present in the areas assigned for testing. In this way, the horizontal extent of all archaeological sites/features/deposits and the vertical extent of archaeological stratigraphy could be established and a preliminary report on the findings produced.

Stage (i)a Test Excavation Services were carried out across a minimum of 12% of the testable greenfield areas and also targeted anomalies recorded in the geophysical survey undertaken between May and October in 2020 (Gimson 2020).

### 2.2 Survey and Excavation Methods

The Stage (i)a Test Excavations undertaken within the footprint of the Testing Area were carried out by a single team, utilising one mechanical excavator, working under the direction of James McKee and Denis Shine. Apart from the directors, the team consisted of a supervisor and two site assistants. Survey services were provided by Daniel Keane. The Senior Archaeologist on the project was Denis Shine.

The Stage (i)a Test Excavations took place at Murlough on 21 and 22 September 2020 with (i)h Metal Detection Surveys completed across all TAs (except TA1) the week commencing 14 September 2020. The Stage (i)h metal detection surveys were completed by Ed Danaher and Ger Dowling, with additional metal detection undertaken on the trench spoil by the testing team (see below; also Plate 3).

The total area available for test excavations at Murlough was approximately 0.99 greenfield hectares; originally this was intended to be larger and located across two fields. The western field was ultimately omitted from the scope of testing, as landowner access was not secured and because this field was considered of lesser archaeological potential. Confirmation was received from TII Archaeologist Orlaith Egan that this western field will no longer be tested, with this report now constituting a description of all Stage (i)a Test Excavations for Murlough.

A proposed (indicative) test trench layout was set out in the testing Method Statement submitted to the National Monuments Service (NMS) on 24 August 2020 (McKee 2020). In general, the test trenching layout followed a standard array consisting of a centreline trench in each field with offset trenches at right-angles, at regular intervals and to the limits of the footprint of the field or Testing Area. In some places, the layout was adapted to target features identified either through geophysics

or during the course of testing and to ensure adequate testing of available lands. The location of each test trench was 'set-out' and re-surveyed after excavation, where required, using GPS equipment by the AMS surveyor (see below).

As part of the investigations, topsoil was removed from the test trenches by a 13-tonne 360° mechanical excavator equipped with a toothless grading bucket working under the direct and continuous supervision of an Excavation Director. Where archaeologically significant features were identified, these were cleaned and tested by hand. Context numbers were used sequentially at each site, starting from number 1. A written and photographic record was prepared of identified features, and all trenches and features were surveyed using a Leica Viva GS20 with smart antenna GPS and related to Ordnance Datum (OD) and the Irish Transverse Mercator Grid (ITM).

The testing areas were assessed and recorded in accordance with the archaeological Method Statement, the contract with Donegal County Council and in a manner consistent with the Code of Practice agreed between TII and the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs (TII 2017). A full list of features and finds recovered are included in the appendices.

### 2.3 Finds Retrieval and Sampling Methods

Every effort was made to ensure the highest possible level of identification and retrieval of archaeological objects in the course of excavations. Archaeological objects of all periods were retained at each TA, with the exception of obvious 'scrap' or modern metal. Only a single possible worked piece of flint, from topsoil, was recovered from Murlough (see Appendix 2).

The treatment of artefacts complied with the policies of the NMI as set out in *Advice Notes for Excavators* (NMI 2010) and the Code of Conduct for the Treatment of Archaeological Objects ratified by the Institute of Archaeologists of Ireland (IAI 2006).

None of the finds recovered during the works required immediate conservation; however, provision was made for this during the works, as required and set out in the Method Statement.

Finds were housed temporarily on-site and following this at the AMS Head Office where they are currently stored. The storage of artefacts has been undertaken in accordance with the *Advice Notes for Excavators* (NMI 2010).

### 2.4 Specialist Contributions and/or Consultations

There were no specialist contributions during the Stage(i)a works. As a result of the test excavation process a single stone object was recovered. The stone object was examined by Dr Conor Brady to

provide an identification where possible and to ascertain typology and geological composition. The results of Conor's assessment have been incorporated into this report (Appendix 2).

## 2.5 Radiocarbon Dating

As part of the Stage(i)a works, samples from select contexts at three of the five sites investigated on the TEN-T Priority Route Improvement Project were forwarded to the <sup>14</sup>CHRONO Centre, Queens University Belfast for priority radiocarbon dating. The nominated sites were Drumboe Lower, Carnshannagh and Curraghalane (Table 4).

**Table 4: Samples for priority radiocarbon dating on TEN-T Priority Route Improvement Project**

Site name	Site type	Sample No.	Context	Sample type
Drumboe Lower 1	Enclosure	6	C.17: fill of enclosure ditch C.11	Barley ( <i>Hordeum vulgare</i> )
Carnshannagh 1	Settlement, possible	1	C.12: fill of pit C.11	Barley ( <i>Hordeum vulgare</i> )
Curraghalane 1 & 2	Enclosure	3	C.6: upper fill of enclosure ditch C.27 (Curraghalane 1)	Barley ( <i>Hordeum vulgare</i> )
Curraghalane 1 & 2	Settlement, possible	2	C.12: fill of pit C.54 (Curraghalane 2)	Hazel ( <i>Corylus</i> )

## 2.6 Conditions

The weather conditions during the Stage (i) works were mild and dry.

## 2.7 Constraints on Methods

As stated above, the western field was not accessible during Stage (i)a works and was ultimately omitted from the testing programme. Trenches 24 and 25 were also positioned under an overhead powerline and directly adjacent an ESB pole, and as such hand digging was undertaken in this location. Trenches which could not be excavated are presented in Table 5. It ought to be noted, however, that additional trenches were excavated in the eastern field where the required/planned linear meterage of trenching was met.

**Table 5: Trenches not completed**

Trenches	Reason not excavated
1–13	These trenches were contained in the western field at Murlough, which was subsequently omitted from Stage (i)a Test Excavations.

### 3 Stage (i)a Test Excavation Results

The total linear metres excavated was 328m (Plates 1–11), representing a greater than 12% sample of the greenfield area available for test excavations. During the Stage (i)a, testing no archaeological features were identified at Murlough.

#### 3.1 Murlough Results

Townland	Murlough
No. of Trenches	14 (26 originally planned)
Total Meterage	328m

##### 3.1.1 Summary

Murlough's Testing Area (TA4) contains the 'site of' standing stone DG070-048, which is located c. 335m south of the R264 road. The proposed testing is in two irregular shaped pasture fields, which fall to the west and north, and are surrounded by mature hedgerow. As stated only the eastern field was tested, with access not secured to the western field, which was subsequently omitted from the Stage (i)a scope of works. In total 14 test trenches were excavated, totalling 328 linear metres (Figures 6–8; Plates 1 and 11). The topsoil (C.1) ranges, in average, from 0.10m to 0.40m in depth, being deeper towards the base of slopes, notably at Trench 26. The natural subsoil (C.2) is predominantly a mottled, light orangey-brown silty clay.

Table 6: Test trench detail

Area	Trench	Length (m)	Width (m)	Archaeological Features	Non-Archaeological Features
E Field	14	36	1.8	N/A	N/A
E Field	15	24	1.8	N/A	N/A
E Field	16	33	1.8	N/A	N/A
E Field	17	12	1.8	N/A	Y
E Field	18	10	1.8	N/A	N/A
E Field	19	27	1.8	N/A	N/A
E Field	20	7	1.8	N/A	N/A
E Field	21	19	1.8	N/A	Y
E Field	22	24	1.8	N/A	N/A
E Field	23	16	1.8	N/A	Y
E Field	23 ext.	44	1.8	N/A	Y
E Field	24 E	4	1.8	N/A	N/A
E Field	24 W	4	1.8	N/A	N/A
E Field	25 N	4	1.8	N/A	N/A
E Field	25 S	5	1.8	N/A	N/A

Area	Trench	Length (m)	Width (m)	Archaeological Features	Non-Archaeological Features
E Field	26	44	1.8	N/A	Y
E Field	27	15	1.8	N/A	N/A
W Field	Not accessible	N/A	N/A	N/A	N/A

### 3.1.2 Geophysical and LiDAR Survey

In 2020 several anomalies were identified in at Murlough (Figure 6) in geophysical surveys carried out by Heather Gimson (Earthsound Geophysics: licence 20R0078) to investigate numerous archaeological areas and potential archaeological areas within and adjacent to the preferred routes of the TEN-T Project.

Preliminary results revealed c.4 geophysical anomalies at Murlough, interpreted as possibly archaeological in nature. These include possible pits, stone deposits and ditches. Of note one of these ditches consists of a 59m long western segment and 29m long eastern segment, with a gap in the middle, which collectively enclose the bottom of a hill in the eastern field; this feature was considered as likely to be archaeological, but was subsequently resolved as modern drainage features (see below). Anomalies from the western field, which was not subsequently tested, are considered less likely to be archaeological.

An archaeological LiDAR survey was also commissioned for the TEN-T Project by Donegal County Council to capture low and high resolution data to assist with the archaeological assessment of the TEN-T study area as part of the Design and Environmental Assessment Phase. The archaeological LiDAR data was captured and provided by BlueSky and subsequently assessed by Dr Richard Clutterbuck of AMS (Clutterbuck 2020). LiDAR results at Murlough identified a single site (L354-1) as follows: 'Standing Stone (SMR:DG070-048----), removed; nothing apparent on LiDAR in SMR location; probable location of removed standing stone 22m SSE at shallow pit 6.1m wide by 0.5m deep'.

No evidence of this feature was found during testing, despite the trenches being fully excavated and cleaned by hand in this area.

### 3.1.3 RMP Site DG070-048

Testing at Murlough was conducted in close proximity to site of the possible standing stone DG070-048, which is located in the middle of the eastern field of the TA.

### 3.1.4 Archaeological Features

No archaeological features were encountered at Murlough.

### *3.1.5 Non-Archaeological Features*

Several modern features were identified during Stage (i)a testing works, predominantly representing several attempts to successfully drain the field. As several of these features were located in locations associated with the 'enclosure' identified during geophysical survey, all were carefully sectioned to prove modern origin. Of note a concrete culvert (C.5=C.8=C.16) partly explained the anomaly mapped on the geophysical survey as the southwestern limits of the enclosure (Figure 8). The landowner explained this culvert ran across the field in a direction consistent with part of the geophysical anomaly. The middle part of the 'enclosure' was explained by the presence of early modern/modern ditch and drain ([C.10] and [C.11]; filled by C.3 and C.12).

A full list of recorded context numbers is presented in Appendix 1 (see also Plates 5 to 9).

## 4 Metal Detection Survey

### 4.1 Aims and Scope of the Stage (i)h Metal Detection Survey Services

Metal detection surveys were completed across four TAs in the week starting Monday 14 September by Ed Danaher and Ger Dowling. Stage (i)h surveys were completed previously at Drumboe, during a programme of site works, from Monday 31 August to Friday 4 September.

### 4.2 Survey Methodology

The metal detection survey employed a metal detector with a penetration depth of 0.5m and was designed to recover from the topsoil all items of metalwork of possible historical or archaeological significance. All finds were recorded using a Leica Viva GS20 with smart antenna GPS and related to Ordnance Datum (OD) and Irish Transverse Mercator Grid (ITM).

### 4.3 Survey Constraints

There were no constraints on the metal detection survey at Murlough.

### 4.4 Survey Results

The results of the metal detector surveys are summarised below in Table 7. None of the finds recovered during the works required immediate conservation. Finds were housed temporarily on-site and following this at the AMS Strokestown Office. They are currently stored at the AMS Post-Ex Facility in Kilrush (see also below).

**Table 7: Artefacts recovered from Metal Detection Surveys**

Testing Area	Description	Licence Number
<b>TA 1 (Drumboe)</b>	Seven objects (three unidentified iron, one iron staple, one iron horseshoe, one tip or sock of plough share and one copper alloy buckle)	20R0167
<b>TA 2 (Trimragh)</b>	One copper alloy halfpenny coin	20R0183
<b>TA 3 (Carnshannagh)</b>	One coin and a single lead waste piece (note: a copper alloy fitting was recovered from spoil during testing)	20R0184
<b>TA 4 (Murlough)</b>	None	20R0182
<b>TA 5 (Curragalane)</b>	One copper alloy sixpence coin and one copper alloy mount	20R0185

Spoil was also metal-detected during archaeological testing at each TA. No finds of archaeological significance were recorded during detection of spoil at Murlough (Plate 3).

## 5 Discussion

No archaeological features were identified during the test trenching at Murlough. The geophysical anomalies identified as a possible enclosure were resolved as a series of modern drainage features, representing at least two phases of drainage at the site (one of which is recalled by the local landowner). No evidence of the standing stone (or a pit associated with the stone in LiDAR surveys) was recorded during testing.

## 6 Significance of Findings

The following significance criteria have been taken from Appendix 2 of the *Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes* (NRA 2005). They are not presented in any ranking order but can be used to evaluate the significance of an archaeological site, monument or complex. They should not, however, be regarded as definitive; rather they are an indicator which contributes to a wider judgment based on the individual circumstances of each feature.

### Existing Status

The level of protection associated with a monument or complex is an important consideration.

### Condition/Preservation

The survival of a monument's archaeological potential both above and below ground is an important consideration and should be assessed in relation to its present condition and surviving features. Well-preserved sites should be highlighted; this assessment can only be based on a field inspection.

### Documentation/Historical Significance

The significance of a monument may be enhanced by the existence of records of previous investigations or contemporary documentation supported by written evidence or historical maps. Sites with a definite historical association or an example of a notable event or person should be highlighted.

### Group Value

The value of a single monument may be greatly enhanced by its association with related contemporary monuments or with monuments from different periods indicating an extended time presence in any specific area. In some cases, it may be preferable to protect the complete group, including associated and adjacent land, rather than to protect isolated monuments within that group.

### Rarity

The rarity of some monument types can be a central factor affecting response strategies for development, whatever the condition of the individual feature.

### Visibility in the Landscape

It is important to recognise sites that have a limited distribution. Monuments that are highly visible in the landscape have a heightened physical presence. The inter-visibility between monuments may also be explored in this category.

### Fragility/Vulnerability

It is important to assess the level of threat to archaeological monuments from erosion, natural degradation, agricultural activity, land clearance, neglect, careless treatment or development.

The nature of the archaeological evidence cannot always be specified precisely but it may still be possible to document reasons to justify the significance of the feature. This category relates to the probability of monuments producing material of archaeological significance as a result of future investigative work.

**Amenity Value**

Regard should be taken of the existing and potential amenity value of a monument.

**6.1 Murlough**

**Existing Status:** Contains Recorded Monument DG070-048 (site of Standing Stone)

**Condition/Preservation:** N/A

**Documentation/Historical Significance:** The identification of a standing stone at the site on the first-edition six-inch Ordnance Survey (OS) map (1836) indicates a past historical significance for the site.

**Group Value:** Two standing stones (site of) are located 185m to 250m south of the site.

**Rarity:** N/A

**Visibility in the Landscape:** N/A

**Fragility/Vulnerability:** N/A

**Amenity Value:** N/A

**Conclusion:** No evidence of the recorded standing stone or any other archaeology was recorded; as such the eastern field of the Testing Area is considered to be of **no** archaeological importance.

## 7 Impact Statement & Recommendations

No archaeological features were identified during Stage (i) testing at Murlough, and anomalies identified during the geophysical survey were largely explained by modern drainage features. No evidence of the standing stone, or a pit associated with the stone identified through LiDAR analysis, was recorded during testing.

As no archaeological features were encountered at Murlough, no further recommendations are made for the eastern field at Murlough.

The western field was not accessible during Stage (i)a works and was ultimately omitted from the testing programme.

## 8 Bibliography

### 8.1 References

- Clutterbuck, R. 2020. Report for the TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment No 1: Lower Resolution LiDAR data. Unpublished LiDAR survey report prepared by Archaeological Management Solutions Ltd for Donegal County Council.
- Gimson, H. 2020. Geophysical Survey Report. TEN-T Priority Route Improvement Project (Drumboe lower, Ballynaglack, Ballyraine, Trimragh, Carnshannagh, Murlough & Curraghalane Td's), Co. Donegal (20R0078). Unpublished geophysical survey report prepared for Donegal County Council.
- McKee, J. 2020. Method Statement accompanying an application to carry out Stage (i)a, Test Excavation and Metal Detection at Murlough Townland in order to provide further information for the TEN-T Priority Route Improvement Project as part of the Design and Environmental Assessment Phase (24 August 2020). Unpublished document by Archaeological Management Solutions Ltd.
- TII 2017. Code of Practice for Archaeology agreed between the Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs and Transport Infrastructure Ireland (June 2017).

### 8.2 Cartographic Sources

First-edition six-inch OS map 1836

First-edition 25-inch OS map 1900–05

### 8.3 Online and Other Resources

- IAI. 2006. *Code of Conduct for Treatment of Archaeological Objects*. Dublin: Institute of Archaeologists of Ireland. [Online]. [Accessed: 18 January 2019]. Available from: <http://www.iai.ie/wp-content/uploads/2016/03/IAI-Code-of-Conduct-for-the-Treatment-of-Archaeological-Objects.pdf>.
- National Monuments Service Historic Environment Viewer database and mapping service. 2020. [Online]. [Accessed: 14 October 2020]. Available from: [www.archaeology.ie](http://www.archaeology.ie).
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- TII. 2005. *Guidelines for the testing of and mitigation of the wetland archaeological heritage for national road schemes* [Online, Accessed: 14 October 2020]. Available from: <https://www.tiipublications.ie/library/PE-ARC-02008-01.pdf>

## Appendix 1: List of Contexts

Context	Area	Trench	Description	Dimensions (m)
<b>C.1</b>	E Field	All	Number used to record topsoil.	N/A
<b>C.2</b>	E Field	All	Number used to record subsoil.	N/A
<b>C.3</b>	E Field	14	Ditch fill (=C.4) consisting of a light brown moderately compact clayey silt containing occasional stone. Orientated broadly E–W. Resolved as an early modern field boundary, drainage ditch when sectioned. Corresponds to anomaly recorded on geophysics.	2.4 x 0.4m x length unknown
<b>C.4</b>	E Field	26	Ditch fill (=C.3) consisting of a light brown moderately compact clayey silt containing occasional stone. Orientated broadly E–W. Resolved as an early modern field boundary, drainage ditch when sectioned.	2.4 x 0.4m x length unknown
<b>C.5</b>	E Field	26	Modern concrete pipe/culvert (= C.8 and C.16); corresponds to enclosure ‘anomaly’ recorded on geophysics	0.5 x 0.4m x length unknown
<b>C.6</b>	E Field	23	Irregular spread of oxidised clay, consisting of a red/brown moderately compact silty clay containing moderate inclusions of charcoal. Resolved as modern burning related to field clearance/landowner activity.	1.8 x 1.1 x 0.1m
<b>C.7</b>	E Field	21	Resolved as a modern drain.	0.35 x 0.35m (not sectioned)
<b>C.8</b>	E Field	27	Modern concrete pipe (= C.5 and C.16); corresponds to enclosure ‘anomaly’ recorded on geophysics	0.5 x 0.4m x length unknown
<b>C.9</b>	E Field	21	Resolved as a modern clay drainage pipe.	0.5 x 0.35m x length unknown
<b>C.10</b>	E Field	14	Early modern/modern ditch cut (= [C.13]) containing C.3. Linear feature orientated E–W, with a sharp break of slope at the top, sloping sides and a gradual break of slope at the base, which is flat. Drain [C.11] is contained at its base. Corresponds to ‘enclosure’ on geophysics.	2.4 x 0.4m x length unknown

Context	Area	Trench	Description	Dimensions (m)
<b>C.11</b>	E Field	14	Drain cut (= [C.15]) at the base of [C.10] containing C.12. Linear feature orientated E–W, with a gradual break of slope at the top and base, which is U-shaped, and sloping sides. Corresponds to ‘enclosure’ on geophysics.	0.4 x 0.4m x length unknown
<b>C.12</b>	E Field	14	Fill of [C.11] (=C.14) consisting of a light brown clay and moderately compact stone fill, representing a modern stone field drain.	0.4 x 0.4m x length unknown
<b>C.13</b>	E Field	26	Early modern/modern ditch cut (= [C.10]) containing C.4. Linear feature orientated E–W, with a sharp break of slope at the top, sloping sides and a gradual break of slope at the base, which is flat. Drain [C.15] is contained at its base.	2.4 x 0.4m x length unknown
<b>C.14</b>	E Field	26	Fill of [C.15] (=C.12) consisting of a light brown clay and moderately compact stone fill, representing a modern stone field drain.	0.4 x 0.4m x length unknown
<b>C.15</b>	E Field	26	Drain cut (= [C.11]) at the base of [C.13] containing C.14. Linear feature orientated E–W, with a gradual break of slope at the top and base, which is U-shaped, and sloping sides.	0.4 x 0.4m x length unknown
<b>C.16</b>	E Field	17	Modern concrete pipe/culvert (= C.5 and C.8); corresponds to enclosure ‘anomaly’ recorded on geophysics.	0.5 x 0.4m x length unknown

## Appendix 2: List of Finds

Find number	Field	Trench	Context	Full Name	Description	Dimensions in cm
<b>20E0487:1:1</b>	E Field	N/A	C.1	Flint flake	Flint retouched flake. An incomplete tertiary flint retouched flake. Retouch on left lateral. The proximal end is missing. The flint is opaque and reddish yellow (Munsell number 7.5YR 6/6) with small inclusions. The retouch is direct semi-invasive, short in extent and with sub-parallel morphology. There are two longitudinal dorsal scars. <b>Weight</b> 3.5g.	(L)2.90 x (W)1.90 x (T)1.00

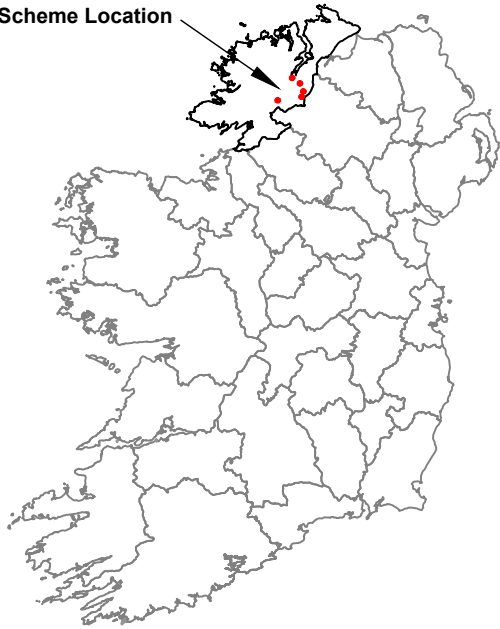
### **Appendix 3: List of Samples**

No samples were taken during Stage (i)a archaeological testing at TA4 Murlough as all features were confirmed as modern.

## Appendix 4: Excavation Bulletin

Bulletin Field	Bulletin Detail
Excavation Completion Date	22 September 2020
Year	2020
County	Donegal
Author	James McKee
Author's Address	c/o Archaeological Management Solutions Ltd, Fahy's Road, Kilrush, Co. Clare
Site Number	To be assigned by excavations.ie
Site Name	N/A
Site Type	Non-archaeological
ITM Coordinates	631615, 899290
Site and Monuments Record No.	DG070-048
Excavation Licence No.	20E0487 (and 20R0182)
Description	<p>James McKee of Archaeological Management Solutions Ltd undertook Stage (i)a Standard Test Excavations and Stage (i)h Metal Detection Surveys in the townland of Murlough as part of the Archaeological Consultancy Services Contract of the TEN-T Priority Route Improvement Project in Donegal.</p> <p>The TEN-T Priority Route Improvement Project is part of the Trans-European Transport Network and comprises the construction of three sections of new road: Section 1: N15/N13 Ballybofey/Stranorlar Urban Region; Section 2: N56/N30 Letterkenny to Manorcunningham; and Section 3: N14 Manorcunningham to Lifford/Strabane/A5 link. Murlough, in Section 3, is one of five Testing Areas (TAs) along the preferred route of the TEN-T project which require Stage (i)a Test Excavations and Stage (i)h Metal Detection Survey Services.</p> <p>The total Stage (i)a testing linear metres excavated at Murlough was 328m, representing a &gt;12% sample of the greenfield area available for test excavations. These excavations targeted anomalies identified through previous geophysical and LiDAR surveys at the site; these surveys were themselves undertaken to assess RMP site (DG070-048), one of five known monuments which could be impacted by the scheme.</p> <p>During archaeological testing at Murlough, no features of archaeological significance were recorded, and anomalies identified during the geophysical survey were largely explained by modern drainage features. No evidence of recorded standing stone (DG070-048), or a pit associated with the stone identified through LiDAR analysis, was found. Stage (i)h Metal Detection surveys also uncovered no archaeologically significant artefacts, although a single flint artefact was recovered from topsoil during the archaeological testing. As no archaeological features were encountered at Murlough no further archaeological recommendations were made for the site.</p>

**Scheme Location**





**Figure No. 1**

TEN-T Priority Route Improvement Project, Donegal

**Location of the Testing Areas on the TEN-T Priority Route Improvement Project**

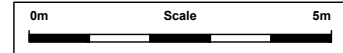
**Legend**

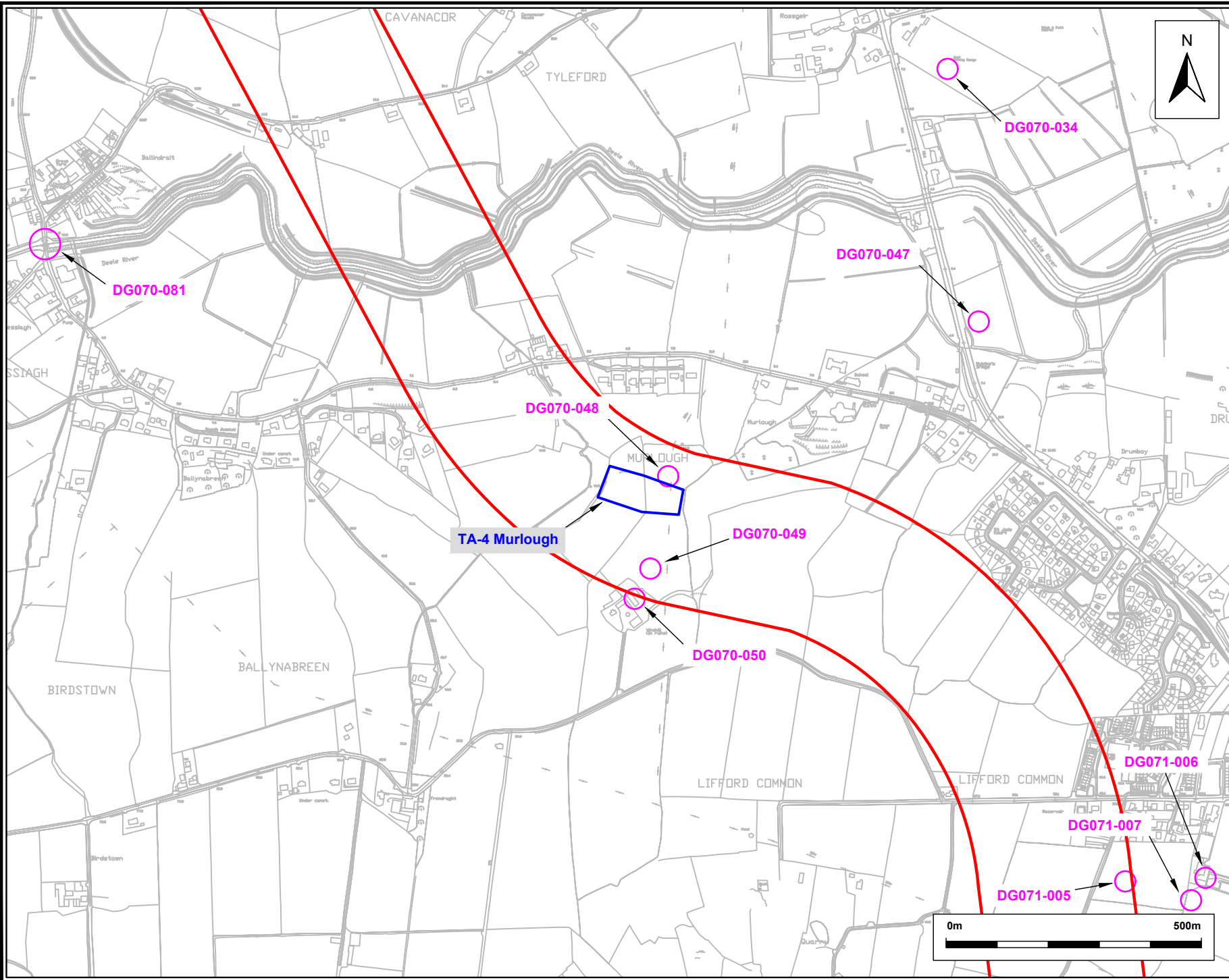
-  Scheme Corridor
-  Stage (i) Testing Area

Scale  
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Date  
14 12 20

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**Figure No. 2**

TEN-T Priority Route Improvement Project, Donegal

**TA-4 Murlough (Testing Area 4)**  
Location showing impacted and surrounding RMP sites

**Legend**

- Scheme Corridor
- Stage (i) Testing Area
- Recorded Monument and Zone of Notification

Scale 1:10000@A4	Date 14 12 20
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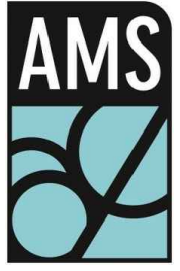






Figure No. 3

TEN-T Priority Route Improvement Project, Donegal

TA-4 Murlough Trenching layout overlaid on 1st edition 6-inch OS map

Legend

-  Scheme Corridor
-  Stage (i) Testing Area
-  Recorded Monument and Zone of Notification
-  Stage (i)a test trenches (excavated)

Scale 1:2500@A4

Date 14 12 20

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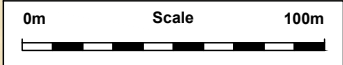
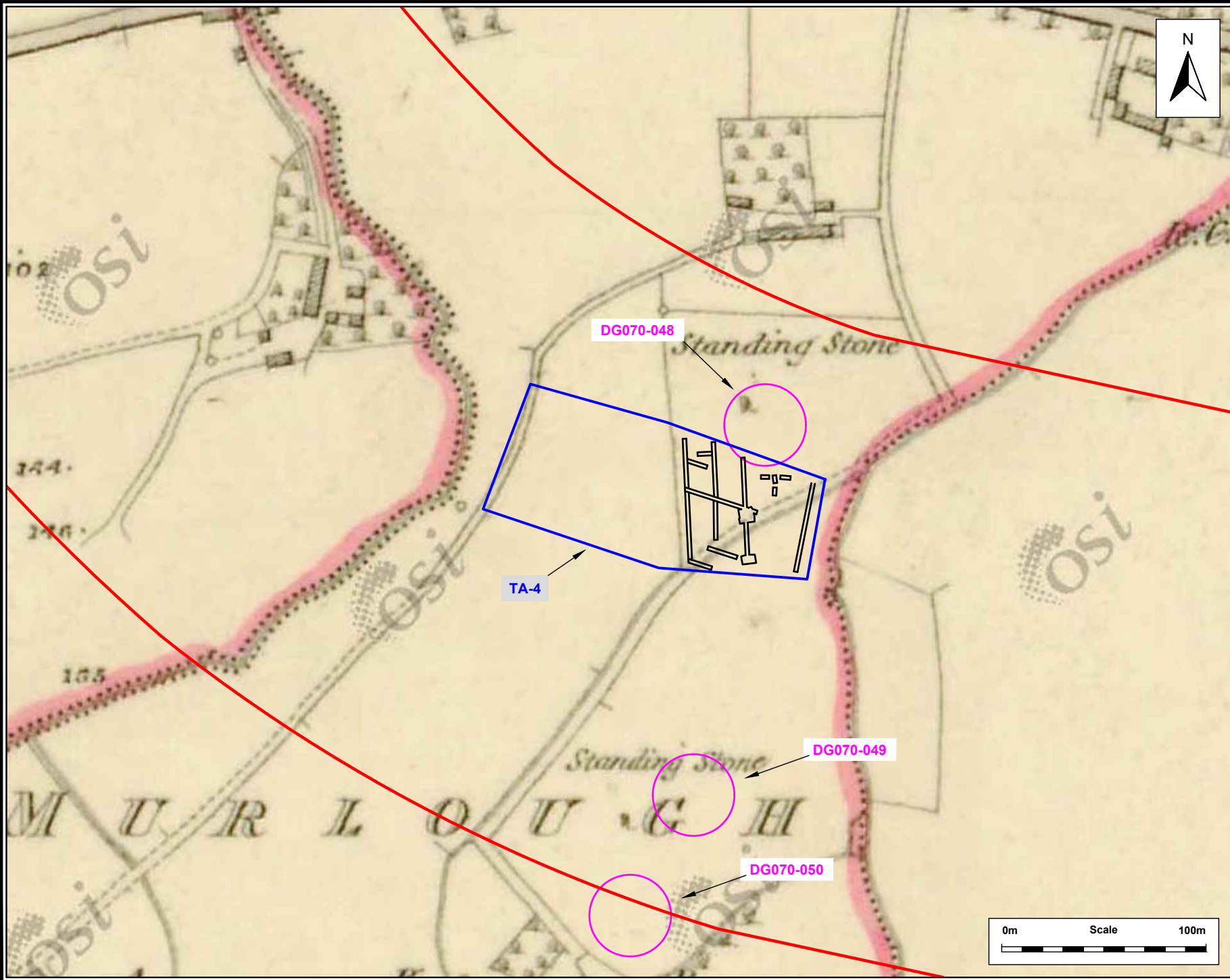






Figure No. 4

TEN-T Priority Route Improvement Project, Donegal

TA-4 Murlough Trenching layout overlaid on 25-inch OS map

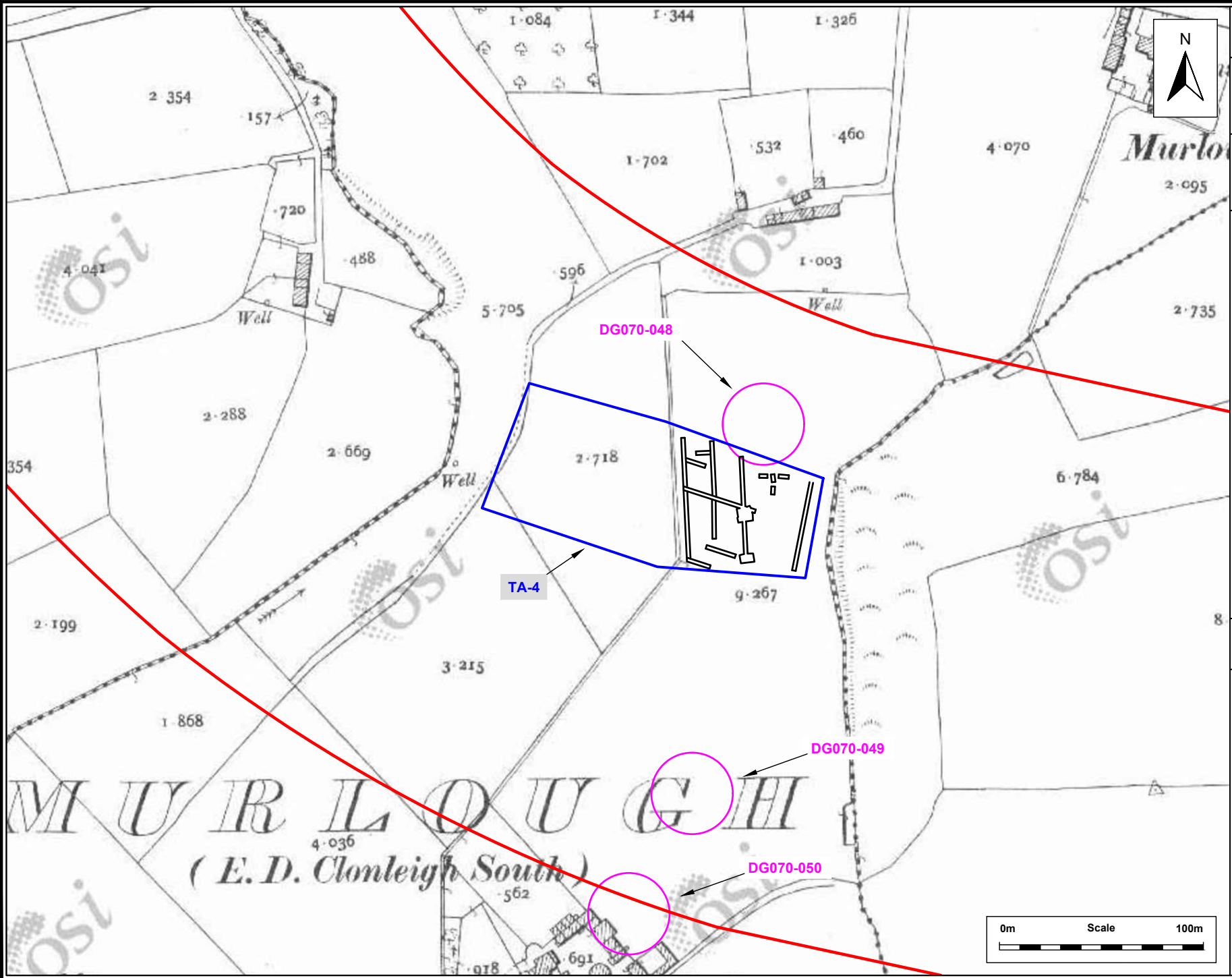
Legend

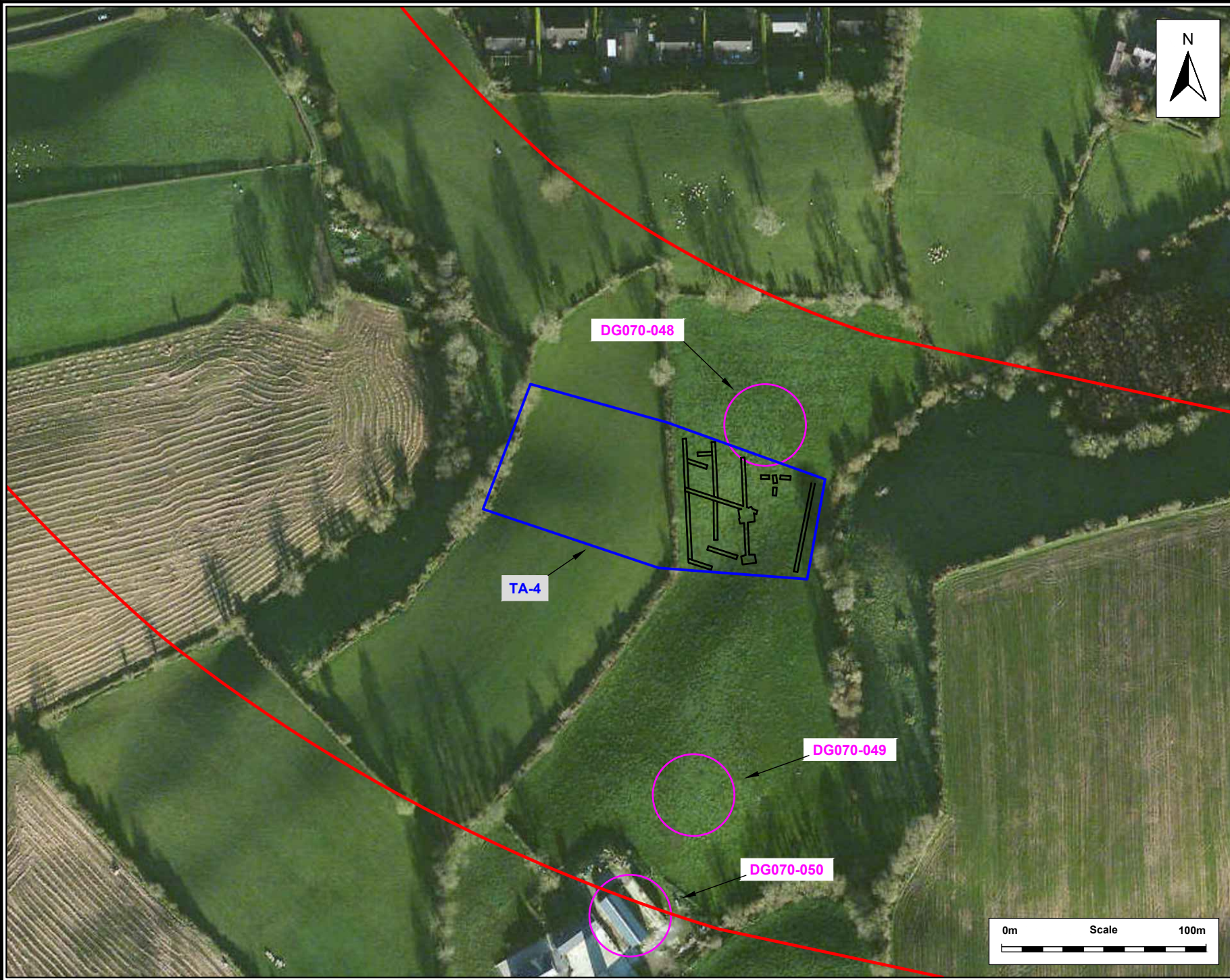
-  Scheme Corridor
-  Stage (i) Testing Area
-  Recorded Monument and Zone of Notification
-  Stage (i)a test trenches (excavated)

Scale 1:2500@A4

Date 14 12 20

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**Figure No. 5**

TEN-T Priority Route Improvement Project, Donegal

**TA-4 Murlough**  
Trenching layout overlaid on modern aerial photography

**Legend**

- Scheme Corridor
- Stage (i) Testing Area
- Recorded Monument and Zone of Notification
- Stage (i)a test trenches (excavated)

Scale  
1:2500@A4

Date  
14 12 20

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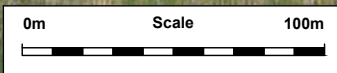
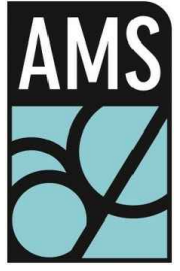


Figure No. 6

TEN-T Priority Route Improvement Project, Donegal

TA-4 Murlough  
Trenching layout overlaid on geophysical and LiDAR survey

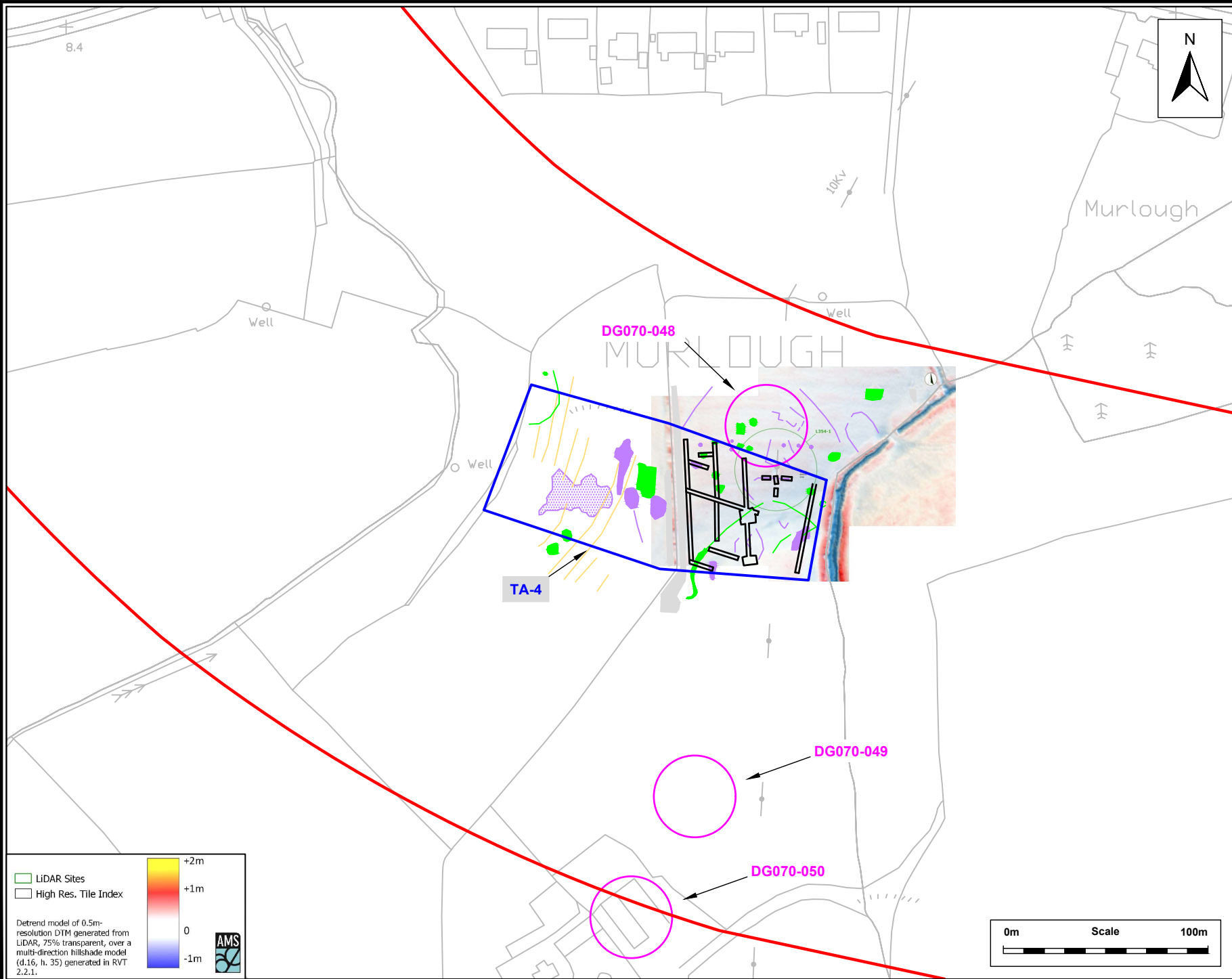
Legend



-  Scheme Corridor
-  Stage (i) Testing Area
-  Recorded Monument and Zone of Notification
-  Stage (i)a test trenches
-  High Resistance Anomaly
-  Low Resistance Anomaly
-  Cultivation Furrows
-  Modern Disturbance

Scale  
1:2500@A4

Date  
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 LiDAR Sites  
 High Res. Tile Index

Detrended model of 0.5m-resolution DTM generated from LiDAR, 75% transparent, over a multi-direction hillshade model (d.16, h. 35) generated in RVT 2.2.1.


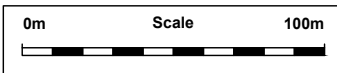
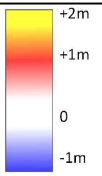









Figure No. 7

TEN-T Priority Route Improvement Project, Donegal

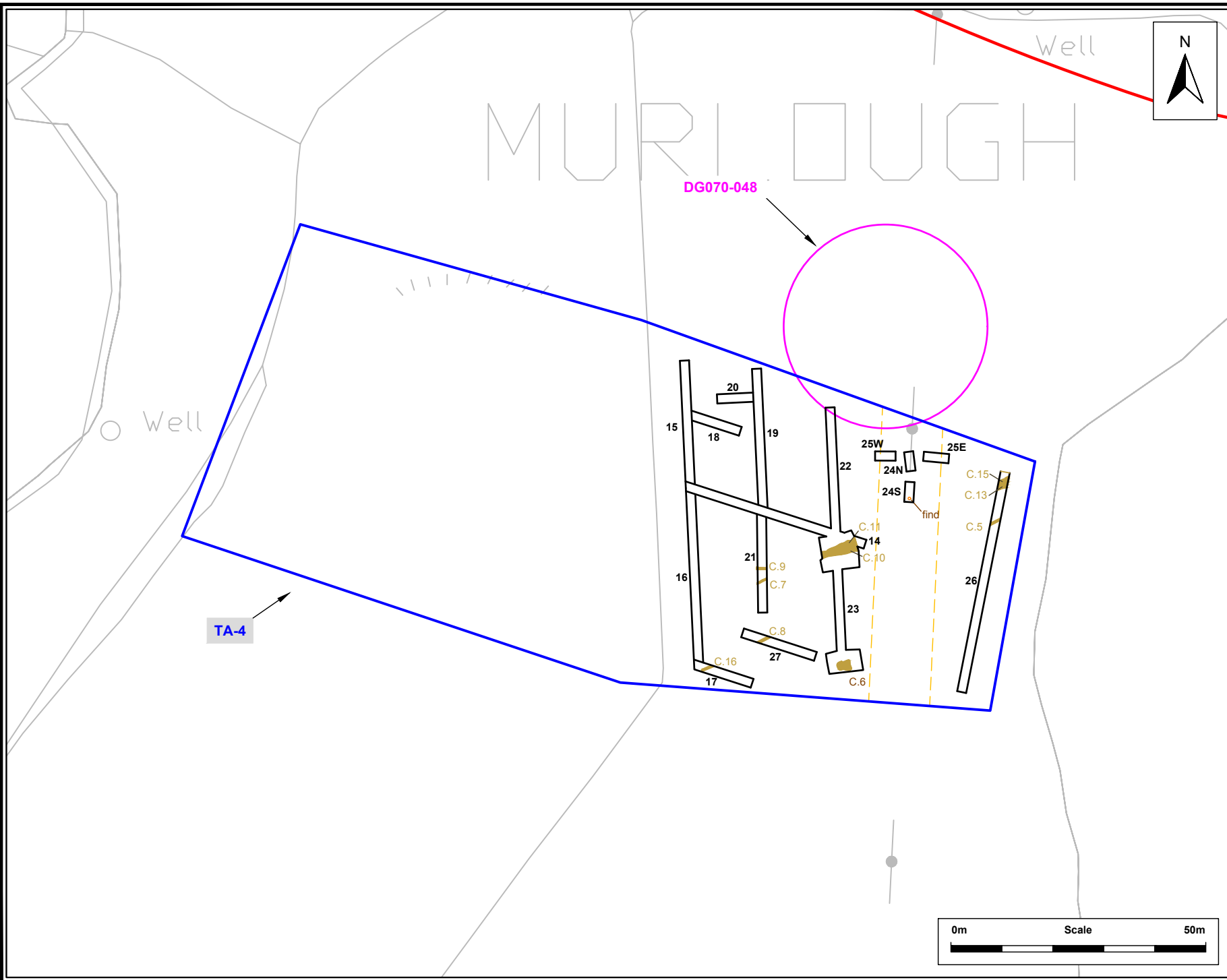
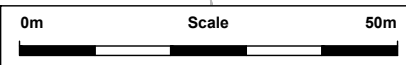
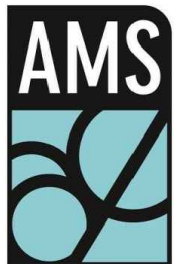
TA-4 Murlough  
Completed trench detail,  
showing recorded features

Legend

-  Scheme Corridor
-  Stage (i) Testing Area
-  Recorded Monument and Zone of Notification
-  Stage (i)a test trenches
-  Non-archaeological Feature
-  OH Powerline Corridor

Scale 1:1000@A4	Date 14 12 20
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TA-4

Figure No. 8

TEN-T Priority Route Improvement Project, Donegal

TA-4 Murlough  
Completed trench detail, showing recorded features with geophysical survey

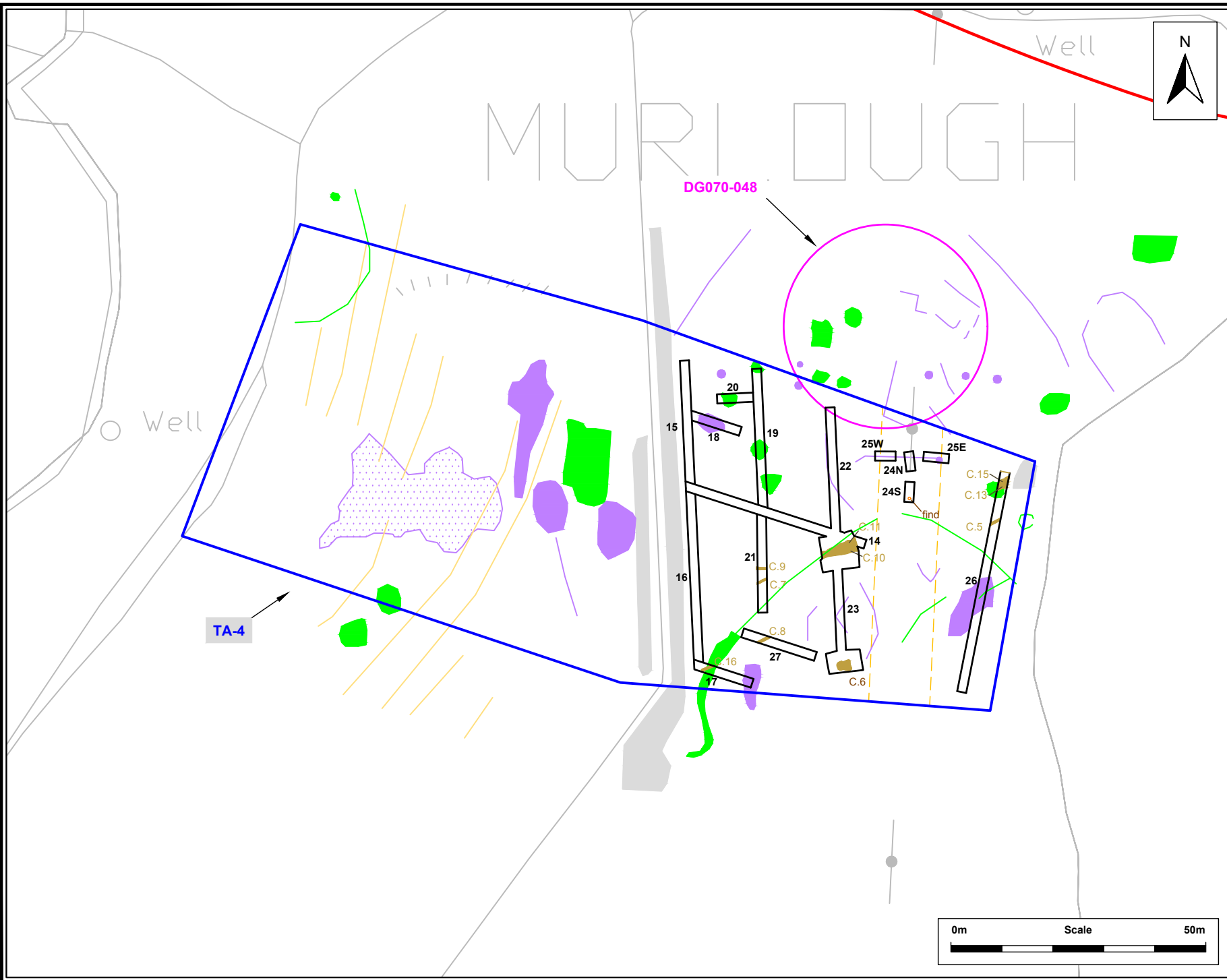
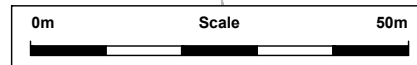
Legend

-  Scheme Corridor
-  Stage (i) Testing Area
-  Recorded Monument and Zone of Notification
-  Stage (i)a test trenches
-  Non-archaeological Feature
-  OH Powerline Corridor
-  High Resistance Anomaly
-  Low Resistance Anomaly
-  Cultivation Furrows
-  Modern Disturbance

Scale  
1:1000@A4

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## PLATES



Plate 1: Commencing hand excavation of trenches (T24 and T25) under overhead powerlines



Plate 2: Hand-dug trench (T24 W); facing west



Plate 3: Metal detection of trench spoil in progress



Plate 4: Example of machine-dug trench (T15); facing southwest



Plate 5: Ditch fill C.3 = C.4 (T14 and T23) pre-excitation; facing west



Plate 6: Ditch fill C.4 = C.3 (T26) pre-excitation; facing south



Plate 7: Ditch [C.13] = [C.10] and drain [C.11] = [C.15] and respective fills (C.4 = C.3 and C.9 = C.14) mid excavation; facing west



Plate 8: Modern drainage pipe C.5 = C.8 = C.16 (T26); facing north



Plate 9: Modern drainage pipe/culvert C.8 = C.5 = C.16 (T27); facing west



Plate 10: Modern drainage pipe C.9 (T21); facing west



Plate 11: Trenches fully reinstated and re-seeded at Murlough