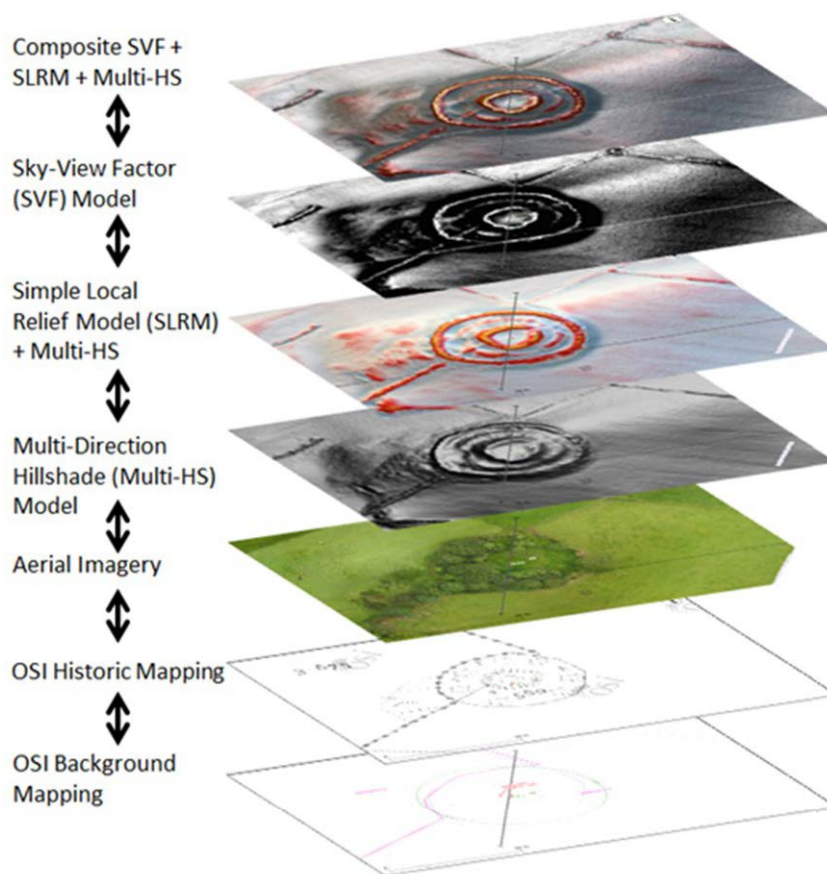


Appendix C17.04b

Archaeological LiDAR Assessment No. 2: Higher Resolution LiDAR data

Report for the TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment No 2: Higher Resolution LiDAR Data



Prepared for Donegal County Council and TII
By Dr Richard Clutterbuck

October 2020
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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 have been collated, the author and AMS accept no responsibility for omissions and/or inconsistencies that may result from information becoming available subsequent to the report's completion.

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NSAI



Executive Summary

This is the second of two reports outlining the results of the archaeological assessment of LiDAR data for the Ten-T Priority Route Improvement Project, Co. Donegal. This report analyses 950 tiles of high-resolution (0.5m) LiDAR data, each tile measuring 250m by 250m.

The first report detailed the analysis of 127 tiles of low-resolution (1m) LiDAR, where each tile measured 1 sq. km. For the sake of consistency and to allow comparison between reports, the same numbering system for sites has been used in both reports.

The LiDAR survey area is divided into three sections: Section 1 (1438.67 Ha), Section 2 (1010.91 Ha) and Section 3 (2128.83 Ha).¹ The high-resolution LiDAR study area is 4436 Ha in total, which is 66% the area of the low-resolution LiDAR data (6696 Ha). Of the 153 LiDAR sites identified in the first report, 95 are located within the area of the high-resolution LiDAR survey; an additional 43 LiDAR sites are newly identified in the high-resolution LiDAR, making a total of 138 LiDAR sites and features detailed in this report.

This report describes the project area, including its topography, and known cultural heritage sites. It details the methodology for the LiDAR analysis, and describes the results for each of the three sections of the Ten-T Priority Route Improvement Project. The report is fully illustrated with location maps, maps of each section, and graphs and tables detailing the results for each section and grid. Appendices contain the image catalogue of LiDAR sites, the inventory of sites, a selection of profiles for significant sites, and a catalogue of images for each 1 sq. km LiDAR grid tile.

The LiDAR visualisations and associated metadata, and the image catalogue and vector data generated for this analysis will also be provided to the client as a data archive.

All newly identified LiDAR sites can only be considered possible archaeological sites until confirmed by fieldwork.

¹ Section 2 and 3 overlap.

Table of Contents

Introduction	9
Project Background.....	9
Report Structure	9
Scope of Works	9
Receiving Environment	11
Location.....	11
Topography	11
Soils	17
Townlands, Parishes & Baronies.....	22
Recorded Cultural Heritage	29
Section 1 Recorded Cultural Heritage.....	29
Section 2 Recorded Cultural Heritage.....	31
Section 3 Recorded Cultural Heritage.....	32
Methodology	38
Overview	38
Software.....	39
Data.....	39
LiDAR Visualisations.....	40
LiDAR Analysis.....	41
Constraints.....	51
Amendments to first report.....	52
Archaeological Assessment of LiDAR Data Visualisations.....	53
Overview	53
Section 1 Summary of Findings.....	60
Section 2 Summary of Findings.....	65
Section 3 Summary of Findings.....	68
Final Note.....	75
References.....	76

Appendices

Appendix 1: LiDAR Site Visualisations.....	77
Appendix 2: Catalogue of LiDAR Sites.....	176
Appendix 3: Site Profiles.....	205
Appendix 4: Maps of Grid Tiles.....	225

List of Tables

Table 1: Townlands intersected by Section 1 LiDAR study area.	22
Table 2: Townlands intersected by Section 2 LiDAR study area.	23
Table 3: Townlands intersected by Section 3 LiDAR study area.	23
Table 4: Previously recorded cultural heritage sites.	29
Table 5: Previously recorded cultural heritage in Section 1.	29
Table 6: NIAH sites in Section 1.	30
Table 7: Sites identified during Route Selection in Section 1.	30
Table 8: Previously recorded cultural heritage in Section 2.	31
Table 9: NIAH sites in Section 2.	31
Table 10: Sites identified during Route Selection, Section 2.	32
Table 11: Previously recorded Cultural Heritage in Section 3.	32
Table 12: NIAH sites in Section 3.	33
Table 13: Sites identified during Route Selection in Section 3.	33
Table 14: LiDAR visualisation techniques and geospatial data used as part of this assessment.	46
Table 15: Fields recorded for individual features identified through LiDAR analysis.	49
Table 16: Confidence scores for identified archaeological features.	50
Table 17: LiDAR sites – overall totals.	53
Table 18: Summary of findings for LiDAR sites recorded in the SMR.	53
Table 19: Summary of findings for LiDAR sites identified in Route Selection.	53
Table 20: Summary of findings for sites newly identified in the LiDAR data for the Ten-T Project.	54
Table 21: Summary of LiDAR analysis for grids in Section 1.	60
Table 22: Section 1 summary of site categories.	64
Table 23: Summary of LiDAR analysis for grids in Section 2.	65
Table 24: Section 2 summary of site categories.	68
Table 25: Summary of LiDAR analysis for grids in Section 3.	68
Table 26: Section 3 summary of site categories.	74

List of Figures

Figure 1: Location of LiDAR Study Areas.	12
Figure 2: Section 1 survey location and grids.	13
Figure 3: Section 2 survey location and grids.	14
Figure 4: Section 3 survey location and grids (1 of 2).	15
Figure 5: Section 3 survey location and grids (2 of 2).	16
Figure 6: Soils in Section 1.	18

Figure 7: Soils in Section 2.	19
Figure 8: Soils in Section 3 (1 of 2).	20
Figure 9: Soils in Section 3 (2 of 2).	21
Figure 10: Section 1 townlands.	25
Figure 11: Section 2 townlands.	26
Figure 12: Section 3 townlands Section 3 (1 of 2).	27
Figure 13: Section 3 townlands (2 of 2).	28
Figure 14: SMR site categories in Section 1 LiDAR survey area.	30
Figure 15: SMR sites in Section 2 LiDAR survey area.	31
Figure 16: SMR sites in Section 3 LiDAR study area.	32
Figure 17: Section 1 Recorded Cultural Heritage.	34
Figure 18: Section 2 Recorded Cultural Heritage.	35
Figure 19: Section 3 Recorded Cultural Heritage (1 of 2).	36
Figure 20: Section 3 Recorded Cultural Heritage (2 of 2).	37
Figure 21: Section 1 LiDAR tiles.	42
Figure 22: Section 2 LiDAR tiles.	43
Figure 23: Section 3 LiDAR tiles (1 of 2).	44
Figure 24: Section 3 LiDAR tiles (2 of 2).	45
Figure 25: Profile and dimensions of an enclosure.	51
Figure 26: Tile edge visible in SLRM Model versus Detrend Model, both made semi-transparent and overlay on the multi-direction hill shade model to produce composite images.	52
Figure 27: Categories of sites newly identified in the high-resolution LiDAR data.	55
Figure 28: LiDAR analysis results, Section 1.	56
Figure 29: LiDAR analysis results, Section 2.	57
Figure 30: LiDAR analysis results, Section 3 (1 of 2).	58
Figure 31: LiDAR analysis results, Section 3 (2 of 2).	59

Abbreviations and Definitions

Abbreviation	Definition
AMS	Archaeological Management Solutions
AAP	Area of Archaeological Potential (from Route Selection Reports)
CAD	Computer Aided Design
DCC	Donegal County Council
DSM	Digital Surface Model
DTM	Digital Terrain Model
GIS	Geographical Information System
GPS	Global Positioning System
GSD	Ground Sampling Distance
ITM	Irish Transverse Mercator
LiDAR	Light Detection and Ranging
Multi-HS	Multi-direction Hillshade Model (LiDAR visualisation)
NIAH	National Inventory of Architectural Heritage
NMI	National Museum of Ireland
NMS	National Monuments Service, Department of Housing, Local Government and Heritage
OD	Ordnance Datum
OS	Ordnance Survey
OSI	Ordnance Survey of Ireland
QGIS	Quantum GIS (program)
RMP	Record of Monuments and Places
RMSE	Root Mean Square Error
RPS	Record of Protected Structures
RS	Route Selection (reports)
RVT	Relief Visualization Toolbox (program)
SLRM	Simple Local Relief Model (LiDAR visualisation)
SMR	Sites and Monuments Record
SVF	Sky View Factor (LiDAR visualisation)
WMS	Web Map Service

Coordinate System

All coordinates are in Irish Transverse Mercator (ITM)

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Introduction

Project Background

Donegal County Council is working to progress the TEN-T Priority Route Improvement Project (Ten-T Project) and the preferred route corridor for the scheme has now been established. The project will involve the construction of about 34km of new or upgraded road in three sections in east County Donegal: Ballybofey/Stranorlar; Letterkenny to Manorcunningham; and Manorcunningham to Lifford Strabane.

Archaeological Management Solutions (AMS) have been commissioned by Donegal County Council (the Council) to undertake the archaeological assessment of LiDAR data for the Ten-T Project. The Council commissioned the analysis of two LiDAR datasets: a low-resolution (1m) dataset covering an area of 6696 Ha, and a high-resolution (0.5m) dataset covering 4436 Ha. The first report assessed existing low-resolution (1m) LiDAR data made available to the Council (AMS 2020). This report is the second of two and details the results of the high-resolution dataset analysis, consisting of visualising the data as a Simple Local Relief Model (SLRM), Sky-View Factor (SVF) and a Multi-Direction Hillshade Model (Multi-HS).

Report Structure

The report sets out the scope of works, a summary description of the receiving environment, and the methodology used to carry out the analysis and the results of the LiDAR analysis. It contains an image catalogue of identified sites and a table with details about each identified site. The appendices also contain a catalogue of profiles generated for the most significant archaeological features, as well as a catalogue of images for each grid or tile.

In addition to this report, the project output includes digital data in the form of geotiff raster images of LiDAR visualisations (SLRM, SVF and Multi-HS) for each tile, their corresponding metadata, local relief model rasters for each section generated in QGIS, and a geodatabase containing vector files generated for the project.

Scope of Works

The aim of this project is to produce an archaeological assessment of the high-resolution LiDAR data available for the proposed Ten-T Project. This includes analysing the LiDAR survey data to identify and record the morphology, extent and condition of all archaeological sites along the proposed route including:

- monuments and sites recorded in the Sites and Monuments Record (SMR)/Record of Monuments and Places (RMP);

- sites previously identified in the low-resolution LiDAR data, as part of the route selection, design, and environmental assessment processes; and
- new sites identified from analysing the high-resolution LiDAR data.

The results of this LiDAR data archaeological assessment will assist with the Design and Environmental Evaluation Phase of the Ten-T Priority Route Improvement Project and help to inform the nature and scope of any future pre-development archaeological investigations (e.g. geophysical survey, test excavation, etc.).

Receiving Environment

Location

The Ten-T project is located in east County Donegal. The area of high-resolution LiDAR assessment is 4436.44 Ha in total, and is divided into three sections corresponding with the three sections of the Ten-T Project (shown in Figure 1):

- Section 1 LiDAR Study Area – N15/N13 Ballybofey/Stranorlar Urban Region covering approximately 9km of new National roadway, with a high-resolution LiDAR footprint of 1438.67 Ha;
- Section 2 LiDAR Study Area – N56/N13 Letterkenny in the west to Manorcunningham in the east, covering approximately 8km of new National roadway, with a high-resolution LiDAR footprint of 1010.91 Ha;
- Section 3 LiDAR Study Area – N14 Manorcunningham in the north to Lifford/Strabane/A5 Link in the south covering approximately 17km of new National roadway, with a high-resolution LiDAR footprint of 2128.83Ha.

Note: Sections 2 and 3 overlap by 141.97 Ha.

The area of high-resolution LiDAR data is 66% of the area of low-resolution data (Figure 2–Figure 5)

Topography

East County Donegal contains relatively low-lying gentle hills dominated by the catchments of the Swilly and Foyle rivers, and their tributaries.

The Section 1 LiDAR survey area ranges in elevation from 11m to 175m OD, within the catchments of the Finn and Deele rivers, both of which flow east to the River Foyle.

The Section 2 LiDAR survey area ranges in elevation from 0m (in areas of land reclamation around the River Swilly) to 155m OD in the southern section, and lies within the catchments of the Swilly, Corranagh Burn, Dooballagh Burn and Corkey rivers, all flowing into Lough Swilly.

The Section 3 LiDAR survey area ranges in elevation from 1m (beside the River Foyle) to 137m on the lower slopes of Mongorry Hill and lies within the catchments of the Corkey River (which flows north into Lough Swilly and the Swilly Burn), Deele River and River Foyle to the south.

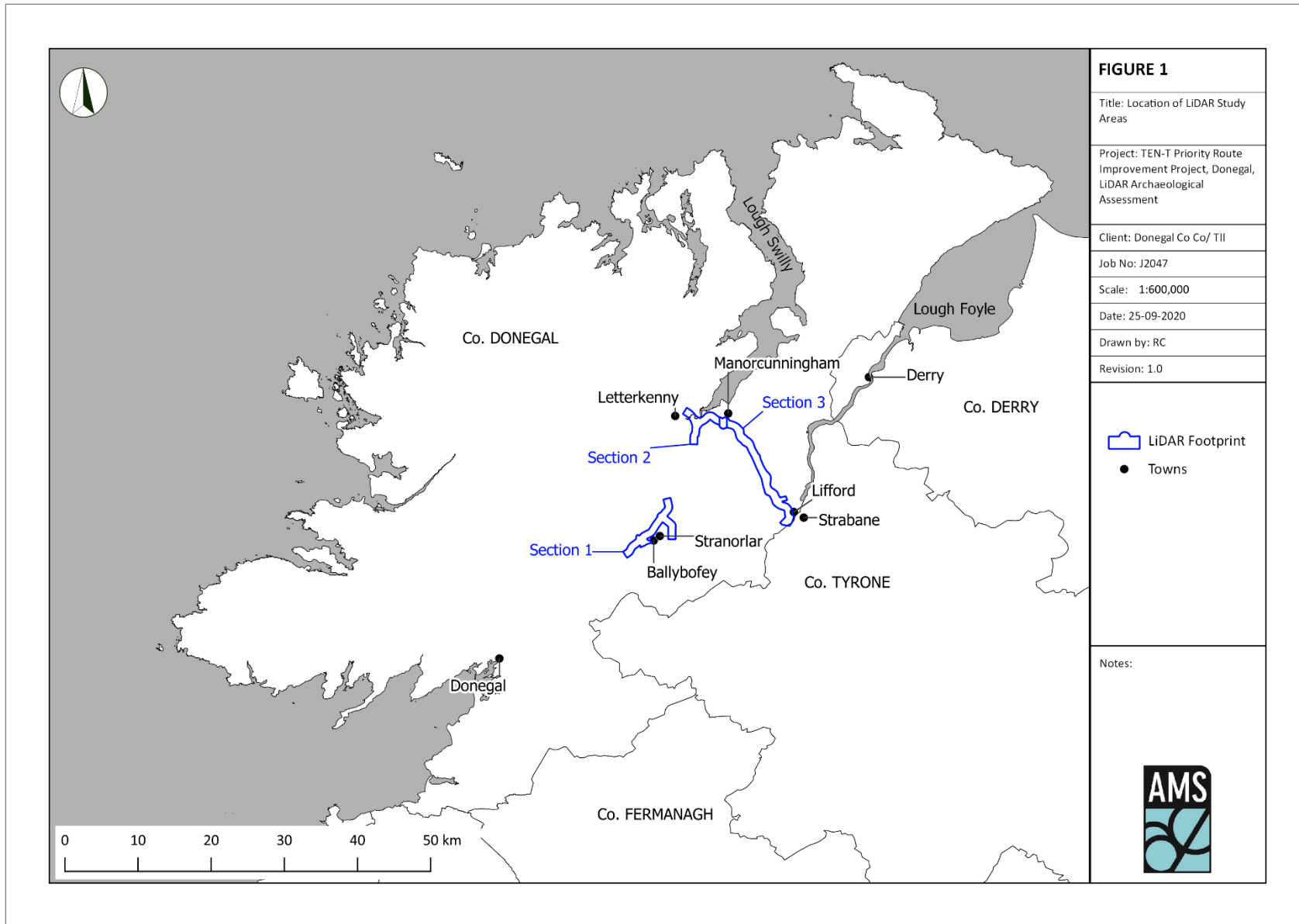


Figure 1: Location of LiDAR Study Areas.

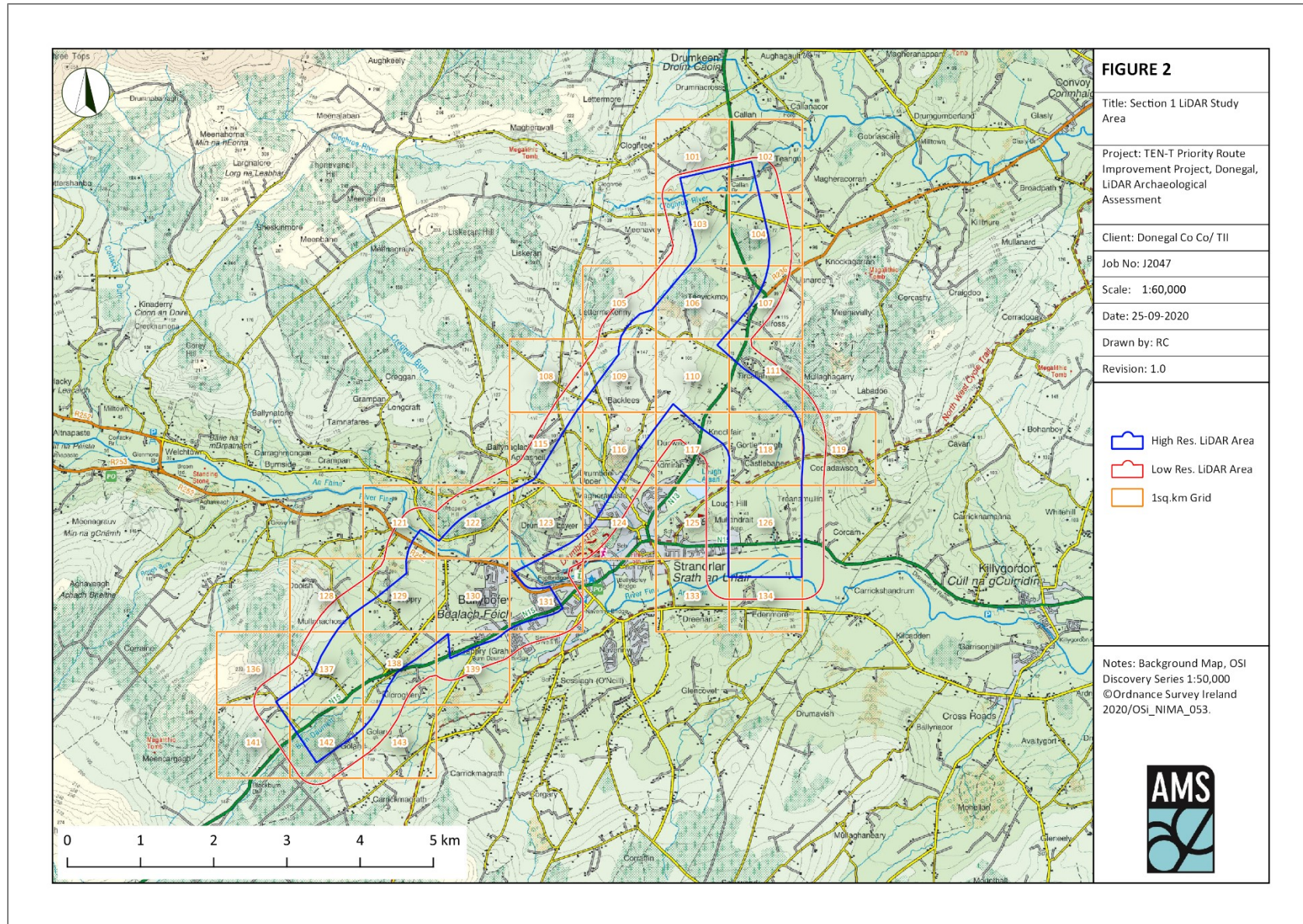


Figure 2: Section 1 survey location and grids.

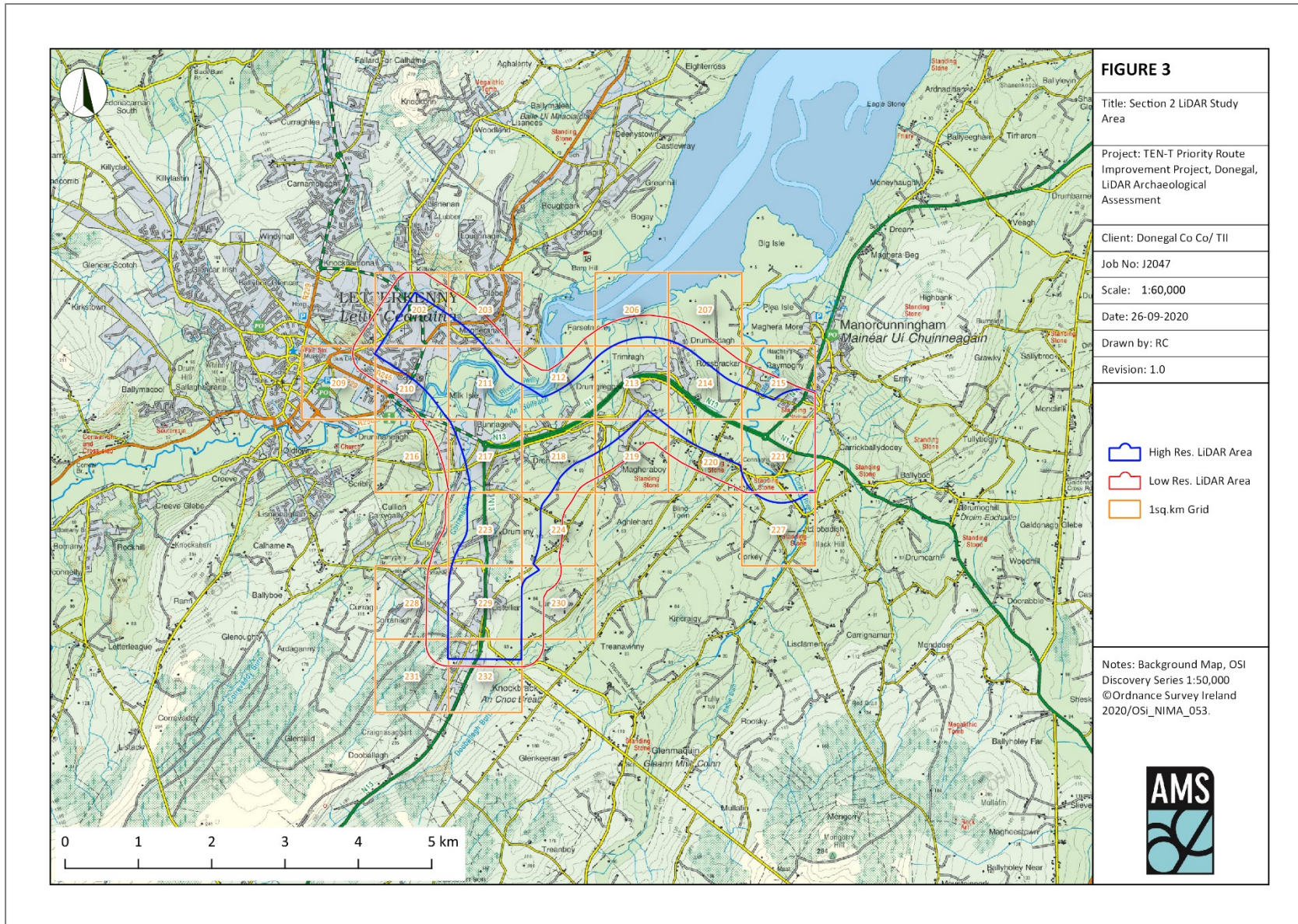


Figure 3: Section 2 survey location and grids.

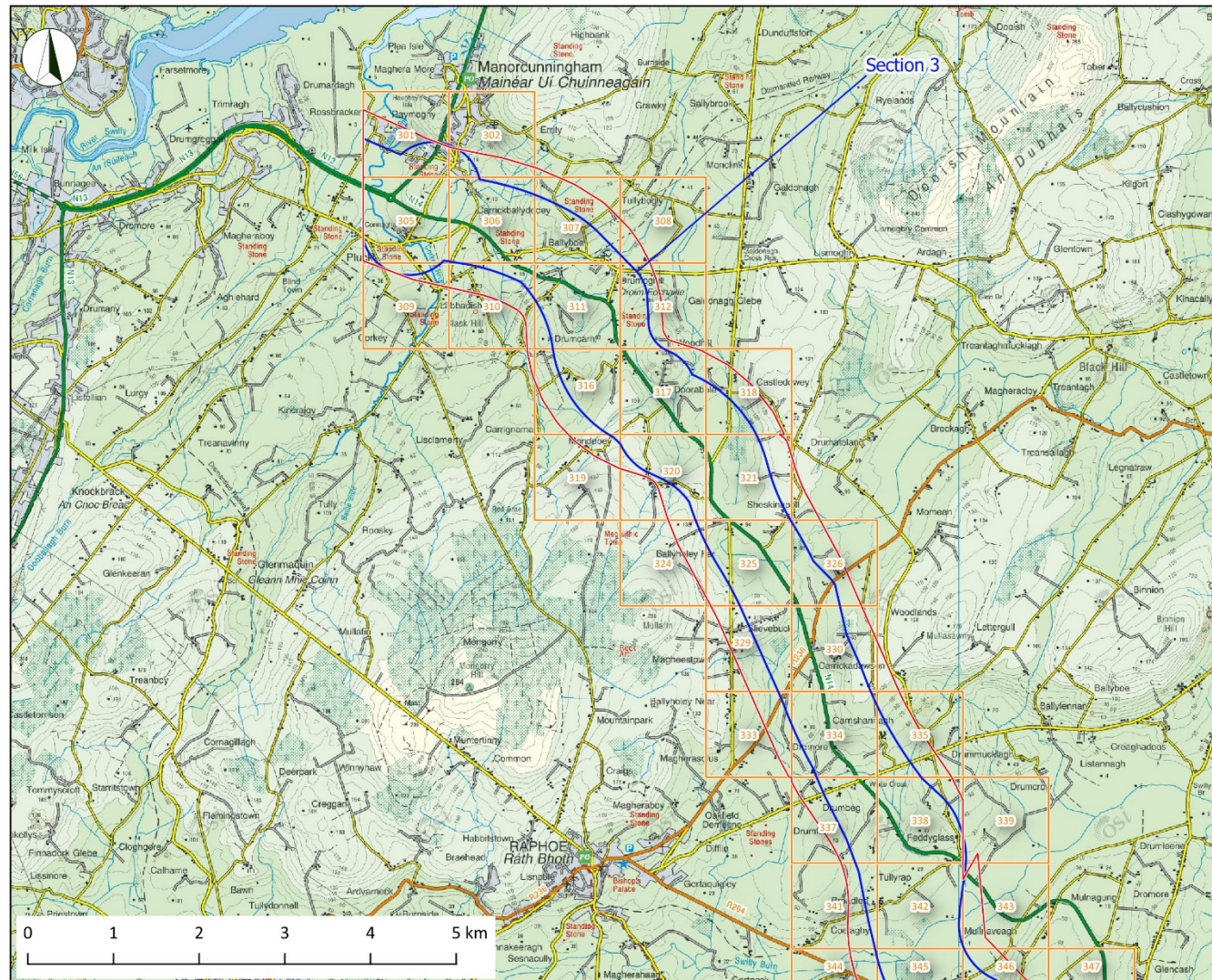


FIGURE 4

Title: Section 3 (Part 1) LiDAR Study Area

Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:60,000

Date: 25-09-2020

Drawn by: RC

Revision: 1.0

- ▭ High Res. LiDAR Area
- ▭ Low Res. LiDAR Area
- ▭ 1sq.km Grid

Notes: Background Map, OSI Discovery Series 1:50,000
© Ordnance Survey Ireland 2020/OSI_NIMA_053.



Figure 4: Section 3 survey location and grids (1 of 2).

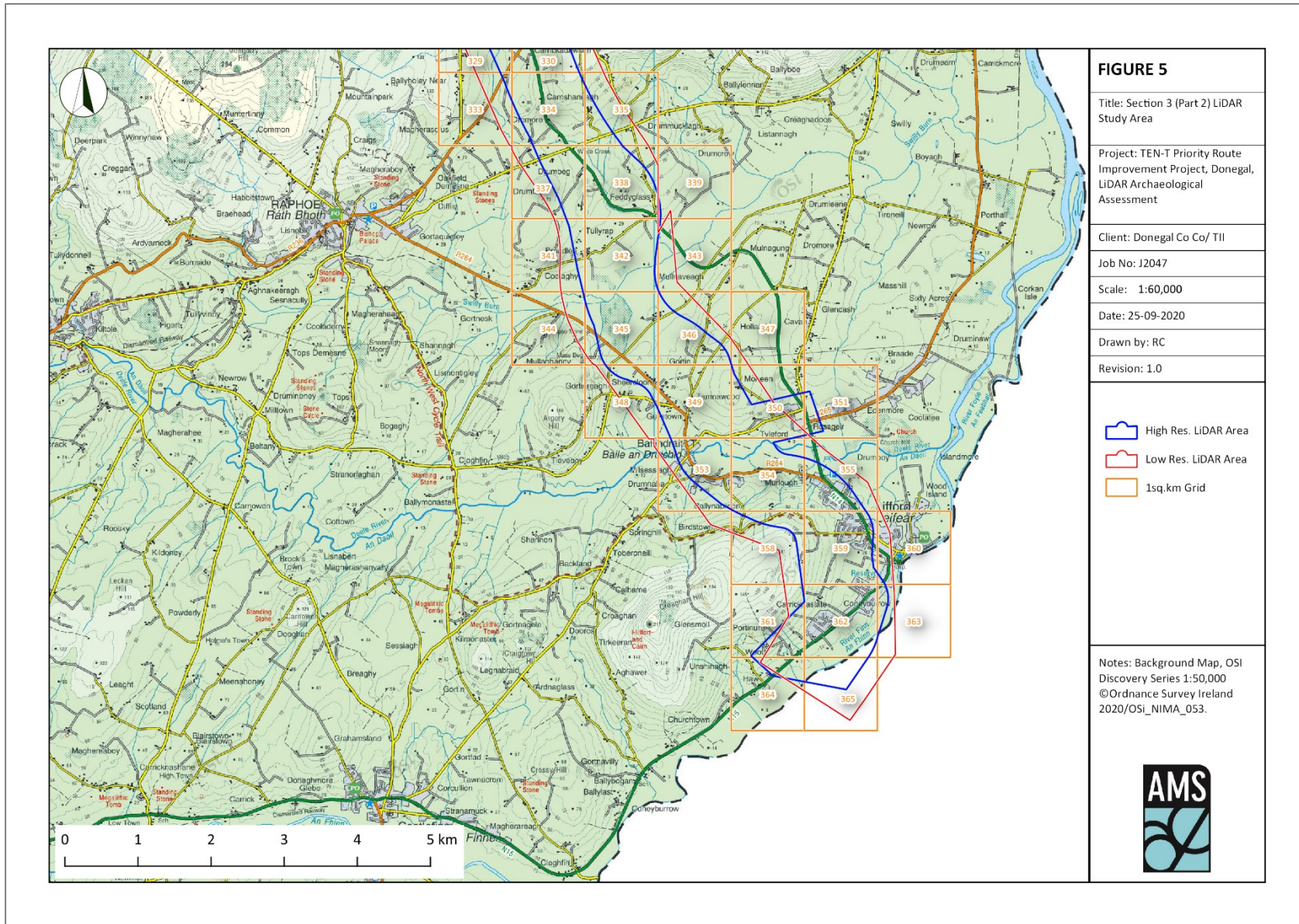


FIGURE 5

Title: Section 3 (Part 2) LiDAR Study Area

Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:60,000

Date: 25-09-2020

Drawn by: RC

Revision: 1.0

- ▭ High Res. LiDAR Area
- ▭ Low Res. LiDAR Area
- ▭ 1sq.km Grid

Notes: Background Map, OSI Discovery Series 1:50,000 © Ordnance Survey Ireland 2020/OSi_NIMA_053.



Figure 5: Section 3 survey location and grids (2 of 2).

Soils

Soils in the Section 1 LiDAR footprint consist primarily of mineral soils (80%), with the remaining being alluviums (8%), podsolised gley soils (5%), blanket peats (4%) and made ground (3%) – see Figure 6.

Soils in the Section 2 LiDAR footprint consist primarily of deep mineral soils (64%) and alluviums (22%), with the remaining comprising made ground (11%), podsolised soils (1%), and shallow well-drained mineral and blanket peats (each 1%) – see Figure 7.

Soils in the Section 3 LiDAR footprint consist primarily of mineral soils (82%) and alluviums (15%), with the remaining consisting of made ground (2%) and podsolised gley soils (1%) – shown in Figure 8 and Figure 9.

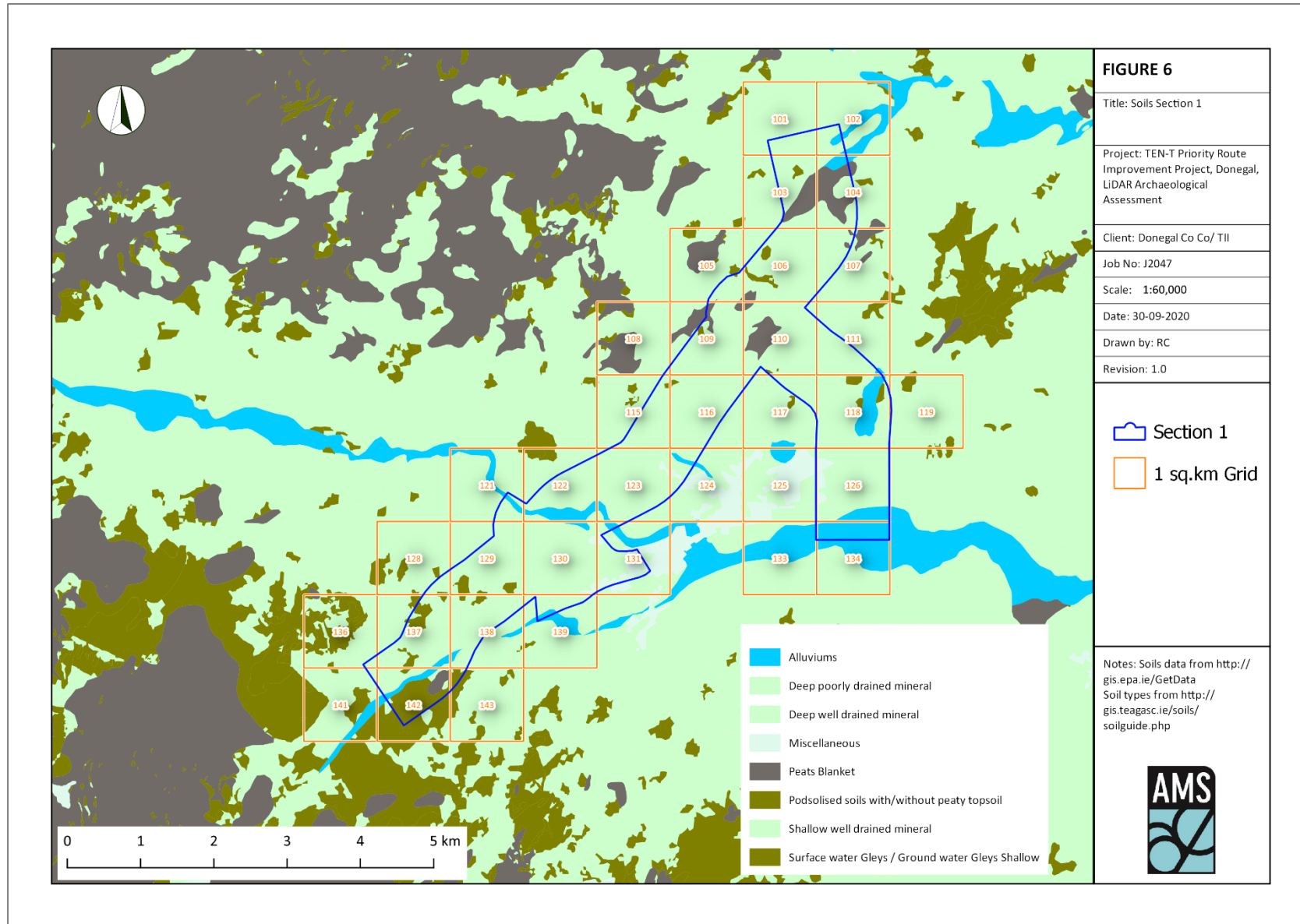


Figure 6: Soils in Section 1.

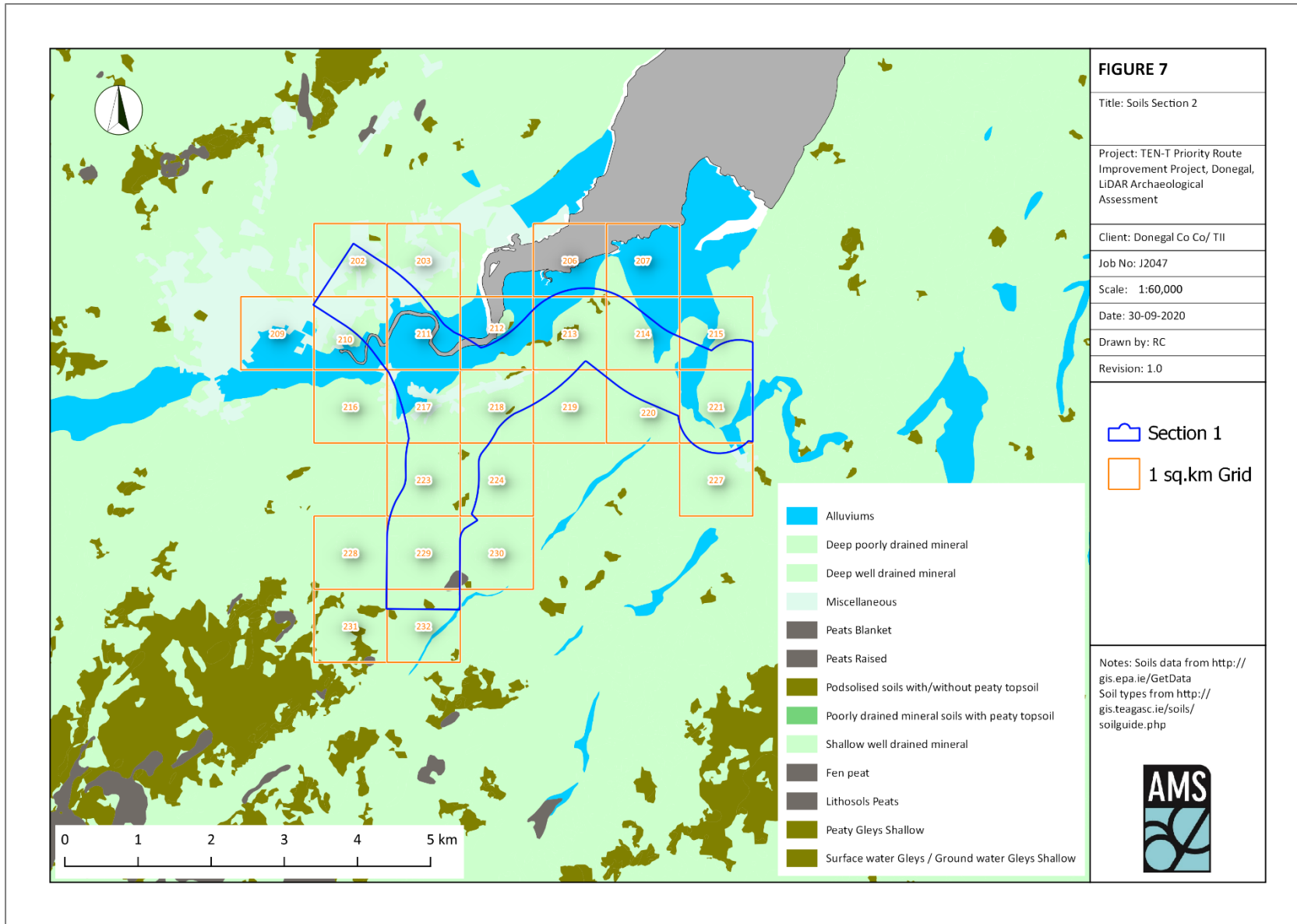


Figure 7: Soils in Section 2.

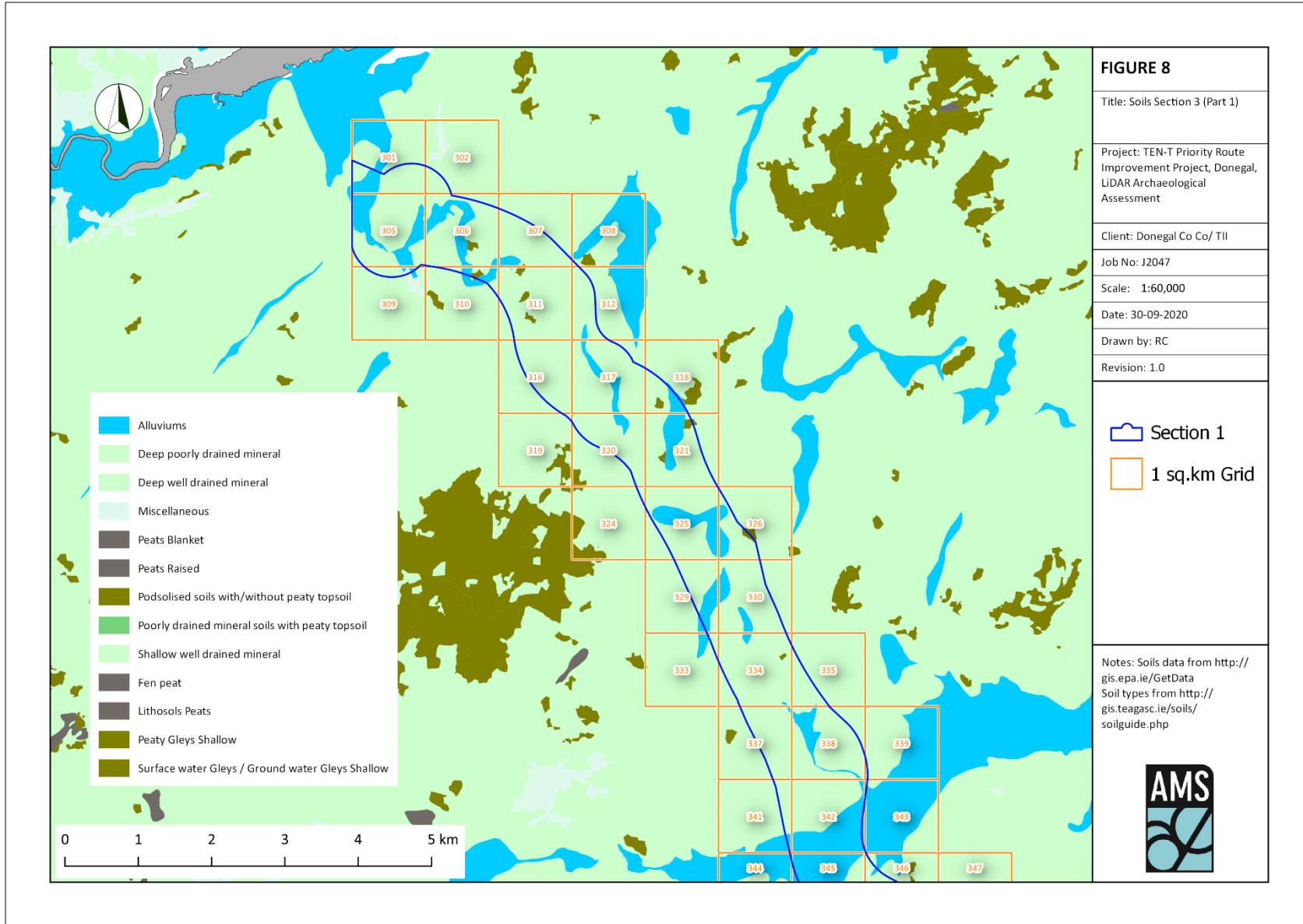


Figure 8: Soils in Section 3 (1 of 2).

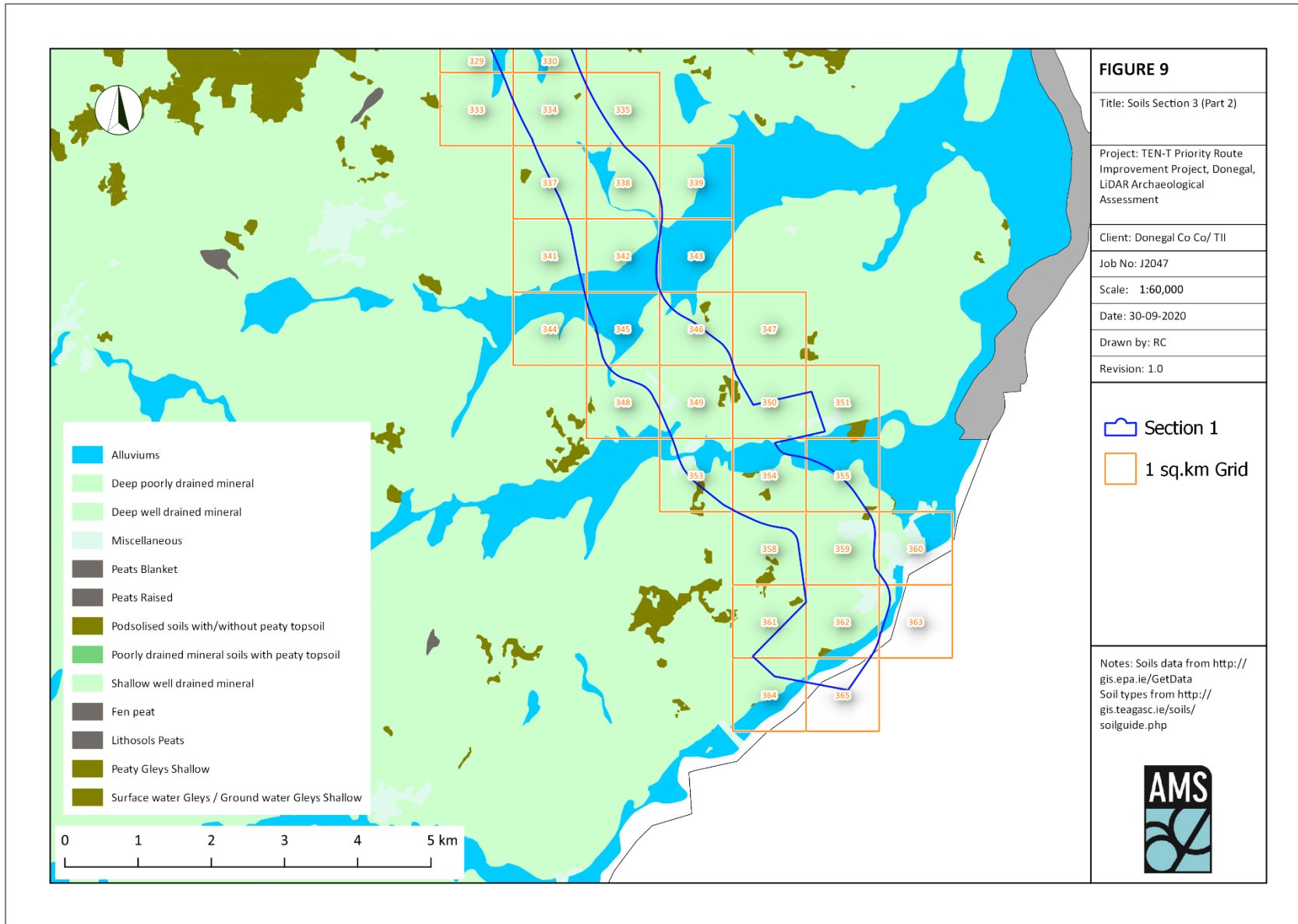


Figure 9: Soils in Section 3 (2 of 2).

Townlands, Parishes & Baronies

The Ten-T Project high-resolution LiDAR study area intersects with 123 townlands: 121 in Co. Donegal and two in Co. Tyrone.² These townlands are located within 11 civil parishes and four baronies.

Section 1 LiDAR study area intersects thirty-five townlands in three civil parishes, and one barony (Table 1; Figure 10).

Section 2 LiDAR study area intersects twenty-nine townlands in four civil parishes, and two baronies (Table 2; Figure 11).

Section 3 LiDAR study area intersects sixty-six townlands (two of which are located in Co. Tyrone) in six civil parishes and two baronies (Table 3; Figure 12 and Figure 13).

Table 1: Townlands intersected by Section 1 LiDAR study area.

Townland	Civil Parish	Barony	Townland	Civil Parish	Barony
Callan	Convoy	Raphoe South	Ironworks	Stranorlar	Raphoe South
Cloghroe	Convoy	Raphoe South	Kilross	Stranorlar	Raphoe South
Magheracorrán	Convoy	Raphoe South	Knockfair	Stranorlar	Raphoe South
Edenmore	Donaghmore	Raphoe South	Lettermakenny	Stranorlar	Raphoe South
Goland	Donaghmore	Raphoe South	Lisnaree	Stranorlar	Raphoe South
Aghasheil	Stranorlar	Raphoe South	Lough Hill	Stranorlar	Raphoe South
Ballybofey	Stranorlar	Raphoe South	Macklees	Stranorlar	Raphoe South
Ballynaglack	Stranorlar	Raphoe South	Magherapaste	Stranorlar	Raphoe South
Cappry	Stranorlar	Raphoe South	Meenavoy	Stranorlar	Raphoe South
Cappry (Graham)	Stranorlar	Raphoe South	Meencargagh	Stranorlar	Raphoe South
Castlebane	Stranorlar	Raphoe South	Mullaghagarry	Stranorlar	Raphoe South
Creggan	Stranorlar	Raphoe South	Mullanachose	Stranorlar	Raphoe South
Dooish	Stranorlar	Raphoe South	Mullandrait	Stranorlar	Raphoe South
Drumboe Lower	Stranorlar	Raphoe South	Teangue	Stranorlar	Raphoe South
Drumboe Upper	Stranorlar	Raphoe South	Teevickmoy	Stranorlar	Raphoe South
Dunwiley	Stranorlar	Raphoe South	Tircallan	Stranorlar	Raphoe South
Gortletteragh	Stranorlar	Raphoe South	Treanamullin	Stranorlar	Raphoe South
Greenhill	Stranorlar	Raphoe South			

² Townland geospatial layer was downloaded from townlands.ie and cross-referenced with the OSI's list of townlands downloaded from data.gov.ie.

Table 2: Townlands intersected by Section 2 LiDAR study area.

Townland	Civil Parish	Barony
Ballyboe Lisnenan	Aghanunshin	Kilmacrenan
Glebe	Aghanunshin	Kilmacrenan
Kiltoy	Aghanunshin	Kilmacrenan
Magheranan	Aghanunshin	Kilmacrenan
Ballyraine	Conwal	Kilmacrenan
Gortlee	Conwal	Kilmacrenan
Milk Isle	Conwal	Kilmacrenan
Bunnagee	Leck	Raphoe North
Coaghmill	Leck	Raphoe North
Corranagh	Leck	Raphoe North
Dromore	Leck	Raphoe North
Drumany	Leck	Raphoe North
Drumardagh	Leck	Raphoe North
Drumgreggan	Leck	Raphoe North
Drumnahoagh	Leck	Raphoe North

Townland	Civil Parish	Barony
Farsetmore	Leck	Raphoe North
Knockbrack	Leck	Raphoe North
Listellian	Leck	Raphoe North
Lurgy	Leck	Raphoe North
Lurgybrack	Leck	Raphoe North
Magheraboy	Leck	Raphoe North
Pluck	Leck	Raphoe North
Rossbrackan	Leck	Raphoe North
Trimragh	Leck	Raphoe North
Corkey	Raymoghly	Raphoe North
Glebe	Raymoghly	Raphoe North
Labbadish	Raymoghly	Raphoe North
Manorcunningham Churchland	Raymoghly	Raphoe North
Raymoghly	Raymoghly	Raphoe North

Table 3: Townlands intersected by Section 3 LiDAR study area.

Townland	Civil Parish	Barony
Ballindrait	Clonleigh	Raphoe North
Ballynabreen	Clonleigh	Raphoe North
Birdtown	Clonleigh	Raphoe North
Carricknaslate	Clonleigh	Raphoe North
Cavanacor	Clonleigh	Raphoe North
Coneyburrow	Clonleigh	Raphoe North
Curragalane	Clonleigh	Raphoe North
Drumboy	Clonleigh	Raphoe North
Gortin North	Clonleigh	Raphoe North
Guystown	Clonleigh	Raphoe North

Townland	Civil Parish	Barony
Carrickballydooyey	Raymoghly	Raphoe North
Carrickballydooyey Glebe	Raymoghly	Raphoe North
Castledowey	Raymoghly	Raphoe North
Corkey	Raymoghly	Raphoe North
Drumatoland	Raymoghly	Raphoe North
Drumcarn	Raymoghly	Raphoe North
Drumoghill	Raymoghly	Raphoe North
Errity	Raymoghly	Raphoe North
Glebe	Raymoghly	Raphoe North
Labbadish	Raymoghly	Raphoe North

Townland	Civil Parish	Barony
Haw	Clonleigh	Raphoe North
Hollands	Clonleigh	Raphoe North
Leggandorragh	Clonleigh	Raphoe North
Lifford	Clonleigh	Raphoe North
Lifford Common	Clonleigh	Raphoe North
Mass Beg	Clonleigh	Raphoe North
Mass More	Clonleigh	Raphoe North
Millsessiagh	Clonleigh	Raphoe North
Moneen	Clonleigh	Raphoe North
Mulnaveagh	Clonleigh	Raphoe North
Murlough	Clonleigh	Raphoe North
Portinure	Clonleigh	Raphoe North
Rossgeir	Clonleigh	Raphoe North
Sheercloon	Clonleigh	Raphoe North
Tamnawood	Clonleigh	Raphoe North
Town Parks	Clonleigh	Raphoe North
Tyleford	Clonleigh	Raphoe North
Wood	Clonleigh	Raphoe North
Pluck	Leck	Raphoe North
Rossbrackan	Leck	Raphoe North
Ballyholey Far	Raphoe	Raphoe North
Ballyholey Near	Raphoe	Raphoe North
Broadlea	Raphoe	Raphoe North
Doorabble	Raphoe	Raphoe North
Magheestown	Raphoe	Raphoe North
Slievebuck	Raphoe	Raphoe North

Townland	Civil Parish	Barony
Manorcunningham Churchland	Raymoghy	Raphoe North
Mondooley Lower	Raymoghy	Raphoe North
Mondooley Middle	Raymoghy	Raphoe North
Mondooley Upper	Raymoghy	Raphoe North
Raymoghy	Raymoghy	Raphoe North
Sheskinapoll	Raymoghy	Raphoe North
Tullybogly	Raymoghy	Raphoe North
Tullybogly	Raymoghy	Raphoe North
Woodhill	Raymoghy	Raphoe North
Carnshannagh	Taughboyne	Raphoe North
Carrickdawson	Taughboyne	Raphoe North
Dromore Big	Taughboyne	Raphoe North
Drumbeg	Taughboyne	Raphoe North
Drumfad	Taughboyne	Raphoe North
Drumore Little	Taughboyne	Raphoe North
Drumucklagh	Taughboyne	Raphoe North
Feddyglass	Taughboyne	Raphoe North
Tullyrap	Taughboyne	Raphoe North
Carricklee	Urney	Strabane Lower
Castletown	Urney	Strabane Lower

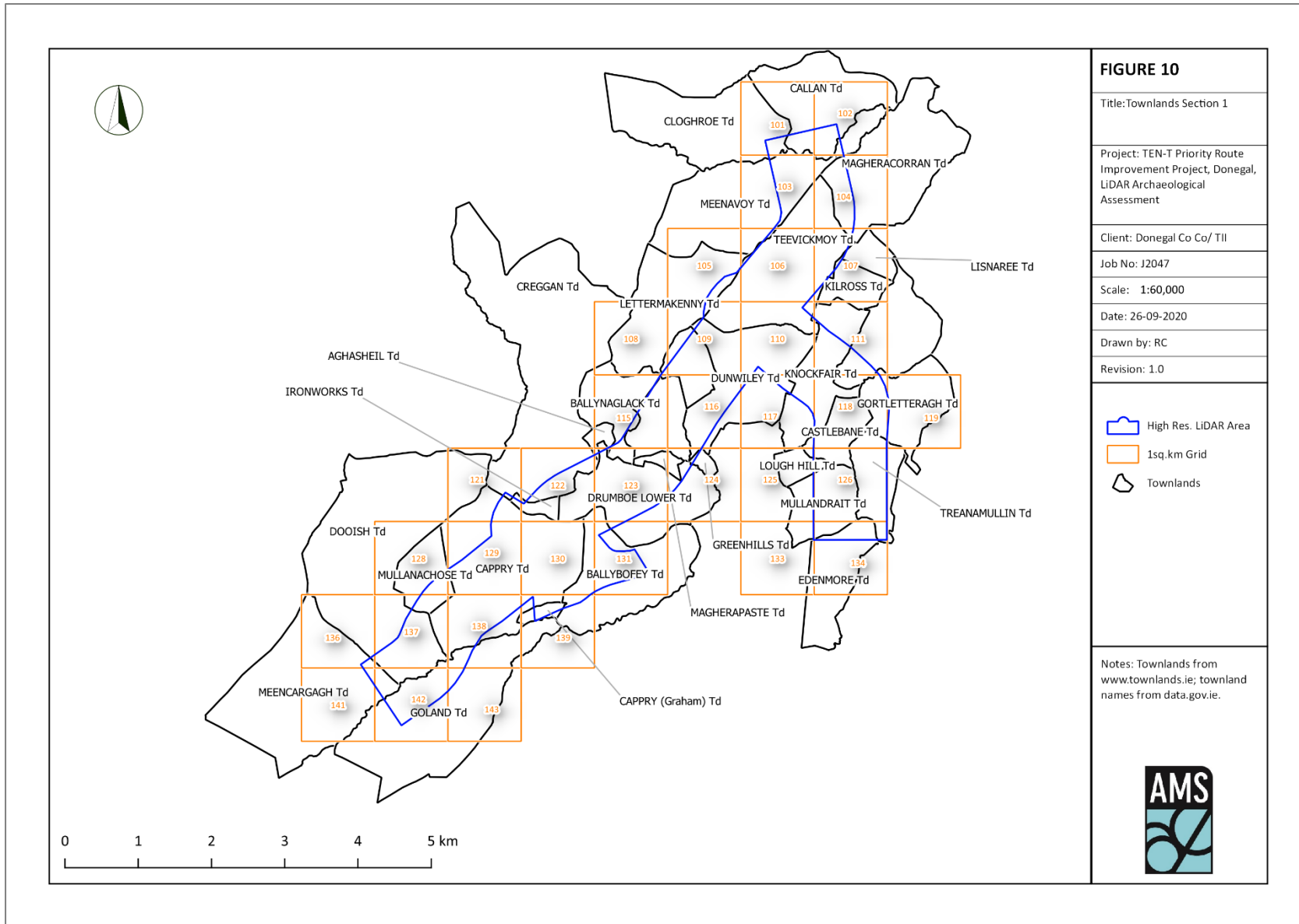


Figure 10: Section 1 townlands.

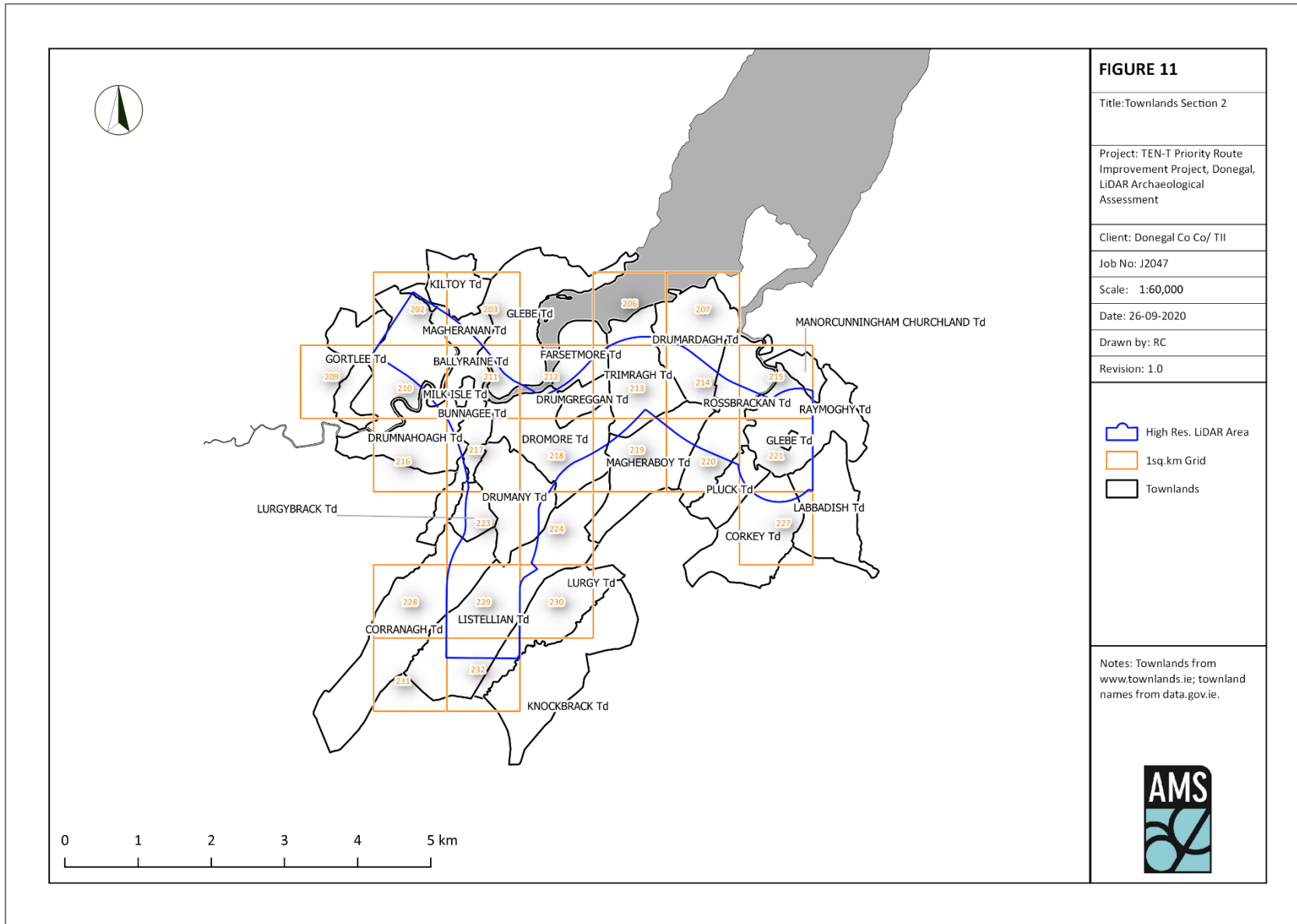


Figure 11: Section 2 townlands.

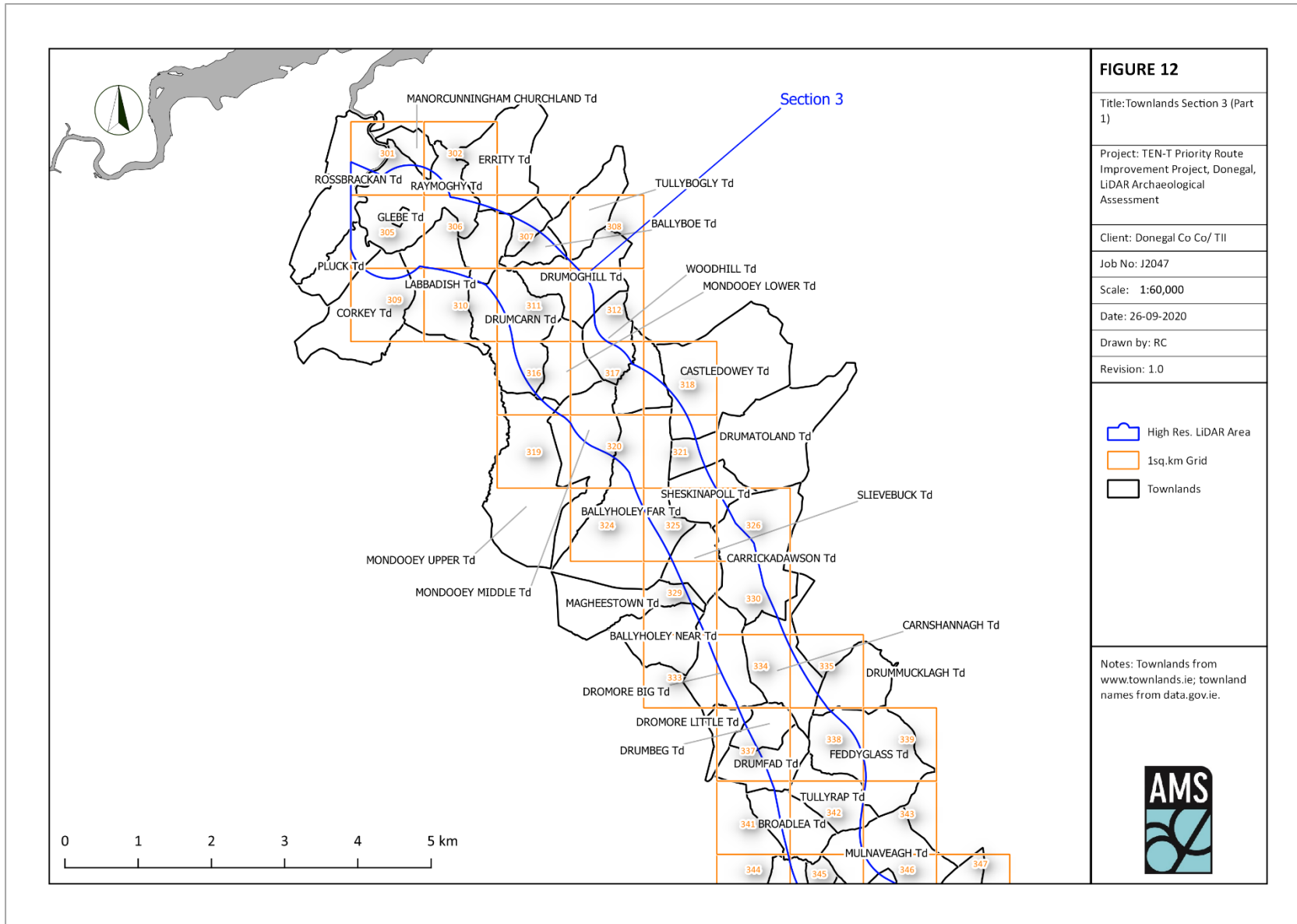


Figure 12: Section 3 townlands Section 3 (1 of 2).

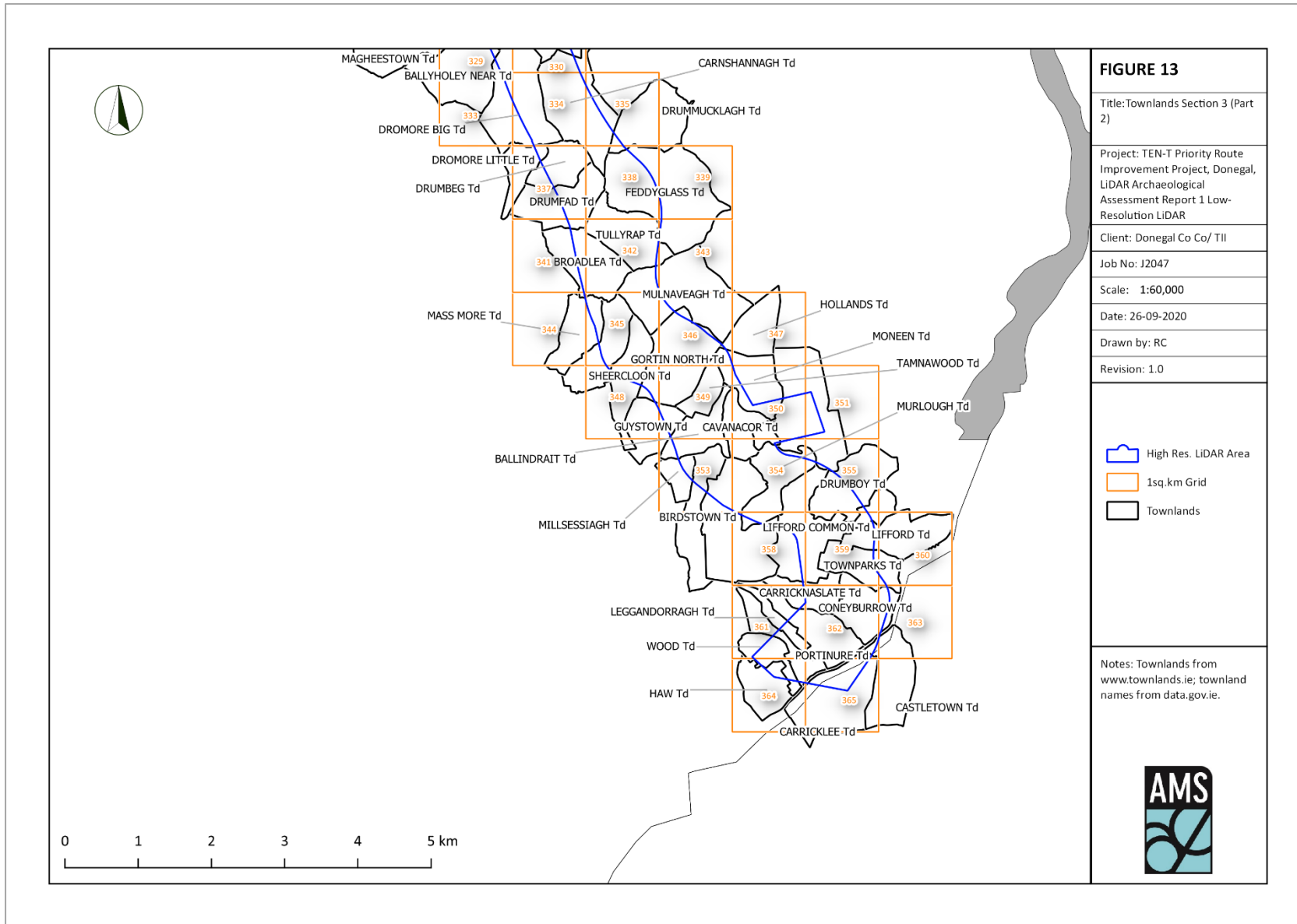


Figure 13: Section 3 townlands (2 of 2).

Recorded Cultural Heritage

One of the primary focuses of the LiDAR analysis is to analyse recorded archaeological sites in the SMR/RMP, and sites identified in the Option Selection Reports (RPS and Barry Transportation 2019a; 2019b; 2019c). The total number of buildings recorded in the National Inventory of Architectural Heritage (NIAH) and the Record of Protected Structures (RPS) for each LiDAR study area are also noted here, although buildings are not the primary focus of this study.³

The Ten-T Project high-resolution LiDAR study areas contain a total of 146 previously recorded cultural heritage sites (Table 4).

Table 4: Previously recorded cultural heritage sites.

Records	No.
SMR	43 ⁴
NIAH	88
RPS	6
Sites from Route Selection	9

Section 1 Recorded Cultural Heritage

In Section 1 of the LiDAR survey area, there are thirty-two previously recorded cultural heritage sites:

Table 5: Previously recorded cultural heritage in Section 1.

Records	No.
SMR	10
NIAH	16
RPS	2
Route Selection	4

The most numerous previously recorded archaeological sites are ringforts: unclassified (4), rath (1) and cashel (1). The Section 1 survey area also contains a souterrain, a bullaun stone, a church, and an enclosure (Figure 14; Figure 17).

³ In general, the type of LiDAR analysis carried out for this project is not appropriate for describing built heritage; therefore, a site-by-site analysis was not carried out for recorded buildings. However, as specified in the works requirements, the NIAH and RPS register numbers were noted when they corresponded with sites identified in the LiDAR data.

⁴ For the purpose of this analysis, the figures for previously recorded archaeological sites are calculated using the SMR only; this also includes SMR sites whose Zone of Notification is intersected by the high resolution LiDAR study area. Also, one SMR site in the study area, an architectural fragment (DG054-032002-), is not counted as it will not have an expression in the LiDAR data.

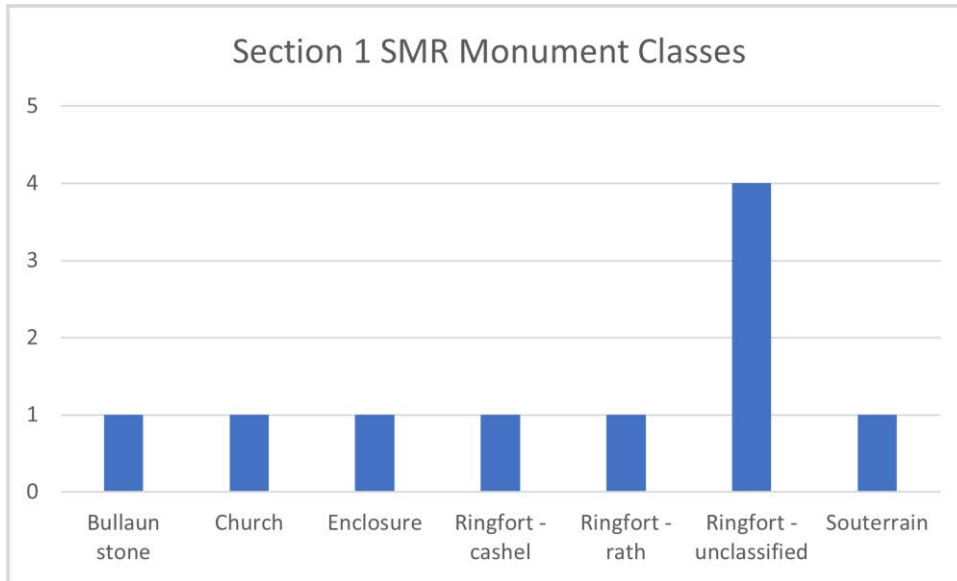


Figure 14: SMR site categories in Section 1 LiDAR survey area.

The NIAH contains records for sixteen sites within the Section 1 study area (Table 6; Figure 17). Two of these buildings are included in Donegal's RPS: a house and a hospital (Figure 17).

Table 6: NIAH sites in Section 1.

Building/Structure Type	No.
Graveyard/cemetery	2
House	8
Mill (water)	2
Outbuilding	4

The Route Selection Report identified six Areas of Archaeological Potential (S1AAP-01 to S1AAP-06) and four potential archaeologically significant sites the Section 1 LiDAR study area (RPS et al. 2019a) (Table 7; Figure 17).

Table 7: Sites identified during Route Selection in Section 1.

Route Selection ID	Townland	Description	ITM E	ITM N
S1-AP01	Ballynaglack	AP Site – Possible ringfort/enclosure	613515	895915
S1-AP02	Mullanachose	Possible Enclosure	610907	894131
S1-BH02	Drumboe upper	Possible 18th-century farmstead	613969	896215
S1-CH01	Drumboe lower	Holy Well Woods (well site)	613505	895748

Section 2 Recorded Cultural Heritage

In Section 2 of the LiDAR survey area, there were 26 previously recorded cultural heritage sites (Table 8).

Table 8: Previously recorded cultural heritage in Section 2.

Records	No.
SMR	11
NIAH	14
RPS	0
Route Selection	1

Standing stones (3) and rock art (4) made up the largest part of the recorded archaeology in the Section 2 LiDAR study area, which also included one each of a church, graveyard, ringfort, and a redundant record (Figure 15; Figure 18).



Figure 15: SMR sites in Section 2 LiDAR survey area.

The NIAH contains records for fourteen buildings and structures in the Section 2 LiDAR study area (Table 9; Figure 18), none of which are included in Donegal's RPS.

Table 9: NIAH sites in Section 2.

Building/Structure Type	No.
Bridge	4
Church/chapel	2
House	1
Manse	6
Mill	1

The Route Selection Report identified three Areas of Archaeological Potential (S2AAP-01 to S2AAP-03) and one site, a disused railway, in Section 2 (RPS et al. 2019b)(Table 10; Figure 18).

Table 10: Sites identified during Route Selection, Section 2.

Route Selection ID	Townland	Description	ITM_E	ITM_N
S2-BH04	Dromore	Disused railway line	620307	910532

Section 3 Recorded Cultural Heritage

In Section 3 of the LiDAR survey area, there were ninety-six previously recorded archaeological sites and buildings (Table 11; Figure 19 and Figure 20).

Table 11: Previously recorded Cultural Heritage in Section 3.

Records	No.
SMR	22
NIAH	66
RPS	4
Route Selection	4

Standing stones are by far the largest number of the recorded archaeological sites (12) in Section 3. The study area also contains two cists, two souterrains, a bridge, a church and graveyard, a cross-inscribed stone, an enclosure (which was re-interpreted in this report as a possible barrow), and a school. One SMR listing in Section 3, an architectural fragment (DG054-032002-) was not included in this analysis as it sits inside a graveyard (DG054-032001-, L302-2) and is too small to have an expression in the LiDAR data (Figure 16; Figure 19 and Figure 20).

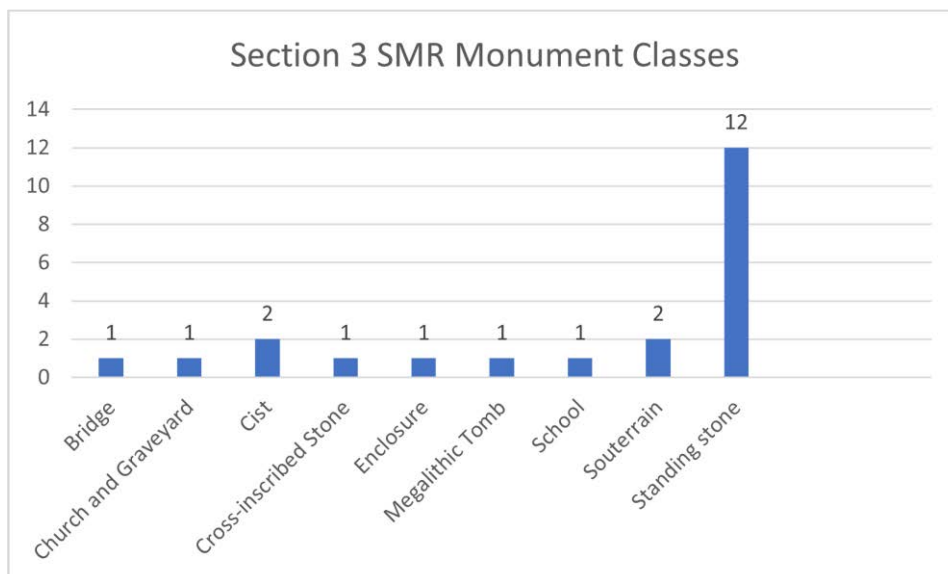


Figure 16: SMR sites in Section 3 LiDAR study area.

The NIAH contains records for sixty-six buildings and structures in the Section 3 LiDAR study area (Table 12; Figure 19 and Figure 20).

Table 12: NIAH sites in Section 3.

Building/Structure Type	No.
Bridge	6
Building misc.	1
Charter school	1
Church/chapel	6
Church/chapel; graveyard/cemetery	1
Country house	9
Goods shed	1
House	17
Manse	9
Mill (water)	1
Mill (wind)	1
Outbuilding	6
Railway station	2
School	1
Water pump	1
Worker's house; level crossing	1
Worker's house; station master's house	2

Four buildings in Section 3 are recorded in Donegal's RPS: three houses and a church (Figure 19 and Figure 20).

The Route Selection Report identified five Areas of Archaeological Potential (S3AAP-01 to S3AAP-05), and four sites from aerial photographs (Table 13; Figure 19 and Figure 20).

Table 13: Sites identified during Route Selection in Section 3.

Route Selection ID	Townland	Description	ITM_E	ITM_N
S3-AP01	Carnshannagh	Possible enclosure	628627	904434
S3-AP02	Dromore Big	Possible bivallate enclosure	628376	904292
S3-AP03	Drumbeg	Possible burnt spread	628795	903751
S3-AP04	Lifford Common	Possible 18th/19th-century farmstead	632162	898450

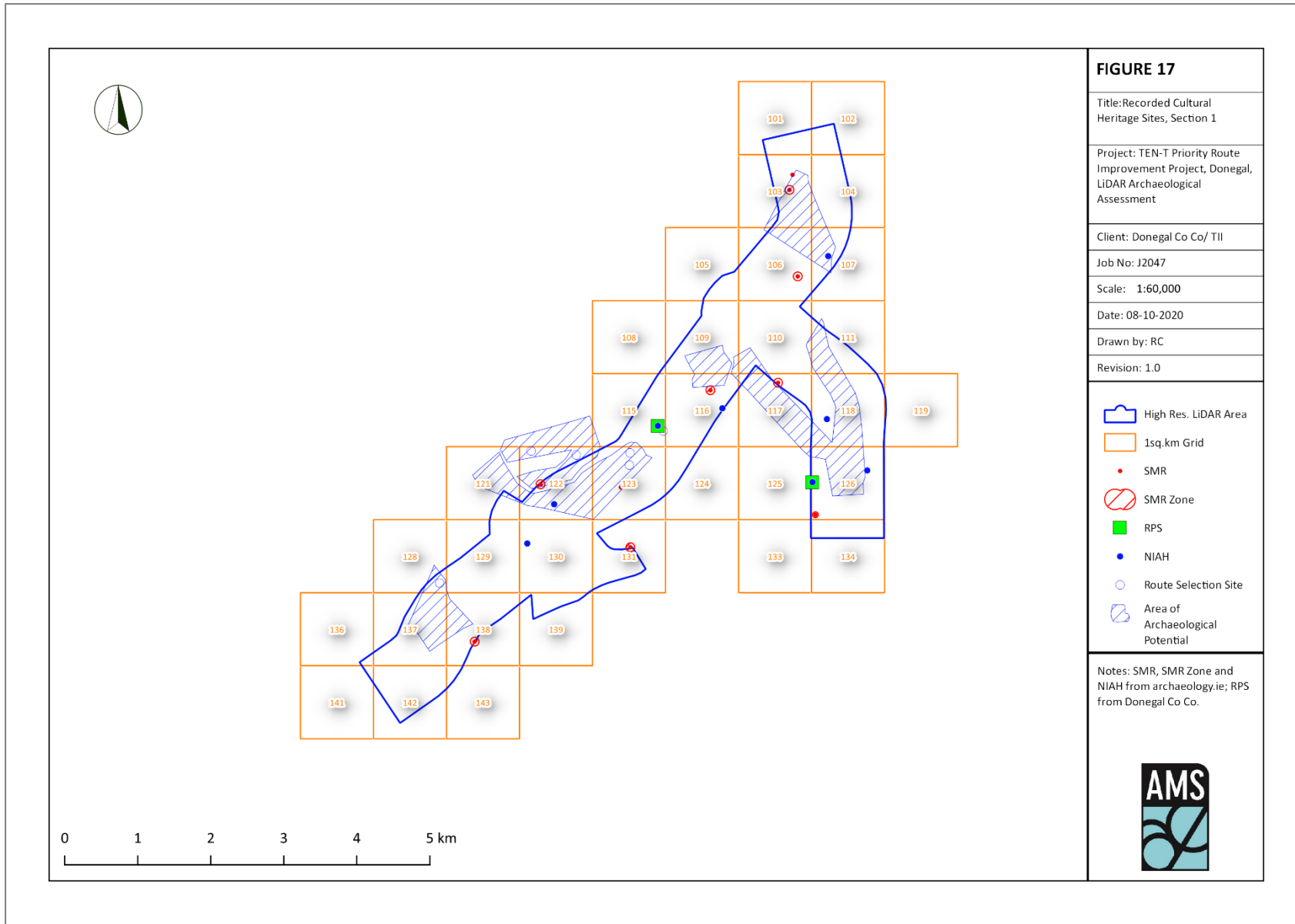


Figure 17: Section 1 Recorded Cultural Heritage.

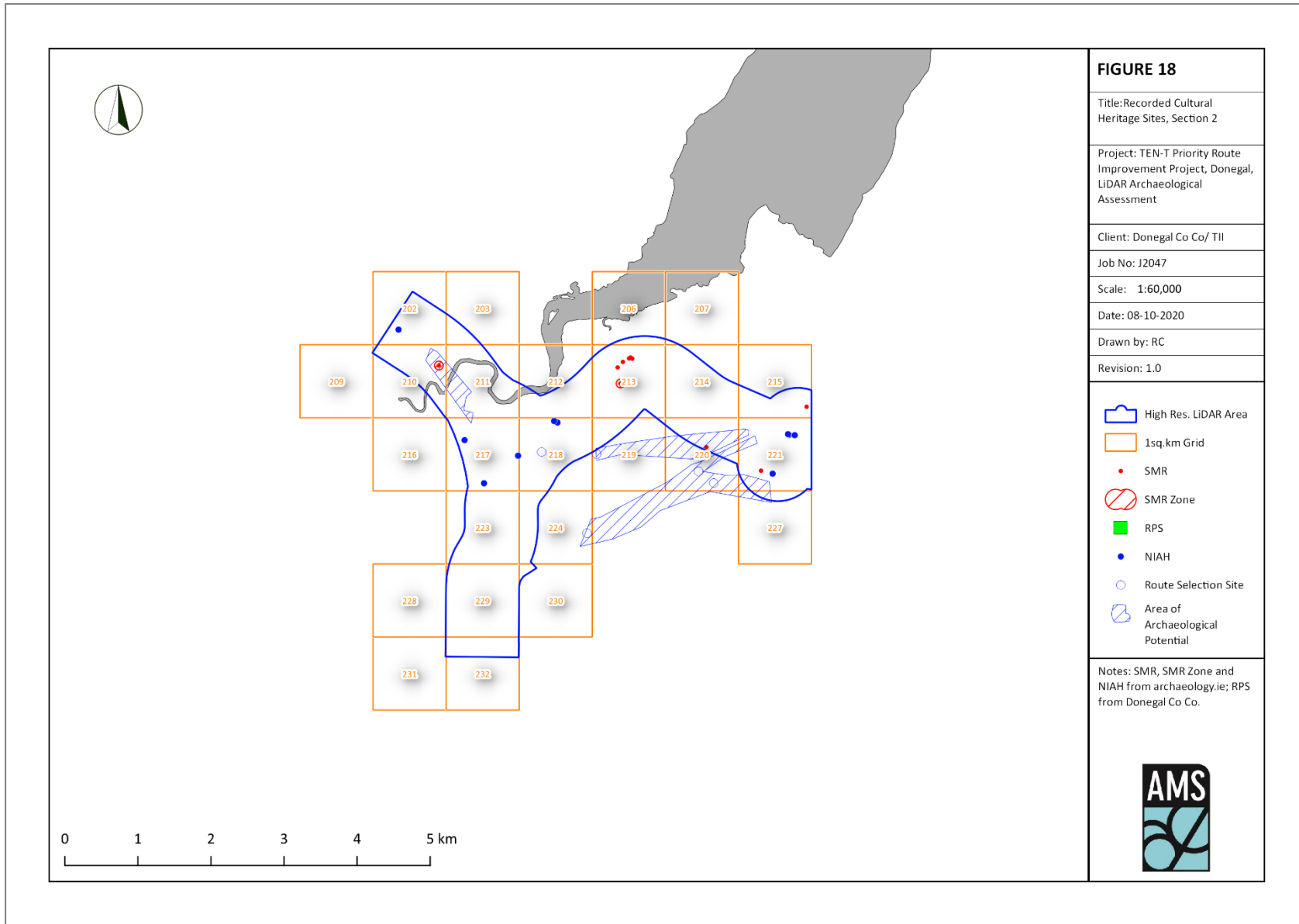


Figure 18: Section 2 Recorded Cultural Heritage.

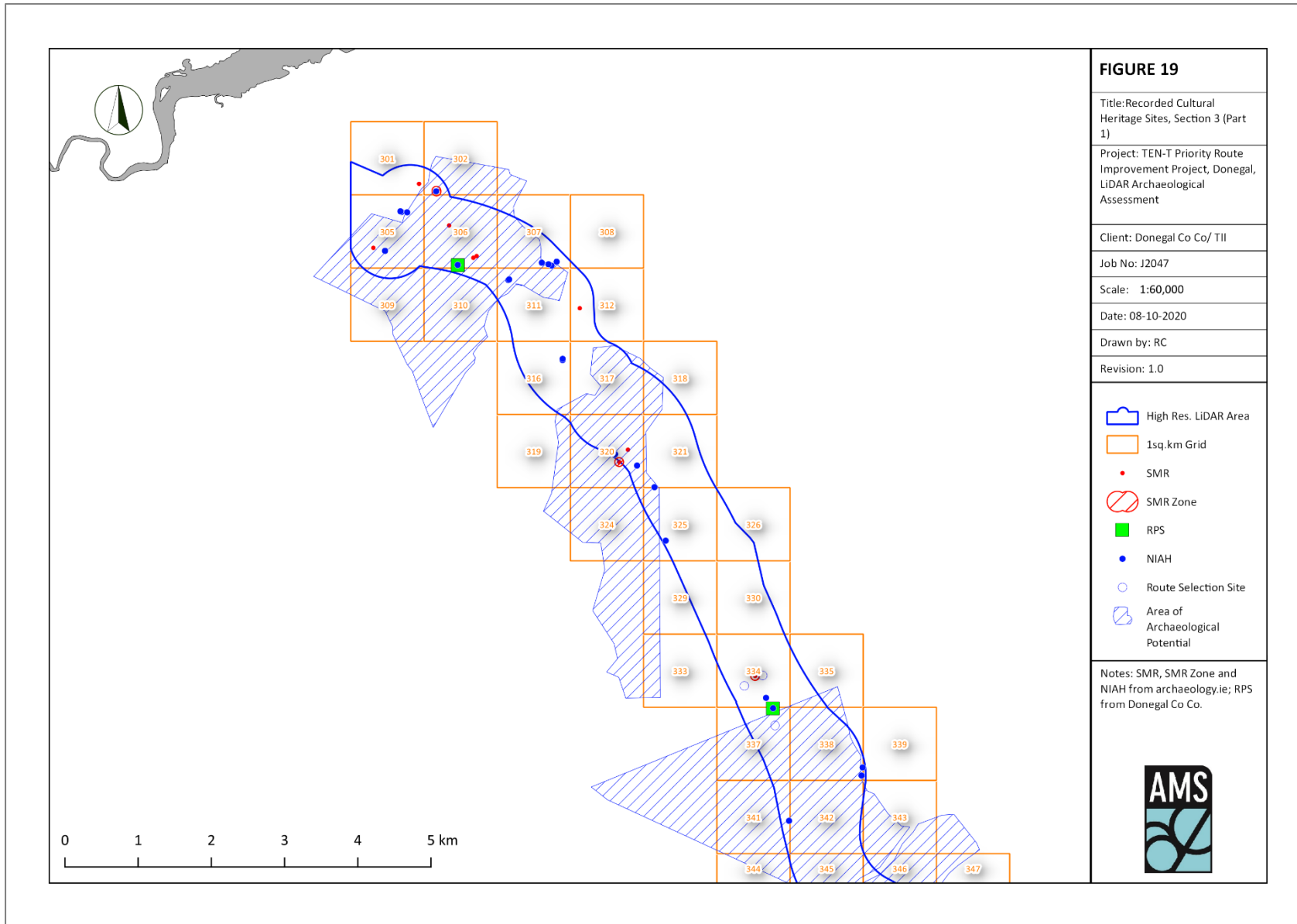


Figure 19: Section 3 Recorded Cultural Heritage (1 of 2).

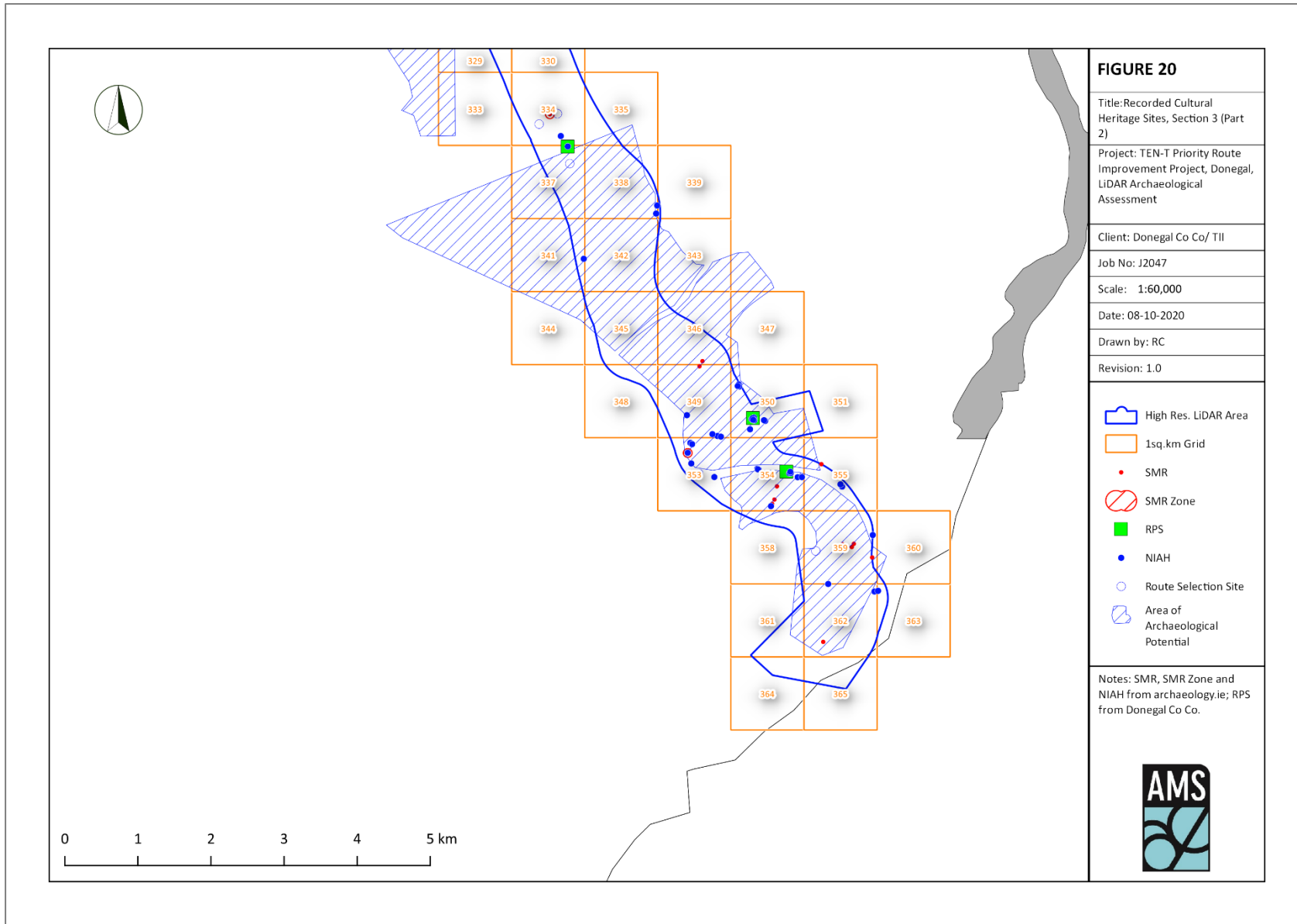


Figure 20: Section 3 Recorded Cultural Heritage (2 of 2).

Methodology

Overview

Archaeologists look for patterns in the ground surface to help identify and interpret archaeology. These patterns are often expressed as slight topographic variations that can take the form of circular banks/ditches for enclosures and/or barrows, linear banks/ditches for field boundaries, rectangular features for house platforms, etc., or any combination of the above. The surface expression of archaeological features, which can cover quite extensive areas, is sometimes almost imperceptible to the naked eye. LiDAR (Light Detection and Ranging) is a remote sensing technique used to generate high-resolution, three-dimensional models of the ground surface, and uses a variety of visualisation techniques to help identify, record and interpret low-profile archaeological features (English Heritage 2010; Kokalj et al. 2017).

The LiDAR data for the present project was captured and processed by Bluesky International. LiDAR data was acquired using a 2 MHz Leica Terrain Mapper scanner. The system was mounted to a Vulcanair P68 twin-prop fixed-wing aircraft. One flight was conducted on 20 April 2020 surveying all areas of interest. Scanner settings and flying height were optimized to meet required specification of at least eight laser pulses per metre (Bluesky International 2020).

LiDAR works by emitting laser light and calculating the distance to the ground based on the return of the laser. Millions of returns build up a detailed map of the ground and its surface characteristics (landforms, built-structures, vegetation, etc.). The Bluesky International survey produced in excess of eight points per metre. Independently acquired ground control points (GCPs) were loaded into the point cloud. Control height was compared against elevation values in the LiDAR point cloud (Bluesky International 2020). The collated data produces a mass point cloud dataset consisting of x, y, and z data points. The x and y points are given grid coordinates in Irish Transverse Mercator (ITM), and the height or z axis is given a value relative to Malin Head Height Ordnance Datum (OD). The first points returned are generally from the surface of features like buildings and vegetation. The last points returned are generally for the bare earth. Each point is classified according to whether it is a building, vegetation or bare earth.

LiDAR data was delivered in LAS 1.4 250 sq. m tiles. Digital elevation models were delivered in 250 sq. m ASCII elevation grids. Building footprints were extracted from the classified point cloud dataset (Bluesky International 2020).

The point cloud dataset is used to generate Digital Surface Model (DSM) and Digital Terrain Model (DTM) ASCII elevation grids. A DSM is a model of the surface of every feature, i.e. modelling the first return laser points. A DTM is a model of the bare earth, with buildings and vegetation removed from

the model, i.e. the last laser point returns. The DTM ASCII elevation grids are used for the analysis detailed in this report. The DSM and DTM ASCII elevation grids were generated by Bluesky International.

AMS's brief for this project was to assess this LiDAR-derived data to help identify and describe all archaeological features, including previously recorded archaeology.

Software

This project used the Relief Visualization Toolbox (RVT, version 2.2.1) to produce visualisations of the LiDAR-generated DTM data, and QGIS (version 3.14) as a Geographical Information System (GIS) for accessing and analysing these visualisations.

Relief Visualization Toolbox is simple software produced by the 'ArchaeoLandscapes Europe' (ArcLand) project specifically for the generation of LiDAR visualisations.^{5,6}

QGIS is an open-source GIS which can be used to create, edit, visualise, analyse and publish geospatial information.⁷ This project used the latest long-term release version of the software (3.14) as the basic platform to access, view and analyse the LiDAR visualisations produced with RVT. QGIS also allowed us to compare these visualisations with other relevant geospatial databases, record the analysis through digitising the position, extent, characteristics, dimensions of individual monuments, and output a table catalogue of this analysis and corresponding maps and profile images.

Data

The LiDAR data for the Ten-T Project provided by Bluesky consisted of:

- 988 LiDAR tiles of Digital Terrain Model (DTM) in ASCII xyz format, of which 950 intersect the route sections. Each tile covers an area 250m by 250m, each with a pixel size of 0.5 sq.m;
- The same number of Digital Surface Model (DSM) tiles in ASCII xyz format, pixel size 0.5 sq. m, covering the same area as the DTM tiles.
- footprint polygons of 54,838 buildings generated from the LiDAR data.

To allow comparison with the first report (AMS 2020), the same grid of 1 sq. km tiles, using the same tile numbers, were used to organise and number LiDAR features for this second report (Figure 21– Figure 24). Existing LiDAR features were analysed and where necessary their descriptions were updated; new LiDAR features were added on a grid-by-grid basis.

Of the 153 LiDAR features described in the first low-resolution LiDAR report (AMS 2020), 95 were

⁵ <https://iaps.zrc-sazu.si/en/rvt#v>.

⁶ <http://www.arcland.eu/>.

⁷ <https://www.qgis.org/en/site/>.

located wholly or partly within the footprint of the high-resolution LiDAR data. An additional 43 new LiDAR features were identified in the high-resolution LiDAR data, resulting in a total of 138 LiDAR features identified and described in this report (Figure 28–Figure 31).

The following datasets were also supplied by Donegal County Council:

- 313 tiles of RGB vertical digital imagery as an orthomosaic (.ecw) format: 73 covering 915.6 Ha of Section 1, and 240 tiles covering 1344.65 Ha of Sections 2 and 3. The orthographic images cover 33% of the full extent of the Low Resolution LiDAR survey;
- Polyline outline of fields and roads (CAD file), converted to a polyline vector layer for GIS;⁸
- Polygon outline of Areas of Archaeological Potential (AAP) identified in the Route Selection Reports (RPS et al. 2019a; RPS et al. 2019b; RPS et al. 2019c);
- RPS vector points for County Donegal;
- Sites identified in Route Selection as vector points;
- Ordnance Survey first-edition six-inch maps (initial survey 1836, revised with field boundaries 1845–52) and the first-edition 25-inch maps (surveyed 1900–05) as a licensed Web Map Service (WMS);
- Ordnance Survey Cassini six-inch maps (surveyed c.1949) as geotiff tiles.

For the purposes of this project, the following datasets were also downloaded and used:

- SMR point and polygon vectors (downloaded from www.archaeology.ie);
- NIAH point vector (downloaded from www.archaeology.ie);
- Rivers and Lakes as a WMS (<http://gis.epa.ie/geoserver/EPA/wms?SERVICE=WMS&>);
- National soils database as a vector layer (<https://gis.epa.ie/GetData/Download>);
- Townlands vector layer;⁹
- The British War Office One-Inch maps (1941–43).¹⁰

The following vector layers were generated for the project:

- Footprint outline of the LiDAR data received, generated from DTM tiles;
- Grid polygons corresponding with the LiDAR tiles received;
- Polygons for each identified LiDAR sites;
- Profile lines for significant LiDAR sites;

LiDAR Visualisations

Multiple types of visualisation techniques can be used to help highlight low-relief or micro-topography

⁸ Note that not all recent buildings are included in this dataset.

⁹ Vector layer downloaded from www.townlands.ie; townland names confirmed against the OS townlands list from <https://data.gov.ie/dataset/townland>.

¹⁰ <https://qms.nextgis.com/geoservices/906/>

in LiDAR data (Corns et al. 2009; Bennett et al. 2012; Bennett 2013; Opitz et al. 2013; Kokalj et al. 2017). It was decided to employ three main types of visualisation to the LiDAR data, and composite images combining LiDAR visualisation models as outlined below in Table 14.

LiDAR Analysis

In QGIS, a sequential numbering system was used to identify each 1km x 1km grid tile within each LiDAR section: 101 to 143 in Section 1 (Figure 21); 201 to 232 in Section 2 (Figure 22), and 301 to 365 in Section 3 (Figure 23 and Figure 24). Each LiDAR visualisation raster image, DTM and orthographic image was imported into QGIS. To improve the performance of QGIS, the raster image tiles were rendered as Virtual Raster layers. The analysis consisted of a grid-by-grid examination of:

- each of the LiDAR visualisation,
- orthographic images,
- previously recorded archaeology,
- previously recorded architecture,
- sites identified in the Constraints Reports,
- historical OS maps,
- and LiDAR features identified in the low-resolution LiDAR.

A vector polygon layer¹¹ recorded fields for each LiDAR site as listed in Table 15 and Appendix 2.

¹¹ The vector layers were saved in a 'GeoPackage' geodatabase.

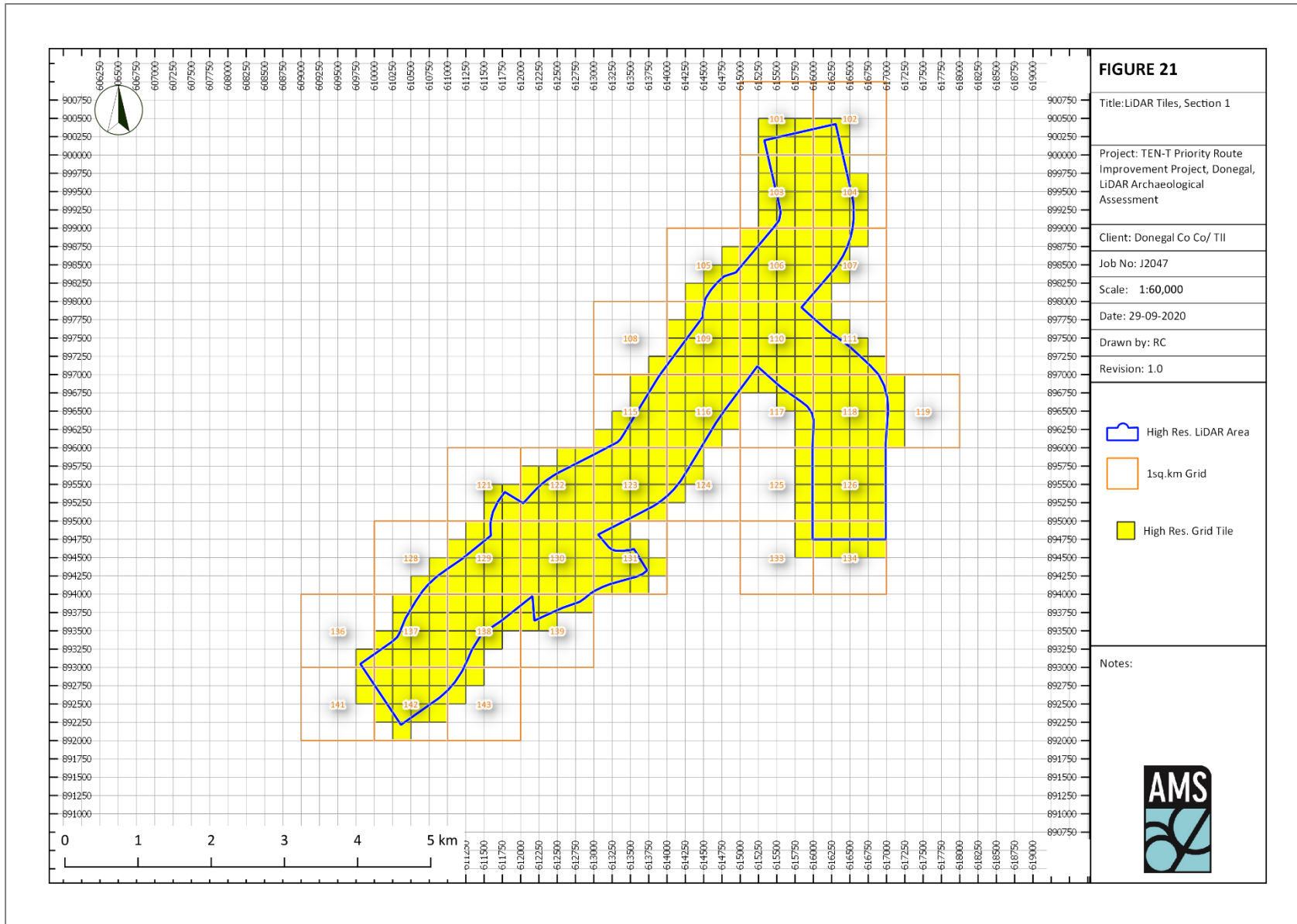


Figure 21: Section 1 LiDAR tiles.

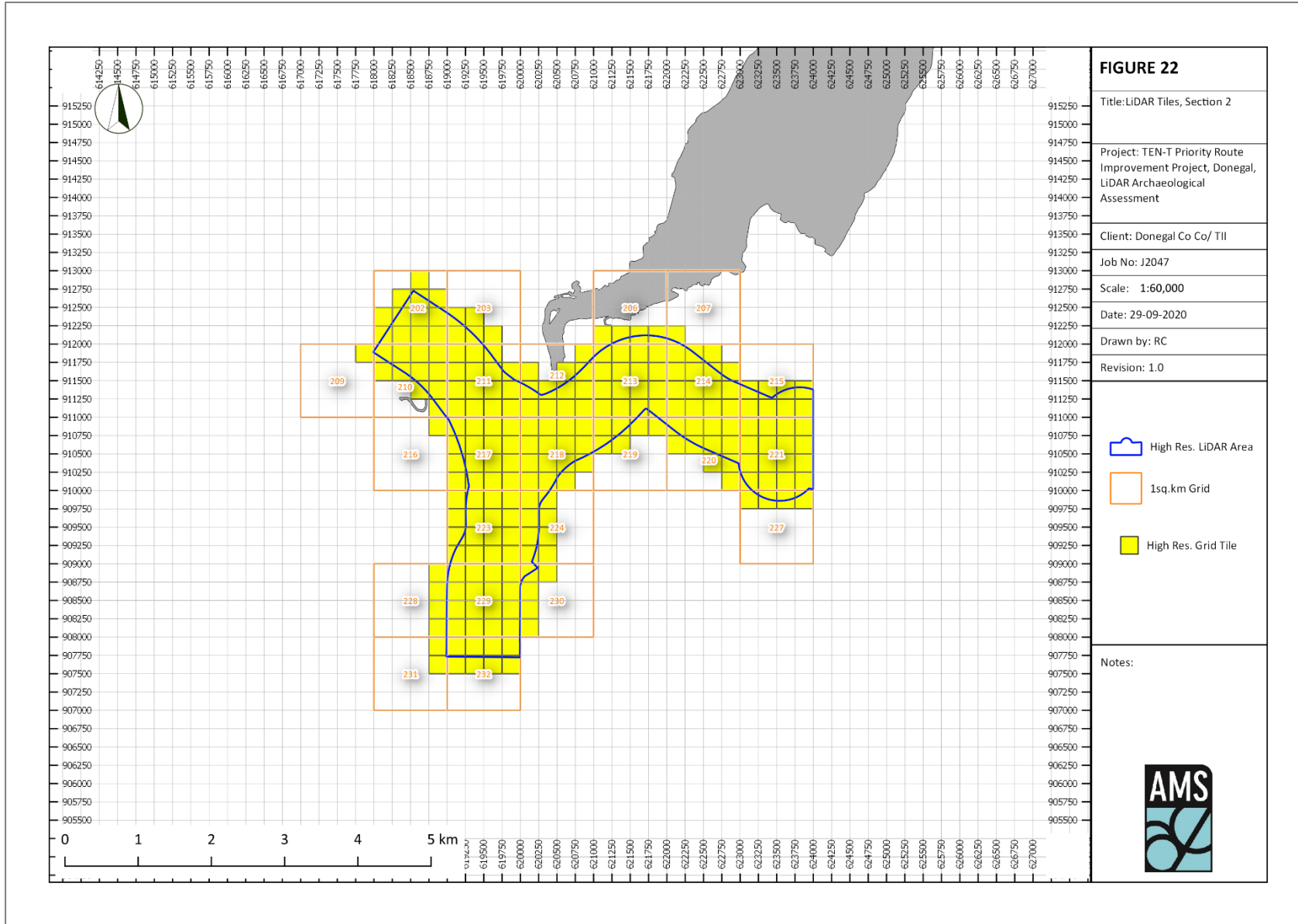


Figure 22: Section 2 LiDAR tiles.

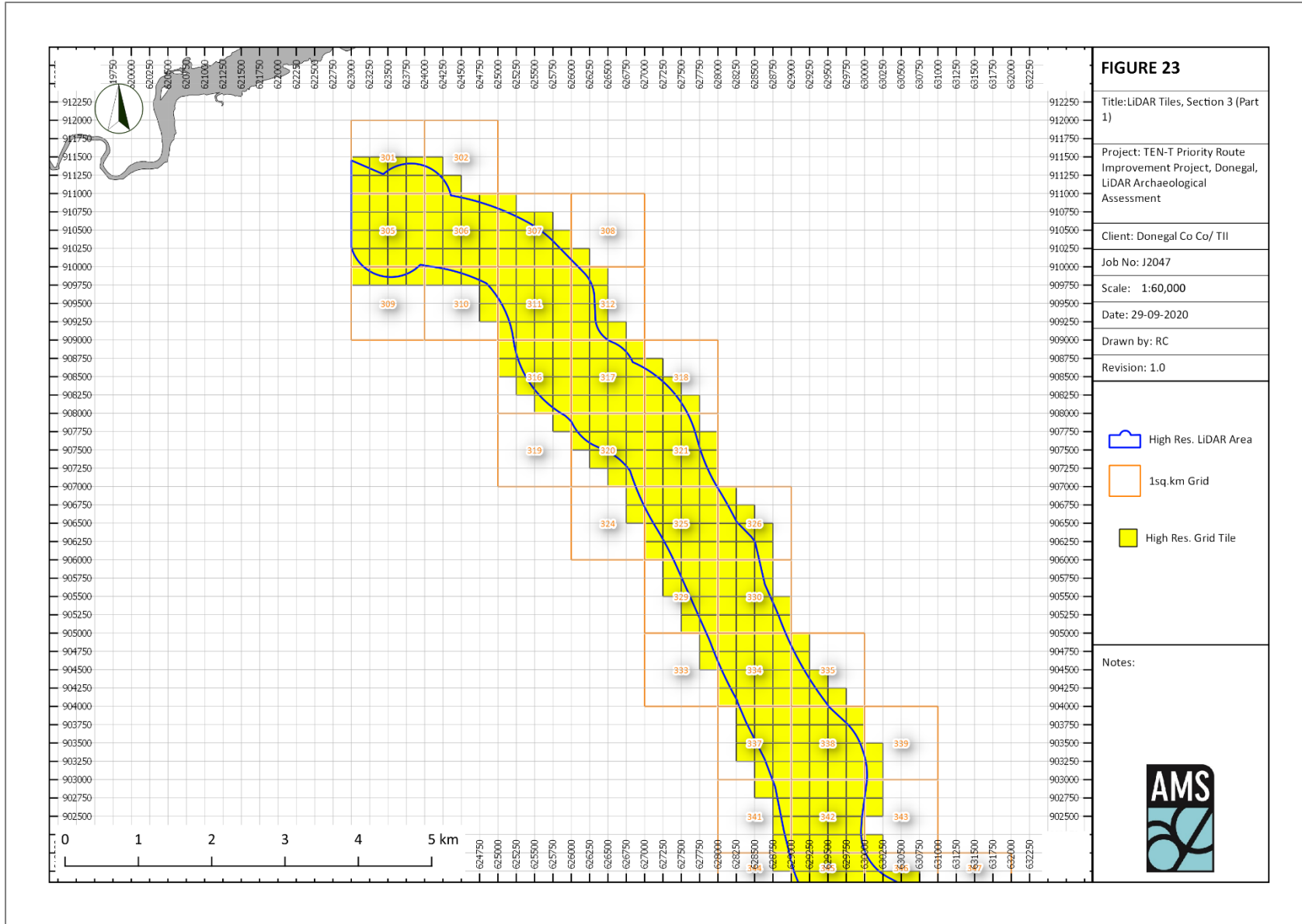


Figure 23: Section 3 LiDAR tiles (1 of 2).

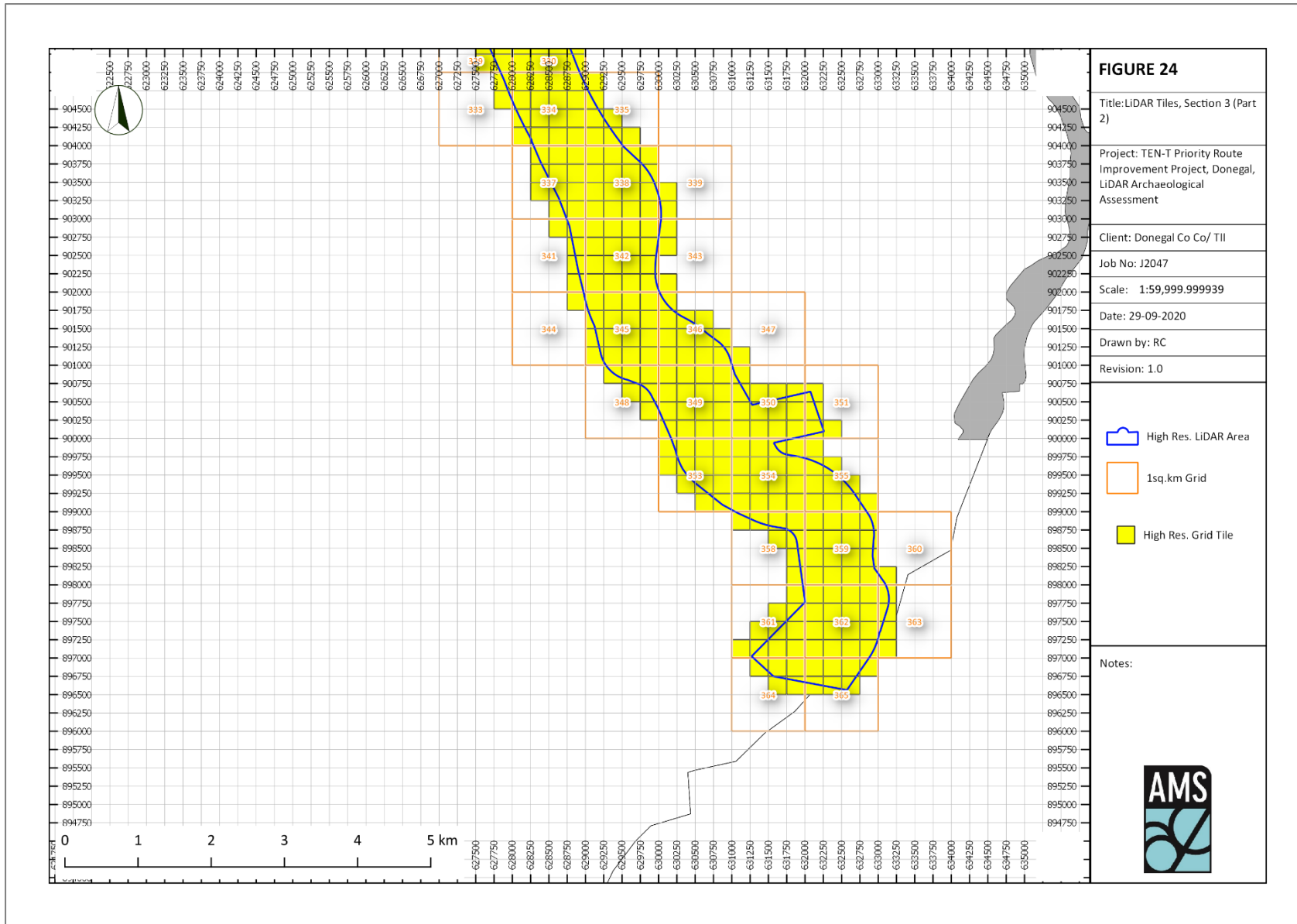




Figure 24: Section 3 LiDAR tiles (2 of 2).

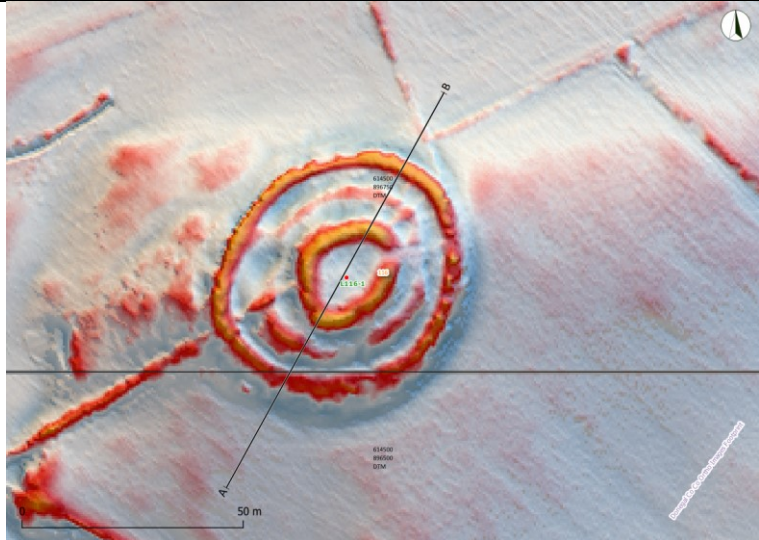
Table 14: LiDAR visualisation techniques and geospatial data used as part of this assessment.¹²

<p>Sky View Factor (SVF) generated in RVT 2.2.1:</p> <p>This visualisation measures the portion of the sky visible above a certain point. In this way, flat terrain, ridges and earthworks which receive more illumination are highlighted and appear in light, while depressions appear dark because they receive less illumination. However, for this project better results were found by reversing the raster values to highlight depressions as light areas and flat areas as dark. To improve the visualisation the raster histogram was clipped between 0.44 and 0.99.</p>	
<p>Simple Local Relief Model (SLRM) generated in RVT 2.2.1:</p> <p>Simple Local Relief Model removes the large-scale topographical elements (hills, valleys, etc.) from the DTM data, revealing the micro-topography, including low-relief surface expressions of archaeological sites and landscape features. RVT calculates a simplified topography and subtracts this filtered model from the original DTM to create a local relief model. This is visualised in QGIS by clipping the raster cell z value between -1 and +2 and styling the raster values from blue (-1), white (0), red (+1), and yellow (+2), representing rising ground. This raster is then made 50% transparent and overlaid on the multi-direction hillshade model, to make it easier to identify the low-relief features.</p>	

¹² The example used here is L116-1, a multivallate ringfort (SMR DG078-003----)

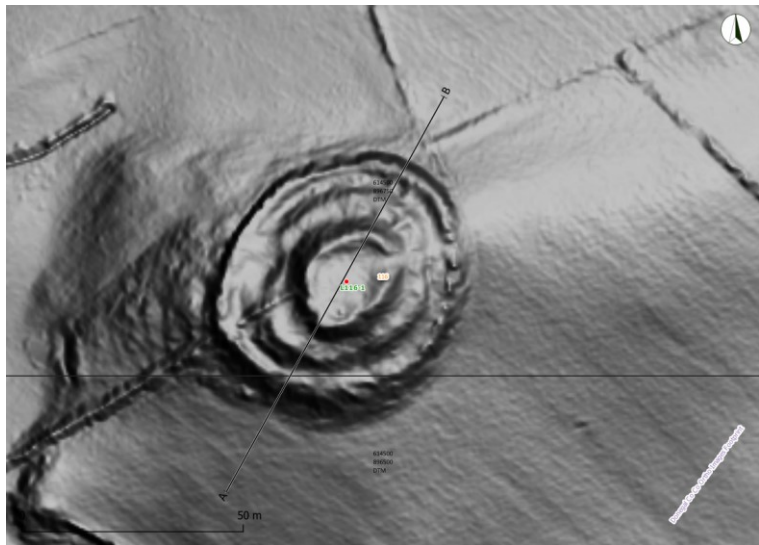
De-trend Model generated in QGIS

A detrend model generated in QGIS using a workflow described in Streatfeild-James' *QGIS for Archaeologists* (2016). Using a virtual raster of the DTM LiDAR tiles for each section of the scheme, the 'trend' of the DTM is removed by a 'simple filter'; the resulting raster is subtracted from the DTM to generate the Detrend model, which is subsequently saved as a tiff file. Like the SLRM, this model is also visualised in QGIS by clipping the raster cell z value between -1 and +2 and styling the raster values from blue (-1), white (0), red (+1), and yellow (+2), representing rising ground. This raster is then made 50% transparent and overlaid on the multi-direction hillshade model, to make it easier to identify the low-relief features.

**Multi-Direction Hillshade Model (Multi-HS) generated in RVT & QGIS.**

Hillshade models create an artificial illumination from a set direction and height angle, to highlight surface changes such as upstanding features (mounds, walls, etc.) and sunken features (ditches etc.) by casting shadows. A significant disadvantage of this technique is that features parallel to the direction of illumination, or in the shadow of prominent features, are hidden. This can be mitigated by hillshading in multiple directions (16 for this project), with a set height angle (35°) in RVT. This provides greater illumination of low-relief features. The z axis was also exaggerated by 3 to further highlight micro-topographical features.

A hillshade model can also be created in QGIS by styling the DTM raster image, with the added advantage of being able to manipulate the lighting direction, altitude, and vertical exaggeration through the raster style; QGIS can also generate a multi-directional hillshade style for the DTM.



Composite Image: Multi-HS, SLRM & SVF.

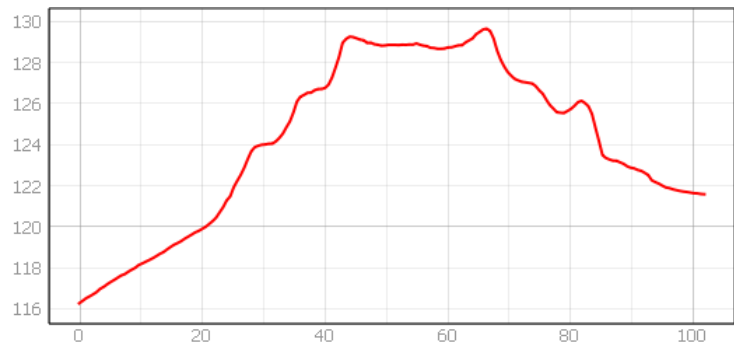
Each type of LiDAR model has its strength, illustrating an aspect of the micro-topography which provides detail and context to a site and landscape. Occasionally, a composite of each model can provide additional detail. For the purpose of this project, composite images consisting of the Multi-direction Hillshade Model, Simple Local Relief Model, and the Sky View Factor Model have been used when appropriate.



Profiles

Profiles of DTMs can be produced in QGIS as another way to visualise and understand the shape and landscape setting of sites using LiDAR DTM data. The profiles correspond with the profile lines A (left) to B (right).

The vertical axis is exaggerated to better illustrate the nature of the micro-topography. The figures on the vertical axis relate to the absolute height; on the horizontal axis the distance along the profile line from A to B.



LiDAR interpretation

Each site analysed by LiDAR is identified with a polygon and mapped in relation to modern field boundaries and previously recorded archaeological sites. These are reproduced on a grid-by-grid basis in Appendix 4.

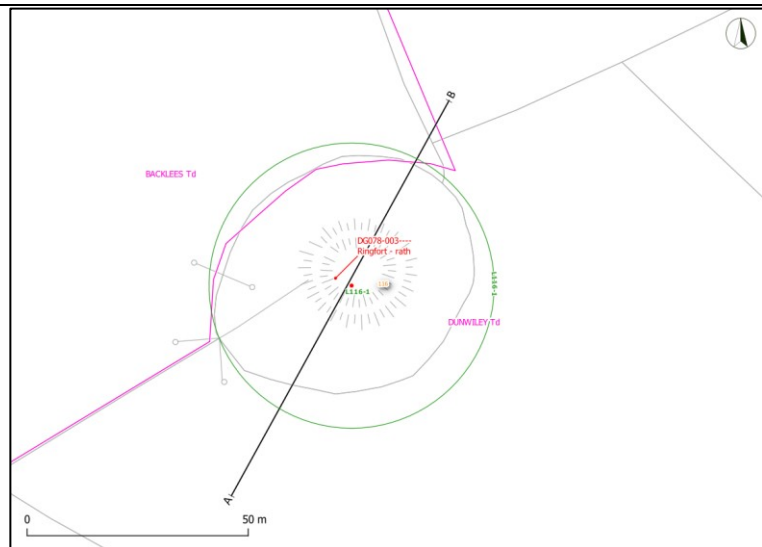


Table 15: Fields recorded for individual features identified through LiDAR analysis.

Field Name	Description	Appendix 2 (yes/no) ¹³
SITE NUMBER	Unique identification number made up of the letter 'L' (for LiDAR), followed by the grid number and the number of the site within that grid. Site numbers were given to all recorded features, including known sites in the SMR and those identified during this LiDAR analysis.	Y
SECTION	LiDAR study area Section 1, 2 or 3.	N
GRID	Unique number is given to each 1 sq. km grid tile; sites are numbered according to which grid they are located in; sites crossing multiple grids are numbered according to the most north-west grid.	N
NUMBER	Number of sites within grid.	N
CATEGORY	Type of site.	Y
DESCRIP	Brief description of the site, including its type, SMR number, whether it appears on historical OS maps, dimensions, morphology and a brief interpretation.	Y
CONFIDENCE	Confidence score (see Table 16).	Y
SMR_RMP	RMP and SMR number(s) for this feature.	Y
SMR_CLASS	Class description for the SMR site(s) corresponding with this feature.	N
SMR	1 = feature on the SMR.	N
RMP	1 = feature on the RMP.	N
RPS	Record of Protected Structures register number.	Y
NIAH	National Inventory of Architectural Heritage register number.	Y
ROUTE SELECTION	Sites identified in the Route Selection study for the Ten-T Project.	Y
AREAS OF ARCHAEOLOGICAL POTENTIAL	Areas of archaeological potential identified in the Route Selection Reports.	N
OS 1st 6-INCH	1 = depicted on OS first-edition 6-inch map, revised survey 1845–52.	Y
OS 25 INCH	1 = depicted on OS 25-inch map, surveyed in 1900–05	Y
Cassini 6 INCH	1 = depicted on OS Cassini 6-inch map, surveyed c.1949	Y
TD_PR_BR	Townland; civil parish; barony.	Y
TD	Townland name.	N
CP	Civil Parish name.	N
BR	Barony name.	N
AREA Ha	Area enclosed by the LiDAR feature polygon in hectares.	Y
GRID TILES	1 sq. km grid tile numbers containing this LiDAR site. Note large sites may extend over several tiles.	N

¹³ Those fields not included in Appendix 2 (N) are included in the geospatial dataset which accompanies this report.

Field Name	Description	Appendix 2 (yes/no) ¹³
Low_Res_Tiles	Low resolution (1m) DTM tile(s) containing this LiDAR site.	N
High_Res_Tiles	High resolution (1m) DTM tile(s) containing this LiDAR feature (see column 'LiDAR Tiles' in Appendix 2).	Y
ITM_E_Min	Minimum easting coordinate of the LiDAR feature.	N
ITM_E_Max	Maximum easting coordinate of the LiDAR feature.	N
ITM_N_Min	Minimum northing coordinate of the LiDAR feature.	N
ITM_N_Max	Maximum northing coordinate of the LiDAR feature.	N
Levels_OD_Range	Range of levels OD within the LiDAR feature polygon.	N
ITM_E_Centroid	ITM coordinate (easting) for the centre point of the feature (see column 'ITM Coords Centre' in Appendix 2).	Y
ITM_N_Centroid	ITM coordinate (northing) for the centre point of the feature (see column 'ITM Coords Centre' in Appendix 2).	Y
L_East	ITM coordinate for the label; attribute for the layer style in GIS.	N
L_North	ITM coordinate for the label; attribute for the layer style in GIS.	N
NEW SITE LOW RES	LiDAR site first identified in the low-resolution LiDAR data (AMS 2020)	Y
NEW SITE HIGH RES	LiDAR site first identified in the high-resolution LiDAR data, in this report	Y

All sites, whether previously known or newly identified, were assigned a unique identifier number. The feature was also scored in terms of confidence (Table 16).

Table 16: Confidence scores for identified archaeological features

Score	Meaning
0	Not archaeologically significant.
1	Possible archaeological site.
2	Probable archaeological site.
3	A previously recorded archaeological site which is visible in the LiDAR data.
4	A previously recorded archaeological site which is not visible in the LiDAR data.

All sites newly identified from the LiDAR data are scored as either possible (1) or probable (2) archaeological features.

These should be inspected in the field before a final determination of archaeological significance can be made.

The dimensions of individual features were calculated in QGIS using the profile and measure tools; the area in hectares was determined by calculating the size of the vector polygon used to define the feature. For enclosures and ringforts, measurements were taken from their most representative profiles for the site diameter (between the top of banks), the height and width of the defining bank,

and the width and depth of the accompanying ditch (Figure 25). A catalogue of profiles of significant features can be found in Appendix 3.

Each identified site was digitised as a polygon to outline the site. Each site has ITM coordinates for its extent and for the centre of the feature.

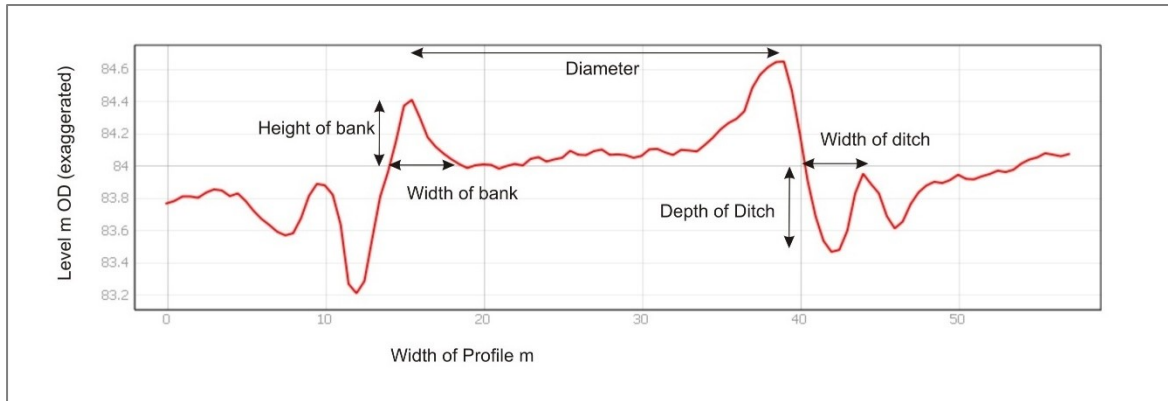


Figure 25: Profile and dimensions of an enclosure.

Constraints

The large number of high-resolution LiDAR tiles (950) generated a much larger dataset, requiring significantly more computer processing power to generate each raster model. Only small batches of raster models could be generated at a time, making the process longer.

Generating virtual raster (.vrt) of each LiDAR DTM data and LiDAR visualisation models generally produced a manageable dataset, and smoothed the interface between each LiDAR tile, albeit with the tile edge still visible. However, this was not possible with the SLRM generated in RVT 2.2.1, where the boundary between tiles was clearly visible (Figure 26). However, it was found that a 'Detrend' model – a form of SLRM generated in QGIS using a workflow described in Streatfeild-James' *QGIS for Archaeologists* (2016) avoided this issue.

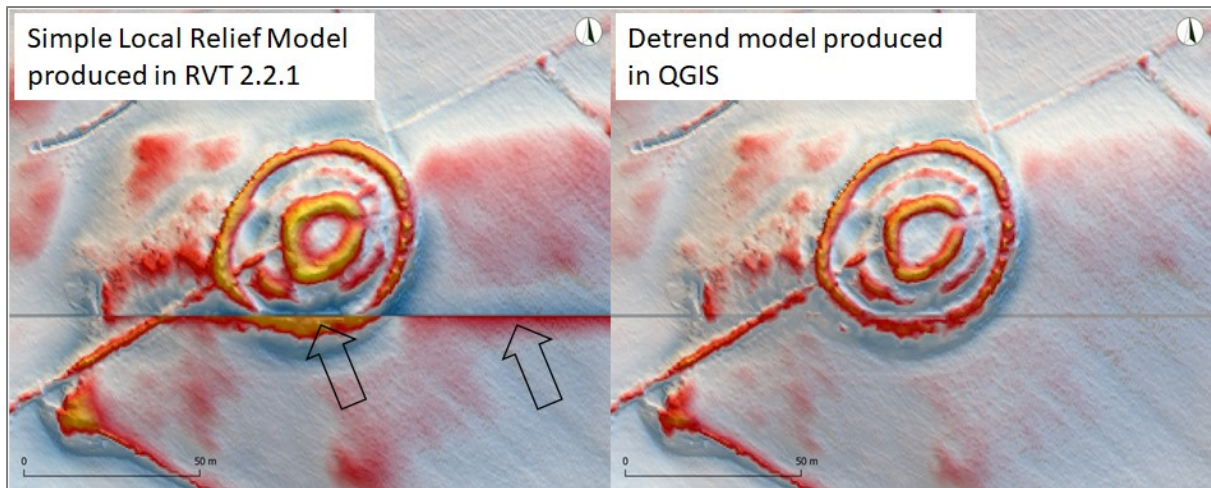


Figure 26: Tile edge visible in SLRM Model versus Detrend Model, both made semi-transparent and overlain on the multi-direction hill shade model to produce composite images.

Certain features were apparent in the LiDAR data which, on closer inspection and comparison with aerial orthographic images, were shown not to be archaeologically significant, such as circular marks surrounding electrical poles in fields, or possibly the marks left by cattle feeding around a round-bale feeder, both of which can look like barrows.¹⁴ In the case of the electrical poles, these are generally visible on aerial imagery. Cattle feeders are moved often, sometimes resulting in groups of circular marks next to field gates or near farmyards. Often the feeder is not visible in the aerial images. Therefore, these features were included in the analysis, but with a confidence score of 1: possibly archaeologically significant.¹⁵

Amendments to first report

One LiDAR feature was mislabelled in the first low-resolution LiDAR report (AMS 2020) as L201-2 (RMP DG053-026---) but should have been labelled L210-1 as it is in grid number 210.

Twenty LiDAR features identified in the low-resolution LiDAR analysis area extend beyond the footprint of the high-resolution LiDAR study area.¹⁶

The position of LiDAR feature L123-3 was amended from the first low-resolution LiDAR report (AMS 2020).

¹⁴ In four instances features have been given LiDAR site numbers but have been determined not to be archaeologically significant and have been given a confidence score of 0: L109-1, L115-1, L302-1, and L354-6. They are included in this analysis to demonstrate that they have been assessed properly.

¹⁵ Sites of possible barrows, but possibly the result of cattle feeder marks: L102-1, L110-1, L129-5, and L345-1.

¹⁶ LiDAR features extending beyond the footprint of the high-resolution LiDAR: L101-3, L102-1, L117-3, L121-1, L122-4, L125-1, L131-4, L138-1, L138-2, L141-2, L214-2, L215-2, L217-2, L218-1, L302-3, L306-4, L310-1, L320-3, L355-1, & L359-4.

Archaeological Assessment of LiDAR Data Visualisations

Overview

Analysis of the high-resolution LiDAR data for the Ten-T Project has resulted in the identification and recording of 138 sites within the 4436.44 Ha study area (Table 17; Figure 28–Figure 31). As the survey area is approximately 66% the size of the low-resolution LiDAR assessment area, 58 features identified in the low-resolution LiDAR assessment are outside the high-resolution LiDAR study area and are not included in this assessment. Of the 138 sites recorded in the high-resolution LiDAR data, 43 are SMR sites, nine were noted in the Route Selection study (RPS et al. 2019a; RPS et al. 2019b; RPS et al. 2019c); 43 sites were first identified in the low-resolution LiDAR data (AMS 2020), whilst a further 43 were first identified in the high-resolution LiDAR data (Table 17).

Table 17: LiDAR sites – overall totals.

Section	Total	SMR	Route Selection	New Sites identified in Low Res LiDAR	Additional Sites identified in High Res LiDAR
1	65	10	4	24	27
2	20	11	1	4	4
3	53	22	4	15	12
Totals	138	43	9	43	43

Of the 43 sites previously recorded in the SMR, the majority (27) did not have a surface expression visible in the LiDAR DTM data, and were therefore given a confidence score of 4 (Table 18).

Table 18: Summary of findings for LiDAR sites recorded in the SMR.

Section	SMR	Confidence Score				
		0	1	2	3	4
1	10	0	0	0	9	1
2	11	0	0	0	2	9
3	22	0	0	0	5	17
Totals	43	0	0	0	16	27

Of the sites identified at Route Selection, four were not apparent in the LiDAR data; one was found to be possibly archaeologically significant (Confidence Score 1), and four were assessed as probably archaeologically significant and thus given a Confidence Score of 2 (Table 19).

Table 19: Summary of findings for LiDAR sites identified in Route Selection.

Section	Route Selection	Confidence Score				
		0	1	2	3	4
1	4	0	0	2	0	2
2	1	0	0	1	0	0

Section	Route Selection	Confidence Score				
		0	1	2	3	4
3	4	0	1	1	0	2
Totals	9	0	1	4	0	4

Of the 43 low-resolution LiDAR sites assessed in this study, two have been determined not to be archaeologically significant after examining them in the high-resolution data.¹⁷ The assessment of significance of two LiDAR features was increased based on the high-resolution LiDAR data.¹⁸ One LiDAR feature associated with an SMR site identified in the low-resolution LiDAR data lay substantially outside the high-resolution LiDAR study area; its Confidence Score was change to reflect that no surface expression for this feature was visible in the high-resolution LiDAR data.¹⁹ The size and location of sixteen LiDAR features identified in the first report were changed in this report.²⁰

A total of 43 features were newly identified using the high-resolution LiDAR data. Of these, 30 were determined to be probably archaeologically significant (Confidence Score 2) and twelve as possibly archaeologically significant (Confidence Score 1) (Figure 27). One feature²¹ was initially noted as potentially archaeological but ultimately deemed not to be archaeologically significant (Table 20).

Table 20: Summary of findings for sites newly identified in the LiDAR data for the Ten-T Project.

Section	New Sites	Confidence				
		0	1	2	3	4
1	27	0	8	19	0	0
2	4	0	3	1	0	0
3	12	1	1	10	0	0
Totals	43	1	12	30	0	0

Most (26) of these newly identified LiDAR sites were identified from historical OS maps, including a burial ground, a farmstead, five buildings, six kilns, two mill ponds, three mill races, a disused railway, two ponds, a reservoir, a tail race, a weir and four wells (Figure 27).

¹⁷ Changed Confidence Score 1 in Report 1 to Confidence Score 0 in this report: L109-1 & L115-1.

¹⁸ Changed Confidence Score 1 in Report 1 to Confidence Score 2 in this report: L101-2 & L129-1.

¹⁹ Changed Confidence Score 3 in Report 1 to Confidence Score 4 in this report: L306-4.

²⁰ Changed position and areas of LiDAR features: L106-3, L117-3, L122-4, L123-1, L124-2, L138-1, L141-2, L218-1, L221-1, L306-1, L307-6, L334-2, L338-4, L349-2, L350-1, and L354-4.

²¹ L354-6: pit identified in the high-resolution LiDAR data in proximity to the site of a standing stone (SMR: DG070-048----; L354-1); found not to be archaeologically significant because it is the site of a utility pole.

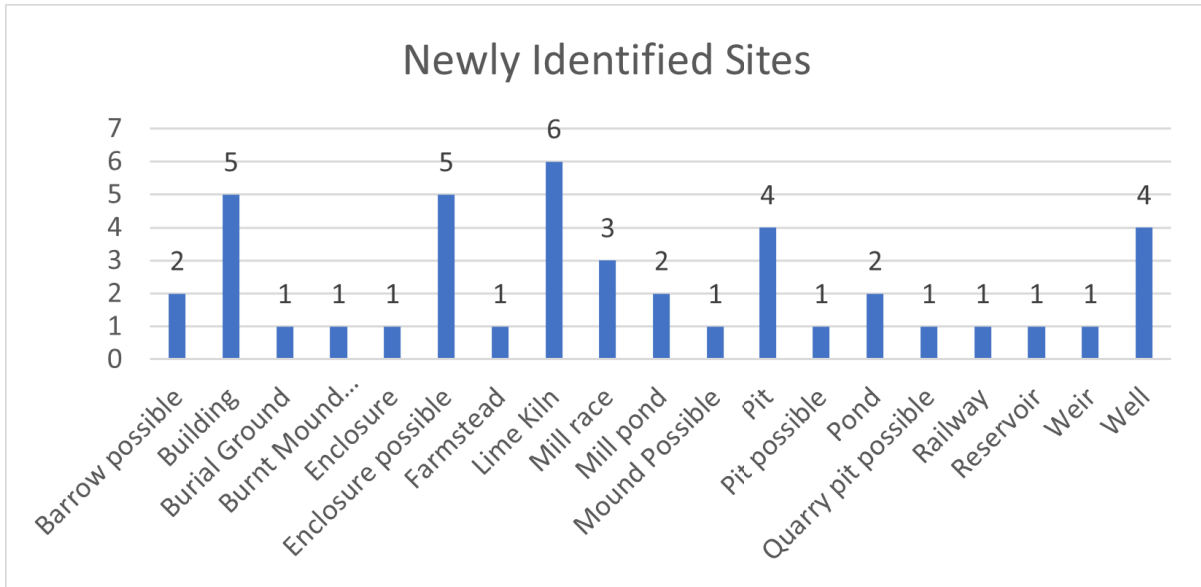


Figure 27: Categories of sites newly identified in the high-resolution LiDAR data.²²

²² Graph of the 43 newly identified sites with a Confidence Score of 1 or 2.

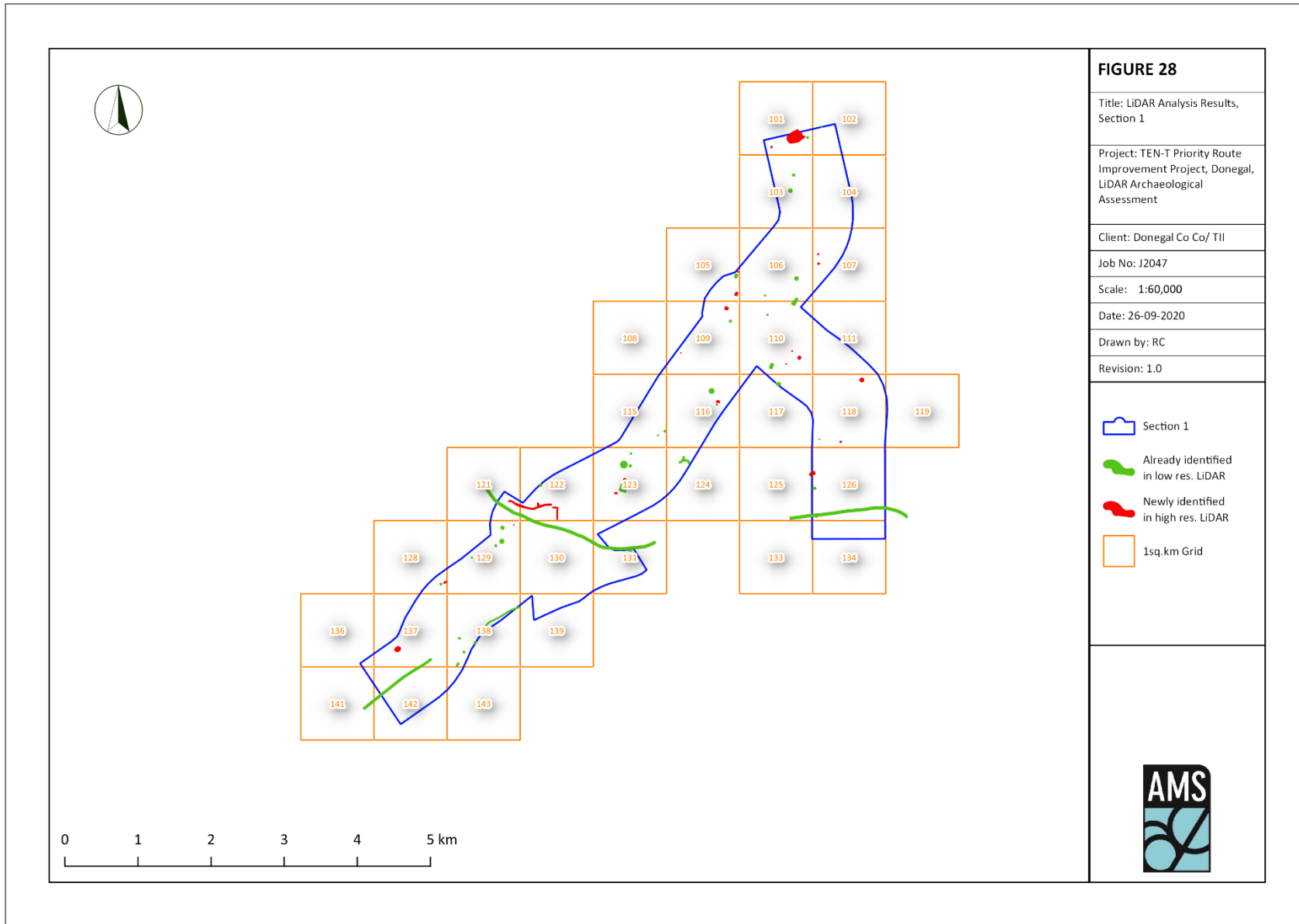


Figure 28: LiDAR analysis results, Section 1.

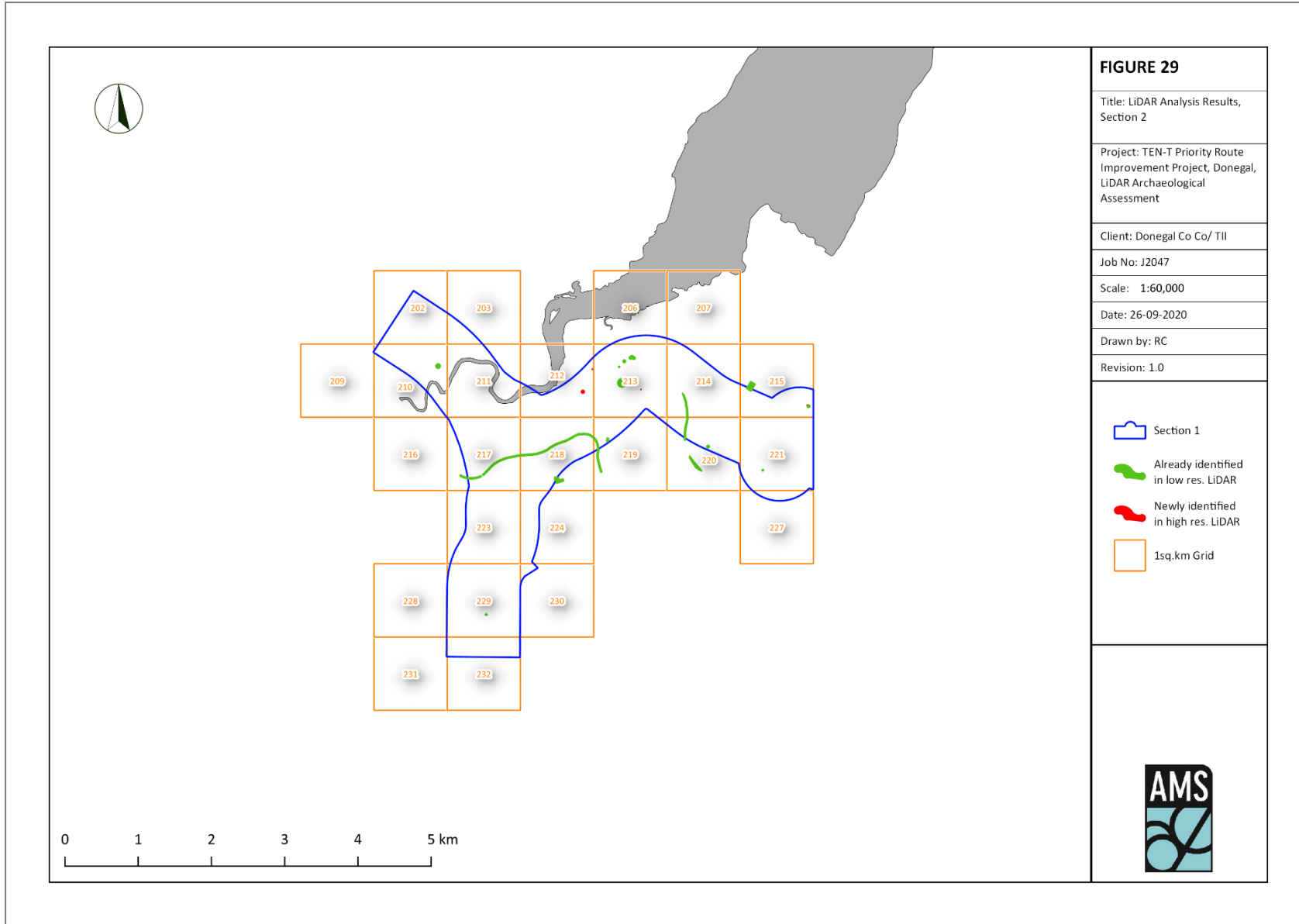


Figure 29: LiDAR analysis results, Section 2.

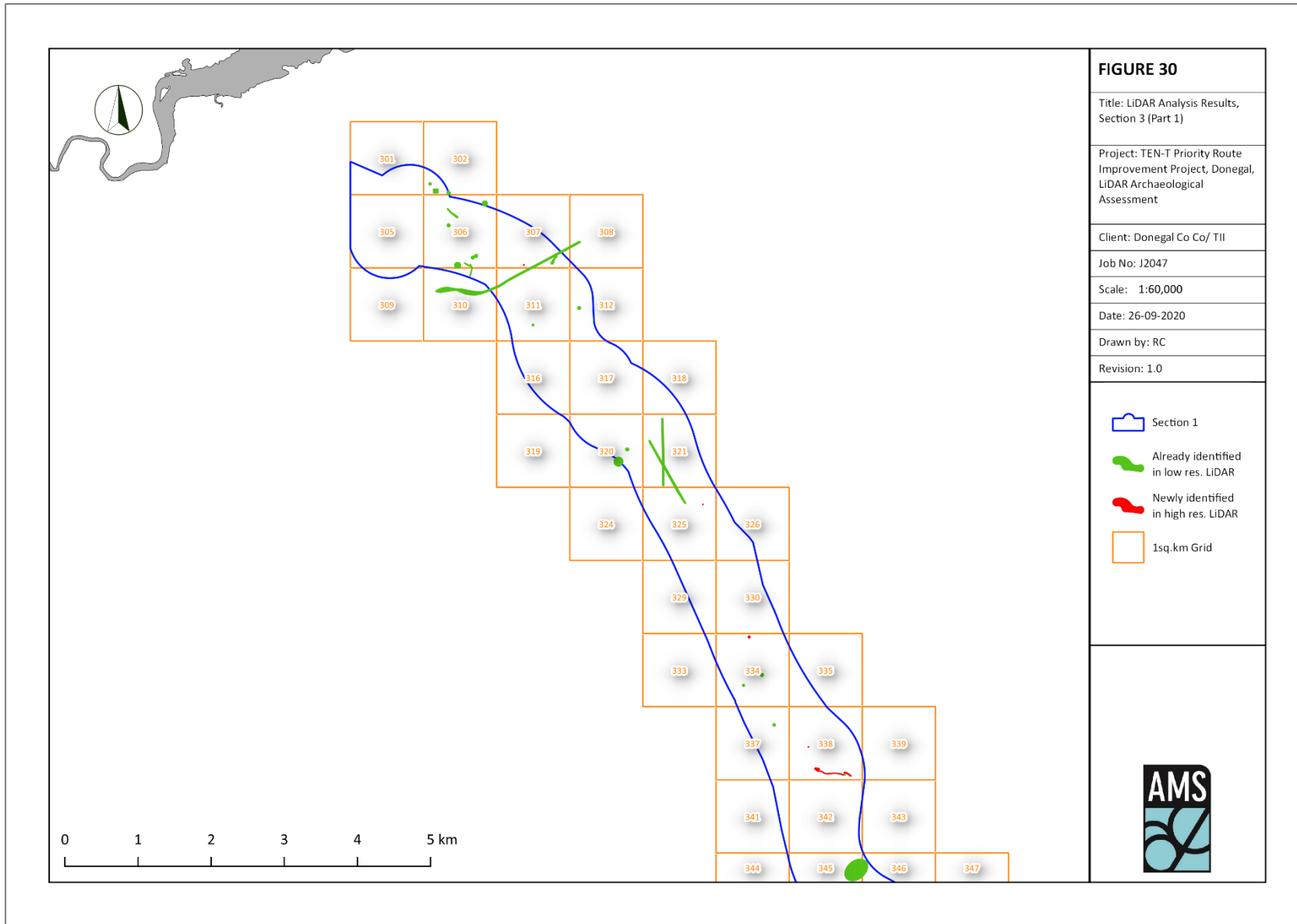


Figure 30: LiDAR analysis results, Section 3 (1 of 2).

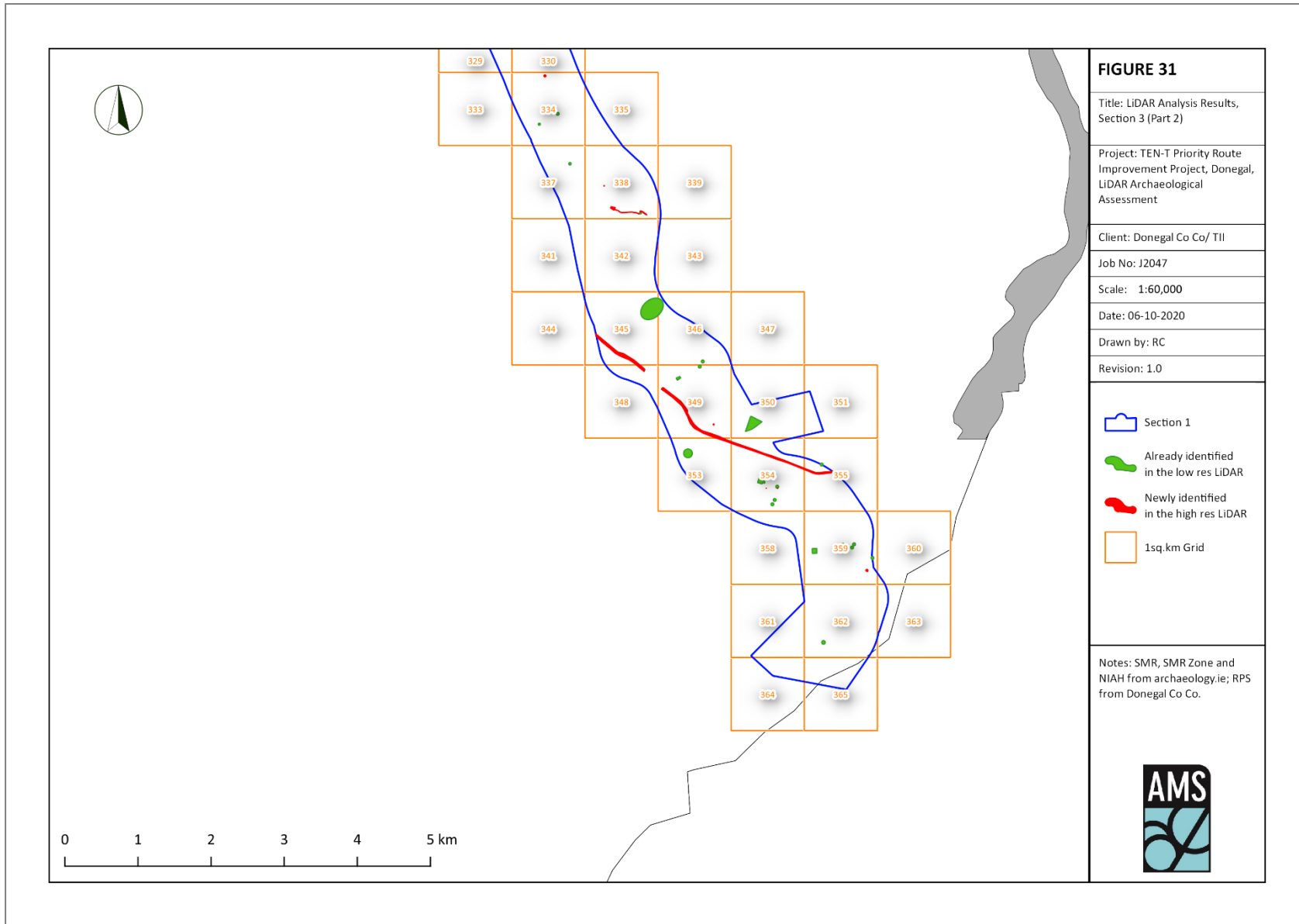


Figure 31: LiDAR analysis results, Section 3 (2 of 2).

Section 1 Summary of Findings

Of the forty-one grids assessed for the Section 1 study area, twenty-nine contained archaeological sites (Table 21).

Table 21: Summary of LiDAR analysis for grids in Section 1.

Grid	Total	SMR	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
101	4	0	0	1	3	0	2	2	0	0
102	1	0	0	1	0	0	1	0	0	0
103	2	2	0	0	0	0	0	0	2	0
105	3	0	0	1	2	0	2	1	0	0
106	3	1	0	2	0	0	0	2	1	0
107	2	0	0	0	2	0	0	2	0	0
109	3	0	0	1	2	1	0	2	0	0
110	5	0	0	2	3	0	1	4	0	0
115	2	0	1	1	0	1	0	1	0	0
116	3	1	0	0	2	0	0	2	1	0
117	1	1	0	0	0	0	0	0	1	0
118	3	0	0	1	2	0	1	2	0	0
121	3	0	0	1	2	0	0	3	0	0
122	3	1	0	0	2	0	0	2	1	0
123	6	1	2	1	2	0	2	2	1	1
124	1	0	0	1	0	0	0	1	0	0
125	1	0	0	0	1	0	0	1	0	0
126	2	1	0	1	0	0	0	1	1	0
128	2	0	1	0	1	0	0	1	0	1
129	5	0	0	4	1	0	1	4	0	0
131	1	1	0	0	0	0	0	0	0	1
137	1	0	0	0	1	0	1	0	0	0
138	7	1	0	5	1	0	1	5	1	0
141	1	0	0	1	0	0	0	1	0	0
TOTALS	65	10	4	24	27	2	12	39	9	3

A total of 65 sites have been identified and recorded in the LiDAR data for Section 1: ten SMR sites, four sites in the Route Selection report, 24 newly identified in the low-resolution LiDAR analysis, and 27 newly identified in the high-resolution LiDAR analysis. Twenty-one LiDAR sites are located in Areas

of Archaeological Potential identified in the Route Selection Report (RPS et al. 2019a);²³ of which thirteen were first identified using LiDAR.²⁴

Three possible barrows have been identified in Section 1; two newly identified from the low-resolution LiDAR data (L102-1 and L110-1), and one newly identified in the high-resolution LiDAR (L129-5). These possible barrows range in size from 3.6m to 10.5m diameter and 0.1m to 0.5m high. These sites are noted as possible archaeology (with a Confidence Score of 1) because some may be associated with recent cattle feeders, which can leave a circular impression from cattle walking around the feeder.

Two possible barrows were noted in the low-resolution LiDAR data, but the high-resolution data indicates that both were not archaeologically significant (L109-1 and L115-1).

A single bullaun stone in Meenavoy townland, a recorded SMR site, appears to be located on a slightly irregular-shaped raised area measuring 27.3m wide and c. 0.23m high (L103-1).

The church site in Drumboe townland (L123-1) is only depicted on the OS 25-inch map and is an SMR site. It is apparent in the LiDAR data as a roughly rectangular enclosed area measuring 70m by 35m with banks c. 0.2m high and c. 11m wide and a possible annex feature (c. 60m E–W by 20m N–S) to the north, possibly representing an enclosed area such as a cemetery or precinct.

Of the two enclosures in Section 1, one (L122-4) is an SMR site, apparent in the high-resolution LiDAR as a circular enclosure with an internal area measuring c. 20m in diameter, an internal ditch c. 0.5m deep surrounded by an external bank c. 30m diameter and 0.6m high. The second enclosure is newly identified in the high-resolution LiDAR data (L101-3). This consists of a large roughly oval enclosure, delimited by a field boundary and located on a sloping hillside, aligned SW–NE measuring a maximum of 198m long by 148m wide and covering an area of 2.66 Ha. This has been given a Confidence Score of 2 (probable archaeology).

Eight possible enclosures were identified in the high-resolution LiDAR study area.²⁵ Four of these possible enclosures were given a Confidence Score of 1 (possible archaeology). One (L105-1) in Teevickmoy townland appears as an oval track-like depression measuring 20.5m by 49.6m, with a track 4m wide and 0.8m deep located in overgrown, uneven scrubby ground; another (L123-4) in Drumboe Lower townland is a possible geological feature; one in Dooish townland (L137-1) is an enclosed area depicted on the first-edition six-inch map; and one (L123-5) is a possible enclosure in

²³ LiDAR sites in AAP in Section 1: L103-1, L103-2, L107-2, L107-3, L117-3, L118-1, L118-3, L121-1, L121-3, L122-4, L122-5, L122-6, L123-1, L123-2, L123-3, L123-4, L123-5, L123-6, L128-1, L128-2, & L138-12.

²⁴ L107-2, L107-3, L118-1, L118-3, L121-1, L121-3, L122-5, L122-6, L123-4, L123-5, L123-6, L128-2, & L138-12.

²⁵ Possible enclosures: L105-1, L118-2, L123-2, L123-4, L123-5, L128-1, L129-1, and L137-1.

Drumboe Lower townland associated with a nearby church site (L123-1). Two enclosures are considered probable archaeology with a Confidence Score 2. These include a sub-circular enclosure in Cappry townland measuring 40m by 30m, enclosing a farmstead site depicted on historical OS maps (L129-1); and an enclosure in Mullaghagarry townland partly encompassing a townland boundary measuring 51.5m in diameter (L118-2). Two possible enclosures (S1-AP01 = L123-2, and S1-AP02 = L128-1) were identified in the Route Selection report (RPS et al. 2019a: S1-AP01 & S1-AP02), but nothing was identified in the LiDAR data for either site.

Six ringforts were identified in Section 1, all SMR sites.²⁶ One recorded ringfort has no expression in the LiDAR data (L131-4). One appears to be a mound 41m in length, 24.6m in width, and 2.1m high, with no indication of an enclosing bank or ditch (L103-2). Two ringforts have been largely removed, but can be seen in the LiDAR data. One in Teevickmoy townland is a low-relief enclosure c. 30m in diameter, with a bank 10.5m wide and 0.1m high (L106-1); the other in Mullandrait townland being half a circular enclosure c. 35m in diameter and c. 0.1m high (L126-2), located on the south side of a railway track (L121-1). The most substantial ringfort (L116-1), in Dunwiley townland and forming part of the boundary with Macklees townland in Section 1, is a multivallate ringfort, with an overall diameter of 54m. It is defined by three enclosing banks and straddles a small ridge c. 9m high.

A single cashel is also located in Section 1 in Dunwiley townland (L117-3). This was labelled as 'Fort' on the OS first-edition six-inch map. In the LiDAR data it appears as a raised, trapezoidal-shaped enclosure measuring c. 41m by 26m and c. 2m high, with banks measuring 5m wide and c. 0.6m high.

One souterrain was located in Section 1 in Cappry townland, labelled 'Duggan's Cellar' on the first-edition OS 25-inch map (L138-2); the high-resolution LiDAR indicates an overgrown, irregular area measuring 13m by 13m and c. 0.7m high with a rectangular mound c. 5m by 5m and c. 1.5m high, possibly the result of disturbance from the construction of an adjacent modern industrial building.

Only one holy well is located in Section 1, in Drumboe Lower townland (L123-3). The well is not visible in the LiDAR, but a number of paths are visible converging on this location.

The remaining forty sites date to the post-medieval period and are discussed below. Most of these are associated with agriculture and flax production.

²⁶ Ringforts: L103-2, L106-1, L116-1, L117-3, L126-2, & L131-4

Most farmsteads depicted on the historical OS maps in the LiDAR study areas are still occupied. Four farmsteads are apparent in the LiDAR data in Section 1.²⁷ These ranged in size from 105m by 48m to 17m by 9m.

Ten building sites are visible in the LiDAR data,²⁸ all corresponding with buildings depicted on historical OS maps. Five of these buildings were identified in the high-resolution LiDAR data.²⁹ These building sites range in size from 10m to 32m long, 3.5m to 13m wide, and 0.1m to 1.4m high. A well site (L116-3) was also apparent in the LiDAR in Dunwiley townland, depicted on historical OS maps, and visible in the data as a roughly circular area of disturbance 6.7m in diameter, c. 0.15m high, with a central hollow c. 2.9m wide and 0.24m deep.

Ten lime kiln sites were identified in the LiDAR data;³⁰ five of which were visible in the high-resolution LiDAR data.³¹ To put this in context, 107 kilns were depicted on historical maps in the footprint of the LiDAR study area. The lime kiln sites are visible in the LiDAR data as oval mounds between 3.6m and 23m diameter and between 0.2 and 1.4m high.

A mill pond and embankment for a flax mill are also apparent in the LiDAR data straddling the boundaries of Greenhills, Magherapaste and Drumboe Lower townlands (L124-2). The mill pond, depicted on the OS first-edition six-inch map, lay behind a dam across the Backlees River (91m long, c. 10m wide and c. 1.1m high); an embankment from this dam flanked a headrace c. 100m long, 7m wide and c. 1.6m high; the former mill associated with this complex is located outside the LiDAR study area. Two further mill races were visible in the LiDAR data (L121-3 & L122-5), both in Ironworks townland, both feeding from the River Finn, and both depicted in the historical OS maps. These ranged from 224m to 520m long, 5m to 6m wide and 1m to 1.6m deep. One mill race, a head race (L121-3), has an associated weir on the River Finn (L121-2), depicted on the OS 25-inch map, measuring c. 107m long by c. 10–13m wide.

Three pits are visible in the LiDAR data, each c. 13m long, 2.6m to 6m wide, and from 0.1m to 1m deep, each 5m apart;³² these are depicted on historical OS maps and are thought to possibly be the remains of retting pits for flax processing. Similarly, two ponds measuring 25m to 35m long, 7m to 8.5m wide by 0.4m to 0.7m deep, also depicted on historical OS maps, may also have been associated

²⁷ Farmsteads: L106-3, L109-2, L122-3, and L129-3.

²⁸ Sites of buildings: L105-3, L107-2, L110-5, L115-2, L116-2, L118-1, L123-6, L129-2, L138-8, & L138-11

²⁹ L105-3, L107-2, L110-5, L116-2, & L123-6.

³⁰ Lime kiln sites: L101-2, L106-2, L107-3, L109-3, L110-3, L110-4, L122-6, L129-4, L138-7, & L138-9

³¹ L107-3, L109-3, L110-3, L110-4, & L122-6.

³² Pits: L101-4, L101-5, & L105-2.

with retting flax.³³ A possible quarry pit in Castlebane townland (L118-3) consists of an irregular area 22m by 12m and 0.10m deep, on sloping ground beside a road.

The site of a 'hospital' in Mullandrait townland (L126-1), depicted on the OS 25-inch map and part of the Union Workhouse complex outside Stranorlar, is visible in the LiDAR data as a rectangular outline measuring 35m by 10m; and 0.3m high. An associated burial ground (L125-1), c. 174m north of the hospital, is also depicted on the OS 25-inch map and is visible on the high-resolution LiDAR data as a rectangular area extending outside the LiDAR footprint, on sloping ground, with banks c. 1m wide and 0.1m high, over a total area measuring 69.5m by 39.5m.³⁴

The remains of the disused Donegal Railway Company narrow gauge (in use from 1892–1960) also crosses Section 1 (L121-1). These remains ranged from cuts c. 20m wide and 1.5m deep to embankments c. 11m wide and 2m high, occasionally with external ditches c. 4m wide and c. 0.4m deep. The remains of this disused railway run for about 3km, in two parts of the Section 1 LiDAR study area.

A possible path was also apparent on the LiDAR data in Cappry townland (L138-1). It partly follows the route of a path depicted on the Cassini six-inch map and consists of a track c. 9m wide and c. 1.9m high on sloping ground, with slight indications of a ditch on the up-slope side (c. 3m wide and 0.2m deep); this path runs for 516m within the Section 1 LiDAR study area.

Finally, a c. 844m section of the N15 road at the south end of the Section 1 study area in Dooish townland (where it extends outside the LiDAR study area) appears to be built on an embankment 25m wide and up to 2m higher than its surrounding fields (L141-2). This feature is depicted on the first-edition six-inch map with the road gently meandering along its length. This embankment was built beside the Burn Darnett River to carry the road and act as a flood defence for the fields to the north. It appears to date to the late eighteenth or early nineteenth century.

Table 22: Section 1 summary of site categories.

Category	Total	SMR/ RMP	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
Barrow Possible	3	0	0	2	1	0	3	0	0	0
Building	10	0	1	4	5	0	0	10	0	0
Bullaun Stone	1	1	0	0	0	0	0	0	1	0

³³ Ponds: L128-2 & L138-12.

³⁴ The area of the burial ground appears to have been expanded from time the OS 25-inch map was surveyed.

Category	Total	SMR/ RMP	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
Burial Ground	1	0	0	0	1	0	0	1	0	0
Church Site	1	1	0	0	0	0	0	0	1	0
Embankment	1	0	0	1	0	0	0	1	0	0
Enclosure	2	1	0	0	1	0	0	1	1	0
Enclosure Possible	8	0	2	3	3	0	4	2	0	2
Farmstead	4	0	0	3	1	0	0	4	0	0
Holy Well	1	0	1	0	0	0	0	1	0	0
Hospital	1	0	0	1	0	0	0	1	0	0
Lime Kiln	10	0	0	5	5	0	0	10	0	0
Mill Pond	1	0	0	1	0	0	0	1	0	0
Mill race	2	0	0	0	2	0	0	2	0	0
Not archaeologically significant	2	0	0	2	0	2	0	0	0	0
Path Possible	1	0	0	1	0	0	0	1	0	0
Pit	3	0	0	0	3	0	3	0	0	0
Pond	2	0	0	0	2	0	1	1	0	0
Quarry pit possible	1	0	0	0	1	0	1	0	0	0
Railway	1	0	0	1	0	0	0	1	0	0
Ringfort	4	4	0	0	0	0	0	0	3	1
Ringfort - Cashel	1	1	0	0	0	0	0	0	1	0
Ringfort - unclassified	1	1	0	0	0	0	0	0	1	0
Souterrain	1	1	0	0	0	0	0	0	1	0
Weir	1	0	0	0	1	0	0	1	0	0
Well	1	0	0	0	1	0	0	1	0	0
Grand Total	65	10	4	24	27	2	12	39	9	3

Section 2 Summary of Findings

Of the 25 grids covering Section 2 of the Ten-T project, ten contained archaeological sites (Table 23).

Table 23: Summary of LiDAR analysis for grids in Section 2.

Grid	Total	SMR	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
210	1	1	0	0	0	0	0	0	1	0
212	2	0	0	0	2	0	2	0	0	0
213	7	7	0	0	1	0	0	1	0	6
214	1	0	0	0	0	0	0	1	0	0
215	3	1	0	1	1	0	2	0	0	1

Grid	Total	SMR	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
217	1	0	1	0	0	0	1	0	0	
218	1	0	0	1	0	0	1	0	0	
219	1	0	0	1	0	1	0	0	0	
220	1	1	0	0	0	0	0	0	1	
221	1	1	0	0	0	0	0	1	0	
229	1	0	0	1	0	0	1	0	0	
Totals	20	11	1	4	4	0	5	5	2	8

A total of twenty sites were identified and recorded in Section 2: eleven SMR sites, one site from the Route Selection report (RPS et al. 2019b), four new sites identified in the low-resolution LiDAR data (AMS 2020), and an additional four new sites identified in the high-resolution LiDAR Data. Eight of the eleven SMR sites in Section 2 have no expression in the LiDAR data;³⁵ this includes the church and graveyard at Trimragh (L213-6) that lies beneath the 'Letterkenny Branch' of the 'Londonderry & Lough Swilly Railway' (in use between 1883–1953), which itself underlies part of the N13 road, four sites of rock art,³⁶ and two standing stones.³⁷ LiDAR is not the most appropriate means of visualising small features like bullaun stones, rock art and standing stones, but it can identify potentially significant associated earthworks. One SMR site recorded as a redundant record is not visible in the LiDAR data (L213-1).

Five LiDAR sites were located within Areas of Archaeological Potential identified in the Route Selection Report (RPS et al. 2019b).³⁸

A possible barrow was noted in Raymoghly townland (L215-3), consisting of a low-profile circular feature measuring c. 7m in diameter by 0.1m deep. This might also be the result of modern cattle feeders.

A standing stone in Pluck townland (L221-1), an SMR site, appears in the LiDAR to be sited on a low mound c. 22m by 18m, and 0.35m high.

The ringfort in Ballyraine townland appears to be heavily disturbed and is sited within a golf course (L210-1). The high resolution LiDAR indicates an indistinct enclosure (c. 25m in diameter) as a raised

³⁵ SMR sites with no expression in the LiDAR data: L213-1, L213-2, L213-3, L213-4, L213-5, L213-6, L215-1, & L220-5.

³⁶ Rock art: L213-2, L213-3, L213-4 and L213-5.

³⁷ Standing stones: L215-1 & L220-5.

³⁸ LiDAR sites in AAP in Section 2: L210-1, L214-2, L217-2, L220-5, & L221-1

area with no apparent enclosing bank or ditch.³⁹ A possible circular enclosure was also noted in Drumreggan townland (L212-3), consisting of a raised area measuring c. 40m in diameter with broad banks c. 14m wide by 0.14m high.

A farmstead site was apparent in the LiDAR data, and was depicted on both the first-edition six-inch and 25-inch OD maps (L218-1). This site was apparent in the LiDAR data as an irregular area c. 96m by 105m and raised c. 1m high, straddling a stream between Drumany and Dromore townlands.

A well was identified in Trimragh townland (L213-7), although the OS 25-inch map marks the well about 15m to the east. This feature consists of a low-level circular area 7.3m in diameter, with banks 1m to 2.1m wide and c. 0.15m high.

One lime kiln site in Listellian townland (L229-1), depicted on the first-edition six-inch OS map, was identified in the LiDAR data as a mound 26m diameter and 0.8m high.

A group of three pits in Dromore townland is depicted in historical OS maps next to a stream in an area now covered by trees (L219-1). The LiDAR data revealed the outline of three roughly rectangular pits ranging in size from 12m to 21m long, 4.5m to 7m wide and 0.7m to 1.1m deep; these may be retting pits and have been given a Confidence Score of 1 (possibly archaeologically significant). Another pit (L212-2), roughly circular, measuring 9m in diameter, with an irregular profile, maximum 0.2m depth, and possibly associated with quarrying, was identified in Farsetmore townland.

Two sections of disused railway run through the Section 2 LiDAR study area. The first is part of the former Letterkenny Branch of the Londonderry & Lough Swilly Railway (1883–1953) (L214-2); this line was substantially reused by the N13 road; the intact segment measures 5m to 10.5m wide, with cuttings up to 1.5m deep, extending for a distance of 628m in the Section 2 survey area. This railway also crosses Section 3 (L310-1). The second railway line (L217-2) was identified in the Route Selection report ((RPS et al. 2019b: S2-BH04) and is a disused part of the narrow gauge Strabane and Letterkenny Railway (1909–1960), with embankments 22m wide at base to 4.2m wide at top, up to 5.4m high, with cuttings up to 22m wide and 7.2m deep, running for c. 2km in the Section 2 survey area. This railway also crosses Section 3 (L345-3).

The final site, in Rossbrackan townland, has been tentatively identified as potential cultivation ridges (L215-2). It largely extends outside the footprint of the high-resolution LiDAR study area. These appear as a rectangular area on a ridge overlooking the Corkey River to the south. The area measures 106m by 60m and consists of eight ridges each c. 7m wide, 7m apart and 0.1m high. Nothing is indicated on

³⁹ Ringfort: L210-1; note this site was mislabelled as L201-2 in the low-resolution LiDAR report.

Grid	Total	SMR	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
320	2	2	0	0	0	0	0	0	0	2
321	1	0	0	1	0	0	0	1	0	0
325	1	0	0	0	1	0	0	1	0	0
334	4	1	2	0	1	0	1	1	1	1
337	1	0	1	0	0	0	0	0	0	1
338	5	0	0	1	4	0	0	5	0	0
345	3	0	0	2	1	0	2	1	0	0
346	1	1	0	0	0	0	0	0	0	1
349	3	1	0	1	1	0	0	2	0	1
350	1	0	0	1	0	0	0	1	0	0
353	1	1	0	0	0	0	0	0	1	0
354	6	3	0	1	2	1	0	2	0	3
355	1	1	0	0	0	0	0	0	0	1
359	6	4	1	0	1	0	0	2	0	4
362	1	1	0	0	0	0	0	0	1	0
Totals	53	22	4	15	12	2	5	22	4	20

A total of 53 sites have been identified and recorded in Section 3: 22 SMR sites, four sites in the Route Selection, fifteen newly identified sites in the low-resolution LiDAR data, and an additional twelve sites newly identified in the high-resolution LiDAR dataset. These include two apparent sites on the LiDAR which were determined not to be archaeologically significant and have been given a Confidence Score of 0. One comprises a circular enclosure in Raymoghly townland which appears to post-date buildings depicted on the OS 25-inch map (L302-1), and is possibly a modern training circle for a horse; and the other consists of a shallow pit in proximity to the site of standing stone (SMR:DG070-048----; L354-1), which was determined to be the result of an electricity pole (L354-6).

Fourty-four LiDAR sites are located in Areas of Archaeological Potential identified in the Route Selection report (RPS et al. 2019c).⁴⁰ Of these, twenty-three are newly identified in the LiDAR data.⁴¹

⁴⁰ LiDAR sites in AAP in Section 3: L302-1, L302-2, L302-3, L306-1, L306-2, L306-3, L306-4, L306-5, L306-6, L306-7, L306-8, L307-3, L307-6, L310-1, L320-2, L320-3, L337-1, 338-4, L338-5, L338-6, L338-7, L338-8, L345-1, L345-2, L345-3, L346-1, L349-1, L349-2, L349-3, L350-1, L353-2, L354-1, L354-2, L354-3, L354-4, L354-5, L354-6, L359-1, L359-2, L359-3, L359-4, L359-5, L359-6, & L362-1.

⁴¹ L302-1, L302-3, L306-1, L306-5, L306-6, L307-3, L307-6, L310-1, L338-4, L338-5, L338-6, L338-7, L338-8, L345-1, L345-2, L345-3, L349-2, L349-3, L350-1, L354-4, L354-5, L354-6, & L359-6.

In total twenty sites have no expression in the LiDAR data: eighteen SMR sites,⁴² and two sites identified in Route Selection.⁴³ This includes a megalithic tomb, an SMR site in Errity townland (L306-4), which is located outside the footprint of the high-resolution LiDAR study area but is included in this analysis because its polygon boundary created for the low-resolution LiDAR analysis partly transects the study area for the high-resolution LiDAR data. However, there is no indication in the high-resolution LiDAR data of archaeology associated with this feature. A possible burnt spread (L337-1) in Drumbeg townland was identified from aerial photos in the Route Selection report (RPS et al. 2019c: S3-AP03) but nothing apparent in the LiDAR data.

Two possible barrow sites are newly identified in the LiDAR data. The first possible barrow, in Carnshannagh townland, had previously been recorded as an enclosure in the SMR (L334-2).⁴⁴ Nothing was apparent at the SMR site in the LiDAR data, but a very low-relief circular enclosure with a central mound was identified c. 55m northeast of the SMR point; this feature measured 34m diameter, with a bank 3.4m wide and 0.08m high, no ditch, but with a central circular mound c.13m diameter and 0.2m high, suggesting that this is possibly a barrow. The second possible barrow (L345-1), in Mulnaveagh townland, was initially identified in the low-resolution LiDAR and consists of a circular hollow c. 10m in diameter, 0.1m deep with a slight raised centre c. 0.05m. However, this also resembles the marks left by modern cattle feeders, and thus has been given a Confidence Score of 1 (possible archaeology).

A tear-shaped mound located in Raymoghy townland and named 'Herdgee Hill' on historical OS maps was identified as a possible archaeological site in the low-resolution LiDAR analysis (L302-3). This feature extends outside the footprint of the high-resolution LiDAR data; the portion covered by the LiDAR measured 54m wide and 9m high. Another possible mound was identified in Drumoghill townland (L307-3), and measured 5m by 3m and 0.2m high.

A possible burnt mound was identified in Feddyglass townland (L338-8), in close proximity to a river; this appears to be a roughly circular low-relief mound c. 10m wide by 0.13m high; its position close to a river suggests it might be a burnt mound or *fulacht fia*.

Four possible enclosures were identified in Section 3.⁴⁵ A possible enclosure noted during Route Selection in Carnshannagh townland appears in the LiDAR data as a circular area c. 30m in diameter

⁴² SMR sites with no LiDAR expression: L306-2, L306-3, L306-4, L306-7, L306-8, L312-1, L320-2, L320-3, L346-1, L349-1, L354-1, L354-2, L354-3, L355-1, L359-1, L359-2, L359-3 & L359-4.

⁴³ Route selection sites with no LiDAR expression: L334-3 & L337-1.

⁴⁴ Possible barrow L334-2, recorded as an enclosure in the SMR DG062-024----.

⁴⁵ Possible enclosures: L334-1, L334-3, L334-4, & L345-2.

and c. 0.2m high on sloping ground (L334-1). The second possible enclosure in Carnshannagh townland was noted in the high-resolution LiDAR data (L334-4) and consists of a very low-relief circular feature 28.5m in diameter, with a bank 0.3m wide and c. 5cm high. Although low-relief, this feature is clear enough to merit being considered probable archaeology (Confidence Score 2). A possible bi-vallate enclosure (L334-3) was identified in aerial photos of Dromore Big townland in the Route Selection report (RPS et al. 2019c: S3-AP02), but nothing was apparent in the LiDAR data. Another possible enclosure was noted in the townland of Mulnaveagh (L345-2) as a large oval area measuring 345m by 240m enclosing a natural hill c. 7m high, with a possible curving outer bank to the north and west (c. 5m wide and c. 0.2m high) and a curving ditch or stream to the south (8m wide and 1.8m deep), but there is no surface indication of an enclosure to the northwest.

Two souterrains were noted in Section 3, both recorded monuments in the SMR. Although the first (L320-3) in Ballyholey Far townland is located c.10m outside the high-resolution LiDAR footprint, the monument's constraint area extends into the high-resolution assessment area; nothing archaeological significant was apparent in high-resolution LiDAR. The second souterrain in the Section 3 is located in Curragalane townland (L362-1). Whilst the souterrain itself is not visible in the LiDAR DTM, the data does show a low-profile sub-circular mound c. 12m in diameter and 0.2m high, situated on the brow of a slight ridge.

A church (ruined but upstanding), graveyard and architectural fragments (all SMR sites) located in Raymoghy townland in Section 3 appears in the LiDAR DTM data as a rectangular enclosure 52m by 36.4m; the interior of this enclosure is c. 0.4m high to the north, but c. 1.7m higher than the ground to the south; the central church building measures c. 26m by 10m (L302-2).

The remains of a designed landscape surrounding Cavanacor House appears in the LiDAR data as a triangular area 230m by 170m on an east-facing slope, with surface irregularities from planting and landscaping (L350-1). The house is still occupied, and the former designed landscape is now substantially wooded.

Two farmstead sites are visible in the high-resolution LiDAR data. The site of a farmstead in Ballynabreen townland beside the Cavanacor River is depicted on historical OS maps (L354-4) and appears in the LiDAR data as an irregular polygon 100m by 92m, containing a rectangular area measuring 20m by 12m and 0.4m high corresponding with buildings. The second farmstead is located in Lifford Common townland (L359-5) and was also noted in the Route Selection report (RPS et al. 2019c: S3-AP04); it is visible in the LiDAR data as an enclosed area 44m by 35m with banks 0.2m to 0.4m high and 7m to 12m wide. The site of a building in Gortin North townland is depicted on historical

OS maps as part of a farmstead, and appears in the LiDAR data as a roughly rectangular mound 25m by 17m and 0.8m high beside the upstanding remains of buildings (L349-2).

Two well sites noted in historical OS maps were also identified in the LiDAR data.⁴⁶ The first, in Sheskinapoll townland (L325-2), appears on the first-edition six-inch and the 25-inch OS maps, and appears to correspond with a circular depression visible in the LiDAR data measuring 5.2m wide by 0.2m deep. This is located c. 88m southwest of the nearest house depicted on historical maps, in the middle of a field. The second well site is located in Murlough townland (L354-5) and appears in the LiDAR data as an irregular depression c. 5m in diameter and 0.5m deep, adjacent to the Cavanacor River.

In total, 21 lime kilns were depicted on the historical OS maps in Section 3. However, just two were visible in the LiDAR data.⁴⁷ Both sites were depicted on the OS 25-inch map. The first, in Drumcarn townland (L311-1), is located in a wooded or overgrown area and appears to be a low-relief earthen mound c. 13m in diameter and c. 1.4m high with a central hollow c. 6m wide and 0.2m deep. The second, in Ballindrait townland (L349-3), is visible in the LiDAR data as a depression c. 5m in diameter and c. 0.2m deep, with the outline of an enclosure 34m N–S by 16m E–W, and the outline of a lane c. 5.5m wide and c. 0.1m deep.

Two flax mill sites located in the Section 3 LiDAR study area and depicted on historical OS maps are apparent in the LiDAR data.⁴⁸ The first, in Carrickballydoeey townland (L306-6), consists of a rectangular depression c. 10m by 6m and 0.3m deep; the level of the associated mill race (L306-5) suggests this mill had an overshot wheel. The second, in Tullyrap townland (L338-4), appears as a rectangular depression 22m by 19m and c. 1.5m deep, fed by a mill race off the adjacent Drumbeg River (L338-6).

Three mill ponds depicted on historical OS maps were also noted in the LiDAR data.⁴⁹ The first, in Drumoghill townland (L307-6), appears in the LiDAR data as an enclosed area 128m by 24m, with an enclosing bank c. 7m wide and 0.9m high; the pond is some c. 3.6m higher than adjacent River Pluck. The second mill pond (L338-5), in Tullyrap and Feddyglass townlands, was fed from the Drumbeg River, measures c. 105m long by c. 14.5m wide and up to 2.3m deep, and served a flax mill (L338-4). The third mill pond, also in Tullyrap townland (L338-7), straddles the Drumbeg River and measures 55m

⁴⁶ Well sites: L325-2 & L354-5.

⁴⁷ Lime kilns: L311-1, L349-3.

⁴⁸ Flax mills: L306-6 & L338-4.

⁴⁹ Mill ponds: L307-6, L338-5, & L338-7.

NW–SE by 40m, behind an earthen dam c. 8m wide and 1.3m high, which in turn fed a mill race (L338-6).

Three mill races are visible in the LiDAR data, corresponding with mill races depicted on historical OS maps.⁵⁰ The first mill race, in Raymohy townland (L306-1), appears as a linear depression parallel to the River Pluck, measuring 190m long, 13m wide, with a base 1.26m higher than the adjacent river, and an enclosing bank 2.5m wide and 0.1m high. The second, in Carrickballydoeey townland (L306-5), appears in the LiDAR data as a channel 3–6m wide, 0.3m to 1.5m deep, and 250m long. It fed a flax mill (L306-6), with a 150m-long headrace and 100m-long tailrace running off the River Pluck. The third mill race, in Tullyrap townland, is fed from the Drumbeg River, measures 350m in length, is c. 0.4m wide and 1m deep and runs from a dammed mill pond on the Drumbeg River (L338-7) to a flax mill (L338-4).

A reservoir, depicted on historical OS maps, was identified in Townparks townland (L359-6). This presumably fed the adjacent town of Lifford c. 500m to the northwest. It appears in the LiDAR data as a square enclosure measuring c. 20m by 22m, with banks c. 3.5m wide and 0.2m–0.4m high, and the remains of a small building appended to the southeast side measuring c. 5m by 6m and c. 0.3m high.

A disused section of the Letterkenny Branch of the Londonderry & Lough Swilly Railway (1883–1953) runs through the Section 3 study area (L310-1). This appears in the LiDAR data as a feature with an average width of 15m, with cuts up to 35m wide and 14m deep, a track 4m wide, and embankments up to 26m wide and 7m high with a track 5m wide; this disused railway runs for 1km in the Section 3 survey area. A disused section of the Strabane and Letterkenny Railway (1909–60; L345-3), narrow gauge railway (a continuation of L217-2 in Section 2), runs for 3.9km through Section 3, visible as railway embankments c. 30m wide and 0.8m high, a cutting c. 22m wide and 6m deep, and sections running at field level where the track was c. 0.18m wide, but with a c. 320m gap where a row of houses has been built on the former track.

A bridge over the River Deelee in Ballindrait townland is an SMR site (L353-2). The bridge is not visible in the high-resolution DTM data, but DSM data indicates the bridge is approximately 5.5m high and c. 7m wide.

Finally, the OS first-edition six-inch map depicts crossing roads in Drumatoland townland which are no longer extant (L321-1). However, these roads appear in the LiDAR data as a slightly raised track 9m wide and 0.2m high, with a total length of c. 2km.

⁵⁰ Mill races: L306-1, L306-5, and L338-6.

Table 26: Section 3 summary of site categories.

Category	Total	SMR/ RMP	Route Selection	New Sites Low Res	New Sites High Res	Confidence				
						0	1	2	3	4
Barrow Possible	2	1	0	1	0	0	1	0	1	0
Bridge	1	1	0	0	0	0	0	0	1	0
Building	1	0	0	1	0	0	0	1	0	0
Burnt Mound possible	1	0	0	0	1	0	0	1	0	0
Burnt Spread Possible	1	0	1	0	0	0	0	0	0	1
Church and Graveyard	1	1	0	0	0	0	0	0	1	0
Circular Feature	1	0	0	1	0	1	0	0	0	0
Cist	2	2	0	0	0	0	0	0	0	2
Cross-inscribed Stone	1	1	0	0	0	0	0	0	0	1
Designed Landscape	1	0	0	1	0	0	0	1	0	0
Enclosure Possible	4	0	2	1	1	0	2	1	0	1
Farmstead	2	0	1	1	0	0	0	2	0	0
Flax Mill	2	0	0	2	0	0	0	2	0	0
Lime Kiln	2	0	0	1	1	0	0	2	0	0
Megalithic Tomb	1	1	0	0	0	0	0	0	0	1
Mill Pond	3	0	0	1	2	0	0	3	0	0
Mill Race	3	0	0	2	1	0	0	3	0	0
Mound	1	0	0	1	0	0	1	0	0	0
Mound Possible	1	0	0	0	1	0	1	0	0	0
Pit possible	1	0	0	0	1	1	0	0	0	0
Railway	2	0	0	1	1	0	0	2	0	0
Reservoir	1	0	0	0	1	0	0	1	0	0
Road	1	0	0	1	0	0	0	1	0	0
School	1	1	0	0	0	0	0	0	0	1
Souterrain	2	2	0	0	0	0	0	0	1	1
Standing stone	12	12	0	0	0	0	0	0	0	12
Well	2	0	0	0	2	0	0	2	0	0
Grand Total	53	22	4	15	12	2	5	22	4	20

Final Note

Please note that the eighty-two⁵¹ new potentially archaeologically significant features identified during this assessment of low-resolution and high-resolution LiDAR data for the Ten-T Project should be inspected on the ground before a final determination can be made as to their archaeological significance.

⁵¹ This consists of the forty-three sites newly identified in the low-res LiDAR, forty-three sites newly identified in the high-res LiDAR data, minus four potential sites determined not to be archaeologically significant.

References

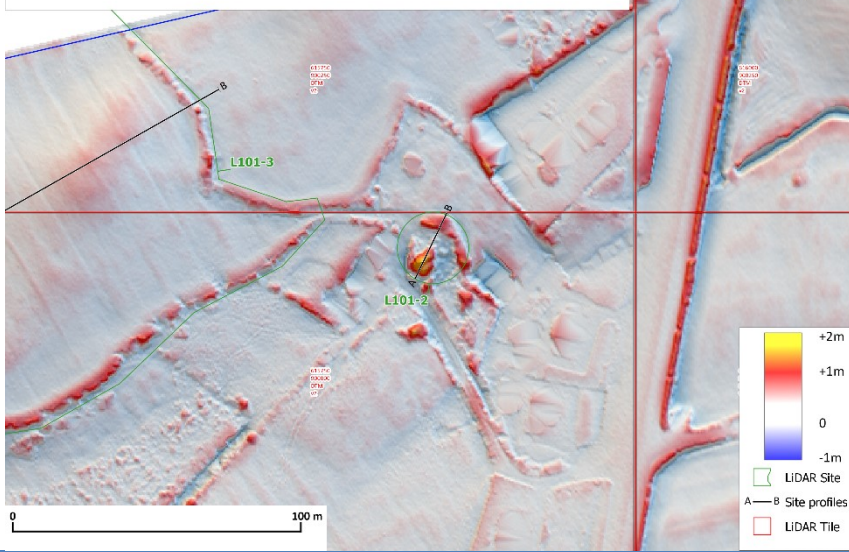
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Appendix 1: LiDAR Site Visualisations

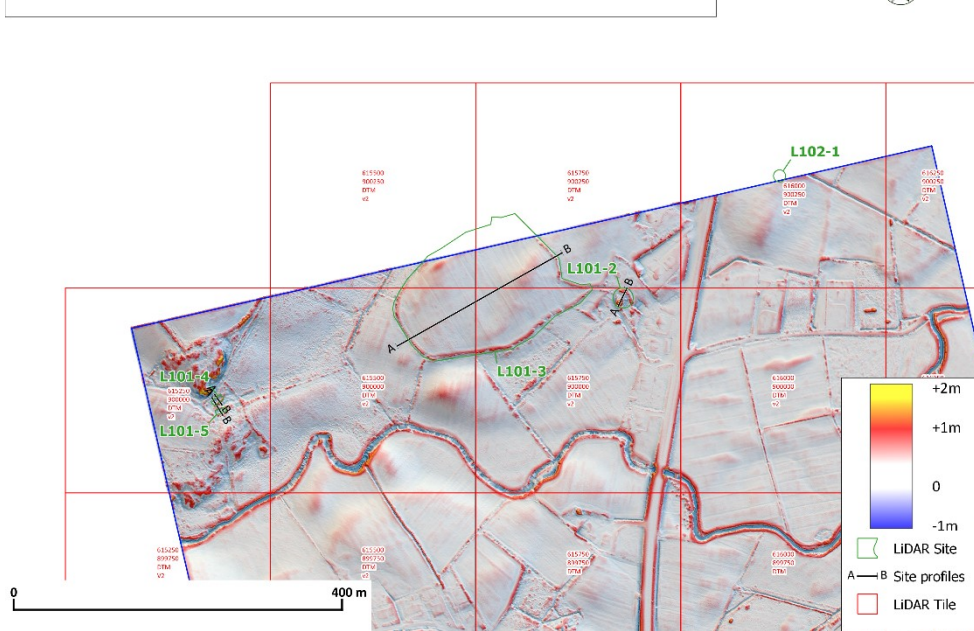
Section 1 LiDAR Sites

LiDAR Image Catalogue

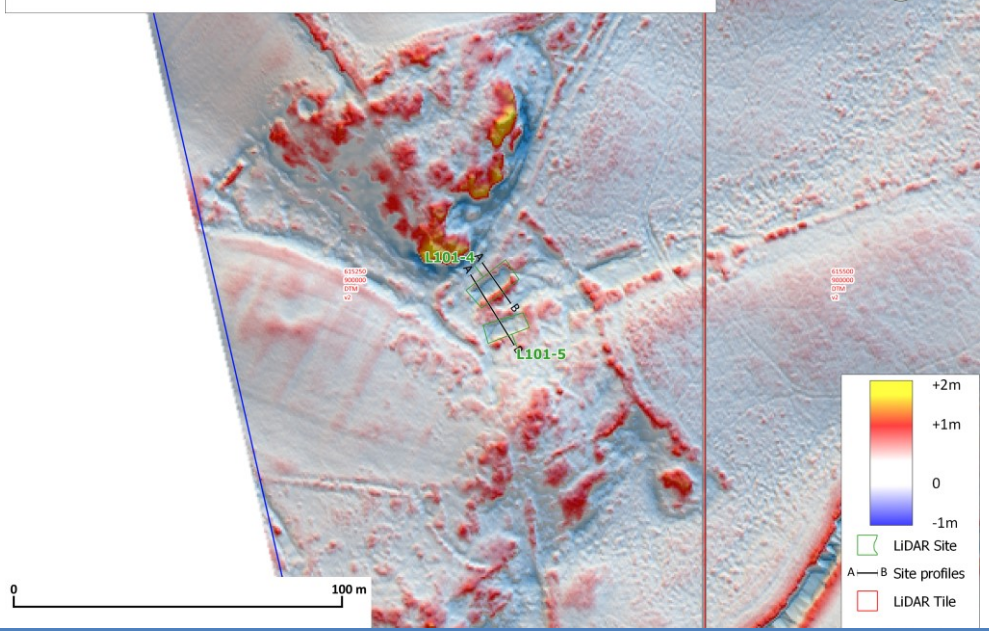
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L101-2: Lime Kiln



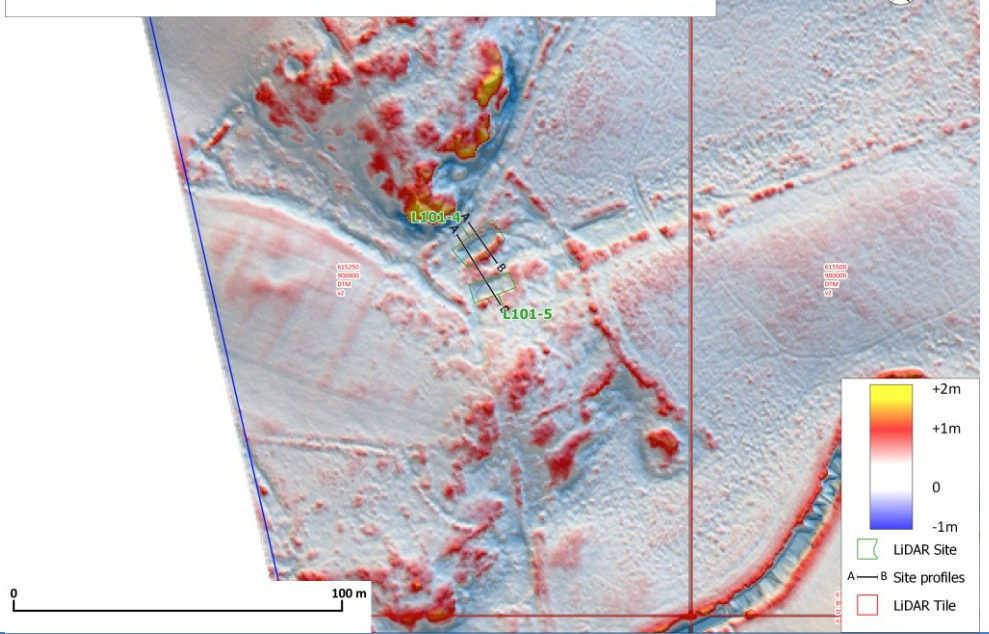
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L101-3: Enclosure



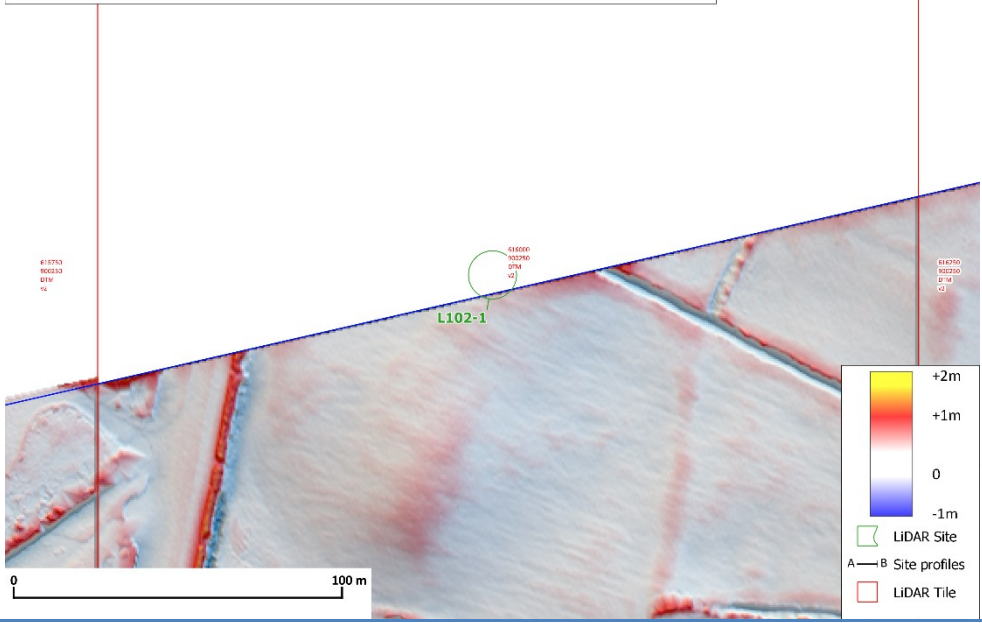
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L101-4: Pit



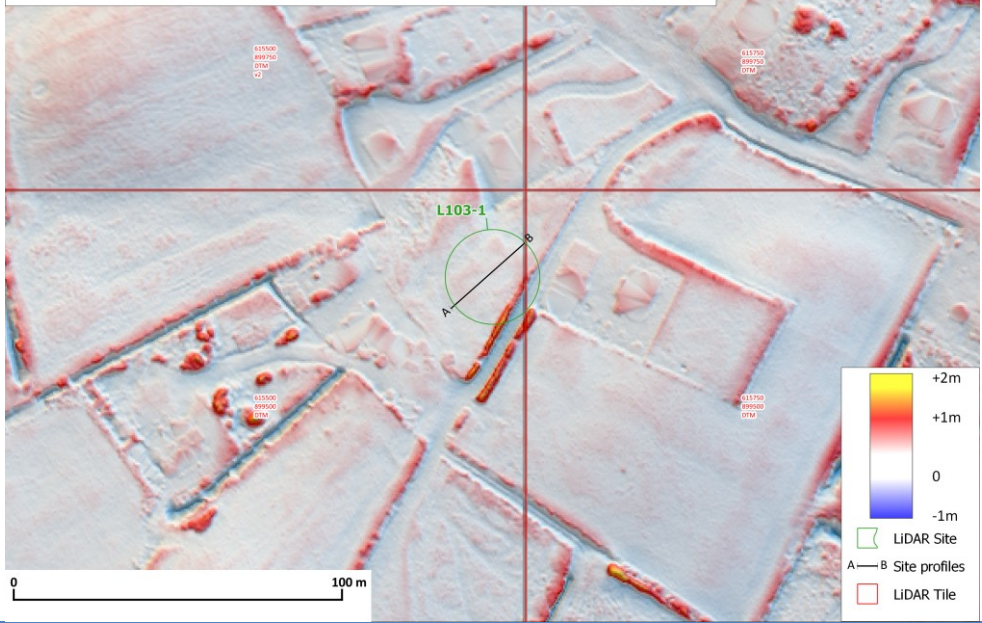
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L101-5: Pit



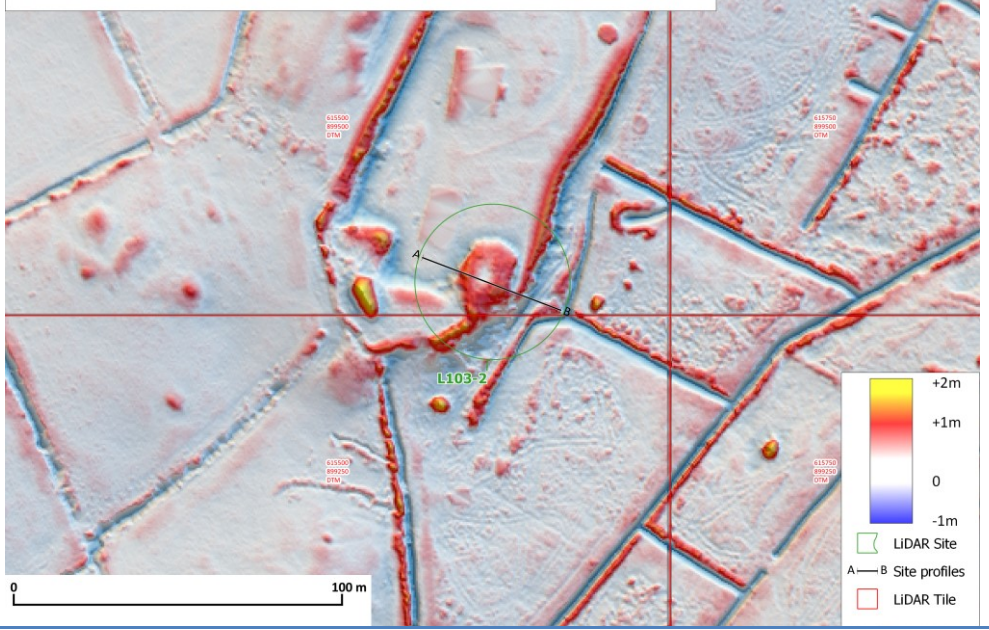
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L102-1: Barrow Possible



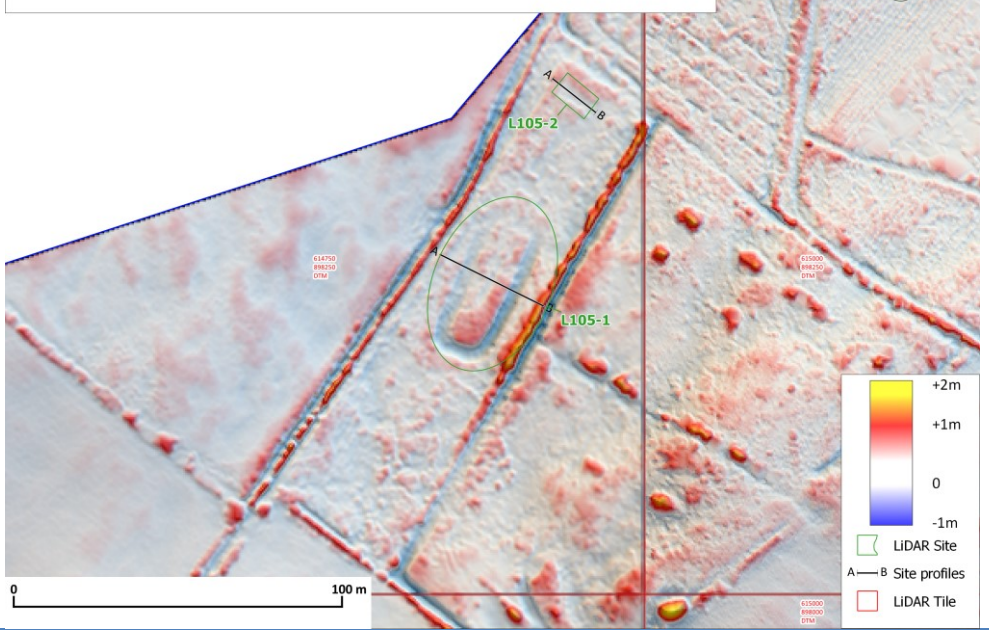
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L103-1: Bullaun Stone

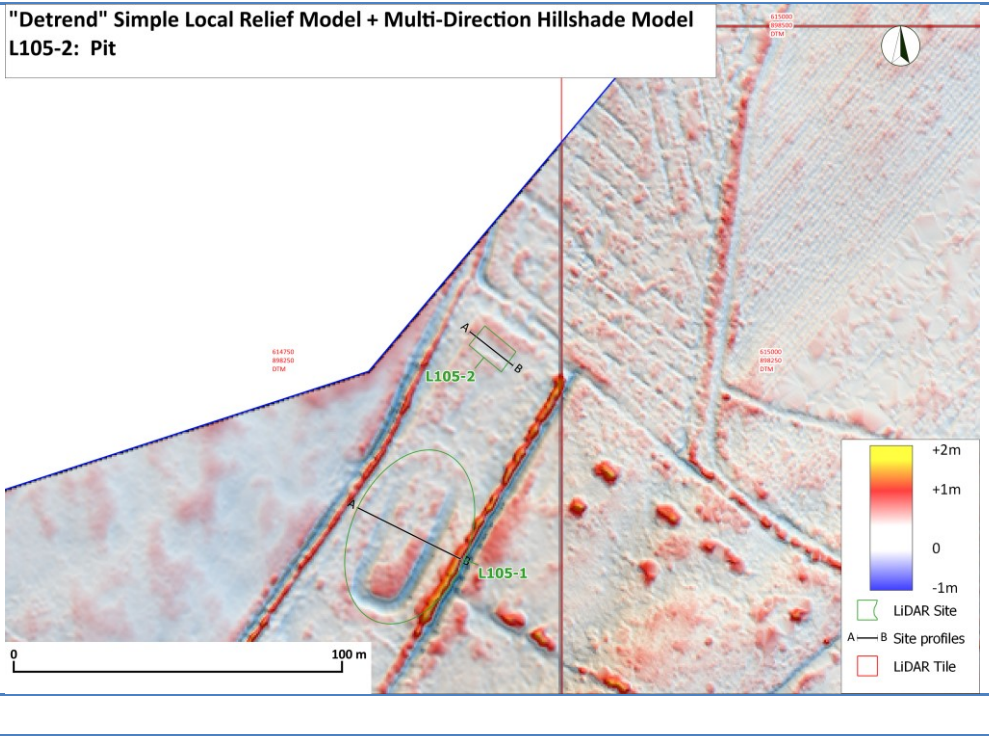
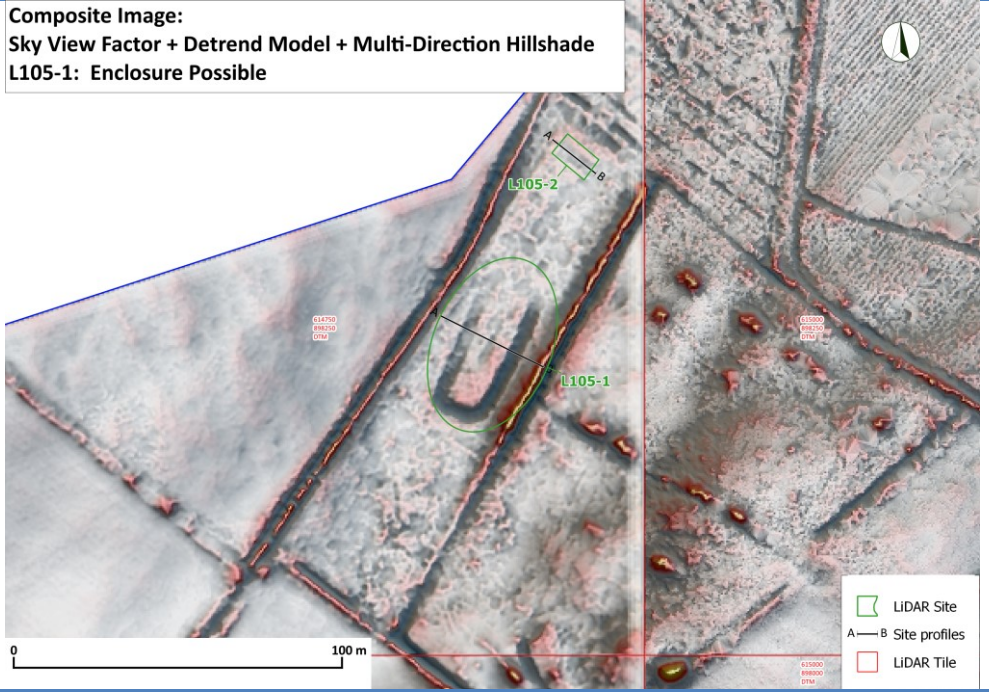


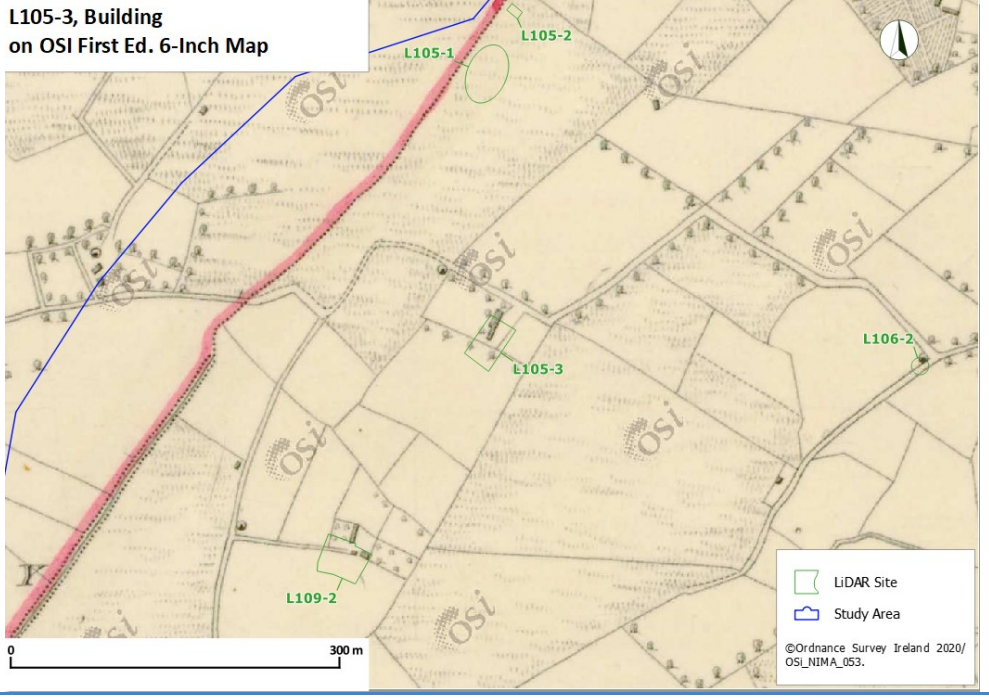
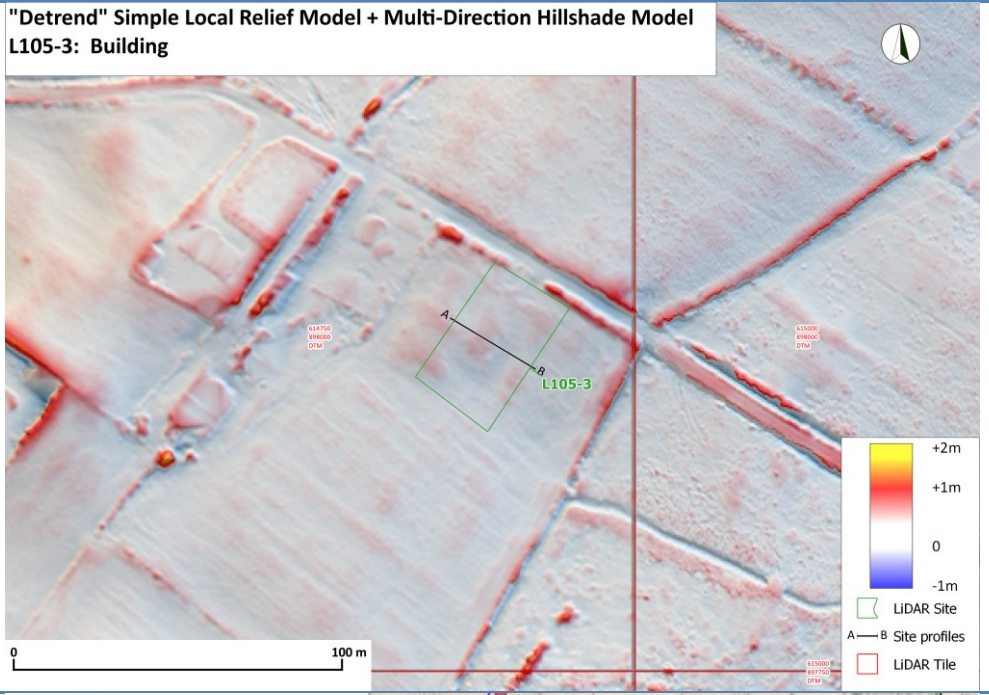
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L103-2: Ringfort

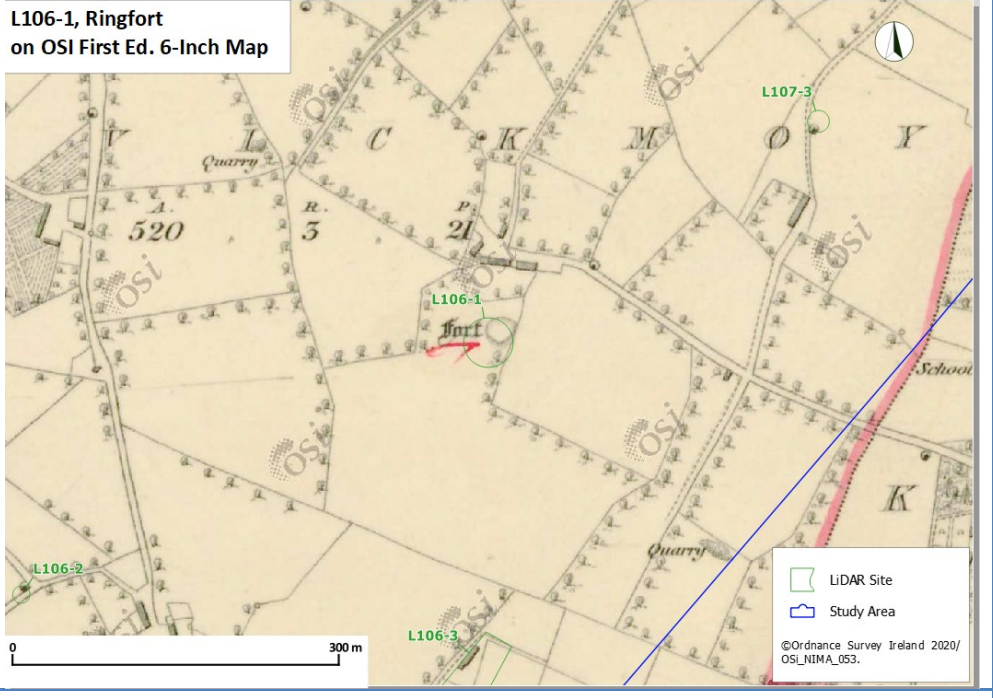
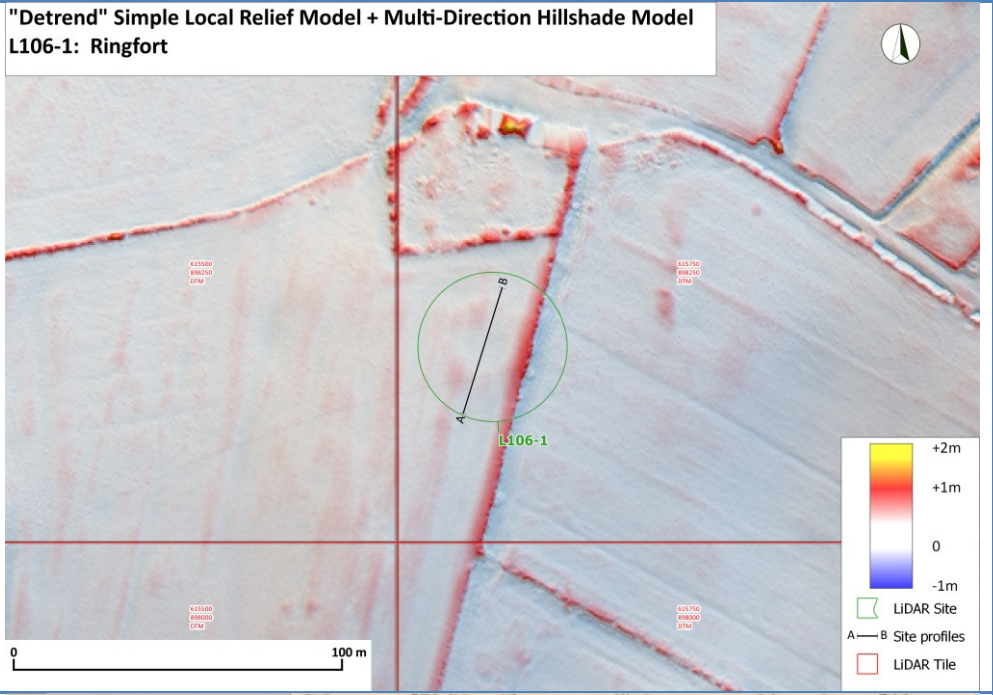


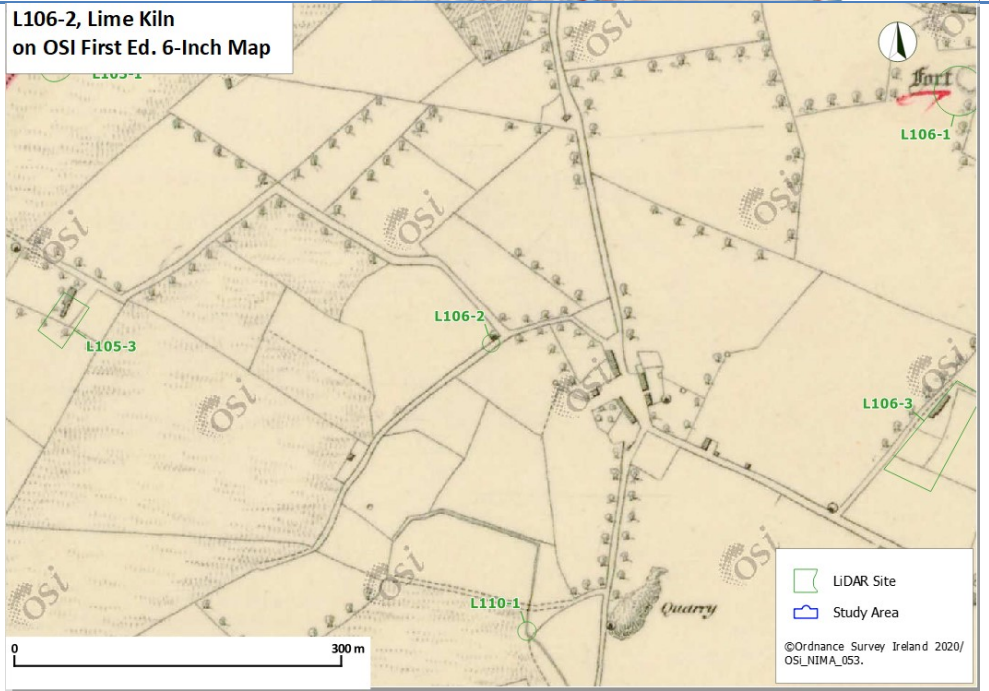
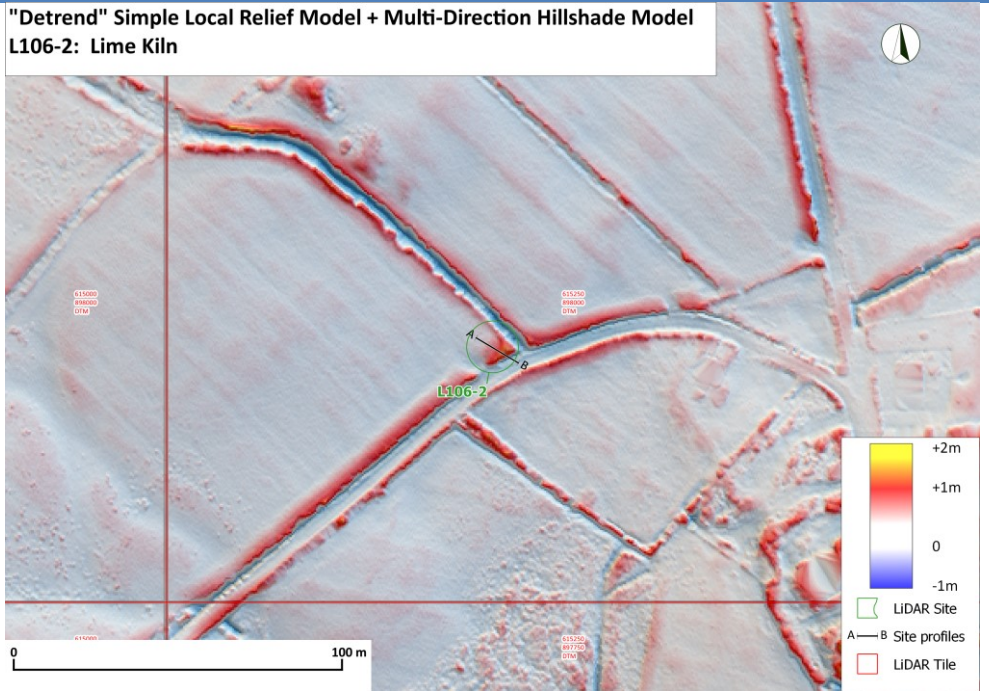
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L105-1: Enclosure Possible

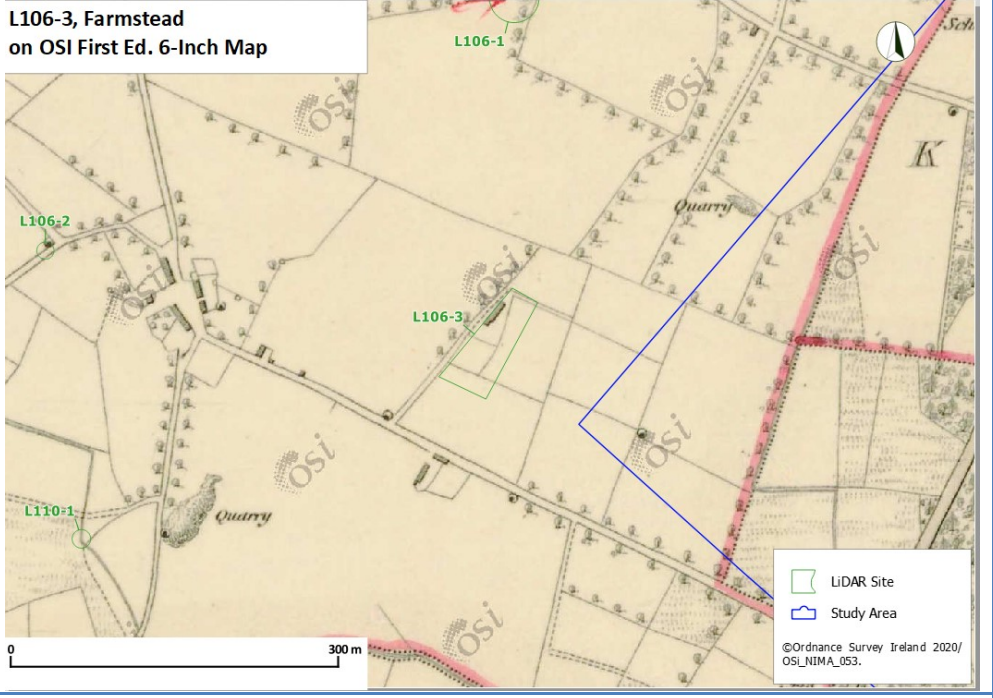
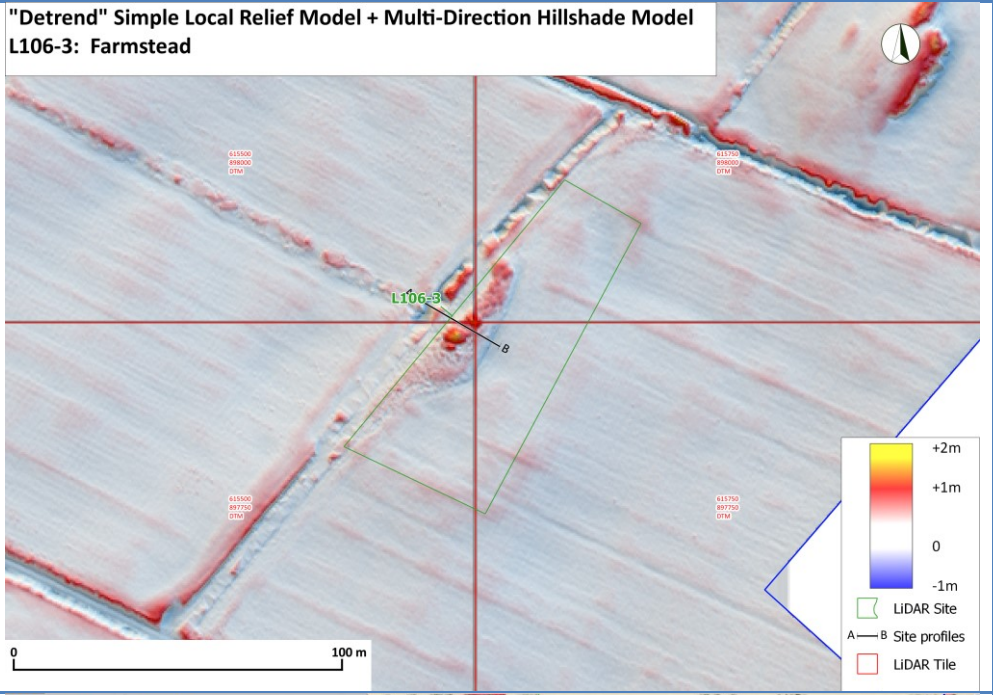


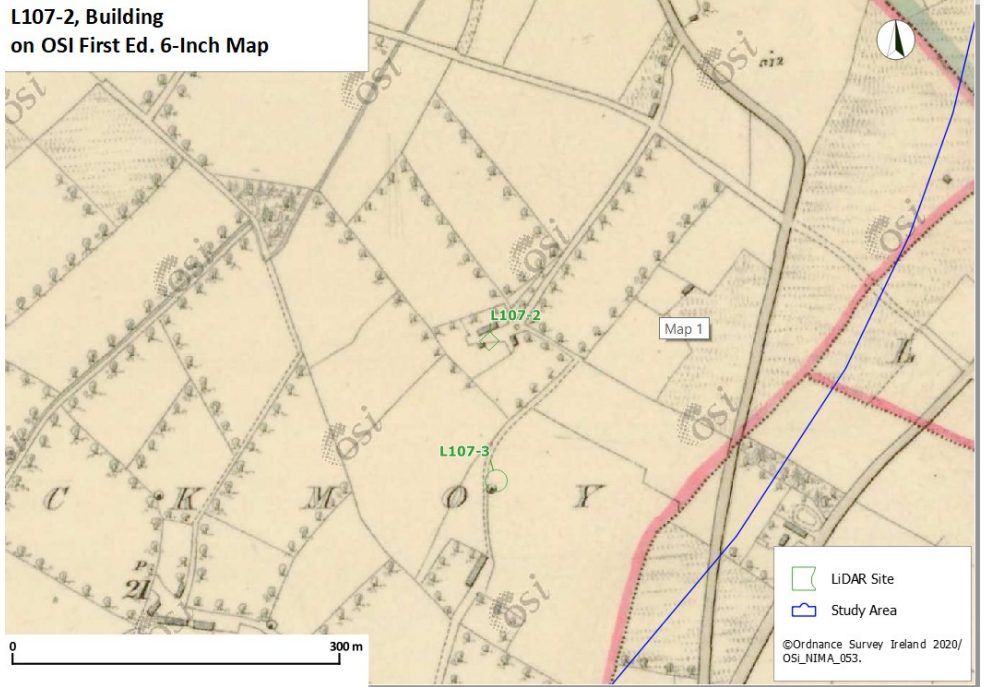
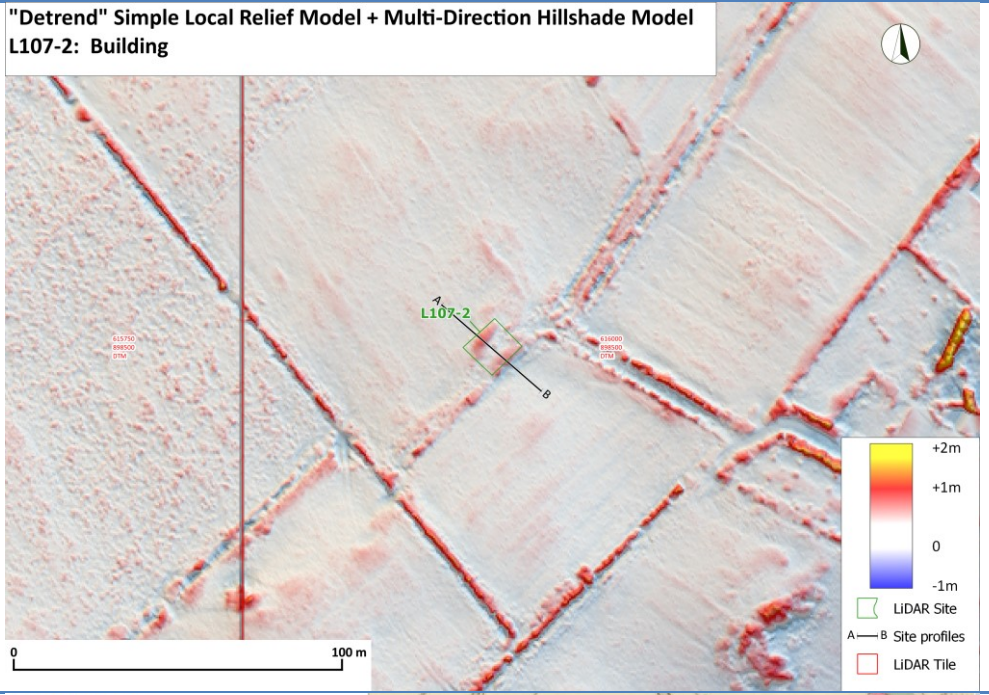


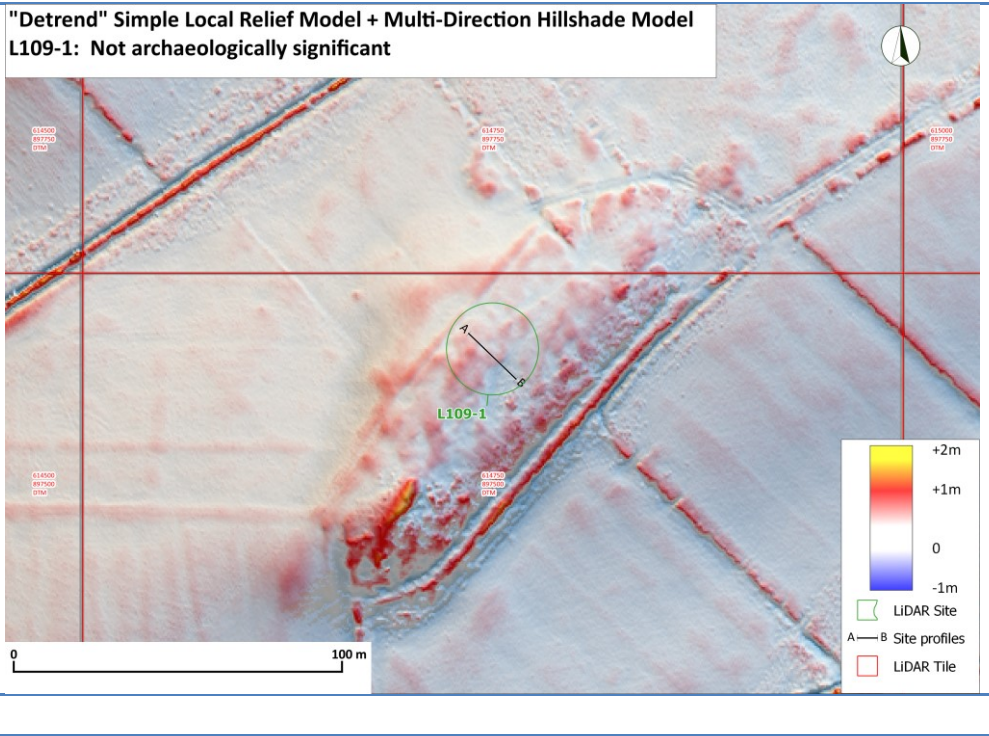
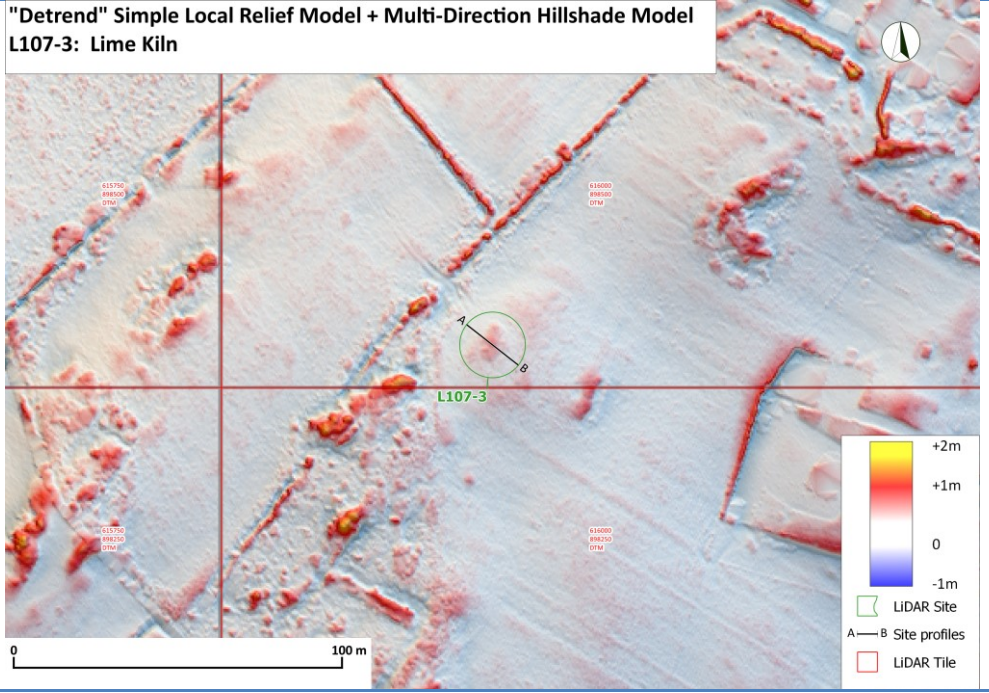




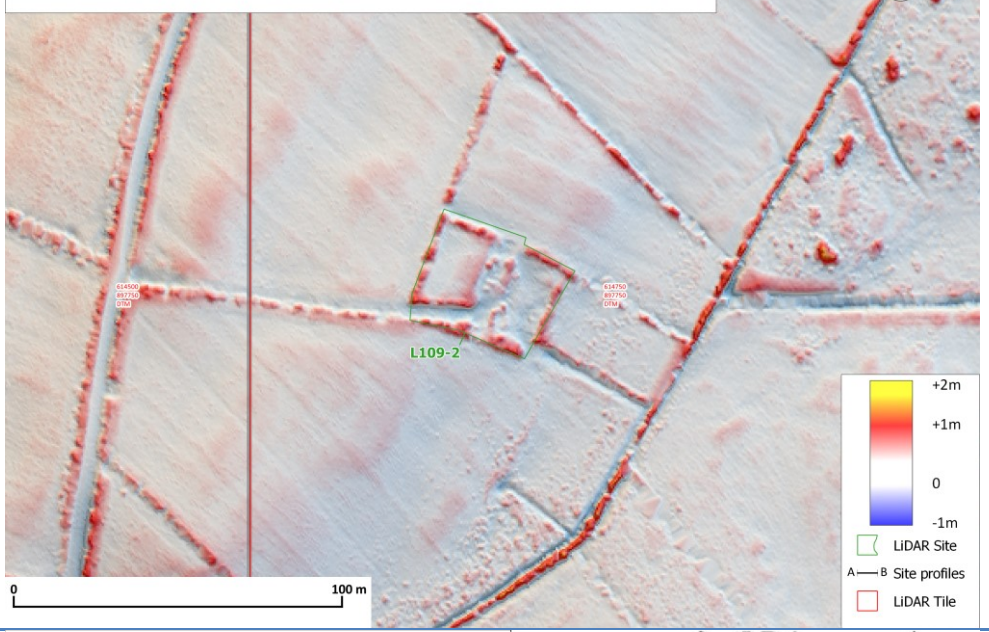




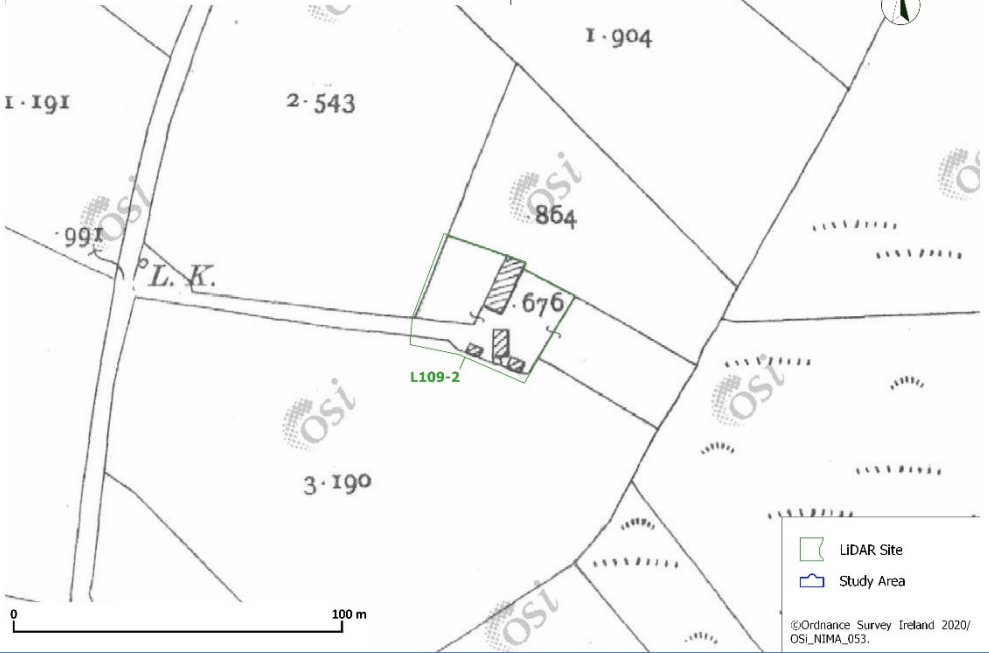




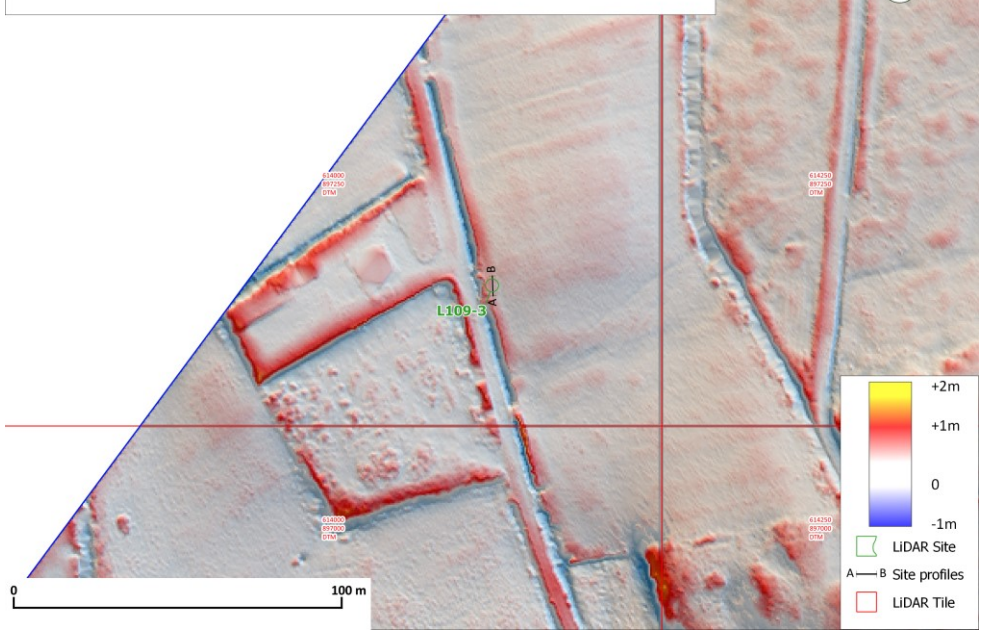
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L109-2: Farmstead



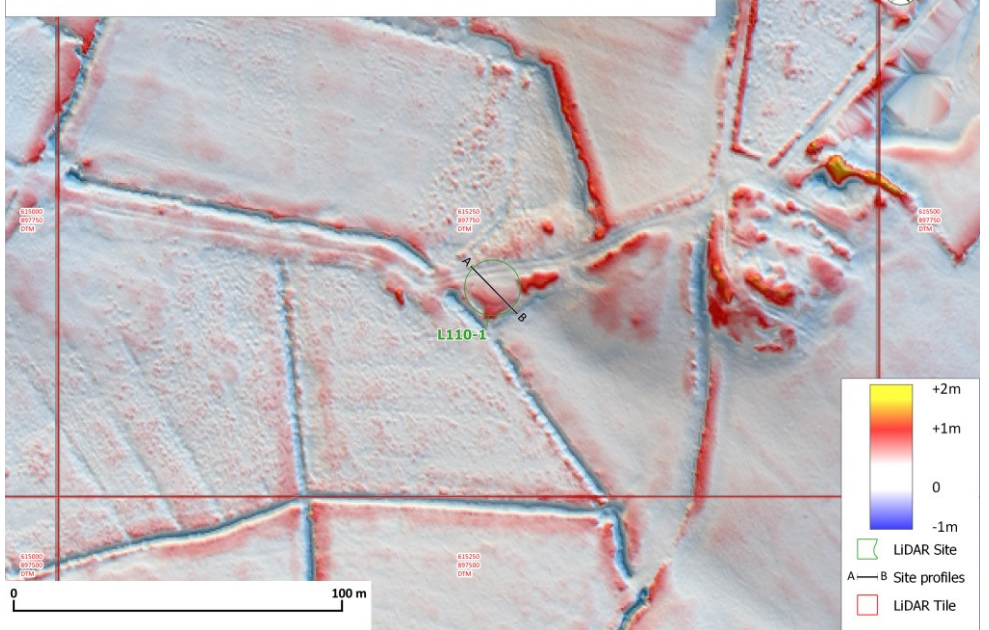
L109-2, Farmstead on OSI 25-Inch Map



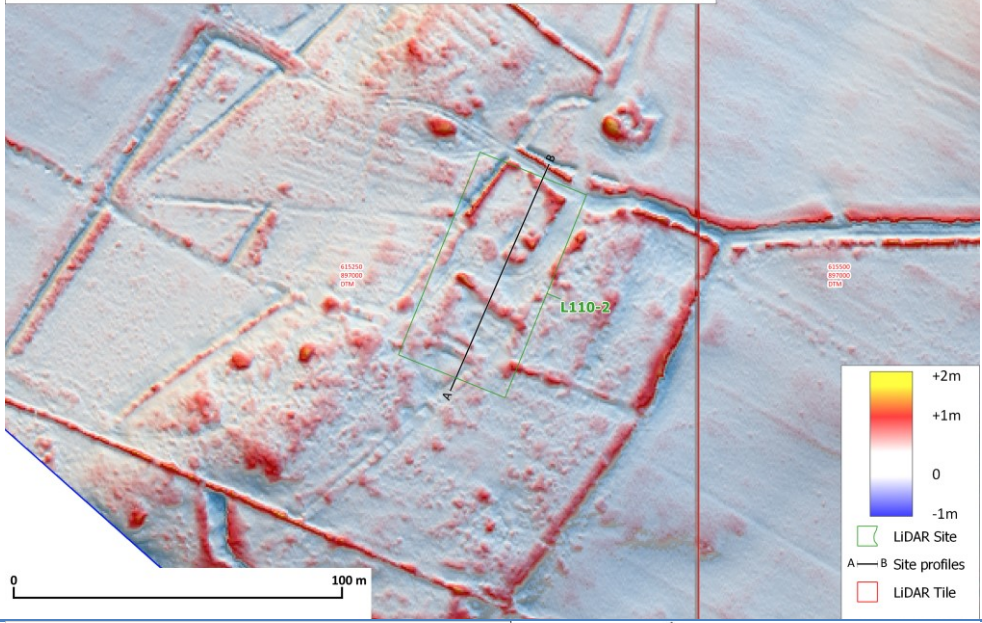
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L109-3: Lime Kiln



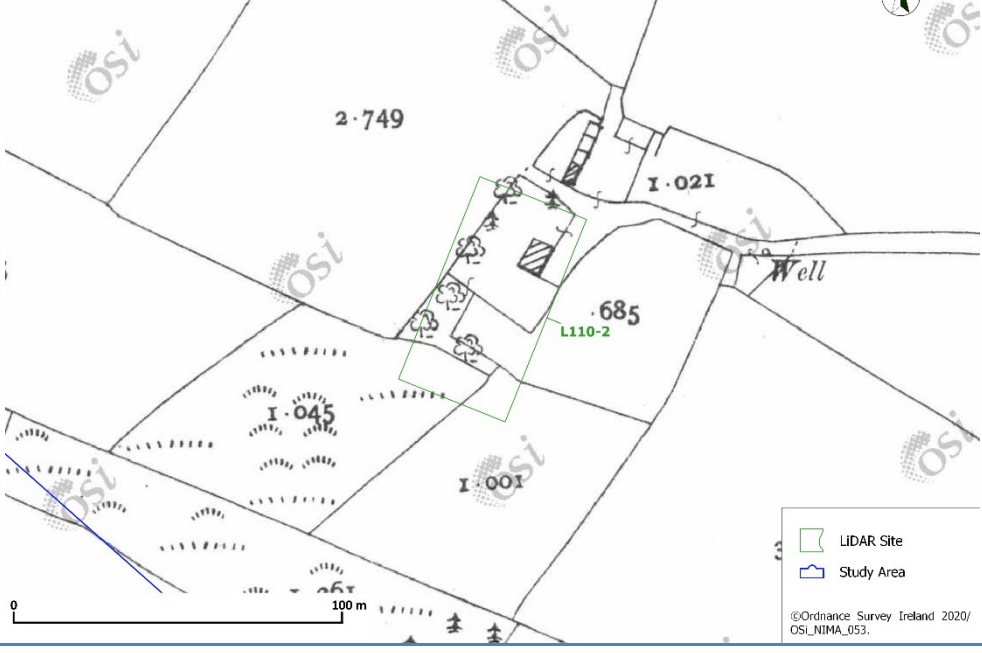
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L110-1: Barrow Possible

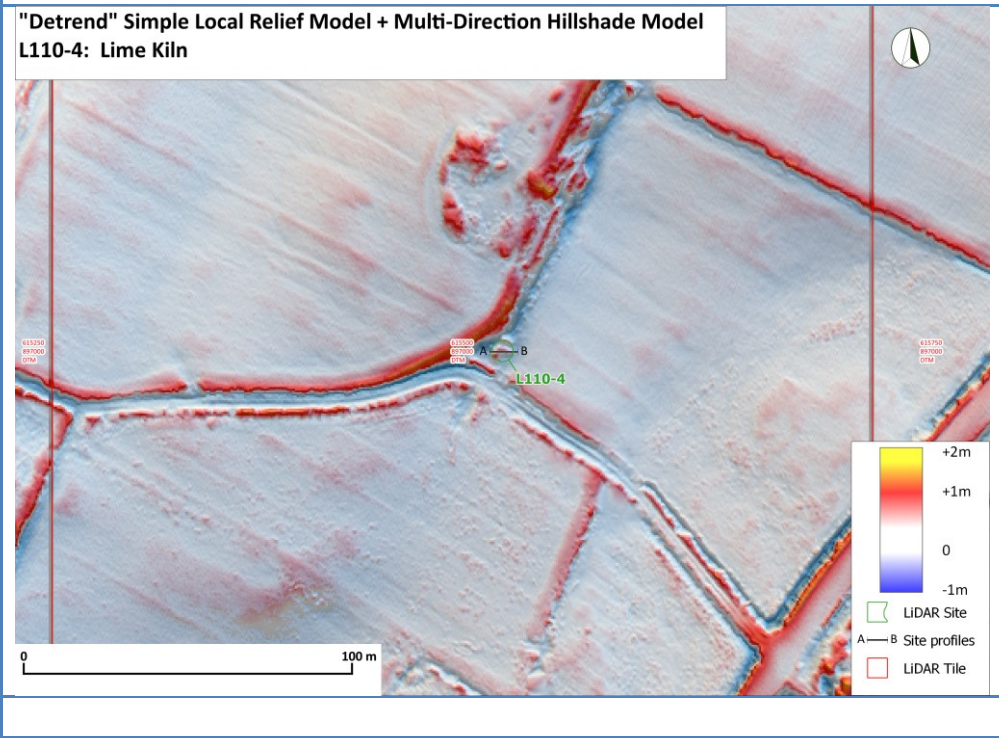
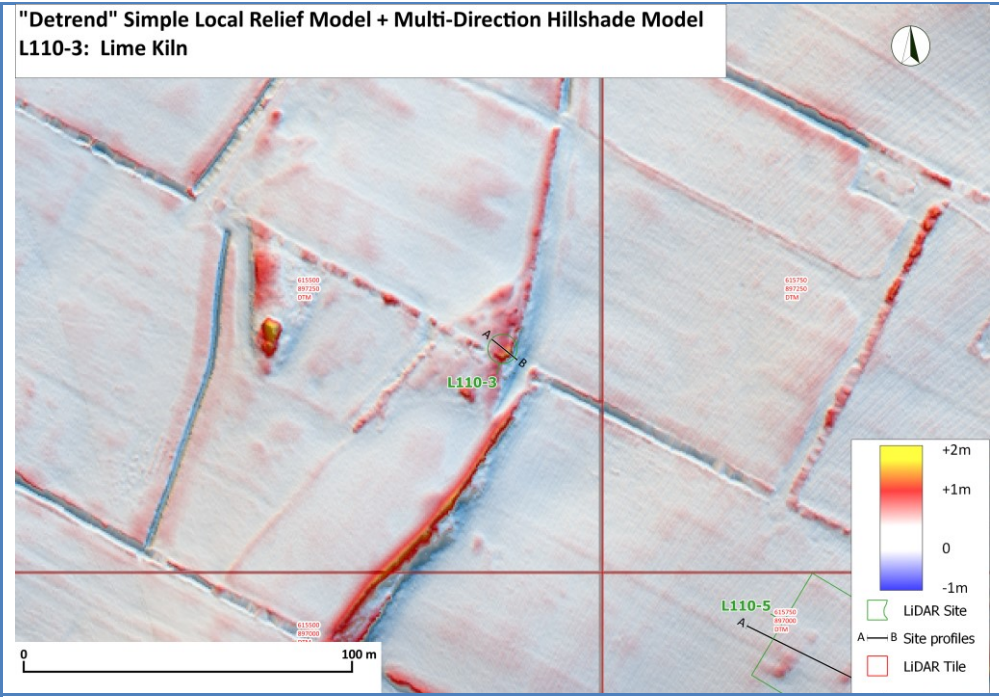


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L110-2: Farmstead

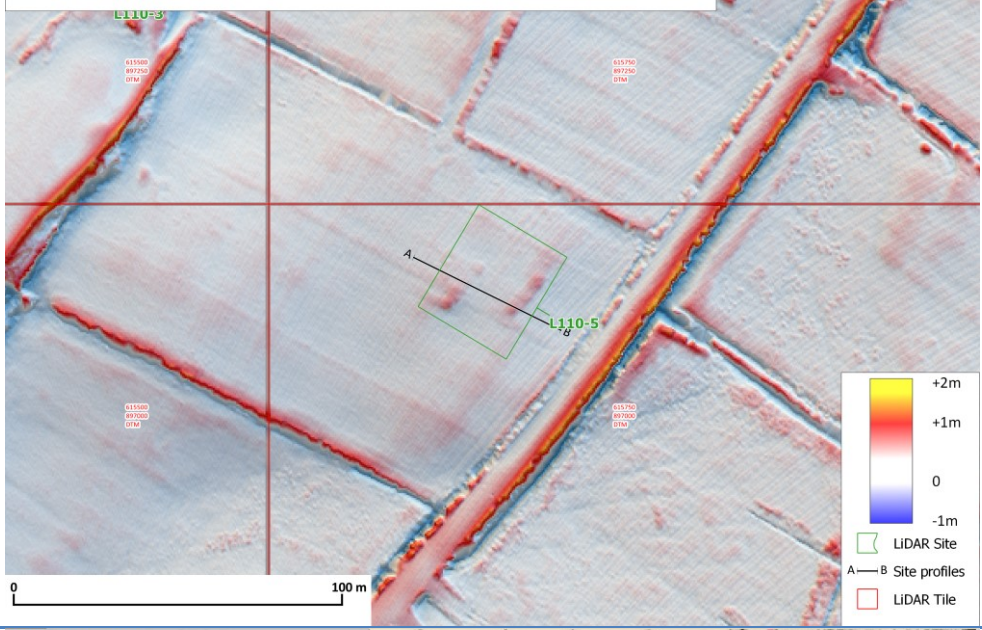


L110-2, Farmstead on OSI 25-Inch Map

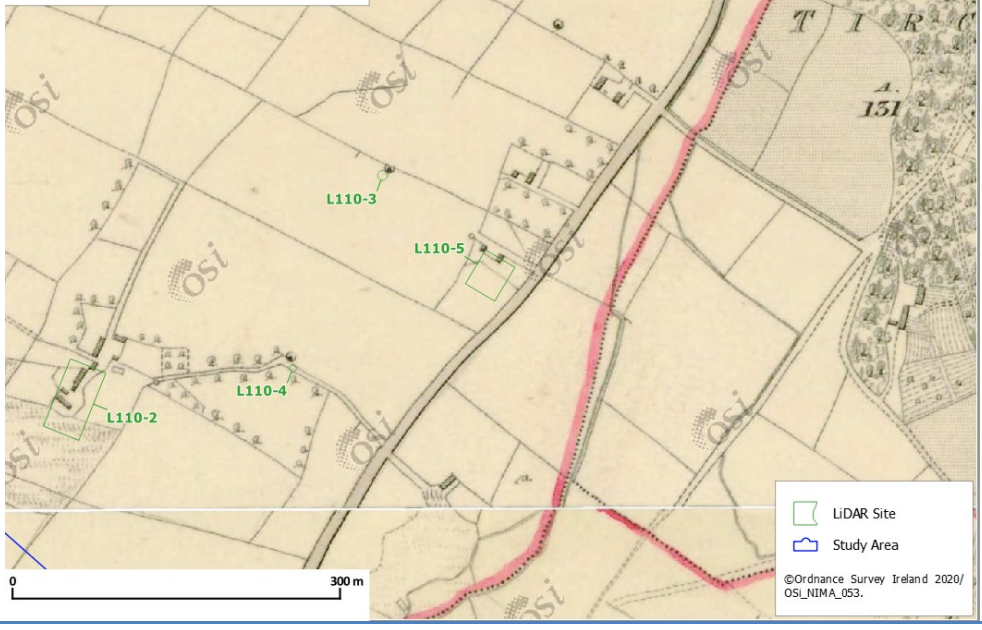


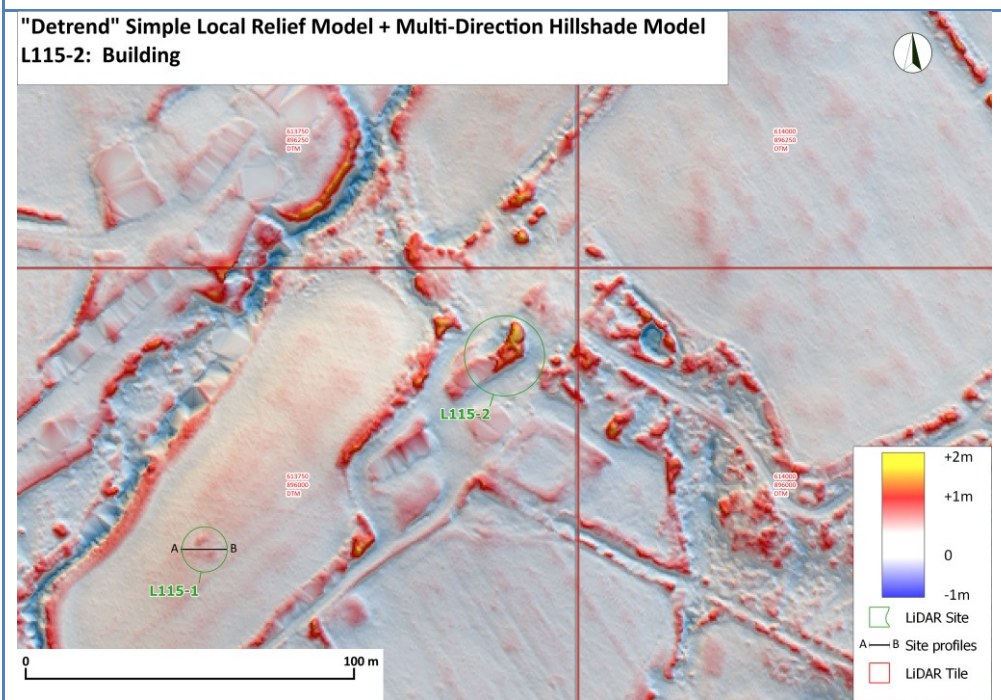
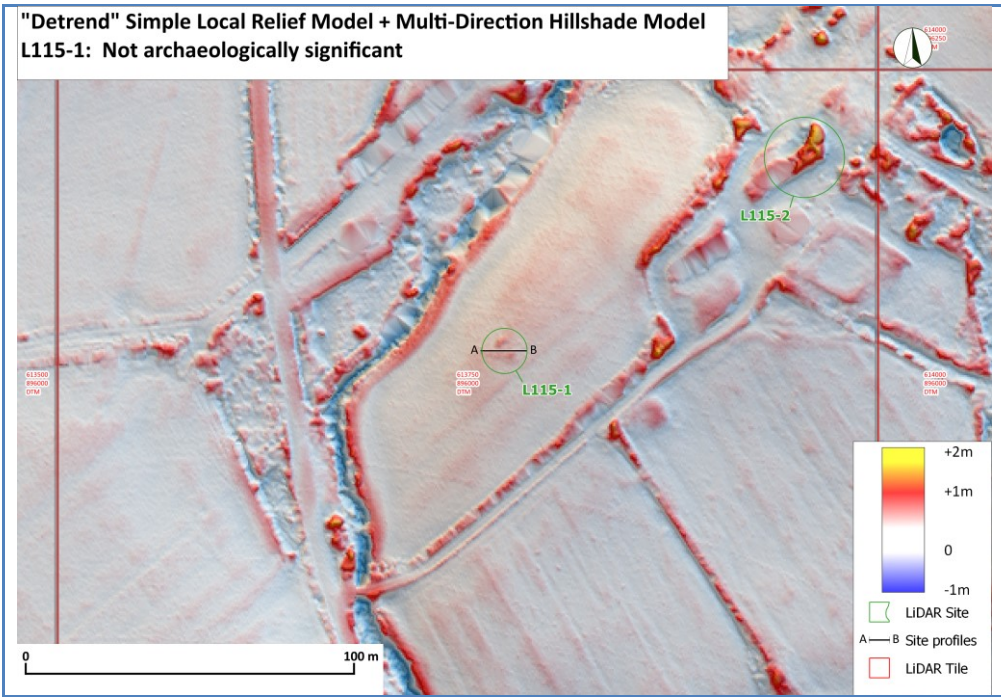


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L110-5: Building

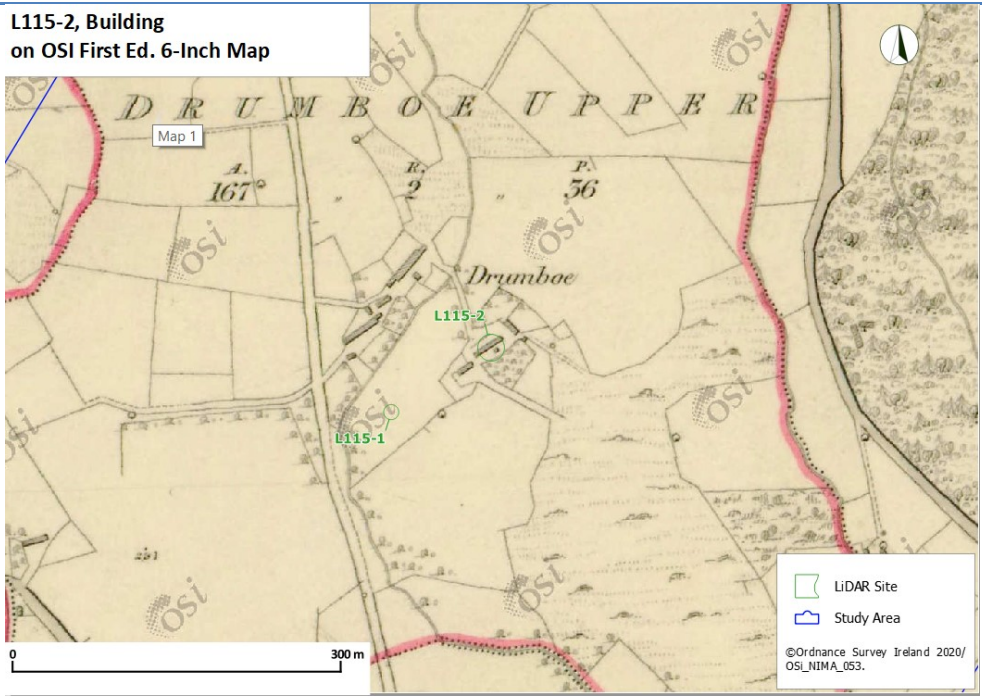


L110-5, Building
on OSI First Ed. 6-Inch Map

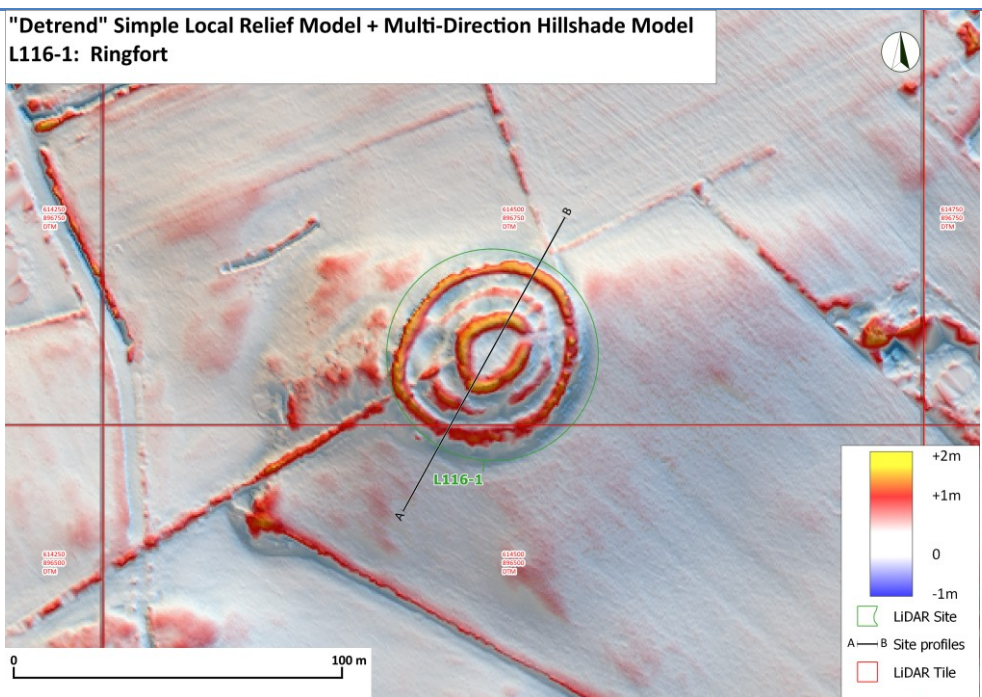


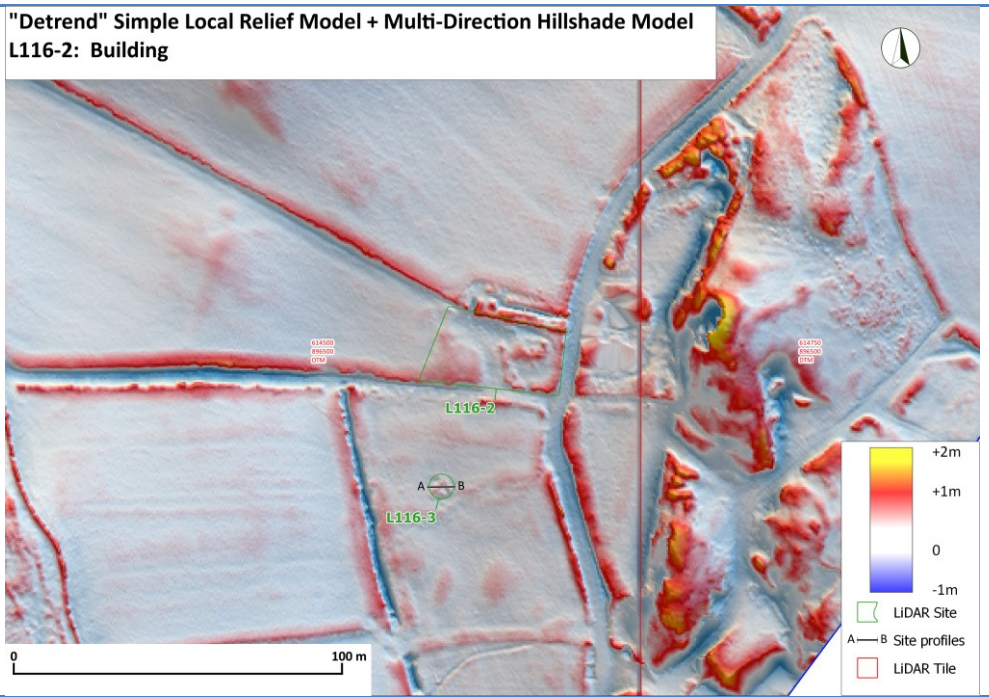
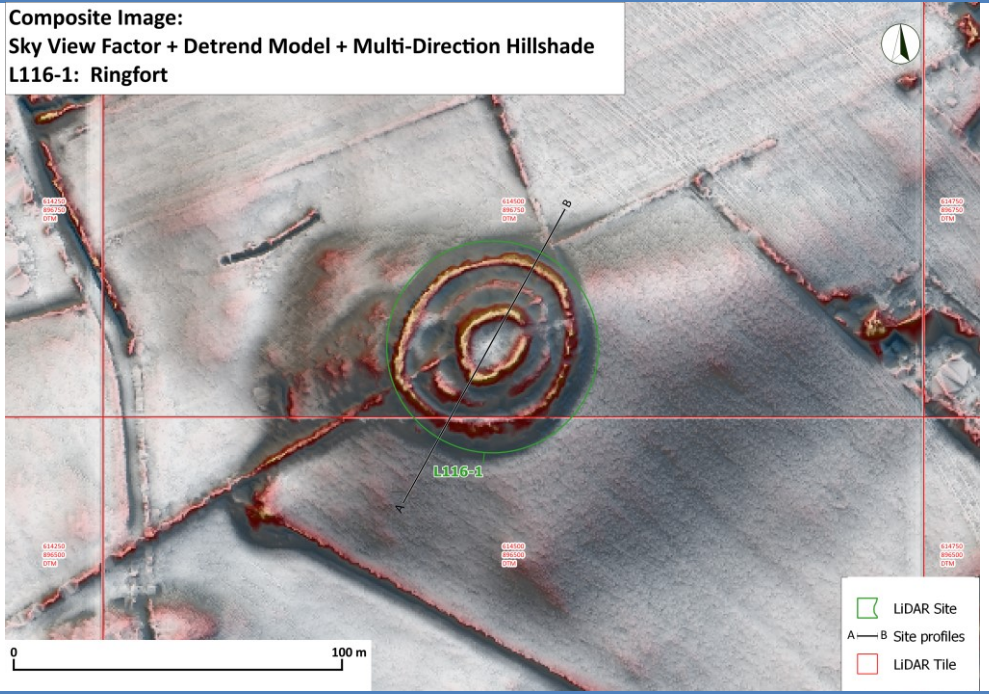


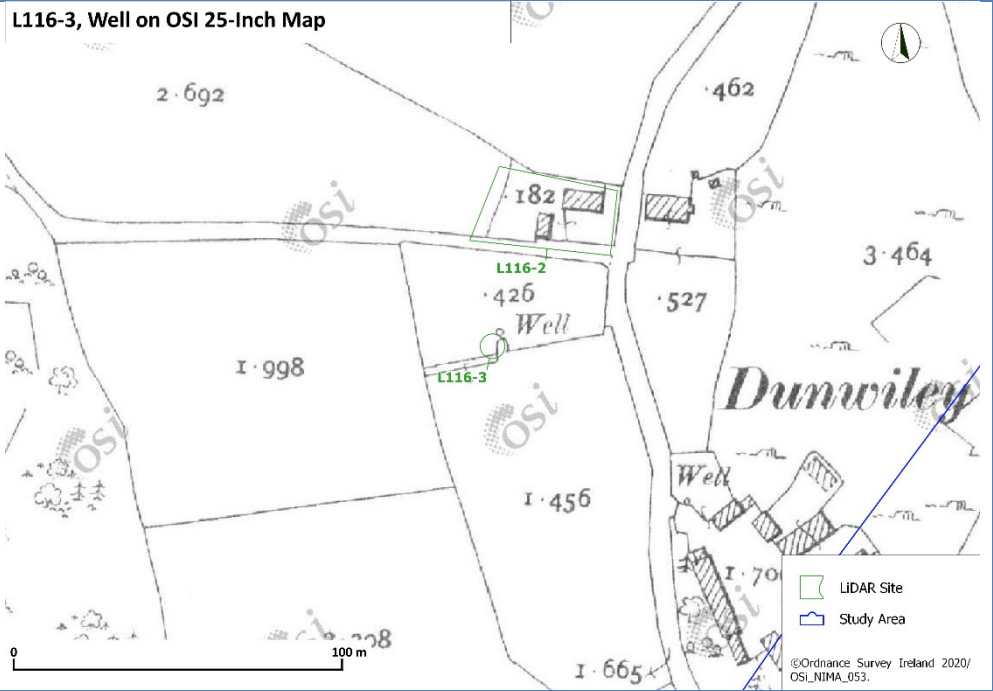
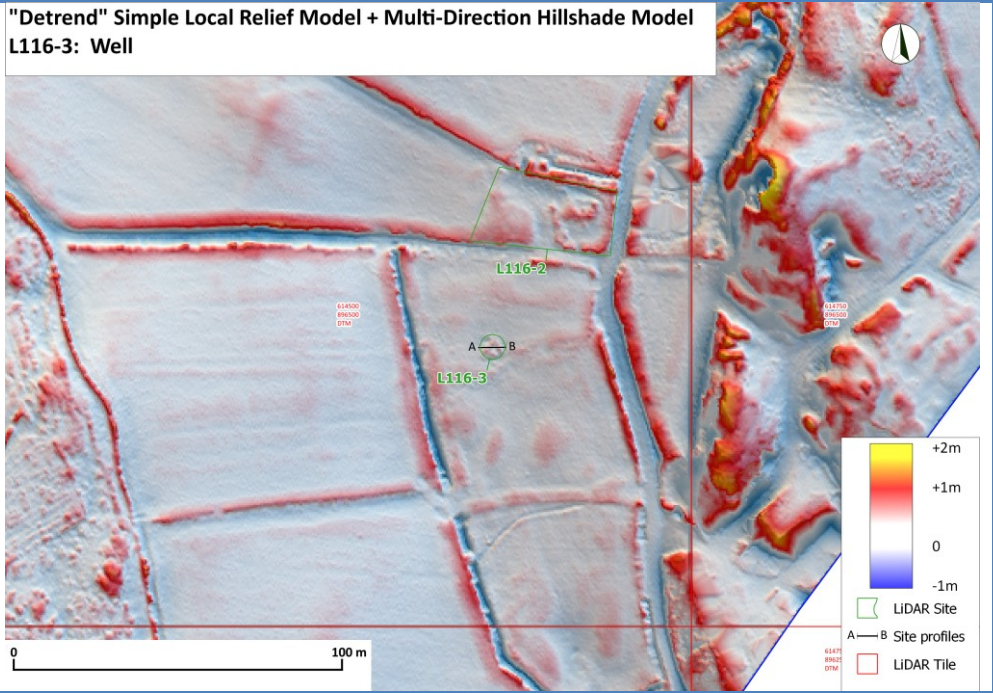
L115-2, Building on OSI First Ed. 6-Inch Map



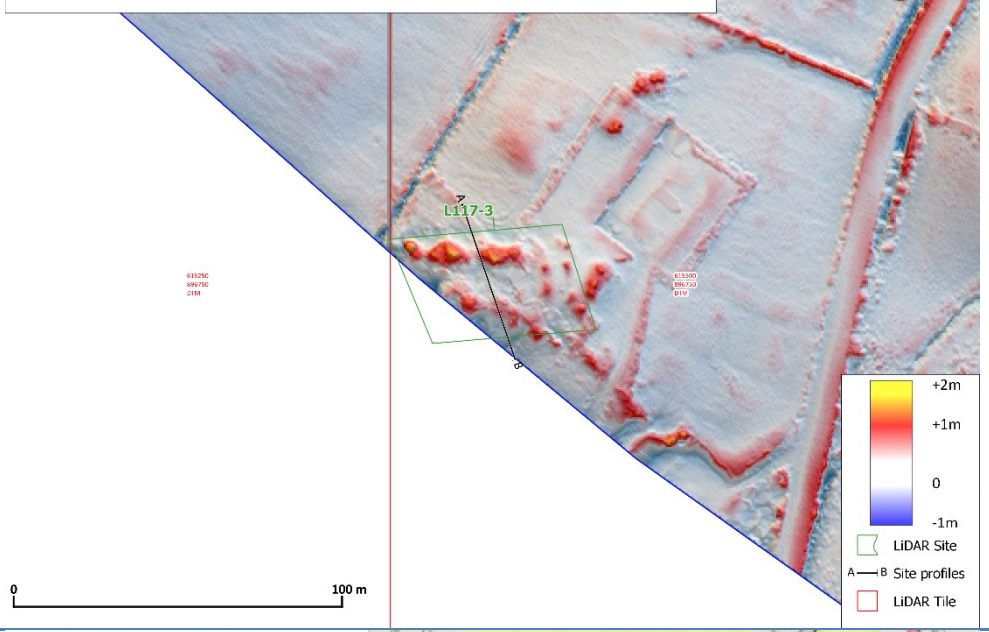
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model L116-1: Ringfort



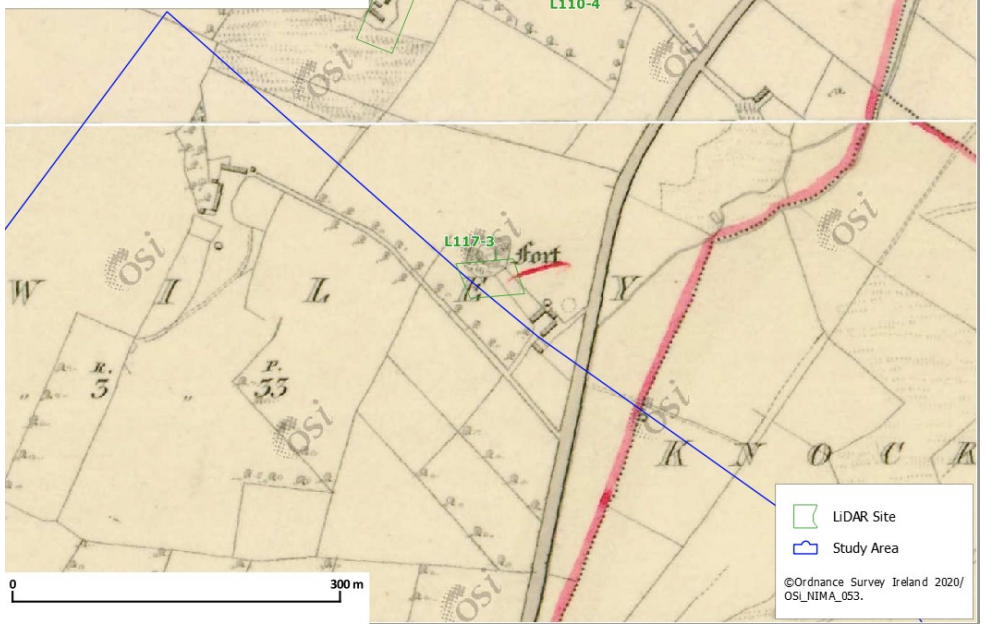


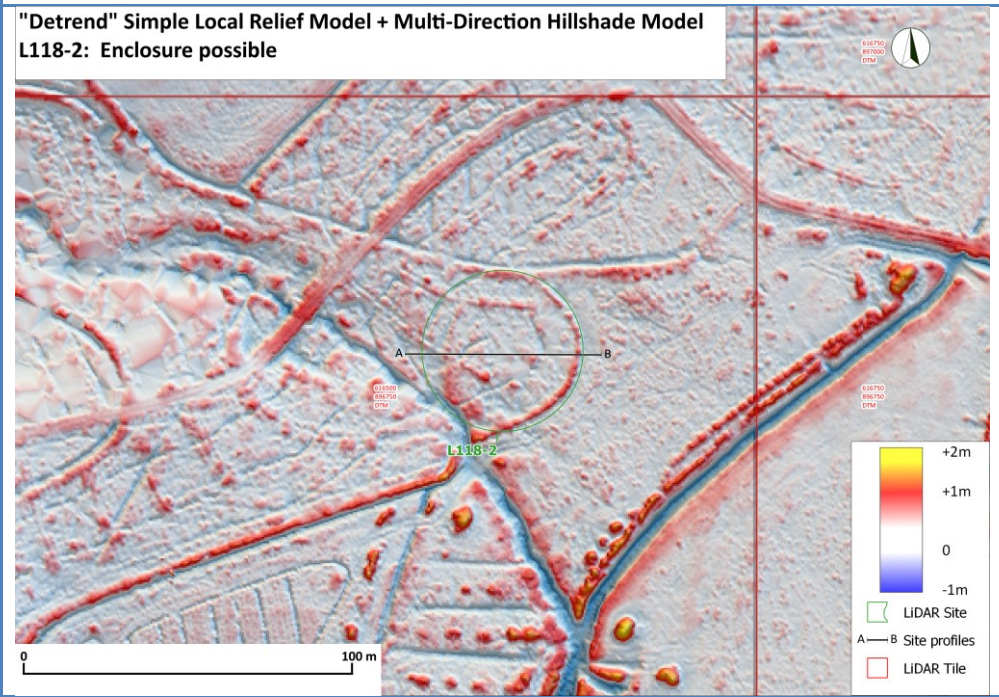
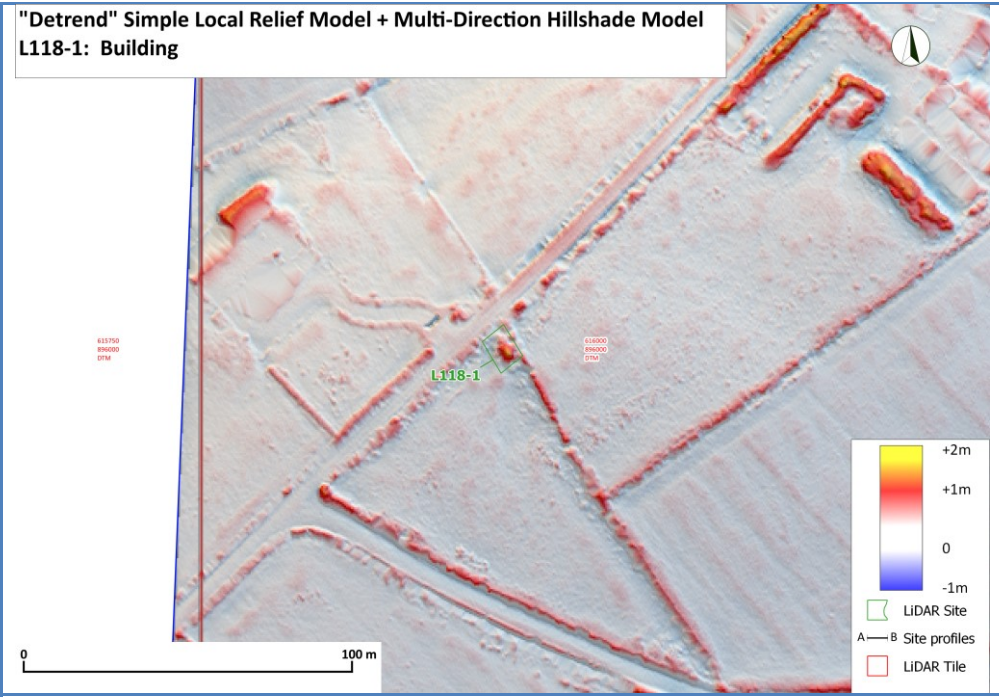


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L117-3: Ringfort - Cashel

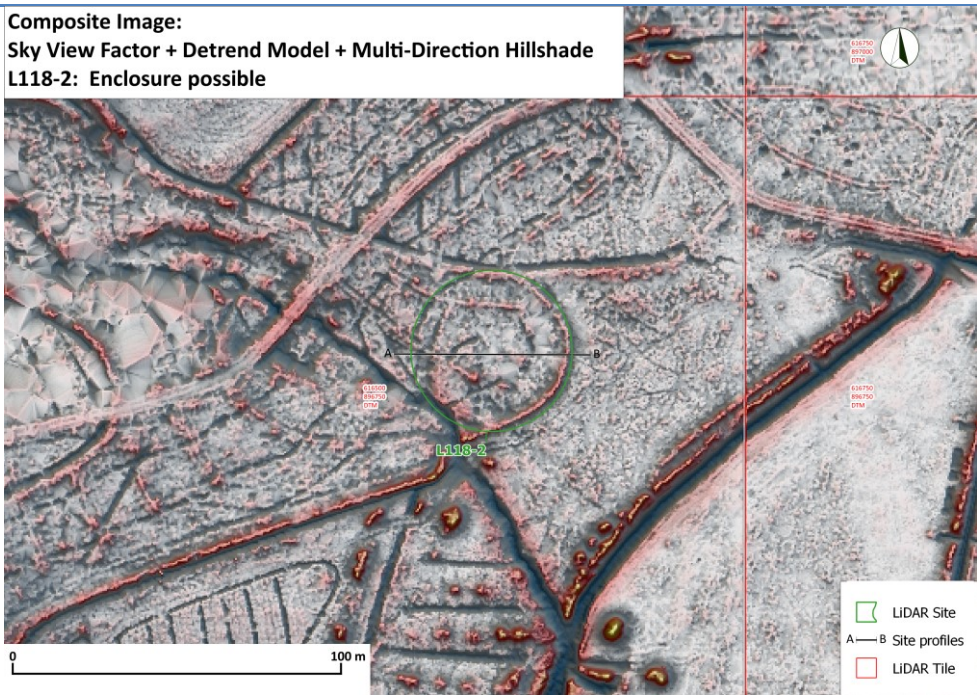


L117-3, Ringfort - Cashel
on OSI First Ed. 6-Inch Map

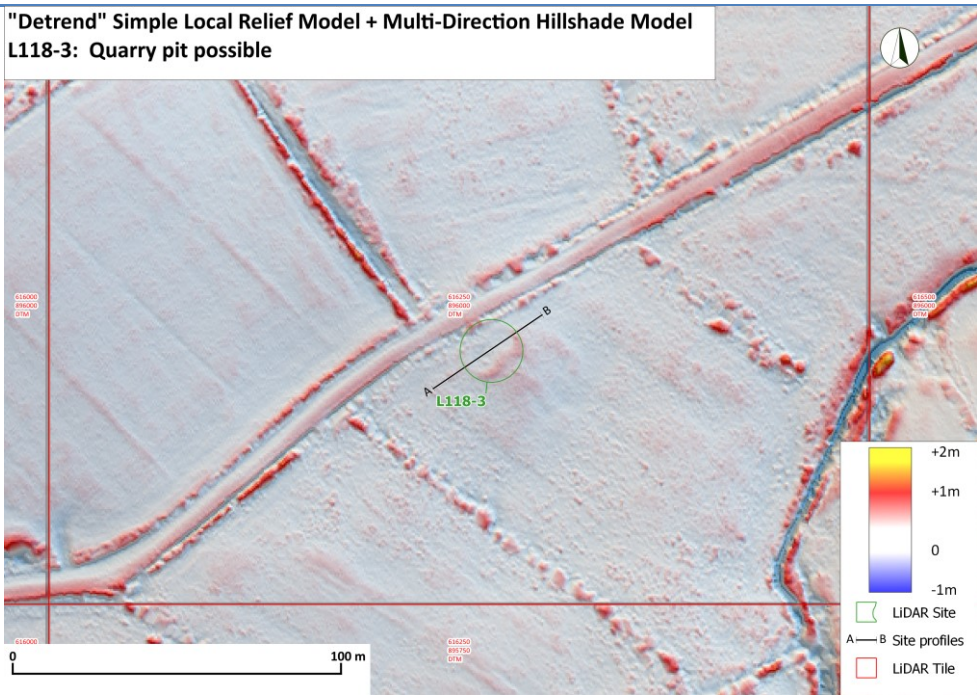


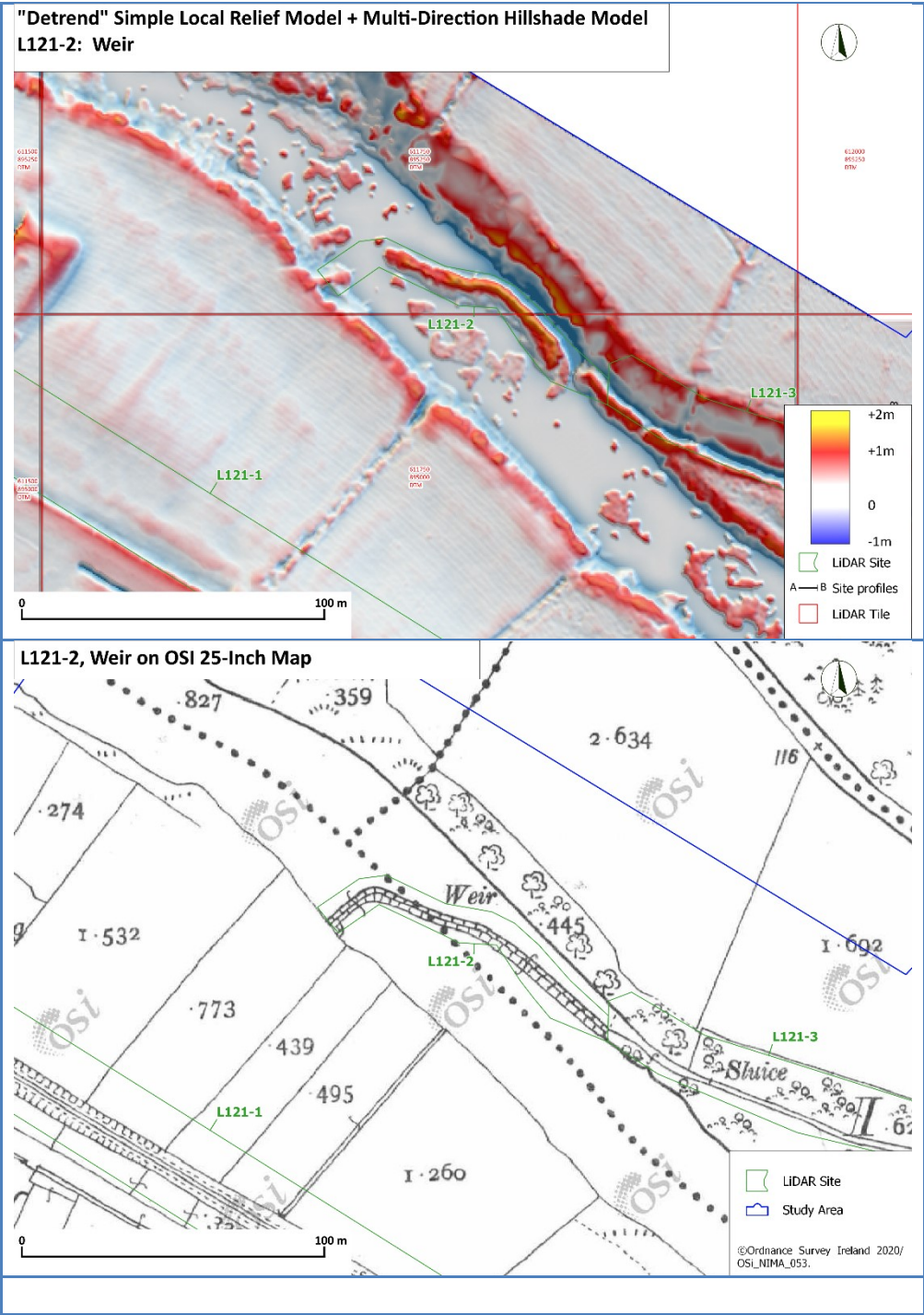


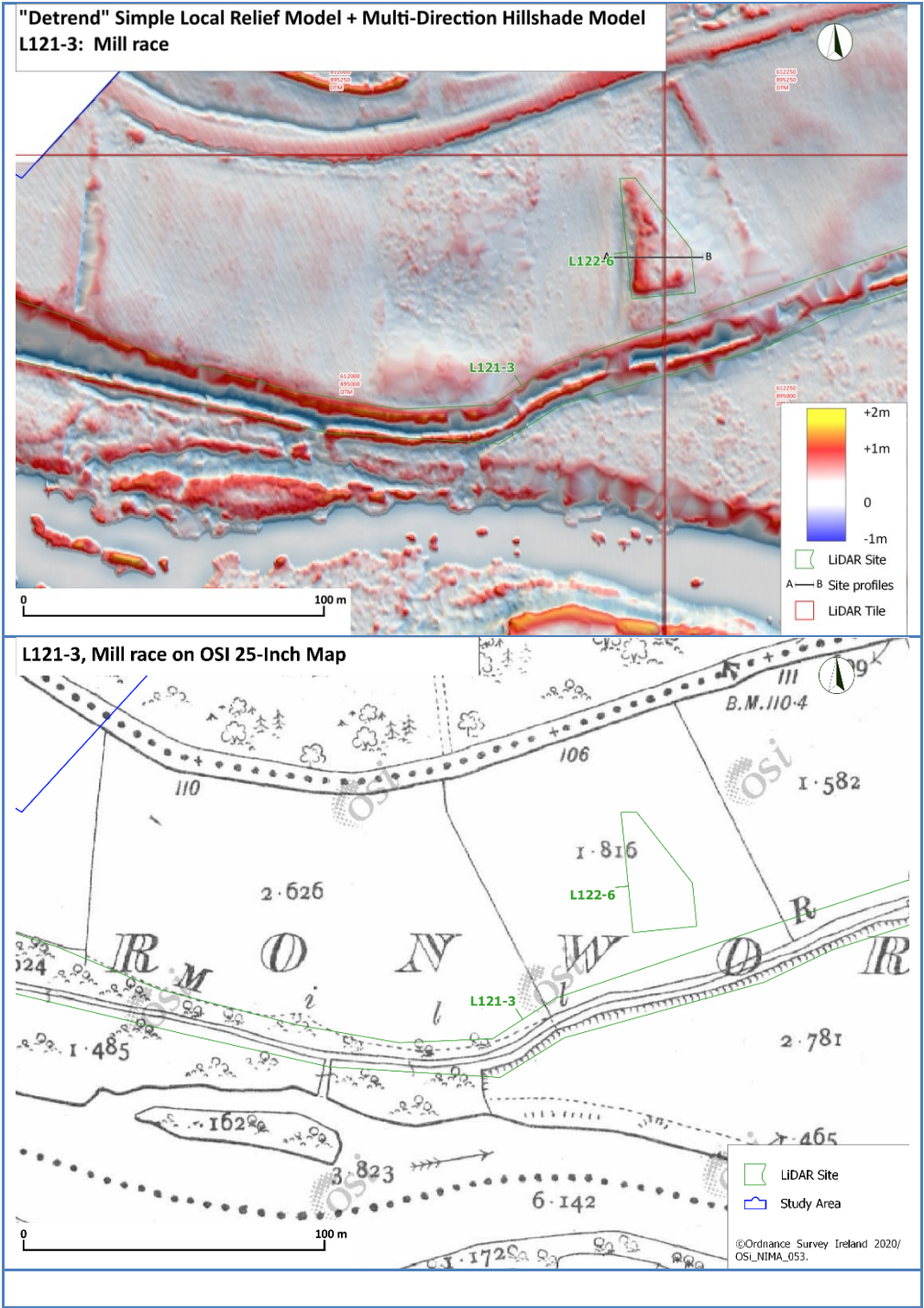
**Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade
L118-2: Enclosure possible**

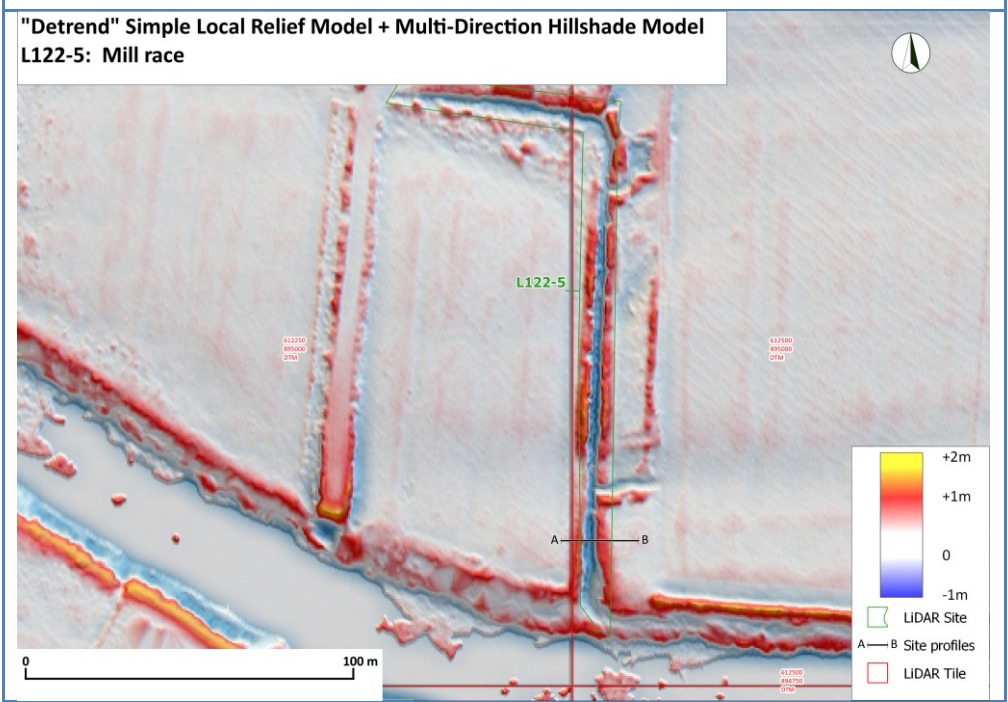
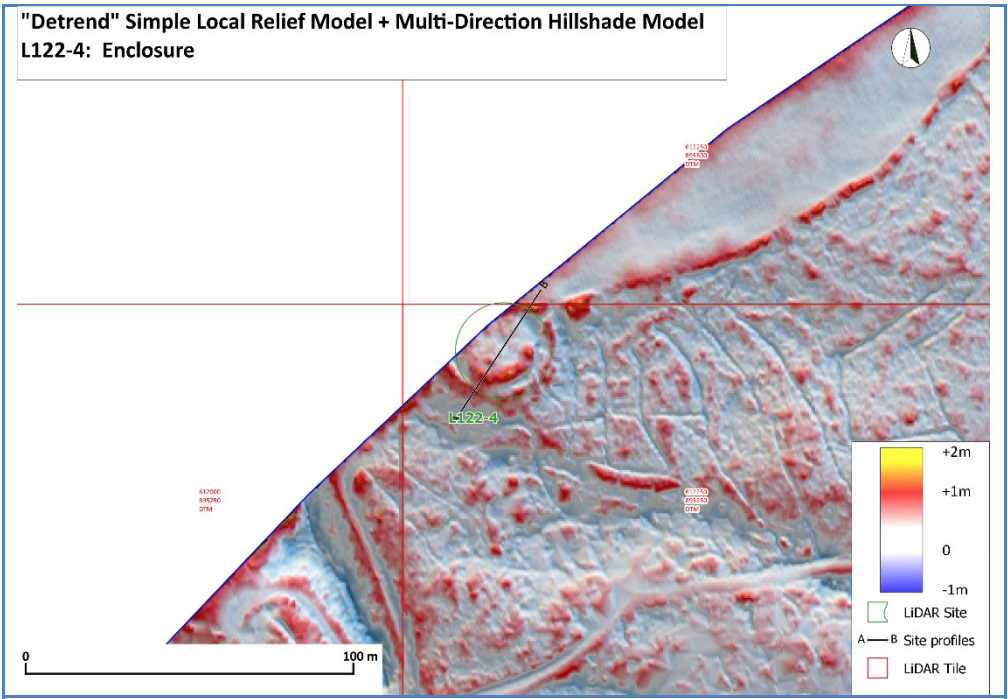


**"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L118-3: Quarry pit possible**

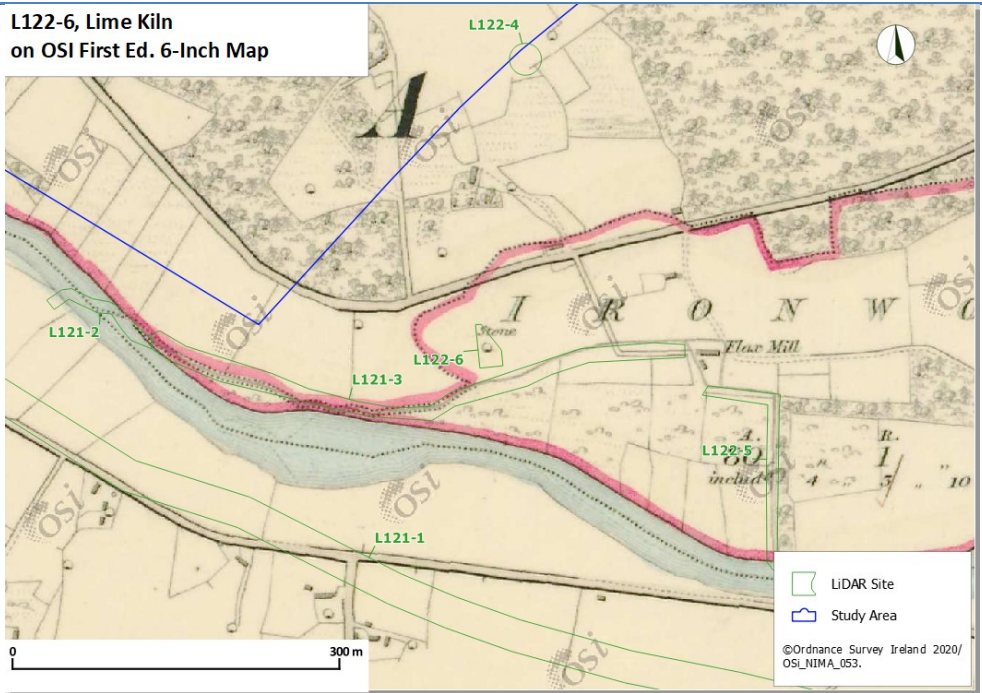




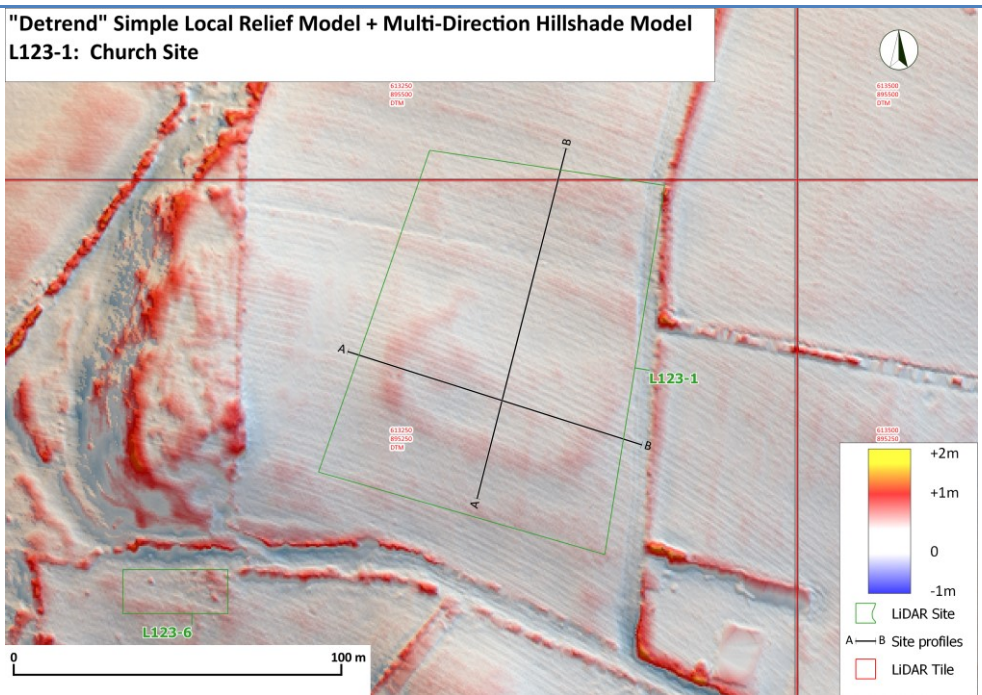




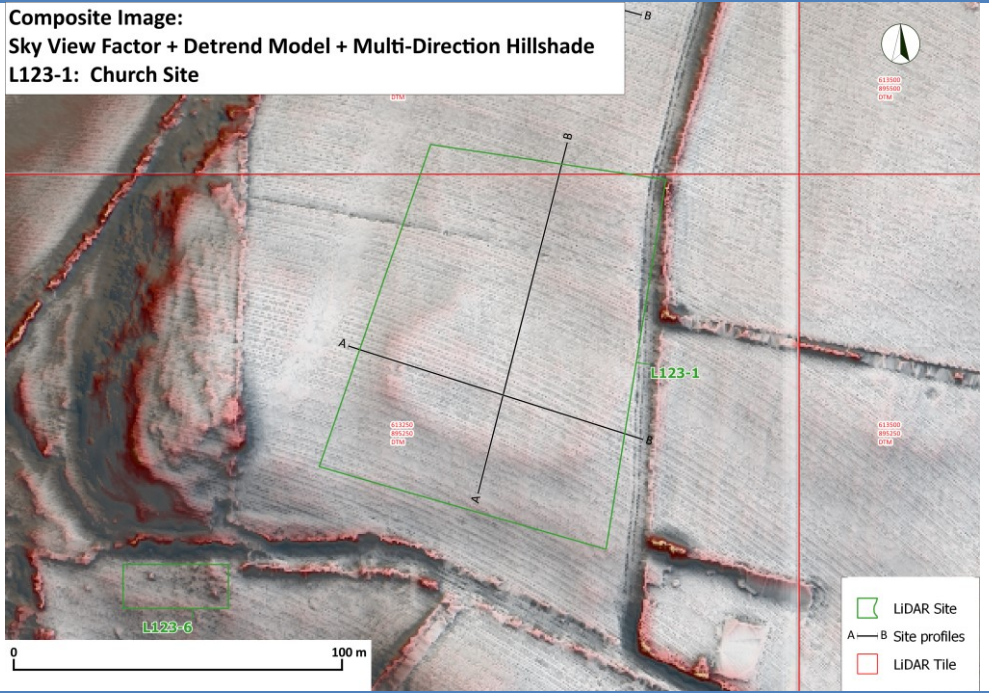
L122-6, Lime Kiln on OSI First Ed. 6-Inch Map



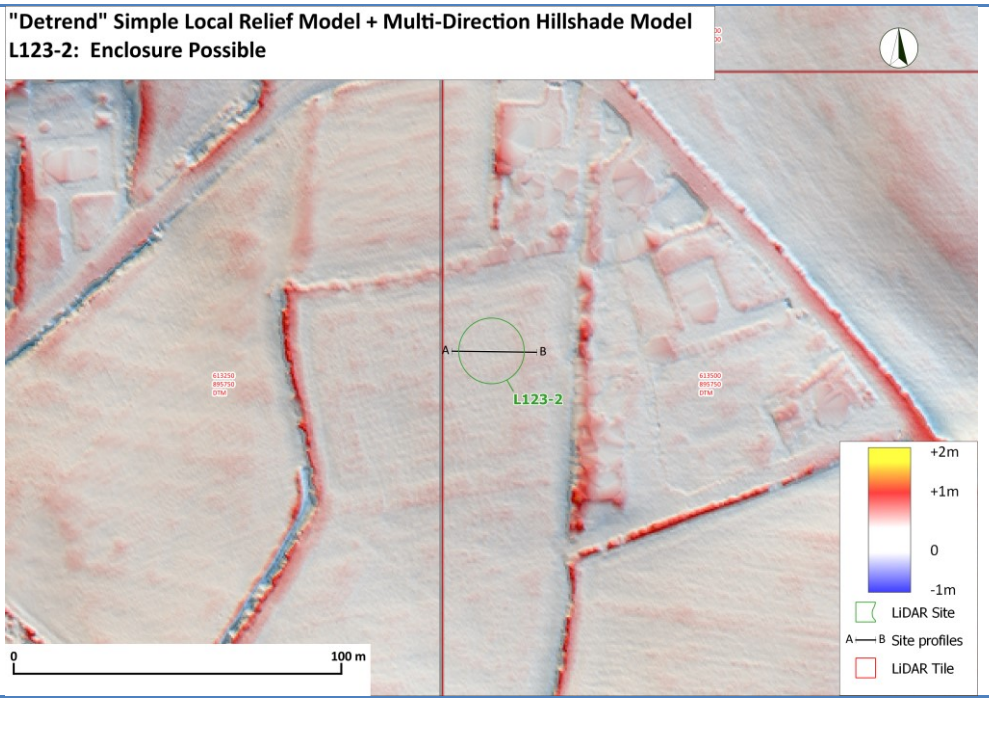
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model L123-1: Church Site



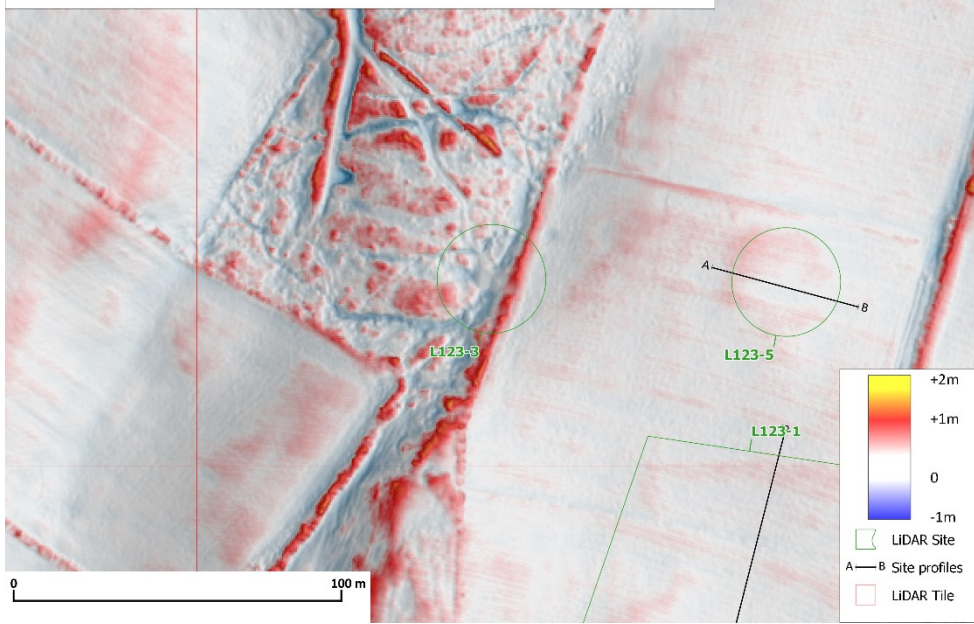
**Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade
L123-1: Church Site**



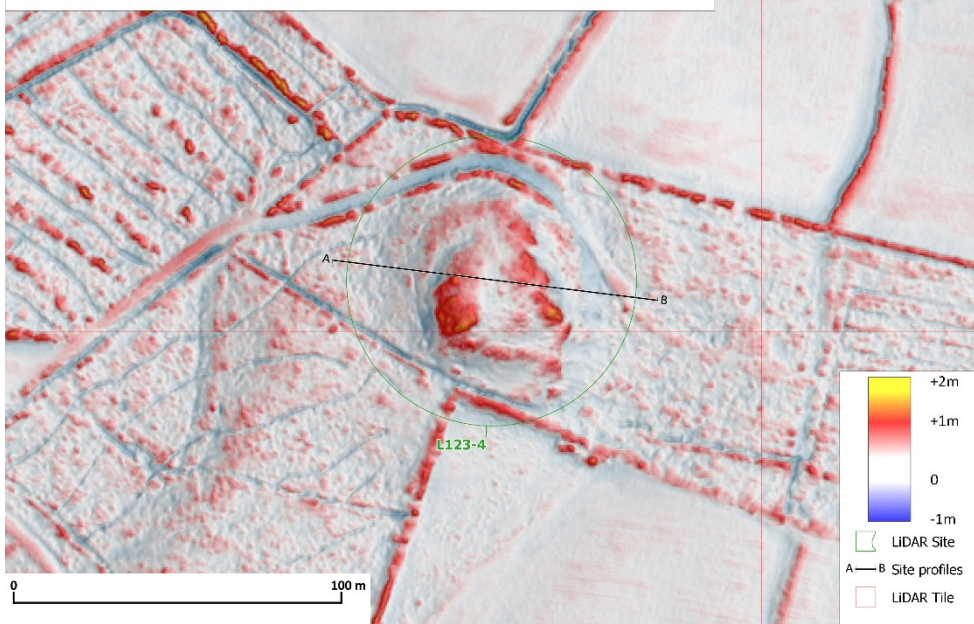
**"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L123-2: Enclosure Possible**



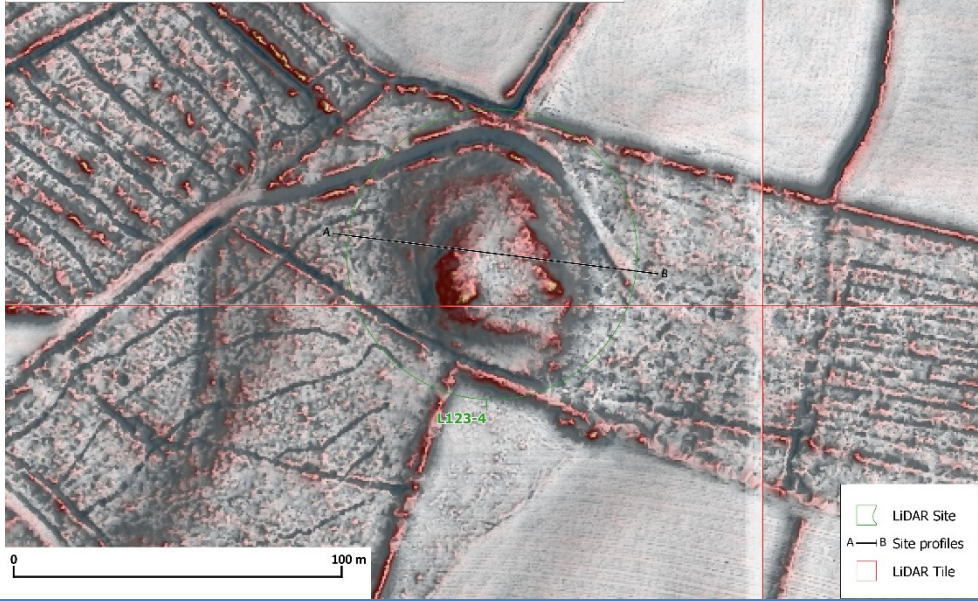
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L123-3: Holy Well



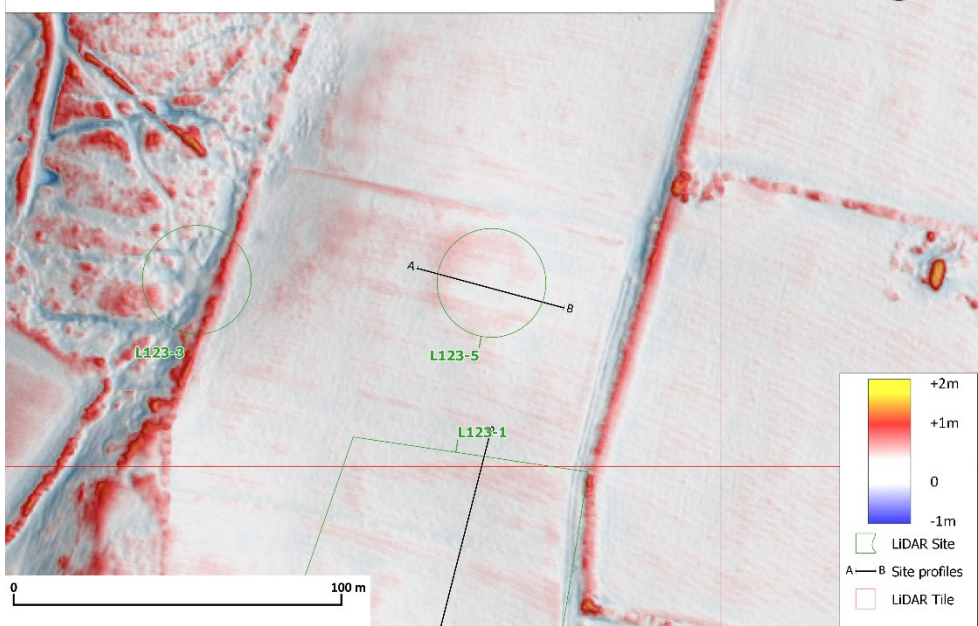
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L123-4: Enclosure Possible

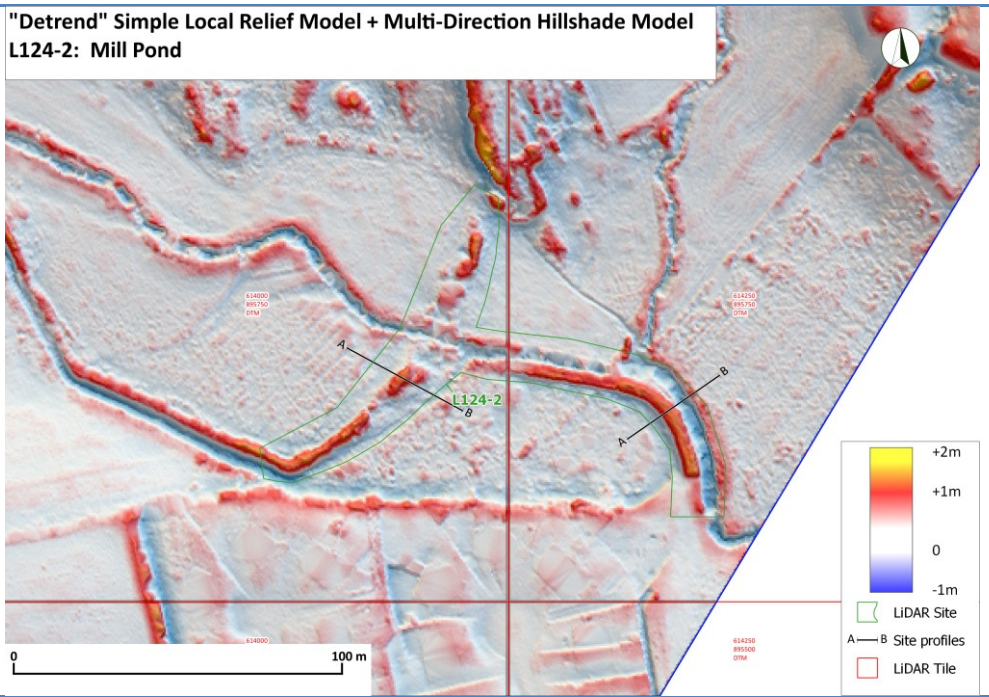
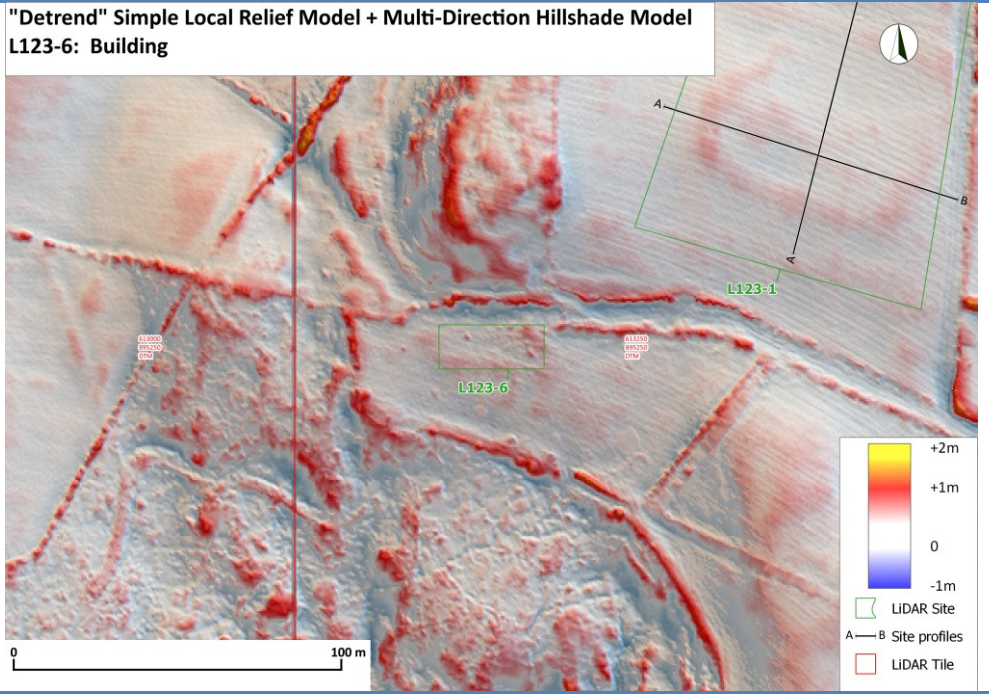


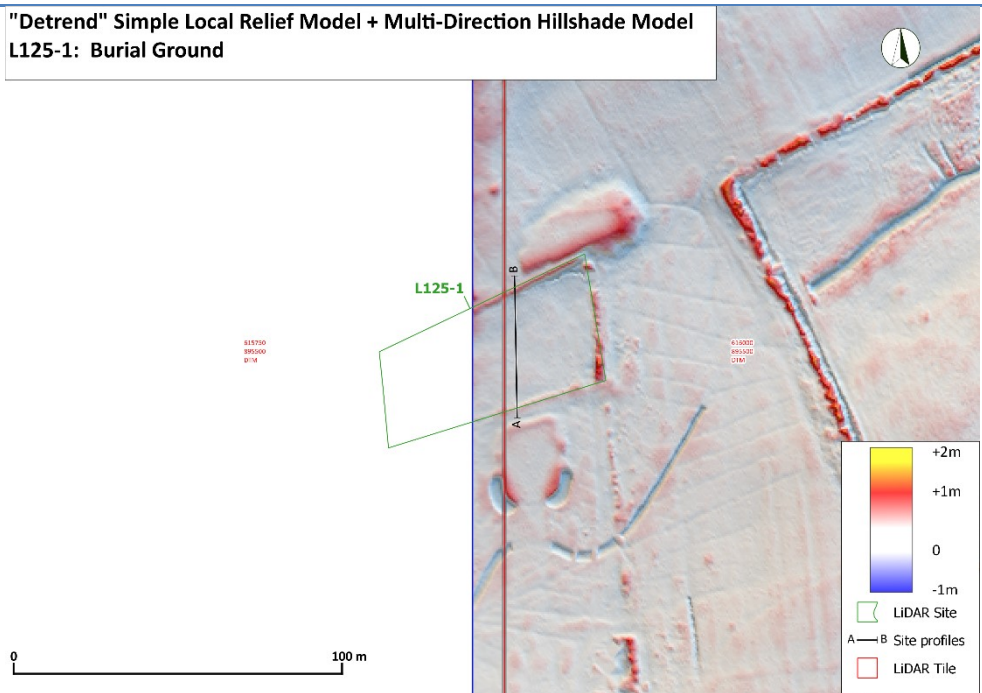
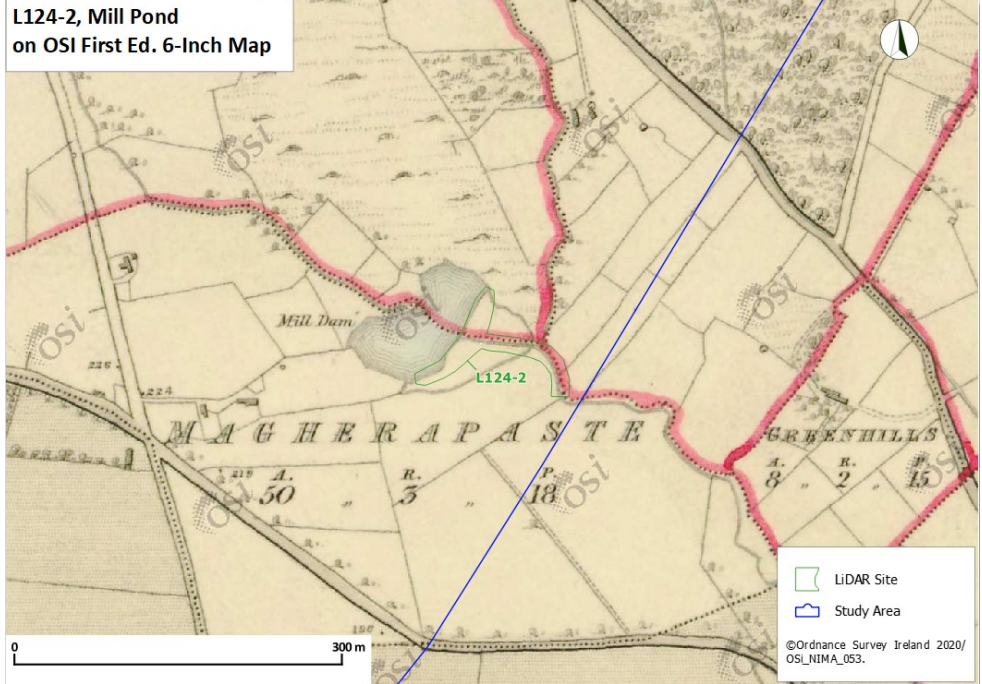
**Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade**
L123-4: Enclosure Possible

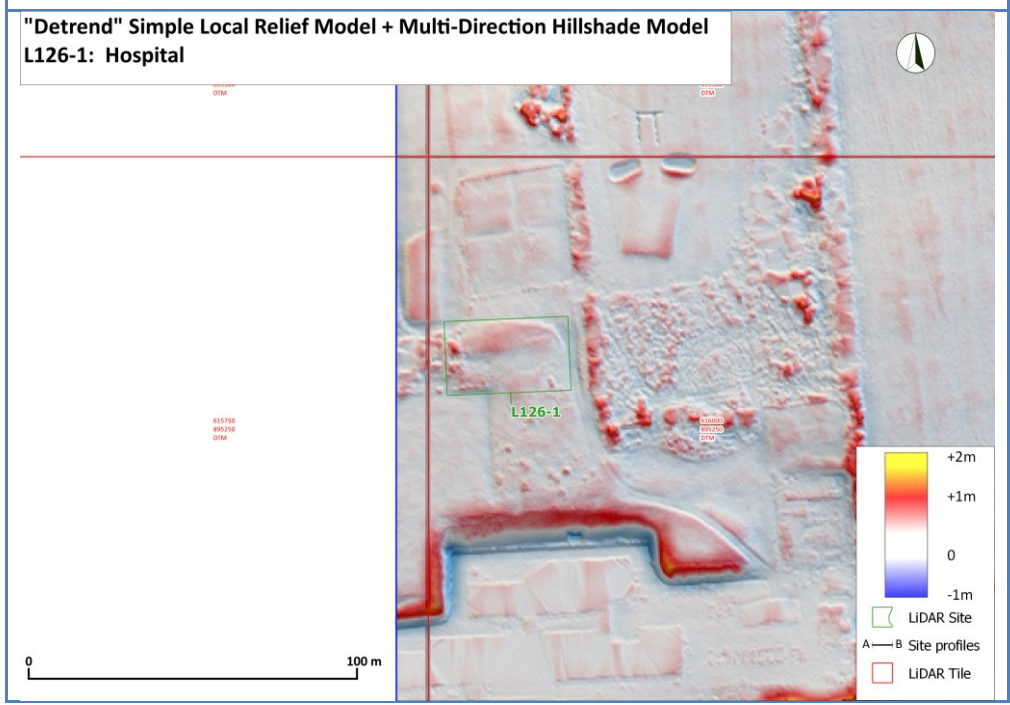
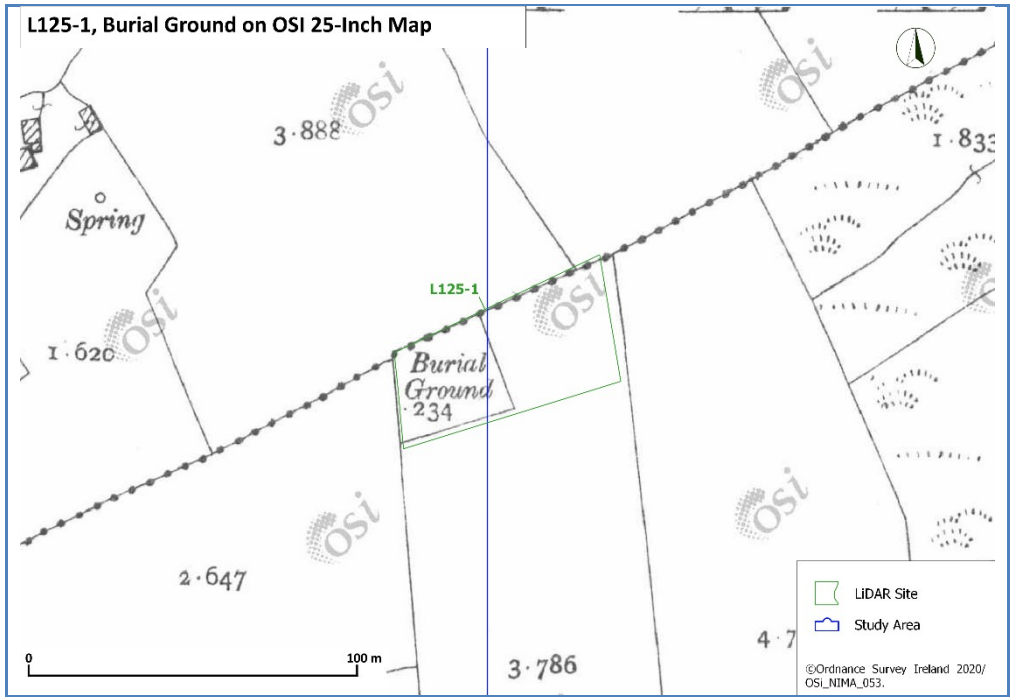


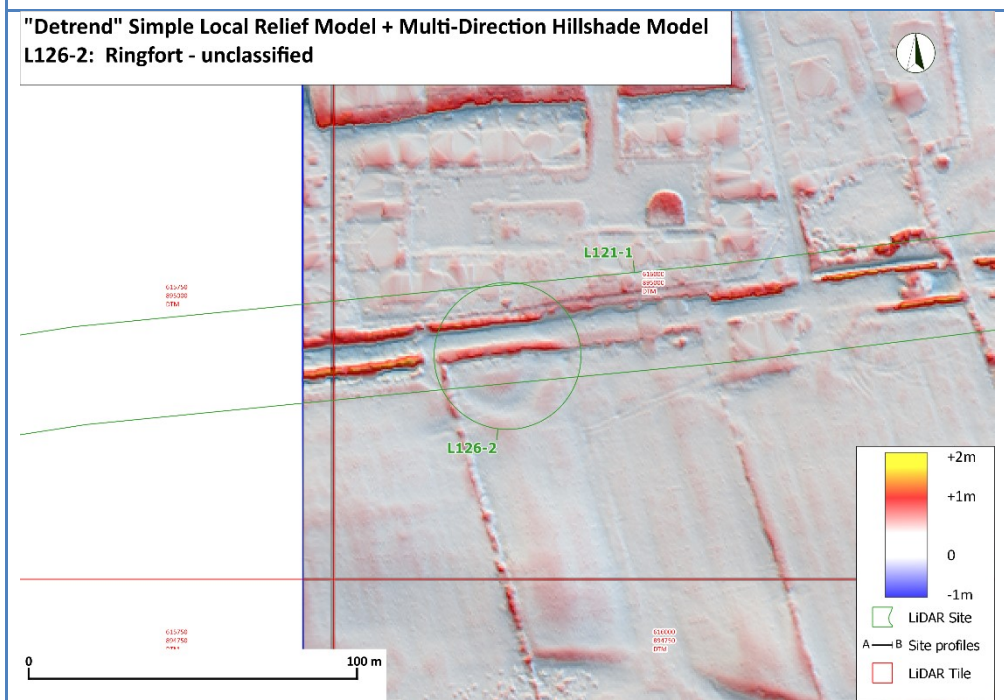
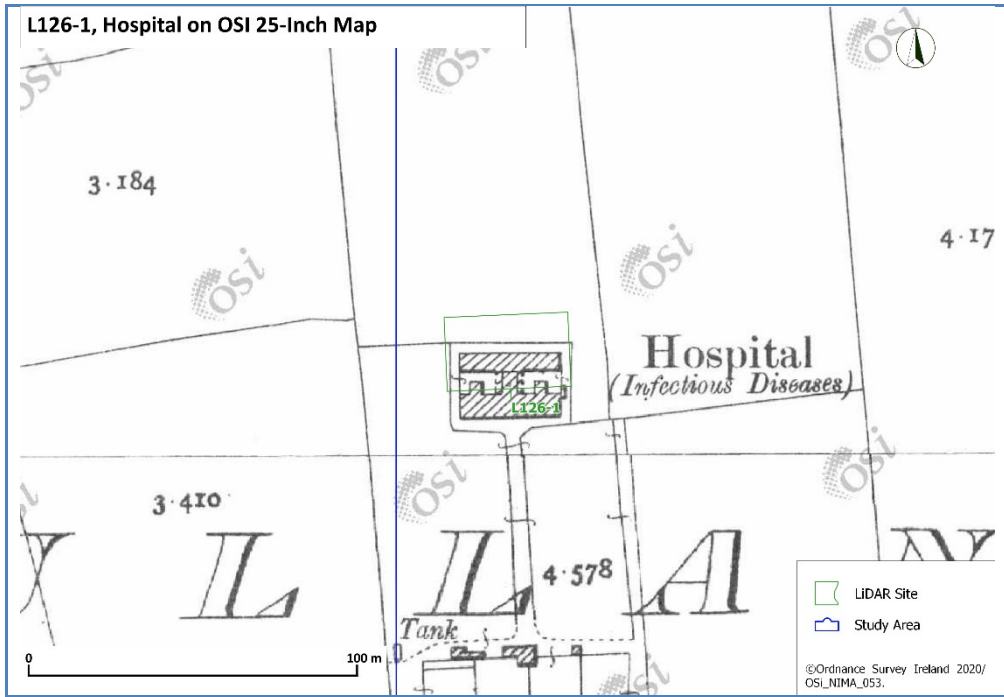
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L123-5: Enclosure Possible



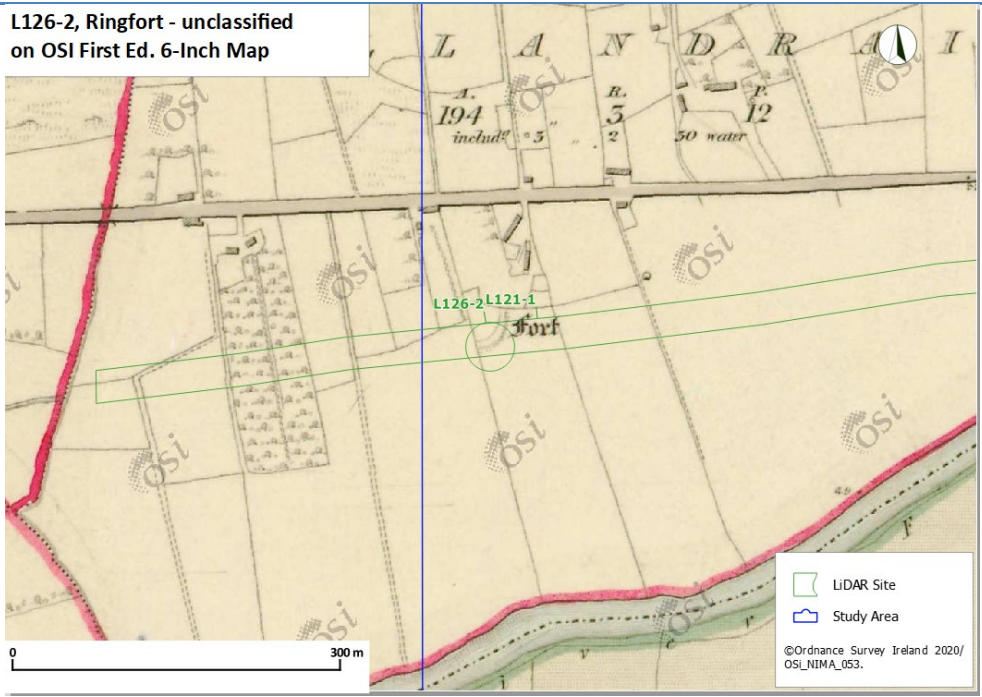




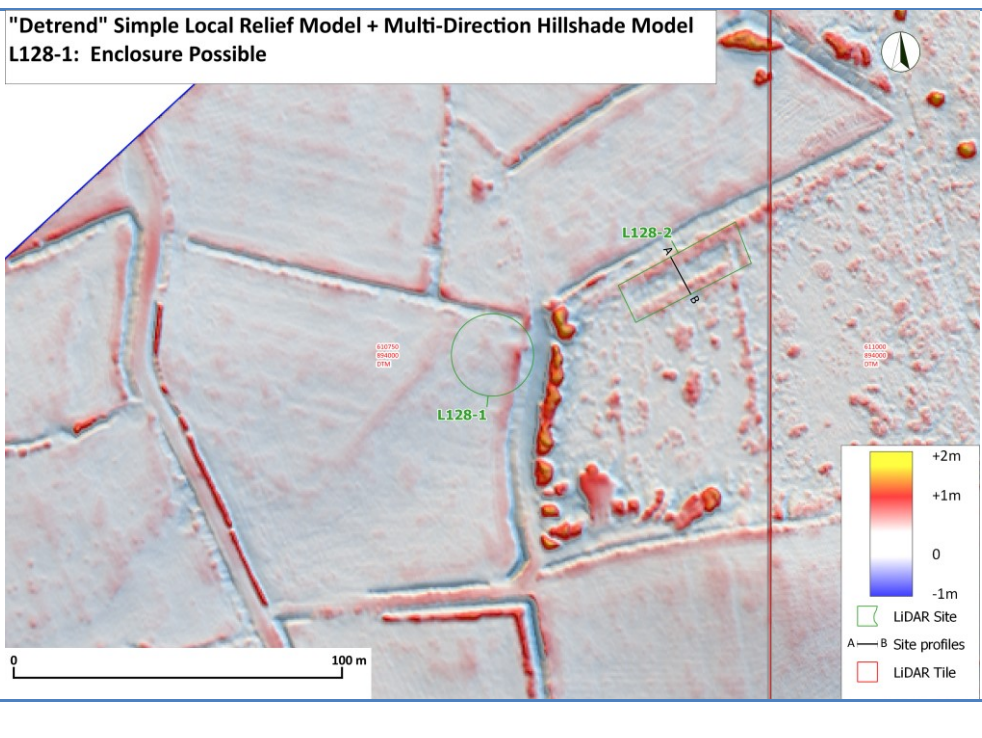


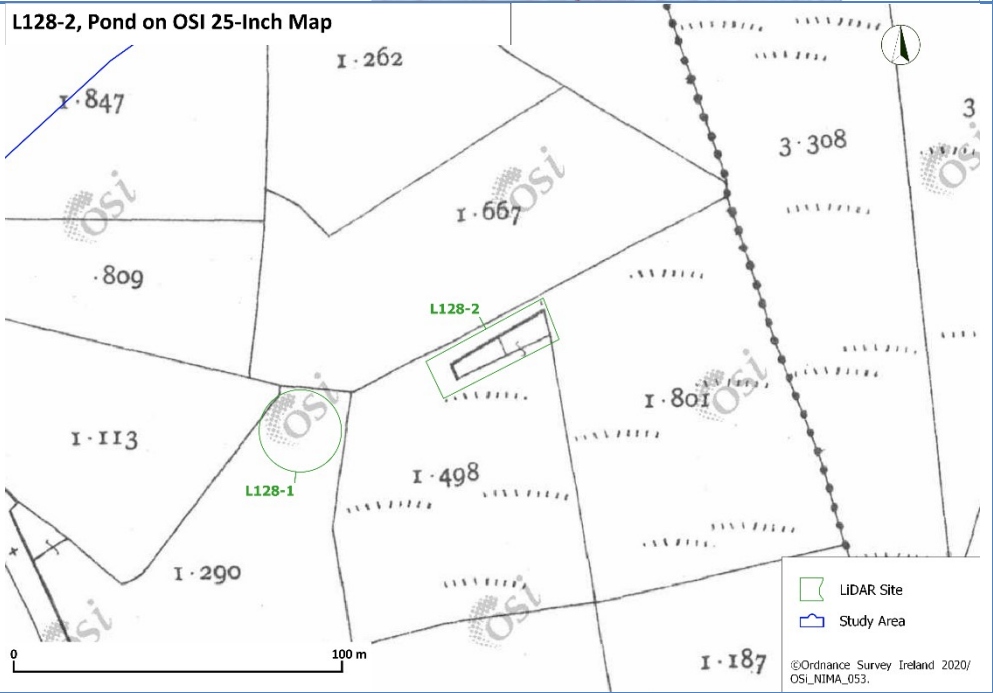
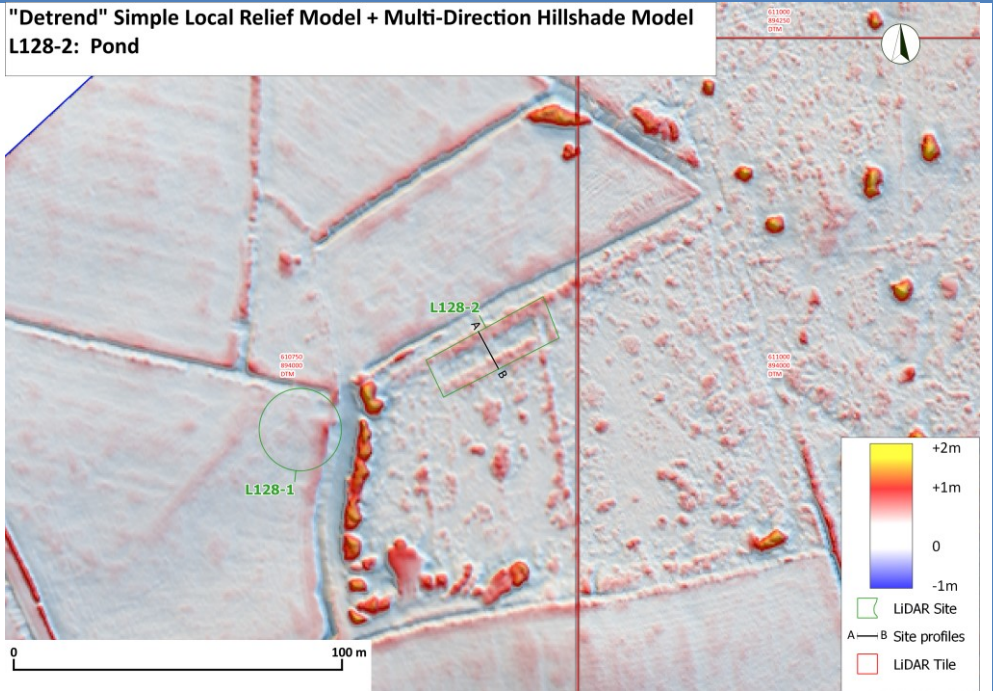


L126-2, Ringfort - unclassified on OSI First Ed. 6-Inch Map

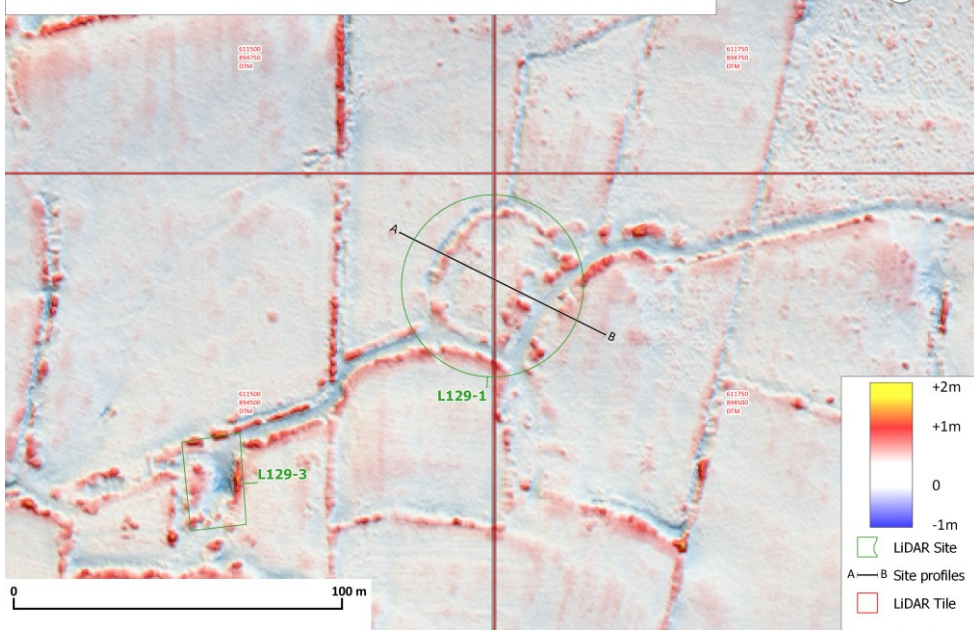


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L128-1: Enclosure Possible

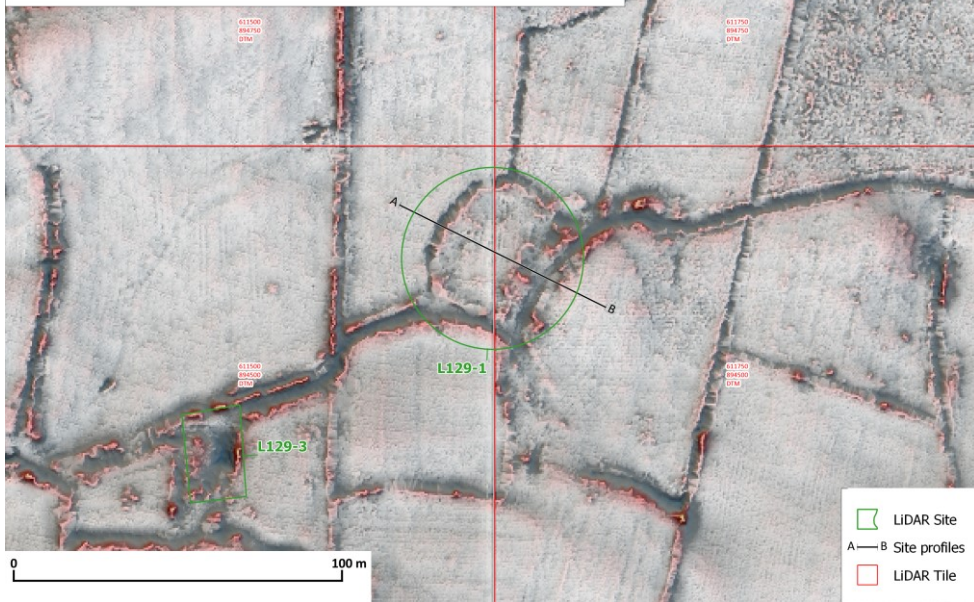


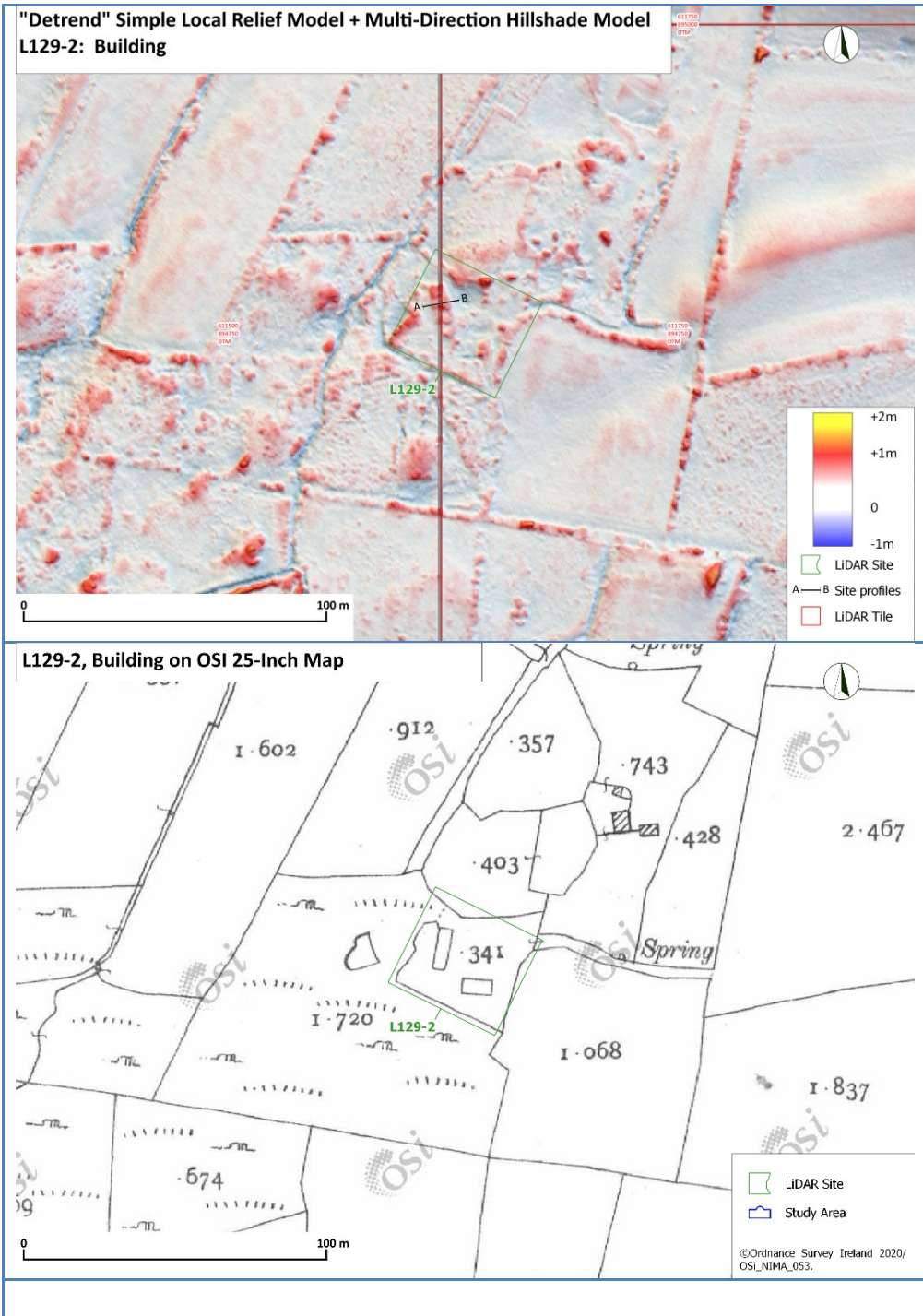


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L129-1: Enclosure Possible

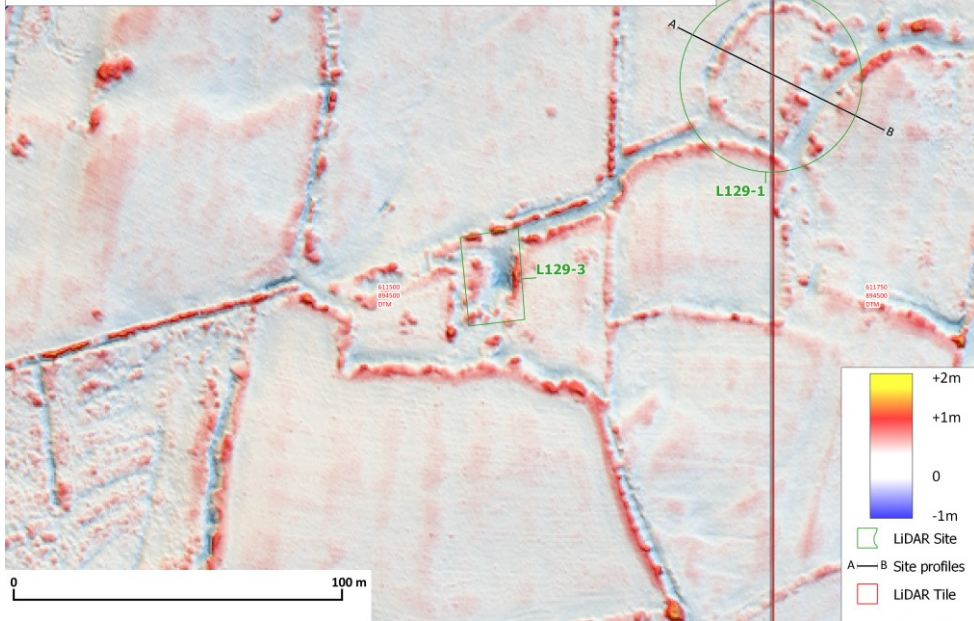


Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade
L129-1: Enclosure Possible

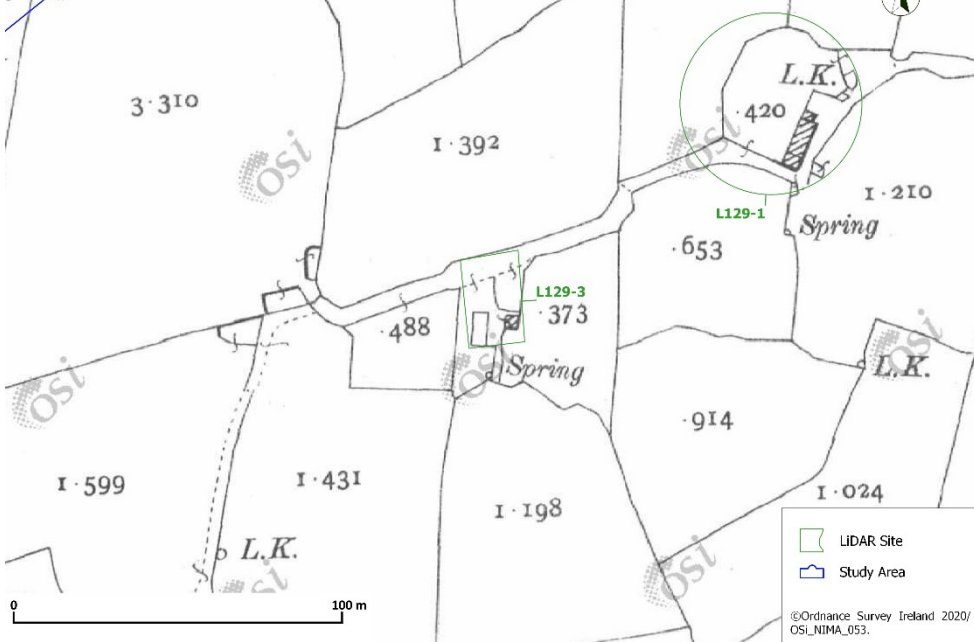


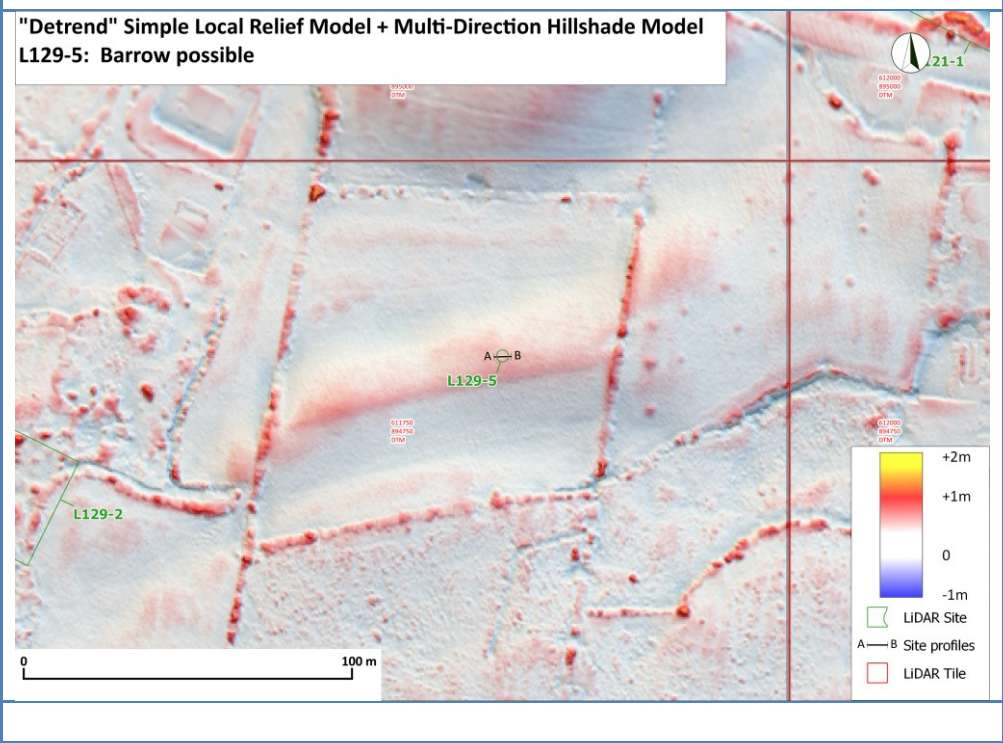
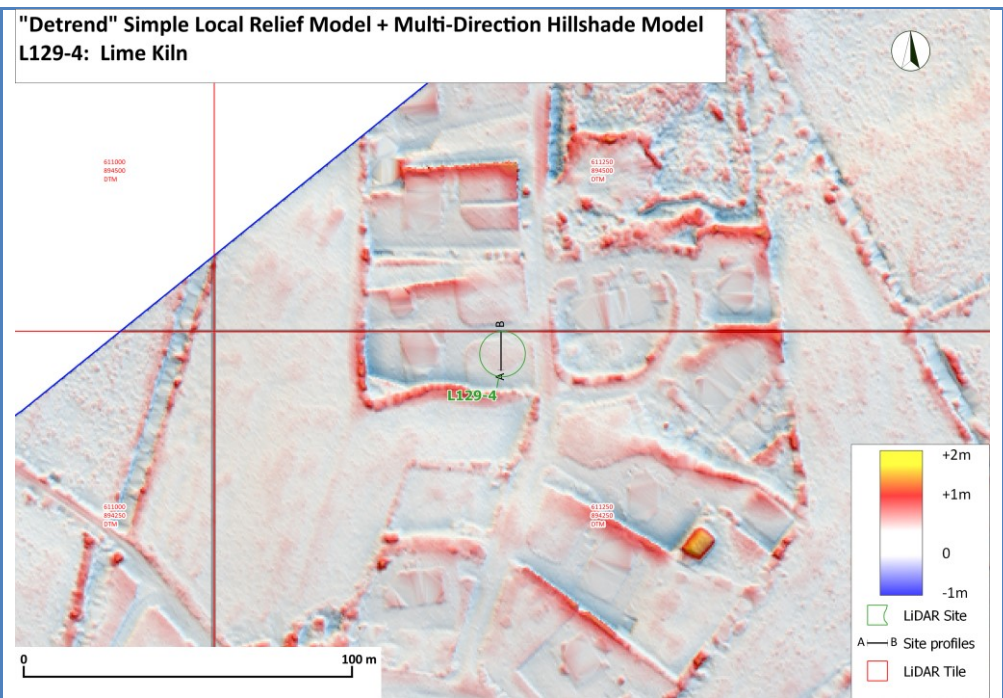


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L129-3: Farmstead

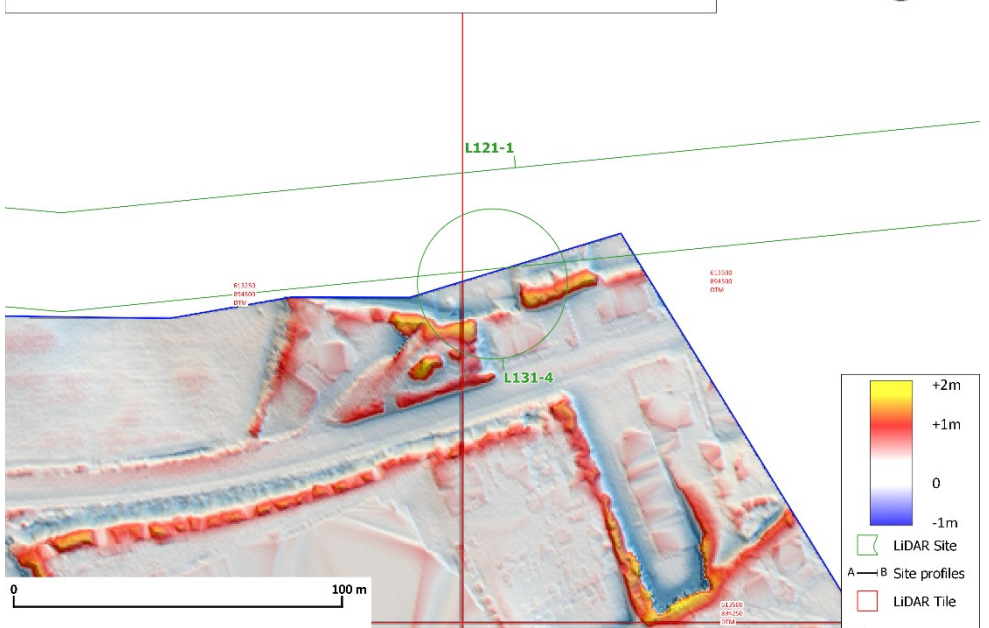


L129-3, Farmstead on OSI 25-Inch Map

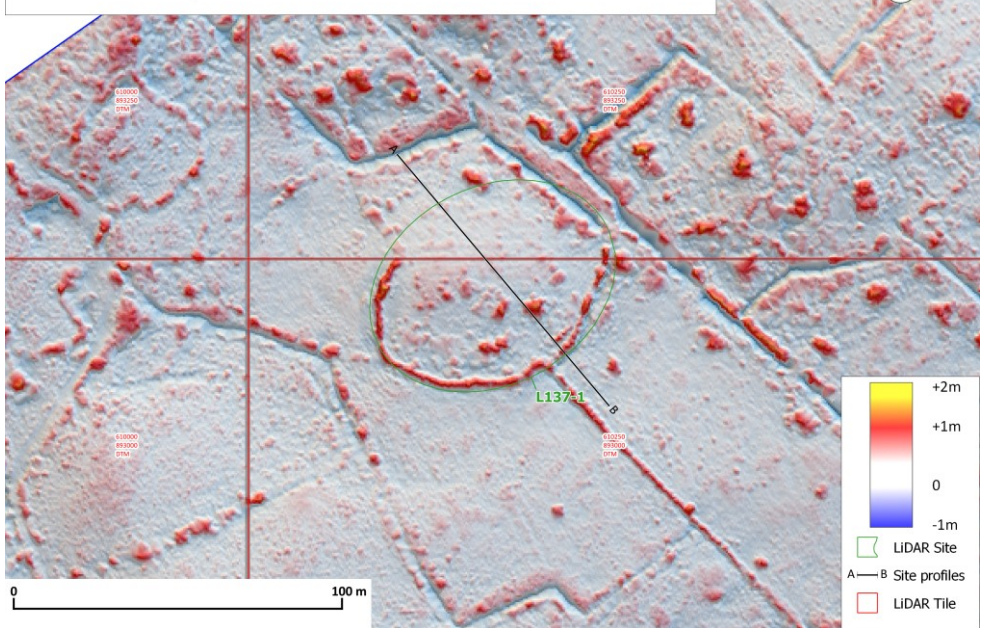


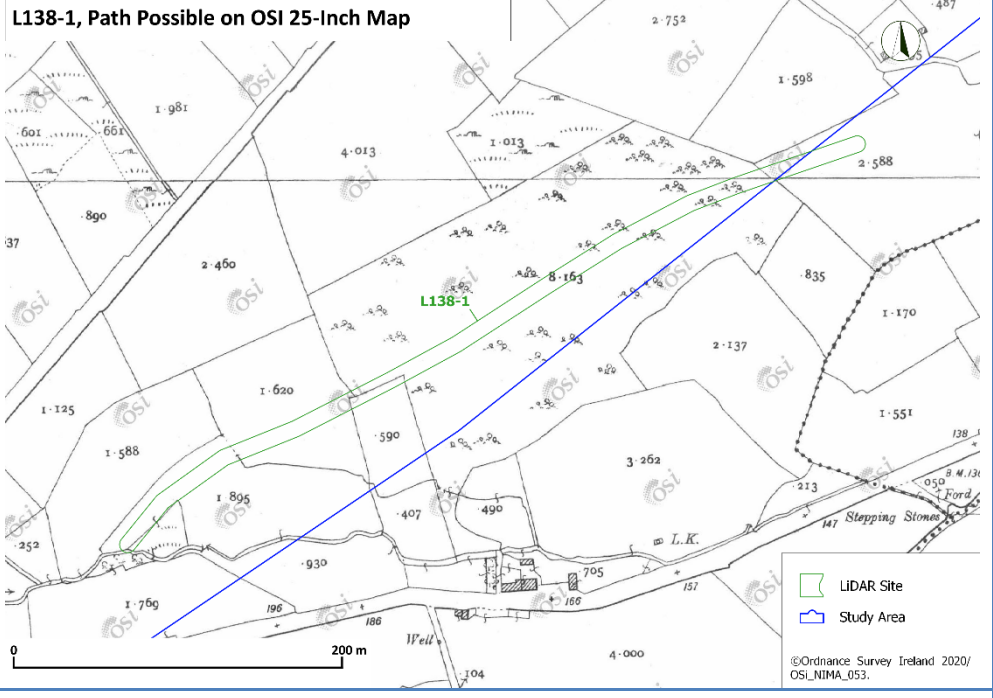
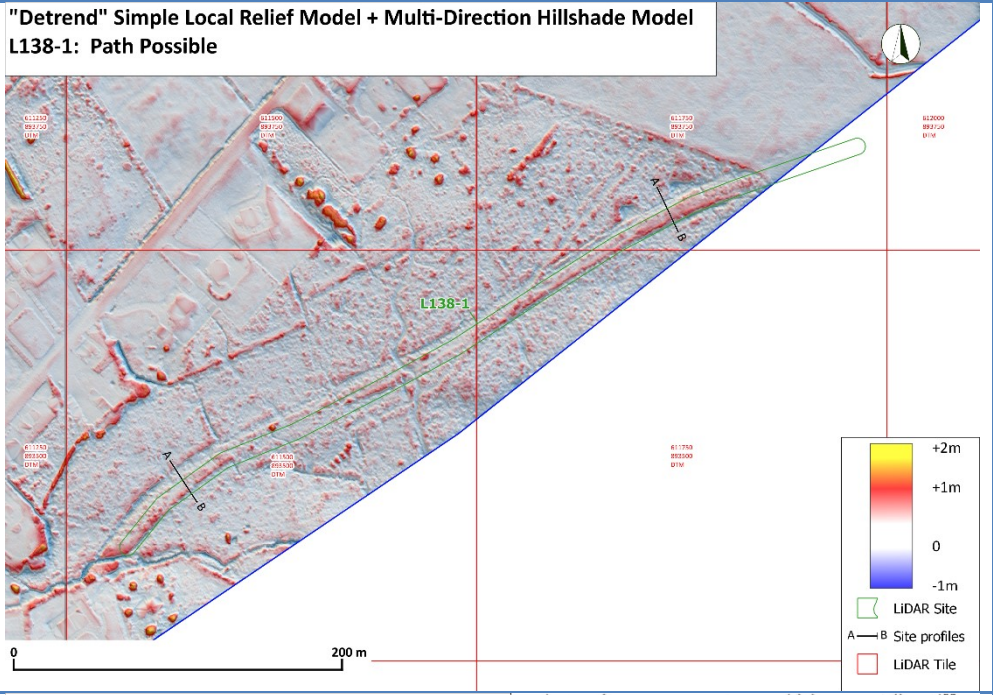


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L131-4: Ringfort

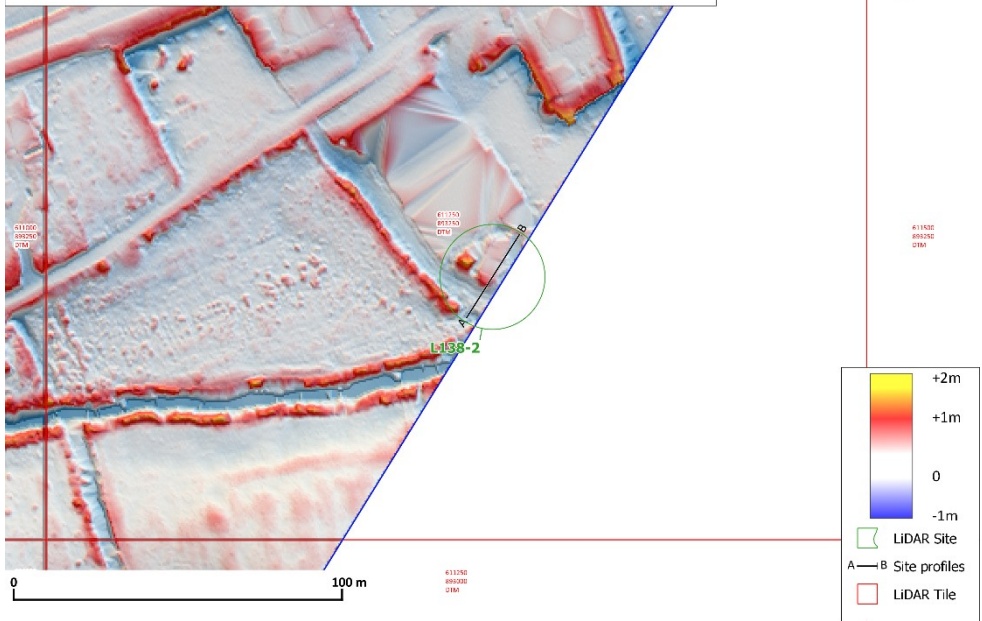


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L137-1: Enclosure possible

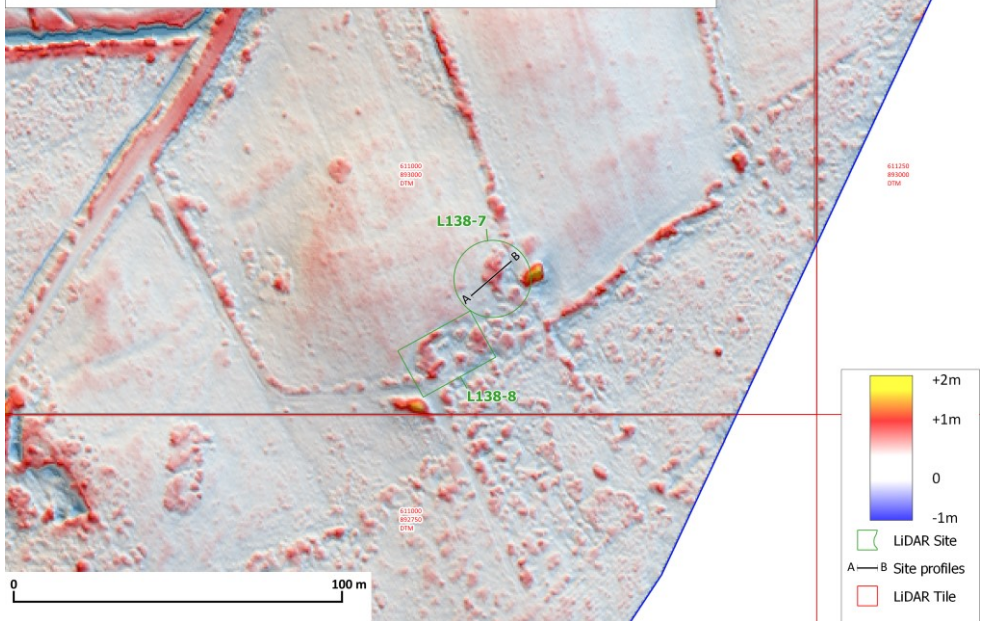


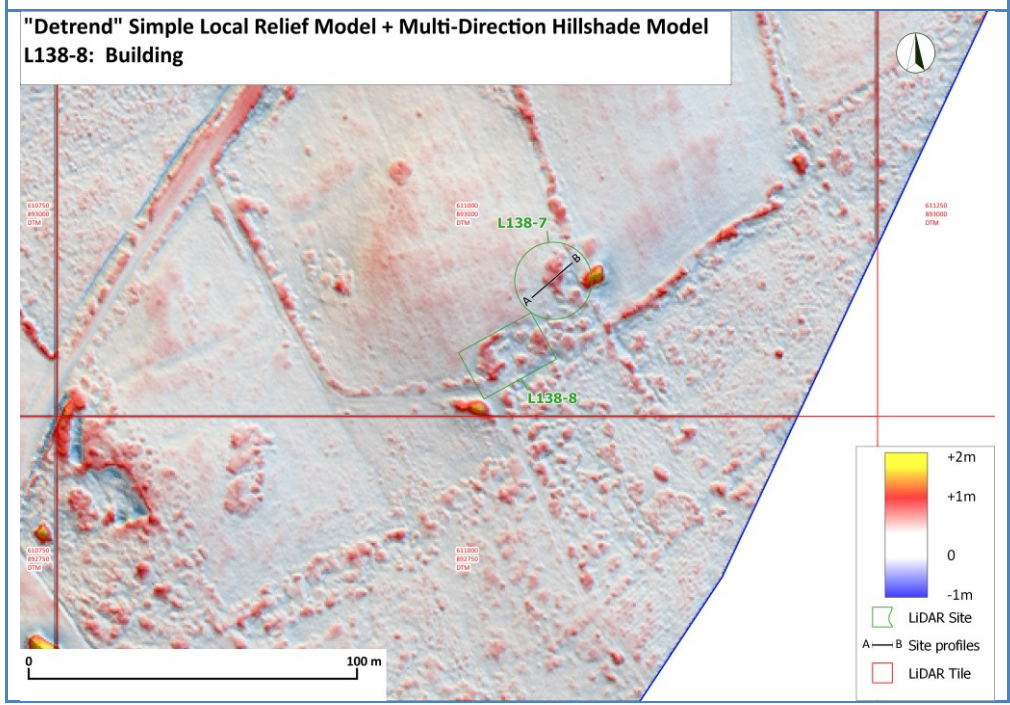
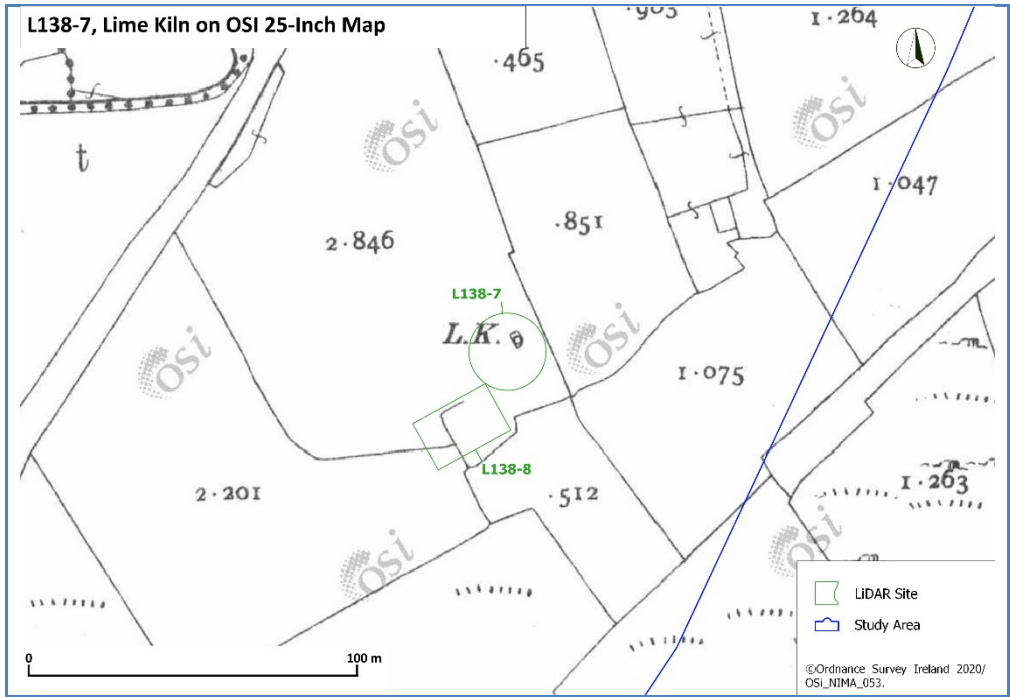


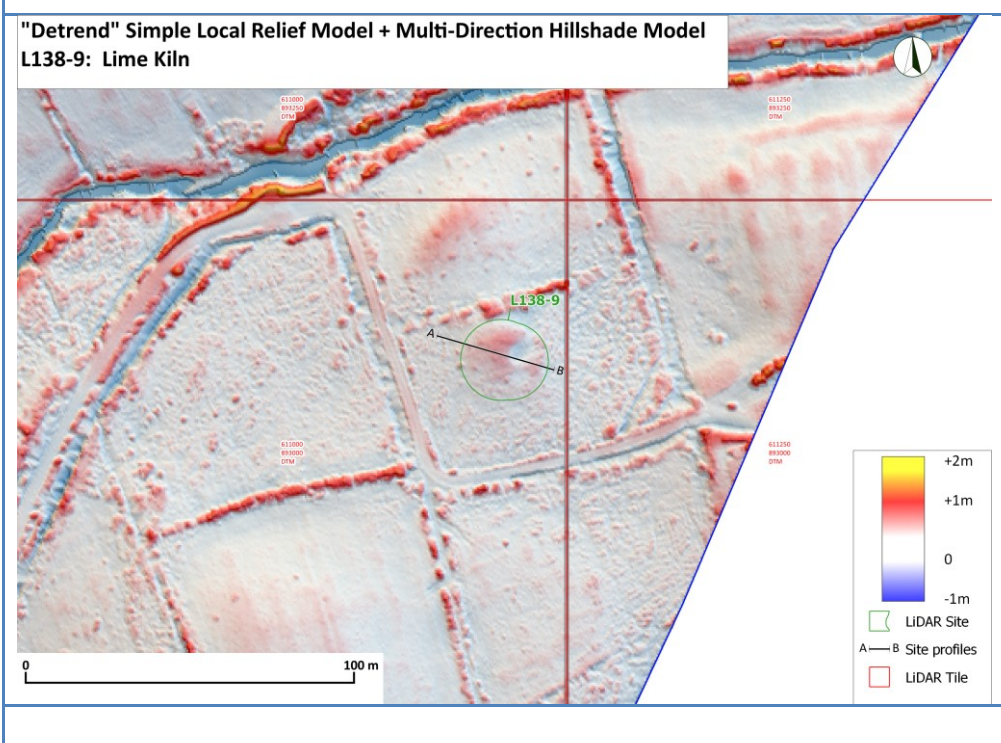
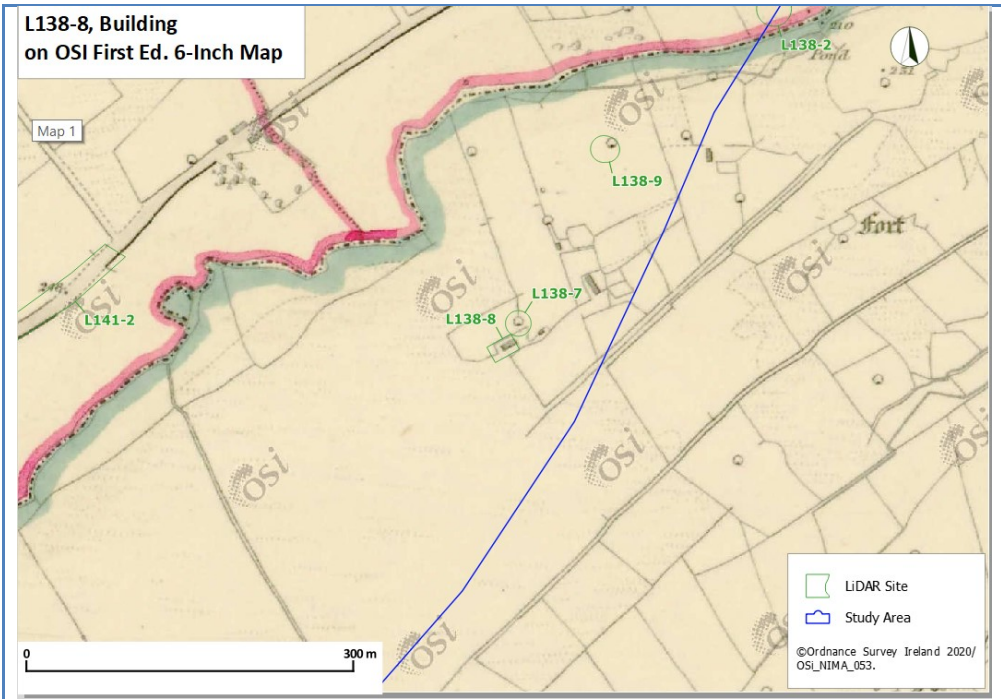
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L138-2: Souterrain



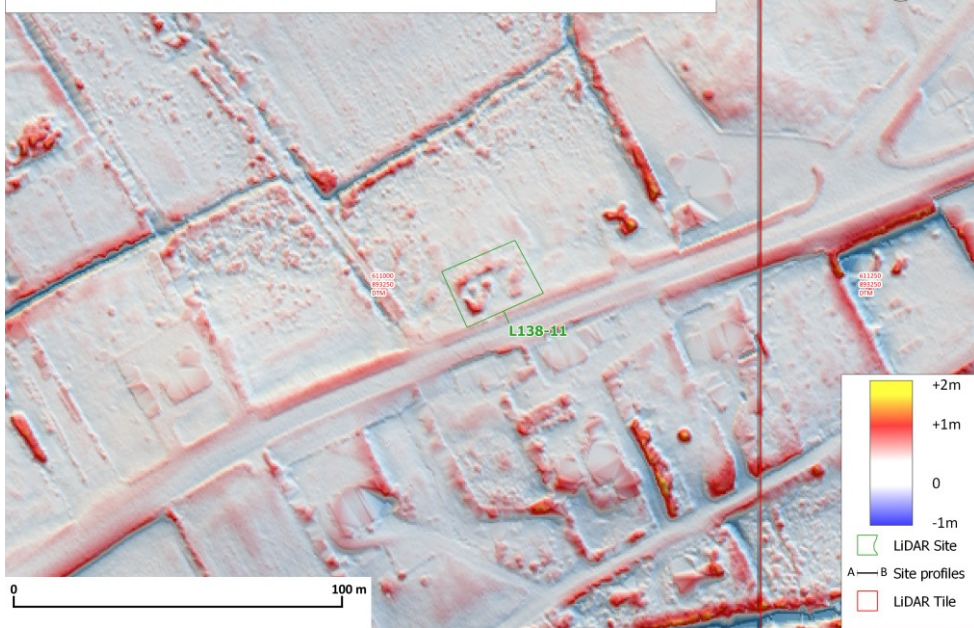
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L138-7: Lime Kiln



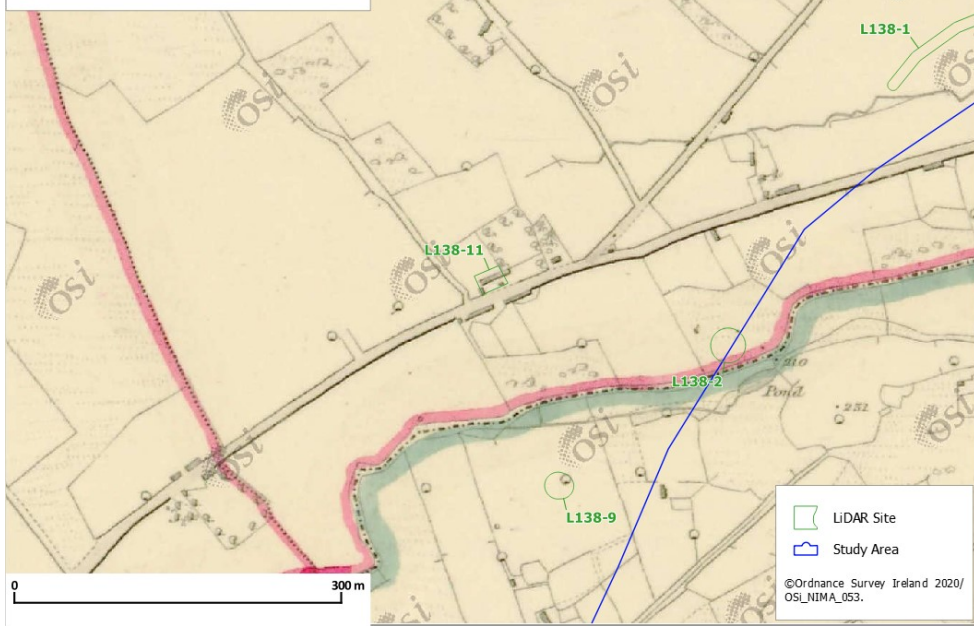




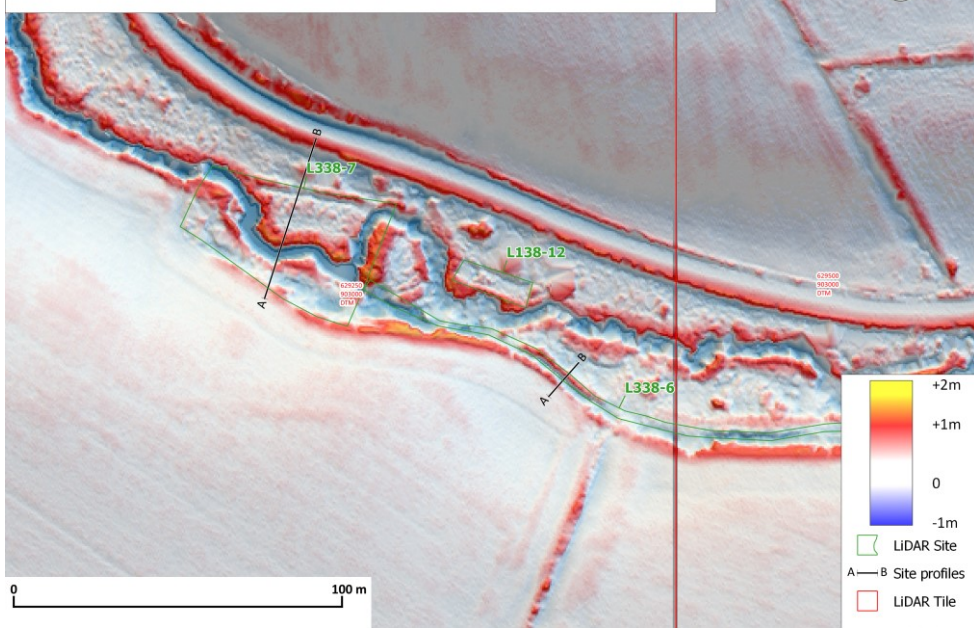
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
 L138-11: Building



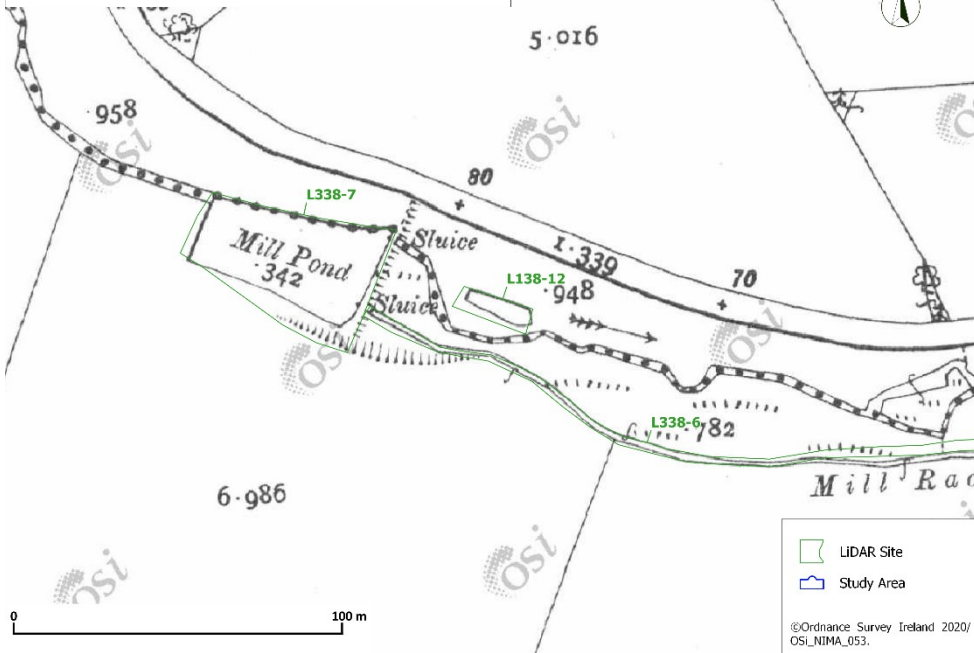
L138-11, Building
 on OSI First Ed. 6-Inch Map

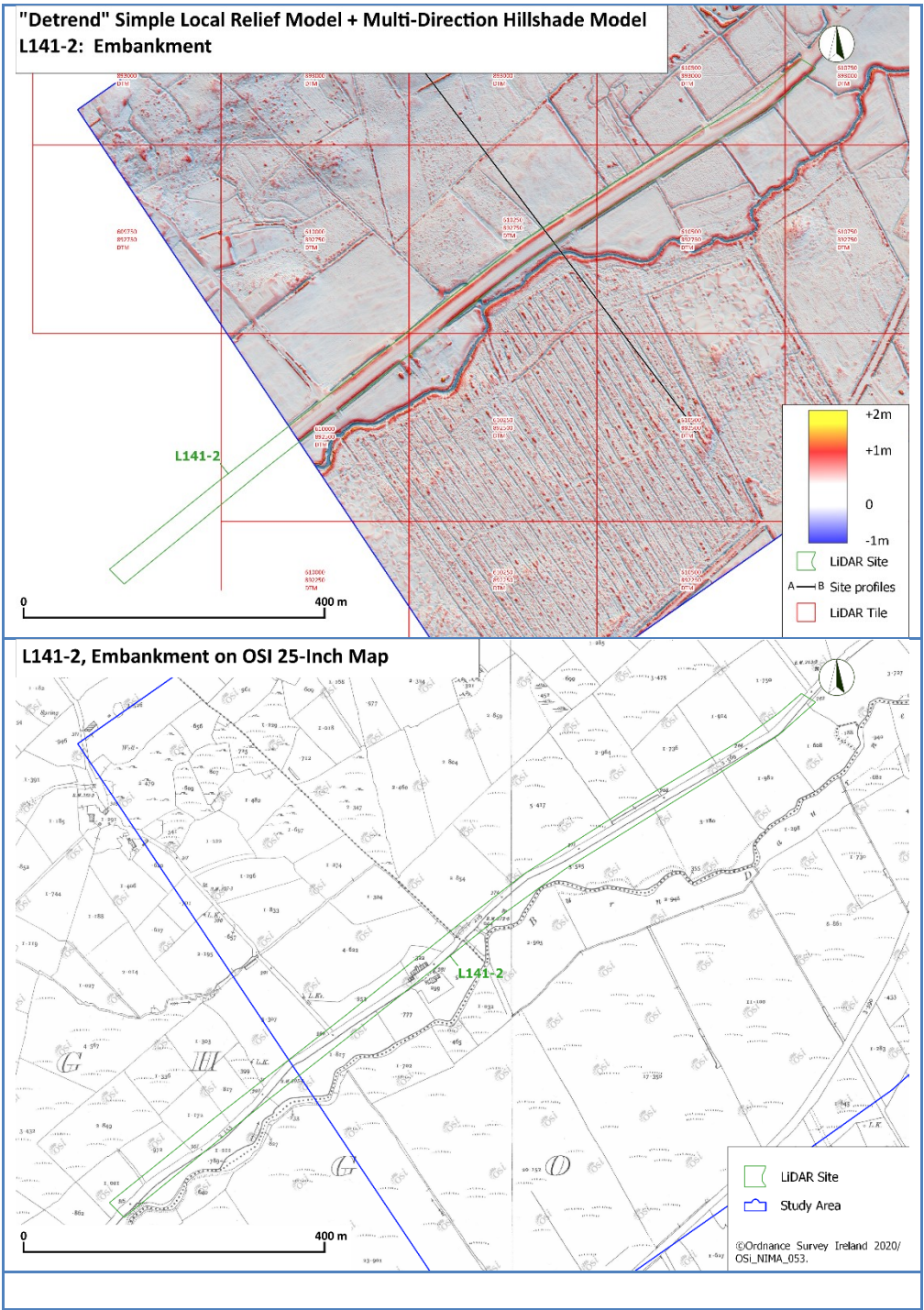


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L138-12: Pond

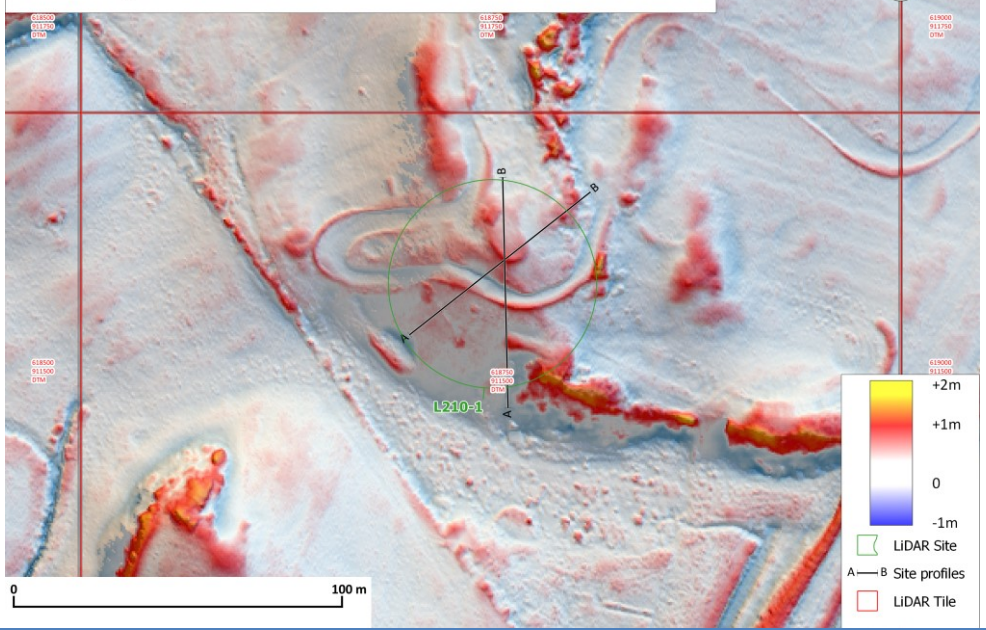


L138-12, Pond on OSI 25-Inch Map

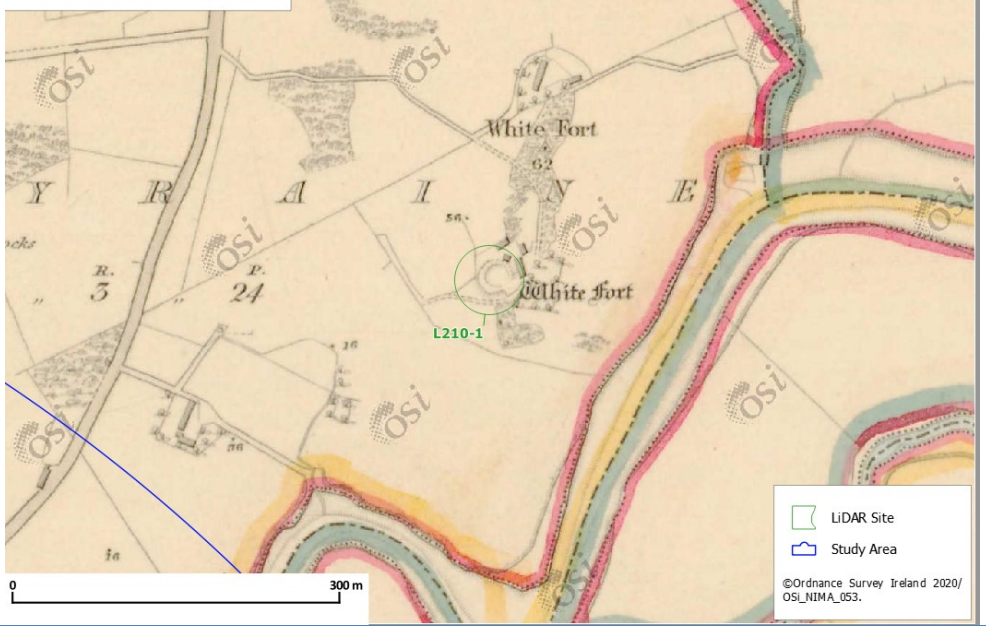


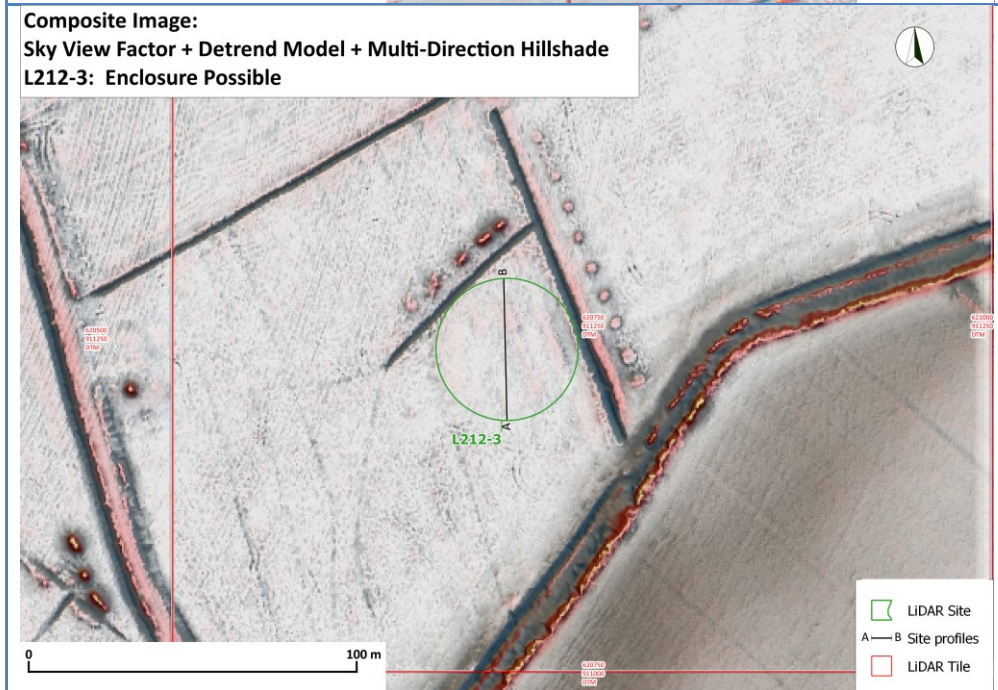
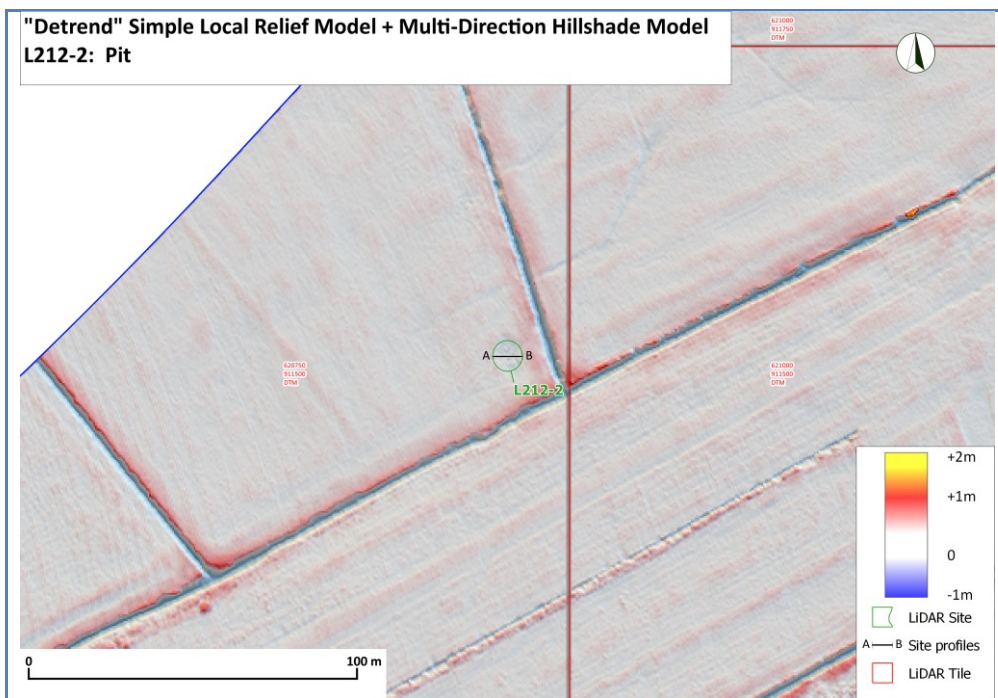


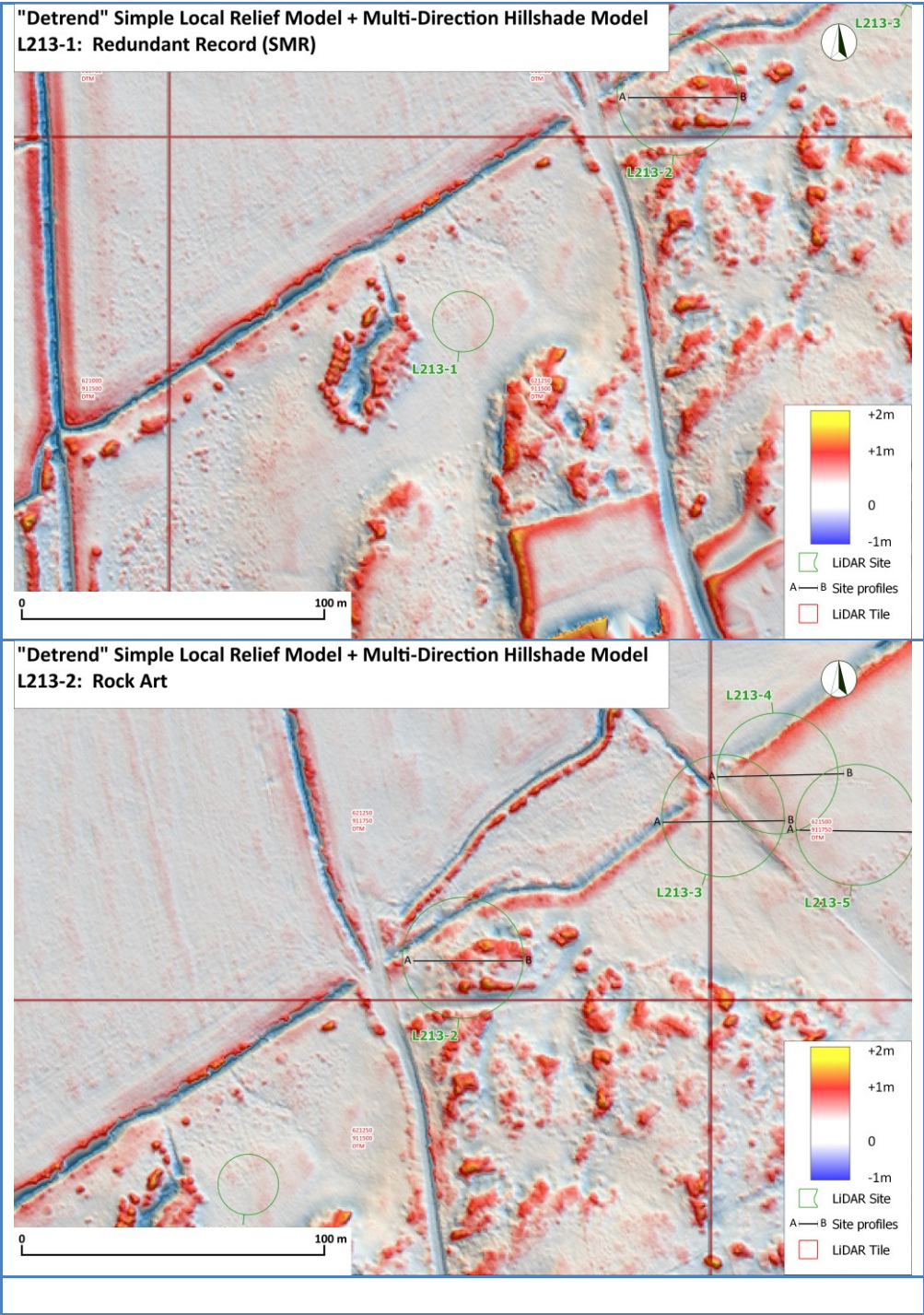
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L210-1: Ringfort



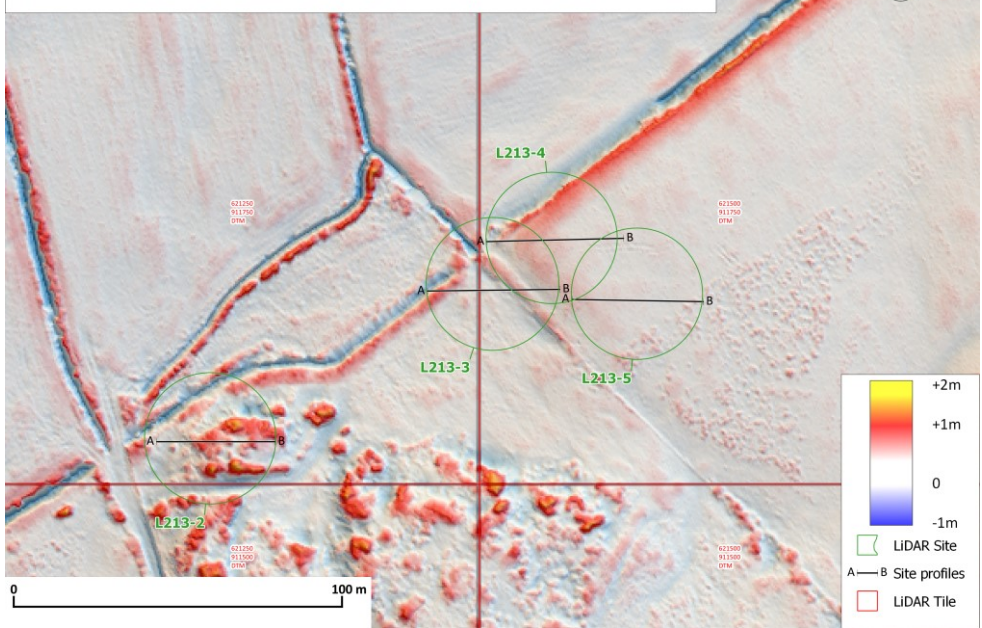
L210-1, Ringfort
on OSI First Ed. 6-Inch Map



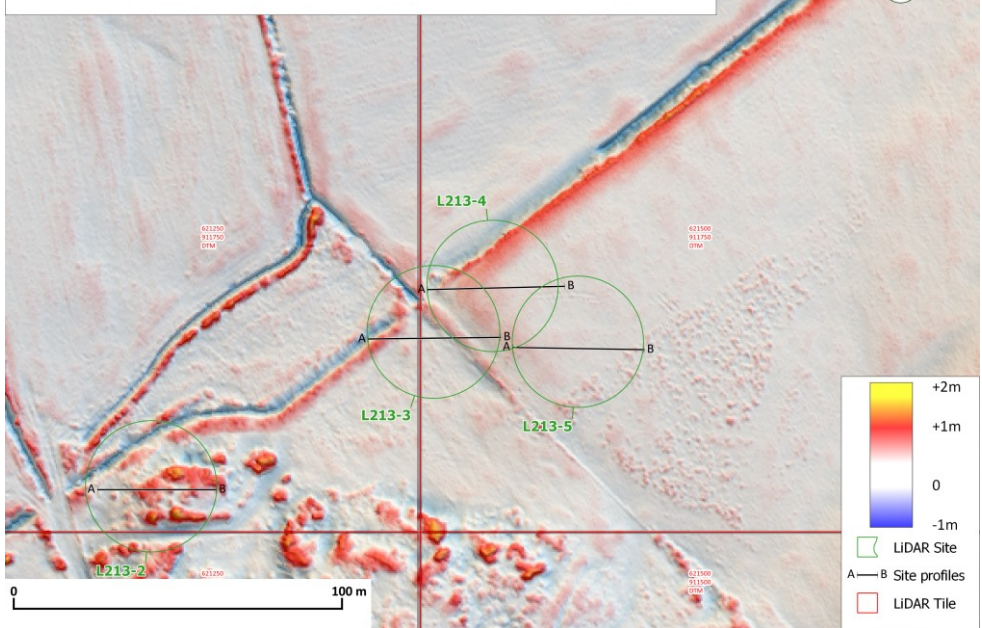




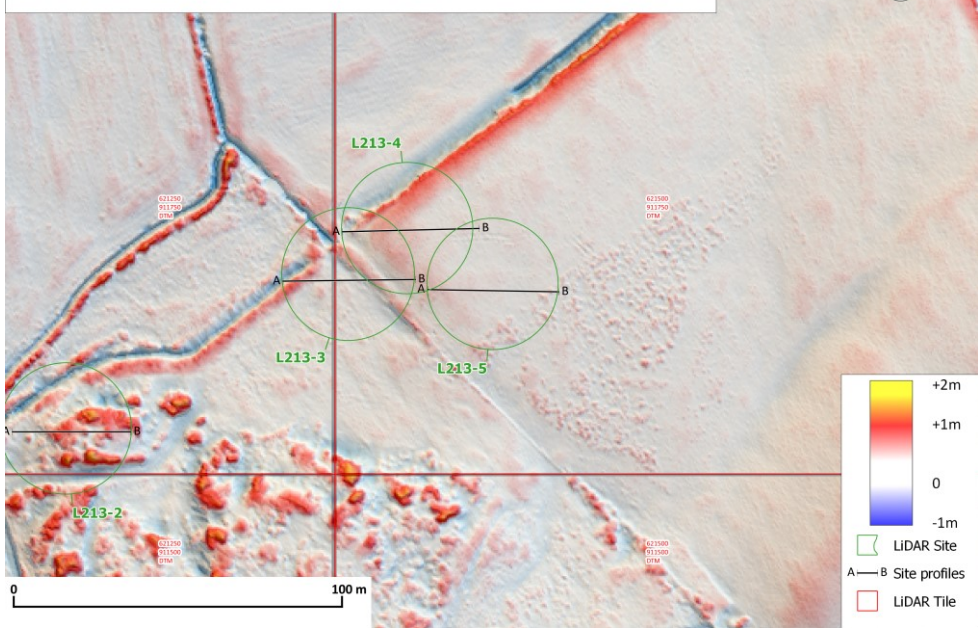
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L213-3: Rock Art



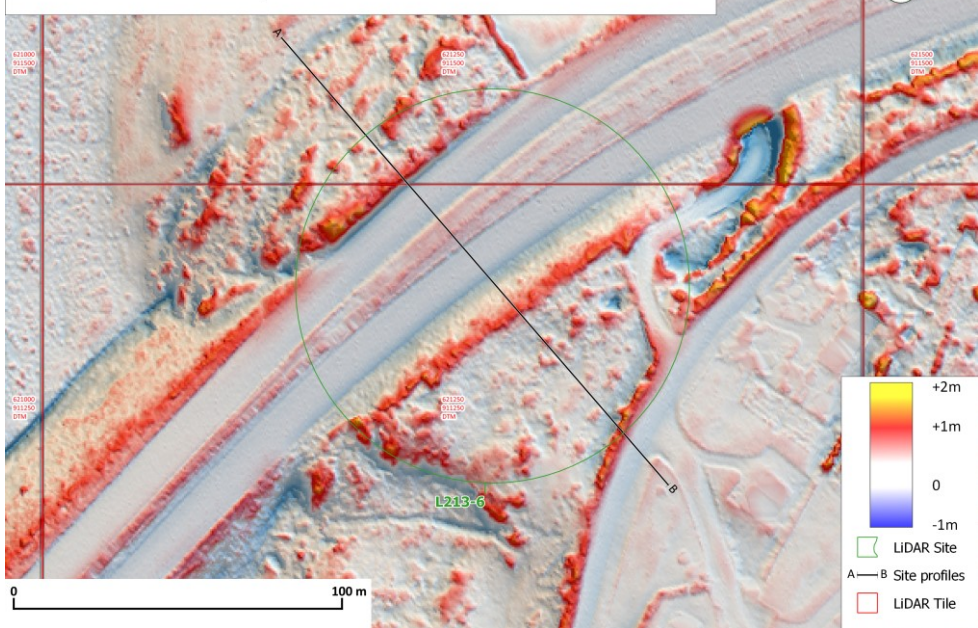
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L213-4: Rock Art

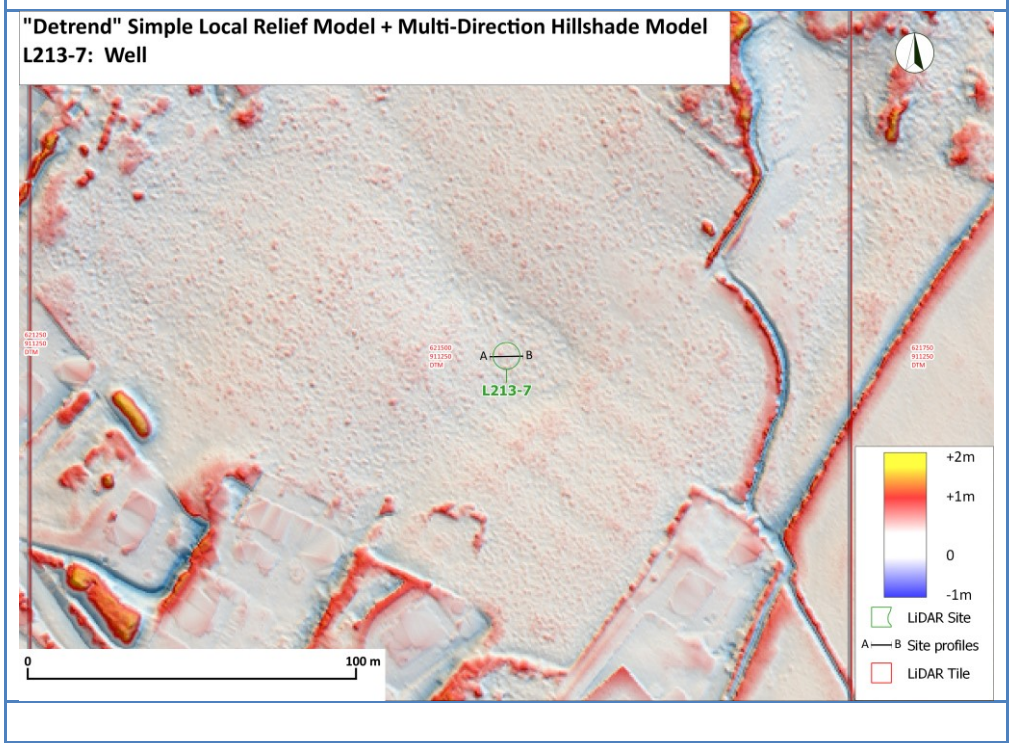
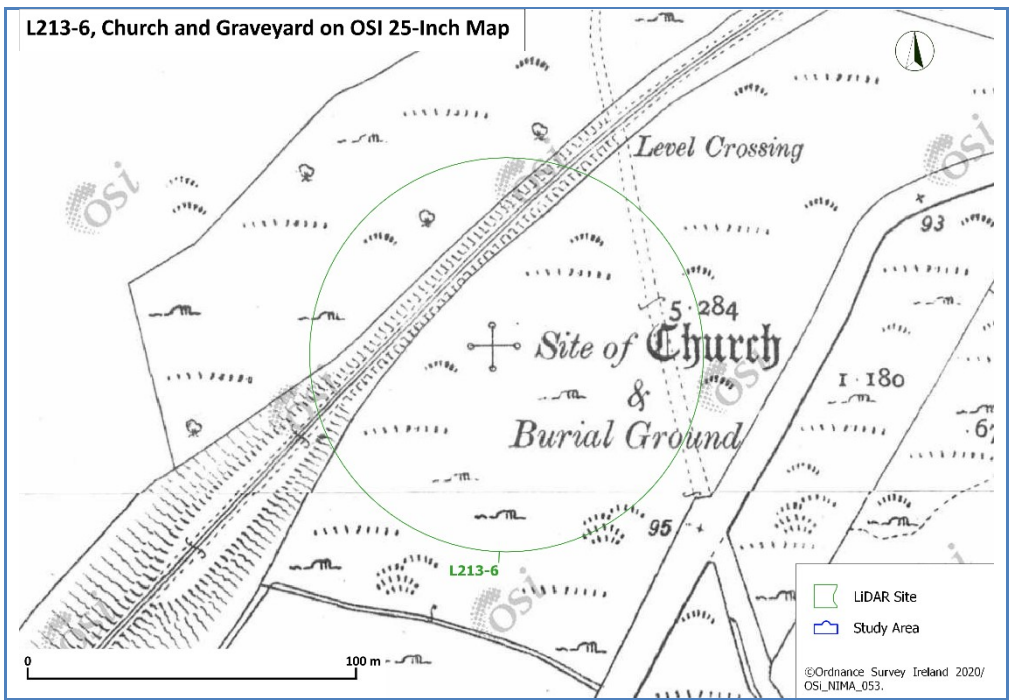


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L213-5: Rock Art

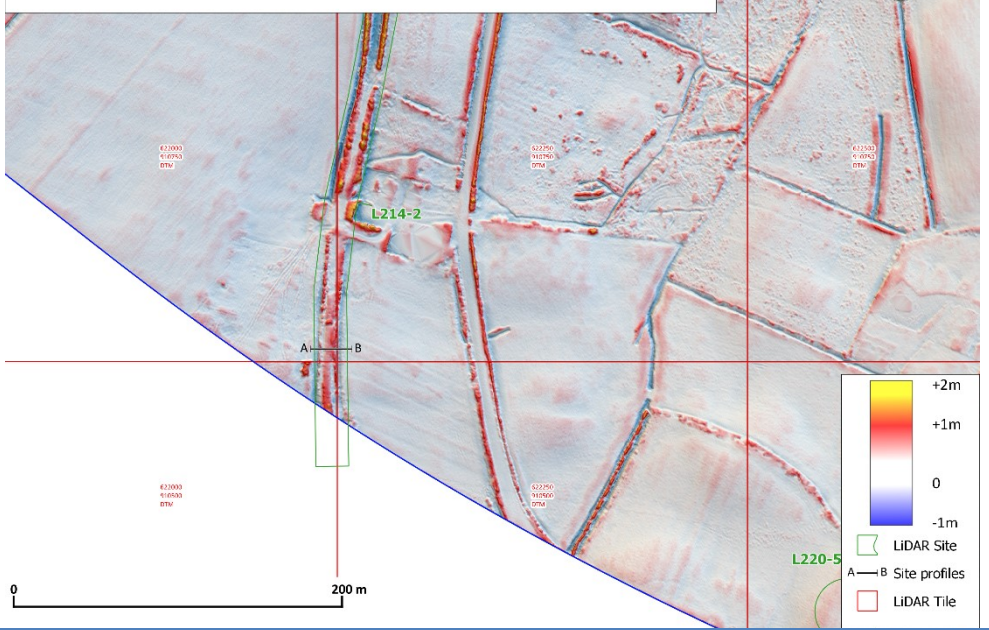


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L213-6: Church and Graveyard

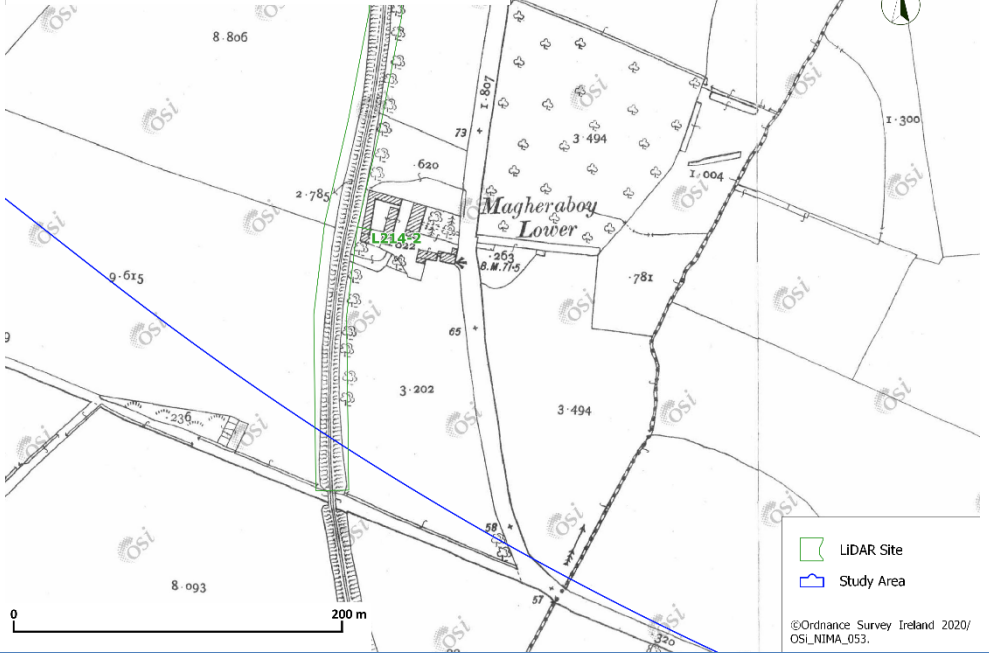




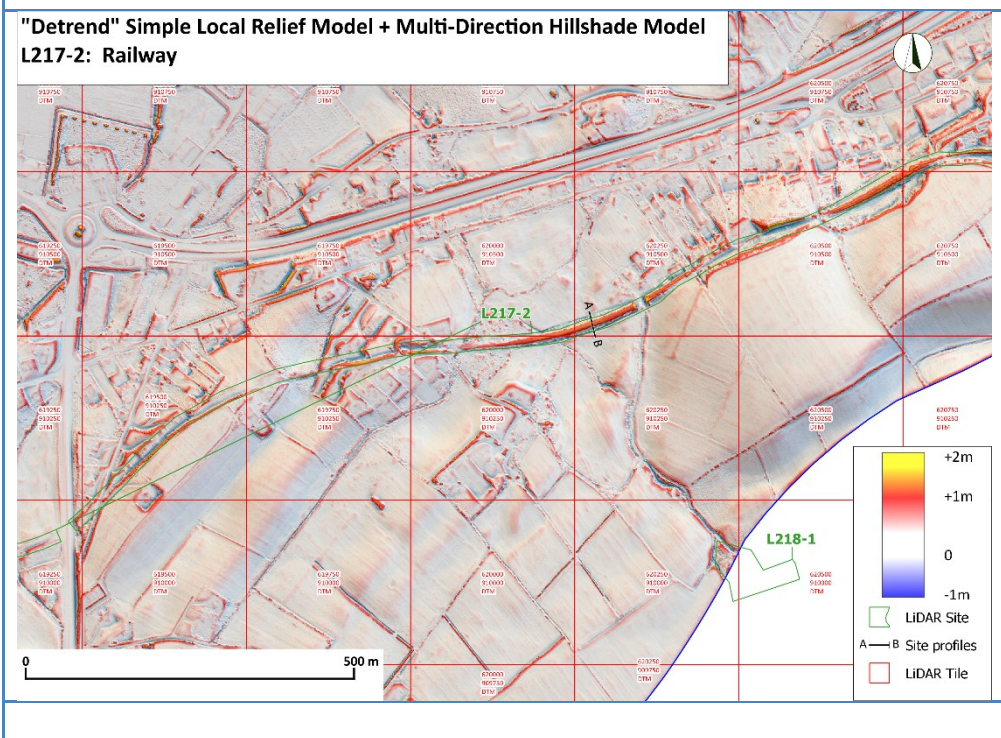
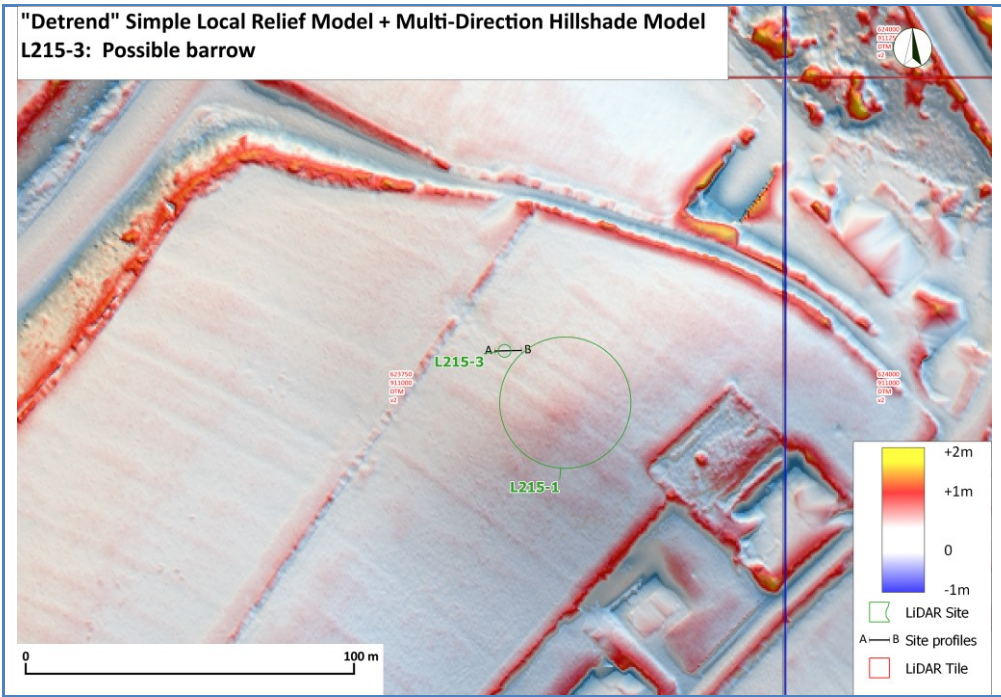
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L214-2: Railway



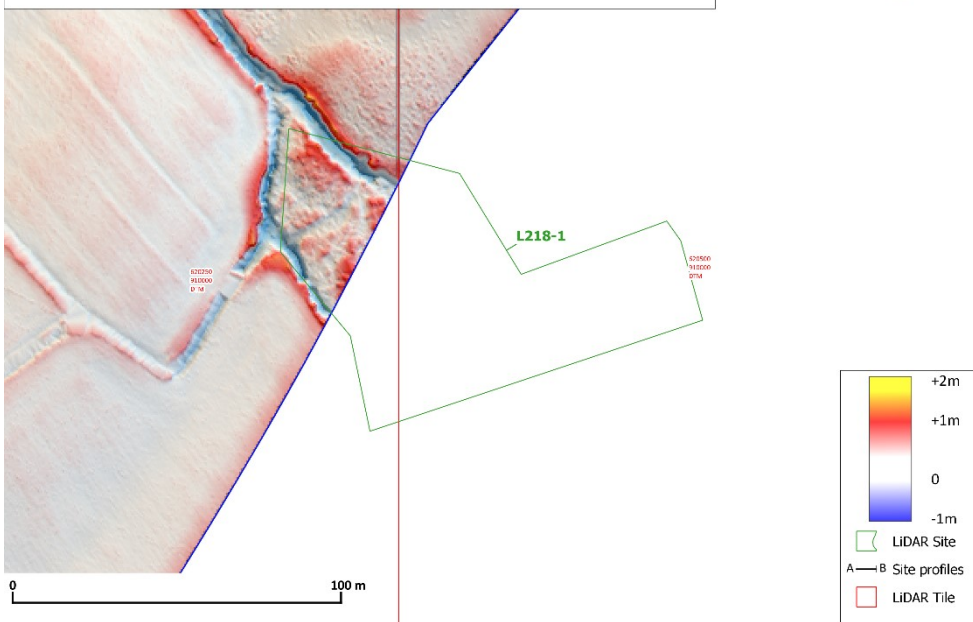
L214-2, Railway on OSI 25-Inch Map



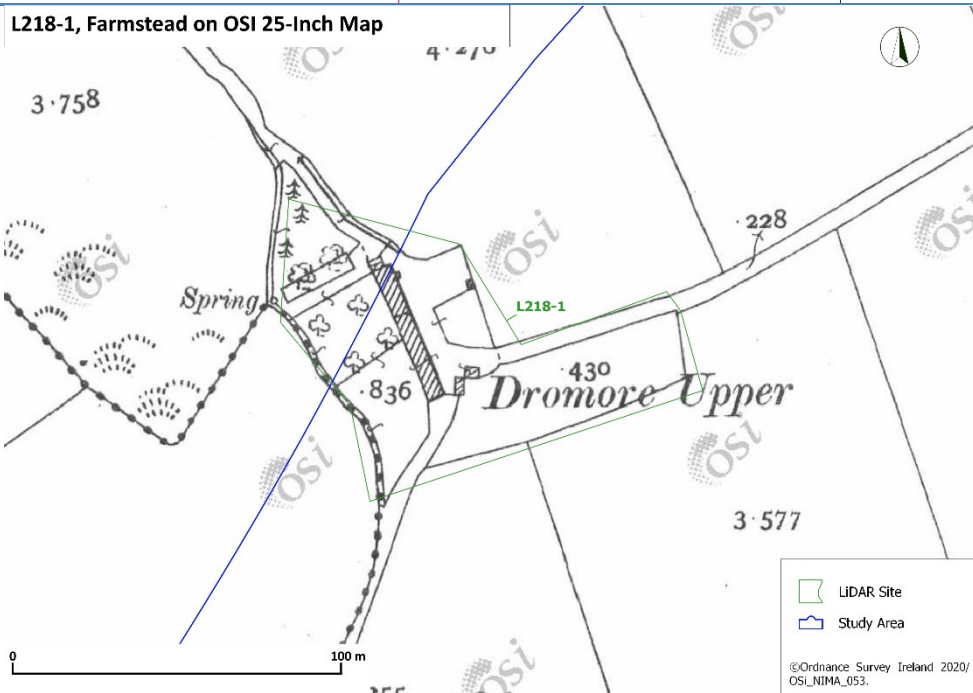
©Ordnance Survey Ireland 2020/
OSI_NIMA_053.



"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L218-1: Farmstead

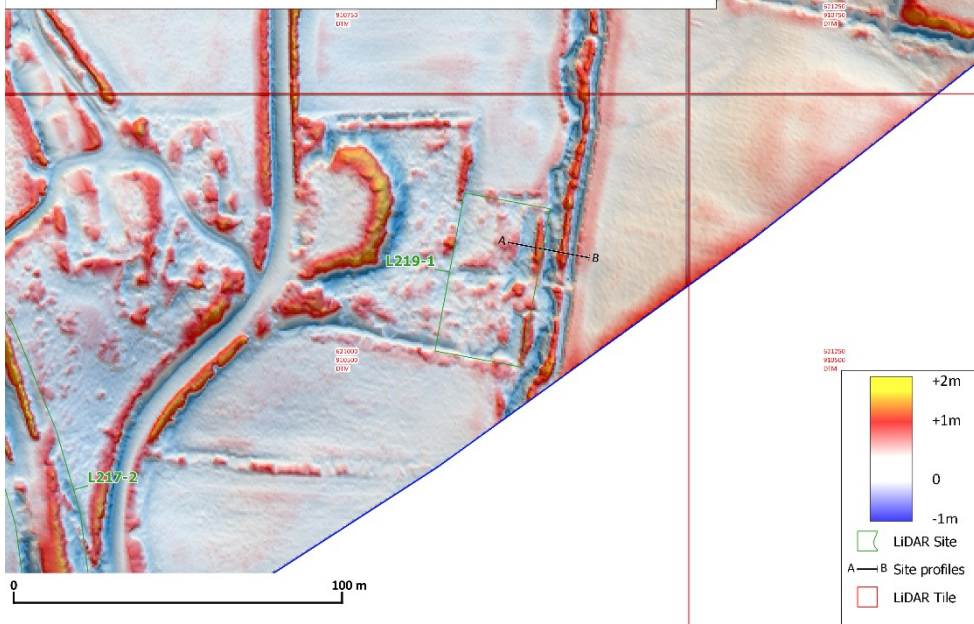


L218-1, Farmstead on OSI 25-Inch Map



©Ordnance Survey Ireland 2020/
OSI_NIMA_053.

"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L219-1: Pits

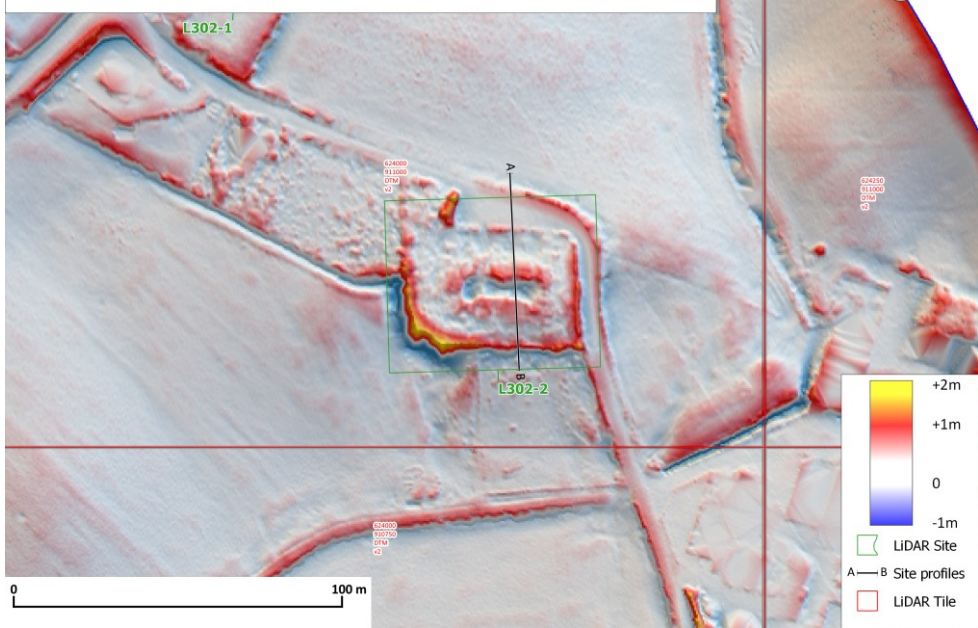


L219-1, Pits on OSI 25-Inch Map

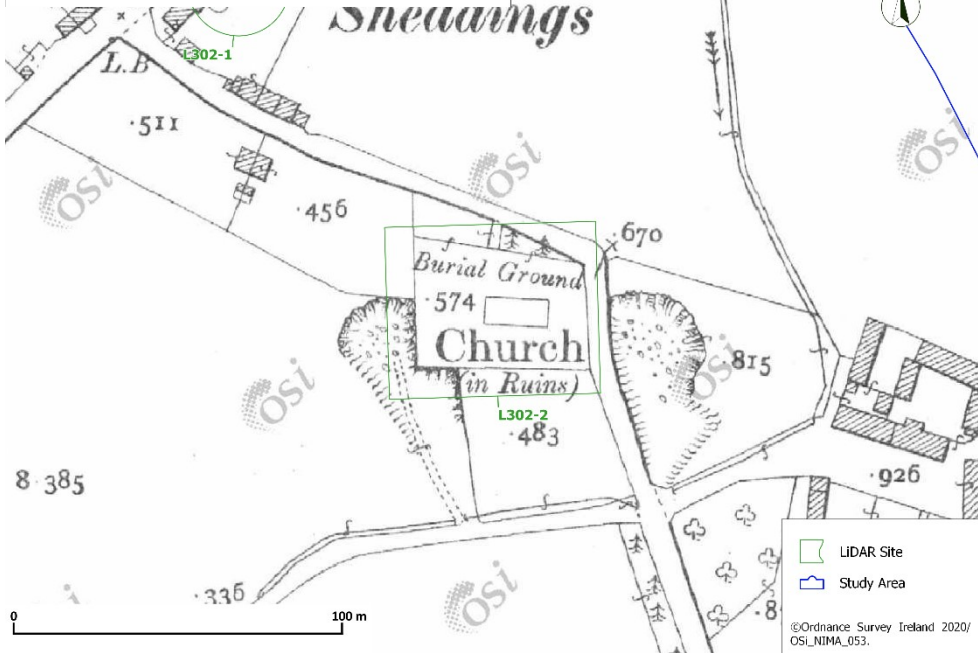




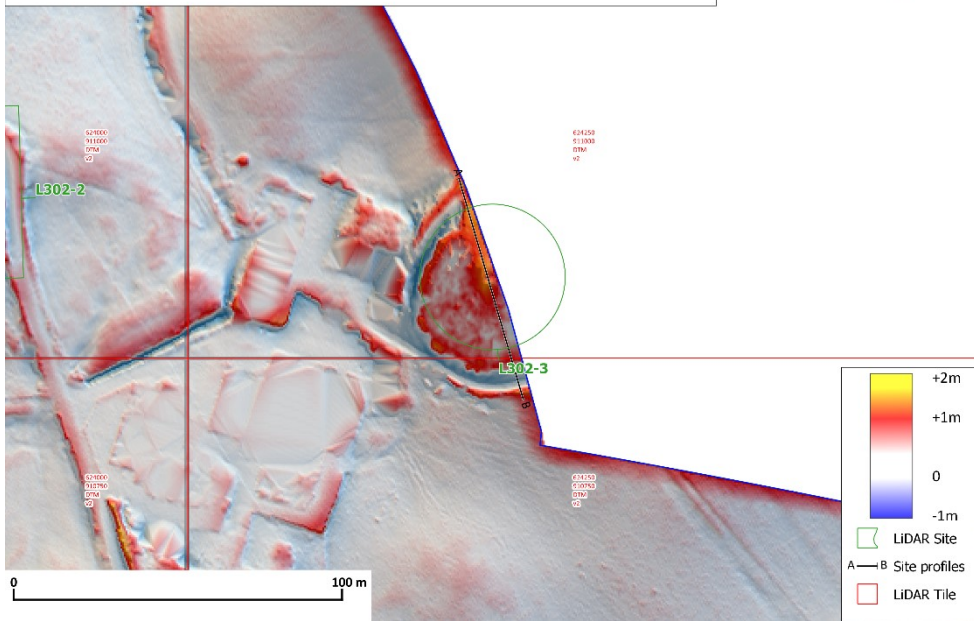
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
 L302-2: Church and Graveyard



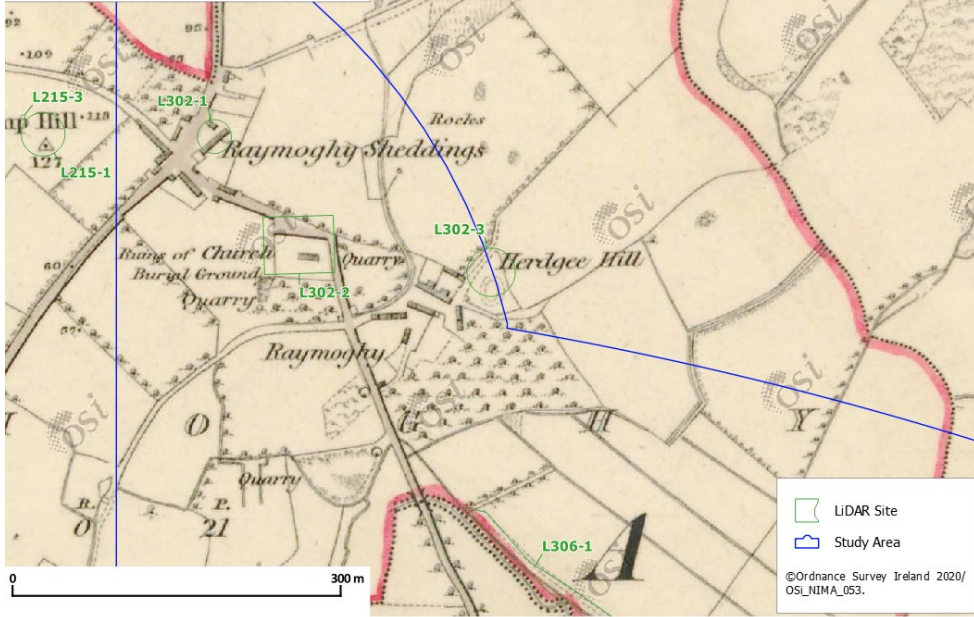
L302-2, Church and Graveyard on OSI 25-Inch Map

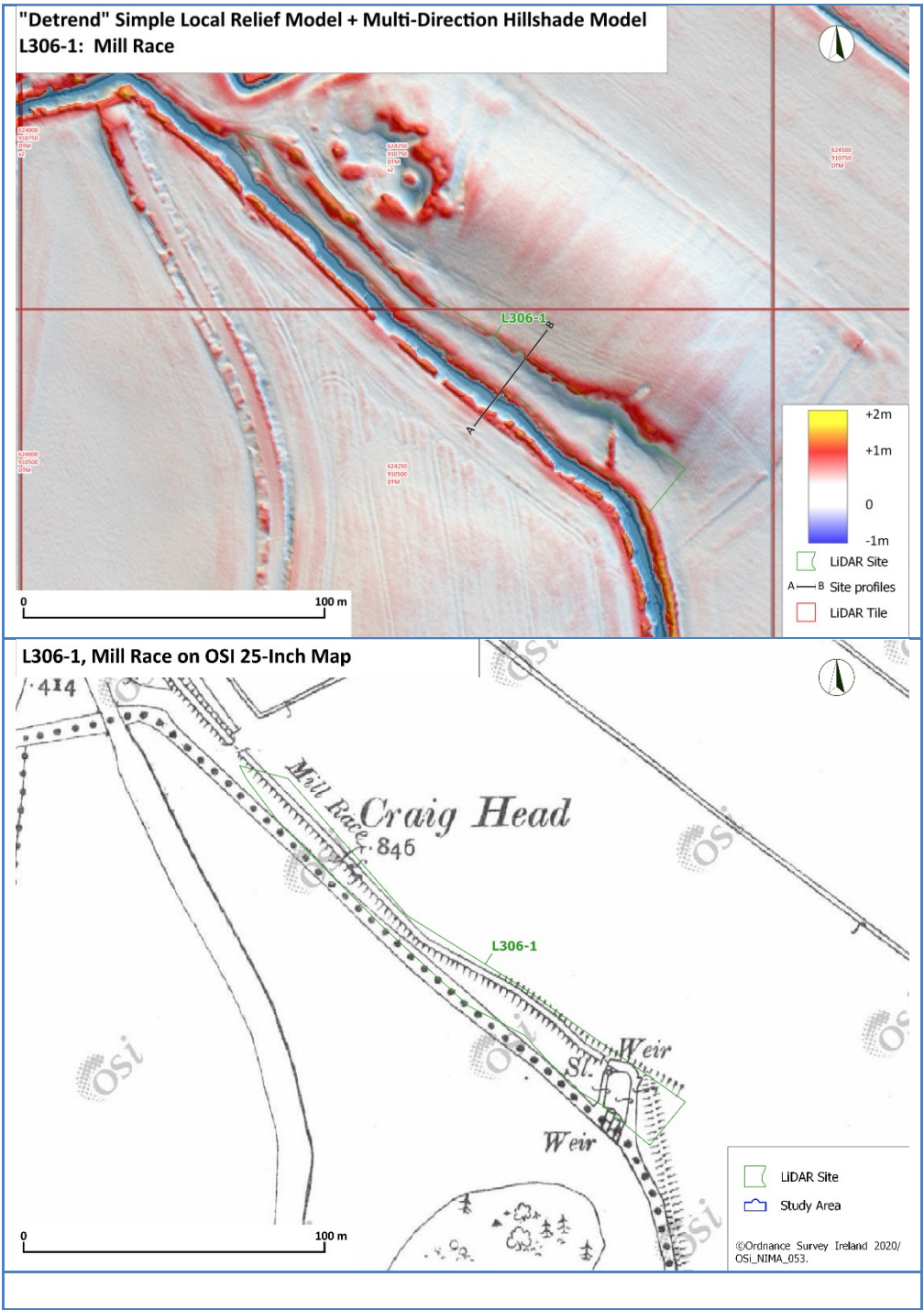


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L302-3: Mound

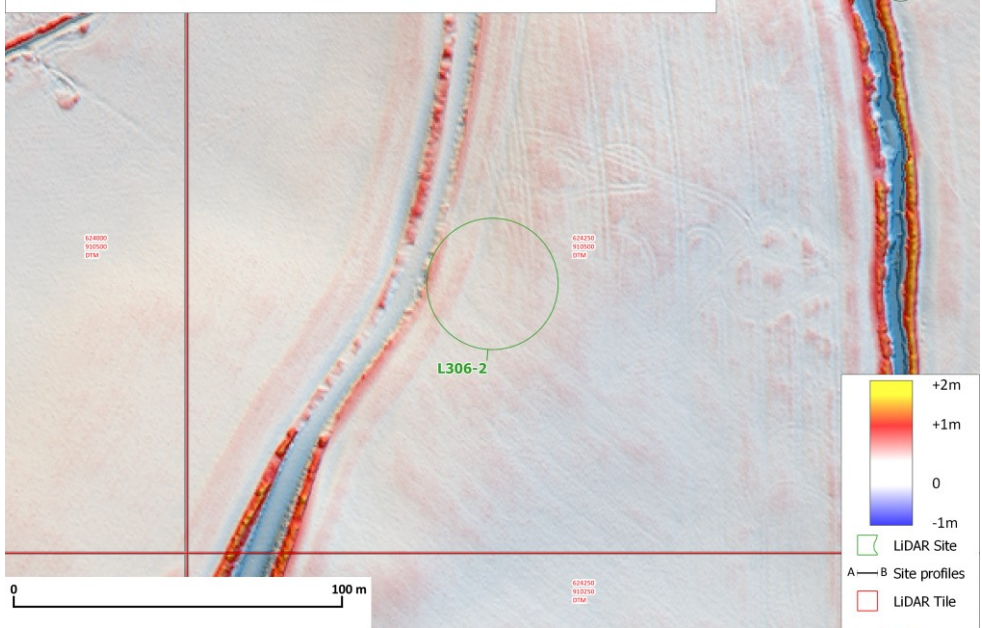


L302-3, Mound
on OSI First Ed. 6-Inch Map

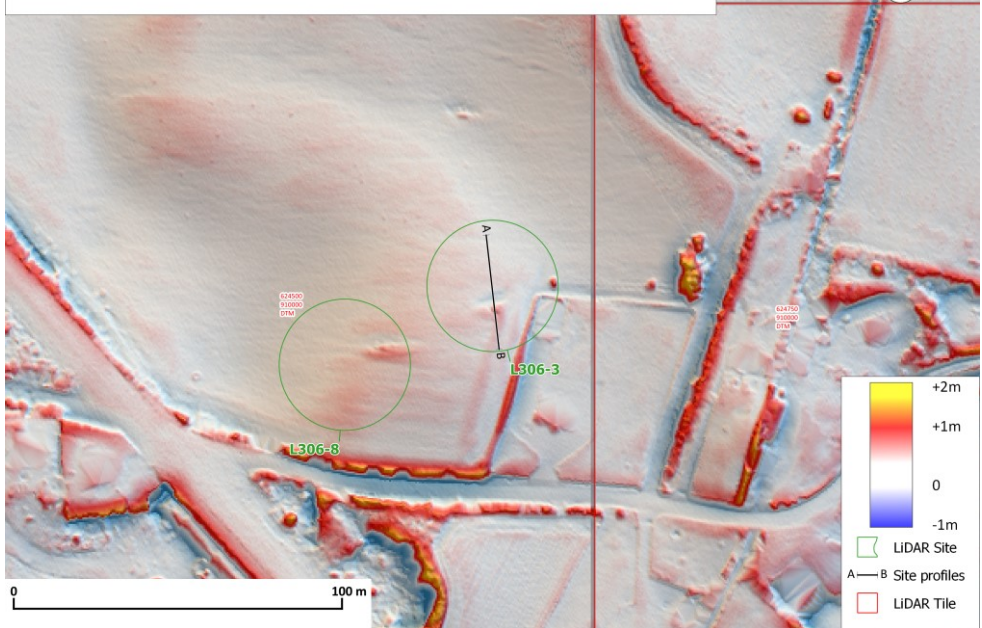




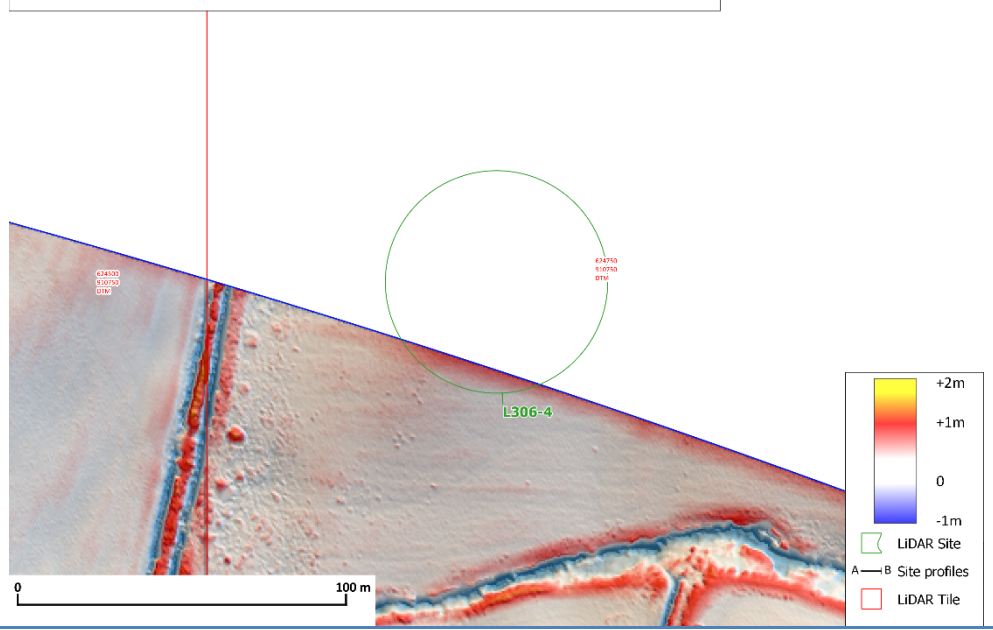
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L306-2: Cist



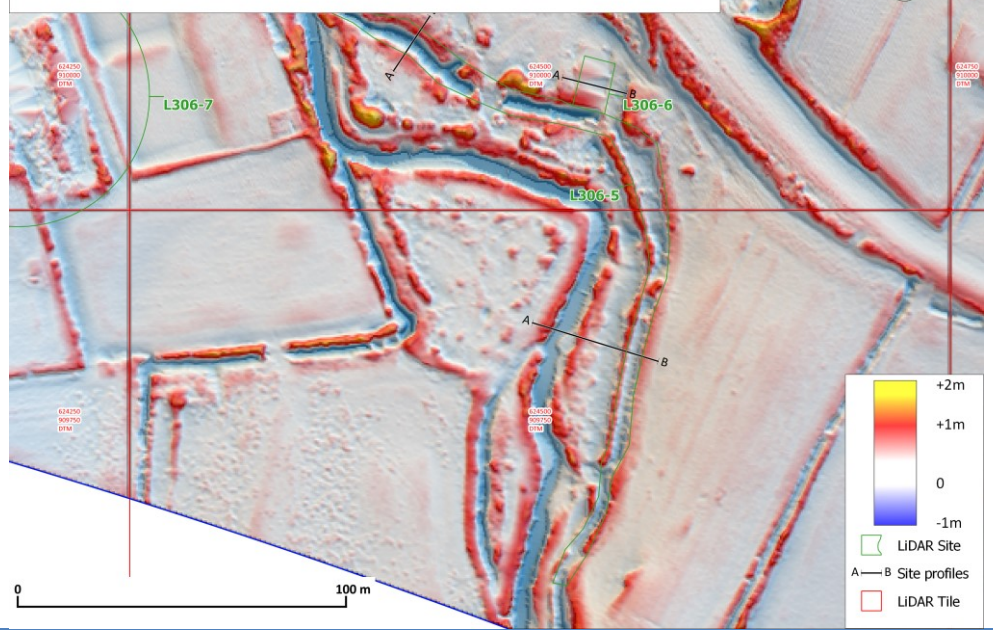
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L306-3: Cross-inscribed Stone

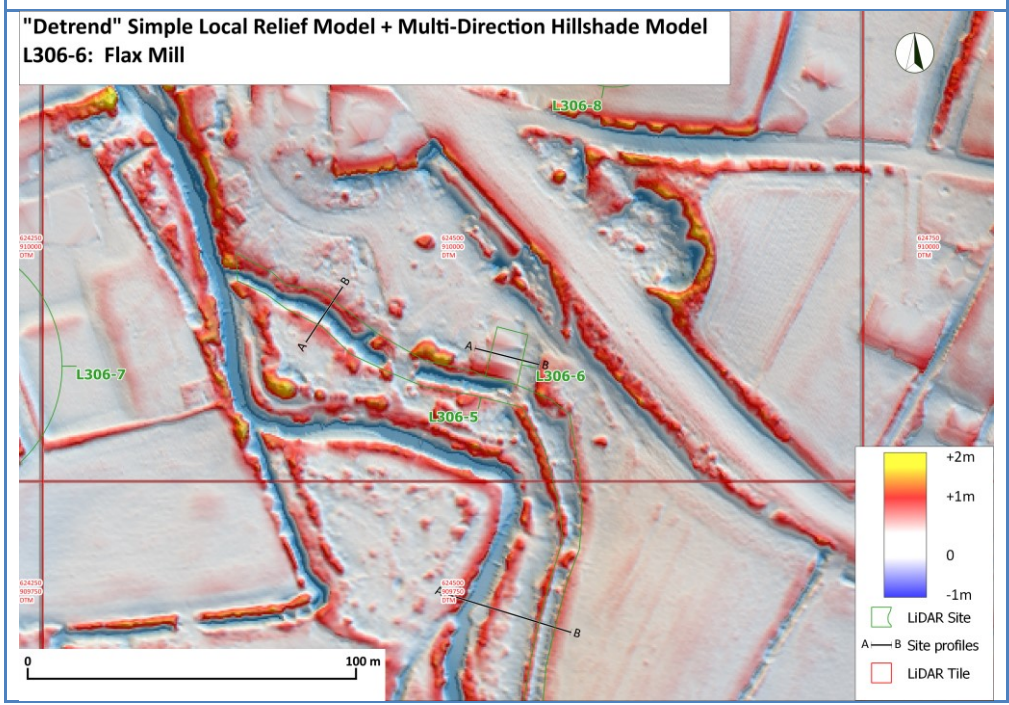
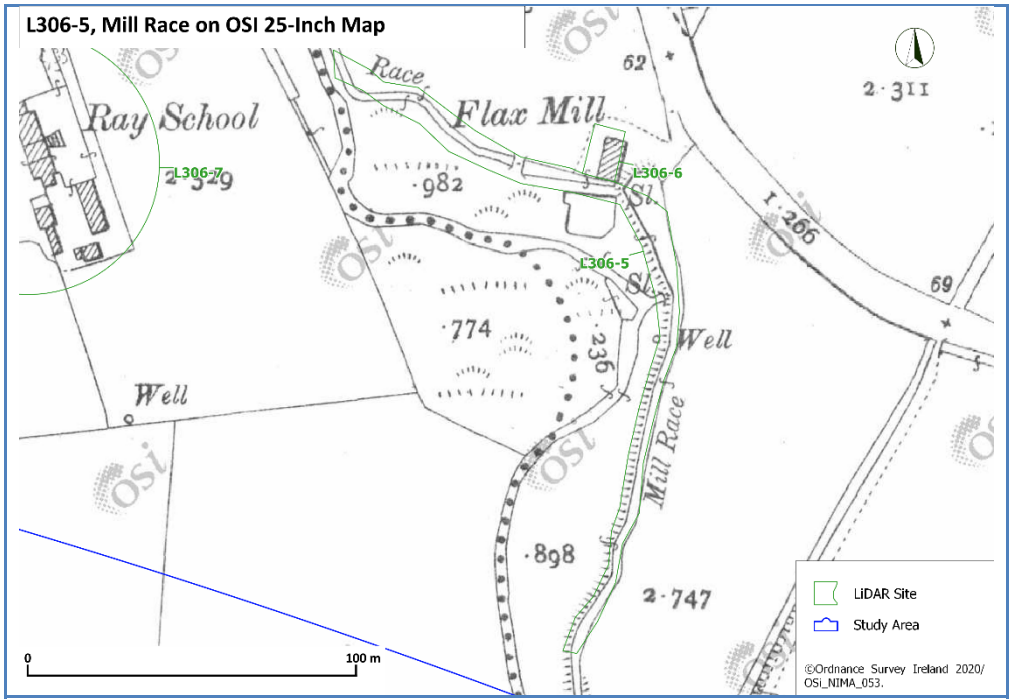


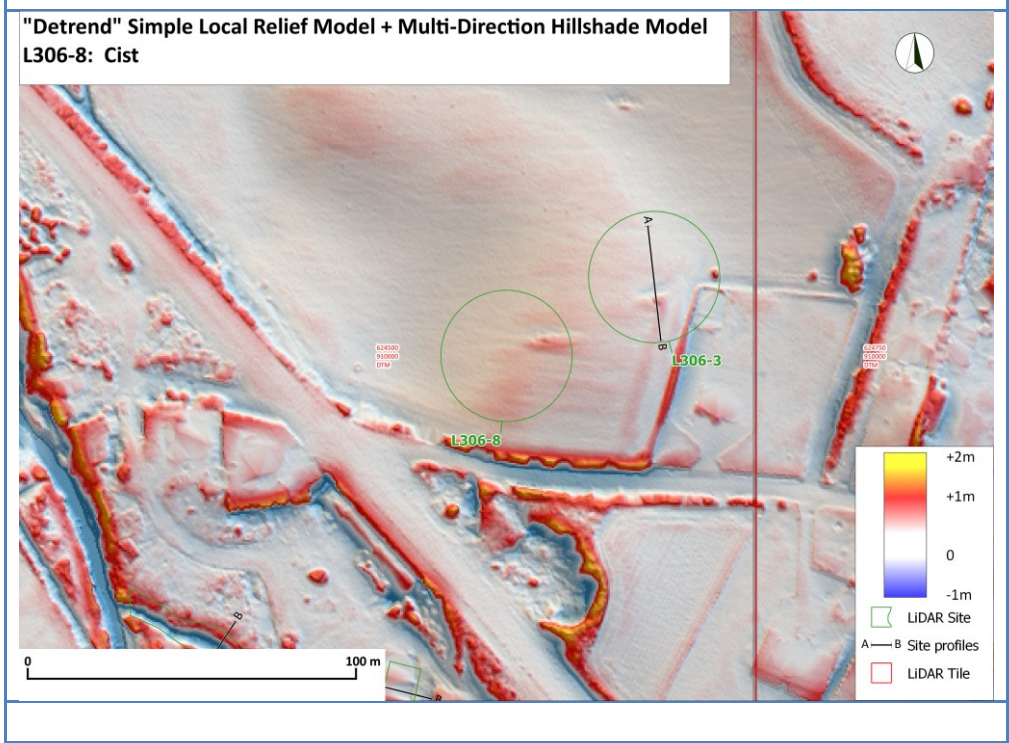
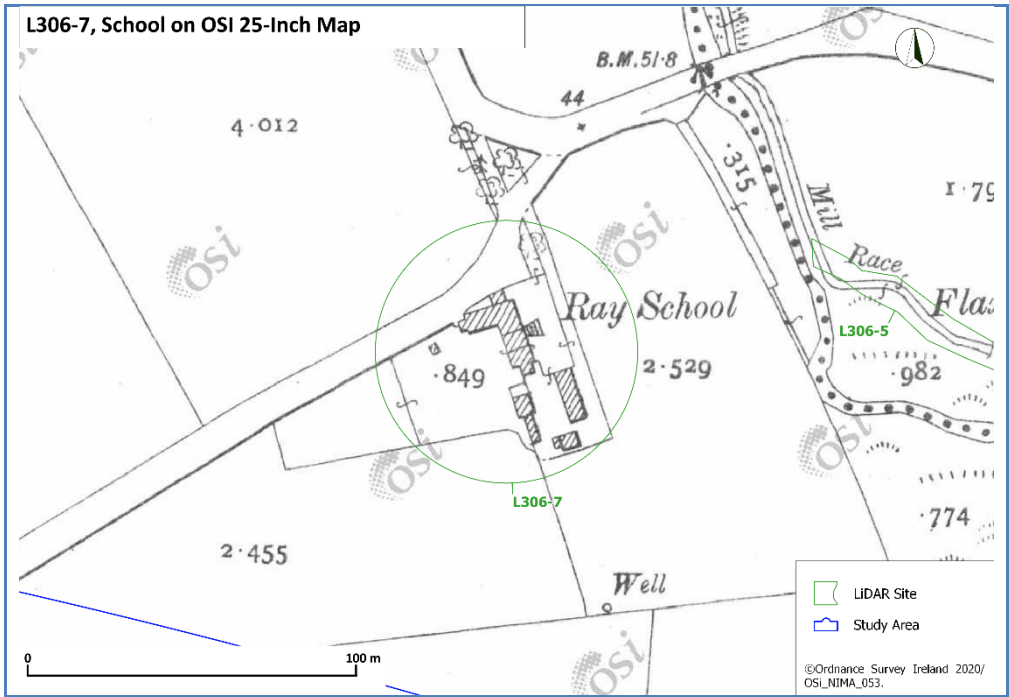
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L306-4: Megalithic Tomb

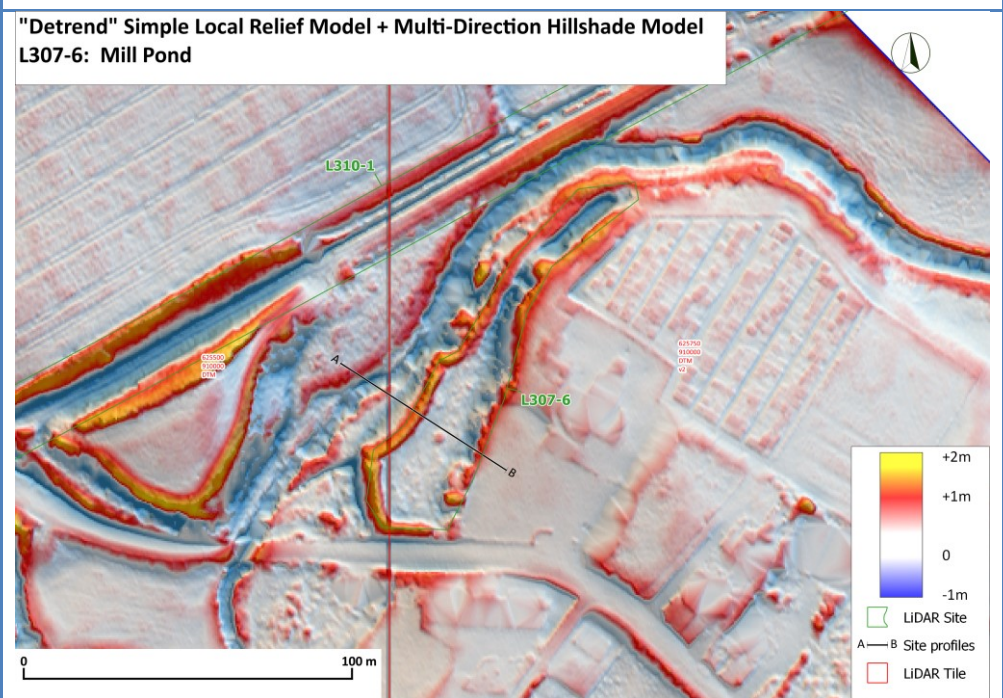
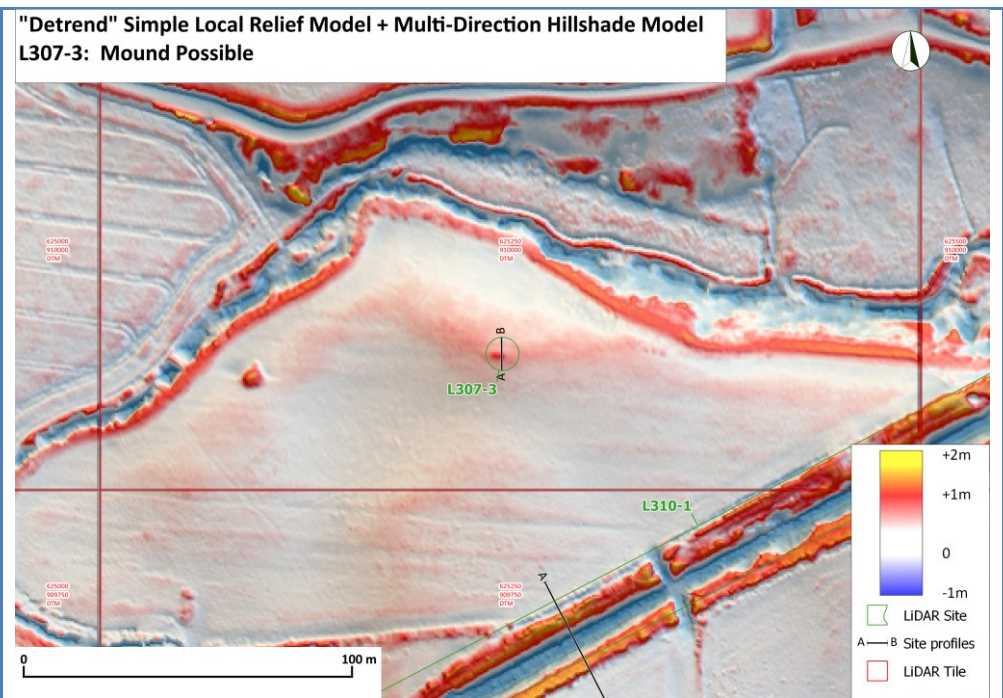


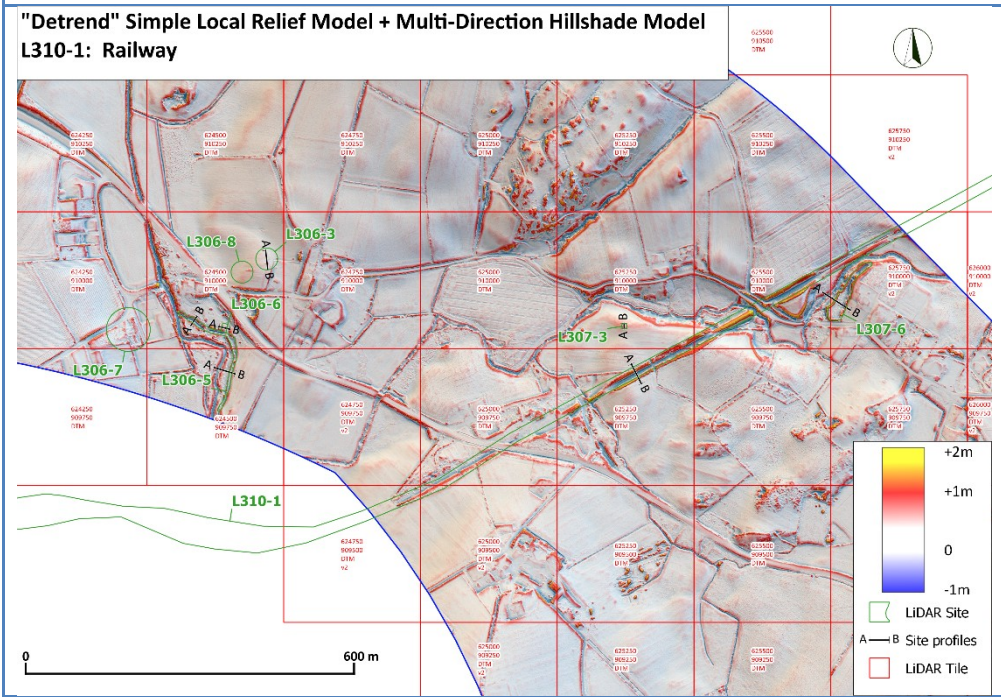
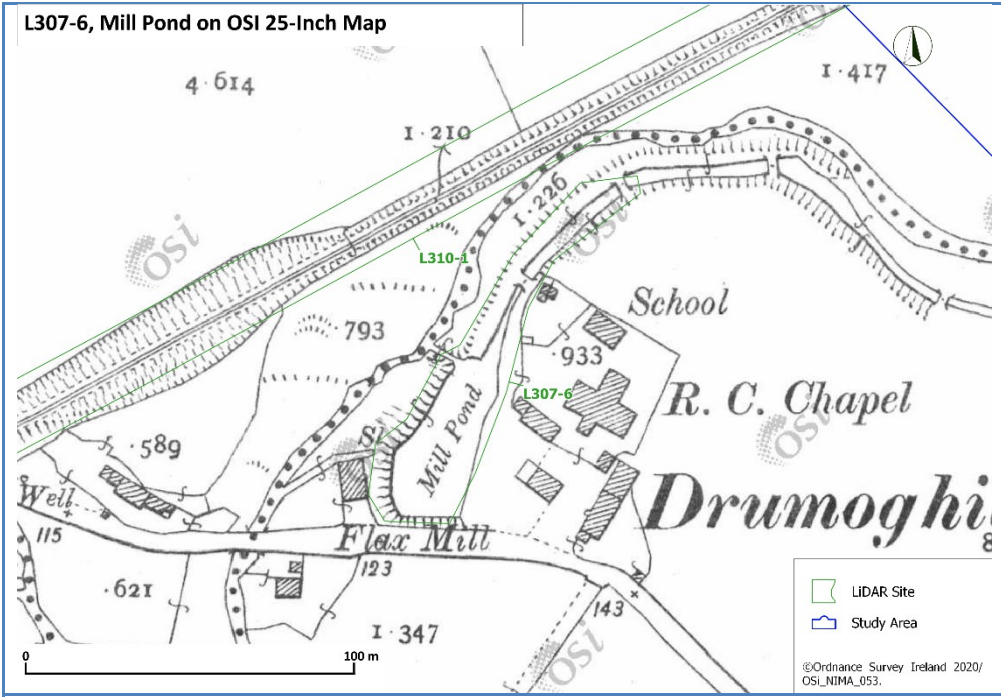
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L306-5: Mill Race

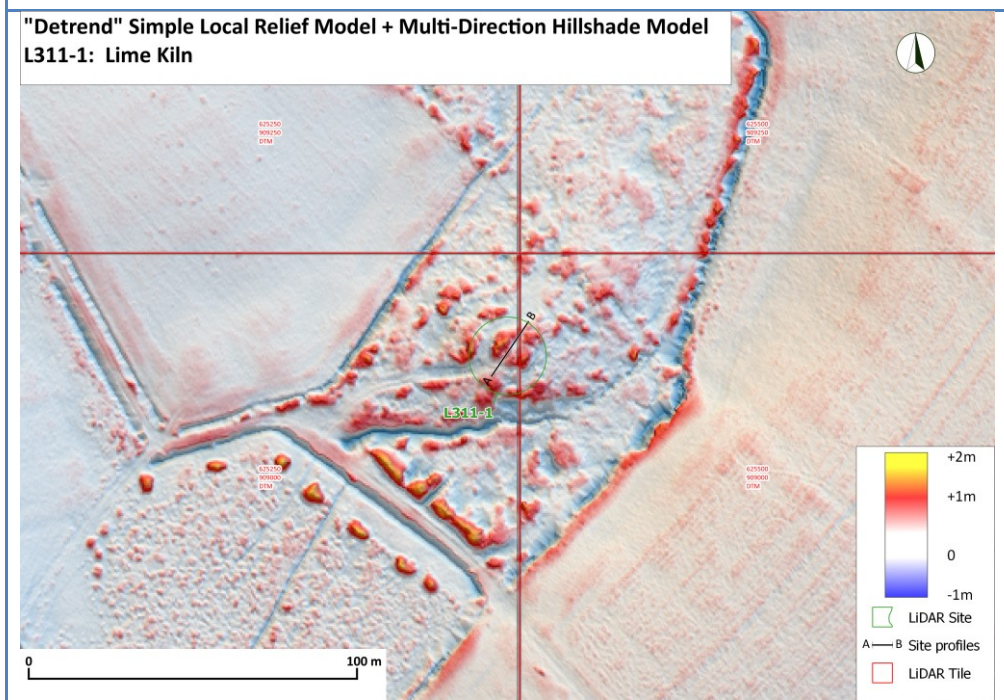
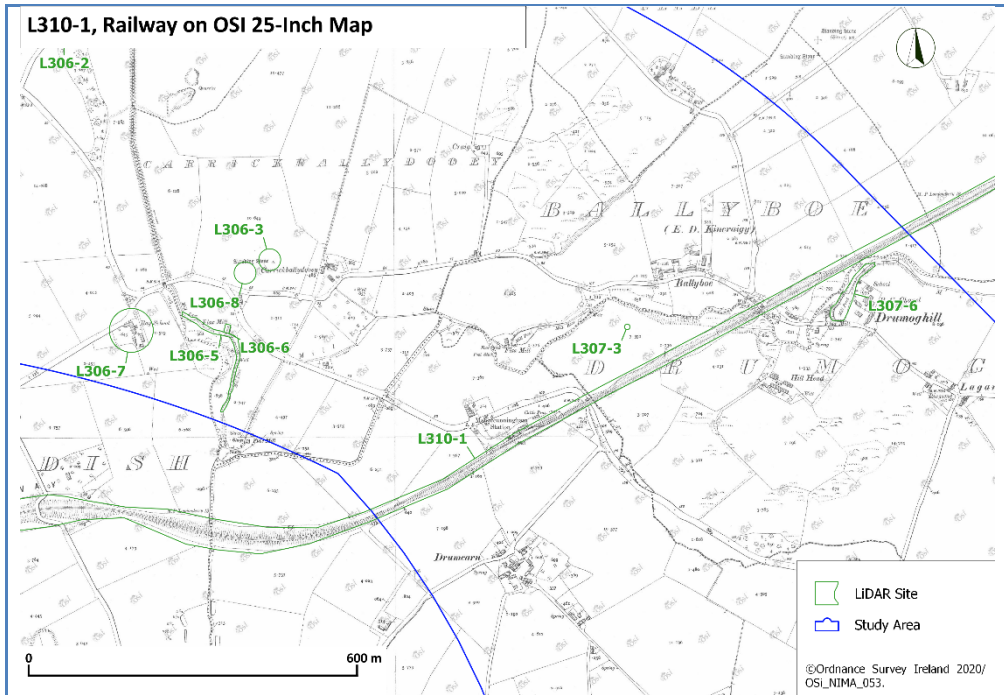


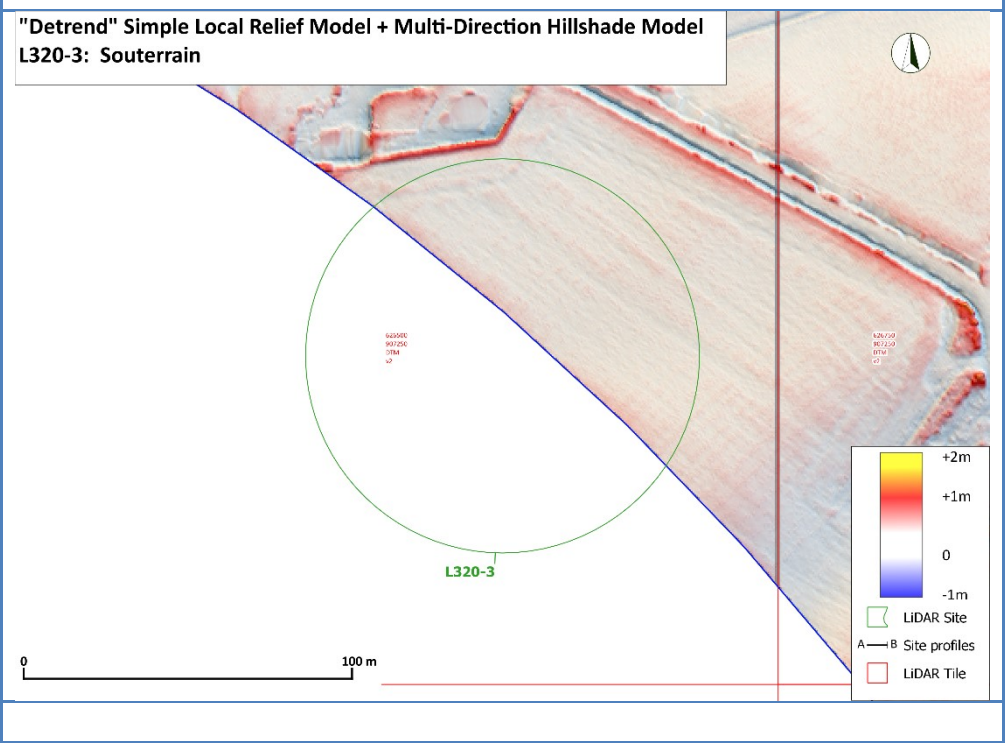
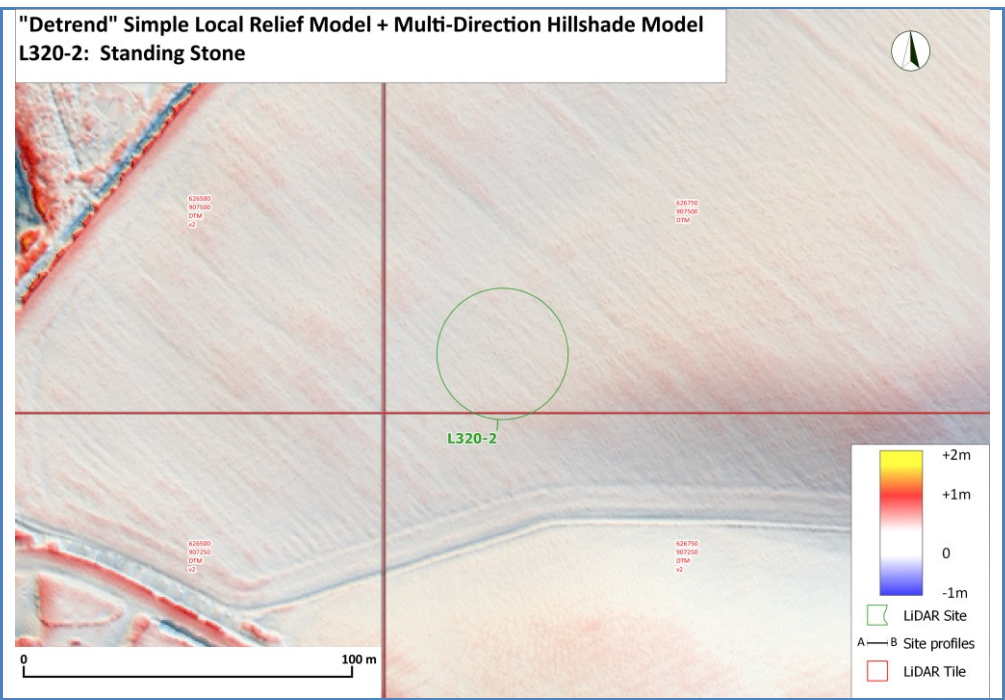


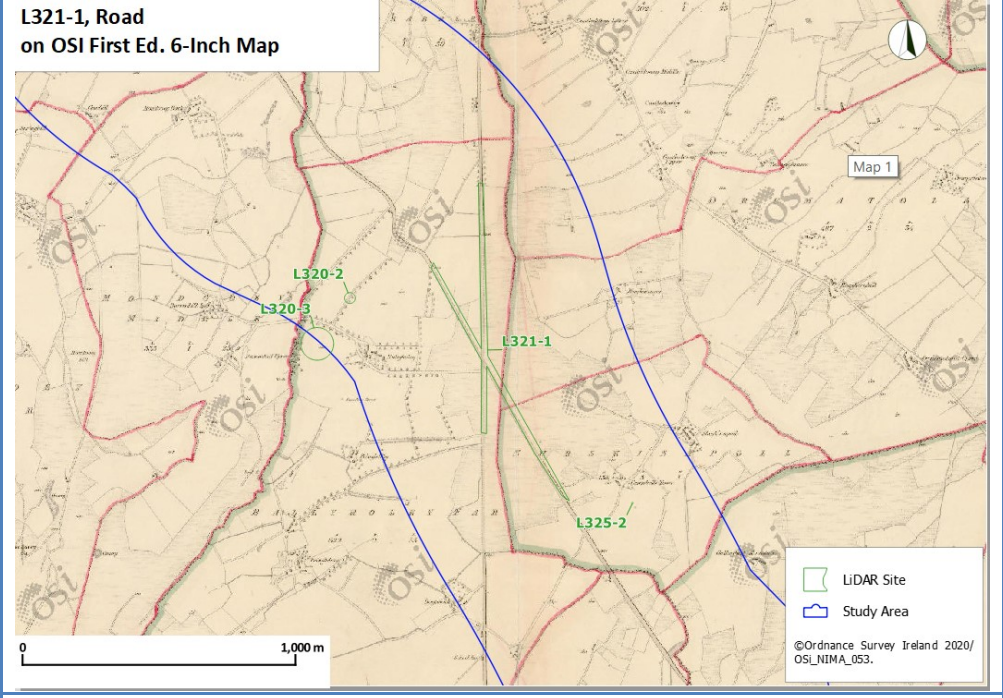
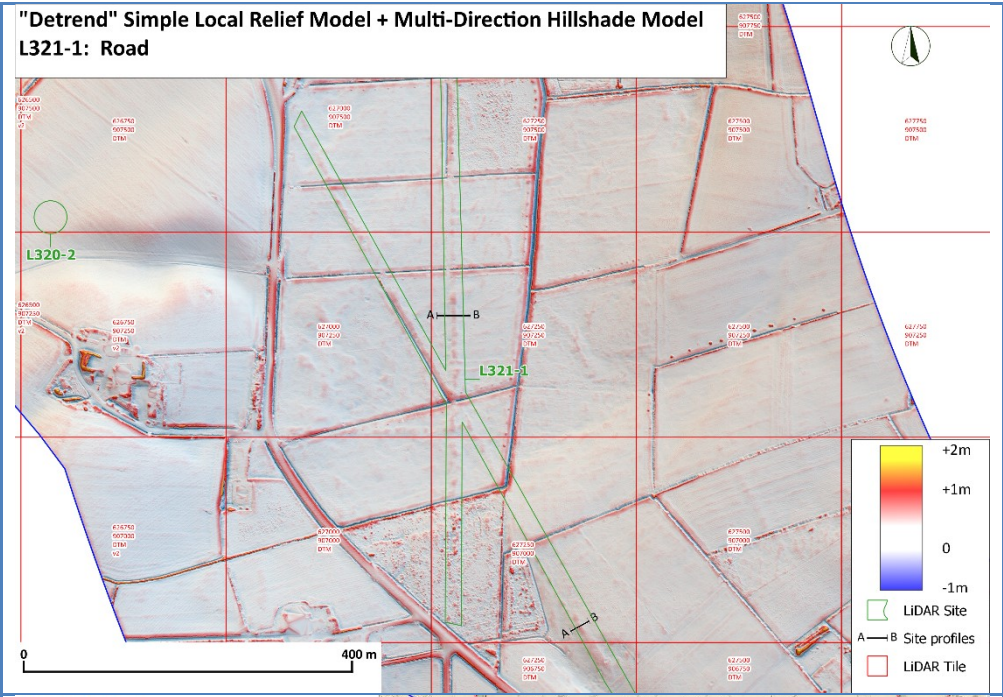


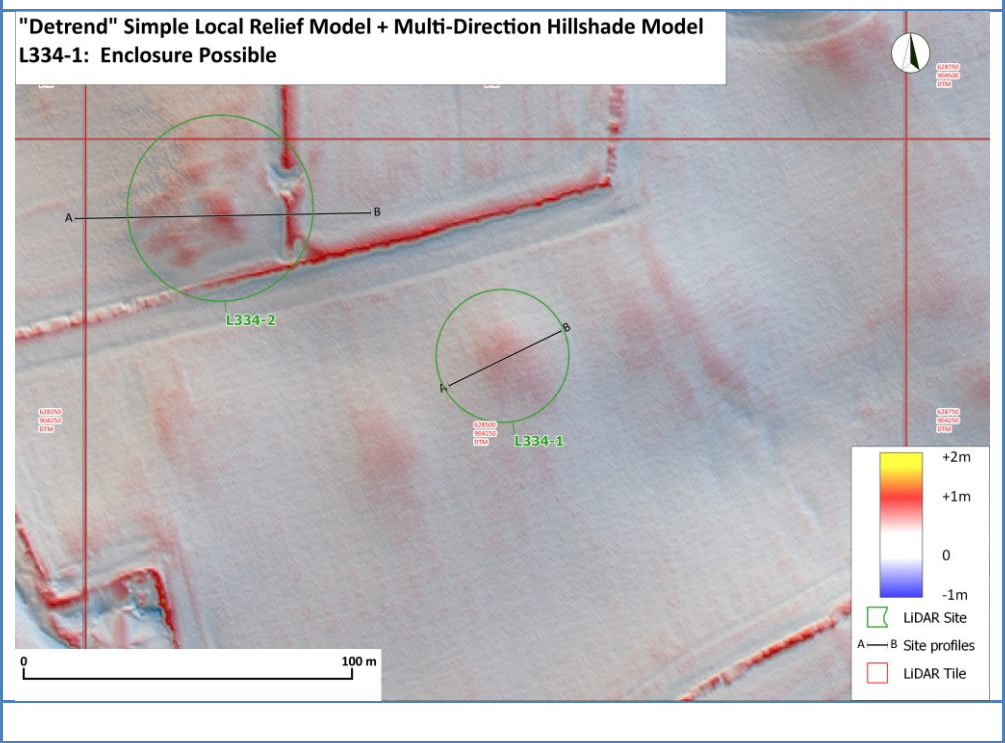
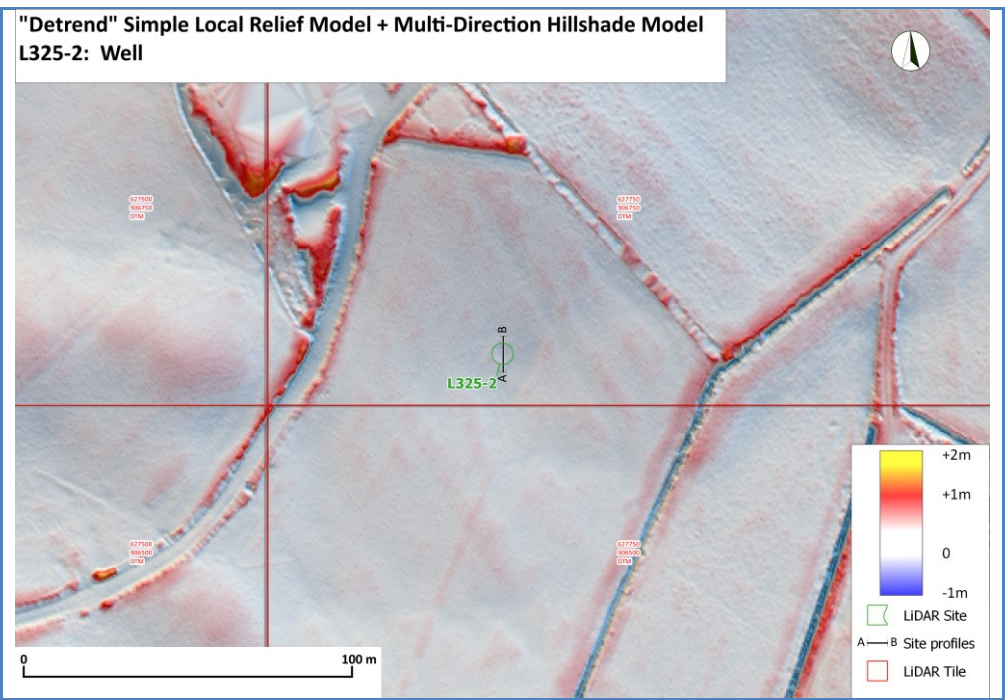




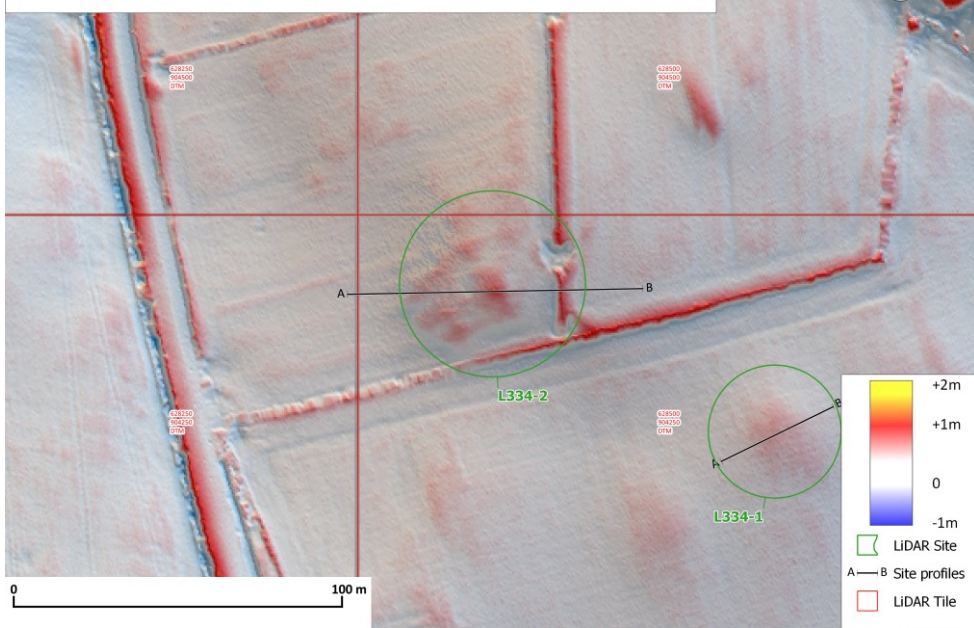




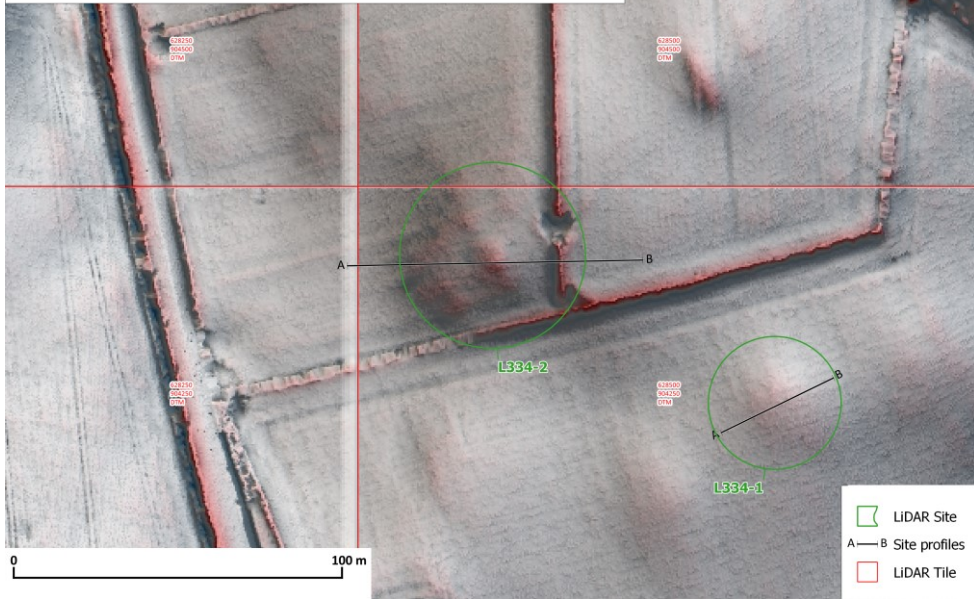




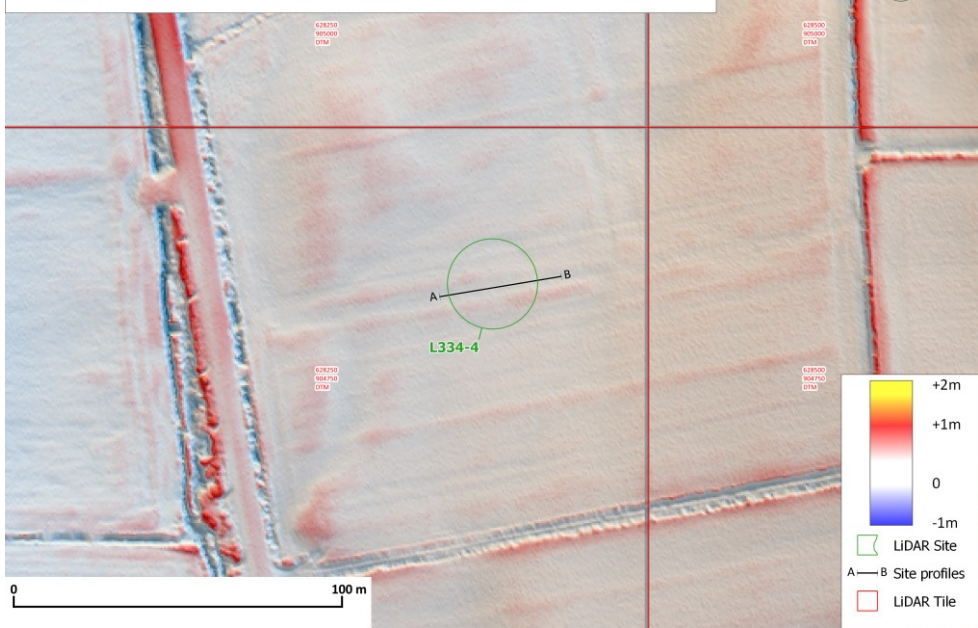
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L334-2: Barrow Possible



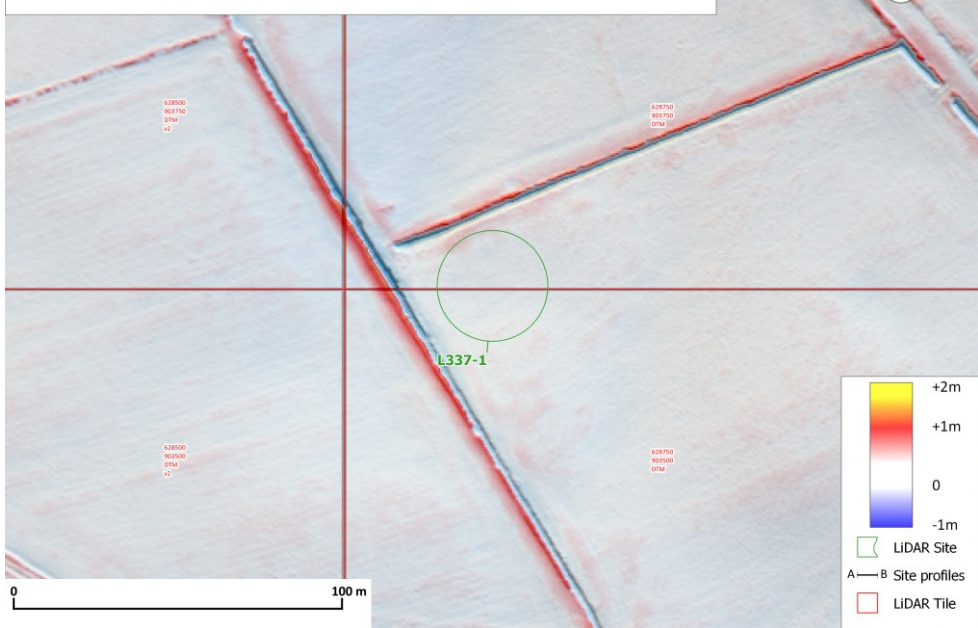
Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade
L334-2: Barrow Possible

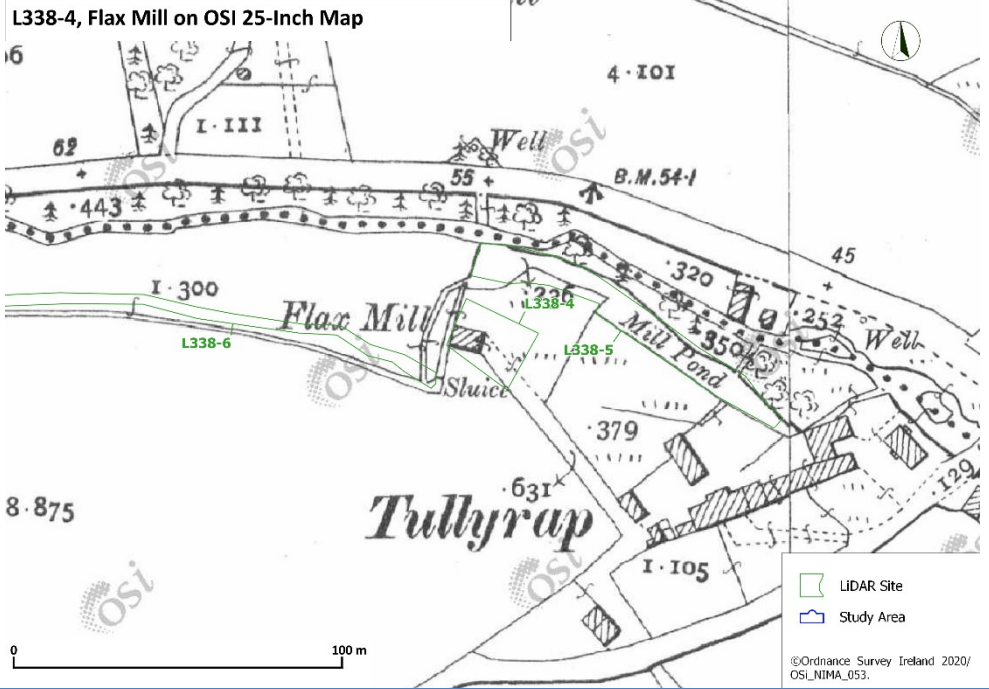
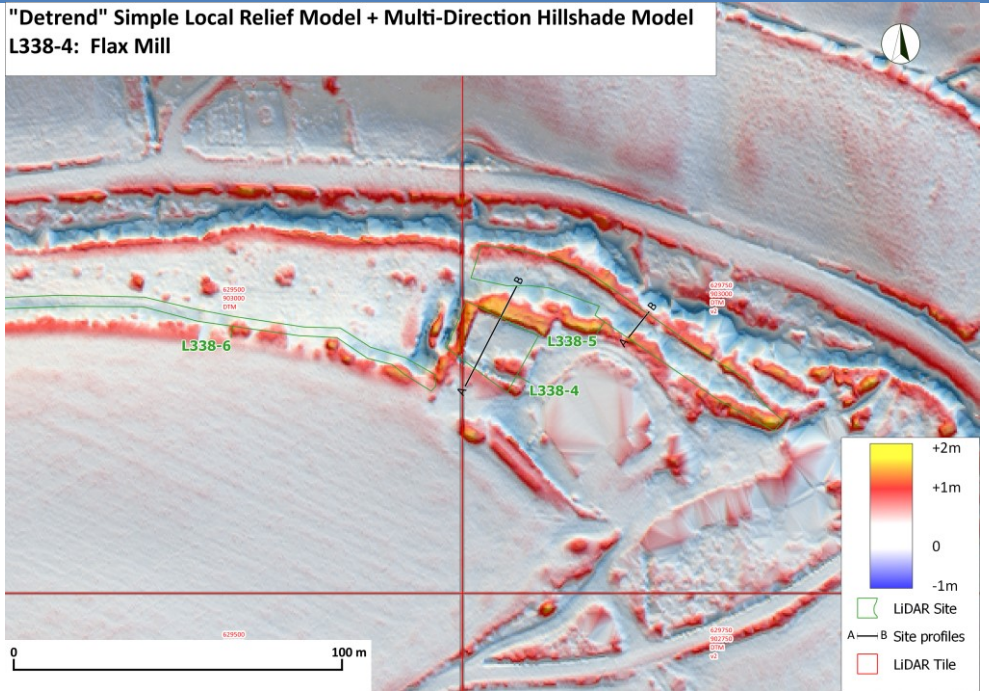


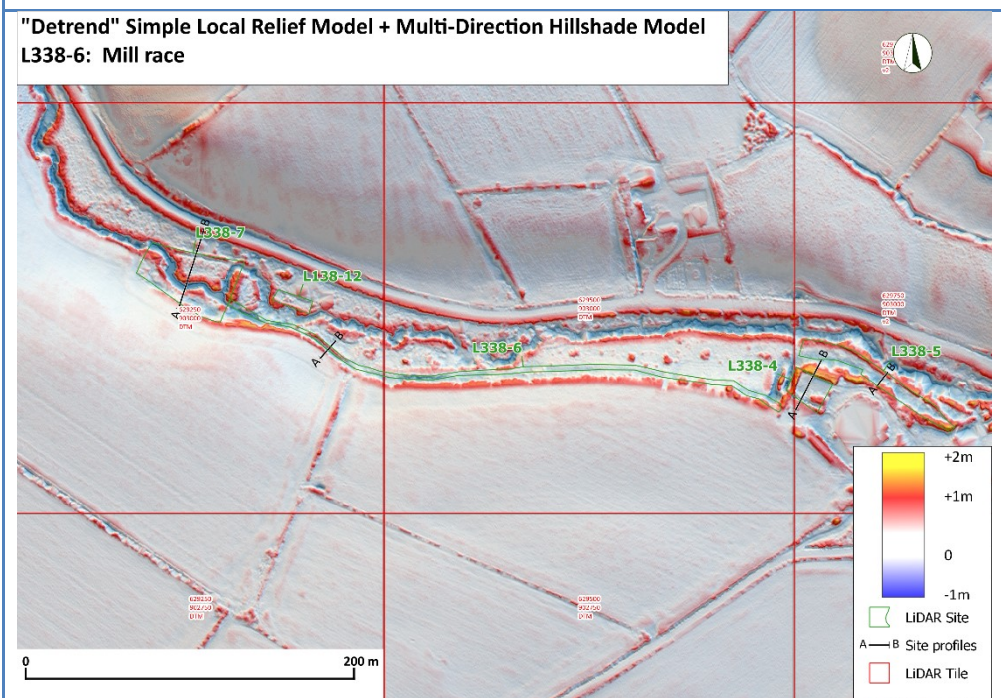
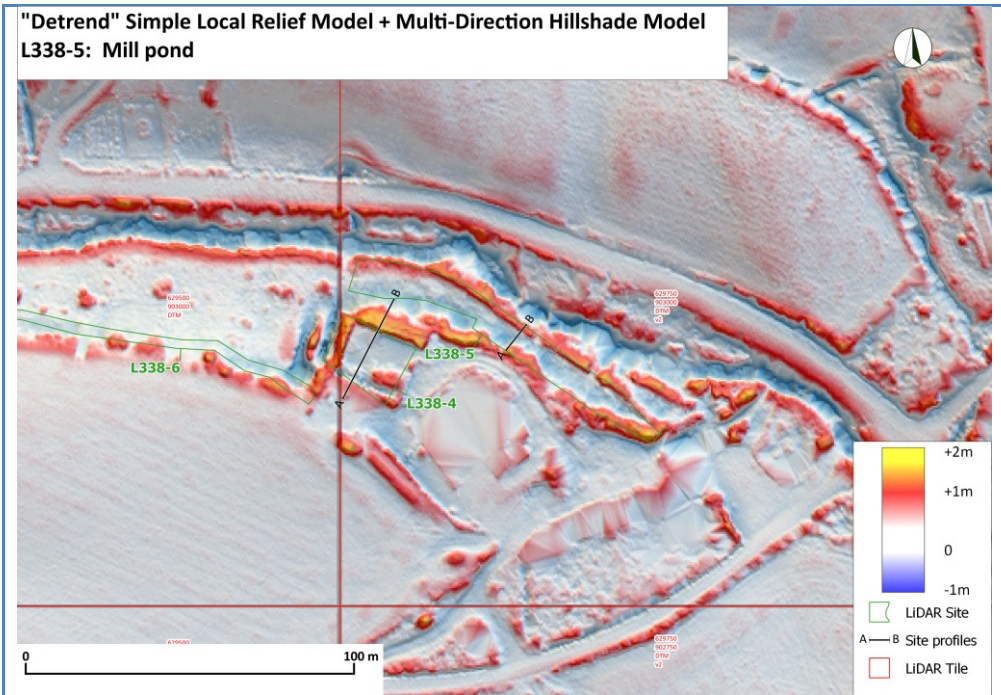
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L334-4: Enclosure Possible

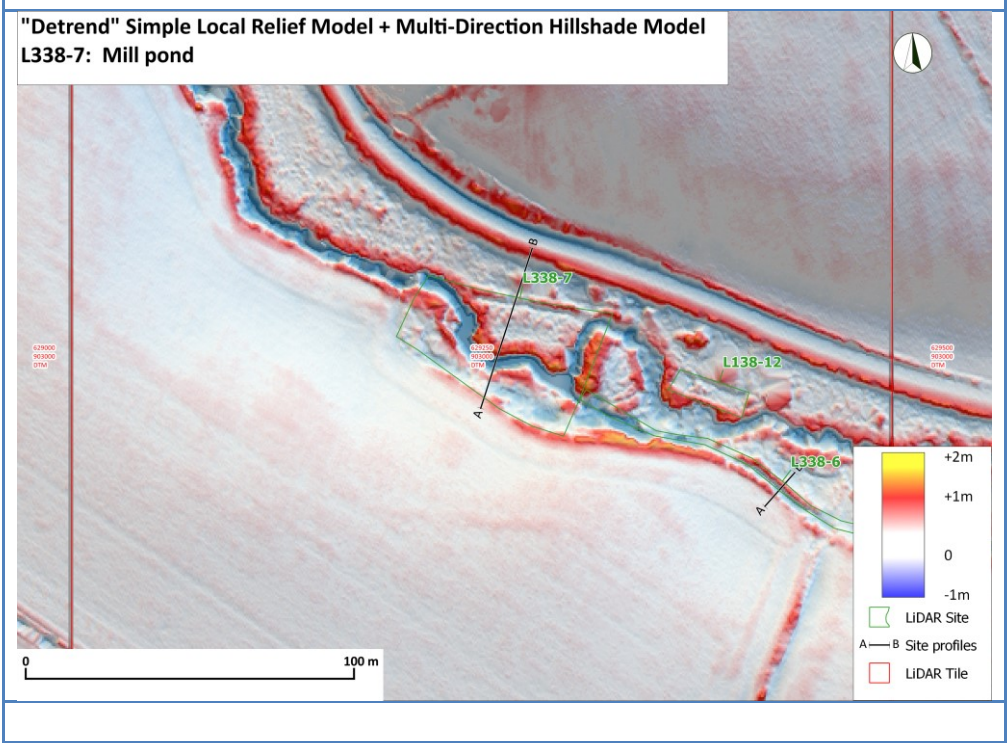
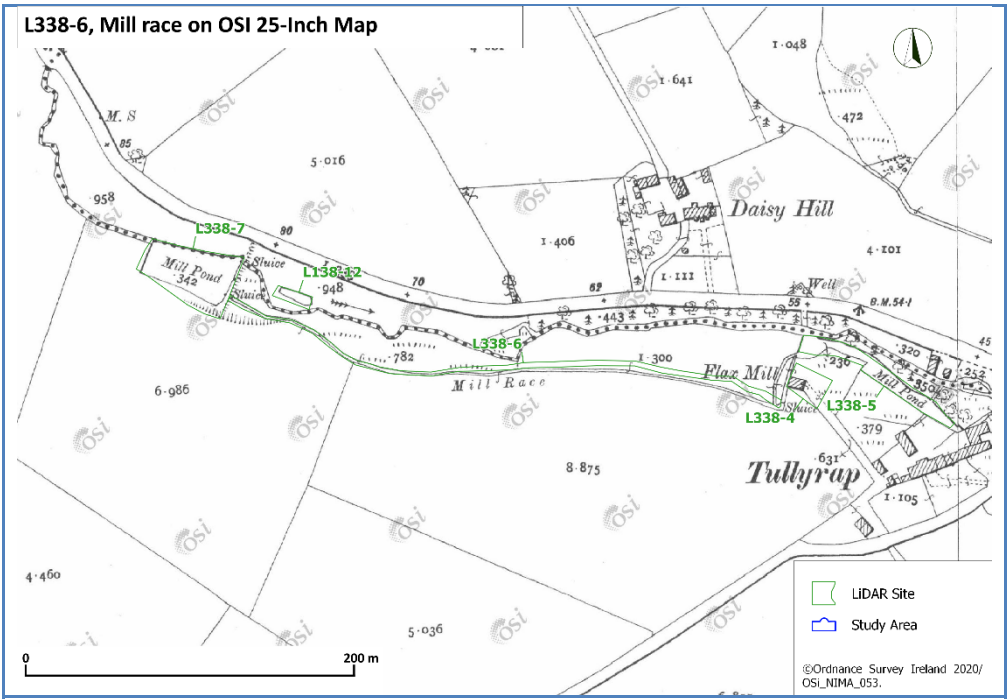


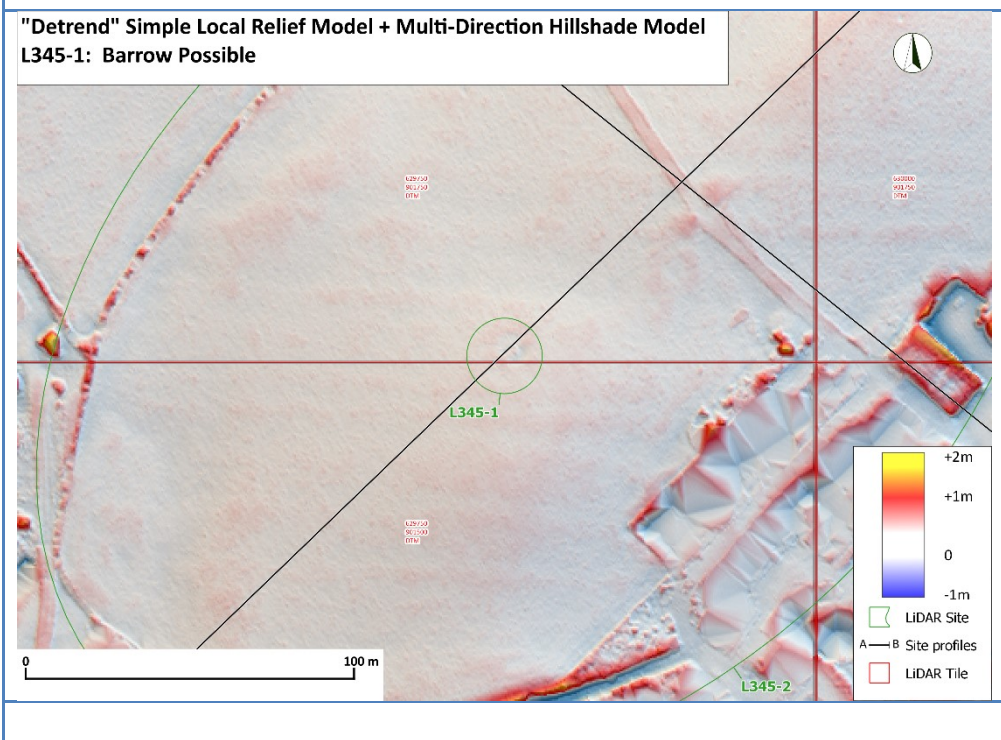
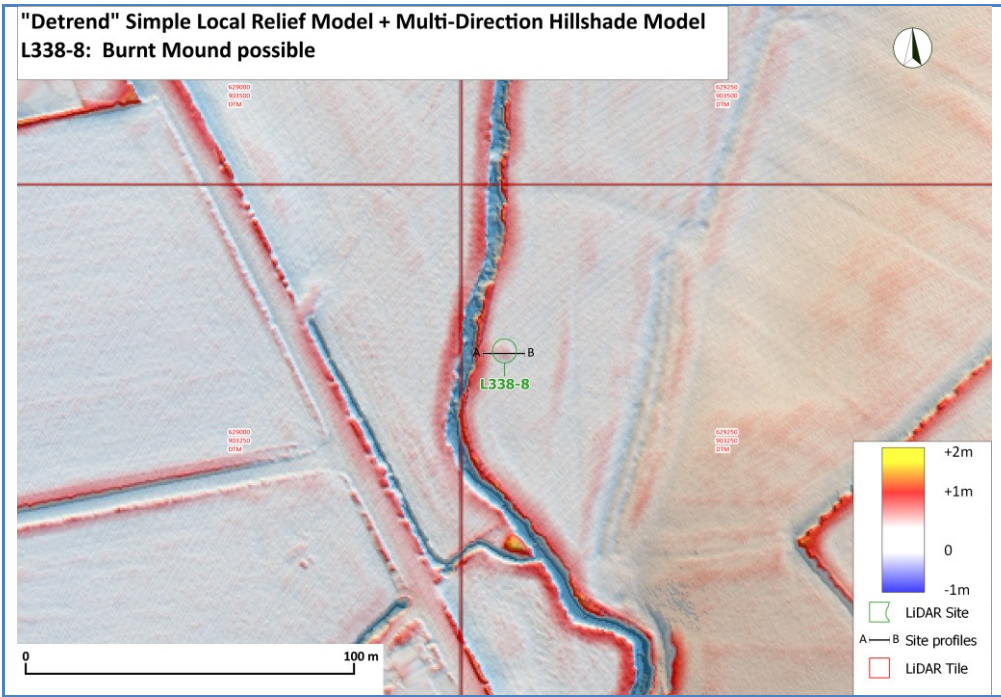
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L337-1: Burnt Spread Possible



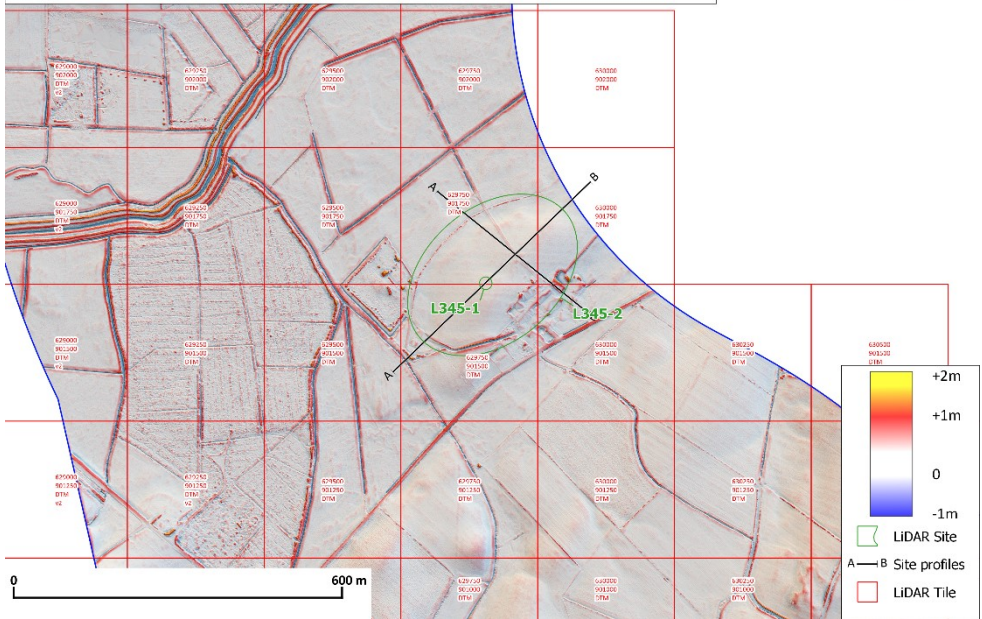




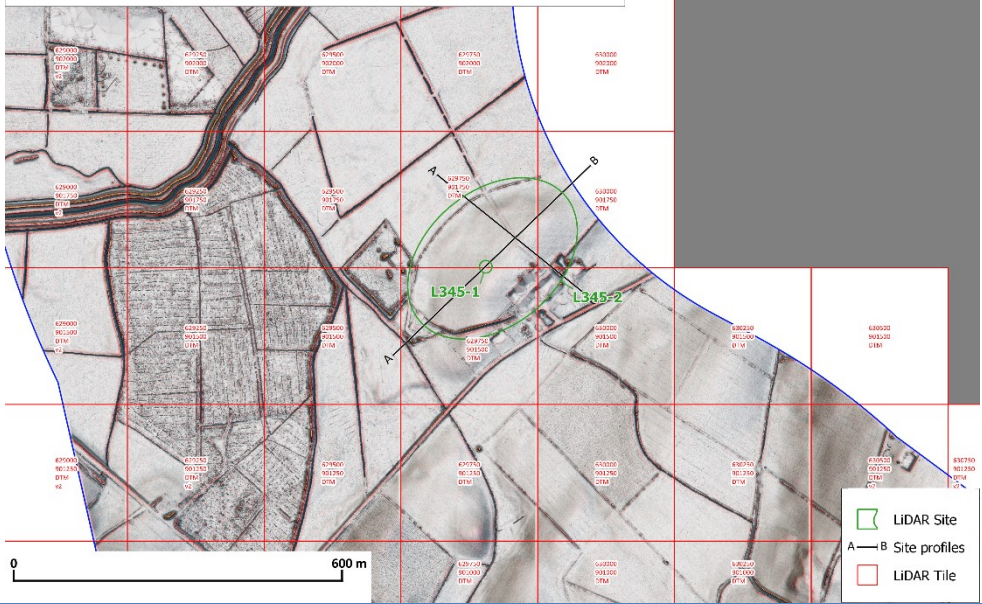


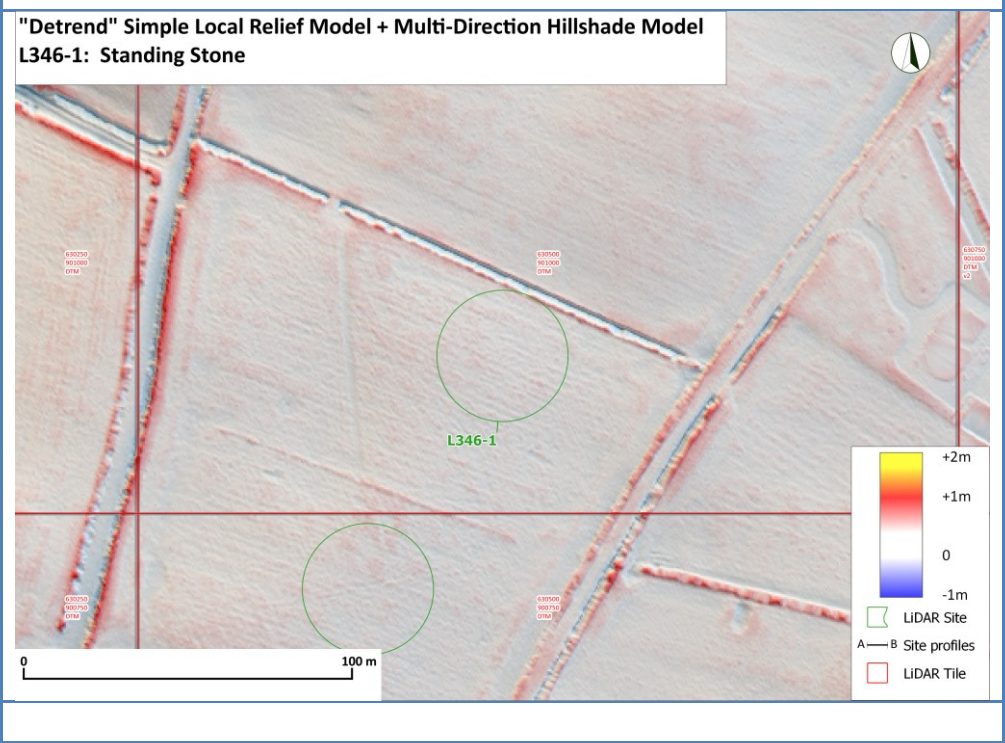
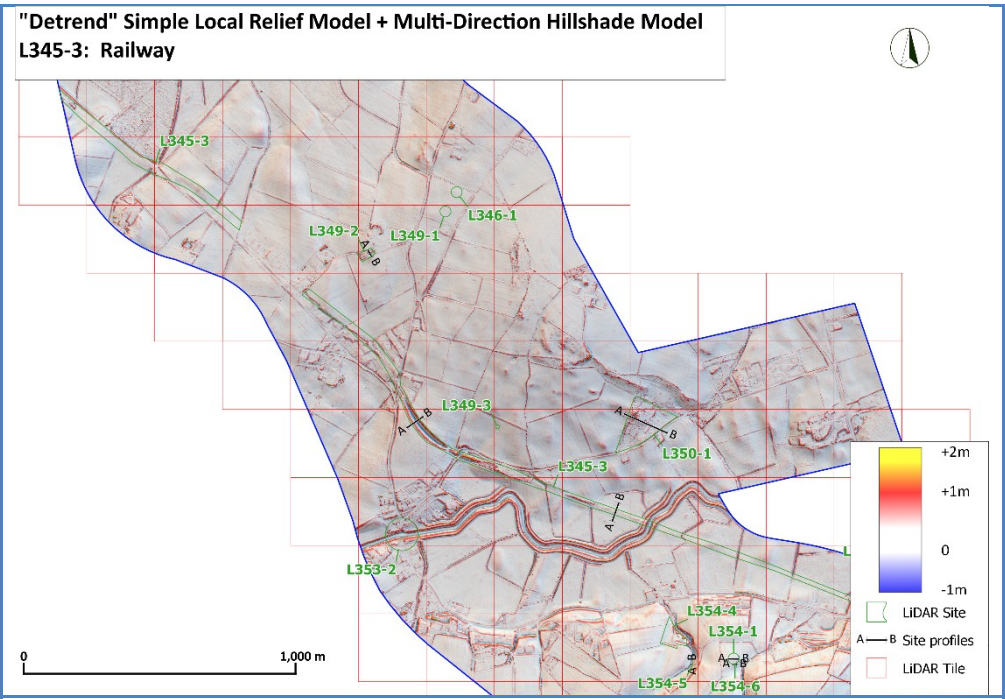


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L345-2: Enclosure Possible

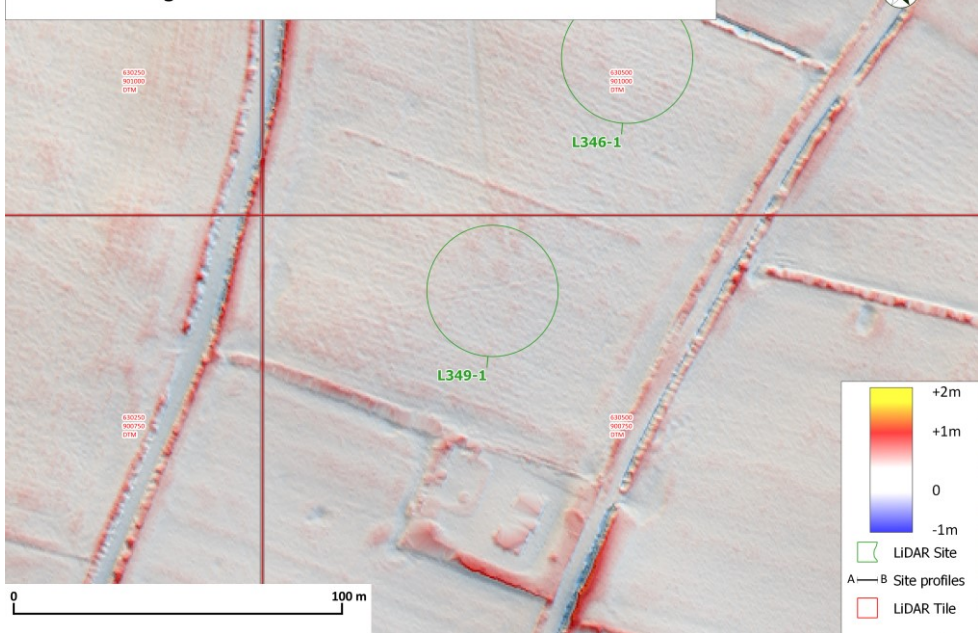


Composite Image:
Sky View Factor + Detrend Model + Multi-Direction Hillshade
L345-2: Enclosure Possible



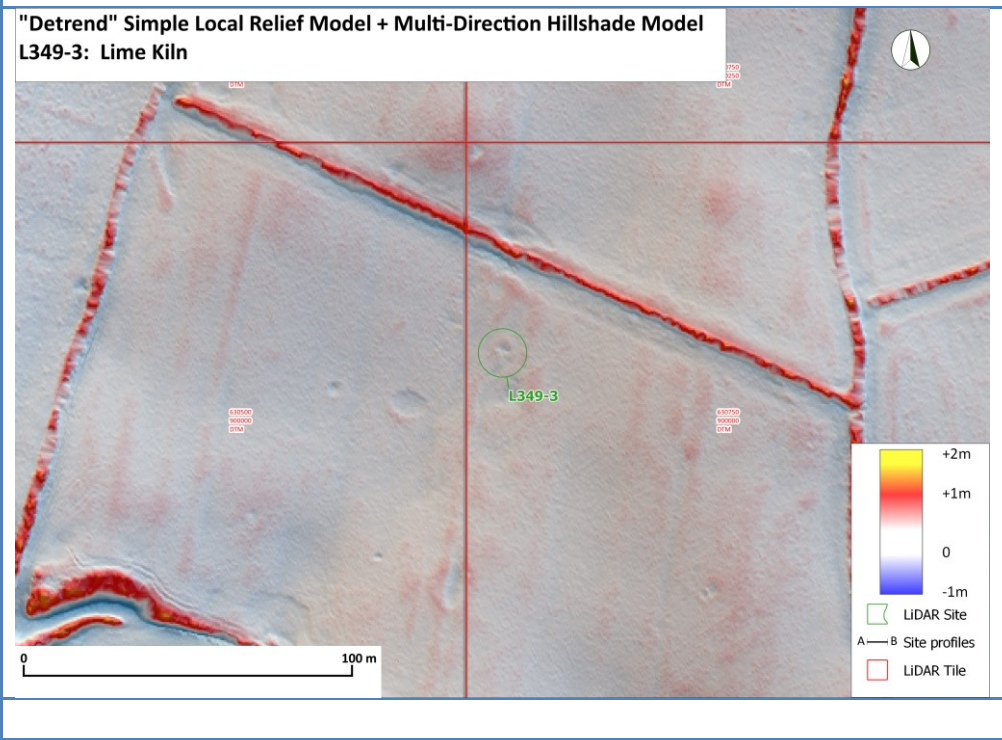
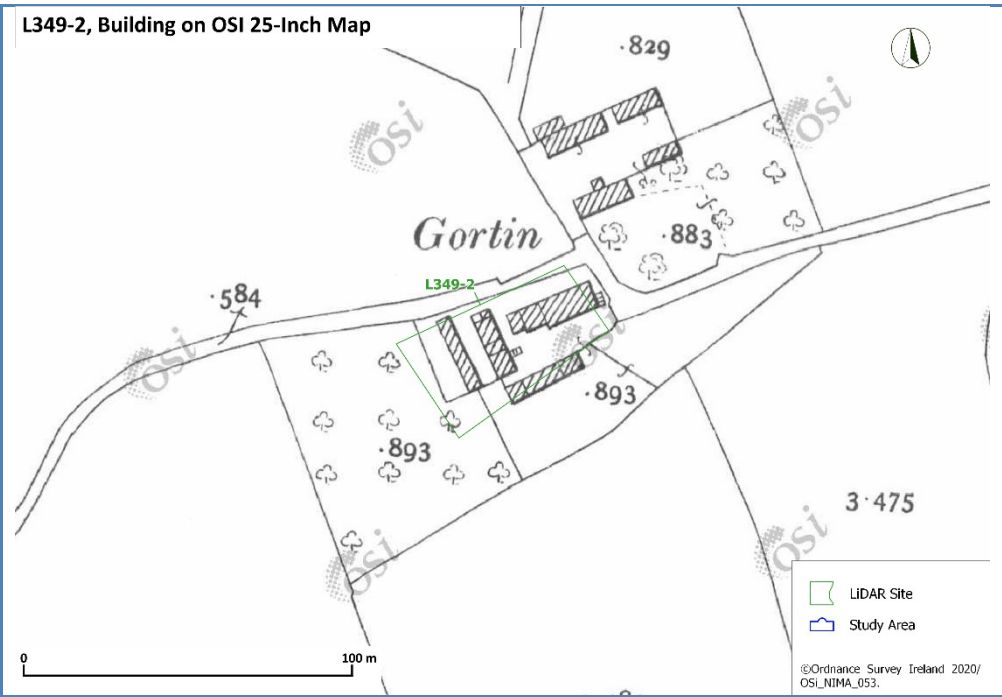


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L349-1: Standing Stone

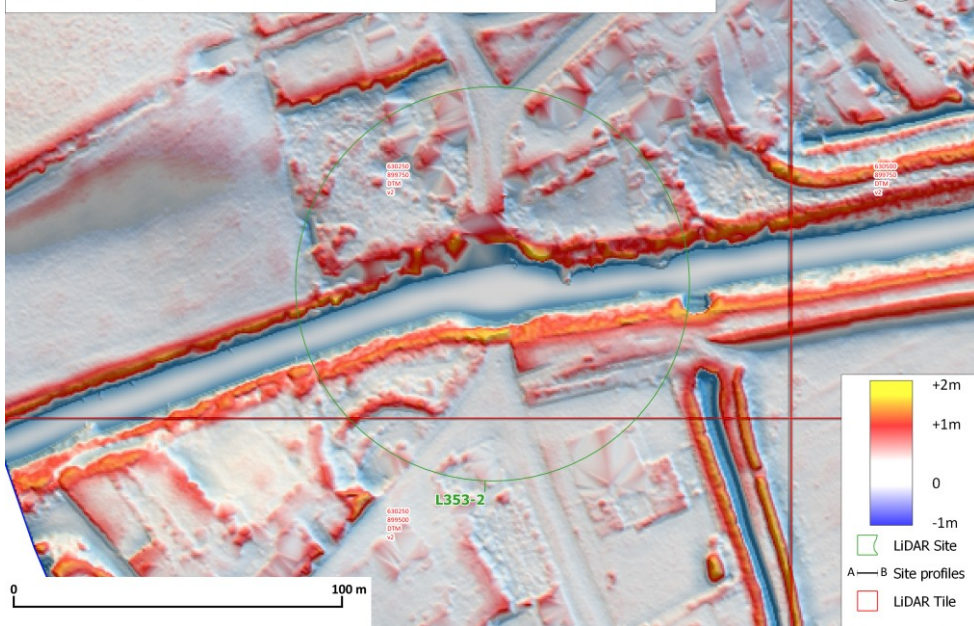


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L349-2: Building



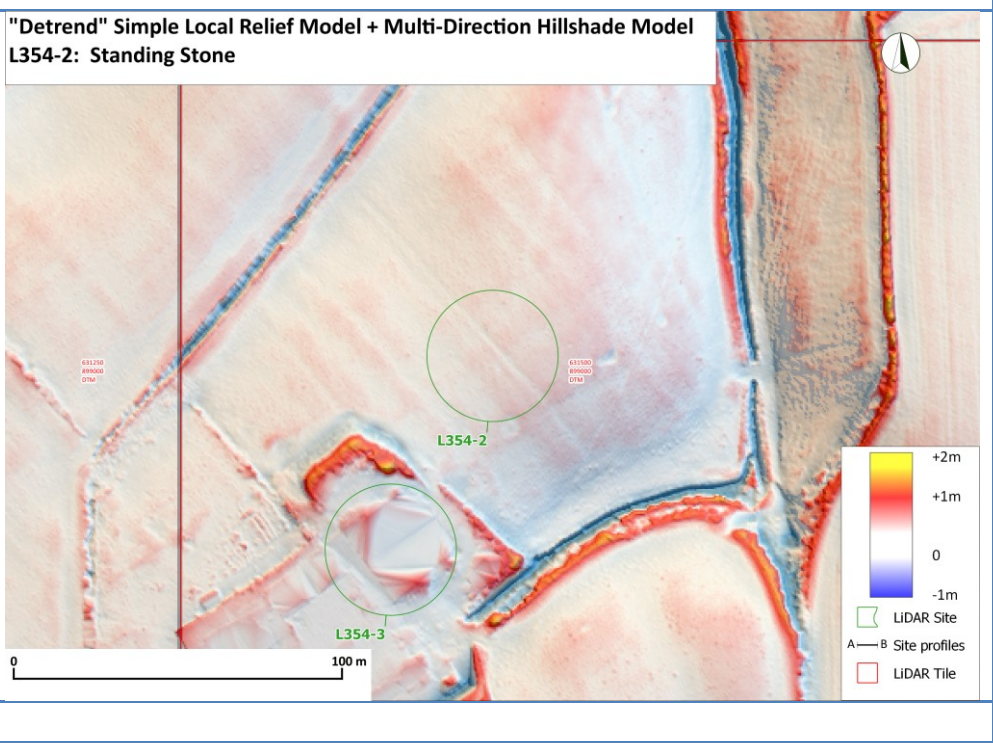
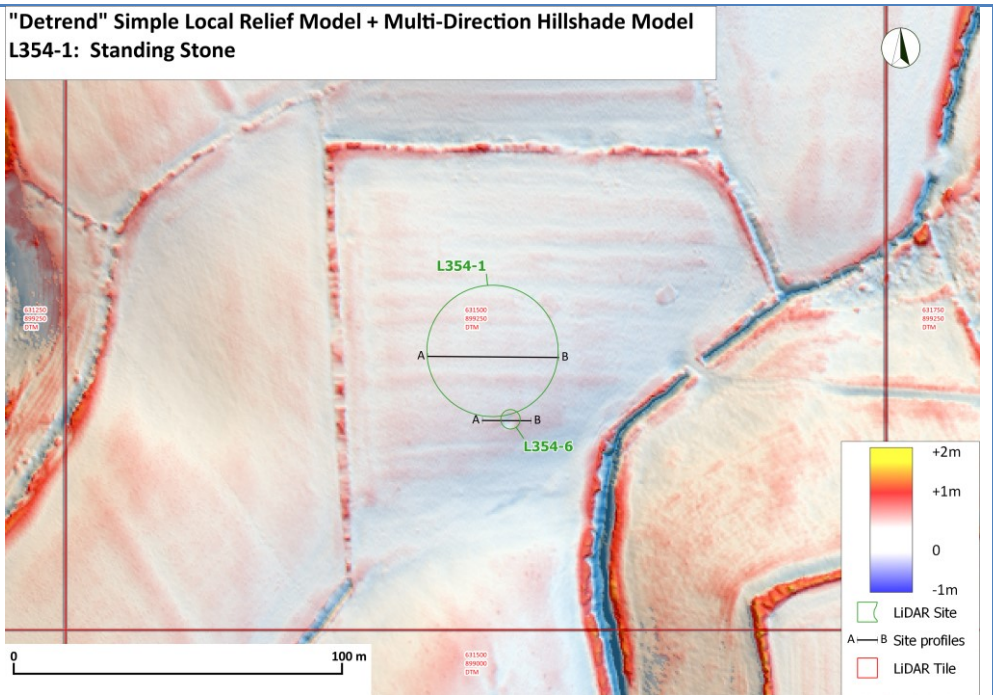


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L353-2: Bridge

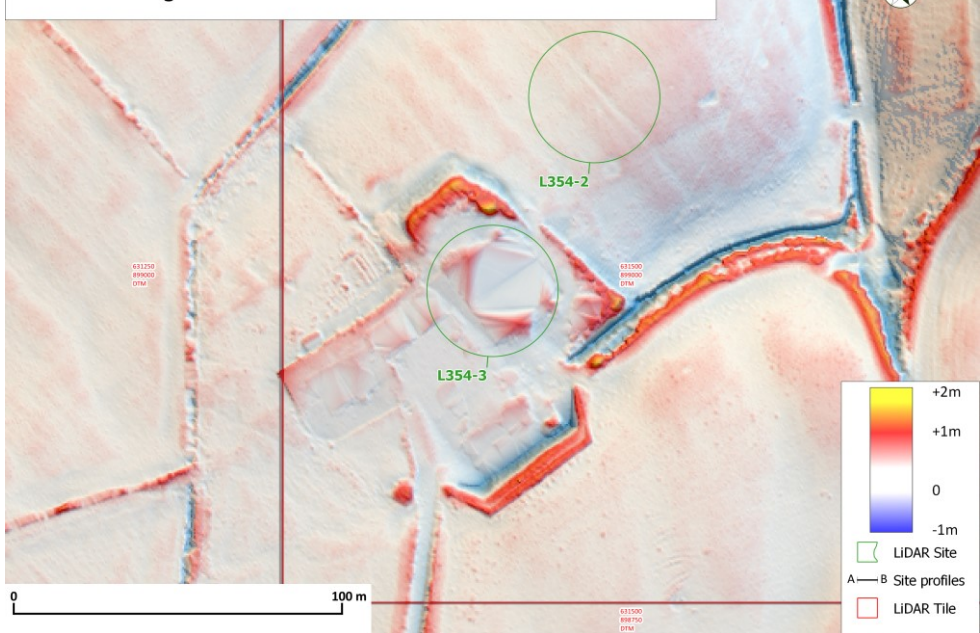


L353-2, Bridge on OSI 25-Inch Map



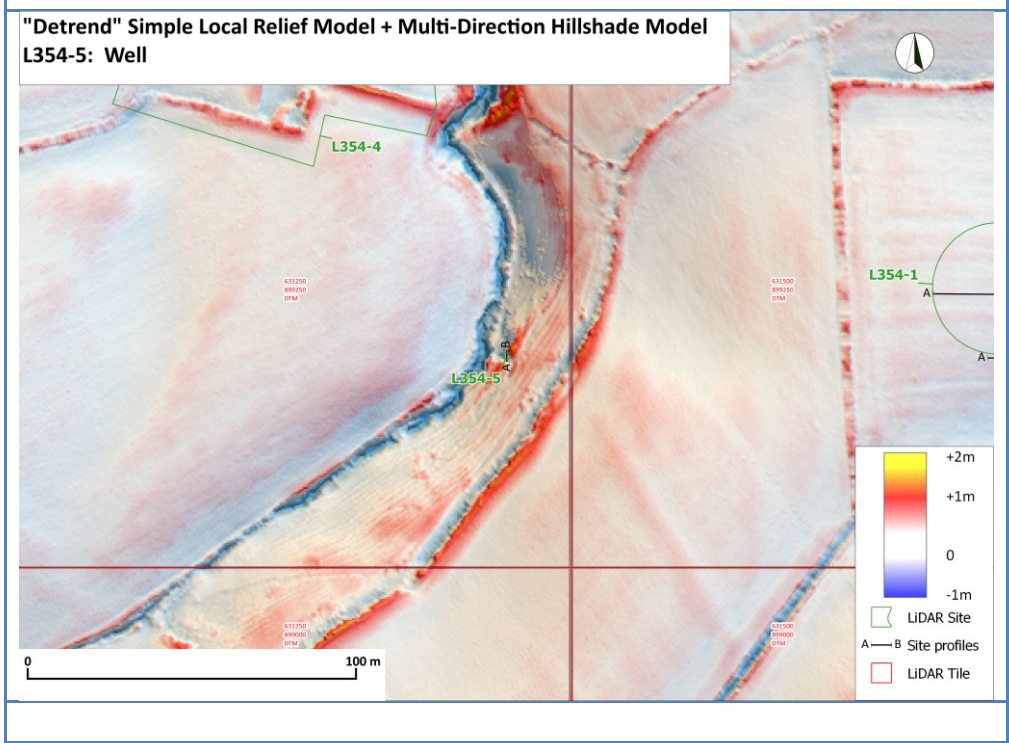
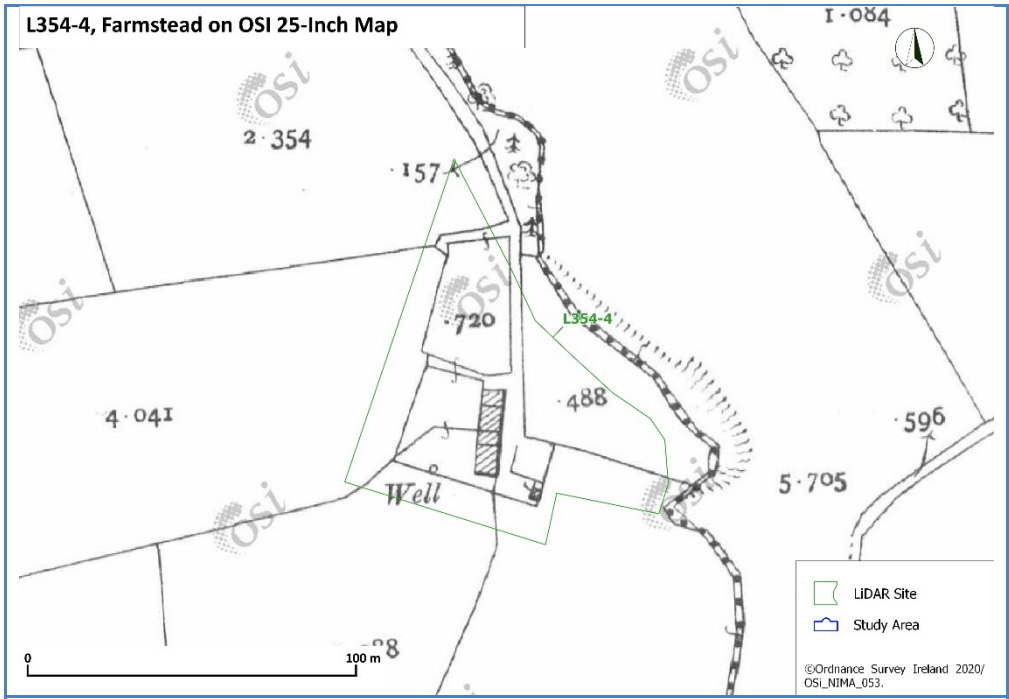


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L354-3: Standing Stone

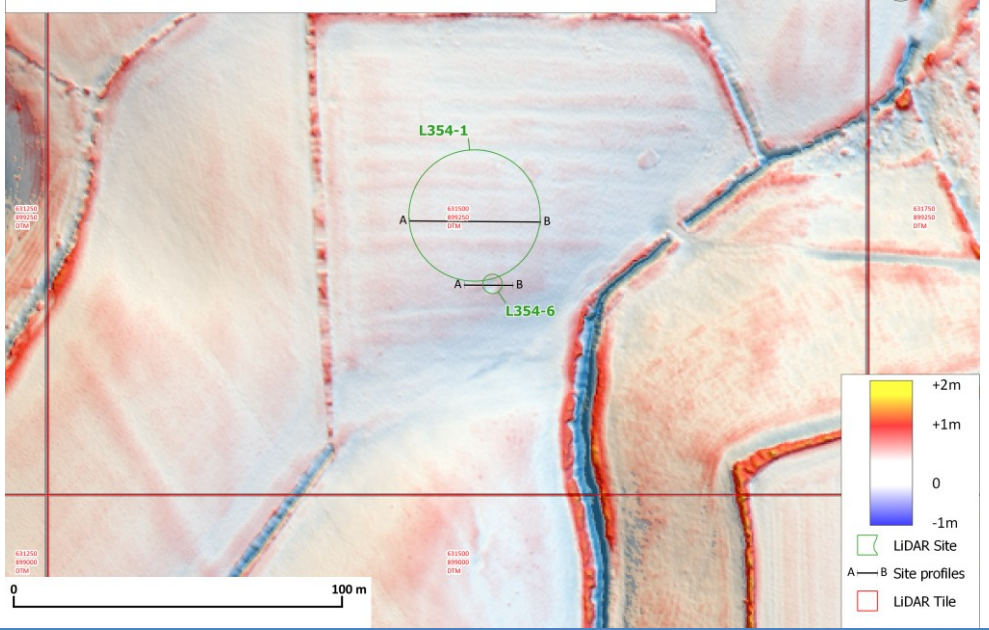


"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L354-4: Farmstead

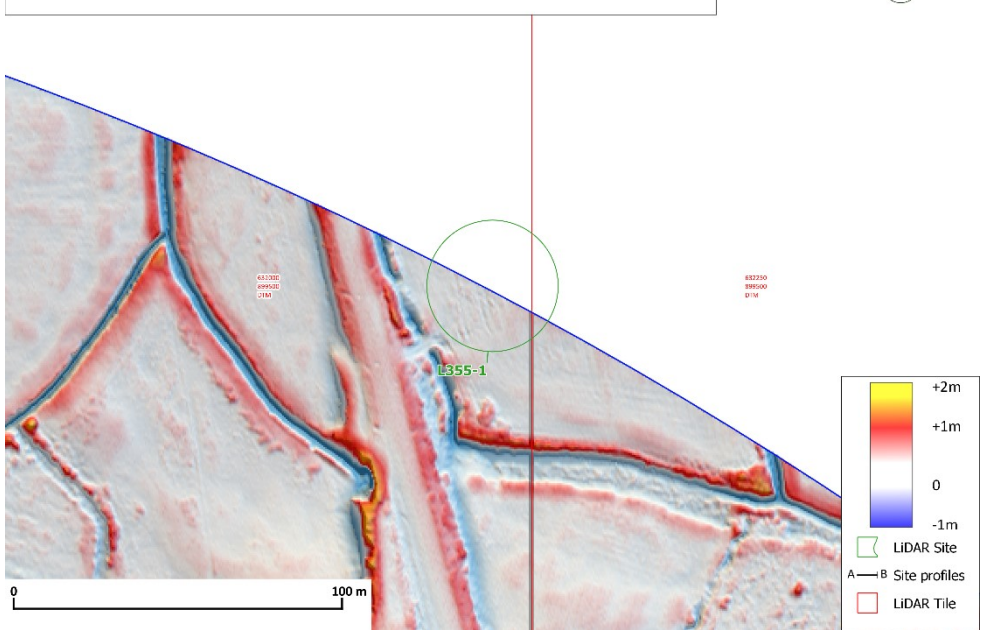


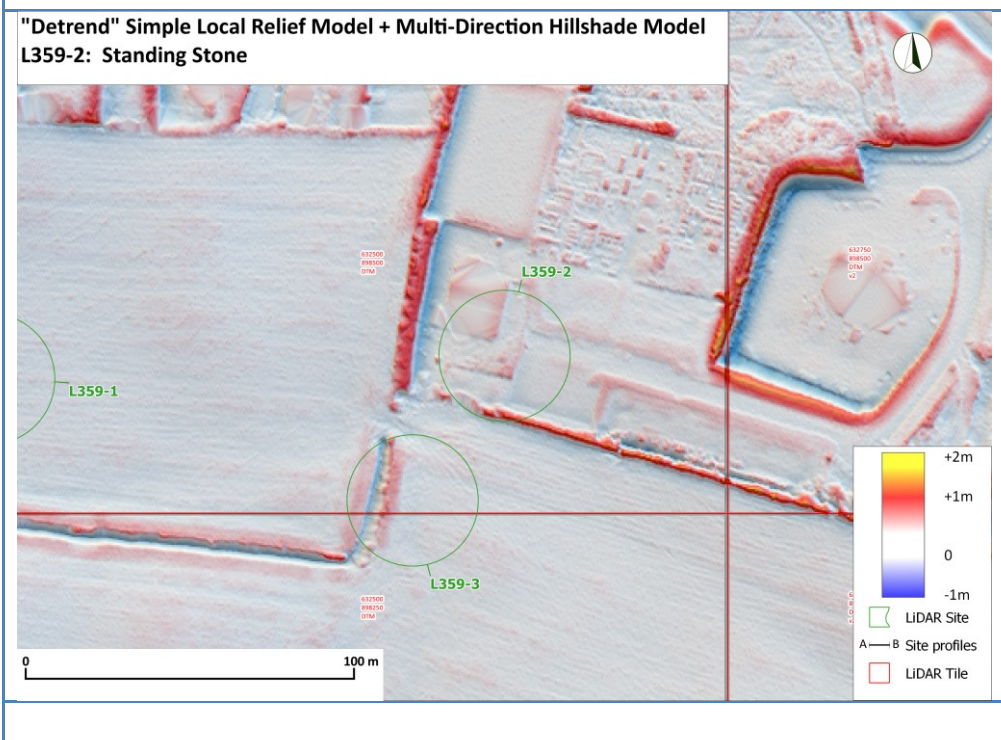
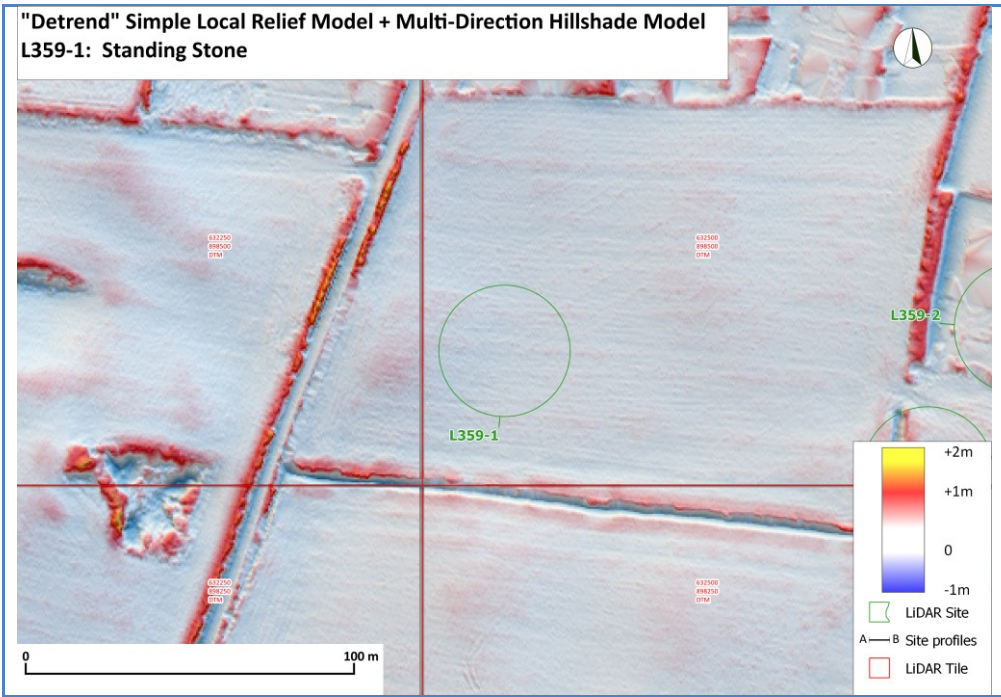


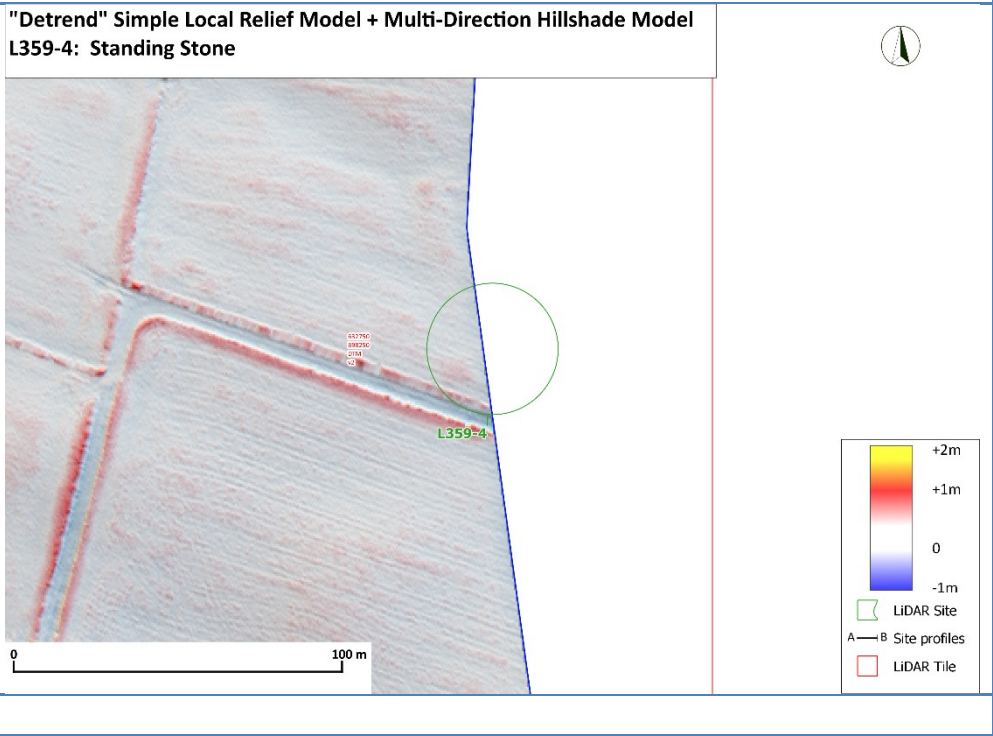
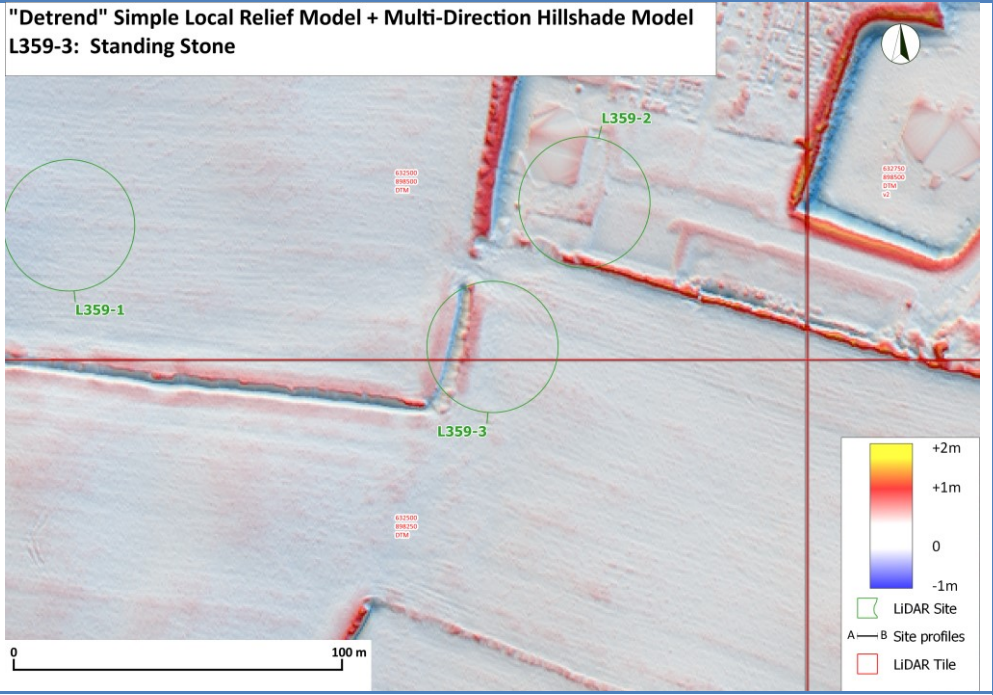
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L354-6: Pit possible

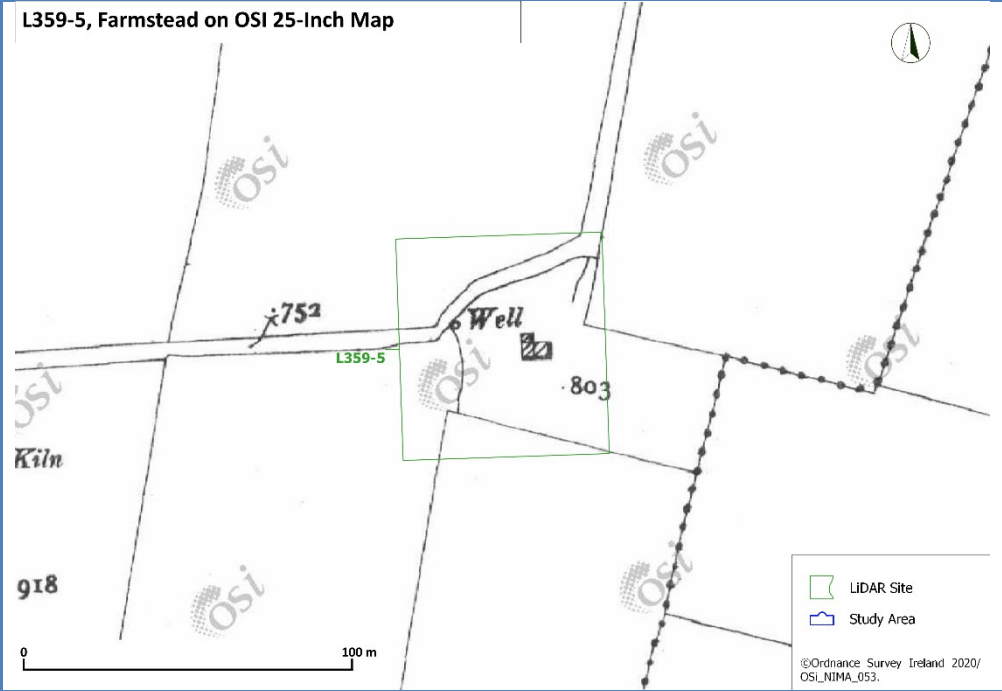
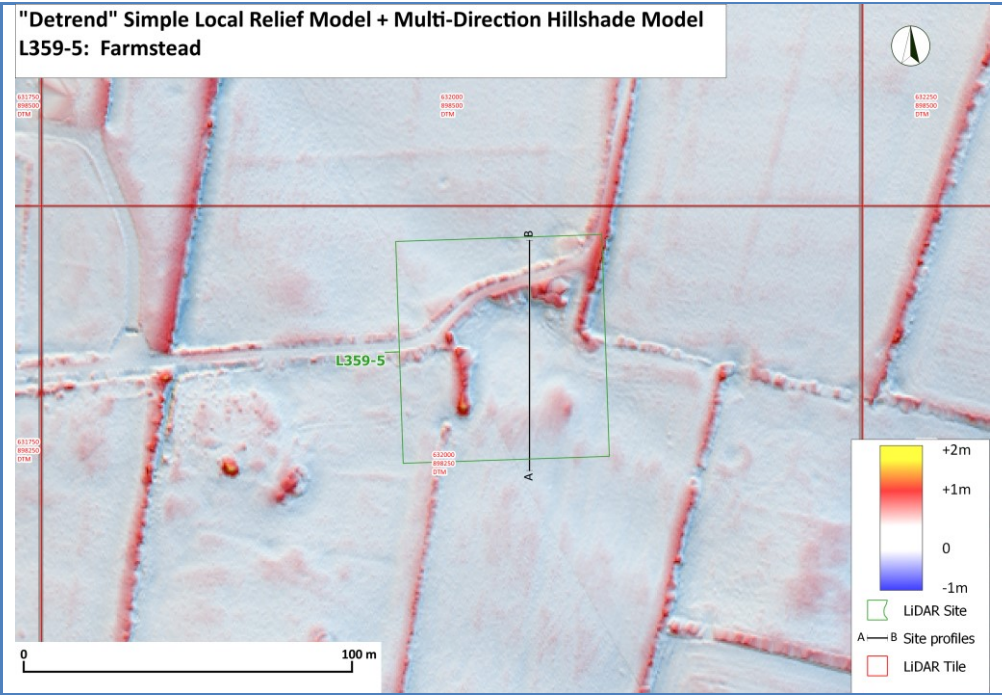


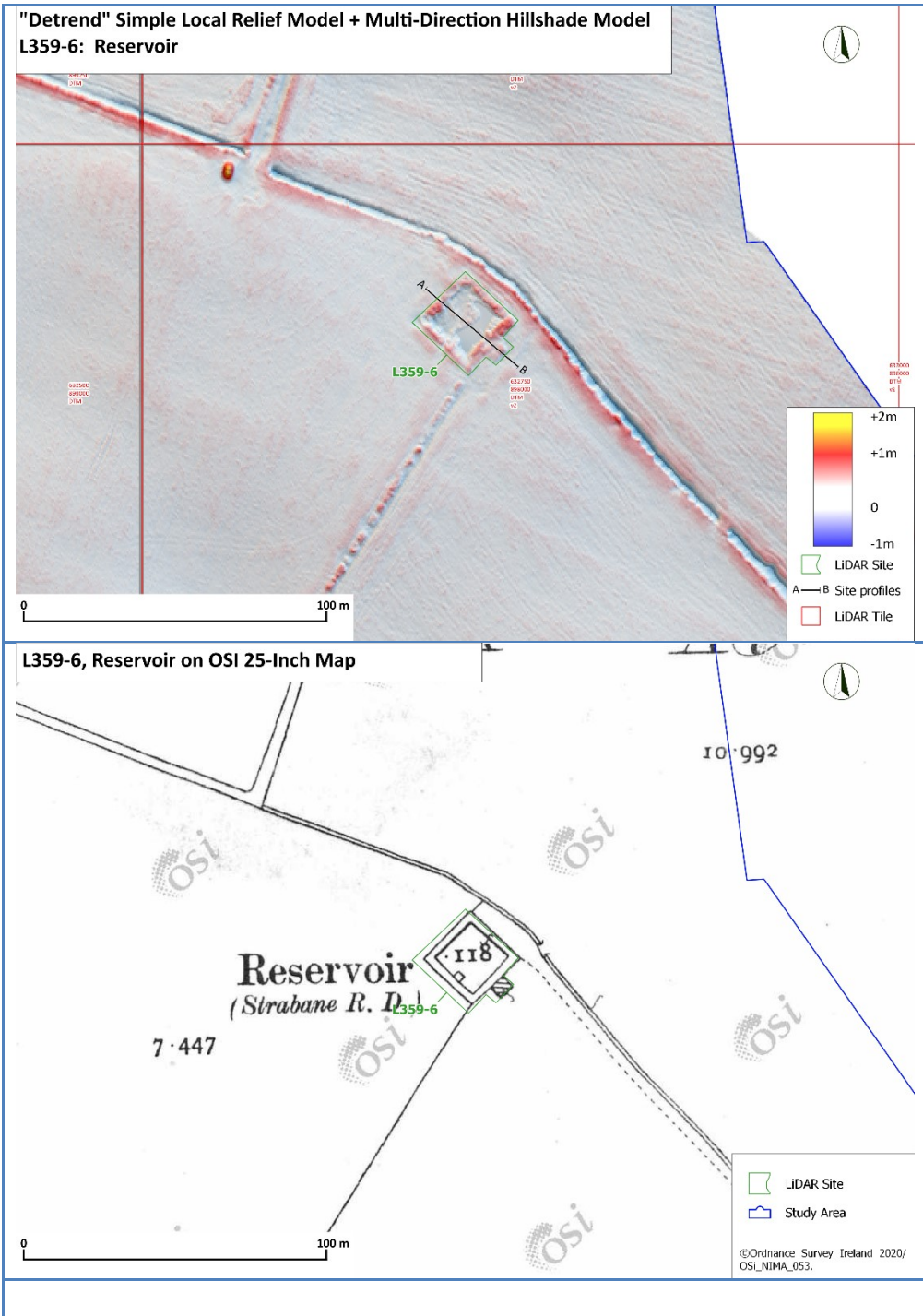
"Detrend" Simple Local Relief Model + Multi-Direction Hillshade Model
L355-1: Standing Stone

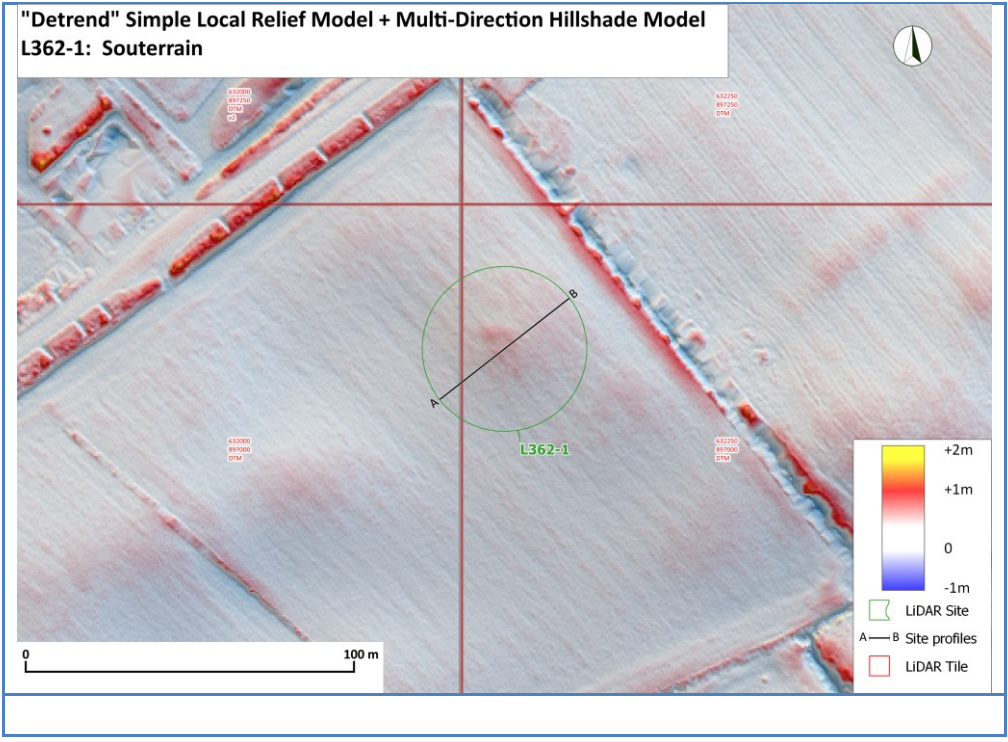












Appendix 2: Catalogue of LiDAR Sites

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L101-2	Lime Kiln	Lime Kiln site, depicted on the OS first ed. 6-inch map; apparent on LiDAR as a roughly circular earthwork c.23m in diameter; 1.43m high; with a hollow centre.	2	-	1	0	1	0	0	Callan Td.;Convoy Pr.;Raphoe South Br.	615930, 900238	615750_900000_ DTM_v2	0.05
L101-3	Enclosure	Enclosure; large roughly oval enclosure, delimited by a field boundary and located on a sloping hillside, aligned SW-NE measuring a maximum of 198m long by 148m wide.	2	-	0	1	1	1	1	Callan Td.;Convoy Pr.;Raphoe South Br.	615761, 900244	615500_9000000 ; 615500_900250_ DTM; 615750_900250_ DTM; 615750_900000_ DTM;	2.66
L101-4	Pit	Rectangular pit, possible retting pit depicted in wetland on historical map, measuring c.13.5m long SW-NE by 6m wide by 1m deep. Located c.7m north of a second such pit L101-5.	1	-	0	1	0	1	1	Cloghroe Td.; Convoy Pr.; Raphoe South Br.	615435, 900113	612250_900000_ DTM	0.01
L101-5	Pit	Rectangular pit, possible retting pit depicted in wetland on historical map, measuring c.13m long SW-NE by 2.6m wide by 0.7m deep. Located c.7m south of pit L101-4.	1	-	0	1	0	1	1	Cloghroe Td.; Convoy Pr.; Raphoe South Br.	615439, 900100	615250_900000_ DTM	0.01
L102-1	Barrow Possible	Two adjacent possible barrows identified in the low resolution LiDAR, but only partly within the high resolution study area. One possible feature being a circular mound 7.4m diameter, and 0.2m high; the second a circular mound	1	-	1	0	0	0	0	Callan Td.;Convoy Pr.;Raphoe South Br.	616120, 900387	616000_900250_ DTM_v2	0.02

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		measuring 9.6m diameter, 0.3m high, with a slight central hollow. Possibly marks left by modern cattle feeders.											
L103-1	Bullaun Stone	Bullaun stone (SMR: DG069-023----); located on a slightly irregular - shaped raised area; measuring 27.3m wide and c.0.23m high.	3	SMR: DG069-023----; AAP: S1AAP-06	0	0	0	0	0	Meenavoy Td.; Stranorlar Pr.; Raphoe South Br.	615740, 899724	615500_899500_ DTM; 615750_899500_ DTM	0.07
L103-2	Ringfort	Mound; recorded as a ringfort (SMR: DG069-024----), located on disturbed terrain and appears as an oval mound; measuring 41m in length and 24.6m in width, and 2.1m high above the surrounding land.	3	SMR: DG069-024----; AAP: S1AAP-06	0	0	1	1	1	Meenavoy Td.; Stranorlar Pr.; Raphoe South Br.	615696, 899510	615500_899250_ DTM; 615500_899500_ DTM	0.18
L105-1	Enclosure Possible	Oval track; apparent on LiDAR as a regular oval 'track' depression measuring 21m by 49.6m; with a track 4m wide and 0.8m deep. This feature is located in overgrown, uneven scrubby ground; archaeological significance uncertain.	1	-	1	0	0	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	614954, 898345	614750_898250_ DTM	0.16
L105-2	Pit	Pit; rectangular feature depicted on historical maps in wetland, measuring 13m by 5.6m by 0.1m deep, possible remains of retting pond or pit.	1	-	0	1	0	1	1	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	614979, 898402	614750_898250_ DTM	0.01
L105-3	Building	Building remains, depicted on historical map; rectangular enclosure c.43m SW-NE by c.27.4m surrounding building	2	-	0	1	1	1	1	Lettermakeny Td.;Stranorlar Pr.;Raphoe South Br.	614957, 898099	614750_898000_ DTM	0.12

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		outline 17m by 9m and c.0.1m high.											
L106-1	Ringfort	Ringfort (SMR: DG069 -028----), depicted on the OS first ed. 6-inch map; but since levelled. The remains of the enclosure may be indicated in the LiDAR data by a potential enclosure c.30m in diameter, with bank 10.5m wide and 0.1m high.	3	SMR: DG069-028----	0	0	0	0	0	Teevickmoy Td.; Stranorlar Pr.; Raphoe South Br.	615779, 898309	615750_898250_DTM	0.16
L106-2	Lime Kiln	Lime kiln site, depicted on the OS first ed. 6-inch map; apparent on LiDAR as a slightly raised area in the corner of a field measuring 7.8m by 4.2m and 0.6m high.	2	-	1	0	1	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	615349, 898078	615250_898000_DTM	0.02
L106-3	Farmstead	Farmstead with building beside a lane, depicted on the OS first ed. 6-inch map; a polygonal area 105m by 48m enclosing a rectangular raised area 42m by 7.4m and max. c.1.2m high.	2	-	1	0	1	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	615757, 897990	615500_897750_DTM; 615500_898000_DTM; 615750_897750_DTM; 615750_898000_DTM	0.38
L107-2	Building	Remains of a rectangular building sited on ground sloping to the NW, depicted on the OS first edition 6-inch map. The building remains are oriented NE-SW, measure 12.4 m by 13m and 1.3m high; the side of the building is a field boundary.	2	AAP: S1AAP-06	0	1	1	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	616076, 898641	616000_898500_DTM	0.02
L107-3	Lime Kiln	Lime kiln, depicted on the OS first edition 6-inch map; apparent in the LiDAR as an irregular oval mound measuring 10m by 11m	2	AAP: S1AAP-06	0	1	1	0	0	Teevickmoy Td.; Stranorlar Pr.;	616083, 898513	616000_898500_DTM	0.03

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		and 0.35 high, sited on a slight prominence.								Raphoe South Br.			
L109-1	Not archaeologically significant	Noted as a possible barrow in the low resolution LiDAR analysis; high resolution shows this is just part of an area of rough ground, most likely where rock is outcropping in a ridge.	0	-	1	0	0	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	614875, 897727	614750_897500_ DTM	0.06
L109-2	Farmstead	Farmstead, depicted on OS 25-inch maps: outline of yard and haggard measuring c. 44m by 35m, with internal low-relief partial remains of building on sloping ground measuring 16m by 8m and c.0.1m high, and a second building footprint measuring 10m by 4m and c.0.2m high.	2	-	0	1	1	1	1	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	614822, 897902	614750_897750_ DTM	0.14
L109-3	Lime Kiln	Lime kiln site, depicted on OS historical maps; circular feature measuring 3.6 in diameter and 0.2m high.	2	-	0	1	1	1	1	Backlees Td.;Stranorlar Pr.;Raphoe South Br.	614198, 897293	614000_897250_ DTM	0
L110-1	Barrow Possible	Barrow possible; circular raised area c.10.5m diameter; 0.5m high; located on the break of slope over low ground; possibly the mark of a cattle feeder.	1	-	1	0	0	0	0	Teevickmoy Td.;Stranorlar Pr.;Raphoe South Br.	615382, 897813	615250_897750_ DTM	0.02
L110-2	Farmstead	Farm buildings, depicted on historical maps; located in forested land; banks c.0.5m high and a rectangular raised area 23m by 13m and 0.7m high.	2	-	1	0	1	1	1	Dunwiley Td.;Stranorlar Pr.;Raphoe South Br.	615437, 897113	615250_897000_ DTM	0.23
L110-3	Lime Kiln	Lime kiln site, depicted on the OS first edition 6-inch maps; apparent	2	-	0	1	1	0	0	Dunwiley Td.;Stranorlar	615720, 897318	615500_897250_ DTM	0.01

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L110-4	Lime Kiln	on LiDAR as an oval area c.9m by 4m, in a raised bank c.2m high. Lime Kiln site, depicted on the OS first edition 6-inch map; apparent on LiDAR as an irregular mound on sloping ground, c.5m by c.4.5m and c.0.2m high.	2	-	0	1	1	0	0	Pr.;Raphoe South Br. Dunwiley Td.;Stranorlar Pr.;Raphoe South Br.	615637, 897141	615500_897000_ DTM	0
L110-5	Building	Building sites depicted on the OS first-edition 6-inch maps; two low-relief raised banks oriented NE-SW, sited on ground sloping to the E. The first (W) bank measures 10.5m by 4.5m and 0.4m high; the second (E) bank measures 15.4m by 3.5m and 0.2m high, and is separated from the first by 14m. The OS map depicts a number of enclosing field boundaries, a lane and a well associated with these two structures, though these are not apparent in the LiDAR data.	2	-	0	1	1	0	0	Dunwiley Td.; Stranorlar Pr.; Raphoe South Br.	615818, 897226	615750_897000_ DTM	0.11
L115-1	Not archaeologically significant	Noted as a possible circular barrow in the low resolution LiDAR analysis; found to be an irregular area of disturbed ground around a modern utility pole, and most likely associated with its construction.	0	-	1	0	0	0	0	Drumboe Upper Td.;Stranorlar Pr.;Raphoe South Br.	613886, 896164	613750_896000_ DTM	0.01
L115-2	Building	Structure, possible 18th-century farmstead (Route Selection S1-BH02); farmstead still occupied, outline of building 15m by 8m and 1.4m high.	2	RS: S1-BH02	0	0	1	1	1	Drumboe Upper Td.;Stranorlar Pr.;Raphoe South Br.	613978, 896223	613750_896000_ DTM	0.05

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L116-1	Ringfort	Trivallate ringfort (SMR: DG078-003----), 62m SW-NE by 57m NW - SE in total extent, sited on the western end of a natural ridge of high ground. Inner enclosure c.8m above surrounding field and c.18m diameter with banks c.4m wide and 0.9m high, separated from a denuded middle enclosure by c.9m; middle enclosure denuded bank c.3m wide and c.0.2m high, separated from outer enclosure by c.7m. Outer enclosure a bank c.0.7m high and 1.9m wide; no external ditches apparent. Gaps in inner and outermost banks suggest an eastern entrance approached along the ridge.	3	SMR: DG078-003----	0	0	1	1	1	Dunwiley; Macklees Td.; Stranorlar Pr.; Raphoe South Br.	614619, 896771	614500_896570_ DTM	0.33
L116-2	Building	Building, depicted on historical OS maps; rectilinear enclosure beside a road c.43.4m by c.23.4m surrounding building c.12m by 5m and 0.3m high.	2	-	0	1	1	1	1	Dunwiley; Macklees Td.; Stranorlar Pr.; Raphoe South Br.	614706, 896625	614500_896500_ DTM	0.09
L116-3	Well	Well, depicted on the OS 25-inch map, apparent on LiDAR as roughly circular area of disturbance 6.7m in diameter, c.0.15m high, with a central hollow c.2.9m wide and 0.24m deep.	2	-	0	1	1	1	1	Dunwiley Td.; Stranorlar Pr.; Raphoe South Br.	614689, 896585	614500_896500_ DTM	0
L117-3	Ringfort - Cashel	Cashel (SMR: DG078-004----), labelled as 'Fort' on OS first ed. 6-inch map; raised trapezoidal enclosure measuring c.41m by 26m and c.2m high, with banks	3	SMR: DG078-004----; AAP: S1AAP-05	0	0	1	0	1	Dunwiley Td.; Stranorlar Pr.; Raphoe South Br.	615532, 896869	615250_896750_ DTM; 615500_896750_ DTM	0.17

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		measuring 5m wide and about 0.6m high.											
L118-1	Building	Buildings depicted on the OS first ed. six-inch map; rectangular outline c.10m by 6m and 1.3m high.	2	AAP: S1AAP-05	1	0	1	0	0	Castlebane Td.;Stranorlar Pr.;Raphoe South Br.	616092, 896110	616000_896000_ DTM	0.01
L118-2	Enclosure possible	Possible circular enclosure; follows townland boundary on its east side as depicted on historical OS maps, measuring 51.5m in diameter with an external ditch of maximum 6.5m wide by 0.25m deep and an internal bank 4.5m wide by 0.4m high.	2	-	0	1	0	1	1	Mullaghagarry Td.;Stranorlar Pr.;Raphoe South Br.	616673, 896923	616500_896750_ DTM	0.19
L118-3	Quarry pit possible	Possible quarry pit; an irregular area 22m SW-NE, 12m NW-SE and 0.10m deep beside a road, on ground sloping to the E.	1	AAP: S1AAP-05	0	1	0	0	0	Castlebane Td.;Stranorlar Pr.;Raphoe South Br.	616385, 896077	616250_896000_ DTM	0.03
L121-1	Railway	Railway line (disused); part of the Donegal Railway Company narrow gauge railway (1892-1960); ranging from cuts c.20m wide and 1.5m deep; to embankments c.11m wide and 2m high; occasional external ditches c.4m wide; 0.4m deep; extending for c.1.7km and 1.3km through the survey area.	2	AAP: S1AAP-02	1	0	0	1	1	Ballybofey; Cappry; Cavan Lower; Corcam; Dooish; Mullandrait; Treanamullin Td.;Donaghmore; Stranorlar Pr.;Raphoe South Br.	612015, 895069	613500_894500_ DTM; 616250_895000_ DTM; 616750_895000_ DTM; 615750_895000_ DTM; 616000_895000_ DTM; 611500_895000_ DTM; 611500_895250_ DTM; 611750_895000_ DTM;	12.81

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
												612000_894750_ DTM; 612000_895000_ DTM; 612250_894750_ DTM; 612500_894750_ DTM; 612750_894500_ DTM; 612750_894750_ DTM; 613000_894500_ DTM; 613250_894500_ DTM	
L121-2	Weir	Historical weir; depicted on OS 25-inch map running NW -SE across the river, measuring C.107m long by c.10 -13m wide. It ends at start of millrace L121 -3 and is likely related to ironworks and mill complex (NIAH 40907708) to E.	2	-	0	1	1	1	1	Cappry; Ironworks Td.; Stranorlar Pr.;Raphoe South Br.	611912, 895246	611750_895750_ DTM; 611750_895000_ DTM	0.12
L121-3	Mill race	Mill race; depicted on historical maps leading from weir (L121 -2) on the River Finn, to a mill complex (NIAH 40907708) to E, measuring c.520m long by c.5.5m wide by 1m deep.	2	AAP: S1AAP-02	0	1	1	1	1	Ironworks Td.; Stranorlar Pr.;Raphoe South Br.	612025, 895193	612000_895000_ DTM; 611750_895000_ DTM;612250_895000_ DTM;	0.76
L122-4	Enclosure	Enclosure (SMR: DG077-011----); circular enclosure with internal area measuring c.20m in diameter, internal ditch c.0.5m deep,	3	SMR: DG077-011----; AAP: S1AAP-03	0	0	0	0	0	Creggan Td.;Stranorlar Pr.;Raphoe South Br.	612281, 895486	612250_895250_ DTM	0.07

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		surrounded by an external bank c.30m diameter and 0.6m high.											
L122-5	Mill race	Mill race of historical mill complex including weir, tail race and mill buildings to W, measuring c.224m long by 6m wide by c.1.6m deep delimited by a low, wide bank 1.5m wide by 0.5m high.	2	AAP: S1AAP-02	0	1	1	1	1	Ironworks;Drumboe Lower Td.; Stranorlar Pr.; Raphoe South Br.	612507, 895065	612250_895000_DTM;612500_895000_DT	0.22
L122-6	Lime Kiln	Roughly rectangular raised area where a lime kiln is depicted on the OS first edition 6-inch map, sited on ground sloping to the SE, measuring 19.2 by 16.8 and 1.2 high.	2	AAP: S1AAP-02	0	1	1	0	0	Ironworks Td.; Stranorlar Pr.;Raphoe South Br.	612246, 895219	612000_895000_DTM; 612250_895000_DTM	0.06
L123-1	Church Site	Church Site (SMR: DG078-005----), depicted on OS 25-inch maps; sub-rectangular area measuring c.77m E-W x 35m N-S, and a possible annex feature (c.60m E-W by 20m N-S) to the north.	3	SMR: DG078-005----; AAP: S1AAP-02	0	0	0	1	1	Drumboe Lower Td.; Stranorlar Pr.; Raphoe South Br.	613411, 895449	613250_895250_DTM	0.88
L123-2	Enclosure Possible	Possible ringfort identified from aerial photos in route selection, (Route Selection S1 -AP01); nothing archaeologically significant identified in LiDAR.	4	RS: S1-AP01; AAP: S1AAP-02	0	0	0	0	0	Ballynaglack Td.;Stranorlar Pr.;Raphoe South Br.	613515, 895915	613500_895750_DTM	0.03
L123-3	Holy Well	Holy well site (Route Selection S1-CH01) sited in a wooded area. The well is not visible in the LiDAR, but a number of paths are visible converging on this location.	2	RS: S1-CH01; AAP: S1AAP-02	0	0	0	0	0	Drumboe Lower Td.;Stranorlar Pr.;Raphoe South Br.	613430, 895556	613250_895500_DTM	0.09
L123-4	Enclosure Possible	Possible enclosure; irregular area of high ground 50m N-S, 46m E-W, c.4m high, in a wooded area with a track running round its north side;	1	AAP: S1AAP-02	1	0	0	0	0	Drumboe Lower Td.;Stranorlar	613417, 895766	613250_895500_DTM; 613250_895750_DTM	0.62

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		possibly also a natural geology outcrop.								Pr.;Raphoe South Br.			
L123-5	Enclosure Possible	Roughly circular feature, measuring c.26m in diameter by 0.2m high, possibly associated with church site L123 -1 located 36m to S.	1	AAP: S1AAP-02	0	1	0	0	0	Drumboe Lower Td.;Stranorlar Pr.;Raphoe South Br.	613430, 895556	613250_895500_ DTM	0.09
L123-6	Building	Site of a large building depicted on the OS first edition 6-inch map; apparent as a flattened area measuring c.32m E-W by 13m N-S on ground sloping steeply to the W.	2	AAP: S1AAP-02	0	1	1	1	1	Drumboe Lower Td.;Stranorlar Pr.;Raphoe South Br.	613310, 895374	613250_895250_ DTM	0.04
L124-2	Mill Pond	Mill pond dam and headrace, depicted on OS first ed. 6-inch map; dam 91m long, c. 10m wide and c.1.1m high; earthen bank flanking headrace c. 100m long; 7m wide and c. 1.6m high; mill pond filled in; mill outside LiDAR footprint.	2	-	1	0	0	1	0	Greenhills; Magherapaste; Drumboe Lower Td.;Stranorlar Pr.;Raphoe South Br.	614247, 895820	614000_895750_ DTM; 614250_895750_ DTM	0.36
L125-1	Burial Ground	Burial Ground; depicted on historical OS maps, being a rectilinear enclosure aligned WSW-ENE and extending outside the high -resolution LiDAR footprint, on sloping ground, with banks c.1m wide and 0.1m high, over a total area measuring 69.5m by 39.5m. Likely associated with hospital (L126-1) located 174m to S and Union Workhouse c.298m to S outside LiDAR study areas.	2	-	0	1	0	1	1	Lough Hill; Mullandrait Td.;Stranorlar Pr.;Raphoe South Br.	615997, 895642	615750_895500_ DTM;616000_895500_ DTM	0.23

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L126-1	Hospital	Hospital building site, depicted on the OS 25-inch map; rectangular outline of building measuring 35m by 10m, and 0.3m high. Likely related to workhouse building to south.	2	-	1	0	0	1	1	Mullandrait Td.;Stranorlar Pr.;Raphoe South Br.	616024, 895439	616000_895250_ DTM	0.08
L126-2	Ringfort - unclassified	Ringfort (SMR: DG078-018----), south side of circular feature c.35m in diameter, c.0.1m high, to the south of railway track (L121 - 1).	3	SMR: DG078-018----	0	0	1	0	0	Mullandrait Td.; Stranorlar Pr.; Raphoe South Br.	616053, 895068	616000_895000_ DTM	0.16
L128-1	Enclosure Possible	Possible enclosure identified from aerial photos (Route Selection S1 - AP02); nothing apparent on LiDAR.	4	RS: S1-AP02; AAP: S1AAP-01	0	0	0	0	0	Mullanachose Td.;Stranorlar Pr.;Raphoe South Br.	610915, 894131	610750_894000_ DTM	0.05
L128-2	Pond	Pond, depicted on historical OS maps in wetland; a rectangular feature measuring 35m long by 8.5m wide by 0.4m deep, with a U-shaped in profile. Possibly a retting pond.	2	AAP: S1AAP-01	0	1	0	1	1	Mullanachose Td.;Stranorlar Pr.;Raphoe South Br.	610974, 894156	610750_894000_ DTM	0.05
L129-1	Enclosure Possible	Farmstead site, tree -covered, and depicted on historical OS maps; a subcircular enclosure surrounded by a bank and ditch, measuring 40m N-S by 30m E-W; with a bank c.5m wide and 0.1m high, and external ditch c. 1.8m wide and 0.3m deep; footprint of internal house at E side of enclosure measuring 17.5m by 7m and c. 0.1m high.	2	-	1	0	1	1	1	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611749, 894716	611500_894500_ DTM; 611750_894500_ DTM	0.24
L129-2	Building	Buildings in a farmstead depicted on historical OS maps; rectangular	2	-	1	0	1	1	1	Cappry Td.;Stranorlar	611758, 894901	611500_894750_ DTM;	0.14

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		area c. 38m by 33m with building remains 21m by 8m and 0.6m high.								Pr.;Raphoe South Br.		611750_894750_DTM	
L129-3	Farmstead	Farmstead site, depicted on historical OS maps; but now area of field boundaries and trees; rectangular depression 17m by 9m and up to 5m deep, no buildings apparent.	2	-	1	0	1	1	1	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611665, 894656	611500_894500_DTM	0.05
L129-4	Lime Kiln	Lime Kiln site depicted on the OS first ed. 6-inch map; oval mound 10m by 6m and 0.2m high.	2	-	1	0	1	0	0	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611338, 894493	611250_894250_DTM; 611250_894500_DTM	0.02
L129-5	Barrow possible	Barrow possible; circular feature with internal shallow depression measuring 3.6m in diameter and 0.1m deep, located on north facing slope on top of ridge. Possibly also the outline mark of a modern circular cattle feeder.	1	-	0	1	0	0	0	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611913, 894941	611750_894750_DTM	0
L131-4	Ringfort	Enclosure (SMR: DG078-013----). Marked on the first ed. OS 6-inch map; but severely impacted by construction of rail line in the early 20th century; nothing apparent on LiDAR.	4	SMR: DG078-013----	0	0	1	0	0	Ballybofey Td.; Stranorlar Pr.; Raphoe South Br.	613509, 894603	613250_894500_DTM; 613500_894500_DTM	0.16
L137-1	Enclosure possible	Oval enclosure possible; depicted on historical OS maps as curving field boundary to W, S and E; apparent on LiDAR as an enclosure measuring c.78m by c.60m, with an external bank measures 0.7m high by 5m wide.	1	-	0	1	0	1	1	Dooish Td.; Stranorlar Pr.; Raphoe South Br.	610324, 893242	610250_893250_DTM;610250_893000_DTM	0.37

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L138-1	Path Possible	Possible road or path, depicted on OS second ed. 6-inch map; track c. 9m wide and c.1.9m high on sloping ground; with slight indication of a ditch on the up - slope side c.3m wide and 0.2m deep, c.516m long.	2	-	1	0	0	0	1	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611753, 893702	611500_893500_ DTM; 611750_893500_ DTM; 611750_893750_ DTM	0.52
L138-11	Building	Buildings, depicted on OS first ed. 6-inch map; located in pasture field adjacent to road; rectangular outline 17.7m by 10.6m; banks c.5m wide and 0.45m high.	2	-	1	0	1	0	1	Cappry Td.;Stranorlar Pr.;Raphoe South Br.	611168, 893390	611000_893250_ DTM	0.05
L138-12	Pond	Rectangular pond 25m E-W, 7m N-S and 0.7m deep, depicted on the OS 25-inch map; possibly associated with the adjacent mill race (L138 -6).	1	AAP: S3AAP-03	0	1	1	1	1	Feddyglass Td.;Taughboy ne Pr.;Raphoe North Br.	629445, 903129	629250_903000_ DTM	0.02
L138-2	Souterrain	Souterrain (SMR: DG077 -033----), labelled "Duggan's Cellar" on OS 25-inch maps; an overgrown, irregular area measuring 13m by 13m and c.0.7m high with a rectangular mound c.5m by 5m and c.1.5m high, possibly the result of disturbance from the construction of an adjacent modern industrial building.	3	SMR: DG077-033----	0	0	0	1	1	Cappry Td.; Stranorlar Pr.; Raphoe South Br.	611386, 893330	611250_893250_ DTM	0.08
L138-7	Lime Kiln	Lime Kiln, depicted on historical OS maps; sited on a slope, apparent as a irregular oval mound 15m by 7m and 0.2m high.	2	-	1	0	1	1	0	Goland Td.;Donaghmore Pr.;Raphoe South Br.	611151, 893041	611000_893000_ DTM	0.04
L138-8	Building	Building site, depicted on the OS first ed. 6-inch map; raised	2	-	1	0	1	0	0	Goland Td.;Donaghmore	611137, 893018	611000_893000_ DTM	0.04

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		rectangular outline in rough pasture field measuring 18m by 11m; with outline earthwork banks c. 8m wide and c. 0.5m high.								ore Pr.;Raphoe South Br.			
L138-9	Lime Kiln	Lime Kiln, depicted on the OS first ed. 6-inch map; slight circular mound 23m diameter and 0.6m high; with a slight hollow to the SW quadrant; sited on sloping ground.	2	-	1	0	1	0	0	Goland Td.;Donaghmore Pr.;Raphoe South Br.	611231, 893201	611000_893000_DTM	0.05
L141-2	Embankment	Embankment, raised ground c. 844m long; 25m wide; and up to 2m higher than fields; with road (N41) meandering along its top; flanking ditches; embankment presumably protecting low-lying field from flooding of the adjacent River Daurnett.	2	-	1	0	1	1	1	Dooish Td.;Stranorlar Pr.;Raphoe South Br.	610302, 892767	610750_893000_DTM; 609750_892500_DTM; 610000_892500_DTM; 610000_892750_DTM; 610250_892500_DTM; 610250_892750_DTM; 610500_892750_DTM; 610500_893000_DTM	2.85
L210-1	Ringfort	Ringfort (SMR: DG053-026----), sited on a ridge, heavily disturbed by a modern golf course; indistinct enclosure c.25m-diameter raised area with no apparent enclosing bank or ditch. Note: mislabelled as L201-2 in Report 1.	3	SMR: DG053-026----; AAP: S2AAP-01	0	0	1	1	1	Ballyraire Td.; Conwal Pr.; Kilmacrenan Br.	618875, 911698	618750_911500_DTM	0.32

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L212-2	Pit	Possible quarry pit, roughly circular, measuring 9m in diameter, with an irregular profile maximum 0.2m deep.	1	-	0	1	0	0	0	Farsetmore Td.;Leck Pr.;Raphoe North Br.	620981, 911656	620750_911500_ DTM	0.01
L212-3	Enclosure Possible	Possible circular enclosure, a raised area measuring c.40m in diameter with broad banks c14m wide by 0.14m high.	1	-	0	1	0	0	0	Drumreggan Td.;Leck Pr.;Raphoe North Br.	620852, 911348	620750_911250_ DTM	0.15
L213-1	Redundant Record (SMR)	Redundant record (SMR: DG053-052----); nothing apparent on LiDAR.	4	SMR: DG053-052----	0	0	0	0	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621347, 911689	621250_911500_ DTM	0.03
L213-2	Rock Art	Rock art (SMR: DG053-02001 -); nothing archaeologically significant apparent on LiDAR.	4	SMR: DG053-027001-	0	0	1	0	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621418, 911764	621250_911750_ DTM	0.13
L213-3	Rock Art	Rock Art (SMR: DG053-027002 -); nothing archaeologically significant apparent on LiDAR.	4	SMR: DG053-027002-	0	0	1	0	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621504, 911811	612500_911750_ DTM	0.13
L213-4	Rock Art	Rock Art (SMR: DG053-027003 -); nothing archaeologically significant apparent on LiDAR.	4	SMR: DG053-027003-	0	0	1	0	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621522, 911825	612500_911750_ DTM	0.13
L213-5	Rock Art	Rock Art (SMR: DG053-027004 -); nothing archaeologically significant apparent on LiDAR.	4	SMR: DG053-027004-	0	0	1	0	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621548, 911808	612500_911750_ DTM	0.13
L213-6	Church and Graveyard	Church and Graveyard (DG053-028---- & DG053-028001 -); site overlain by the Letterkenny Branch of the Londonderry & Lough Swilly Railway (1883-1953; reused as the	4	SMR: DG053-028----;DG053-028001-	0	0	0	1	1	Trimragh Td.; Leck Pr.; Raphoe North Br.	621387, 911469	621250_911250_ DTM	1.13

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		N13); nothing archaeologically significant apparent on LiDAR.											
L213-7	Well	Well, marked 15m to E on the OS 25-inch map, low-level circular feature 7.3m in diameter, banks 2.1m wide by 0.15m high to W and 1m wide by 0.01m high to E.	2	-	0	1	0	1	0	Trimragh Td.; Leck Pr.; Raphoe North Br.	621645, 911380	621500_911250_ DTM	0.01
L214-2	Railway	Railway line (disused; Route Selection S2-BH02); part of the Letterkenny Branch of the Londonderry & Lough Swilly Railway (1883-1953); 5m-10.5m wide; 1.5m deep in cutting; 628m long in survey area; partly reused by the N13. See also L216 -1 & L310 -1.	2	NIAH: 40905337; RS: S2-BH02; AAP: S2AAP-03 & S2AAP-02	0	0	0	1	1	Trimragh Td.;Leck Pr.;Raphoe North Br.	622278, 911023	622000_910500_ DTM; 622000_910750_ DTM; 622000_911000_ DTM; 622000_911250_ DTM; 622250_910750_ DTM; 622250_911000_ DTM; 622250_911250_ DTM; 622250_910500_ DTM	1.98
L215-1	Standing Stone	Standing stone (SMR: DG054-031--); the OS first ed. 6-inch map depicts a trigonometric point in this location; nothing apparent on LiDAR.	4	SMR: DG054-031----	0	0	0	1	1	Raymoghly Td.; Raymoghly Pr.; Raphoe North Br.	623933, 911151	623750_911000_ DTM_v2	0.13
L215-2	Cultivation Ridges Possible	Ridges on LiDAR data; possibly from cultivation; rectangular area of ridges along ridge of a hill sloping S; overlooking Corkey River; measuring 106m by 60m; 8 ridges each c.7m wide; 7m apart;	1	-	1	0	0	0	0	Rossbrackan Td.;Leck Pr.;Raphoe North Br.	623146, 911422	623000_911250_ DTM	0.85

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		60m long and 0.1m high; nothing indicated on historical OS maps.											
L215-3	Barrow Possible	Low profile circular feature, possible barrow measuring c.7m in diameter by 0.1m deep.	1	-	0	1	0	0	0	Raymoghly Td.; Raymoghly Pr.; Raphoe North Br.	623914, 911167	623750_911000_ DTM	0
L217-2	Railway	Railway line (disused; Route Selection S2 -BH03 & S2 -BH04); part of the Strabane and Letterkenny Railway (1909-1960) narrow gauge railway; embankment 22m wide at base to 4.2m wide at top; 5.4m high; cuttings 22m wide and 7.2m deep; c.2km in survey area.	2	NIAH: 40905394; RS: S2-BH04; AAP: S2AAP-02	0	0	0	0	1	Bunnagee; Drumany; Coaghmill; Dromore Td.;Leck Pr.;Raphoe North Br.	620158, 910495	620500_910750_ DTM; 620750_910500_ DTM; 620750_910750_ DTM; 621000_910500_ DTM; 619000_910000_ DTM; 619250_910000_ DTM; 619500_910000_ DTM; 619500_910250_ DTM; 619750_910250_ DTM; 620000_910250_ DTM; 620000_910500_ DTM; 620250_910250_ DTM; 620250_910500_ DTM;	4.95

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
												620500_910500_ DTM	
L218-1	Farmstead	Farmstead, depicted on the OS first ed. 6-inch map; irregular area straddling a stream c.96m by 105m and c.1m high; no structural remains.	2	-	1	0	1	1	1	Drumany; Dromore Td.;Leck Pr.;Raphoe North Br.	620518, 910141	620250_910000_ DTM; 620500_910000_ DTM	0.62
L219-1	Pits	Pits (X3); depicted on historical OS maps; located next to a stream; rectangular pits 12m to 21m long; 4.5m to 7m wide and 0.7m to 1.1m deep; possible retting pits.	1	-	1	0	0	1	1	Dromore Td.;Leck Pr.;Raphoe North Br.	621190, 910693	621000_910500_ DTM	0.13
L220-5	Standing stone	Standing stone (SMR: DG054-036--); labelled as 'Standing Stone' on OS 6-inch map; nothing apparent on LiDAR.	4	SMR: DG054-036----; AAP: S2AAP-02	0	0	1	0	0	Rossbrackan Td.; Leck Pr.; Raphoe North Br.	622561, 910598	622500_910500_ DTM	0.13
L221-1	Standing Stone	Standing stone (SMR: DG054-038--); sited on elevated part of field; standing stone on low mound c.22m SW-NE by 18m NW-SE, and 0.35m high.	3	SMR: DG054-038----; AAP: S3AAP-01	0	0	1	1	1	Pluck Td.; Leck Pr.; Raphoe North Br.	623309, 910278	623250_910250_ DTM	0.07
L229-1	Lime Kiln	Lime Kiln, depicted on the OS first ed. 6-inch map; mound 26m diameter and 0.8m high.	2	-	1	0	1	0	0	Listellian Td.;Leck Pr.;Raphoe North Br.	619532, 908307	619500_908250_ DTM	0.05
L302-1	Circular Feature	Circular enclosed area 27.8m diameter and bank 2.5m; c.0.1m high; site of buildings on historical OS maps; modern feature associated with training horses.	0	AAP: S3AAP-01	1	0	0	0	0	Raymoghly Td.;Raymoghly Pr.;Raphoe North Br.	624090, 911149	624000_911000_ DTM_v2	0.08
L302-2	Church and Graveyard	Church and graveyard (SMR: DG054-032----), graveyard (DG054-032001-), and architectural	3	SMR: DG054-032----; DG054-032001-;	0	0	1	1	1	Raymoghly Td.; Raymoghly	624167, 911050	624000_911000_ DTM_v2	0.34

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		fragment (DG054-032002-); rectangular enclosure 55m by 36.4m and c.1.4m high, with central building, still upstanding, measuring 22.5m by 8.64m.		DG054-032002-; NIAH: 40827009; AAP: S3AAP-01						Pr.; Raphoe North Br.			
L302-3	Mound	Tear-drop shaped mound only partly within the area of high - resolution LiDAR, sited on top of break of slope in natural topography; measuring at least 54m wide and 9m high recorded as Herdgee Hill on historical OS maps.	1	AAP: S3AAP-01	1	0	1	1	0	Raymoghly Td.;Raymoghly Pr.;Raphoe North Br.	624343, 911025	624250_911000_ DTM_v2	0.15
L306-1	Mill Race	Mill race, depicted on historical OS maps; linear depression parallel to river Pluck; 190m long; 13m wide; base 1.26m higher than adjacent river; bank 2.5m wide and 0.1m high.	2	AAP: S3AAP-01	1	0	1	1	1	Raymoghly Td.;Raymoghly Pr.;Raphoe North Br.	624402, 910739	624250_910500_ DTM; 624250_910750_ DTM_v2	0.23
L306-2	Cist	Cist (SMR: DG054-039----); nothing apparent on LiDAR.	4	SMR: DG054-039----; AAP: S3AAP-01	0	0	0	0	0	Labbadish Td.; Raymoghly Pr.; Raphoe North Br.	624343, 910582	624250_910500_ DTM	0.13
L306-3	Cross - inscribed Stone	Cross -inscribed stone (SMR: DG054-040----); labelled as 'Standing Stone' on historical OS maps. Sited on sloping terrain but nothing archaeologically significant apparent on LiDAR.	4	SMR: DG054-040----; AAP: S3AAP-01	0	0	1	1	1	Carrickballydoey Td.; Raymoghly Pr.; Raphoe North Br.	624719, 910164	624500_910000_ DTM	0.13
L306-4	Megalithic Tomb	Megalithic tomb (SMR: DG054-033----), sited on steeply sloping ground beside stream tributary of the Corkey River, now destroyed; nothing apparent at the SMR site	4	SMR: DG054-033----; AAP: S3AAP-01	0	0	1	1	1	Errity Td.; Raymoghly Pr.; Raphoe North Br.	624838, 910881	624750_910750_ DTM	0.36

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		on LiDAR, but oval mound 16m by 12m and 0.5m high situated c.28m to SE of marked tomb site which may be an associated feature.											
L306-5	Mill Race	Mill race, depicted on OS 25-inch map; channel 3m-6m wide and 0.3m to 1.5m deep; 250m long; 150m head race and 100m tailrace running off the River Pluck; associated flax mill site [L306-6].	2	AAP: S3AAP-01	1	0	1	1	1	Carrickballydooney Td.;Raymoghly Pr.;Raphoe North Br.	624659, 909976	624500_910000_DTM	0.17
L306-6	Flax Mill	Flax mill site, recorded on historical OS maps; rectangular depression c.10m by 6m and 0.3m deep; level of associated mill race [L306-5] suggests this mill had an overshot wheel.	2	AAP: S3AAP-01	1	0	1	1	1	Carrickballydooney Td.;Raymoghly Pr.;Raphoe North Br.	624641, 910038	624500_910000_DTM	0.02
L306-7	School	School (SMRL DG054-048----); labelled 'Free School' on the OS first ed. 6-inch map and 'Ray School' on the OS 25-inch -maps; nothing archaeologically significant apparent on LiDAR.	4	SMR: DG054-048----; NIAH: 40905401; RPS: 40905401; AAP: S3AAP-01	0	0	1	1	1	Labbadish Td.; Raymoghly Pr.; Raphoe North Br.	624466, 910035	624250_909750_DTM; 624250_910000_DTM; 624500_910000_DTM	0.5
L306-8	Cist	Cist (SMR: DG054-041----); nothing apparent on LiDAR.	4	SMR: DG054-041----; AAP: S3AAP-01	0	0	0	0	0	Carrickballydooney Td.; Raymoghly Pr.; Raphoe North Br.	624674, 910140	624500_910000_DTM	0.13
L307-3	Mound Possible	Possible mound, sited on a ridge, 5m E-W and 3m N-S, and 0.2m high.	1	AAP: S3AAP-01	0	1	0	0	0	Drumoghill Td.;Raymoghly Pr.;Raphoe North Br.	625373, 910041	625250_910000_DTM	0.01
L307-6	Mill Pond	Mill pond, depicted on the OS 25-inch map; enclosed area 128m by 24m, with bank c.7m wide and	2	AAP: S3AAP-01	1	0	0	1	0	Drumoghill Td.;Raymoghly Pr.;Raphoe North Br.	625777, 910098	625500_910000_DTM;	0.23

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		0.9m high; pond c.3.8m higher than adjacent River Pluck; associated corn mill not apparent on LiDAR.								y Pr.;Raphoe North Br.		625750_910000_DTM_v2	
L310-1	Railway	Railway line (disused); part of the Letterkenny Branch of the Londonderry & Lough Swilly Railway (1883-1953); average width 15m; cut up to 35m wide; 14m deep to track 4m wide; embankment up to 26m wide; 7m high to track 5m wide; 1.1km in survey area. See also L214-2 and L216-1.	2	NIAH: 40905447; AAP: 40905457; S3AAP-01	1	0	0	1	1	Ballyboe; Drumcarn; Drumoghill; Labbadish; Tullybogly Td.;Raymogh y Pr.;Raphoe North Br.	625422, 909973	625000_909750_DTM; 625250_909750_DTM; 625250_910000_DTM; 625500_910000_DTM; 624750_909500_DTM_v2; 625000_909500_DTM_v2; 625750_910000_DTM_v2; 625750_910250_DTM_v2	5.8
L311-1	Lime Kiln	Lime kiln, depicted on OS 25-inch map, and is located in an overgrown area; mound c.13m in diameter and c.1.4m high with a central hollow c.6m wide and 0.2m deep.	2	-	1	0	0	1	0	Drumcarn Td.;Raymogh y Pr.;Raphoe North Br.	625496, 909219	625250_909000_DTM; 625500_909000_DTM	0.04
L312-1	Standing stone	Standing stone (SMR: DG062-006--); nothing apparent on LiDAR.	4	SMR: DG062-006----	0	0	0	1	1	Drumoghill Td.; Raymogh y Pr.; Raphoe North Br.	626128, 909451	626000_909250_DTM_v2	0.13
L320-2	Standing Stone	Standing Stone (SMR: DG062-015--); nothing apparent on LiDAR.	4	SMR: DG062-015----; AAP: S3AAP-02	0	0	0	1	1	Ballyholey Far Td.; Raphoe	626786, 907518	626750_907500_DTM;	0.13

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L320-3	Souterrain	Souterrain (SMR: DG062-033----). The site is 10m outside, but the monument's constraint area extends into the high-resolution assessment area; site assessed in the low-resolution LiDAR, where nothing was apparent on data; no associated features apparent in high-resolution LiDAR.	4	SMR: DG062-033----; AAP: S3AAP-02	0	0	0	0	0	Pr.; Raphoe North Br. Ballyholey Far Td.; Raphoe Pr.; Raphoe North Br.	626666, 907350	626750_907250_ DTM_v2 626500_907250_ DTM_v2	1.13
L321-1	Road	Cross-roads depicted on OS first ed. 6-inch map; slightly raised track 9m wide; 0.2m high; c.1955m long in total.	2	-	1	0	1	0	0	Drumatoland Td.;Raymogh y Pr.;Raphoe North Br.	627276, 907480	627000_907250_ DTM; 627000_907500_ DTM; 627250_906750_ DTM; 627250_907000_ DTM; 627250_907250_ DTM; 627250_907500_ DTM; 627250_907750_ DTM; 627500_906750_ DTM	3.83
L325-2	Well	Well, on sloping ground, marked on the OS 25-inch map, apparent as a circular depression measuring 5.2m wide by 0.2m deep.	2	-	0	1	1	1	0	Sheskinapoll Td.;Raymogh y Pr.;Raphoe North Br.	627822, 906766	627750_906750_ DTM	0
L334-1	Enclosure Possible	Possible enclosure (Route Selection S3-AP01); circular area	1	RS: S3-AP01	0	0	0	0	0	Carnshannagh Td.;Taughboy	628627, 904434	628500_904250_ DTM	0.13

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		c.30m diameter on sloping ground; c.0.2m high.								ne Pr.;Raphoe North Br.			
L334-2	Barrow Possible	Recorded as an enclosure (SMR: DG062-024----), nothing depicted on historical OS maps; nothing apparent at the SMR site on LiDAR, but a very low-relief circular enclosure with central mound located c.55m NE of SMR point on ground sloping to the SW; enclosure 34m diameter, with a bank 3.4m wide and 0.08m high, no ditch, central circular mound c.13m diameter and 0.2m high; possibly a barrow.	3	SMR: DG062-024----	0	0	0	0	0	Carnshannagh Td.; Taughboyne Pr.; Raphoe North Br.	628541, 904479	628500_904500_DTM; 628500_904250_DTM	0.25
L334-3	Enclosure possible	Possible bivallate enclosure identified from aerial photos (Route Selection S3-AP02); nothing apparent on LiDAR.	4	RS: A3-AP02	0	0	0	0	0	Dromore Big Td.;Taughboyne Pr.;Raphoe North Br.	628376, 904292	628250_904250_DTM	0.07
L334-4	Enclosure Possible	Enclosure, very low-relief circular feature 28.5m in diameter, with a bank 0.3m wide and c.5cm high.	2	-	0	1	0	0	0	Carnshannagh Td.; Taughboyne Pr.; Raphoe North Br.	628453, 904952	628250_904750_DTM	0.06
L337-1	Burnt Spread Possible	Possible burnt spread identified from aerial photos (Route Selection S3-AP03); nothing apparent on LiDAR.	4	RS: S3-AP03; AAP: S3AAP-03	0	0	0	0	0	Drumbeg Td.;Taughboyne Pr.;Raphoe North Br.	628795, 903751	628750_903500_DTM; 628750_903750_DTM	0.09
L338-4	Flax Mill	Flax mill; depicted on historical OS maps; rectangular depression 22.25m by 19.27m; and 1.55m	2	AAP: S3AAP-03	1	0	1	1	1	Tullyrap Td.;Taughboyne	629759, 903076	629500_903000_DTM;	0.04

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		deep; with apparent mill wheel pit to W 1.44m below level of mill.								Pr.;Raphoe North Br.		629750_903000_ DTM_v2	
L338-5	Mill pond	Mill pond; depicted on historical maps as part of flax mill complex L338-4, located next to the Drumbeg river, measures c.105m long NW -SE by 0.3-14.5m wide and 2.3m deep.	2	AAP: S3AAP-03	0	1	1	1	1	Tullyrap; Feddyglass Td.;Taughboy ne Pr.;Raphoe North Br.	629799, 903082	627509_903000_ DTM	0.1
L338-6	Mill race	Millrace, depicted on historical maps, part of flax mill complex (L338-4); millrace runs off a stream on townland boundary flowing eastwards, measuring 350m long by c.0.4m wide and 1m deep.	2	AAP: S3AAP-03	0	1	1	1	1	Tullyrap Td.;Taughboy ne Pr.;Raphoe North Br.	629471, 903097	629500_903000_ DTM	0.1
L338-7	Mill pond	Millpond, depicted on historical maps, straddles the Drumbeg river and measures 55m long NW-SE by 40m at its widest at the remains of an earthen dam c.8m wide and 1.3m high, now cut by two water channels between 1.1m and 3.4m deep. This millpond once served a millrace (L338-6) which fed a mill complex (L338-4).	2	AAP: S3AAP-03	0	1	1	1	1	Tullyrap Td.;Taughboy ne Pr.;Raphoe North Br.	629383, 903143	629250_903000_ DTM	0.18
L338-8	Burnt Mound possible	Mound; roughly circular low-relief mound beside a stream, measuring c.10m wide by 0.13m high; possibly a fulacht fia.	2	AAP: S3AAP-03	0	1	0	0	0	Feddyglass Td.;Taughboy ne Pr.;Raphoe North Br.	629263, 903449	629250_903250_ DTM	0
L345-1	Barrow Possible	Barrow possible; very low-relief circular hollow c.10m diameter; 0.1m deep; slight raised centre c.0.05m; located on locally prominent hill [L345-2]; possibly	1	AAP: S3AAP-03	1	0	0	0	0	Mulnaveagh Td.;Clonleigh Pr.;Raphoe North Br.	629905, 901752	629750_901500_ DTM; 629750_901750_ DTM	0.04

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
		feature associated with feeding cattle.											
L345-2	Enclosure Possible	Oval enclosure area; 345m by 240m and rising to 7m high; with possible curving outer bank to the N and W c.5m wide and c.0.3m high, with a scarped interior c.0.5m higher than the exterior; a curving ditch or stream to S 8m wide and 1.8m deep; no indication of an enclosure to the NW. Possible barrow [L345-1] on summit.	1	AAP: S3AAP-03	1	0	0	0	0	Mulnaveagh Td.;Clonleigh Pr.;Raphoe North Br.	629917, 901767	629750_901500_DTM; 629750_901750_DTM; 630000_901500_DTM; 630000_901750_DTM	6.74
L345-3	Railway	Railway line (disused); part of the Strabane and Letterkenny Railway (1909-1960), a narrow gauge railway (continuation of L217-2); embankments c.30m wide and 0.8m high, a cutting c.22m wide and 6m deep, and sections running at field level where the track was c.0.18m wide; a c.320m gap where a row of houses has been built on the former track. The railway also crossed the River Deele, but no remains of a railway bridge are apparent in the DTM data.	2	AAP: S3AAP-03 & S3AAP-04	0	1	0	0	0	Drumboy, Sheercloon, Mass Beg, Gortin North, Lifford Common, Murlough, Cavanacor, Tamnawood, Mass More, & Ballindrait Td.; Clonleigh Pr.; Raphoe North Br.	630581, 900102	629000_901250_DTM_v2, 629250_901000_DTM_v2, 629250_901250_DTM_v2, 629500_900750_DTM_v2, 629500_901000_DTM_v2, 629750_900750_DTM_v2, 629750_901000_DTM, 630000_900500_DTM_v2, 630250_900000_DTM_v2, 630250_900250_DTM, 630250_900500_	9.73

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
												DTM, 630500_900000_ DTM, 630750_899750_ DTM, 630750_900000_ DTM, 631000_899750_ DTM, 631250_899750_ DTM, 631500_899500_ DTM, 631500_899750_ DTM_v2, 631750_899500_ DTM, 632000_899500_ DTM, & 632250_899500_ DTM	
L346-1	Standing Stone	Standing Stone (SMR: DG070-032--); nothing apparent on LiDAR.	4	SMR: DG070-032----; AAP: S3AAP-04	0	0	1	1	1	Gortin North Td.; Clonleigh Pr.; Raphoe North Br.	630611, 901048	630500_901000_ DTM	0.13
L349-1	Standing Stone	Standing Stone (SMR: DG070-033--); nothing apparent on LiDAR.	4	SMR: DG070-033----; AAP: S3AAP-04	0	0	1	1	1	Gortin North Td.; Clonleigh Pr.; Raphoe North Br.	630570, 900977	630500_900750_ DTM	0.13
L349-2	Building	Buildings, depicted on historical OS maps as part of a farmstead; roughly rectangular mound 25m by 10m and 1.6m high.	2	AAP: S3AAP-04	1	0	1	1	1	Gortin North Td.; Clonleigh Pr.; Raphoe North Br.	630278, 900818	630000_900750_ DTM; 630250_900750_ DTM	0.16

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L349-3	Lime kiln	Lime kiln with enclosure and lane depicted on the OS 25-inch map, sited on S facing pasture field; apparent on LiDAR as measuring a depression c.5m in diameter and c.0.2m deep, with the outline of an enclosure 34m N-S by 16m E-W, and the outline of a lane c.5.5m wide and c.0.1m deep.	2	AAP: S3AAP-04	0	1	0	1	1	Ballindrait Td.; Clonleigh Pr.; Raphoe North Br.	630761, 900186	630750_900000_ DTM	0.02
L350-1	Designed Landscape	Designed landscape (Garden) surrounding Cavanacor House (RPS: 40907026; NIAH: 40834001); triangular area 230m by 170m on an E -facing slope; with surface irregularities from planting and landscaping.	2	NIAH: 40834001; RPS: 40907026; AAP: S3AAP-04	1	0	1	1	0	Cavanacor Td.; Clonleigh Pr.; Raphoe North Br.	631296, 900197	631000_900000_ DTM; 631000_900250_ DTM; 631250_900000_ DTM_v2; 631250_900250_ DTM_v2	2.18
L353-2	Bridge	Bridge (SMR: DG070-081----); nothing apparent on LiDAR DTM; DSM indicates the bridge is approximately 5.5m high and c.7m wide.	3	SMR: DG070-081----; AAP: S3AAP-04	0	0	1	1	1	Ballindrait Td.; Clonleigh Pr.; Raphoe North Br.	630409, 899791	630250_899500_ DTM_v2; 630250_899750_ DTM_v2	1.13
L354-1	Standing Stone	Standing Stone (SMR: DG070-048--); nothing apparent on LiDAR at mapped location.	4	SMR: DG070-048----; AAP: S3AAP-05	0	0	1	0	0	Murlough Td.; Clonleigh Pr.; Raphoe North Br.	631630, 899335	631500_899250_ DTM	0.13
L354-2	Standing Stone	Standing Stone (SMR: DG070-049--); nothing apparent on LiDAR.	4	SMR: DG070-049----; AAP: S3AAP-05	0	0	1	0	0	Murlough Td.; Clonleigh Pr.; Raphoe North Br.	631595, 899154	631500_899000_ DTM	0.13
L354-3	Standing Stone	Standing Stone (SMR: DG070-050--); nothing apparent on LiDAR.	4	SMR: DG070-050----; AAP: S3AAP-05	0	0	0	0	0	Murlough Td.; Clonleigh Pr.; Raphoe North Br.	631564, 899095	631500_899000_ DTM	0.13

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L354-4	Farmstead	Farmstead site, depicted on historical OS maps, sited in a hollow beside the Cavanacor River; irregular polygon 100m by 92m, with a rectangular outline 20m by 12m and 0.4m high corresponding with buildings.	2	AAP: S3AAP-05	1	0	1	1	1	Ballynabreen Td.; Clonleigh Pr.; Raphoe North Br.	631406, 899417	631250_899250_DTM	0.56
L354-5	Well	Well, depicted on historical OS map, adjacent to the Cavanacor river, c.5m in diameter and 0.5m deep.	2	AAP: S3AAP-05	0	1	1	1	1	Murlough Td.; Clonleigh Pr.; Raphoe North Br.	631480, 899314	631250_899250_DTM	0
L354-6	Pit possible	Shallow pit 6.1m wide by 0.5m deep 22m SSE of the site of standing stone (SMR: DG070-048--); L354 -1); this is the location of an electricity pole, and is not archaeologically significant.	0	AAP: S3AAP-05	0	1	1	0	0	Murlough Td.; Clonleigh Pr.; Raphoe North Br.	631635, 899314	631500_899250_DTM	0
L355-1	Standing Stone	Standing Stone (SMR: DG070-047--); nothing apparent on LiDAR.	4	SMR: DG070-047----	0	0	1	0	0	Rossgeir Td.; Clonleigh Pr.; Raphoe North Br.	632238, 899638	632000_899500_DTM; 632250_899500_DTM	0.13
L359-1	Standing Stone	Standing Stone (SMR: DG071-005--); nothing apparent on LiDAR.	4	SMR: DG071-005----; AAP: S3AAP-05	0	0	1	0	0	Lifford Td.; Clonleigh Pr.; Raphoe North Br.	632525, 898541	632500_898500_DTM	0.13
L359-2	Standing Stone	Standing Stone (SMR: DG071-006--); nothing apparent on LiDAR.	4	SMR: DG071-006----; AAP: S3AAP-05	0	0	1	0	0	Lifford Td.; Clonleigh Pr.; Raphoe North Br.	632682, 898548	632500_898500_DTM	0.13
L359-3	Standing Stone	Standing Stone (SMR: DG071-007--); nothing apparent on LiDAR.	4	SMR: DG071-007----; AAP: S3AAP-05	0	0	1	0	0	Townparks Td.; Clonleigh Pr.; Raphoe North Br.	632654, 898504	632500_898250_DTM; 632500_898500_DTM	0.13

SITE NUMBER	CATEGORY	DESCRIPTION	CONFIDENCE	SMR/ RPS/ NIAH/ Route Selection/ Areas of Archaeological Potential	Low Res	High Res	1st Ed 6 Inch	25 Inch	Cassini 6 Inch	Townland; Civil Parish; Barony	ITM Coords Centre	LiDAR TILES	AREA_Ha
L359-4	Standing Stone	Standing Stone (SMR: DG071-009--); nothing apparent on LiDAR.	4	SMR: DG071-009----; AAP: S3AAP-05	0	0	0	0	0	Townparks Td.; Clonleigh Pr.; Raphoe North Br.	632933, 898361	632750_898250_DTM_v2	0.13
L359-5	Farmstead	Possible 18 -19th century farmstead (Route Selection S3 - AP04) sited on ground sloping to the E; enclosed area 44m by 35m with banks 0.2m to 0.4m high and 7m to 12m wide but no remains of buildings apparent.	2	RS: S3-AP04; AAP: S3AAP-05	0	0	1	1	1	Lifford Common Td.;Clonleigh Pr.;Raphoe North Br.	632140, 898457	632000_898250_DTM	0.42
L359-6	Reservoir	Reservoir, depicted on historical maps; square enclosure measuring c.20m by 22m with banks c.3.5m wide and 0.2m-0.4m high, and remains a small building appended to the SE side measuring c.5m by 6m and c.0.3m high.	2	AAP: S3AAP-05	0	1	1	1	1	Townparks Td.; Clonleigh Pr.; Raphoe North Br.	632858, 898190	632750_898000_DTM	0.06
L362-1	Souterrain	Souterrain (SMR: DG070-082----), situated on the brow of a slight ridge; a low-profile sub-circular mound c.12m in diameter, and 0.2m high.	3	SMR: DG070-082----; AAP: S3AAP-05	0	0	0	0	0	Curraghane Td.; Clonleigh Pr.; Raphoe North Br.	632263, 897206	632250_897000_DTM	0.2

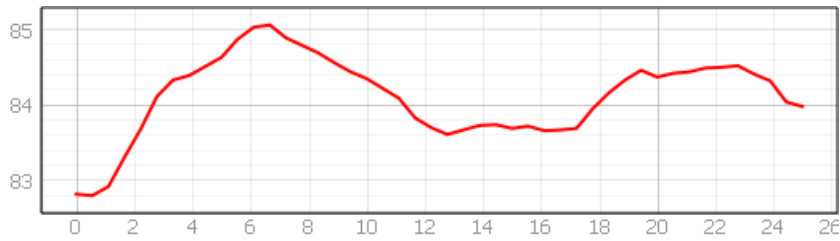
Appendix 3: Site Profiles

Profile

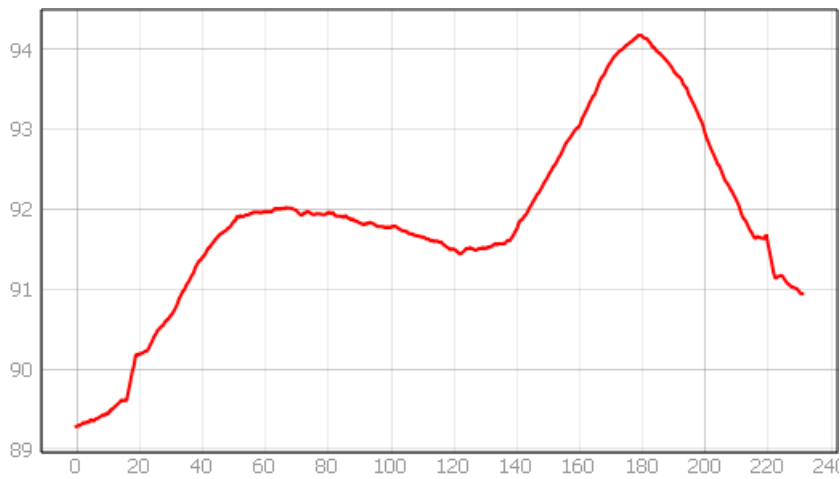
LiDAR Site

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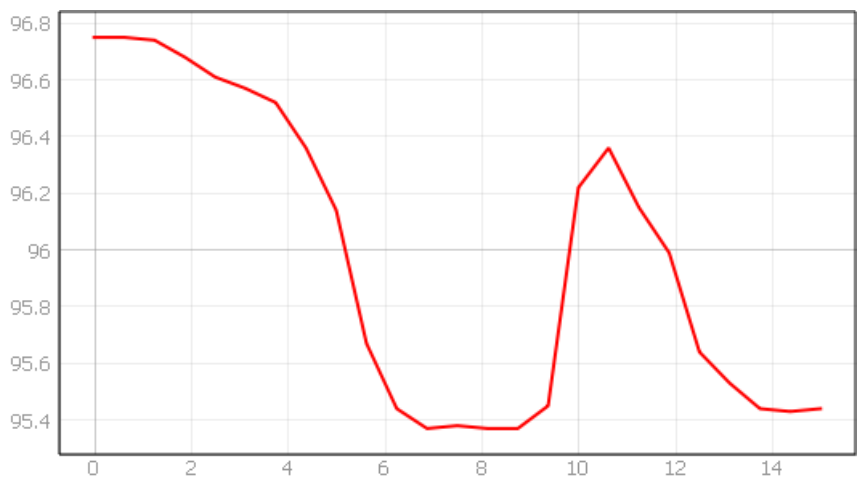
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L101-2



L101-3



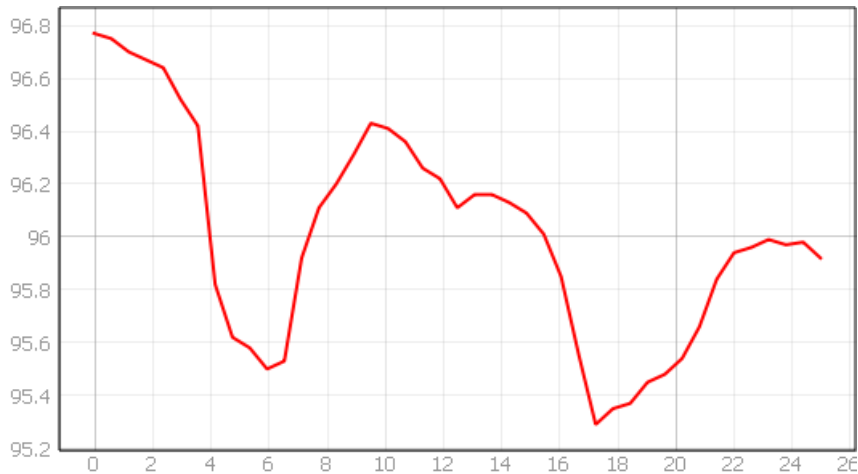
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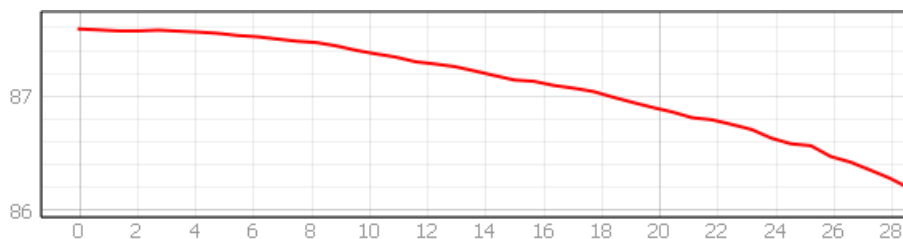
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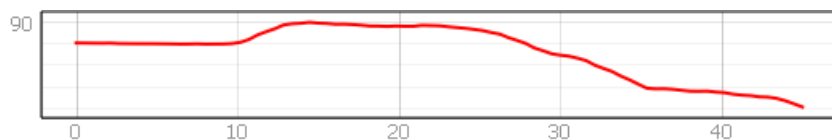
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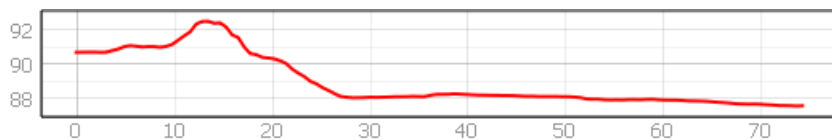
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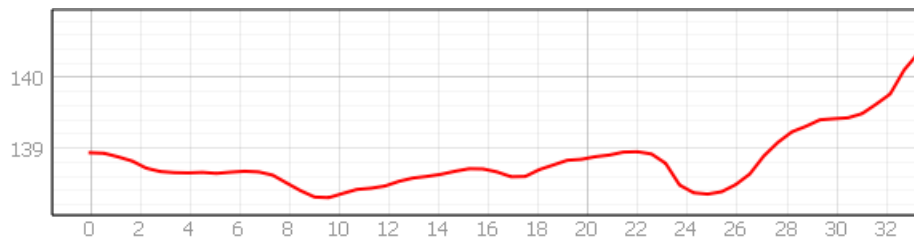
L103-1



L103-2



L103-3



L105-1



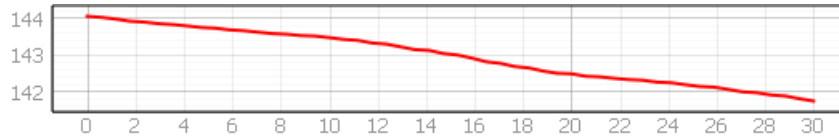
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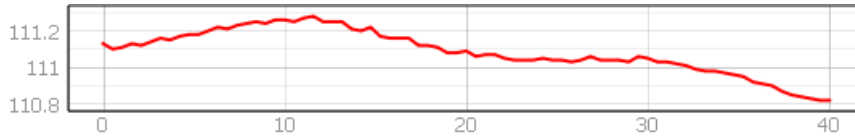
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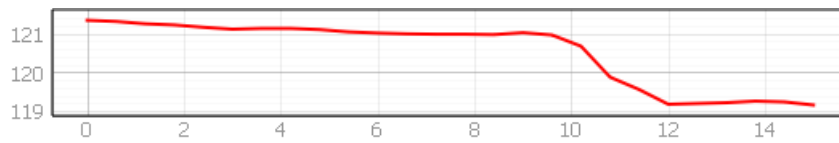
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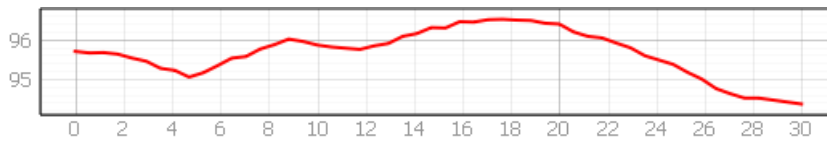
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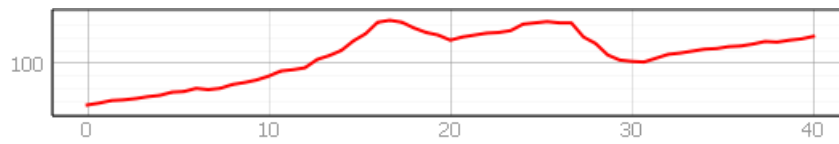
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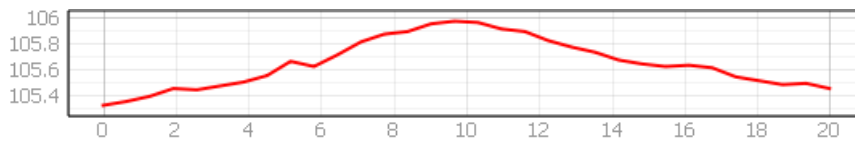
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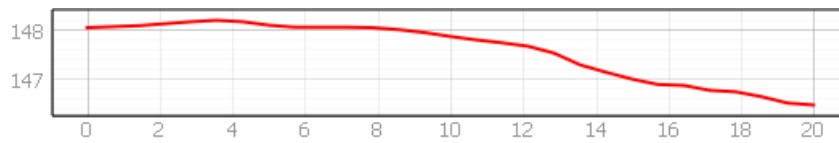
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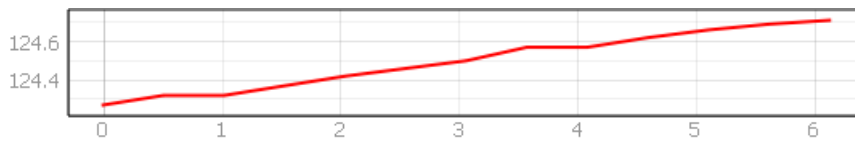
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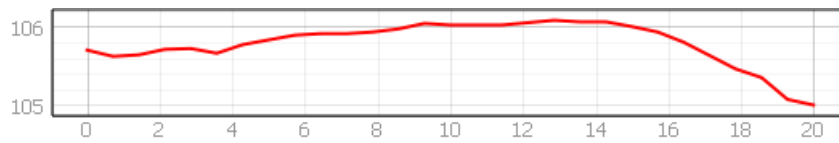
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L109-1



L109-3



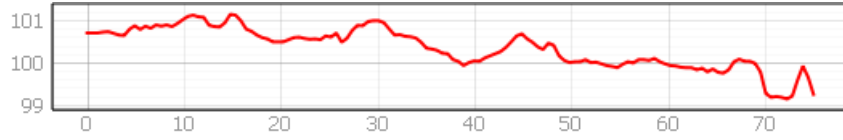
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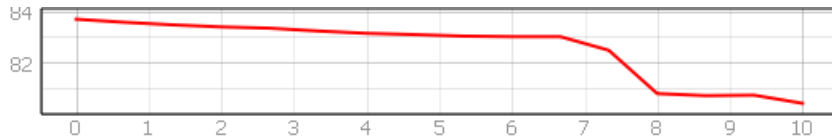
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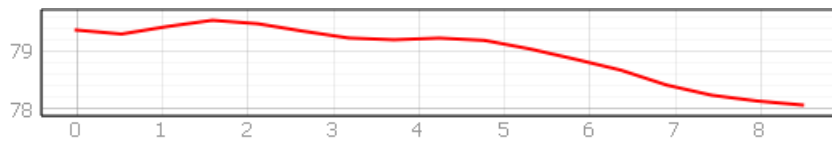
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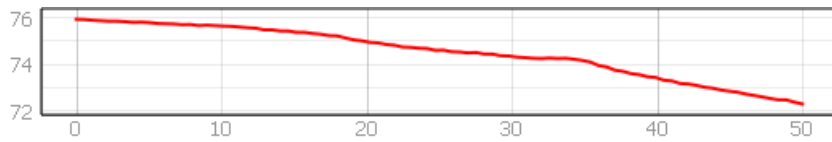
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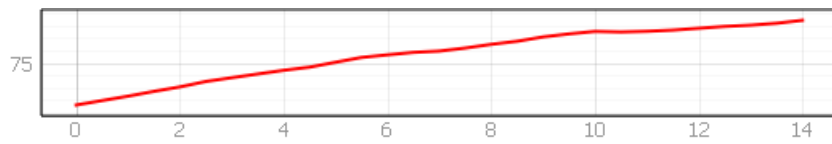
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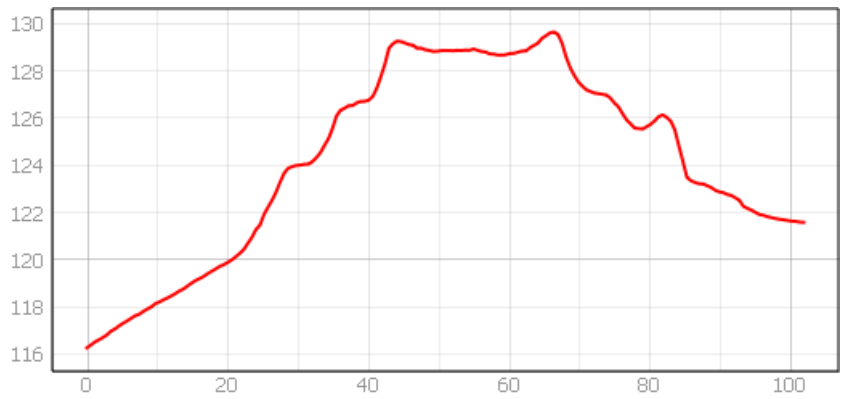
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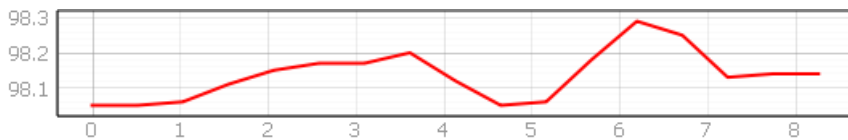
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L115-1



L116-1



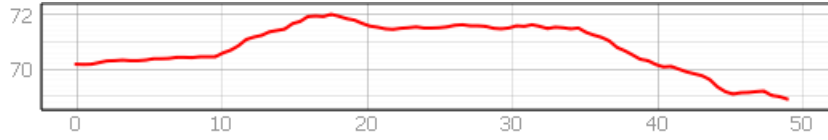
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Profile

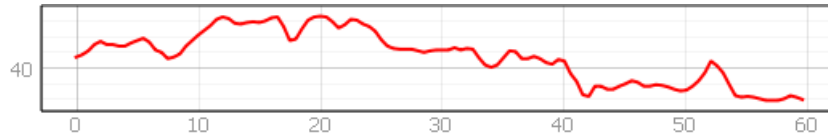
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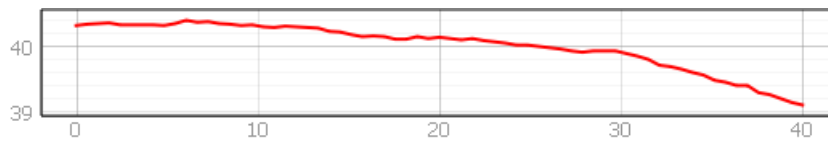
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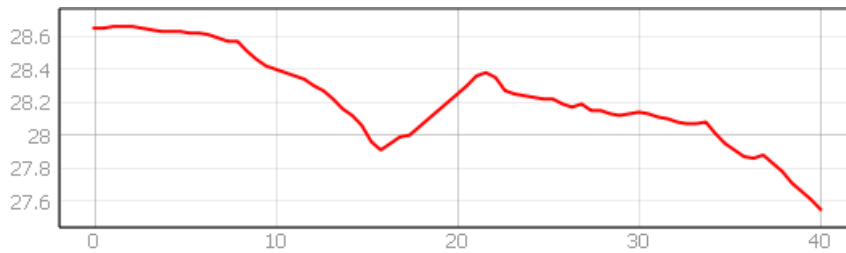
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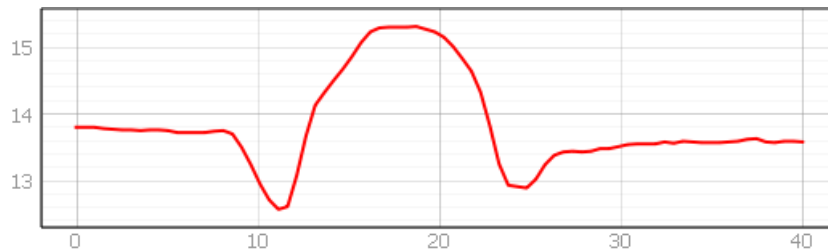
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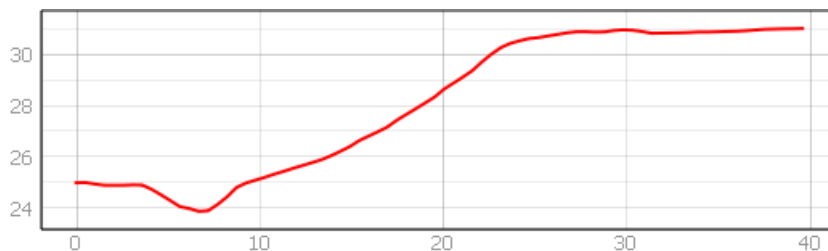
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L121-1-A



L121-1-B



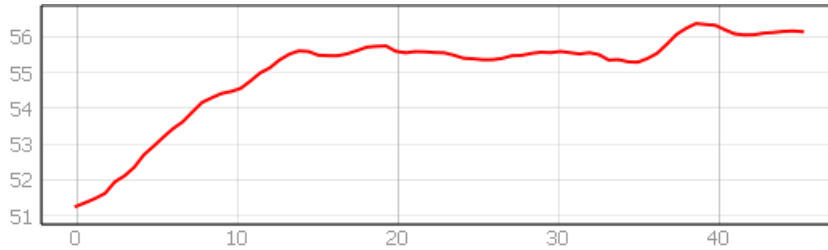
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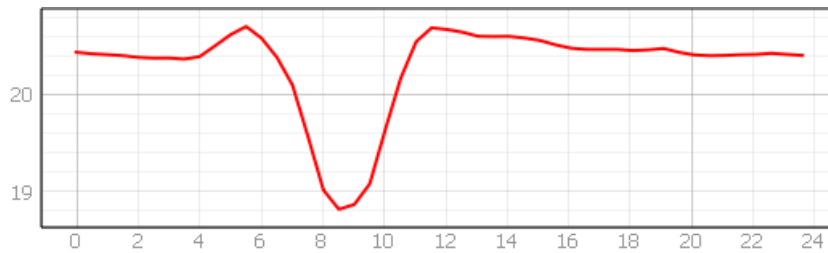
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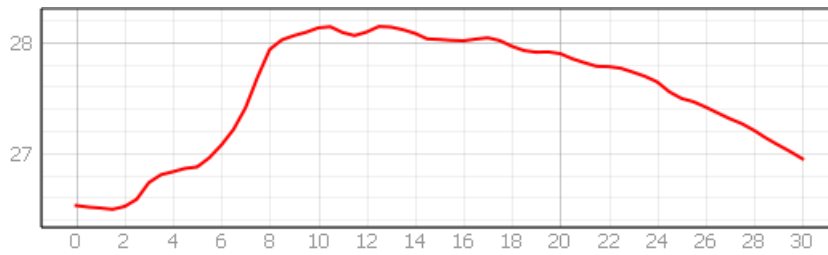
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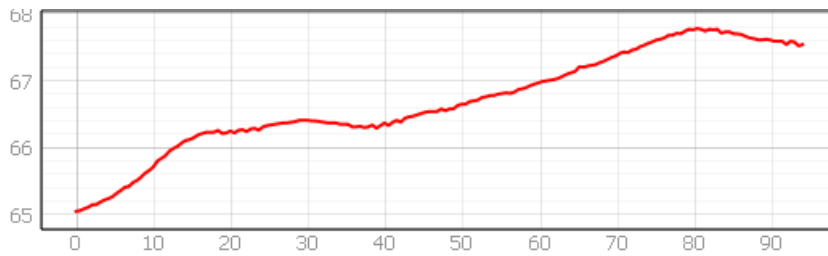
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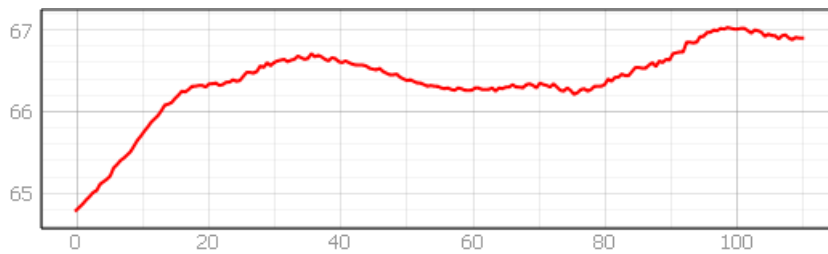
L122-5



L122-6



L123-1-A



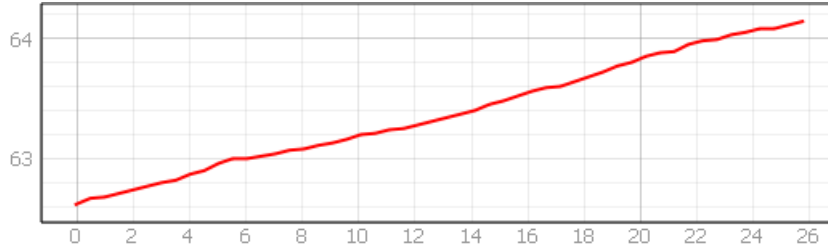
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Profile

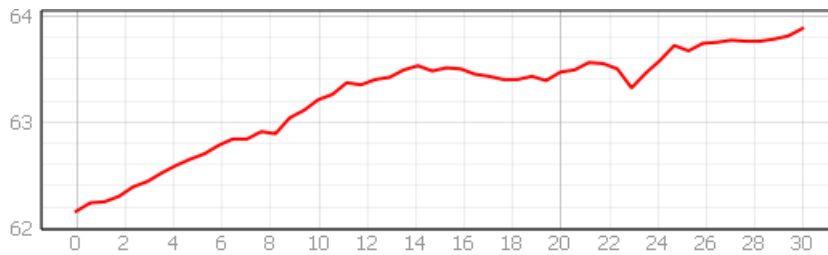
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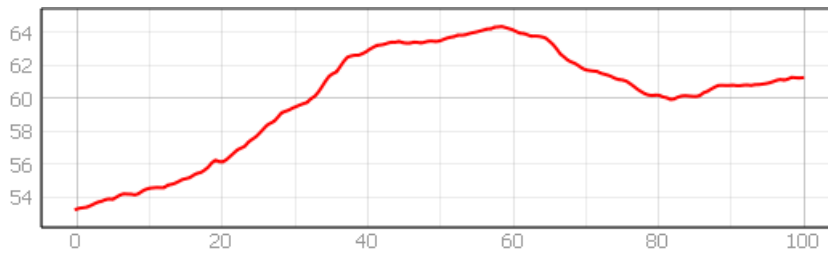
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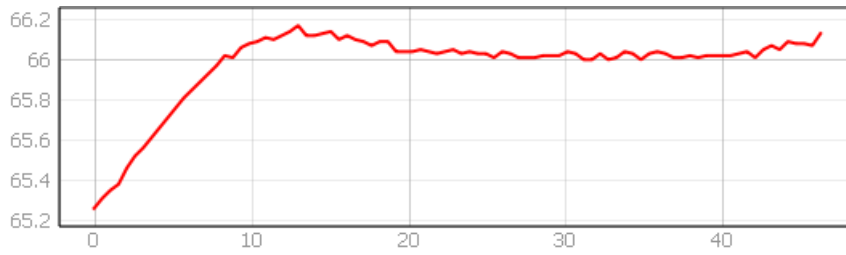
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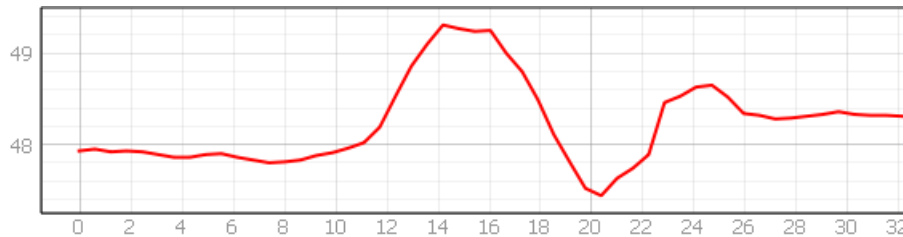
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L123-4



L123-5



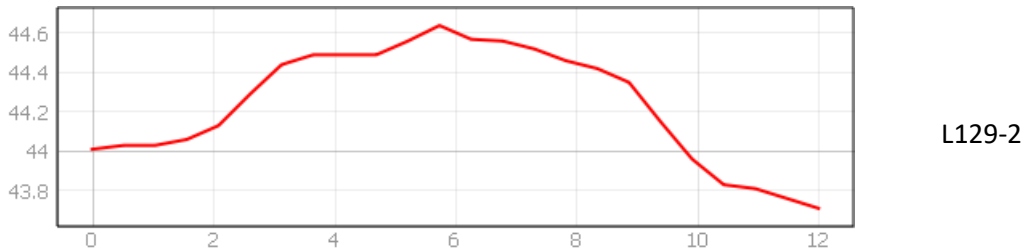
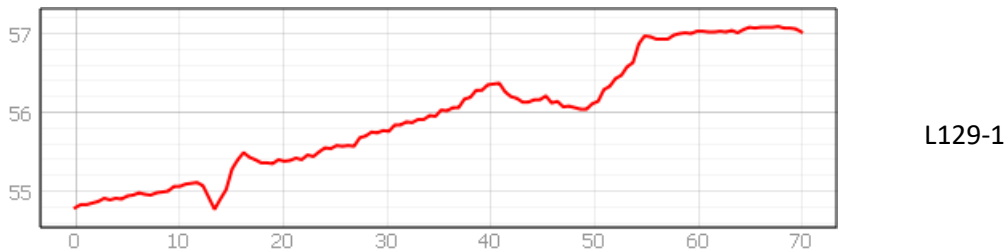
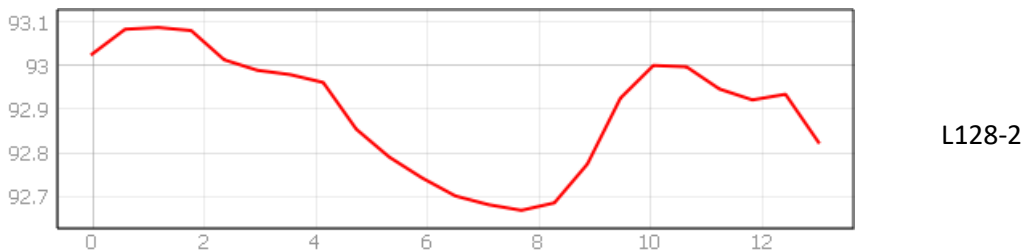
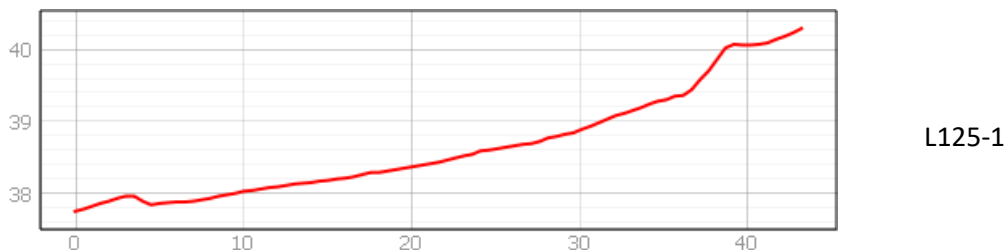
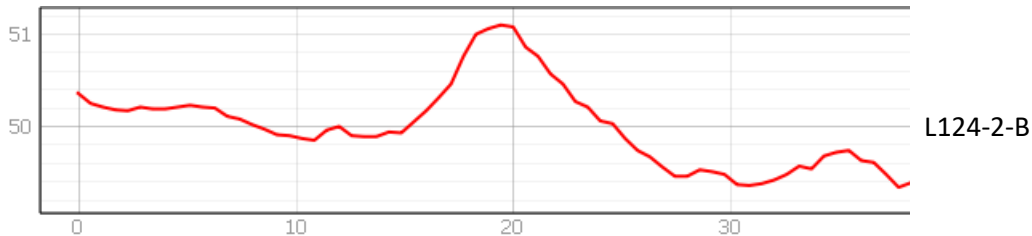
L124-2-A

Profile

A

B

LiDAR Site

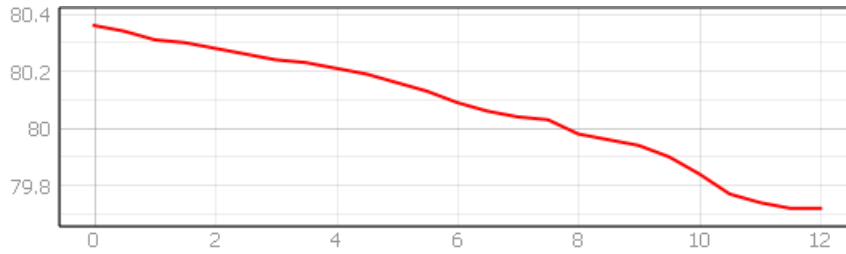


Profile

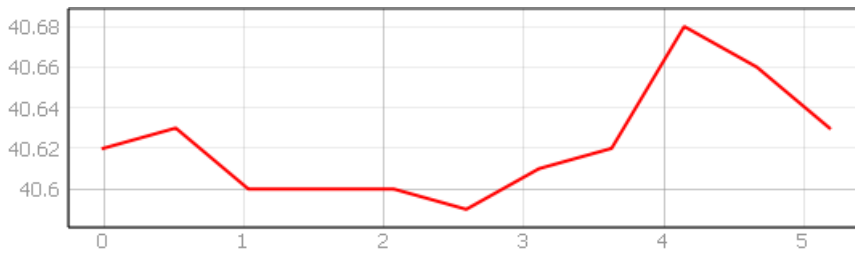
A

LiDAR Site

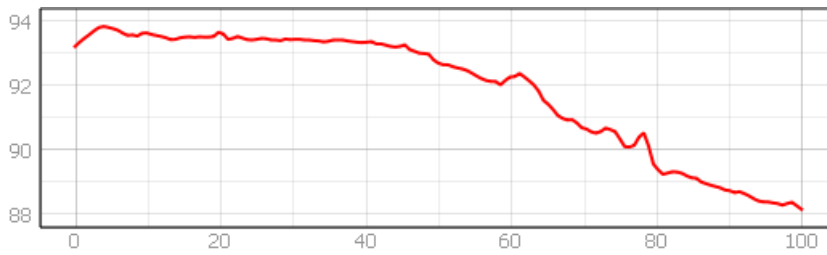
B



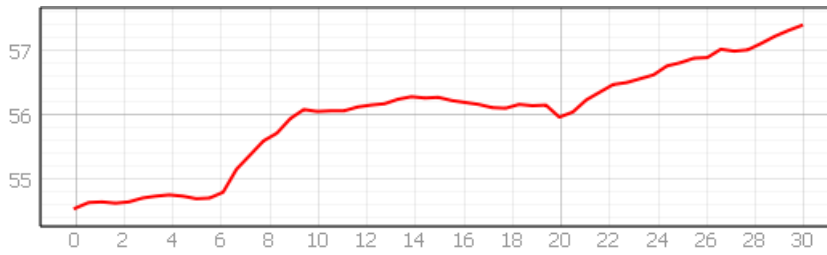
L129-4



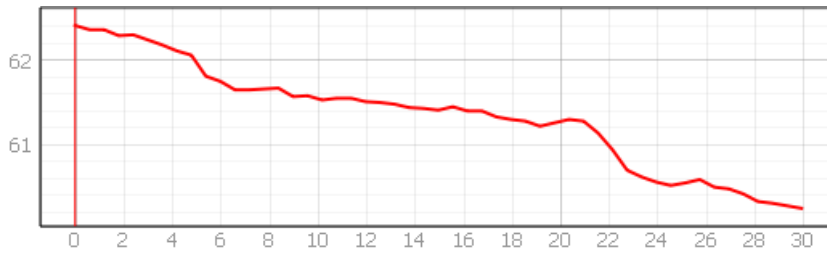
L129-5



L137-1



L138-1



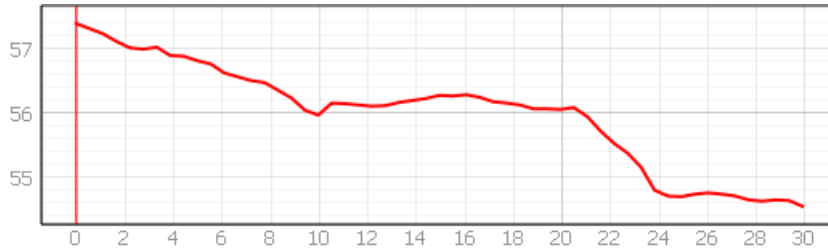
L138-1-A

Profile

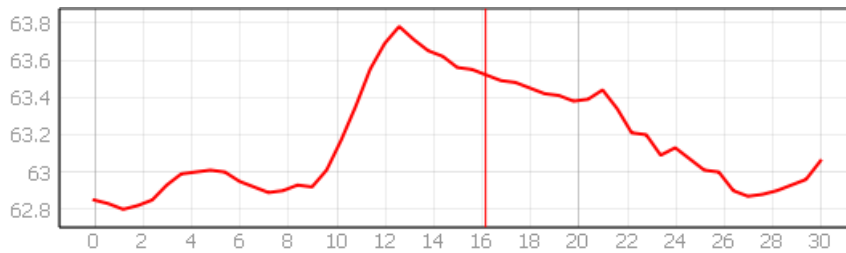
A

LiDAR Site

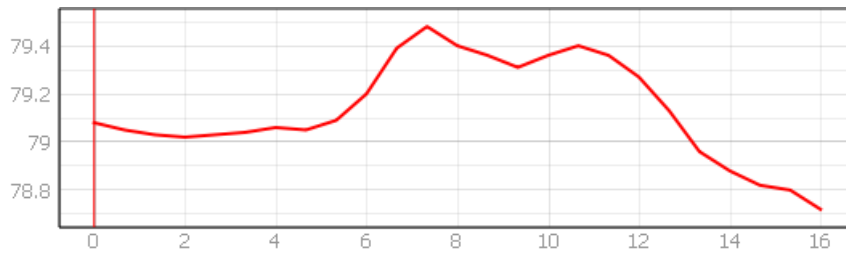
B



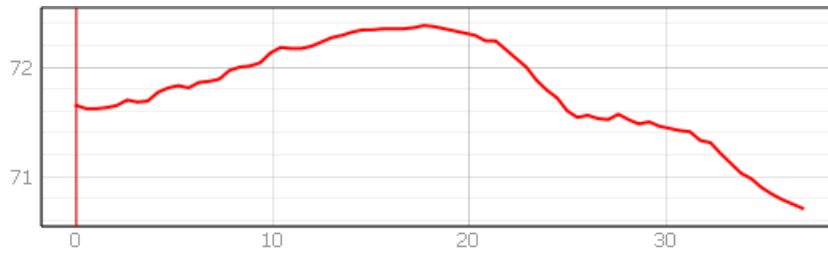
L138-1-B



L138-2



L138-8



L138-9



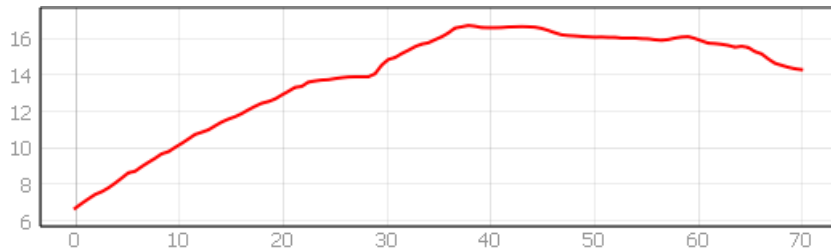
L141-2

Profile

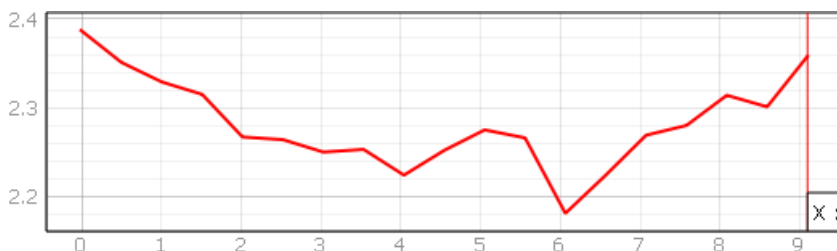
A

LiDAR Site

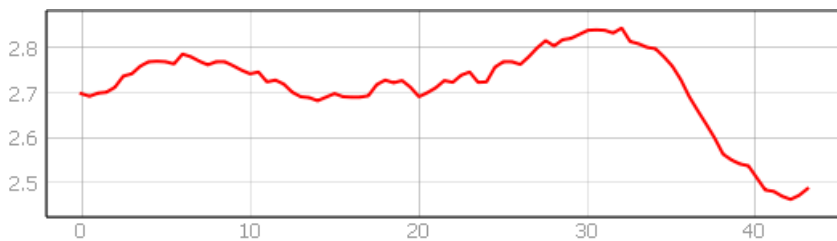
B



L210-1



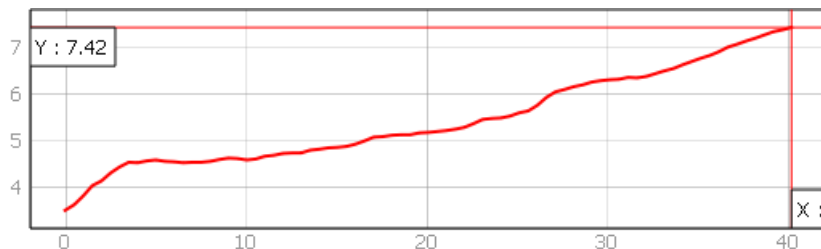
L212-2-B



L212-3



L213-2-A



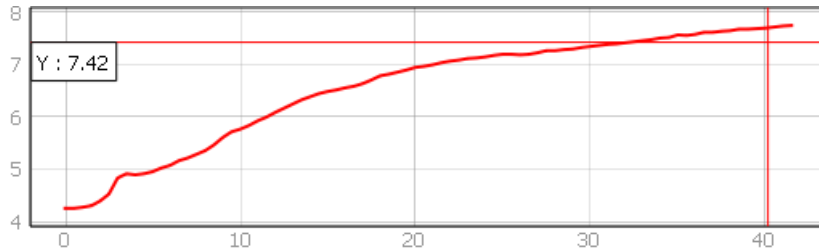
L213-3-A

Profile

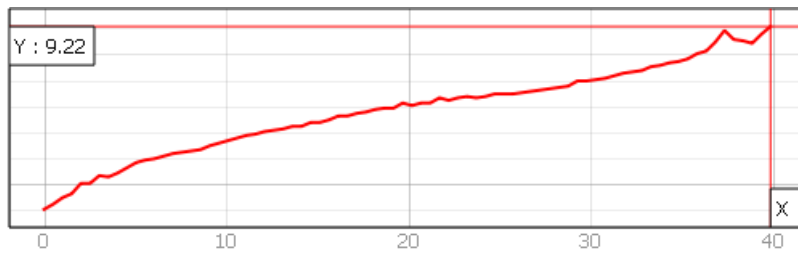
A

LiDAR Site

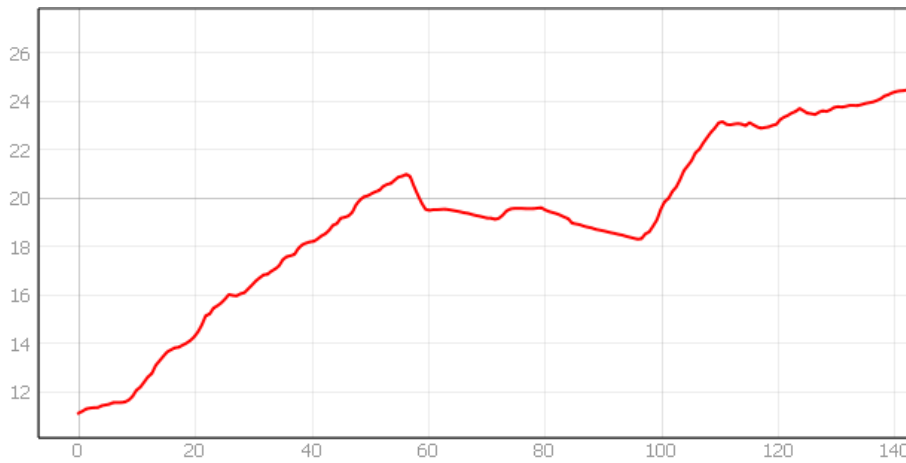
B



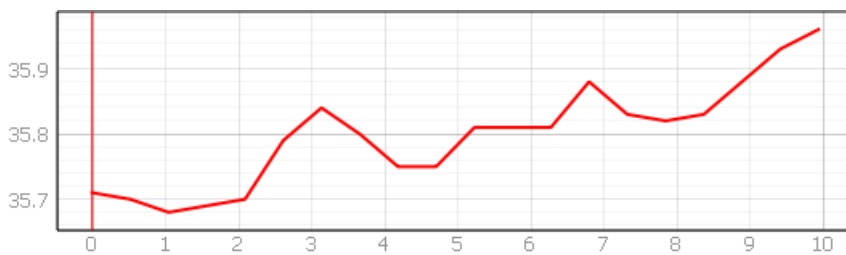
L213-4-A



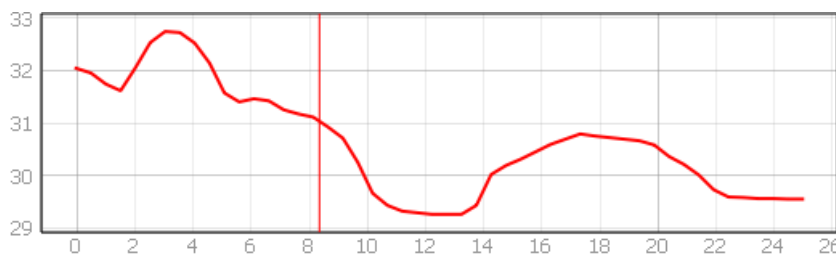
L213-5-A



L213-6



L213-7



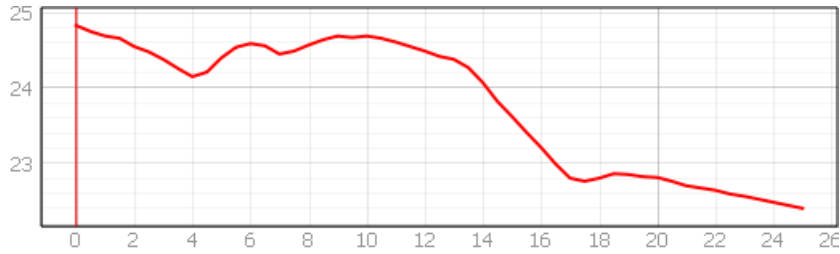
L214-2

Profile

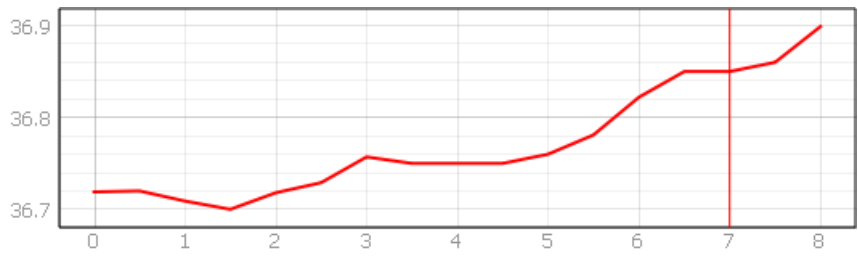
A

LiDAR Site

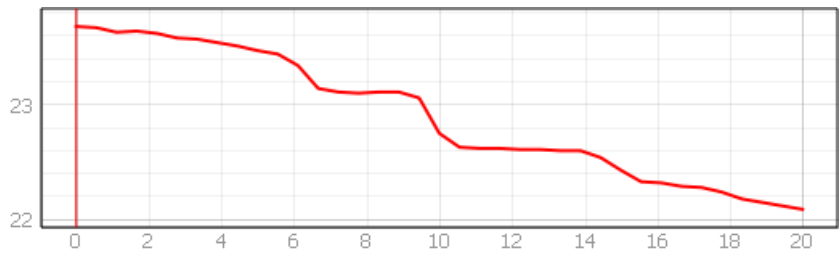
B



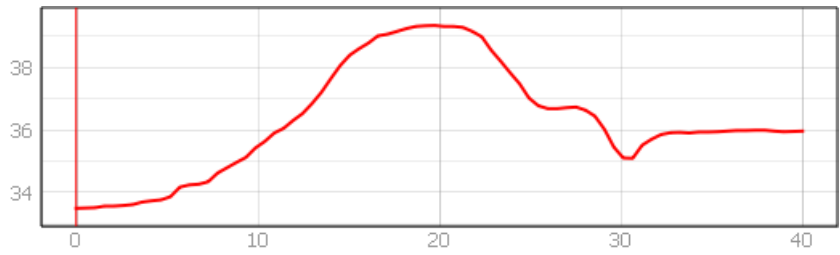
L214-2-B



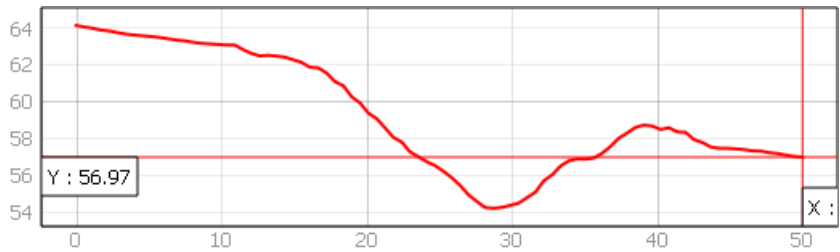
L215-3



L217-2-A



L217-2-B



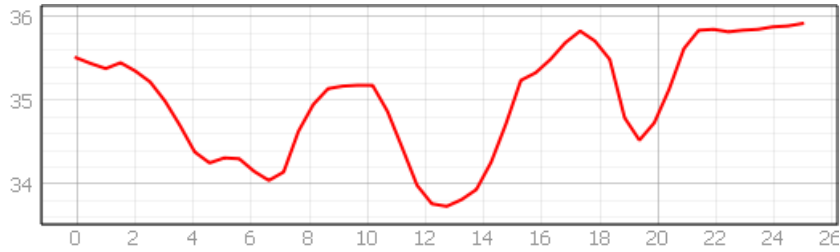
L217-2-C

Profile

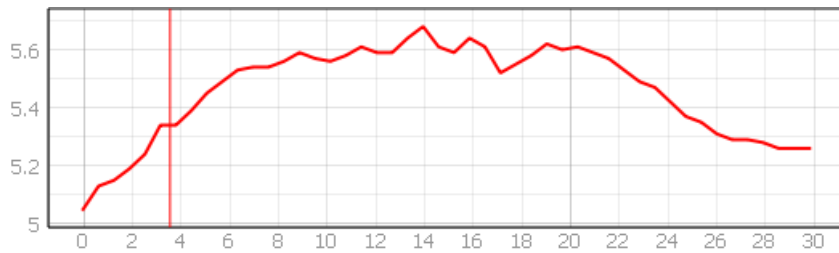
A

LiDAR Site

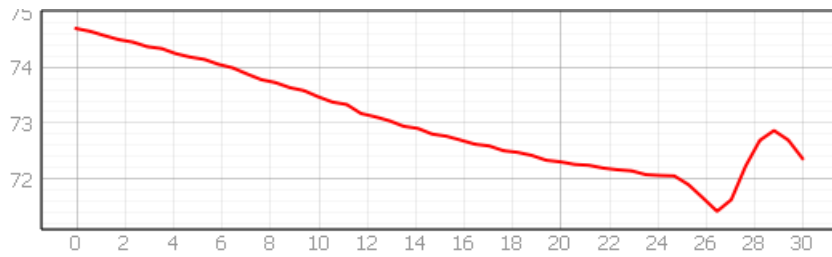
B



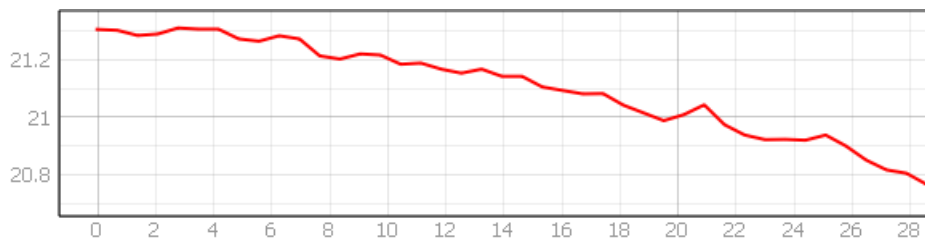
L219-1



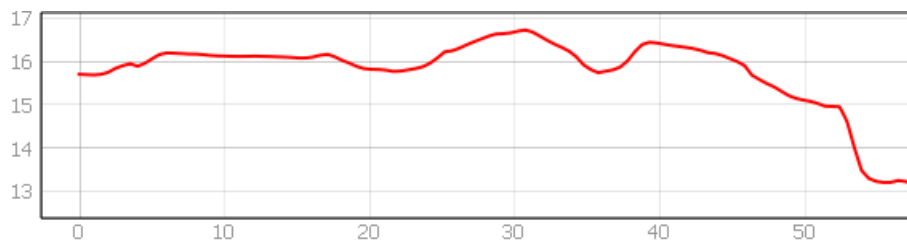
L221-1-A



L223-2



L302-1



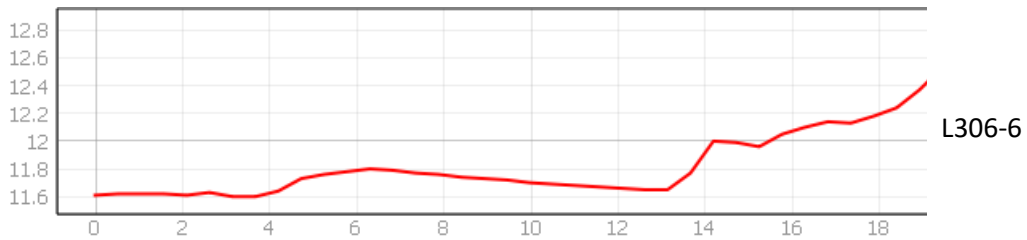
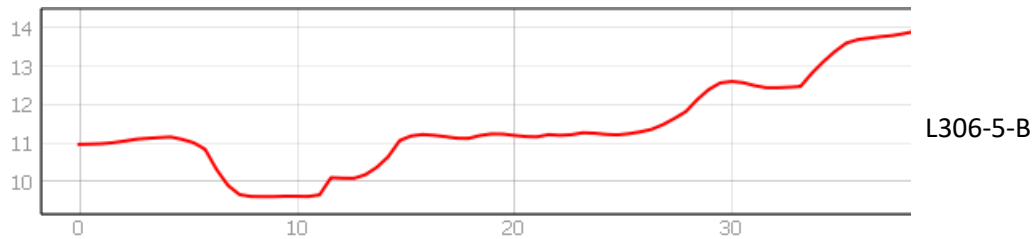
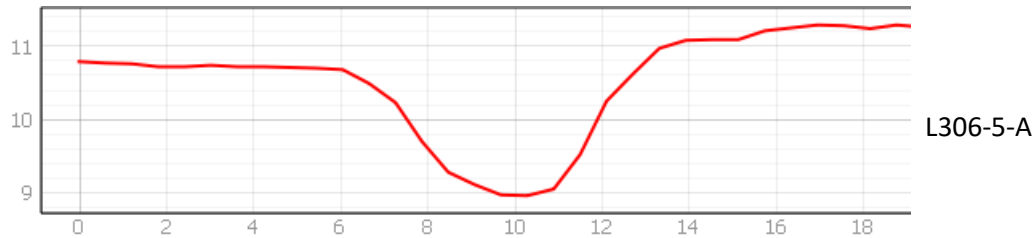
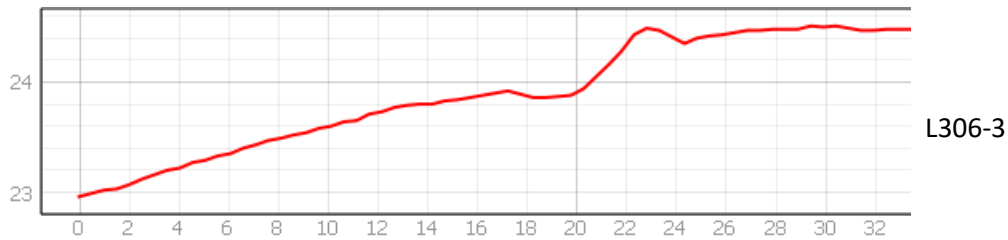
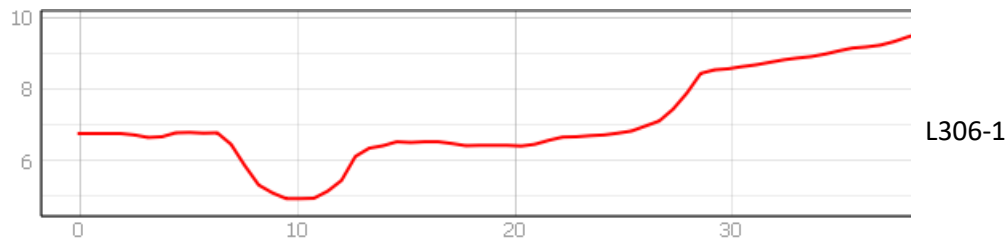
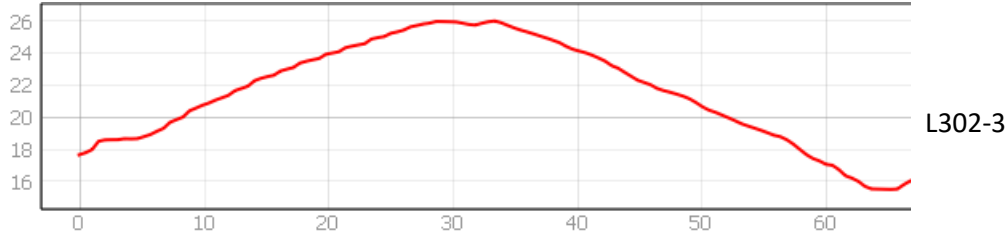
L302-2

Profile

A

B

LiDAR Site

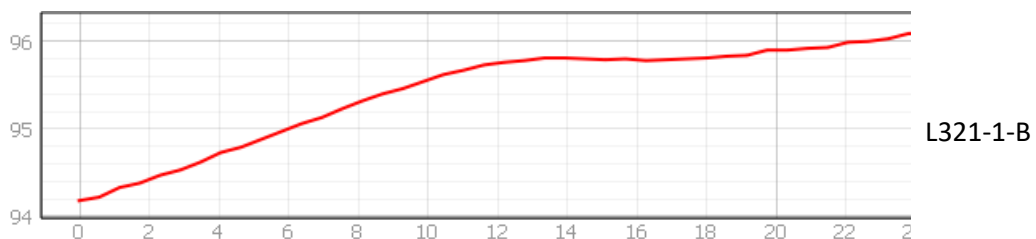
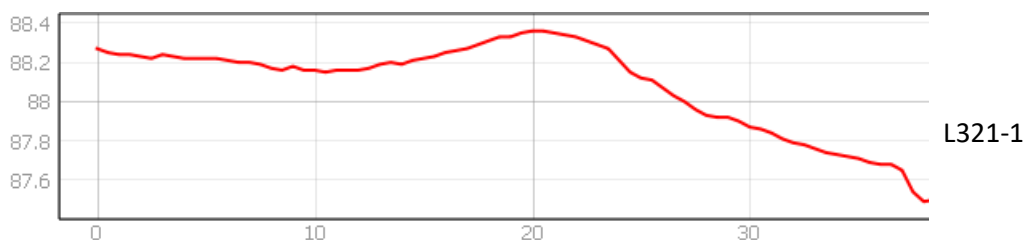
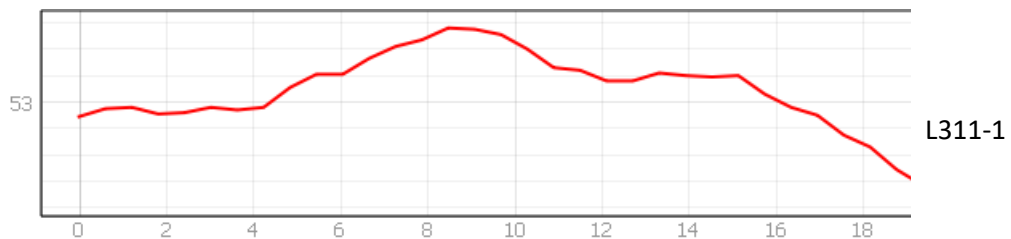
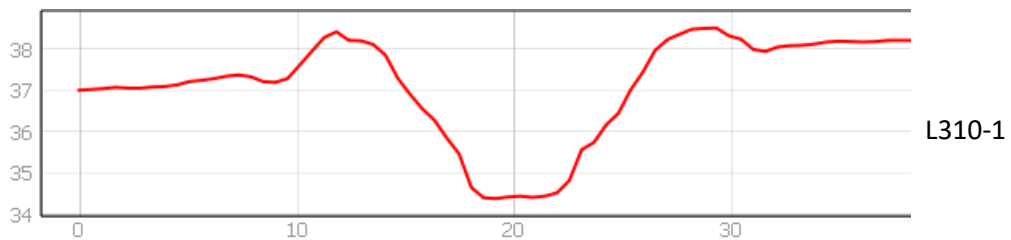
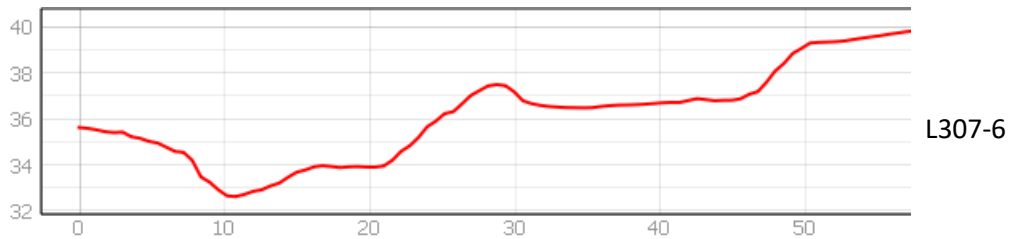
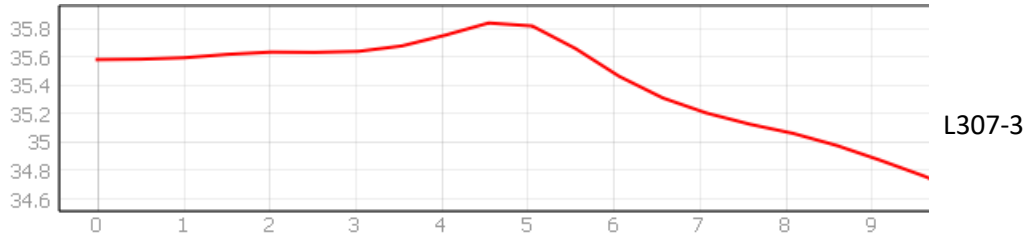


Profile

A

B

LiDAR Site

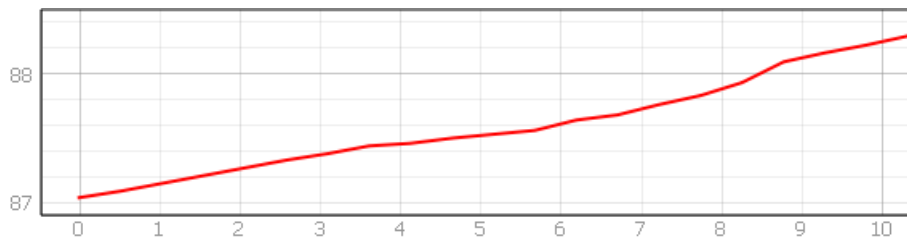


Profile

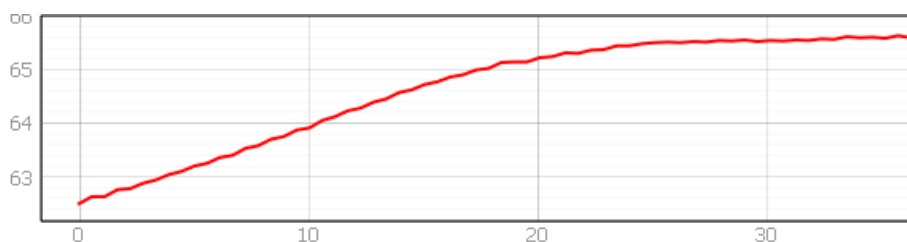
A

B

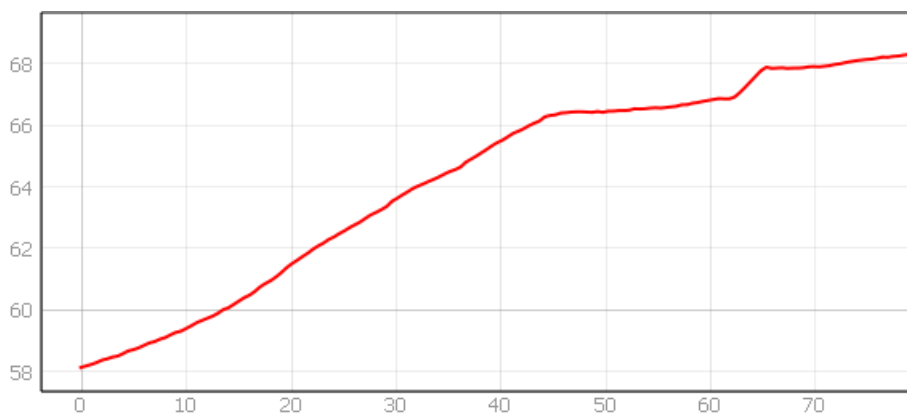
LiDAR Site



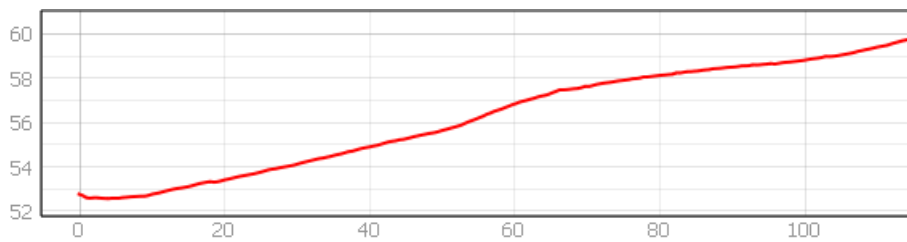
L325-2



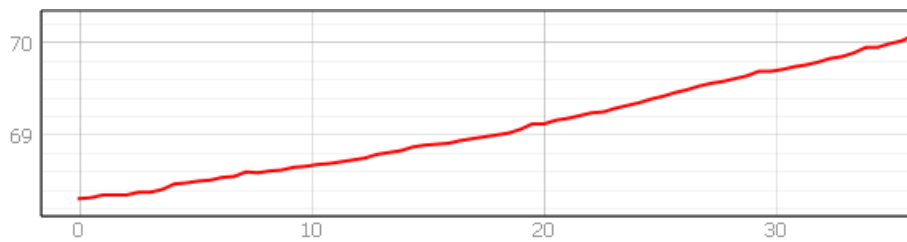
L334-1-A



L334-2-A



L334-2-B



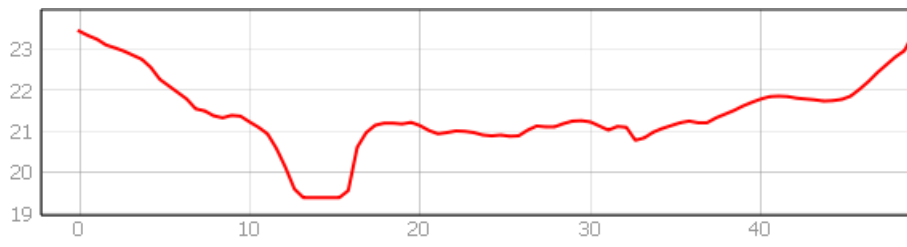
L334-4

Profile

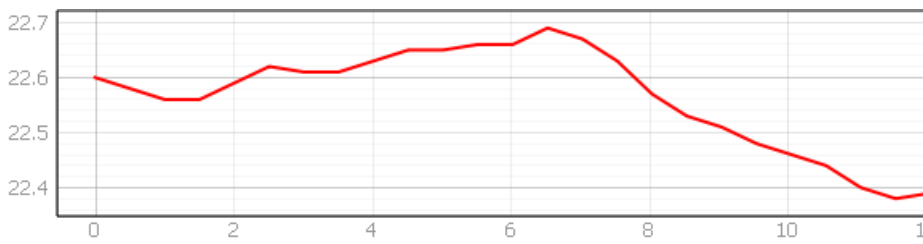
A

B

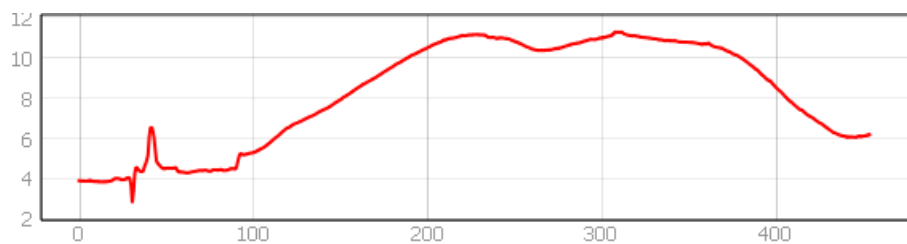
LiDAR Site



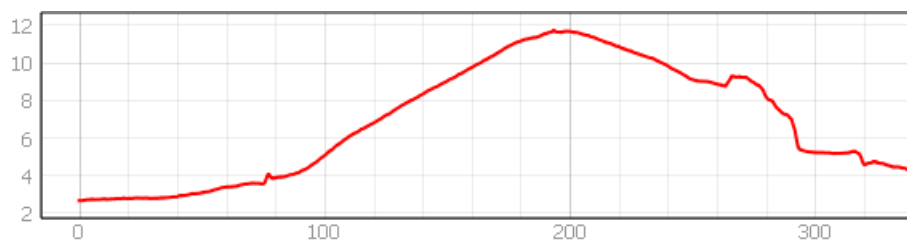
L338-7



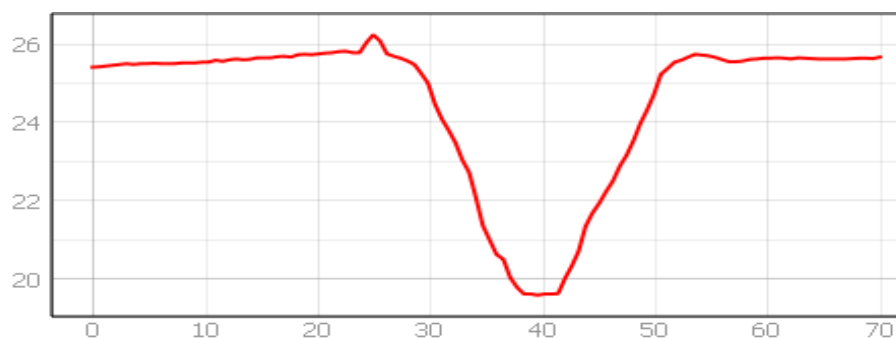
L338-8



L345-1 & L345-2



L345-2



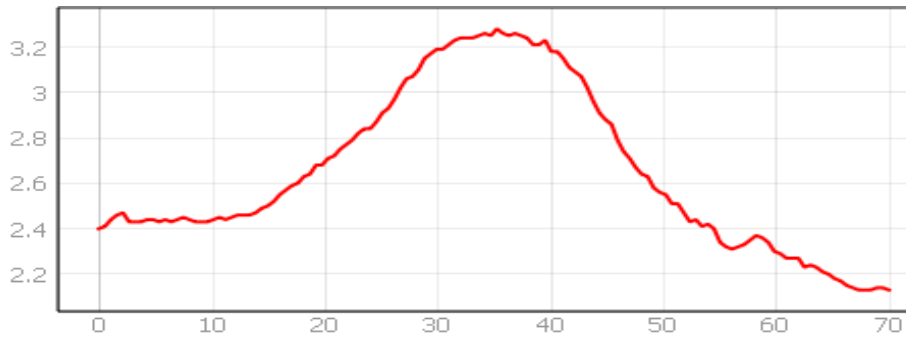
L345-3-A

Profile

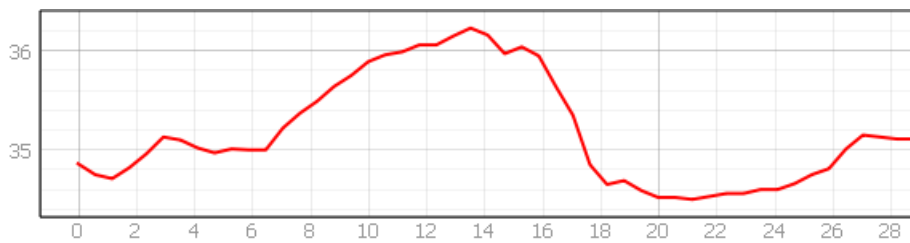
A

B

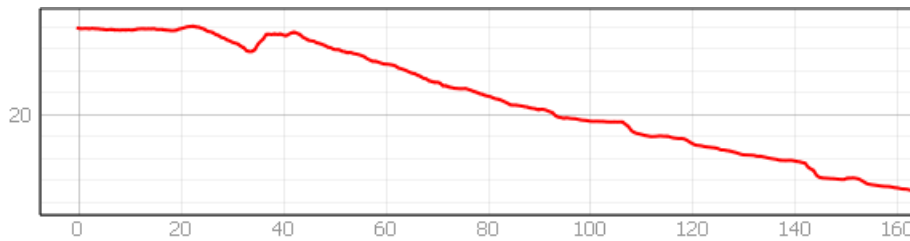
LiDAR Site



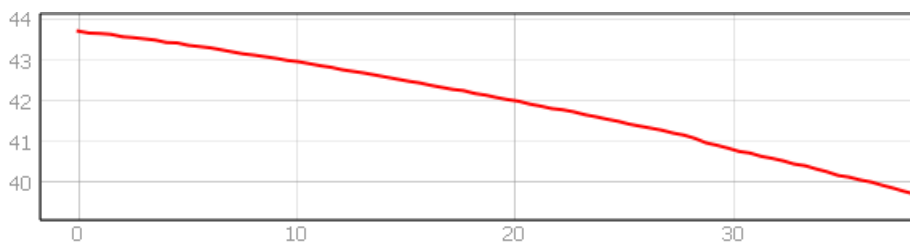
L345-3-B



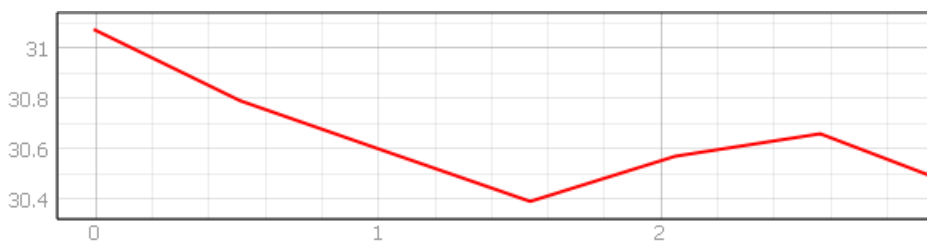
L349-2



L350-1



L354-1-A



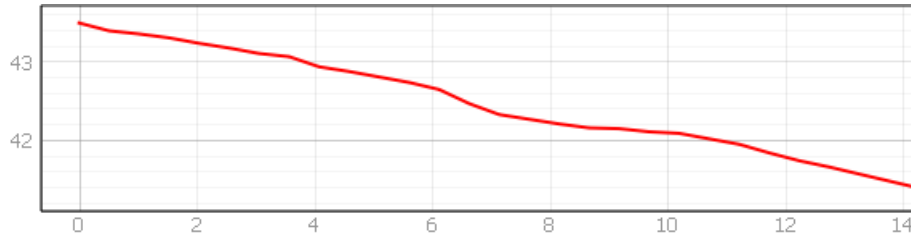
L354-5

Profile

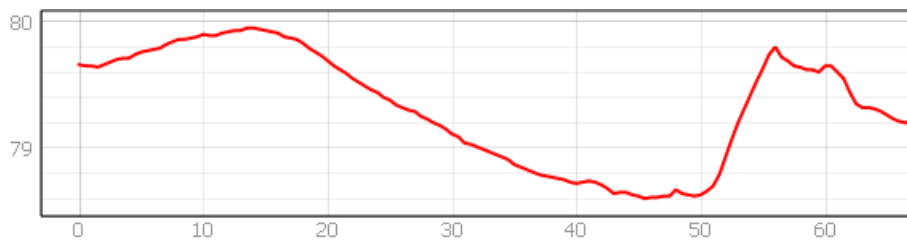
A

LiDAR Site

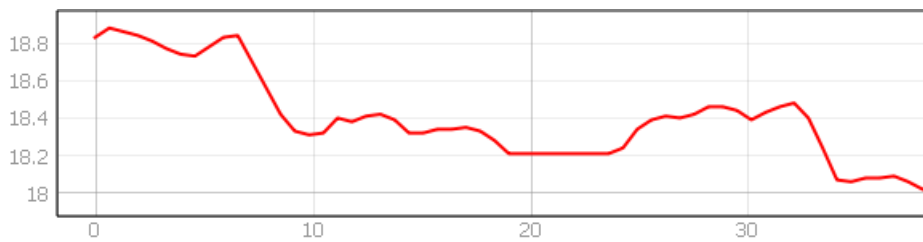
B



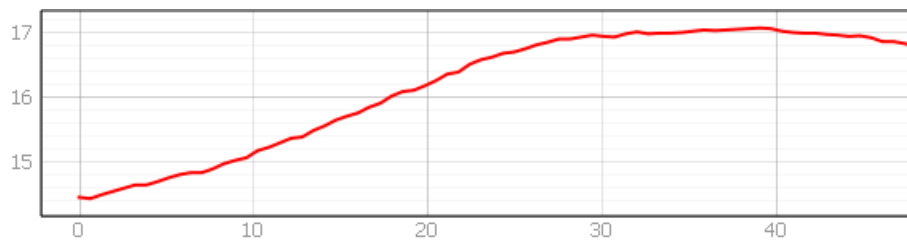
L354-6



L359-5



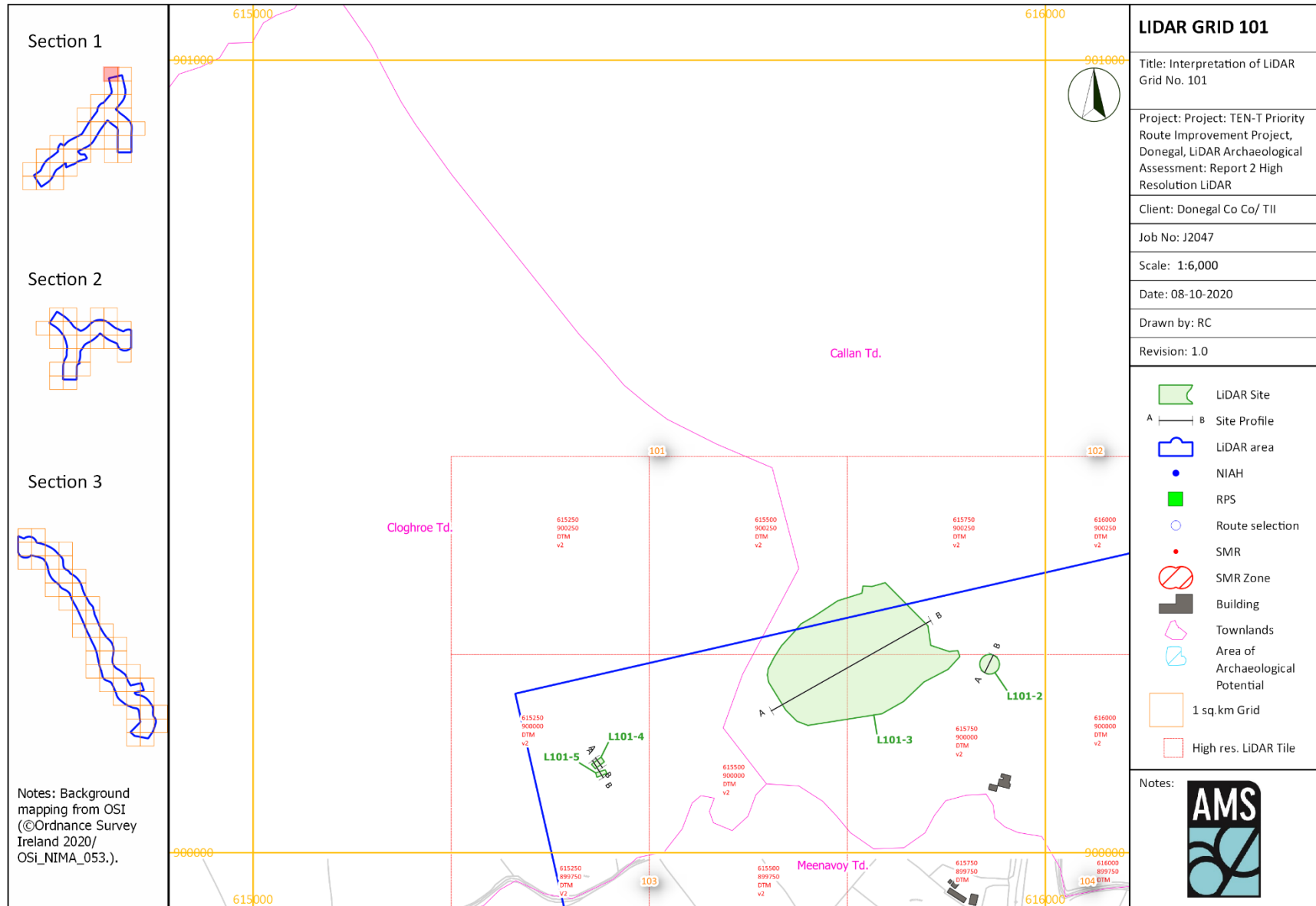
L359-6

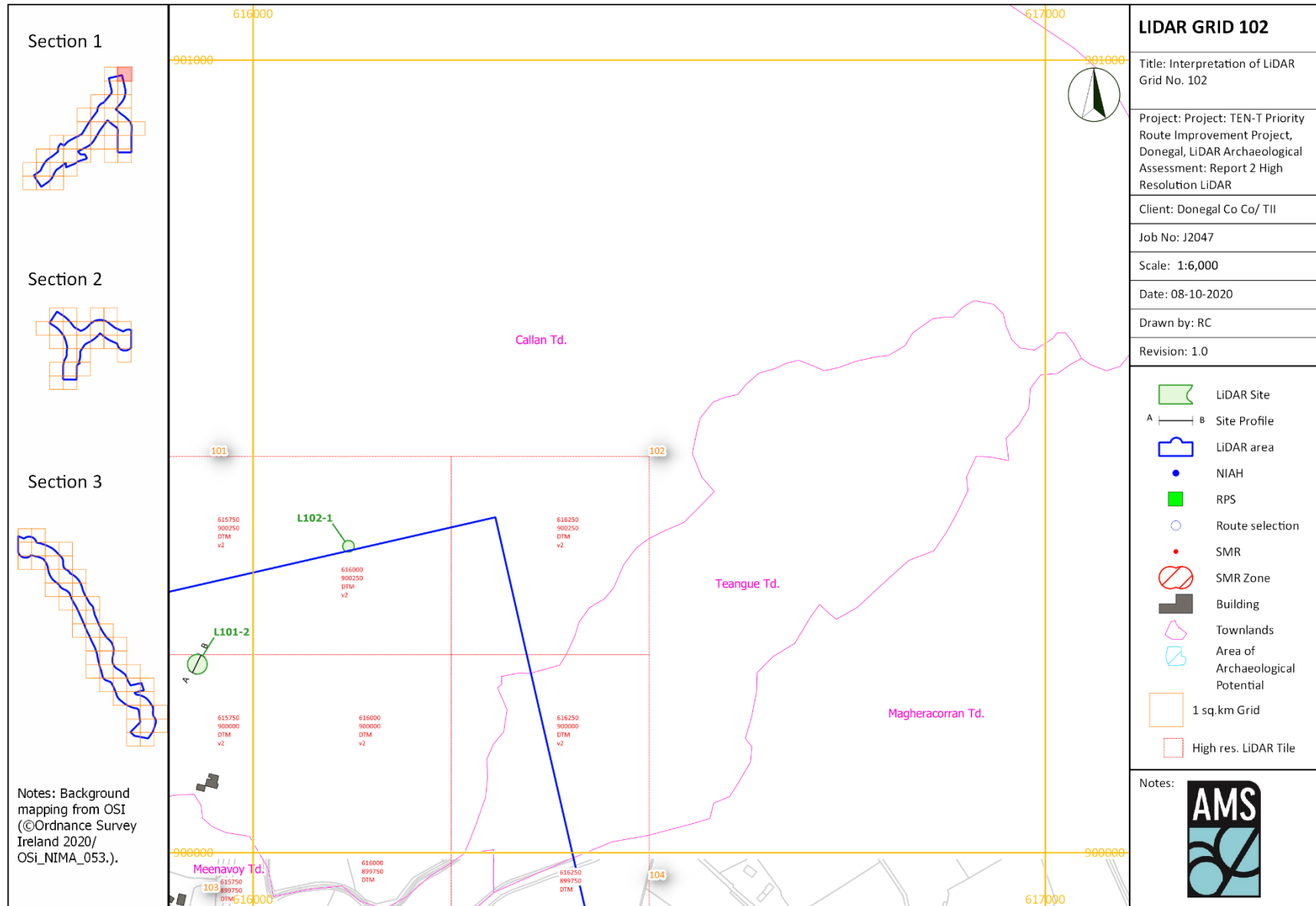


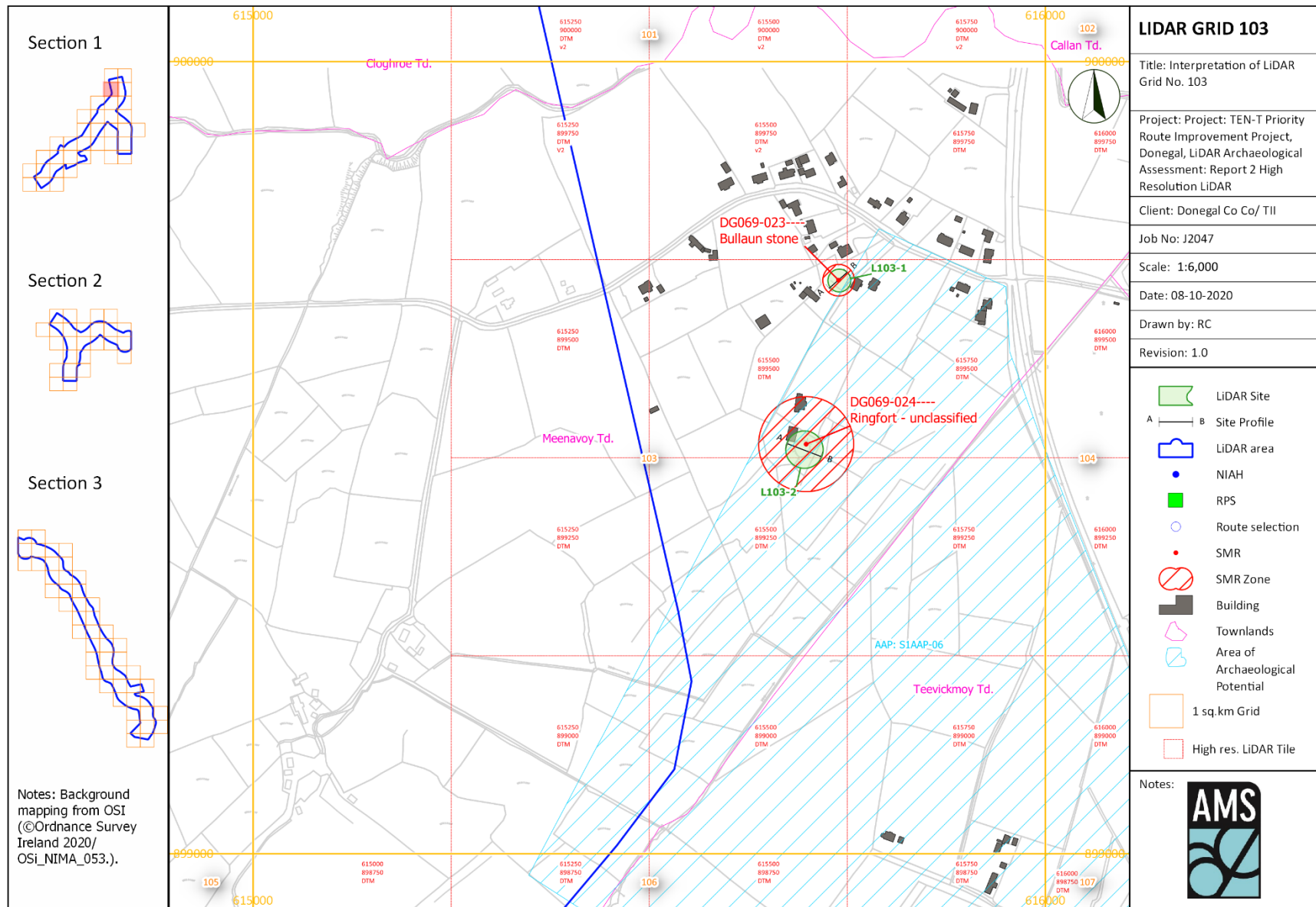
L362-1

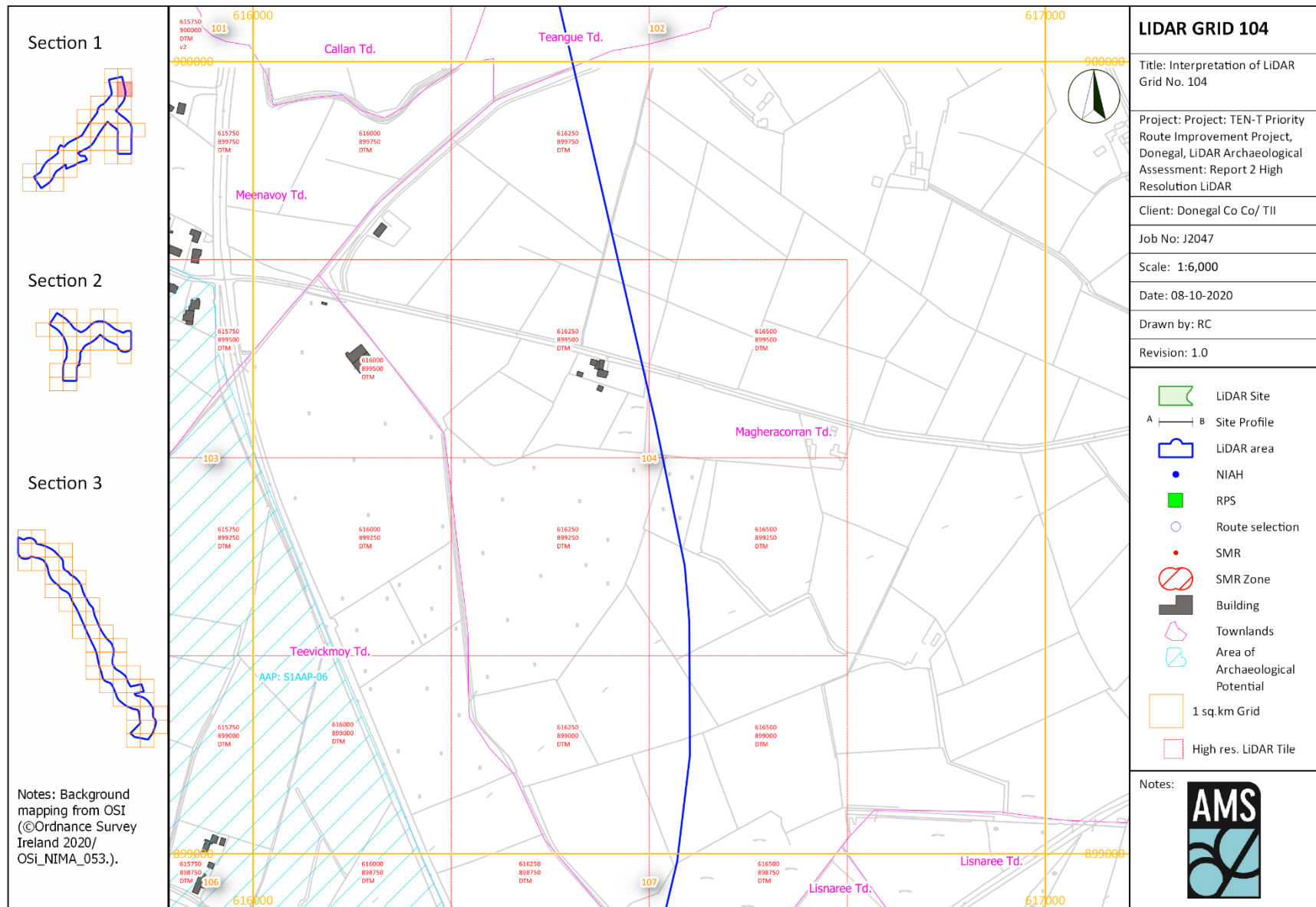
Appendix 4: Maps of Grid Tiles

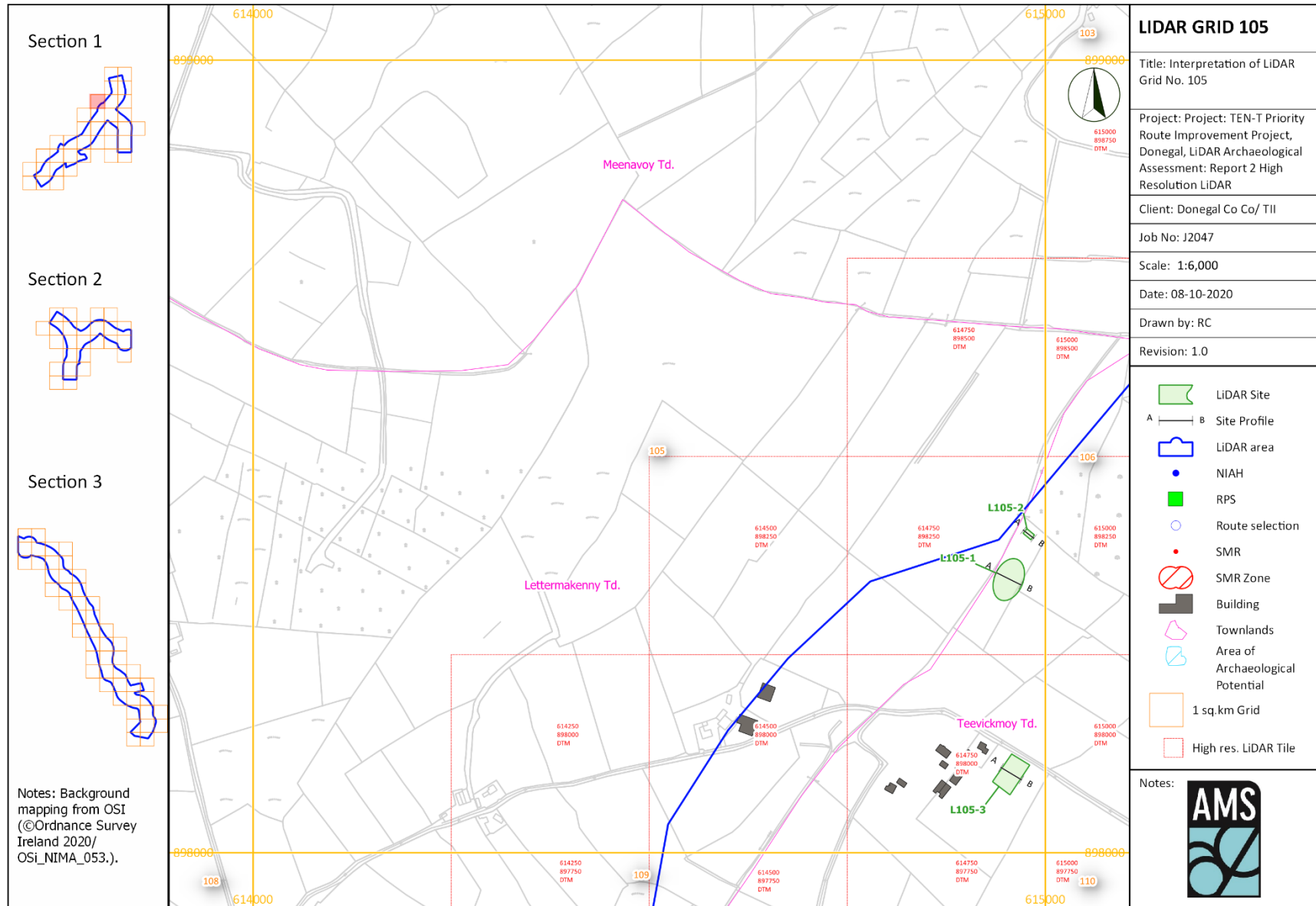
Section 1 Grids

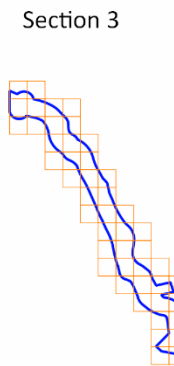
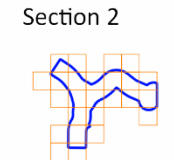
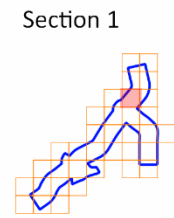
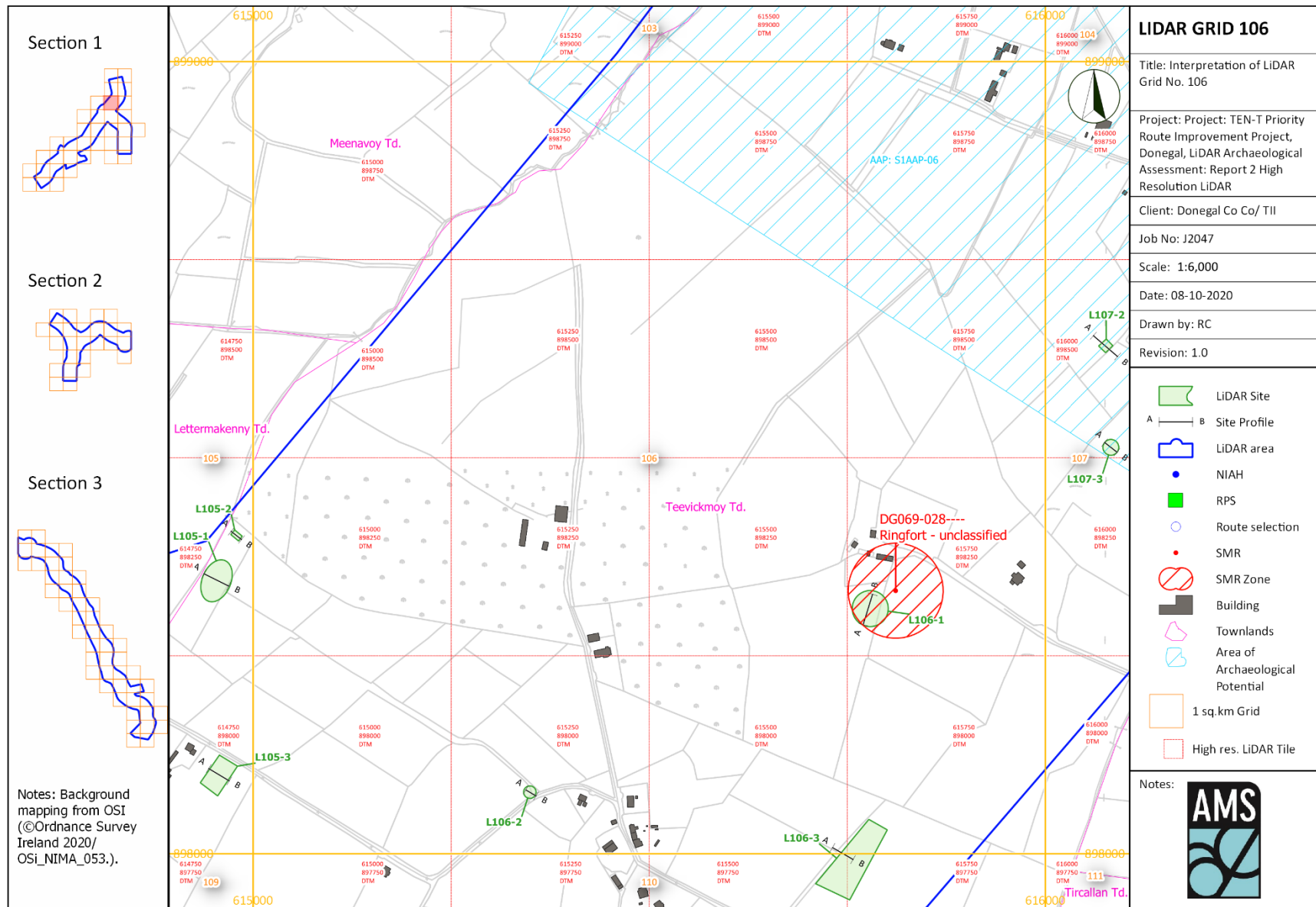










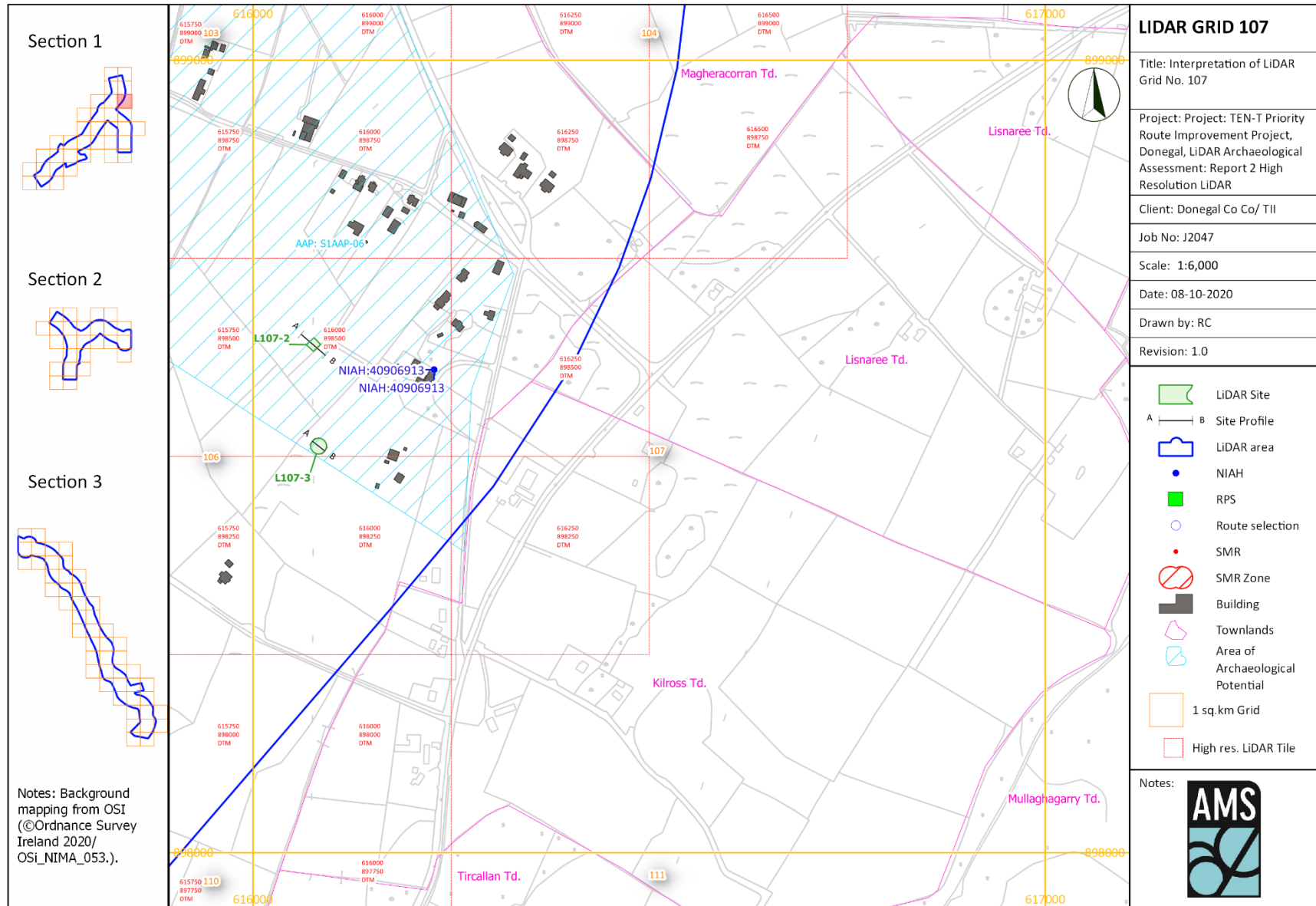


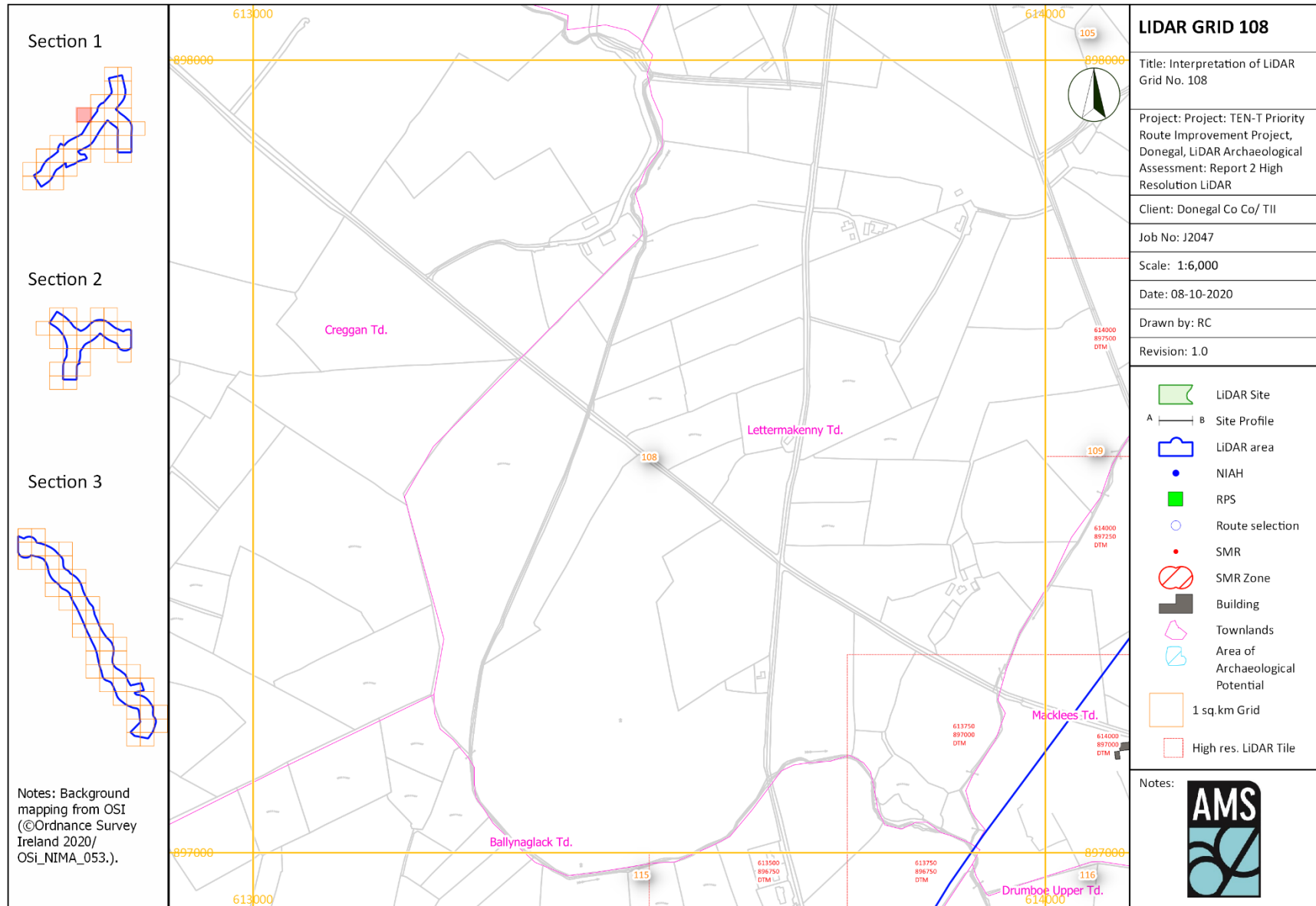
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

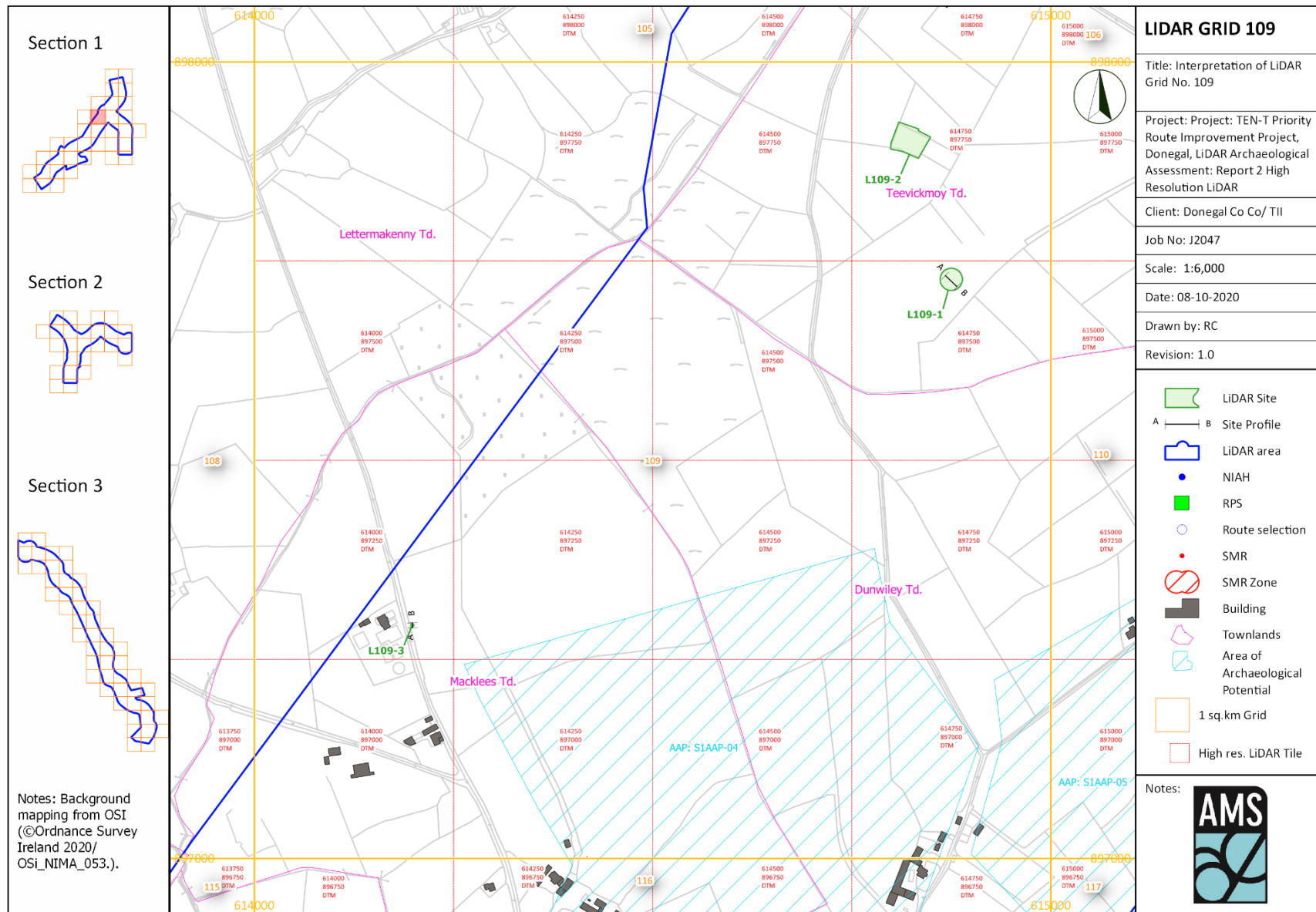
LiDAR GRID 106	
Title: Interpretation of LiDAR Grid No. 106	
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR	
Client: Donegal Co Co/ TII	
Job No: J2047	
Scale: 1:6,000	
Date: 08-10-2020	
Drawn by: RC	
Revision: 1.0	

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile









LIDAR GRID 109

Title: Interpretation of LiDAR Grid No. 109

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

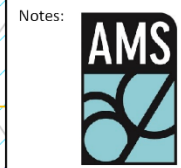
Date: 08-10-2020

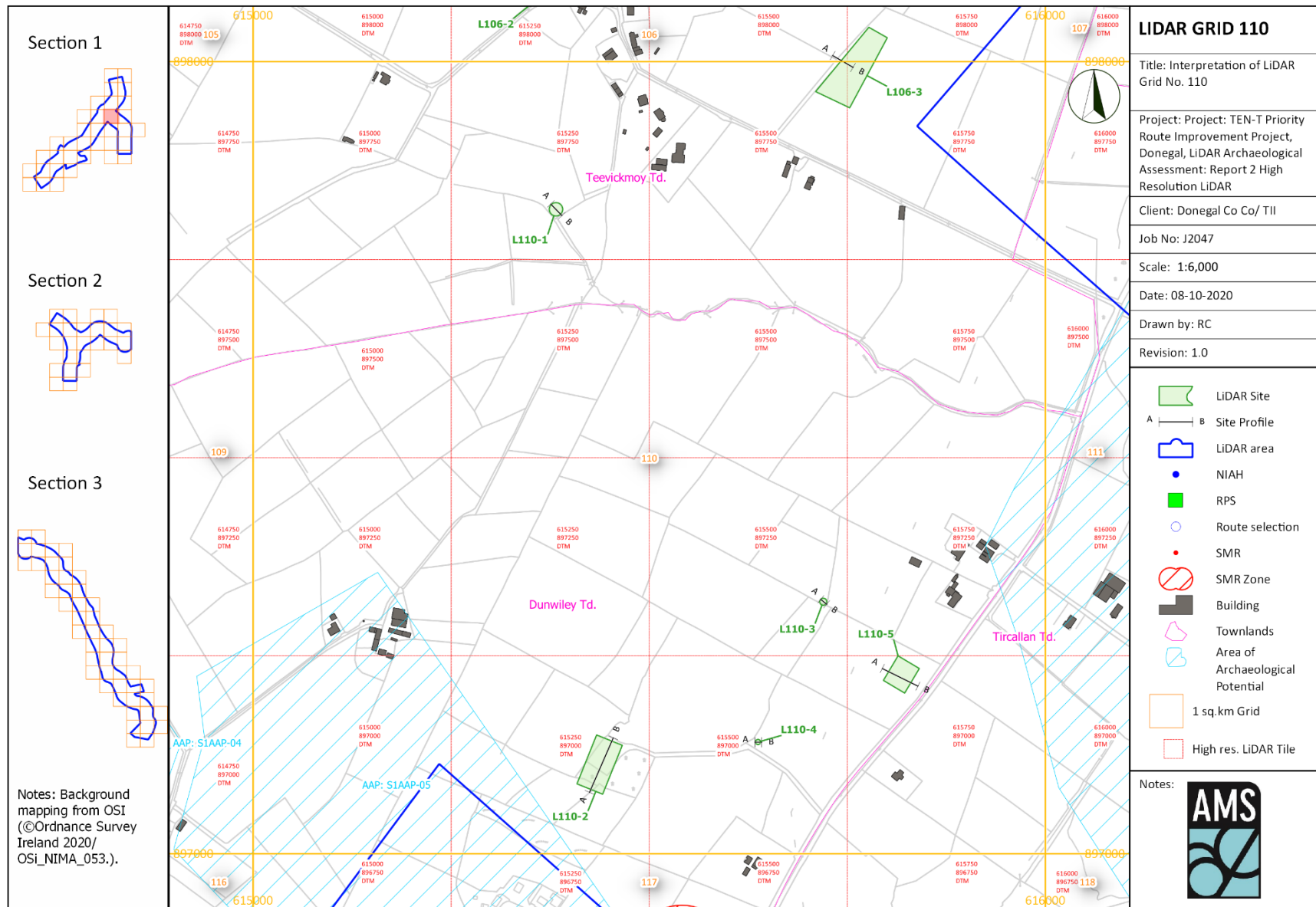
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).



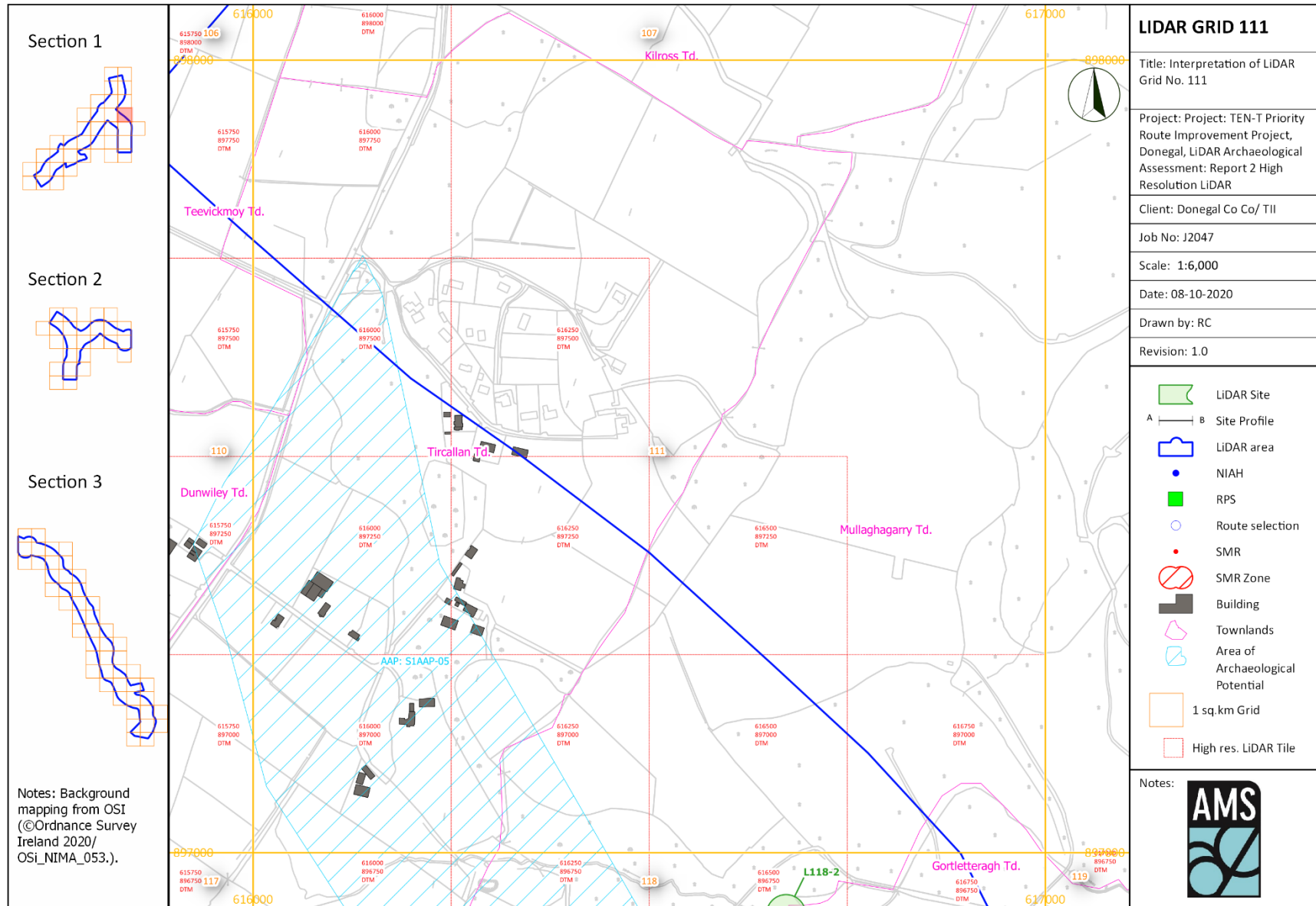


LIDAR GRID 110	
Title:	Interpretation of LiDAR Grid No. 110
Project:	Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client:	Donegal Co Co/ TII
Job No:	J2047
Scale:	1:6,000
Date:	08-10-2020
Drawn by:	RC
Revision:	1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).





LIDAR GRID 111

Title: Interpretation of LiDAR Grid No. 111

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

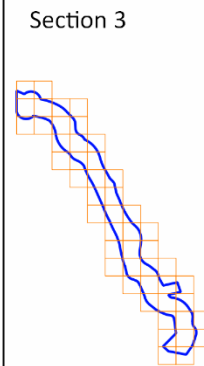
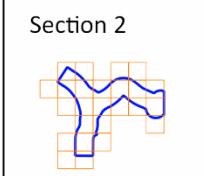
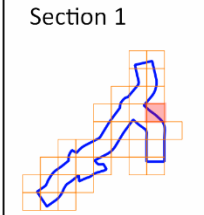
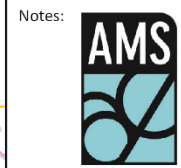
Scale: 1:6,000

Date: 08-10-2020

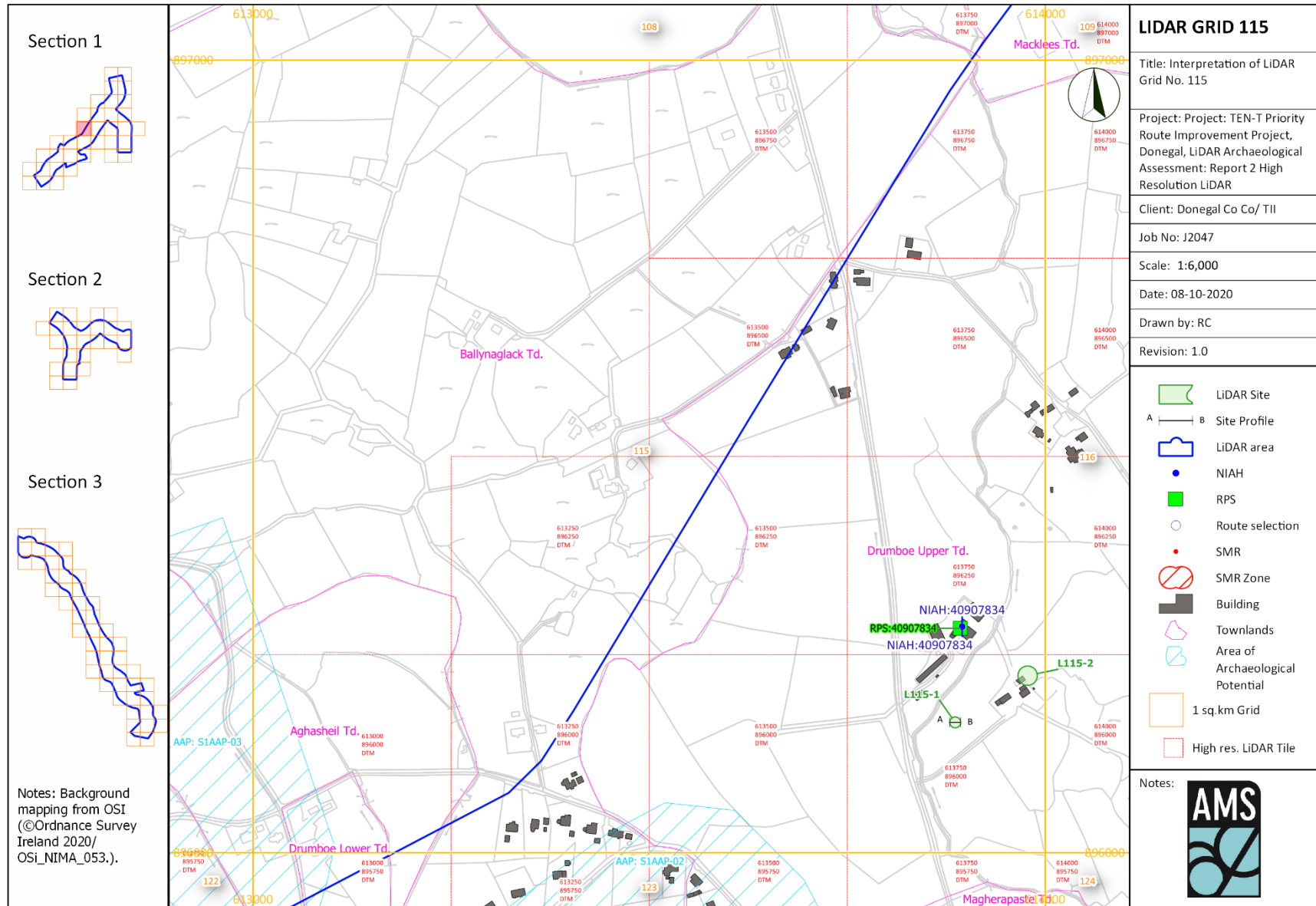
Drawn by: RC

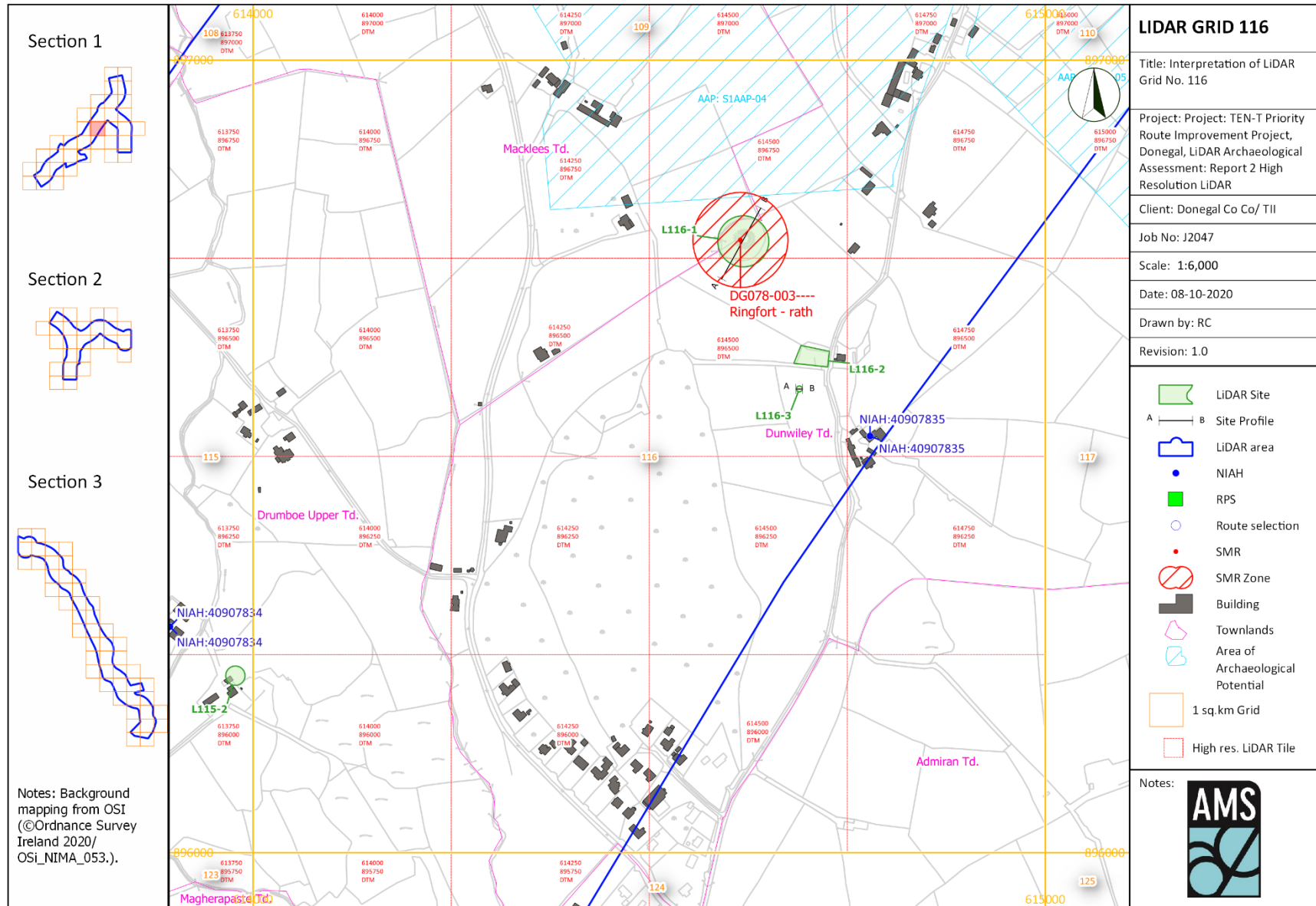
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 116

Title: Interpretation of LiDAR Grid No. 116

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

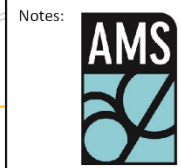
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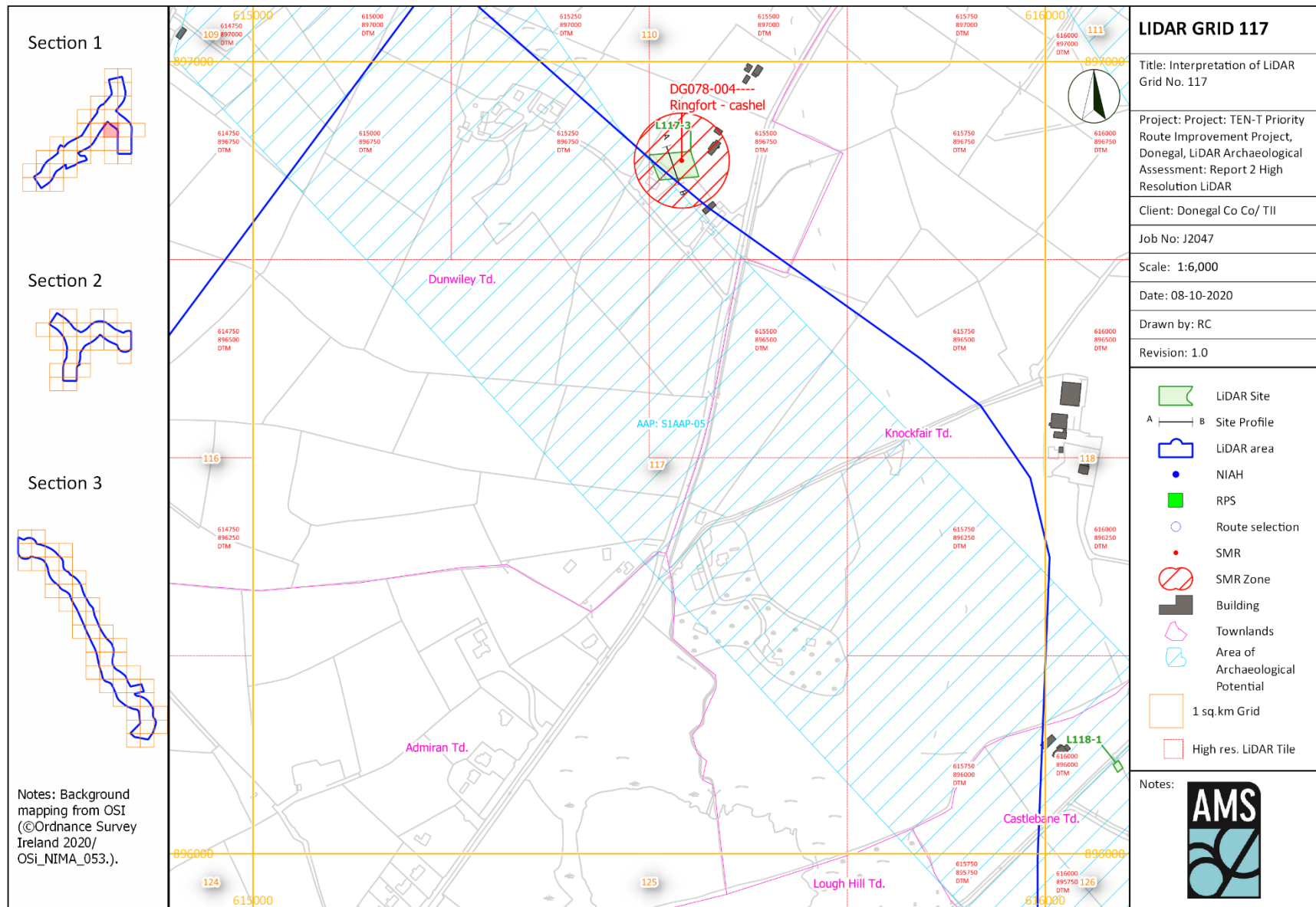
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 117

Title: Interpretation of LiDAR Grid No. 117

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

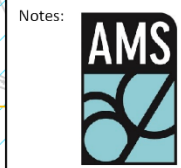
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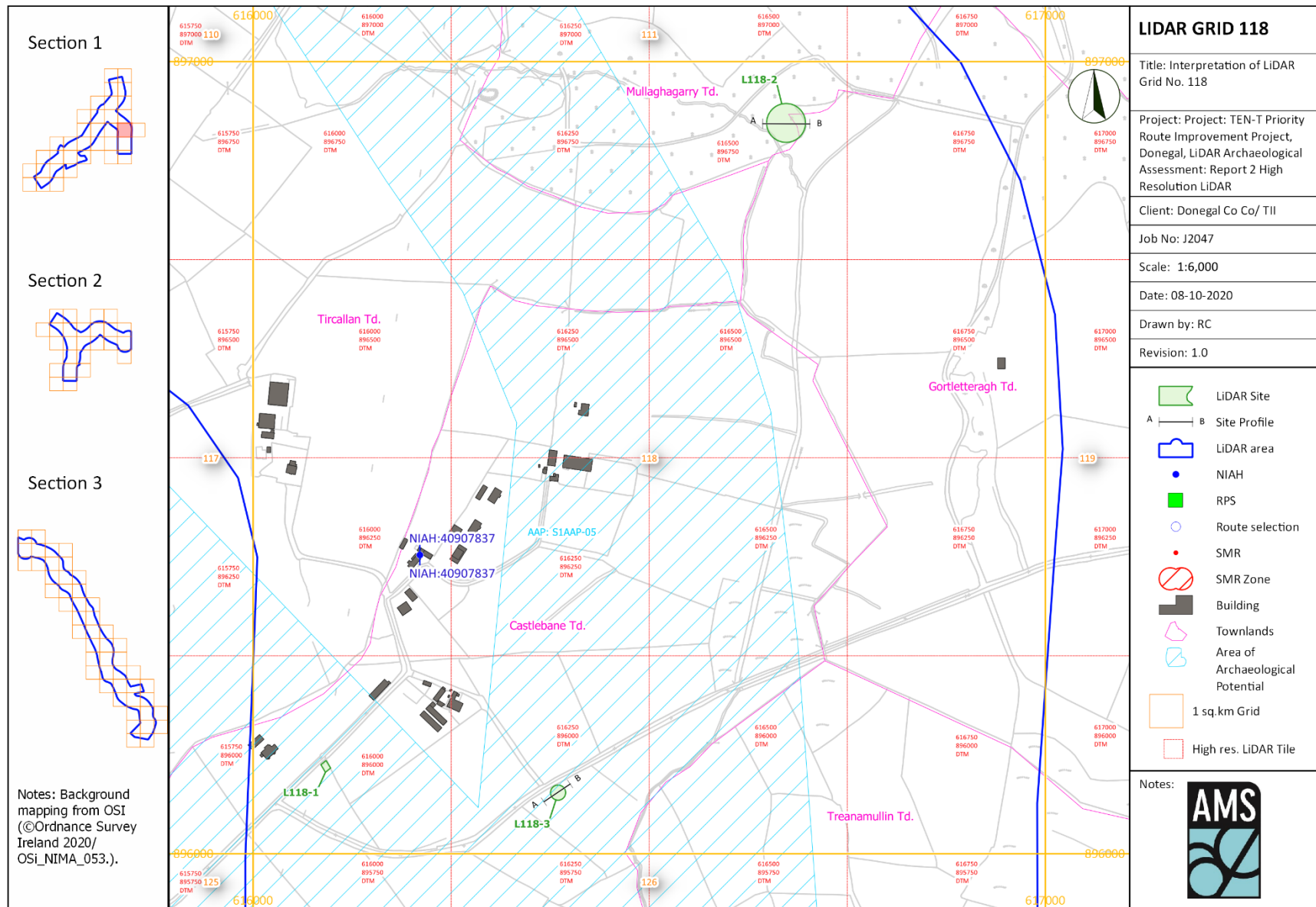
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 118

Title: Interpretation of LiDAR Grid No. 118

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

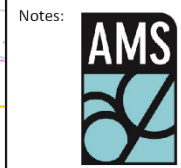
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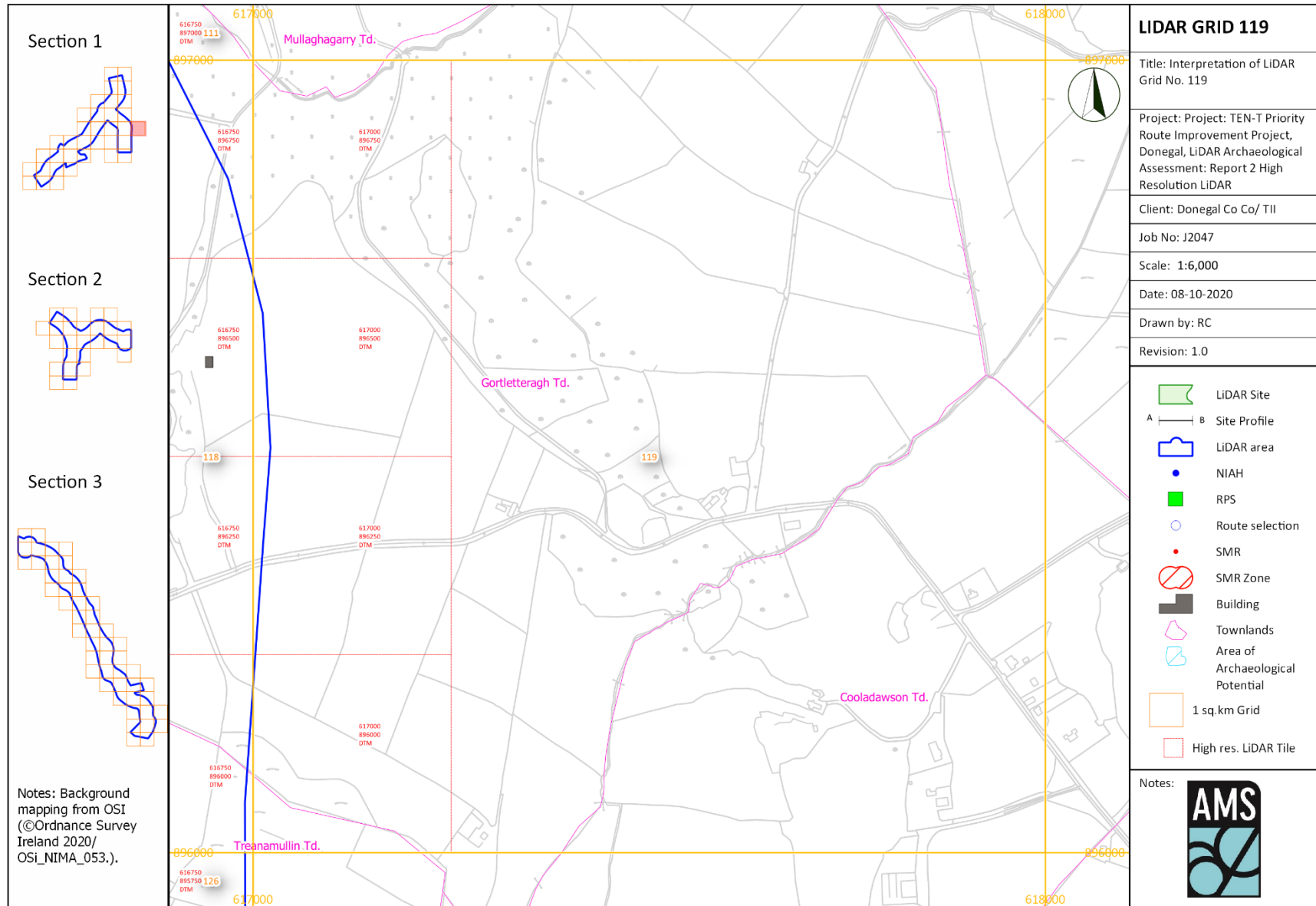
Date: 08-10-2020

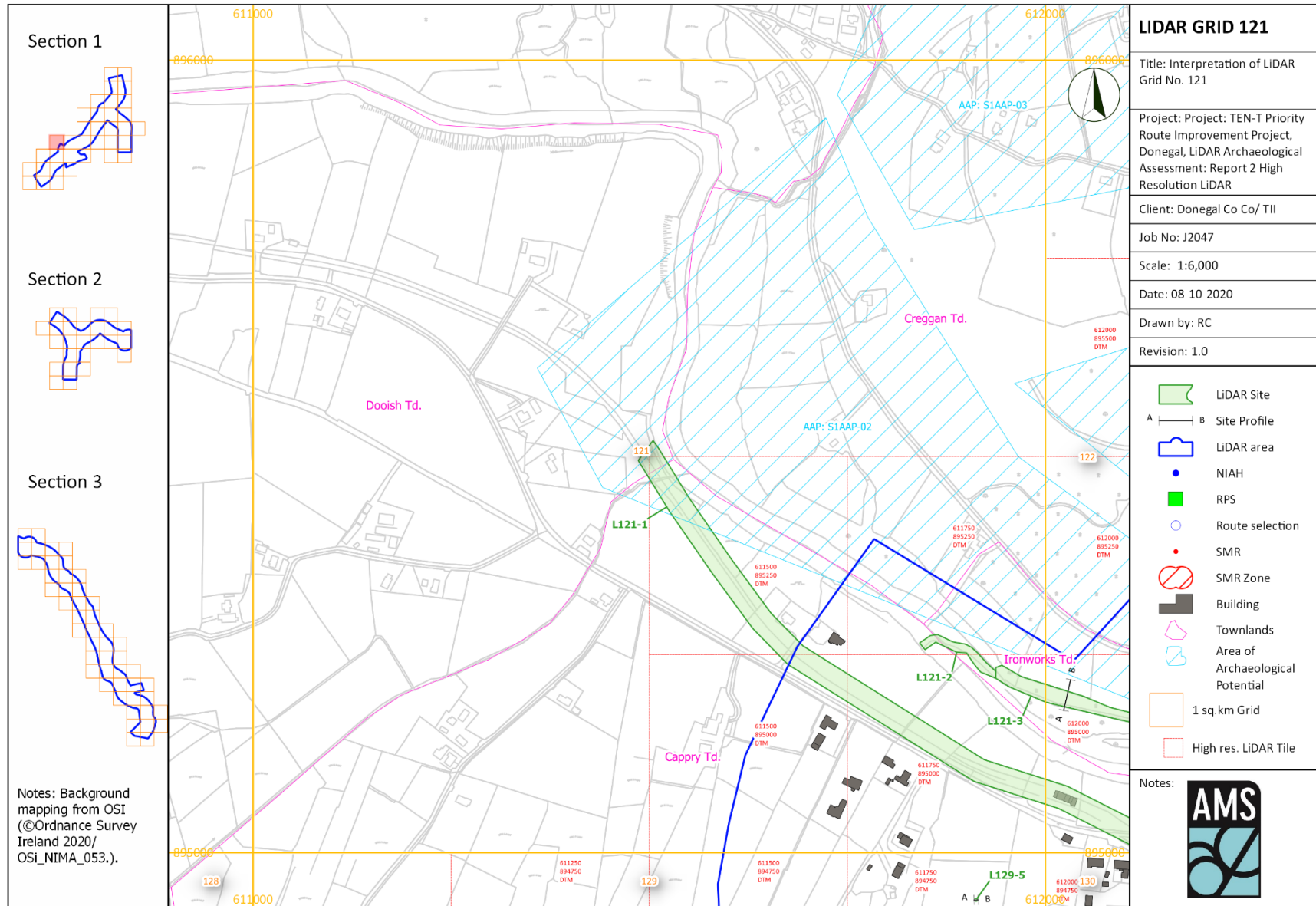
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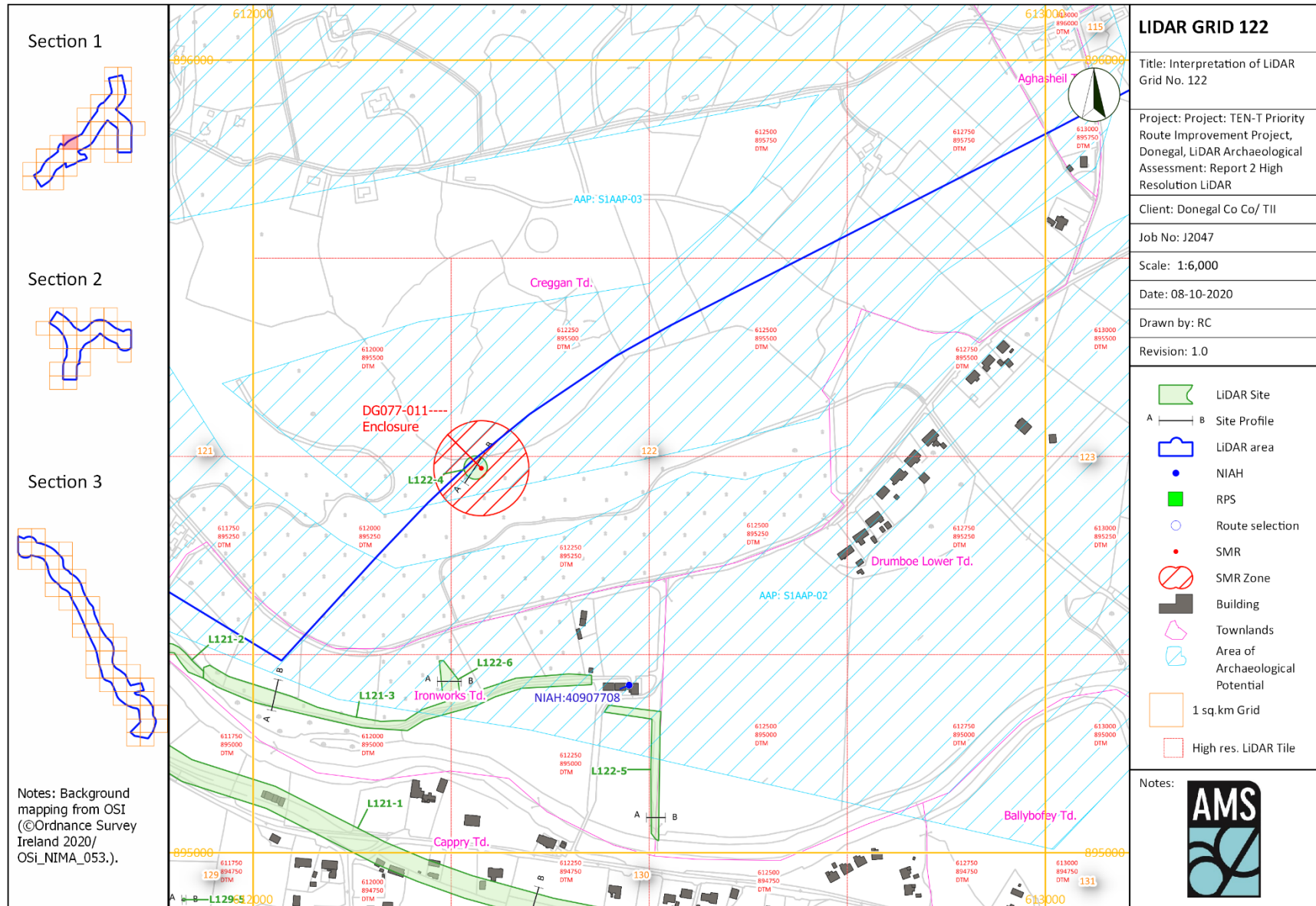
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile









Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 122

Title: Interpretation of LiDAR Grid No. 122

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

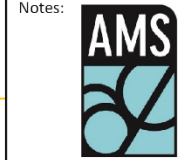
Scale: 1:6,000

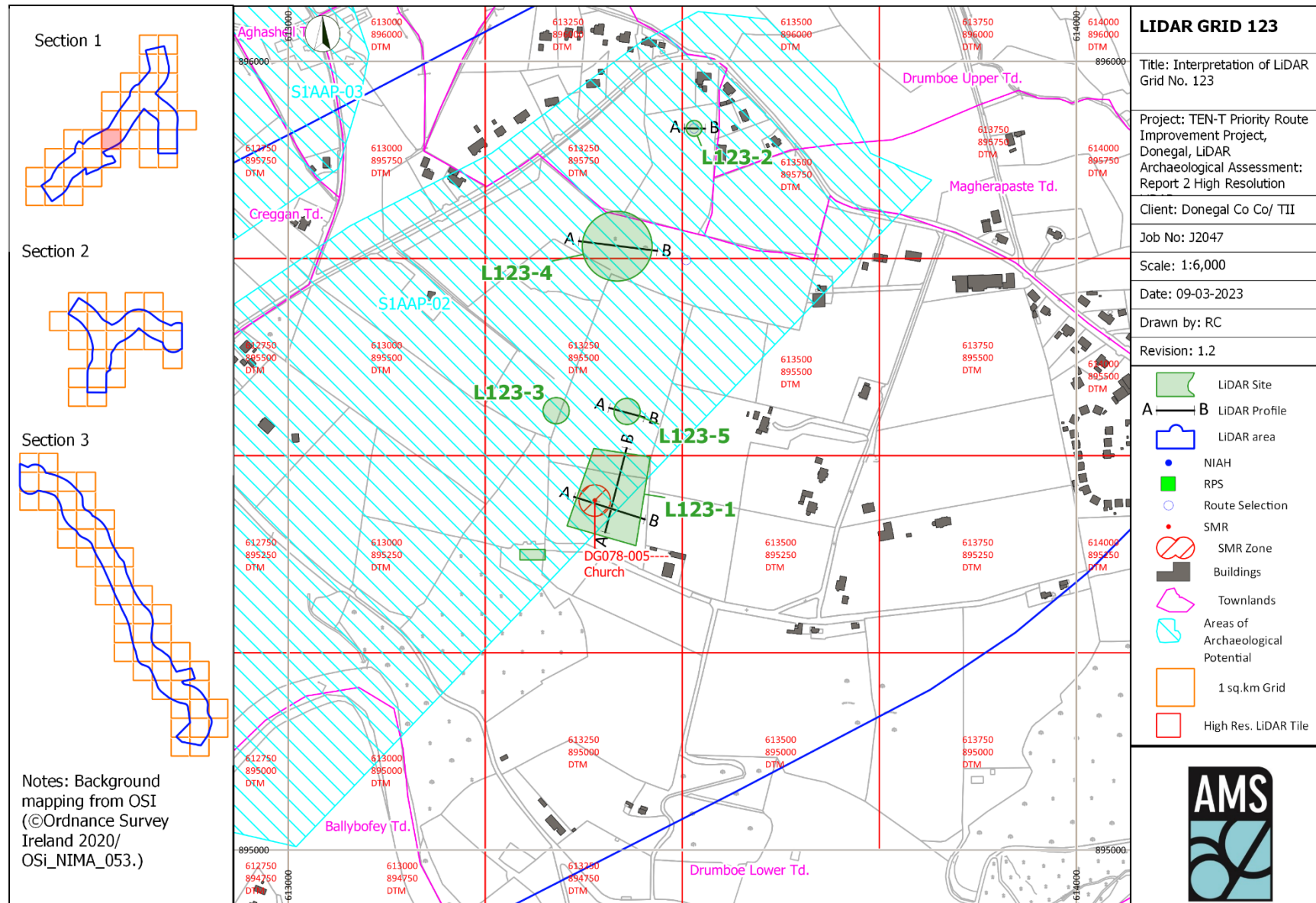
Date: 08-10-2020

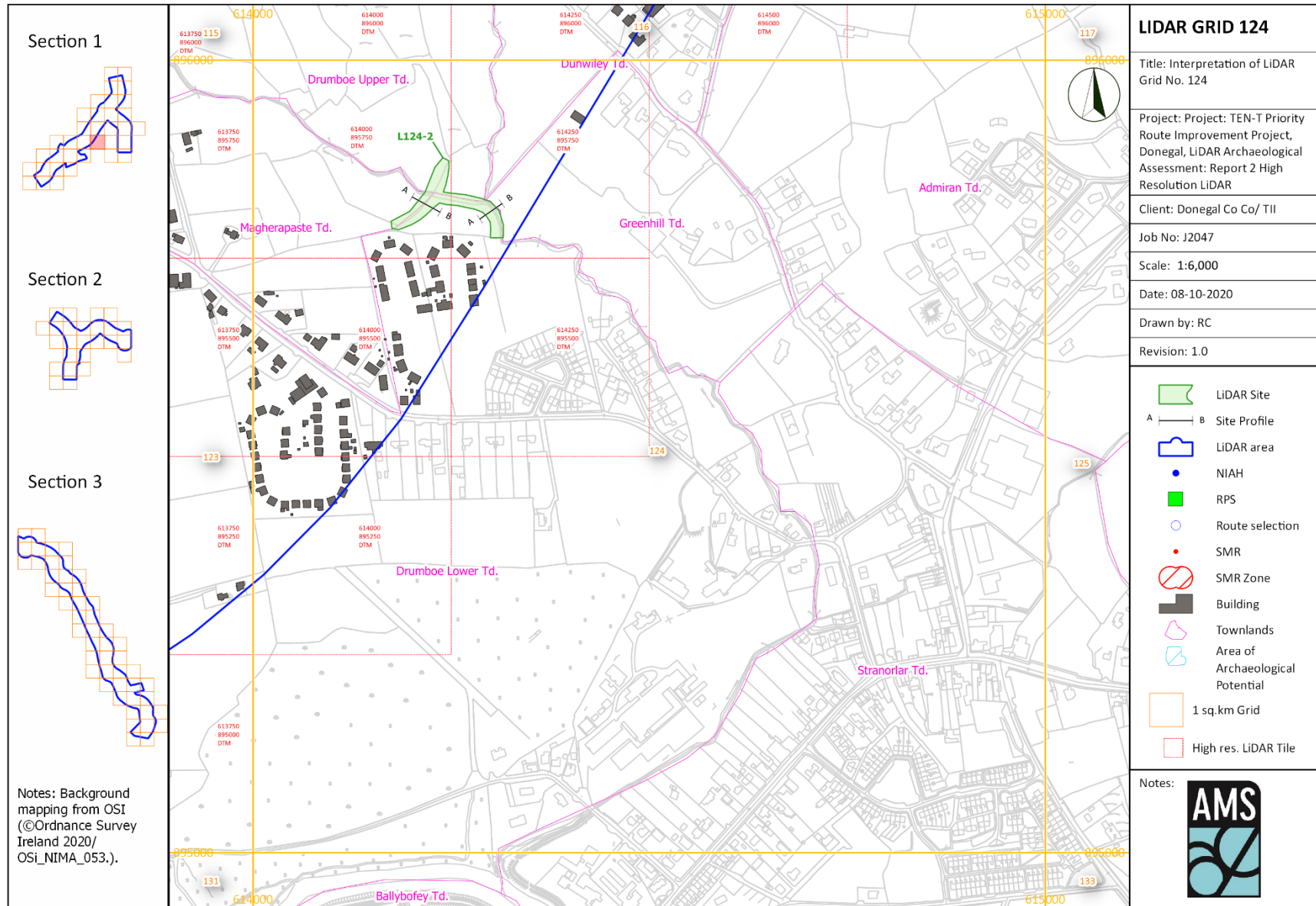
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile



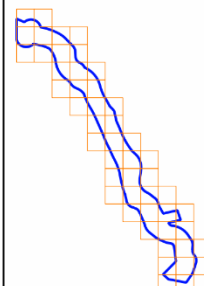
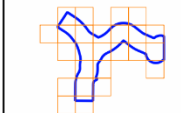
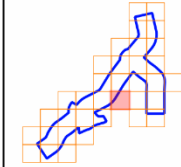




Section 1

Section 2

Section 3

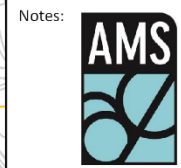


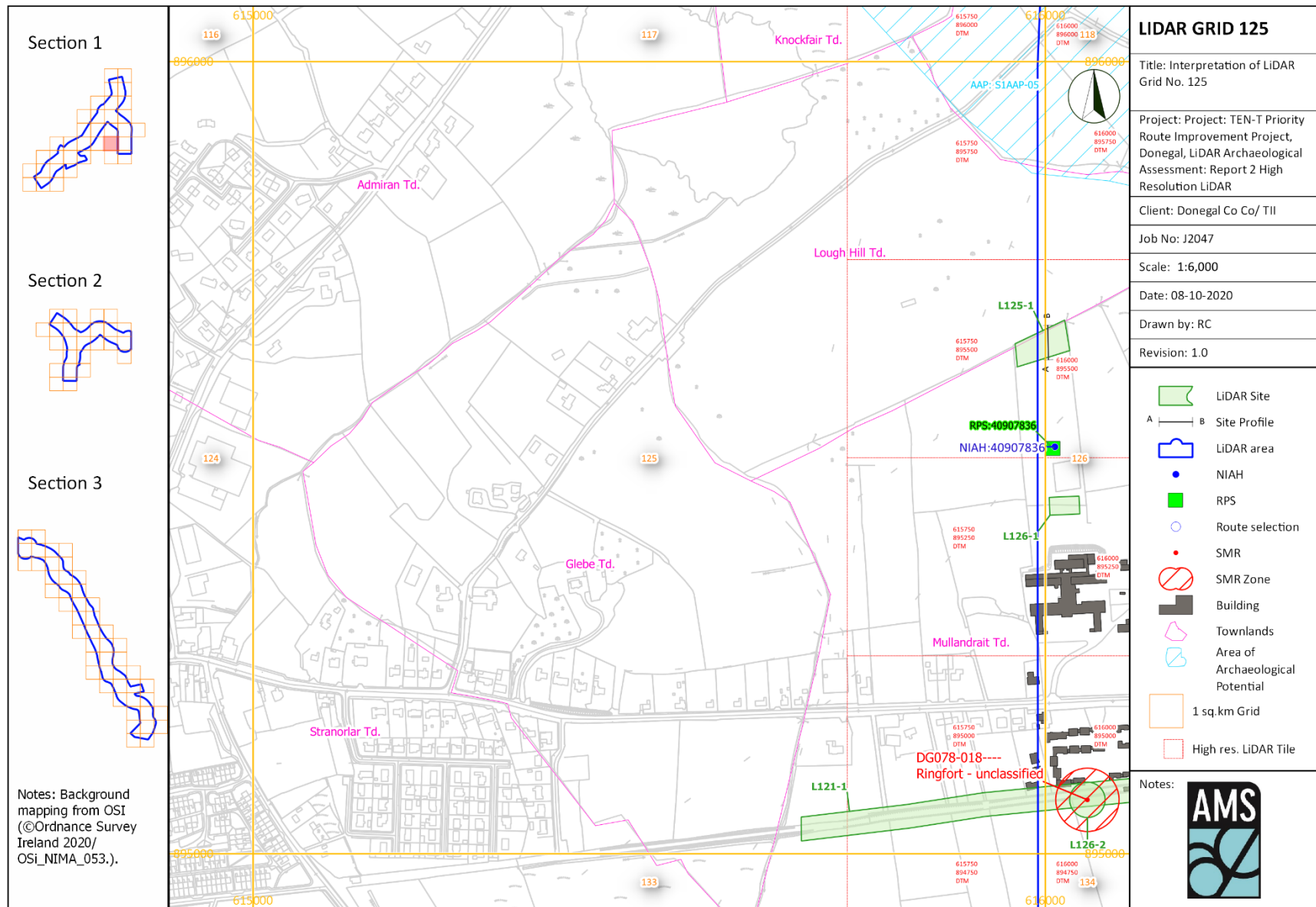
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 124

Title: Interpretation of LiDAR Grid No. 124
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client: Donegal Co Co/ TII
Job No: J2047
Scale: 1:6,000
Date: 08-10-2020
Drawn by: RC
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 125

Title: Interpretation of LiDAR Grid No. 125

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

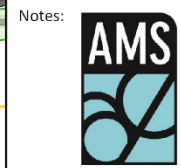
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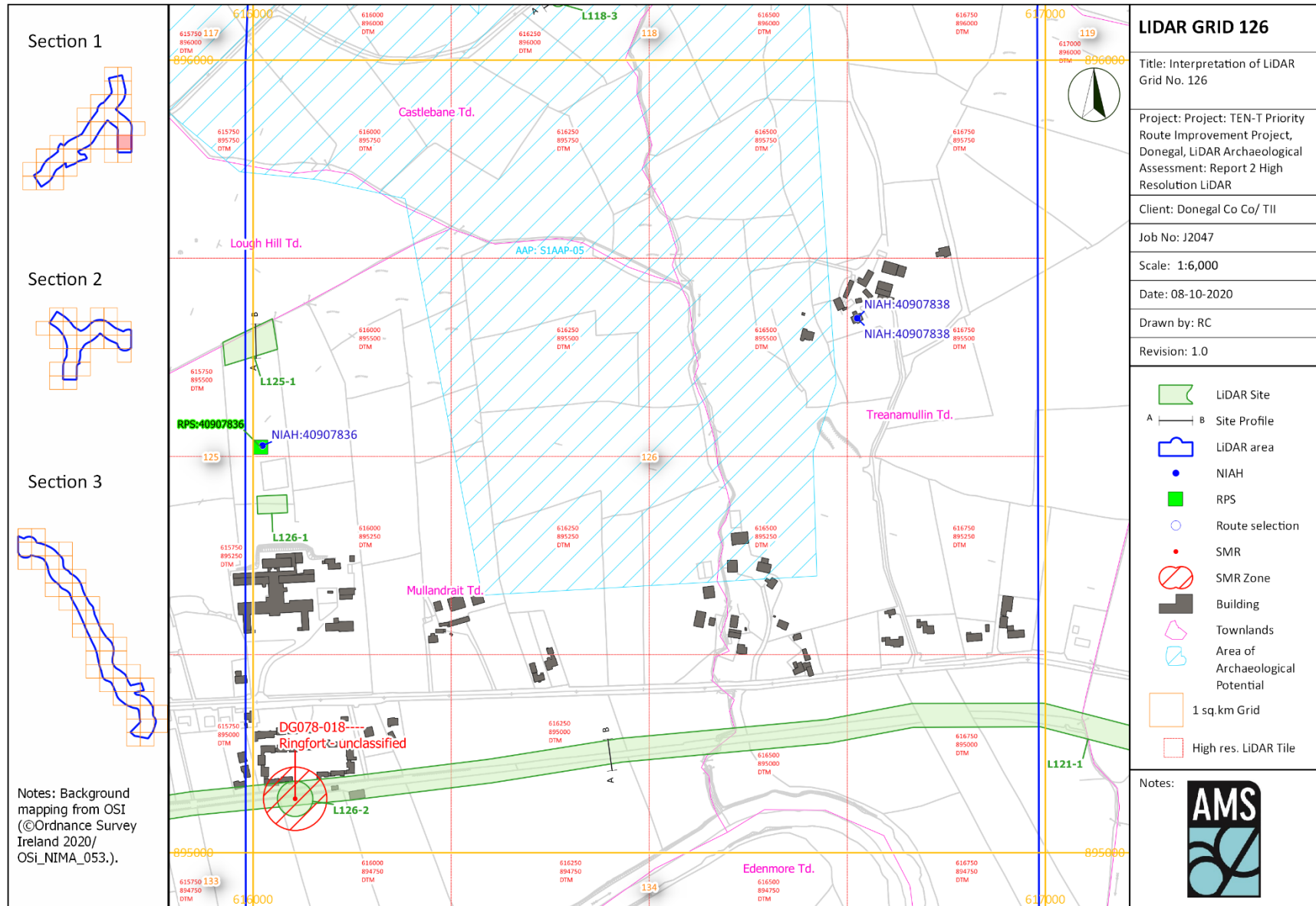
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 126

Title: Interpretation of LiDAR Grid No. 126

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

Date: 08-10-2020

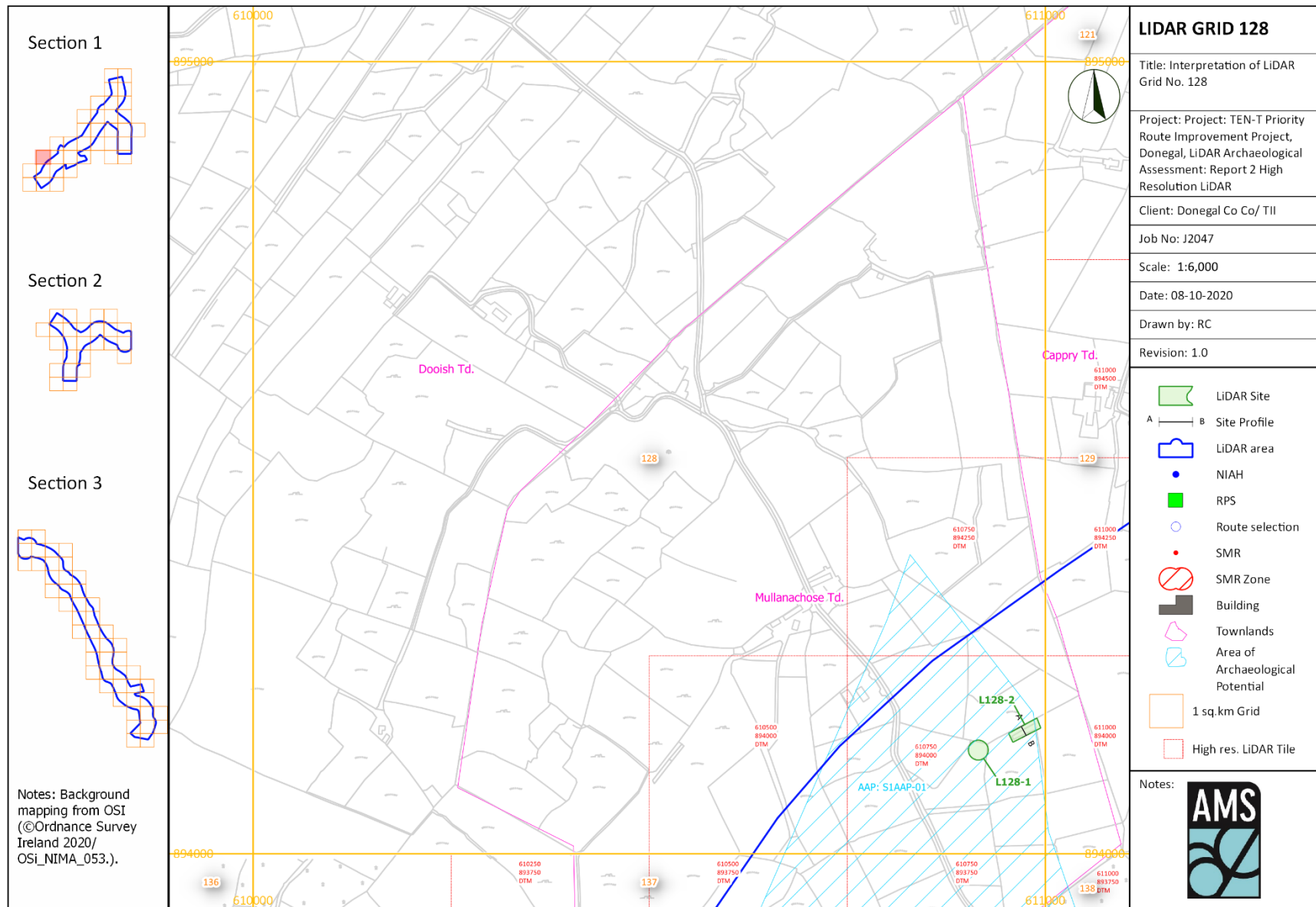
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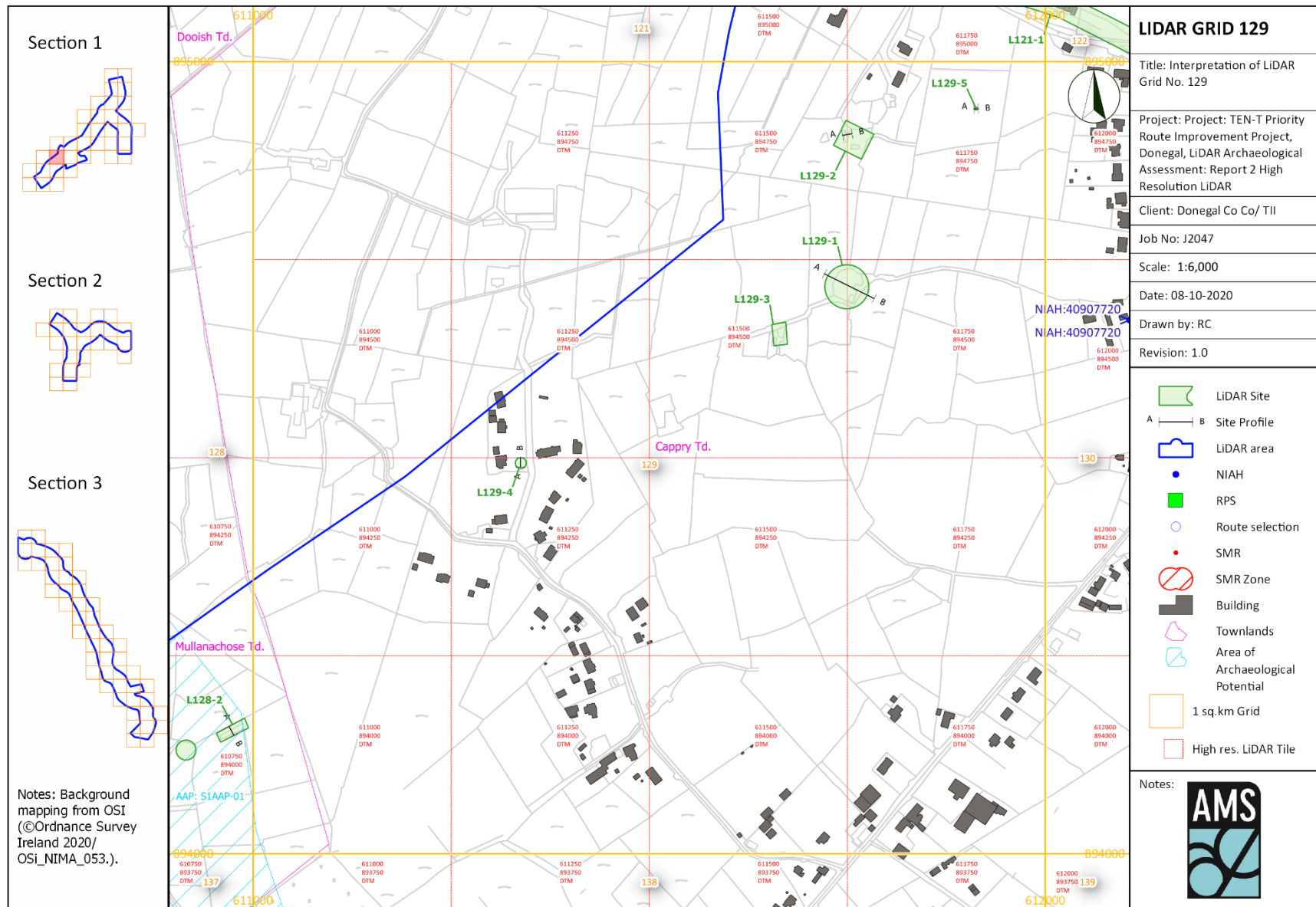
Revision: 1.0

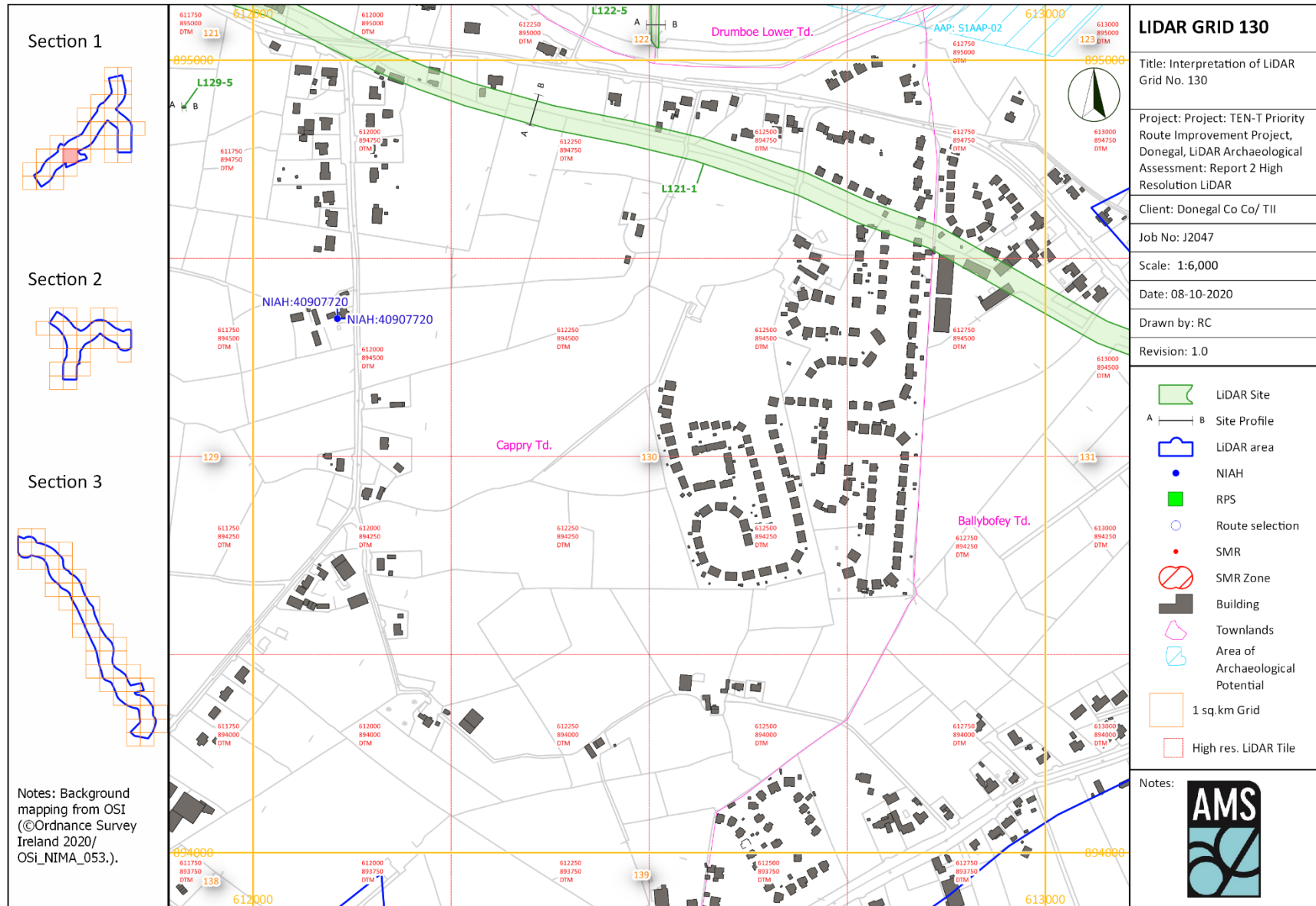
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

Notes:









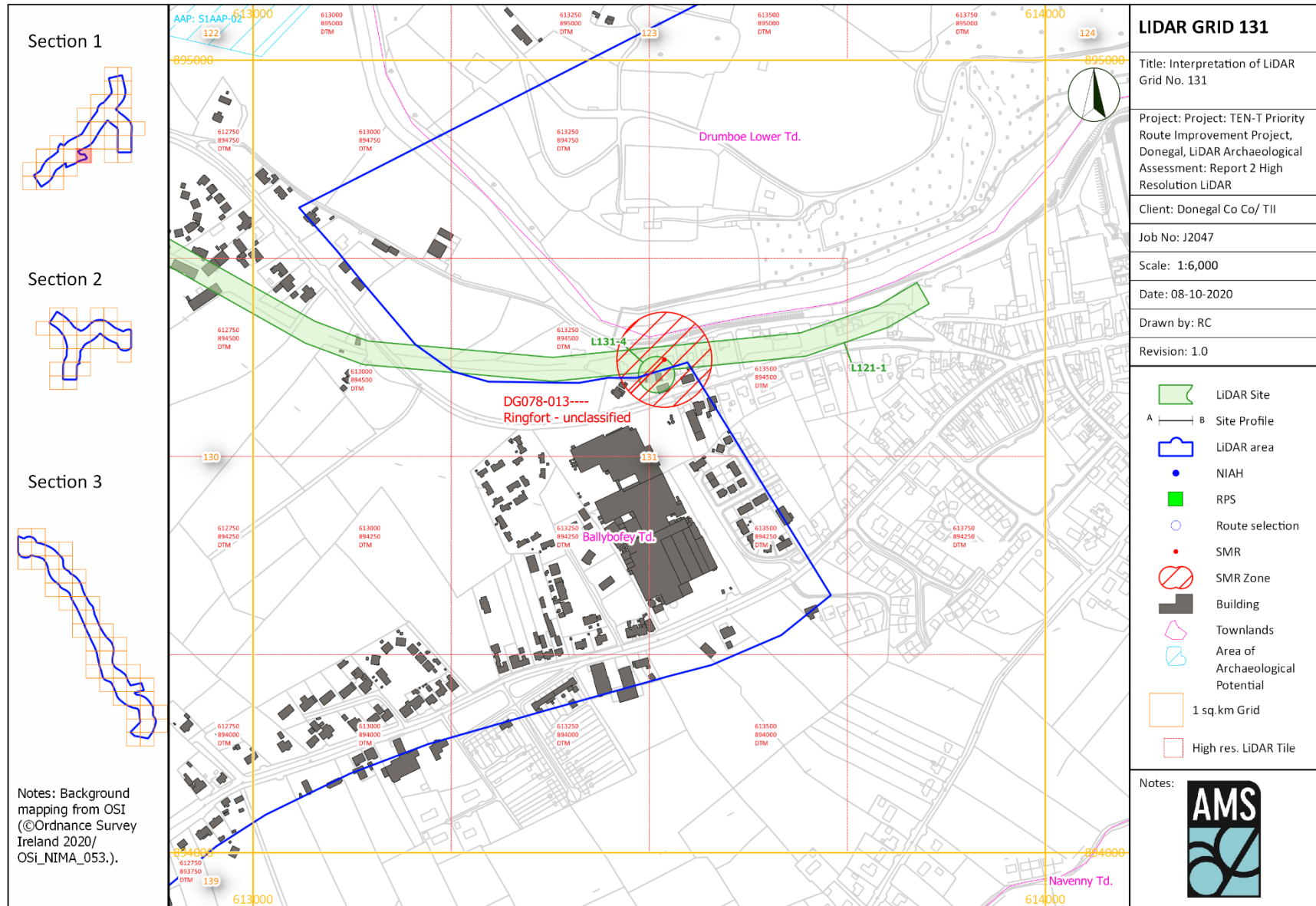
LIDAR GRID 130	
Title: Interpretation of LiDAR Grid No. 130	
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR	
Client: Donegal Co Co/ TII	
Job No: J2047	
Scale: 1:6,000	
Date: 08-10-2020	
Drawn by: RC	
Revision: 1.0	

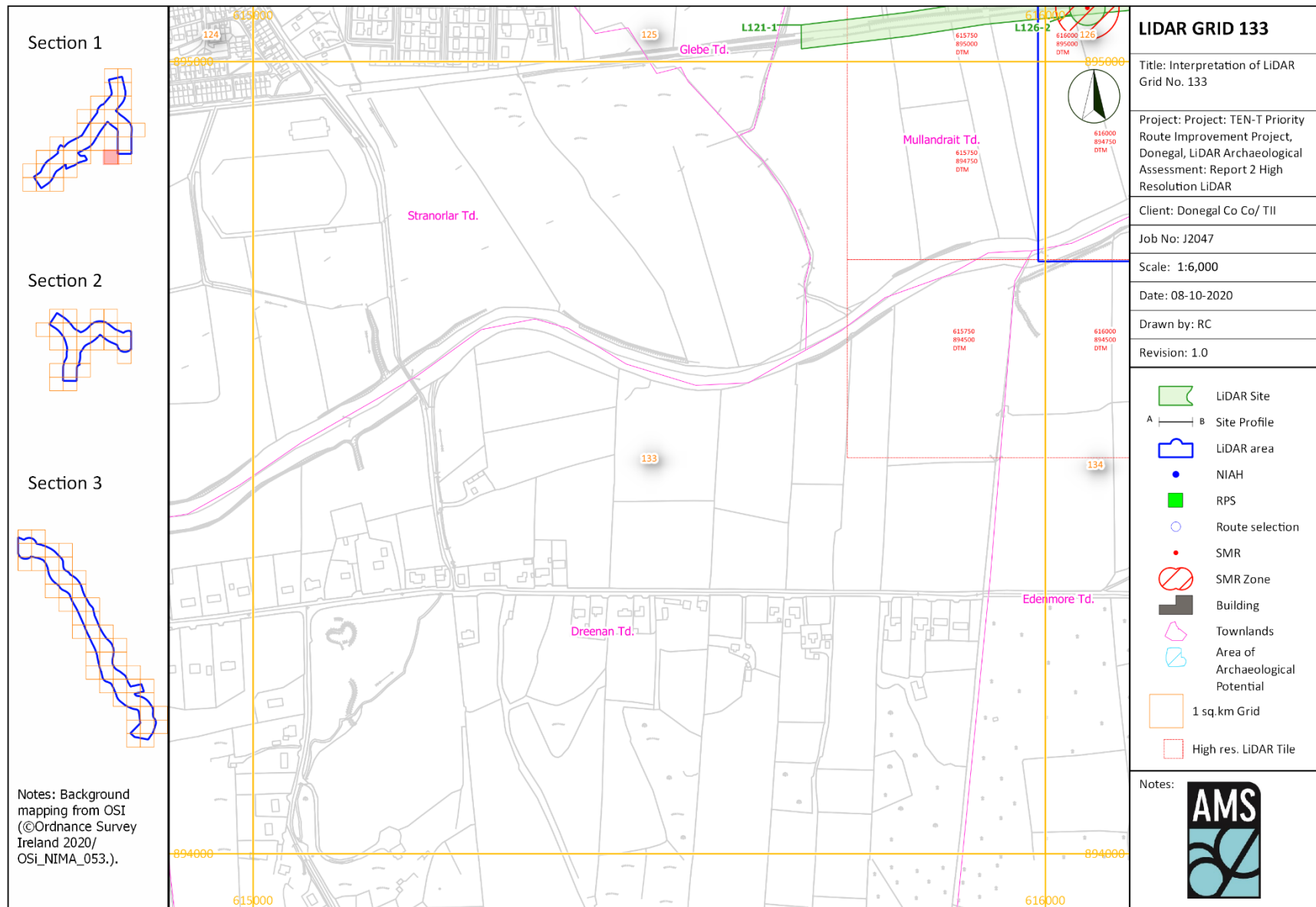
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

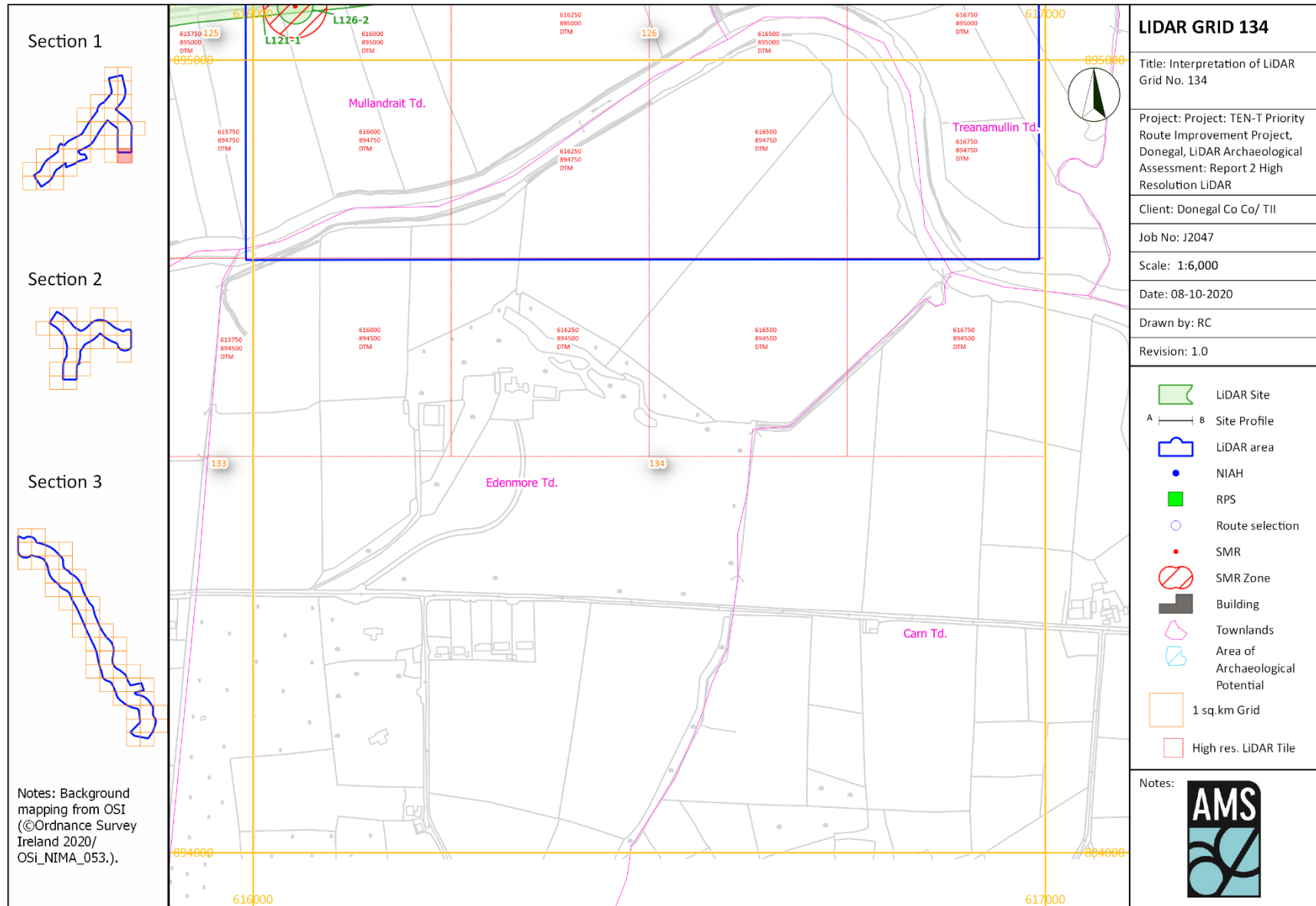
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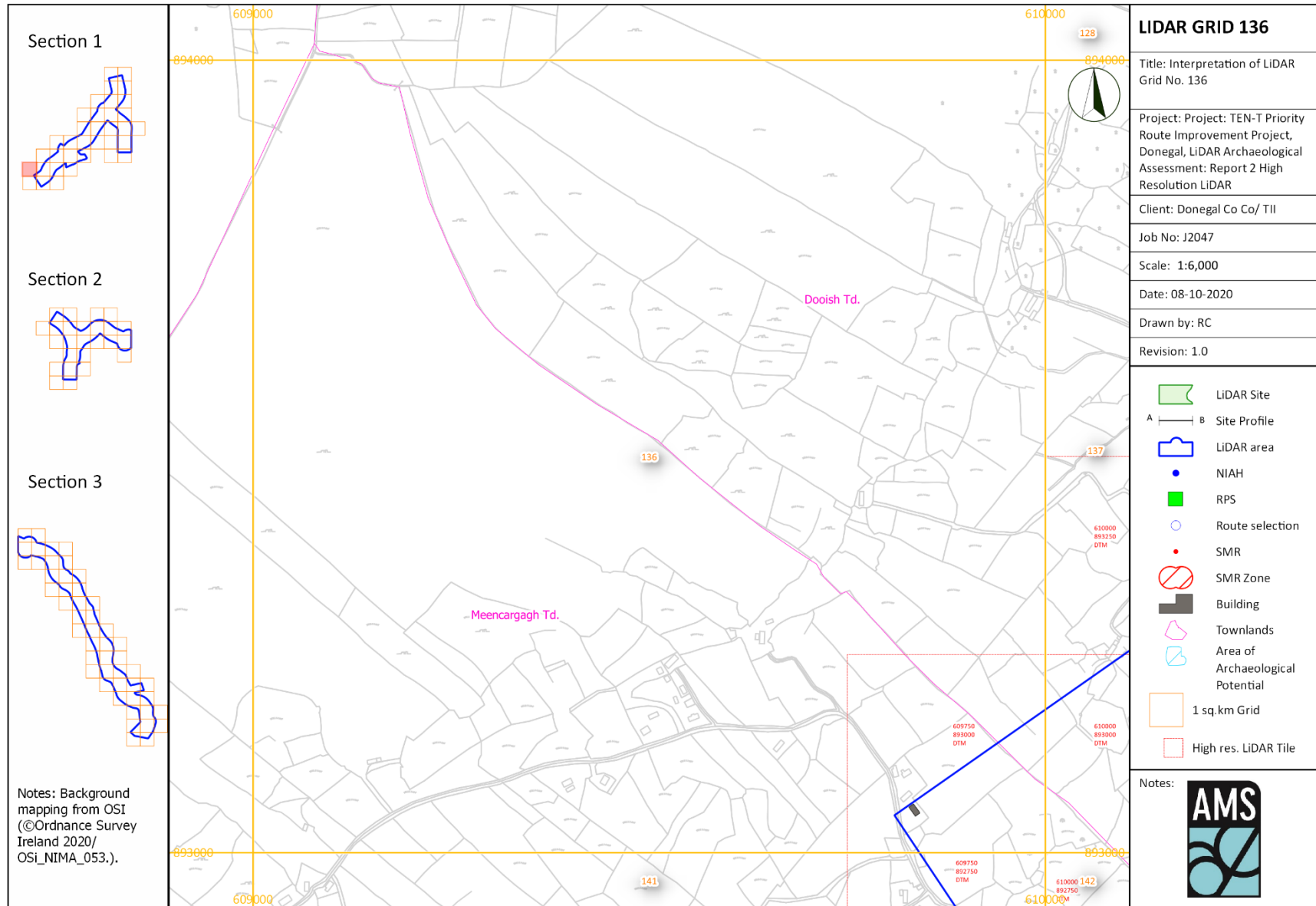


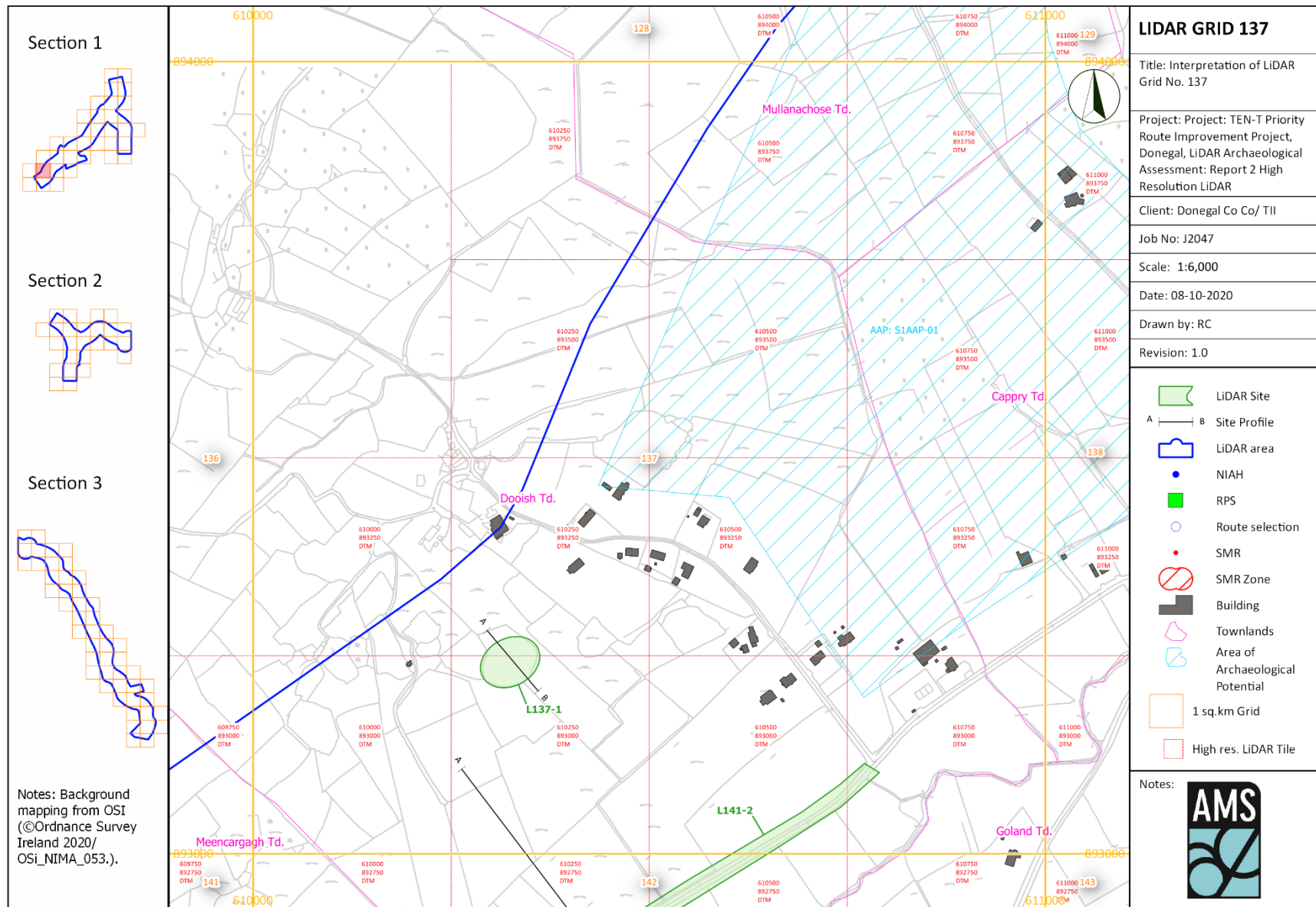
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

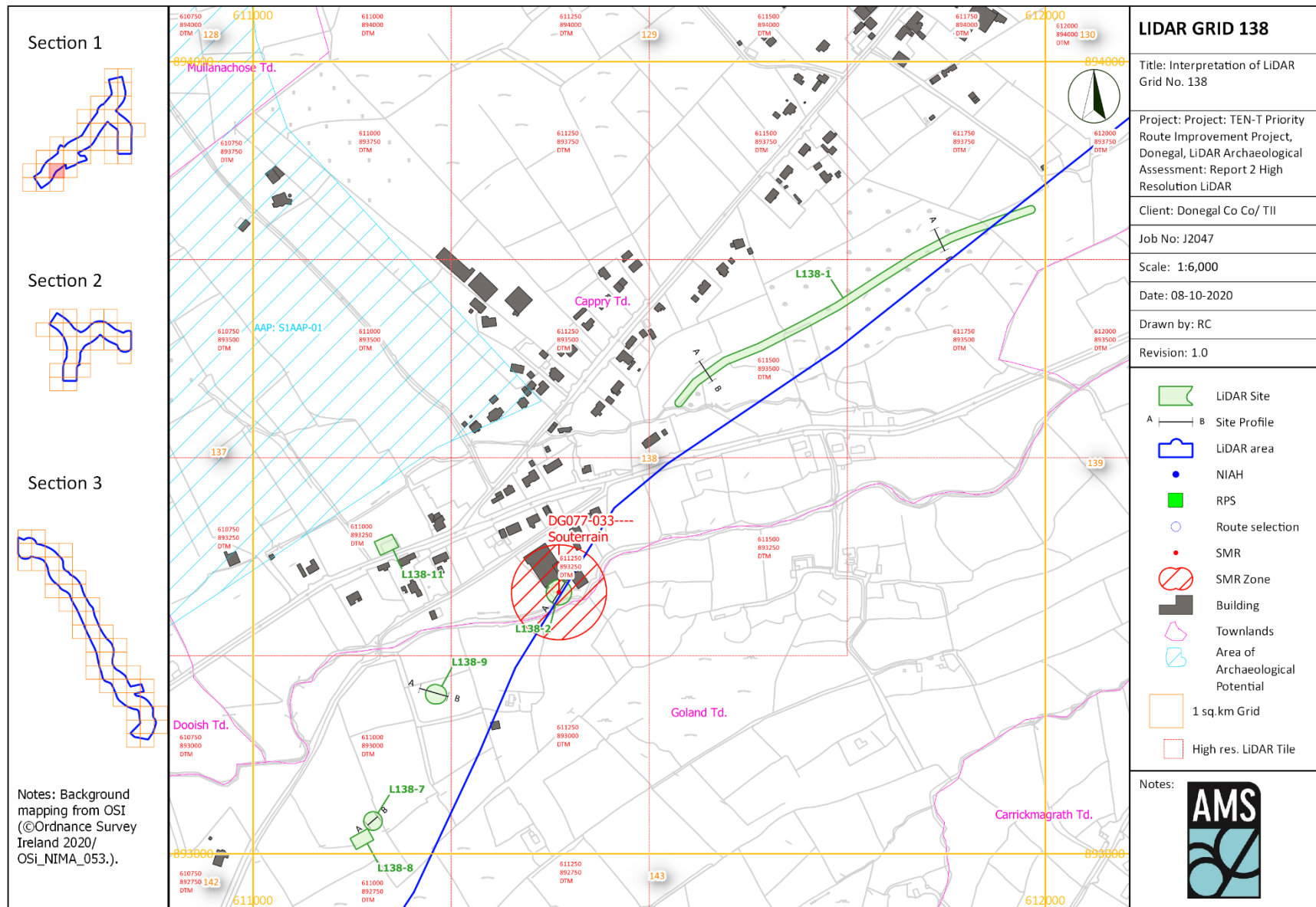












Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 138

Title: Interpretation of LiDAR Grid No. 138

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

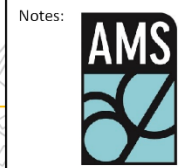
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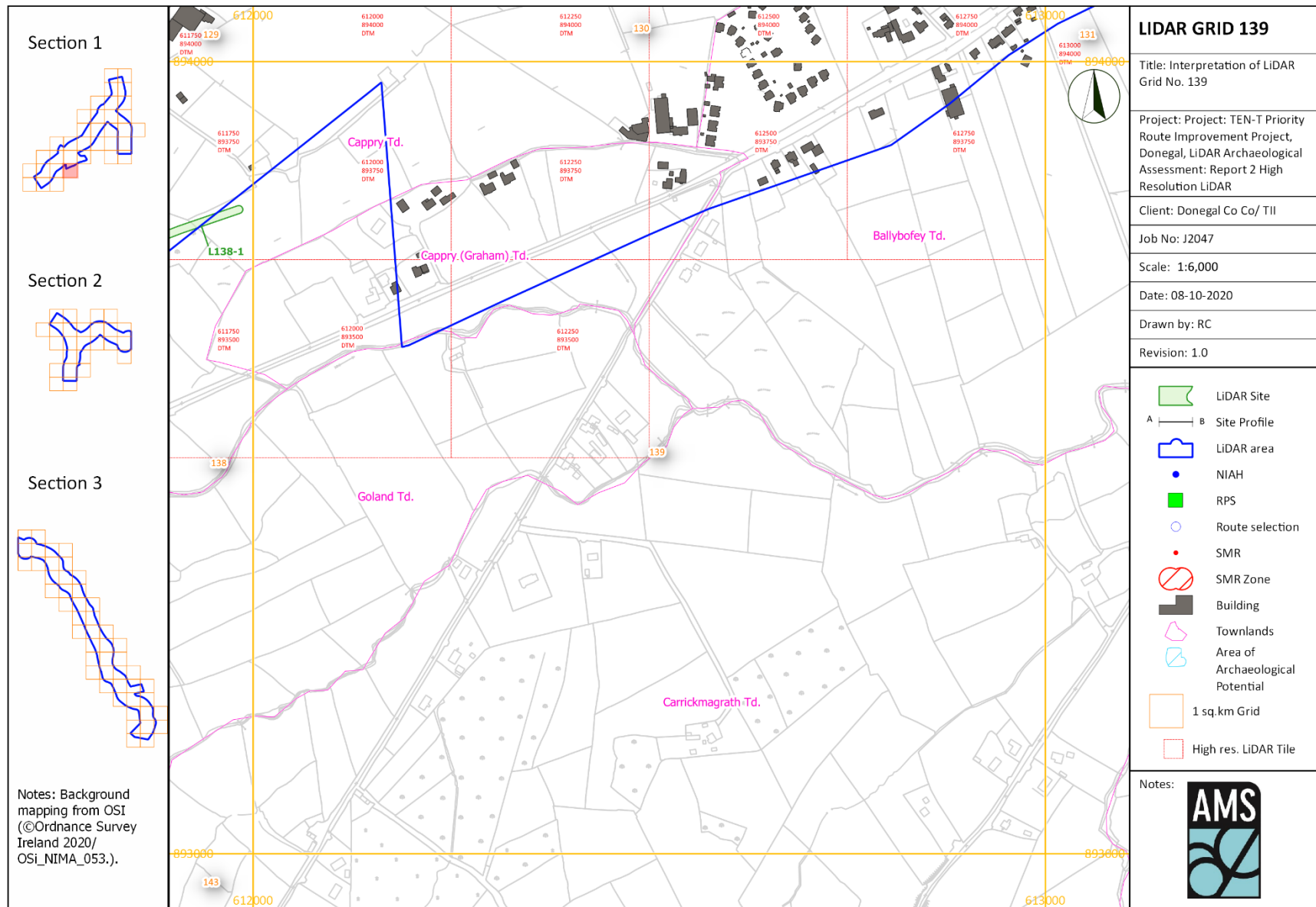
Date: 08-10-2020

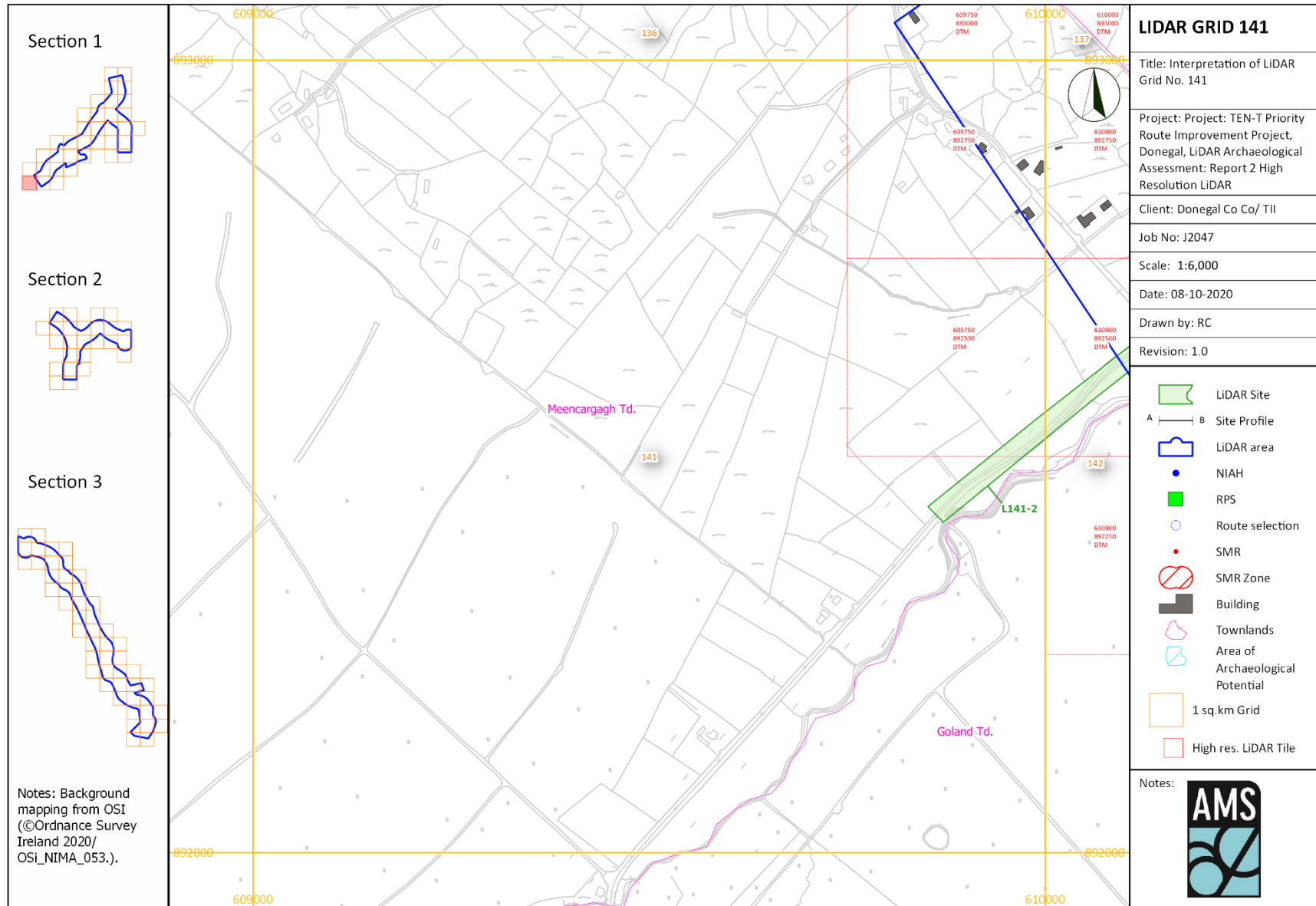
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile







LIDAR GRID 141

Title: Interpretation of LiDAR Grid No. 141

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

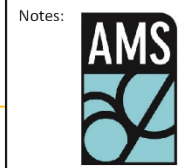
Date: 08-10-2020

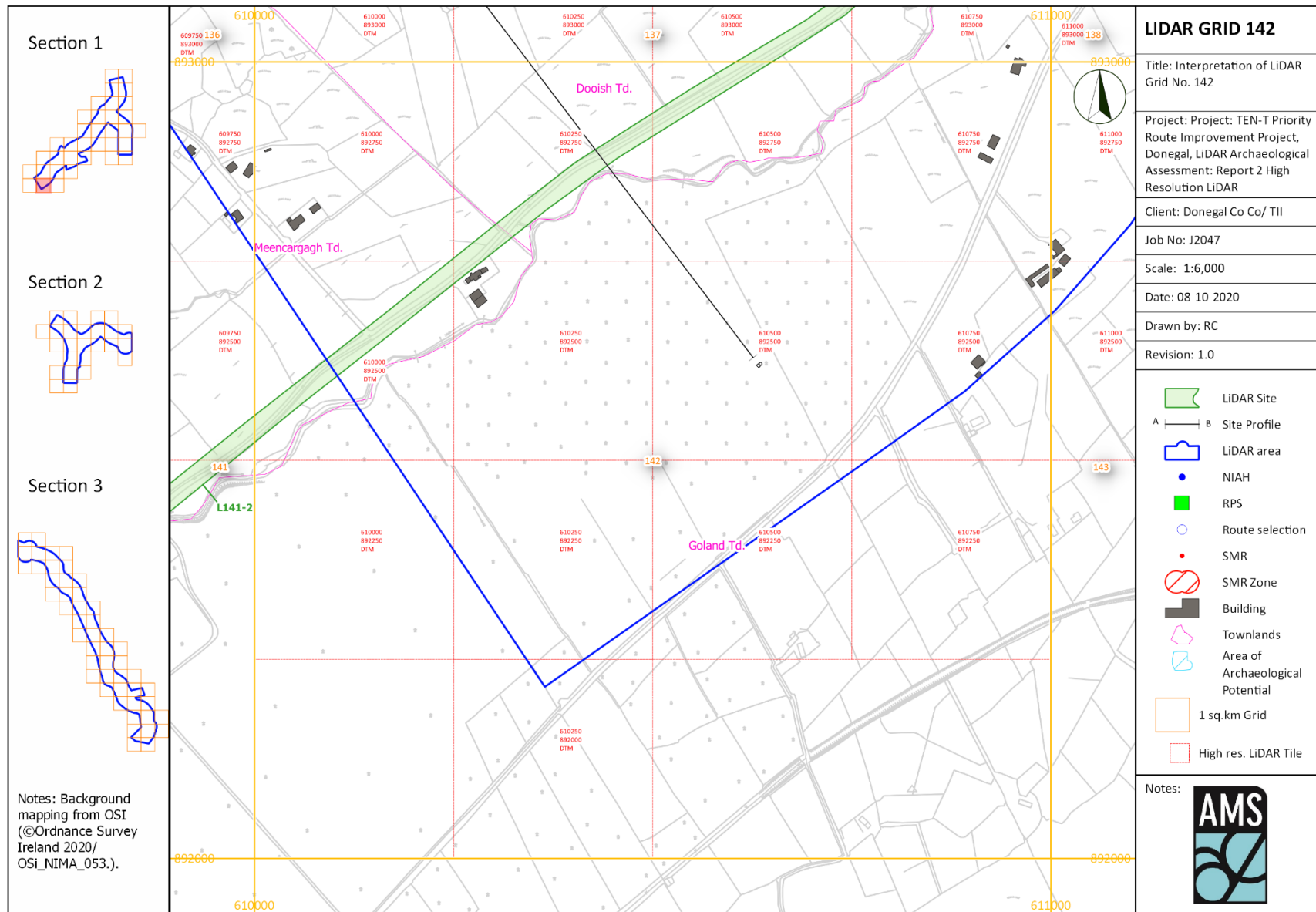
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).



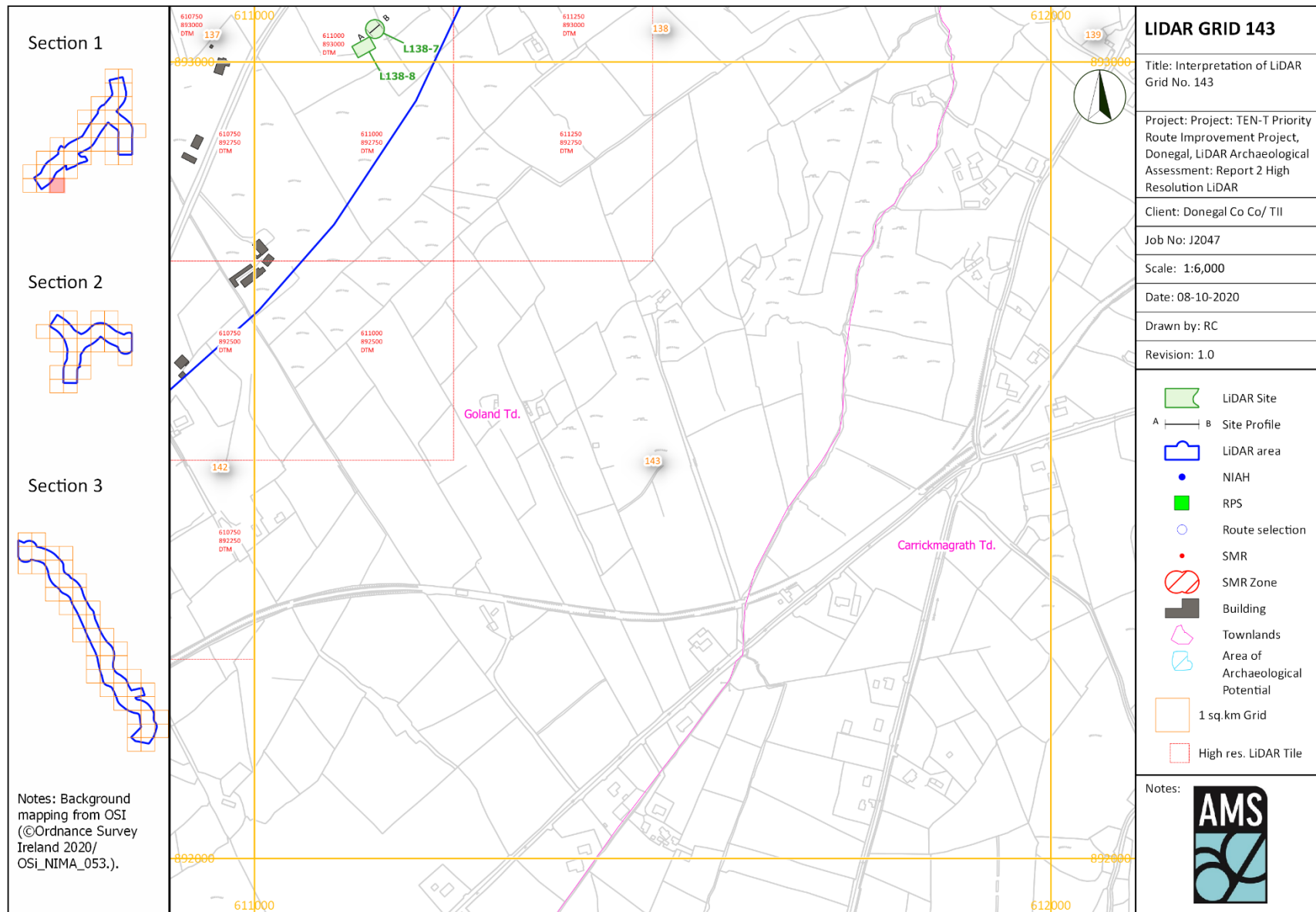


LIDAR GRID 142
Title: Interpretation of LiDAR Grid No. 142
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client: Donegal Co Co/ TII
Job No: J2047
Scale: 1:6,000
Date: 08-10-2020
Drawn by: RC
Revision: 1.0

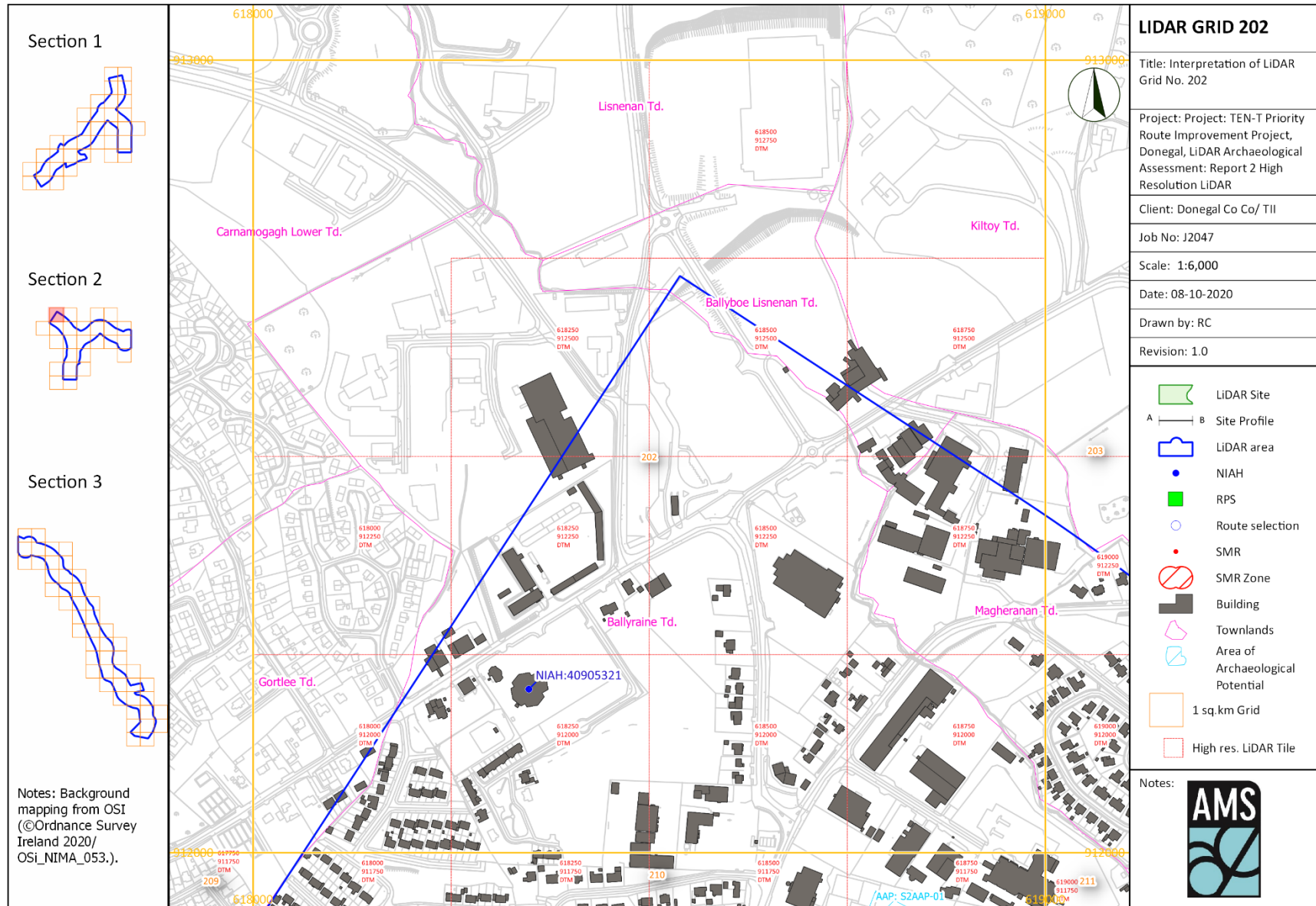
- LiDAR Site
- Site Profile
- LiDAR area
- NIHAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

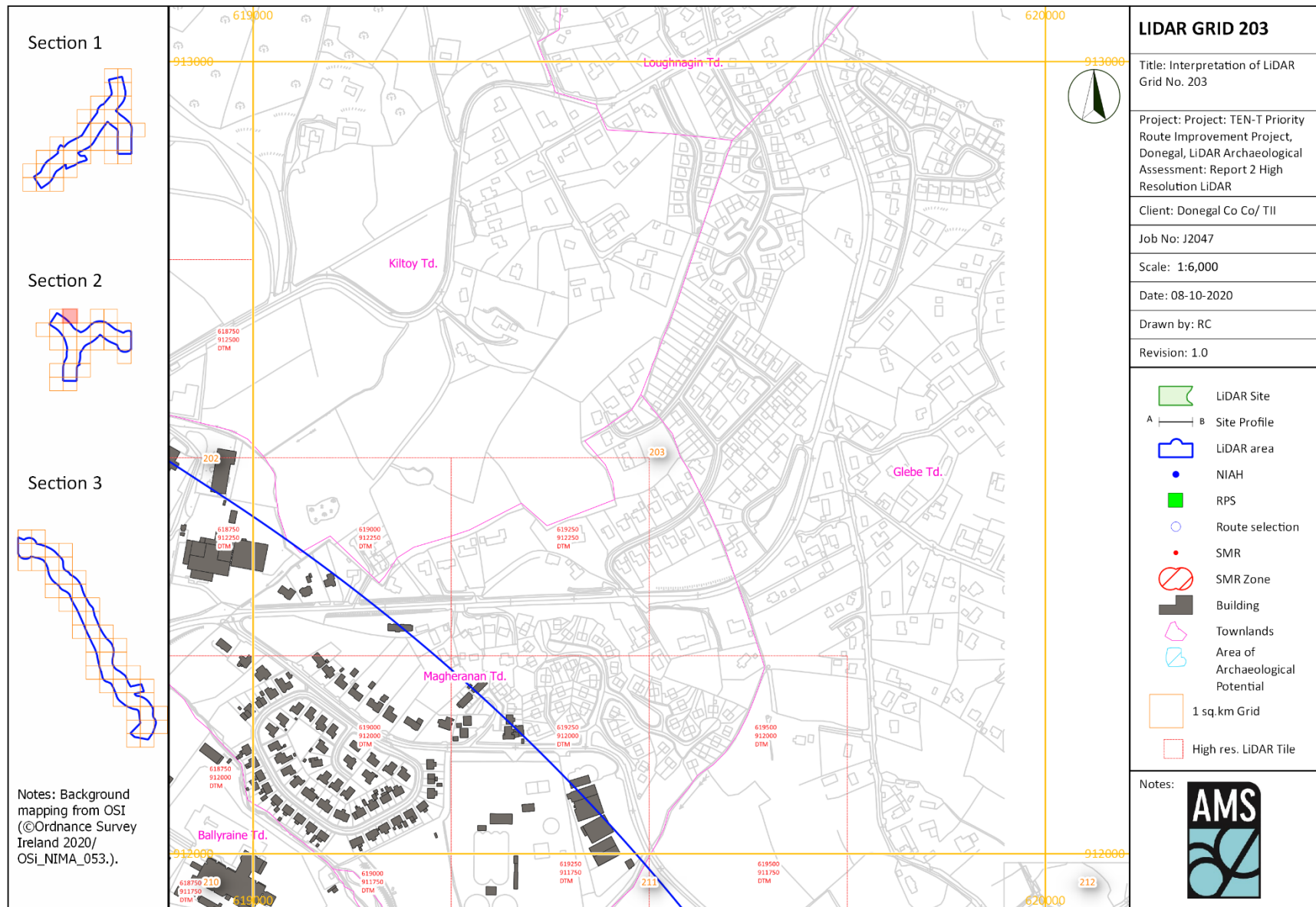
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

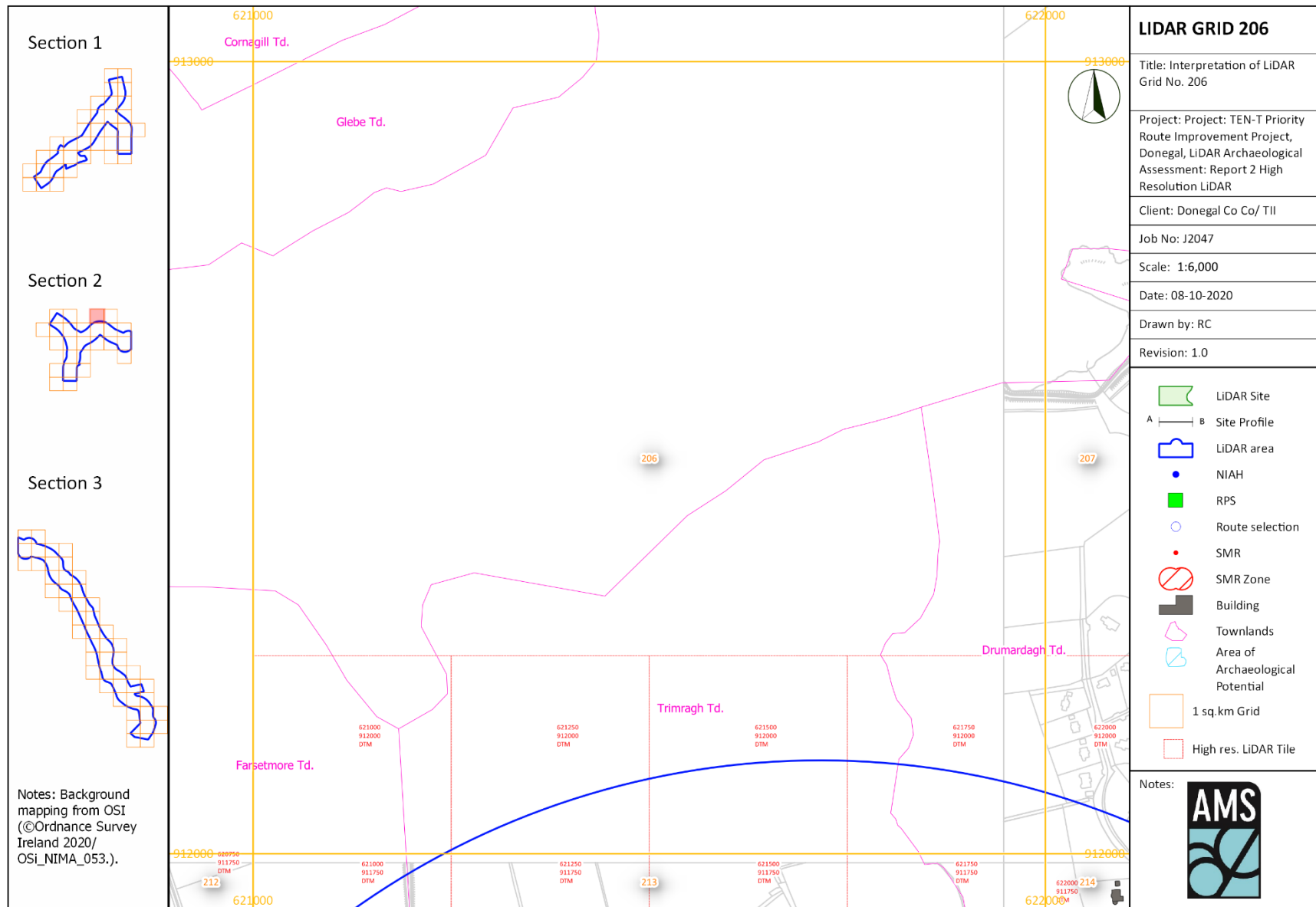


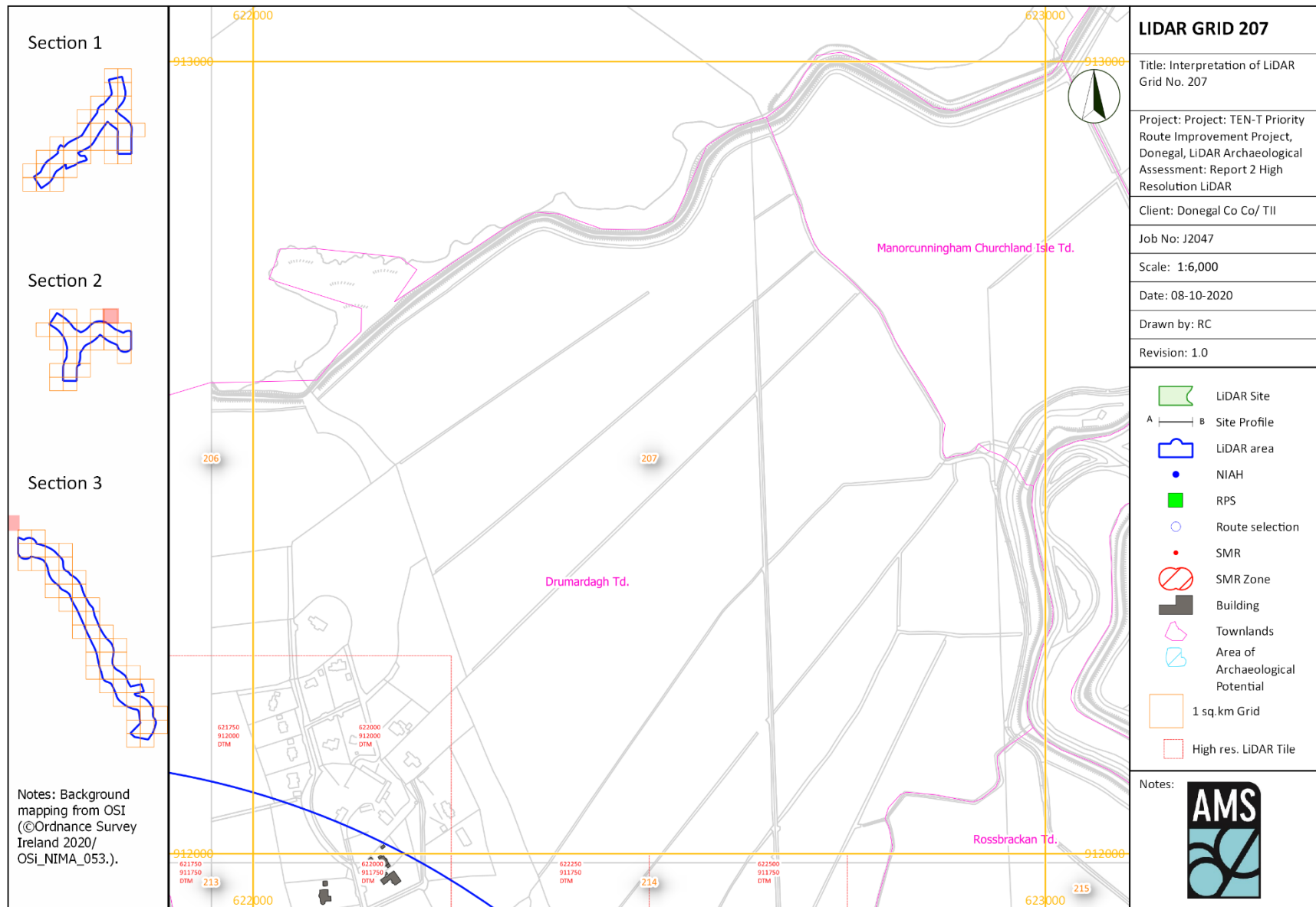


Section 2 Grids









Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 207

Title: Interpretation of LiDAR Grid No. 207

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

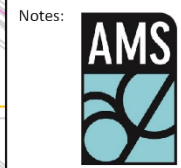
Scale: 1:6,000

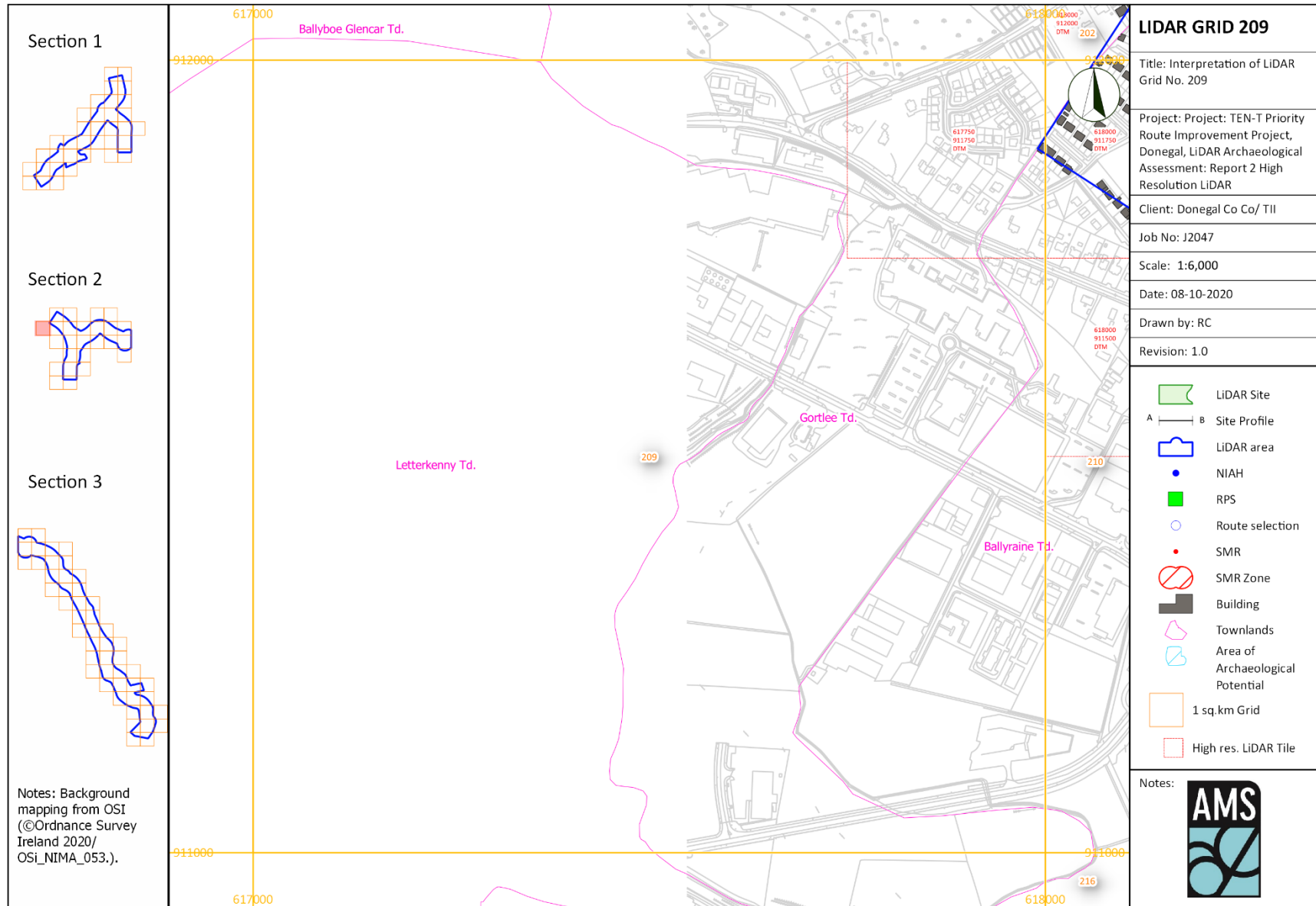
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 209

Title: Interpretation of LiDAR Grid No. 209

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

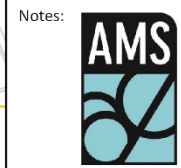
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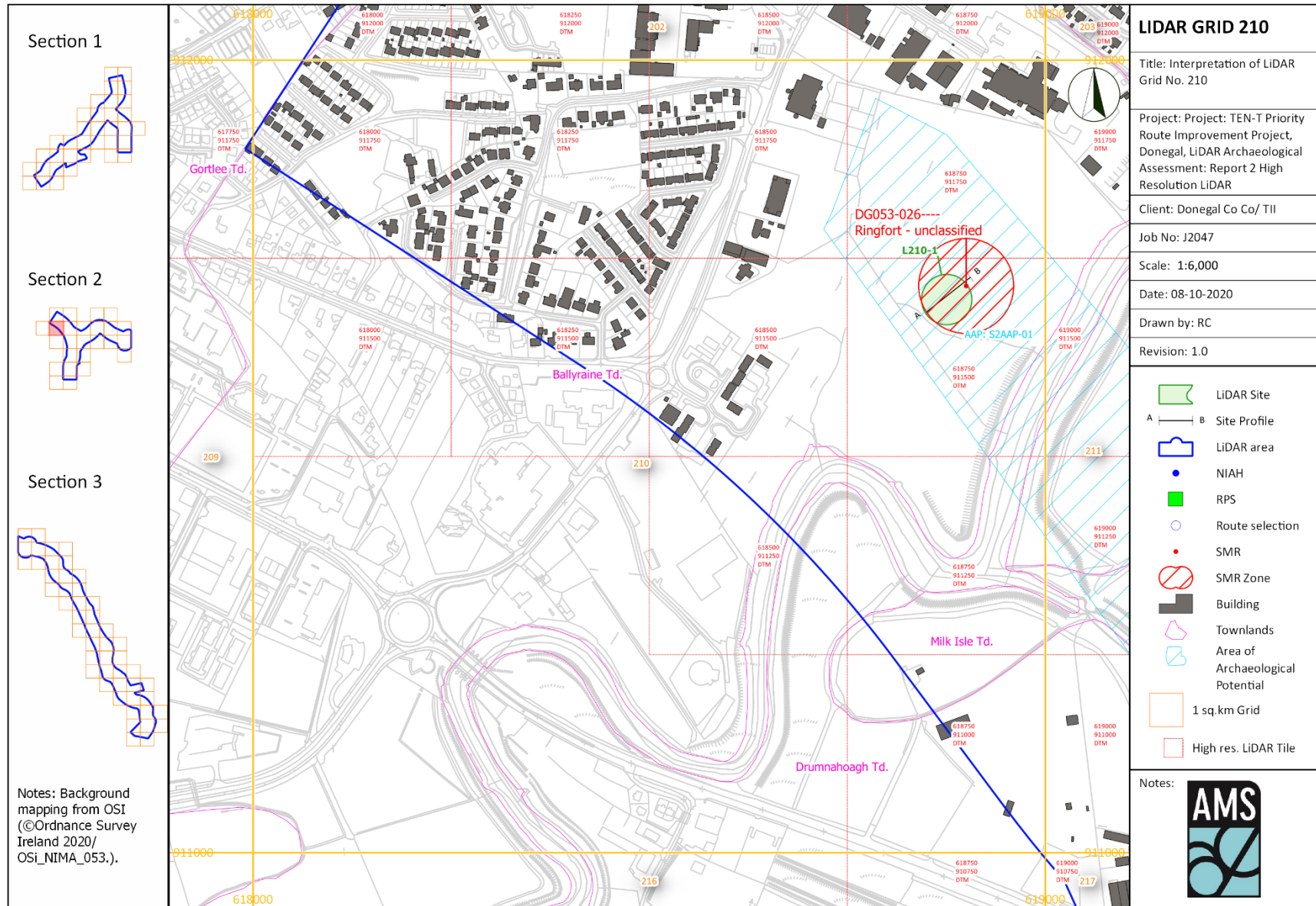
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

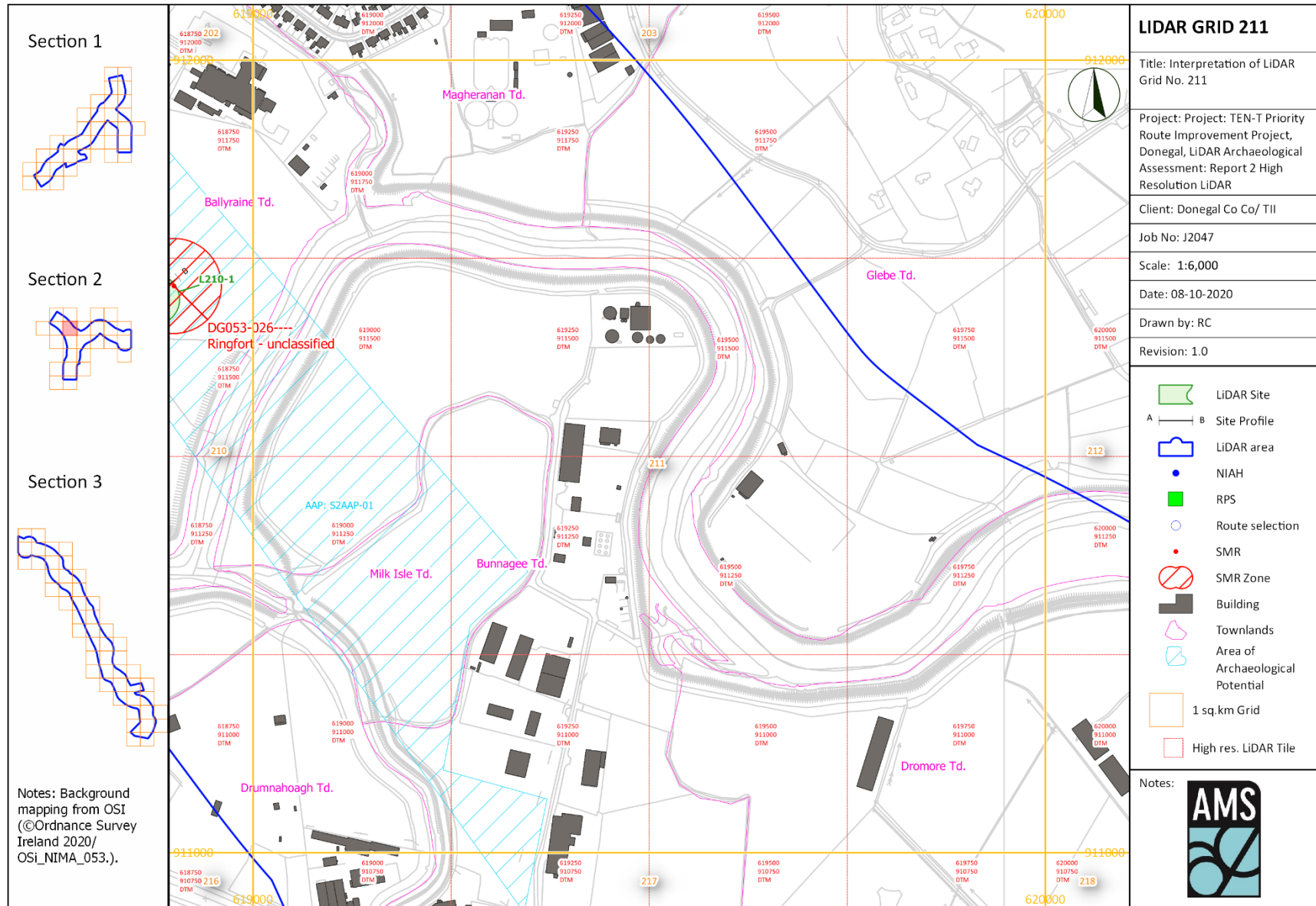
- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

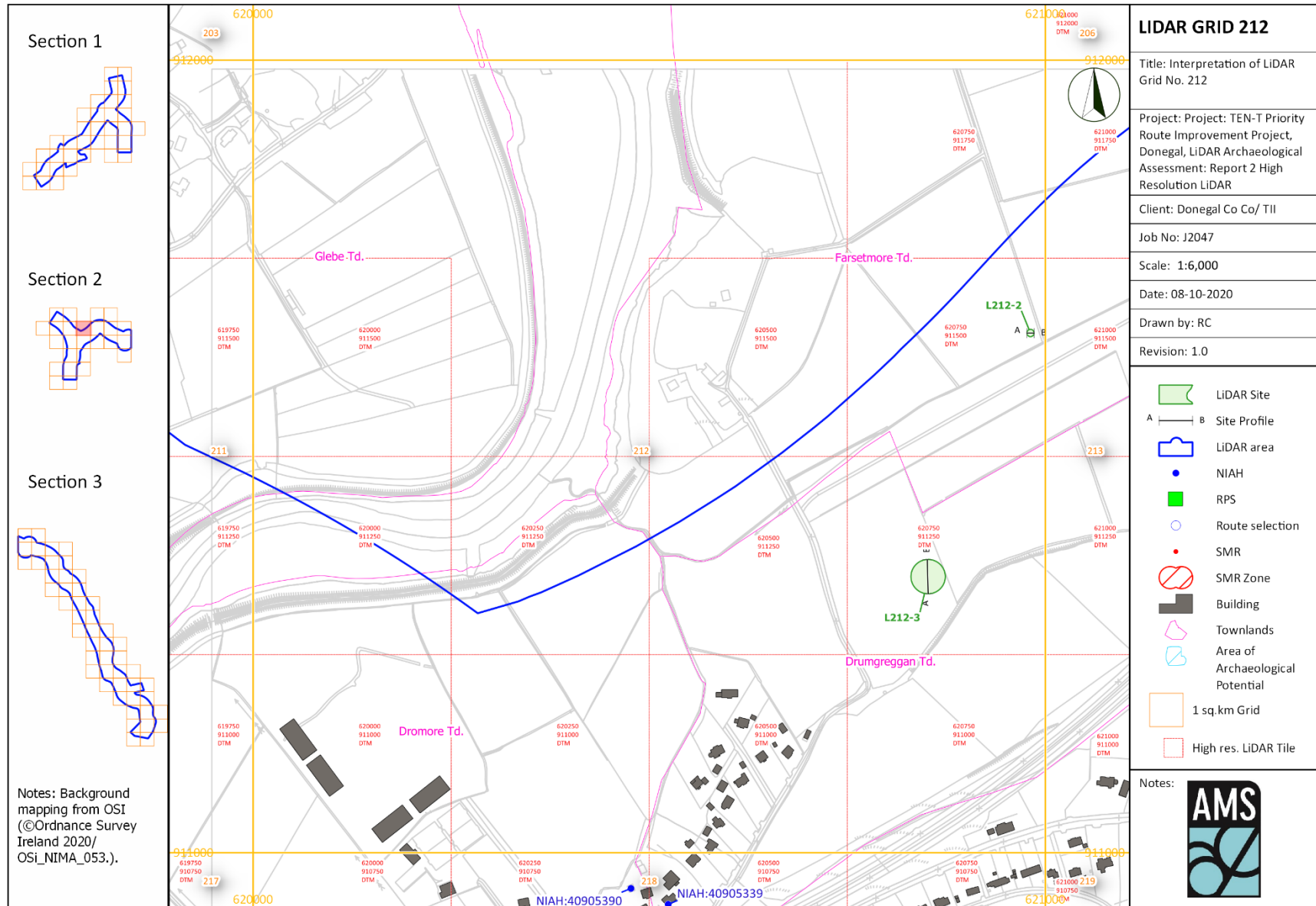


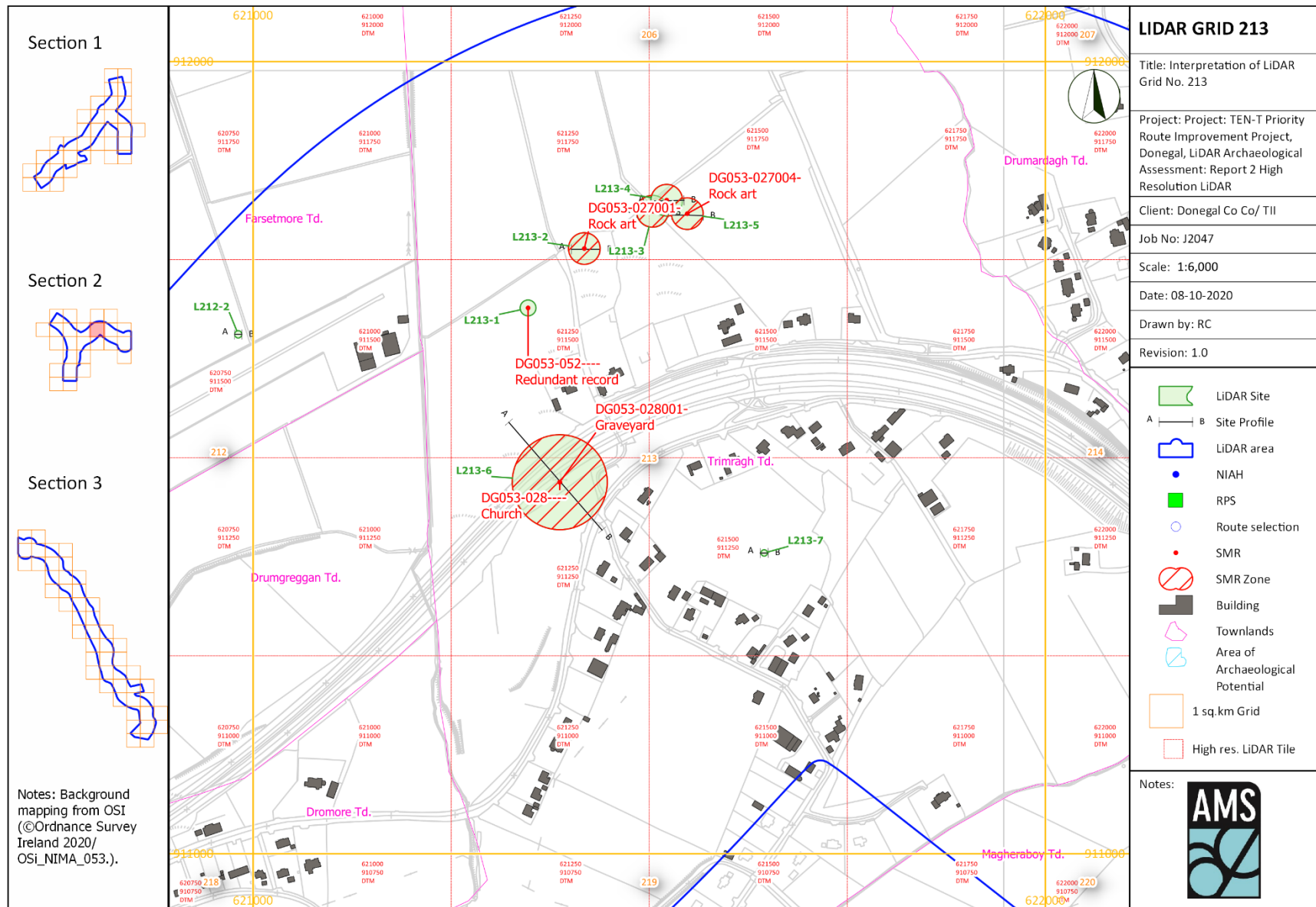


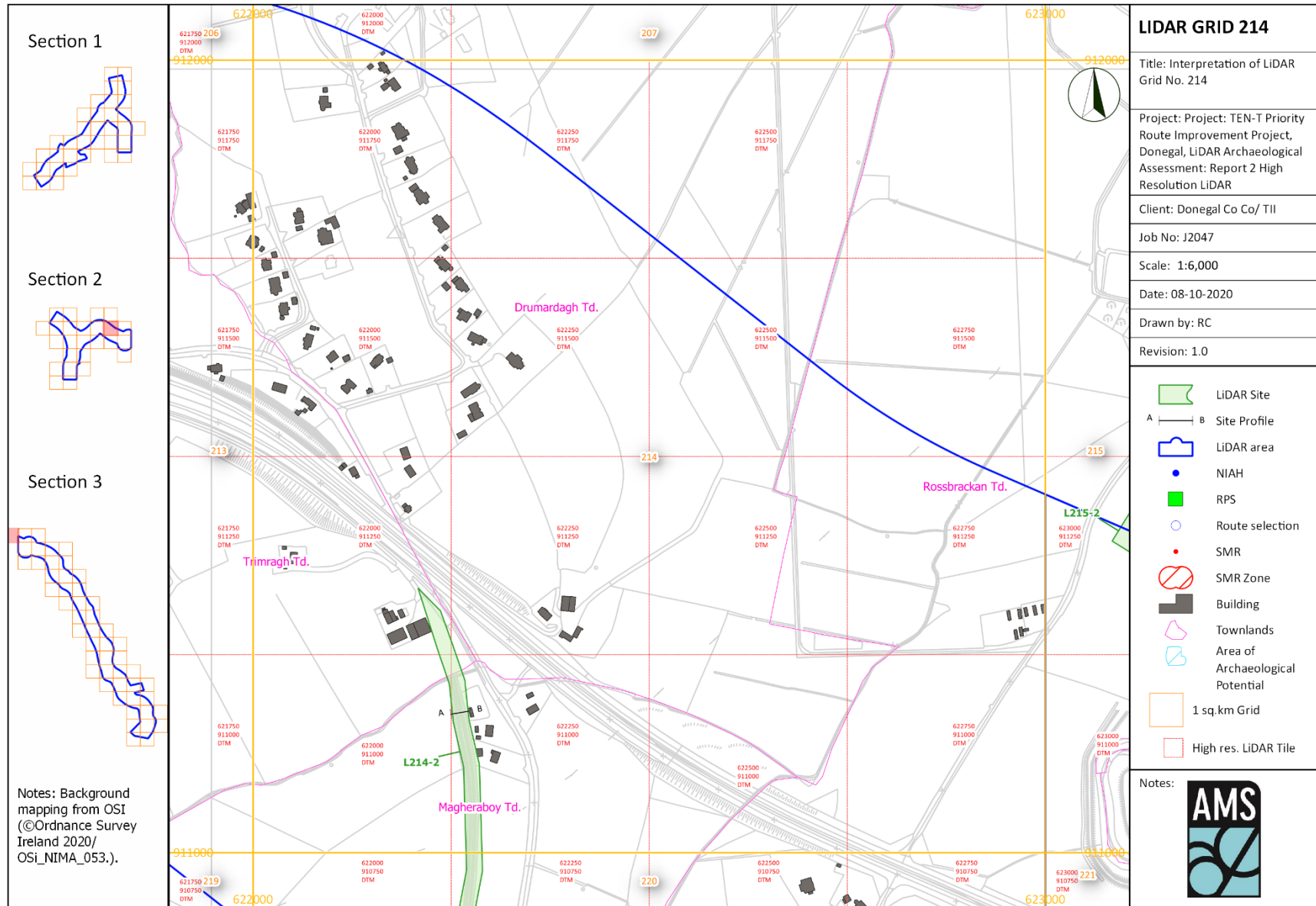
LiDAR GRID 210	
Title: Interpretation of LiDAR Grid No. 210	
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR	
Client: Donegal Co Co/ TII	
Job No: J2047	
Scale: 1:6,000	
Date: 08-10-2020	
Drawn by: RC	
Revision: 1.0	
<ul style="list-style-type: none"> LiDAR Site A — B Site Profile LiDAR area NIAH RPS Route selection SMR SMR Zone Building Townlands Area of Archaeological Potential 1 sq. km Grid High res. LiDAR Tile 	<p>Notes:</p>

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).









Section 1

Section 2

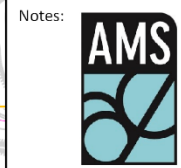
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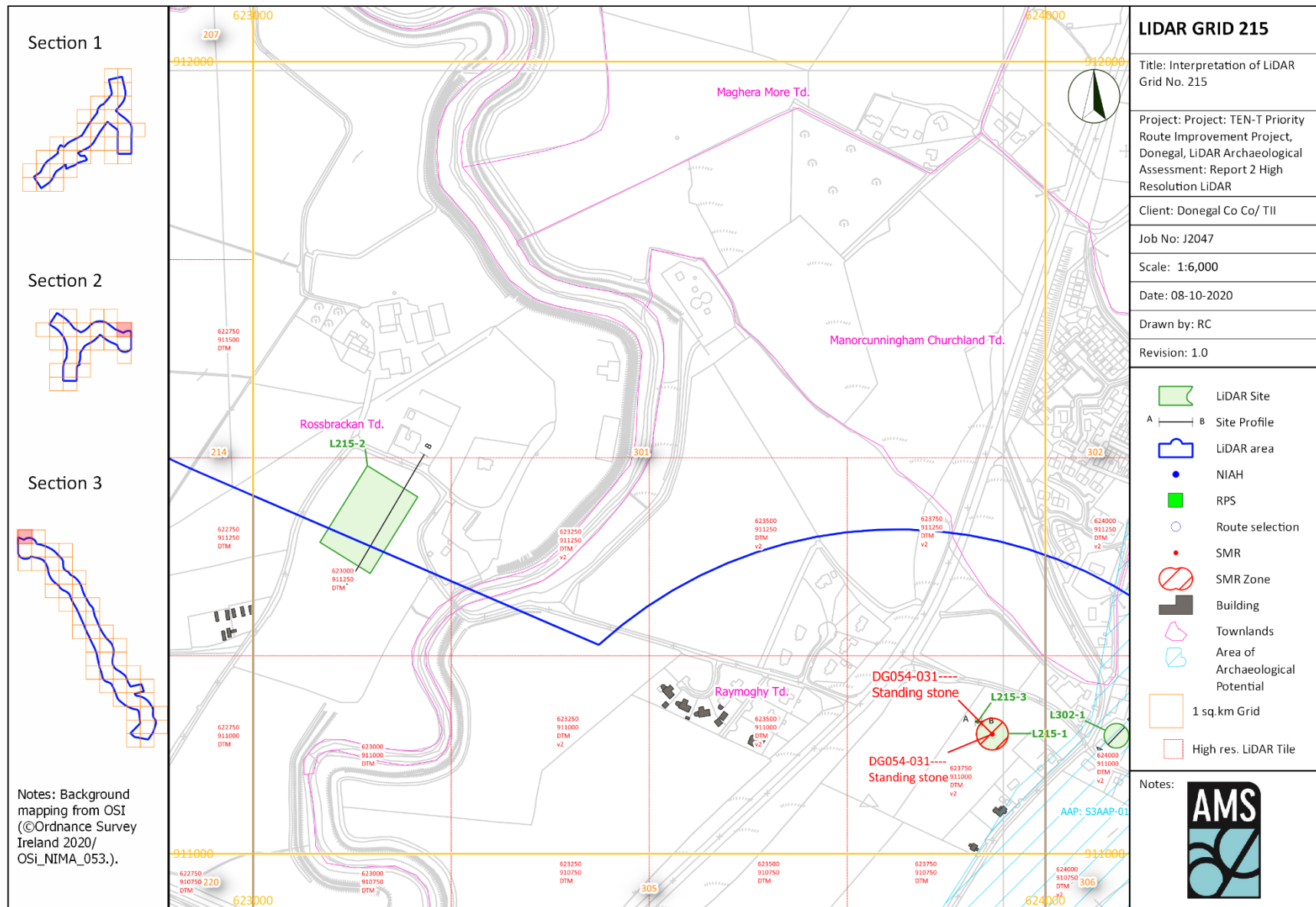
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 214

Title: Interpretation of LiDAR Grid No. 214
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client: Donegal Co Co/ TII
Job No: J2047
Scale: 1:6,000
Date: 08-10-2020
Drawn by: RC
Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 215

Title: Interpretation of LiDAR Grid No. 215

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

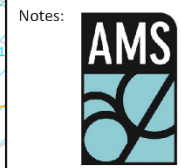
Scale: 1:6,000

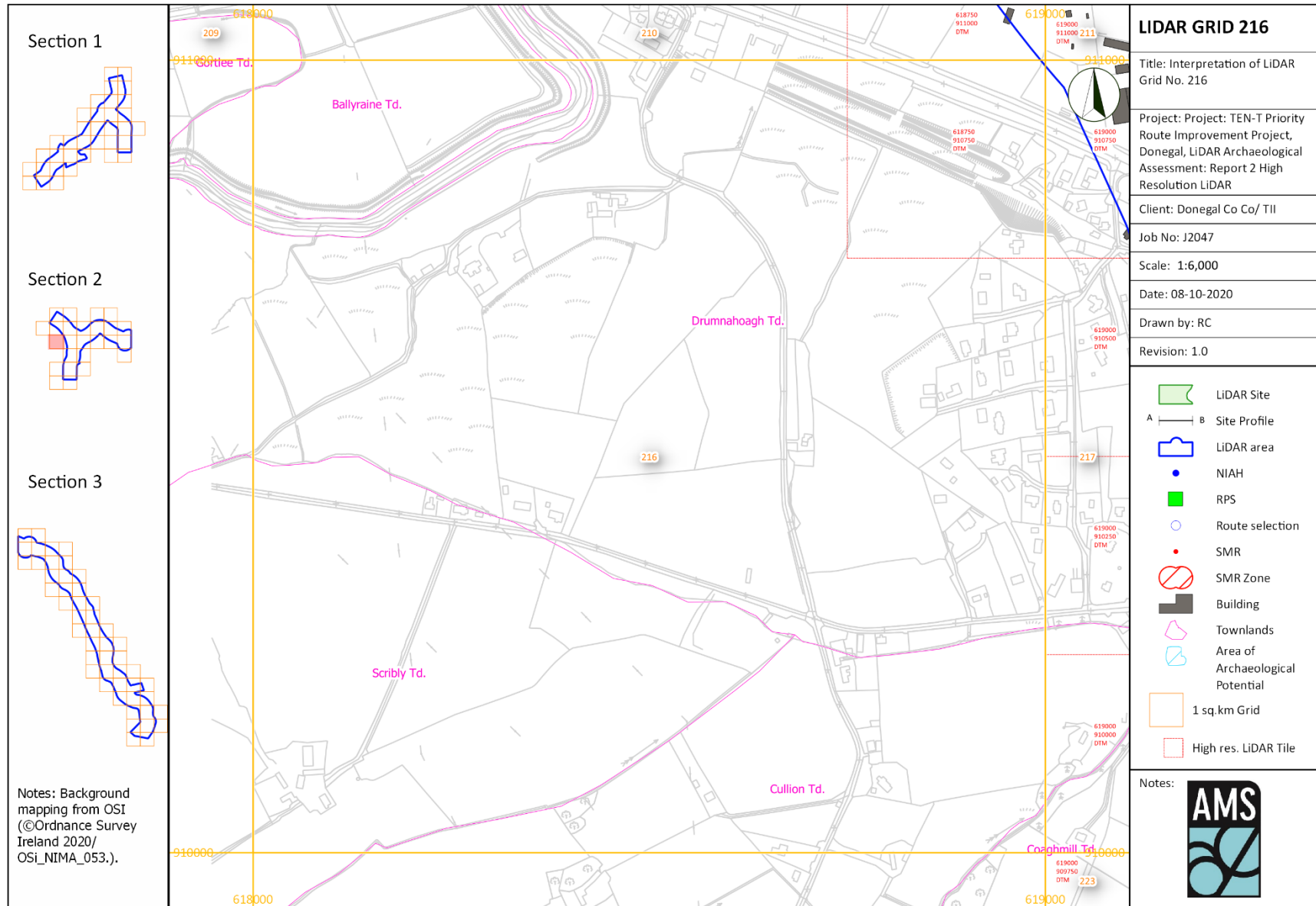
Date: 08-10-2020

Drawn by: RC

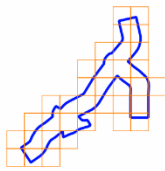
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

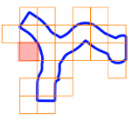




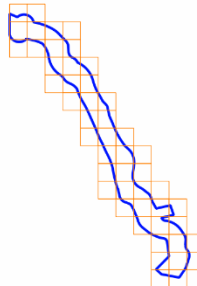
Section 1



Section 2



Section 3



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 216

Title: Interpretation of LiDAR Grid No. 216

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

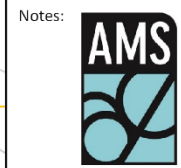
Scale: 1:6,000

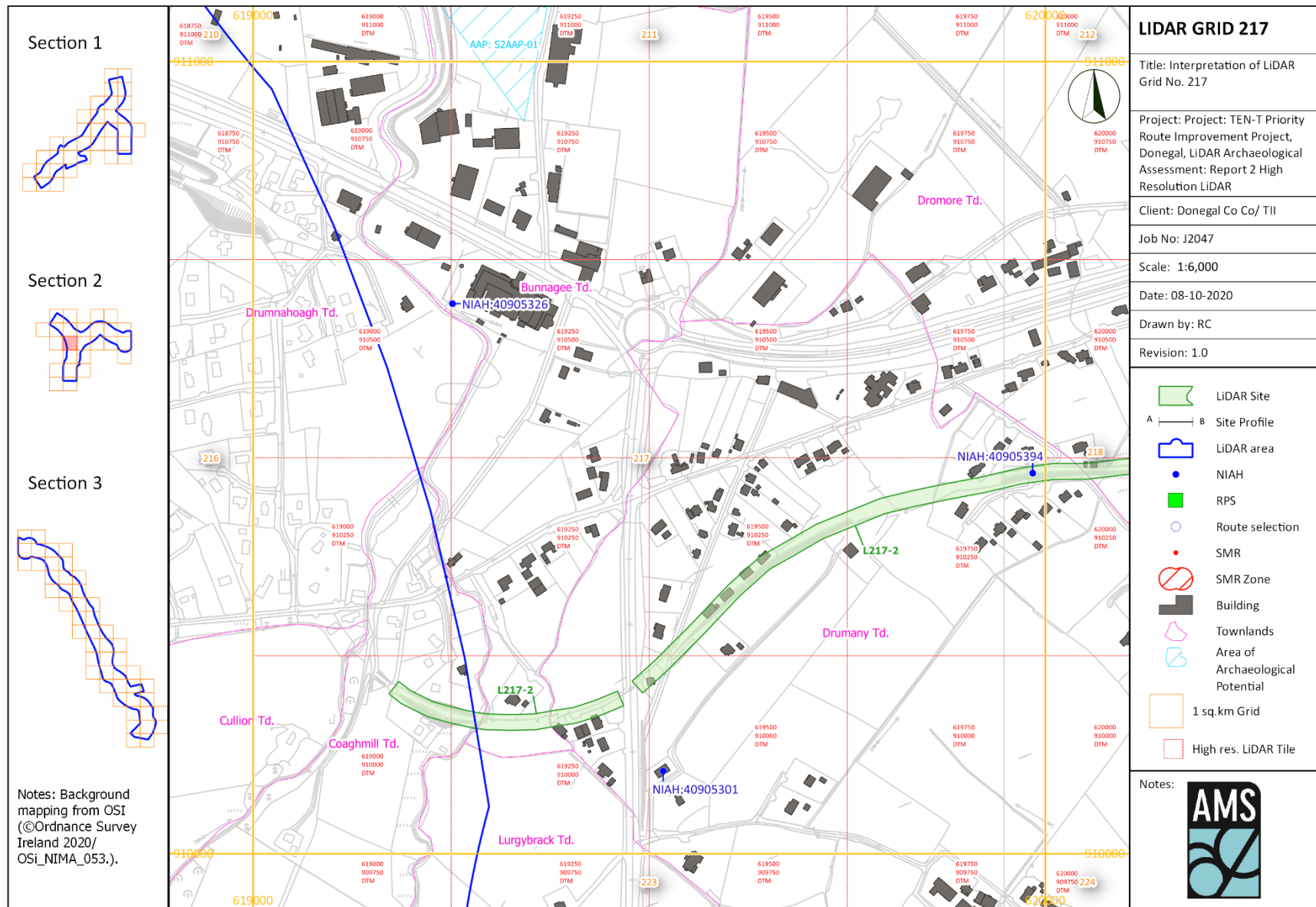
Date: 08-10-2020

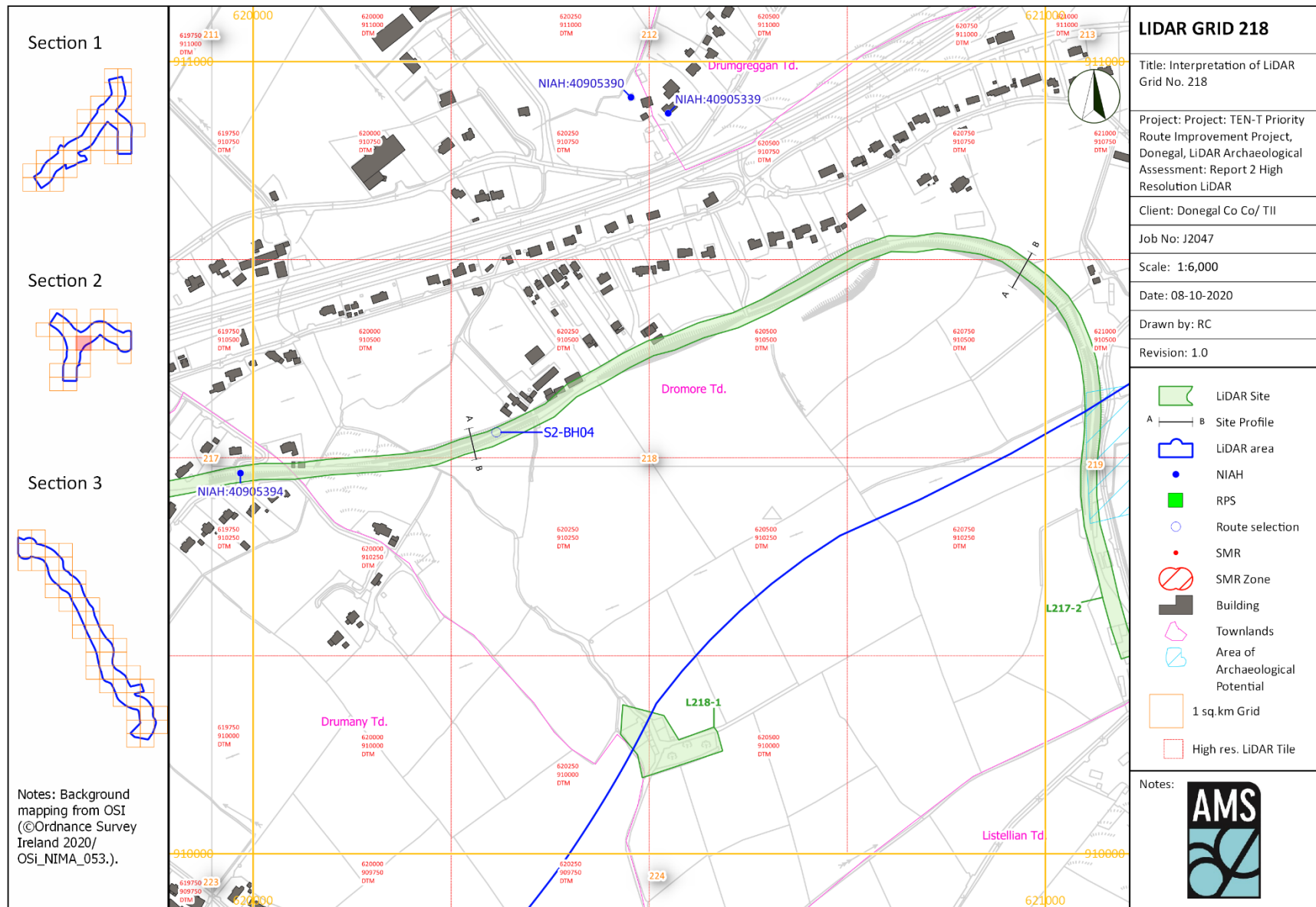
Drawn by: RC

Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile







LIDAR GRID 218

Title: Interpretation of LiDAR Grid No. 218

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

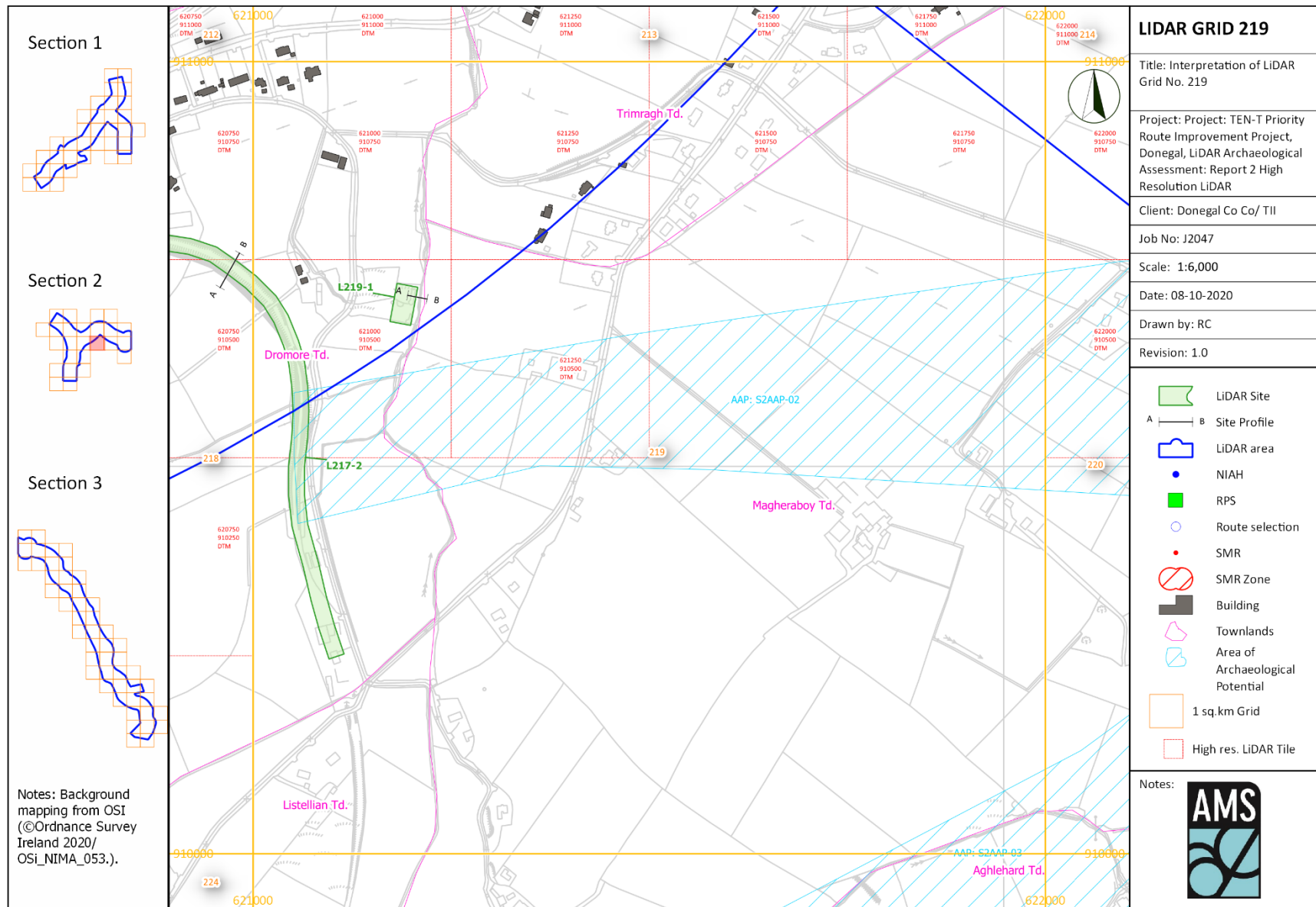
Date: 08-10-2020

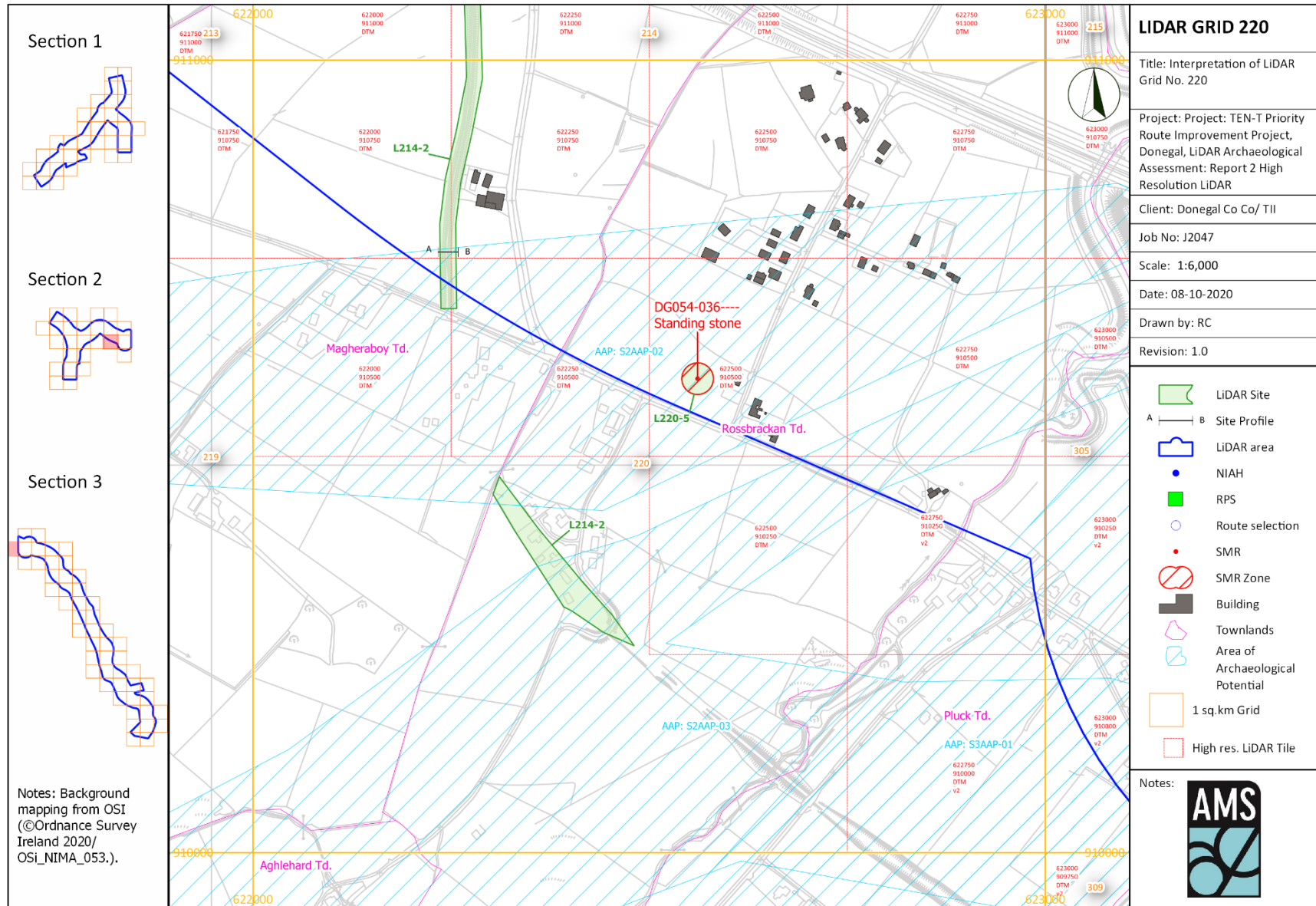
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile







LIDAR GRID 220

Title: Interpretation of LiDAR Grid No. 220

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

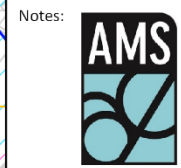
Date: 08-10-2020

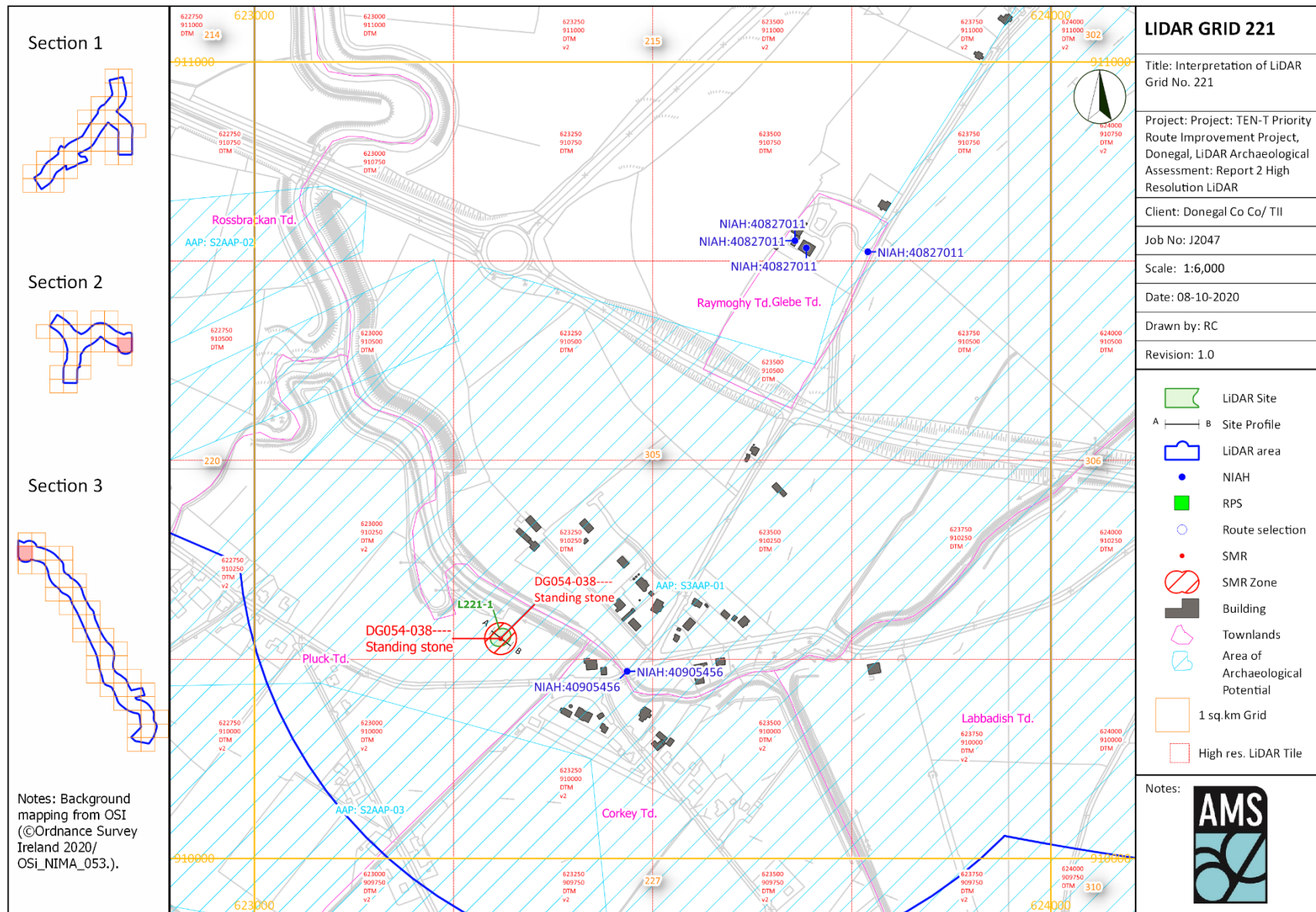
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 221

Title: Interpretation of LiDAR Grid No. 221

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

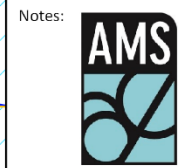
Scale: 1:6,000

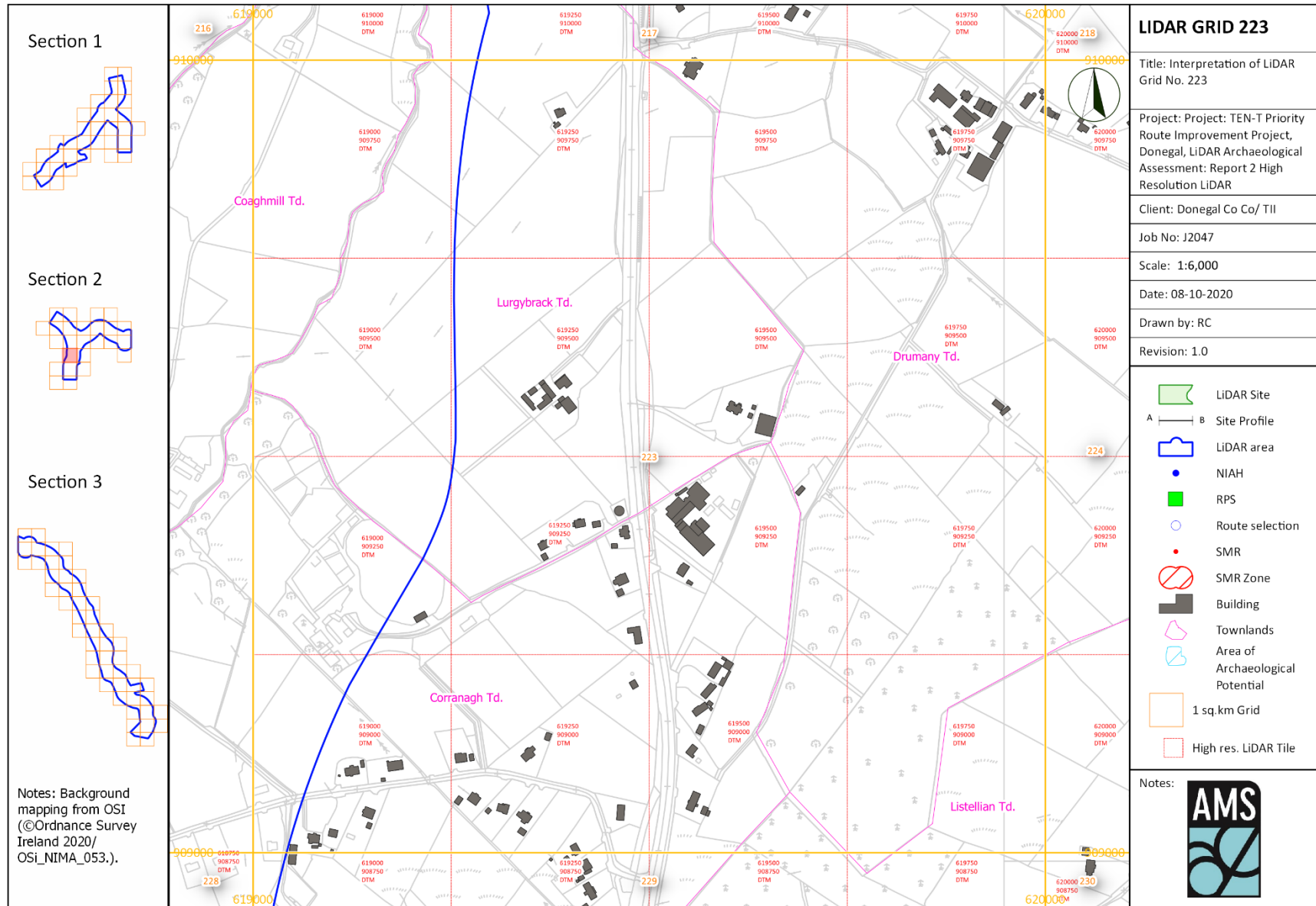
Date: 08-10-2020

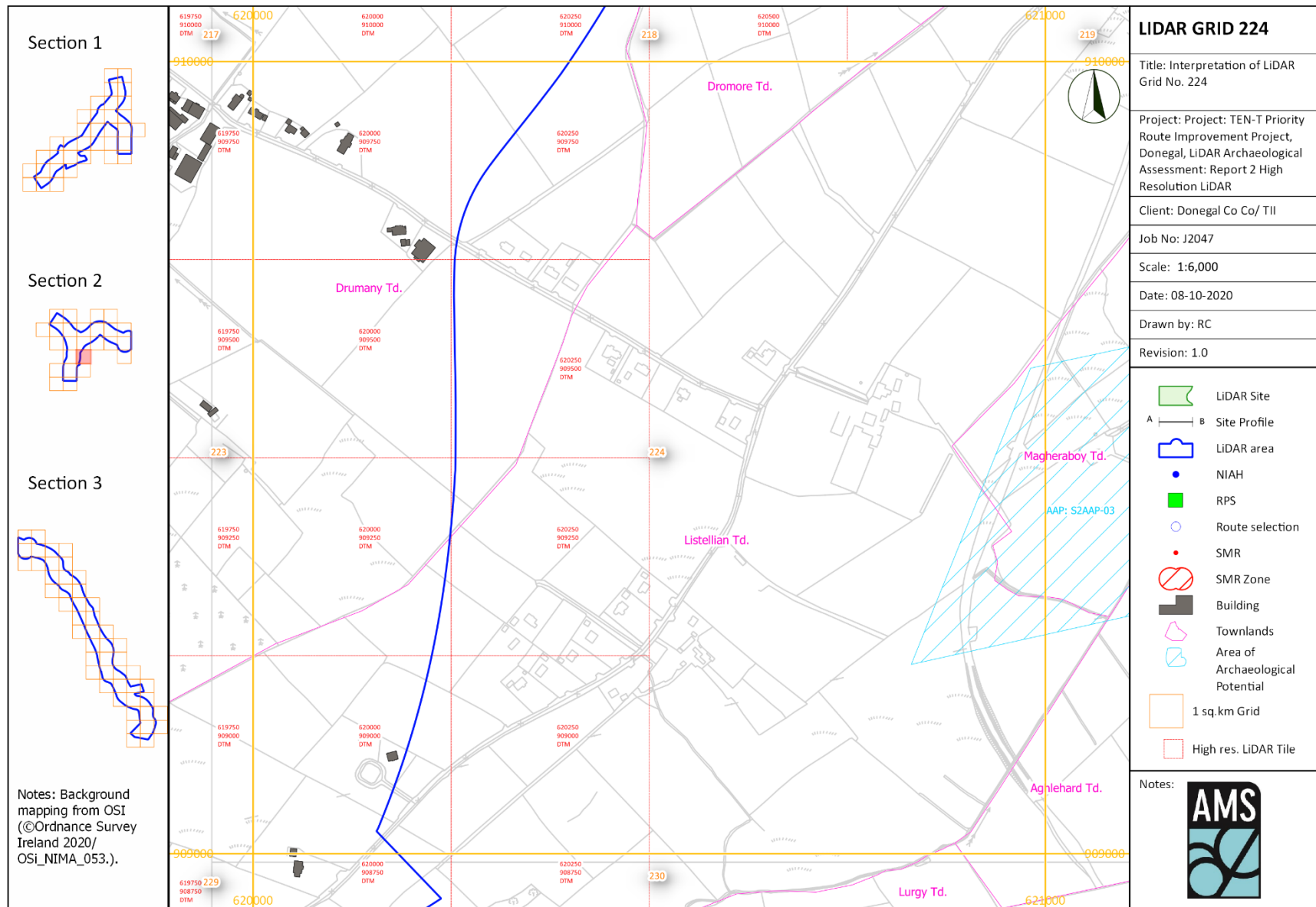
Drawn by: RC

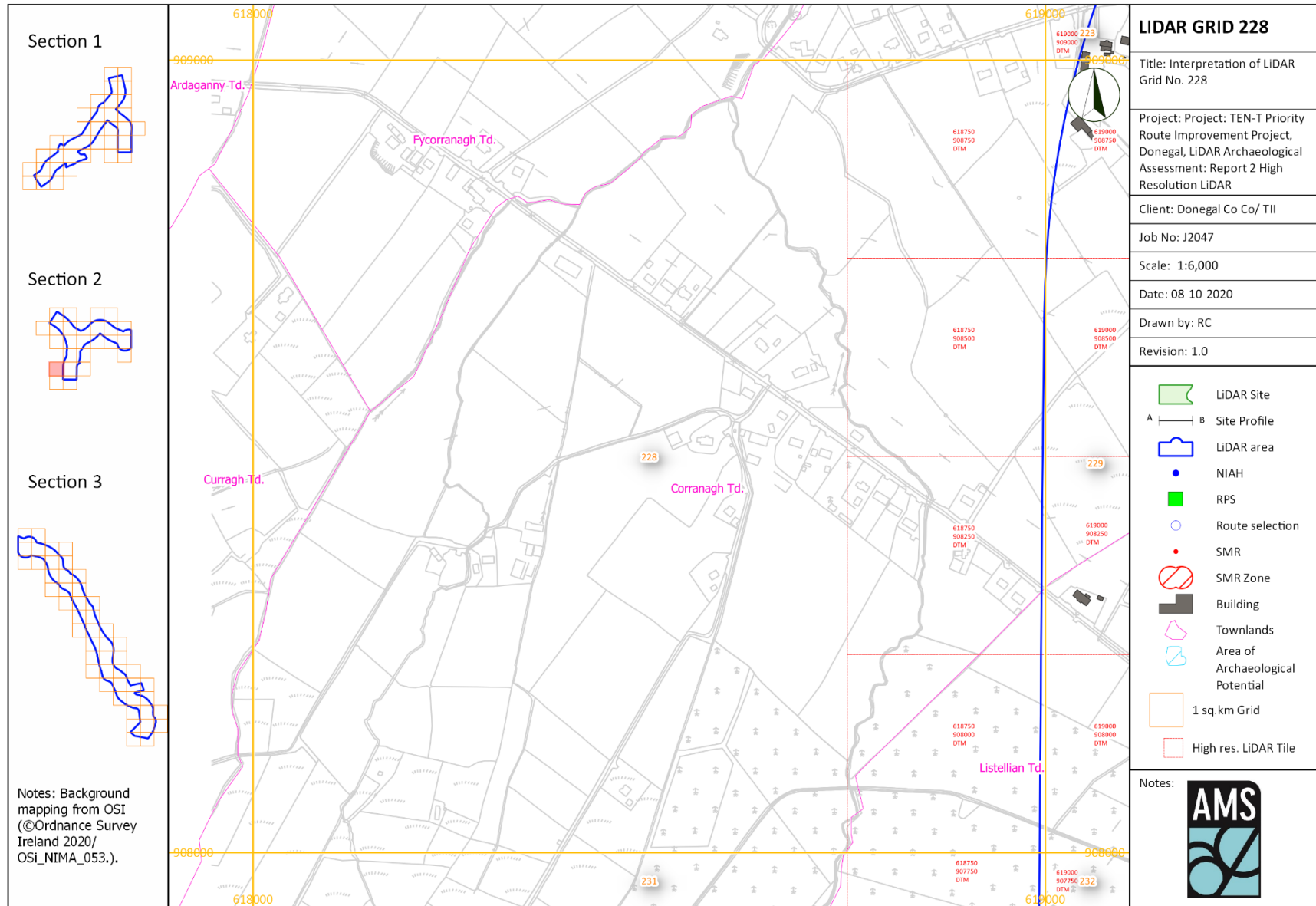
Revision: 1.0

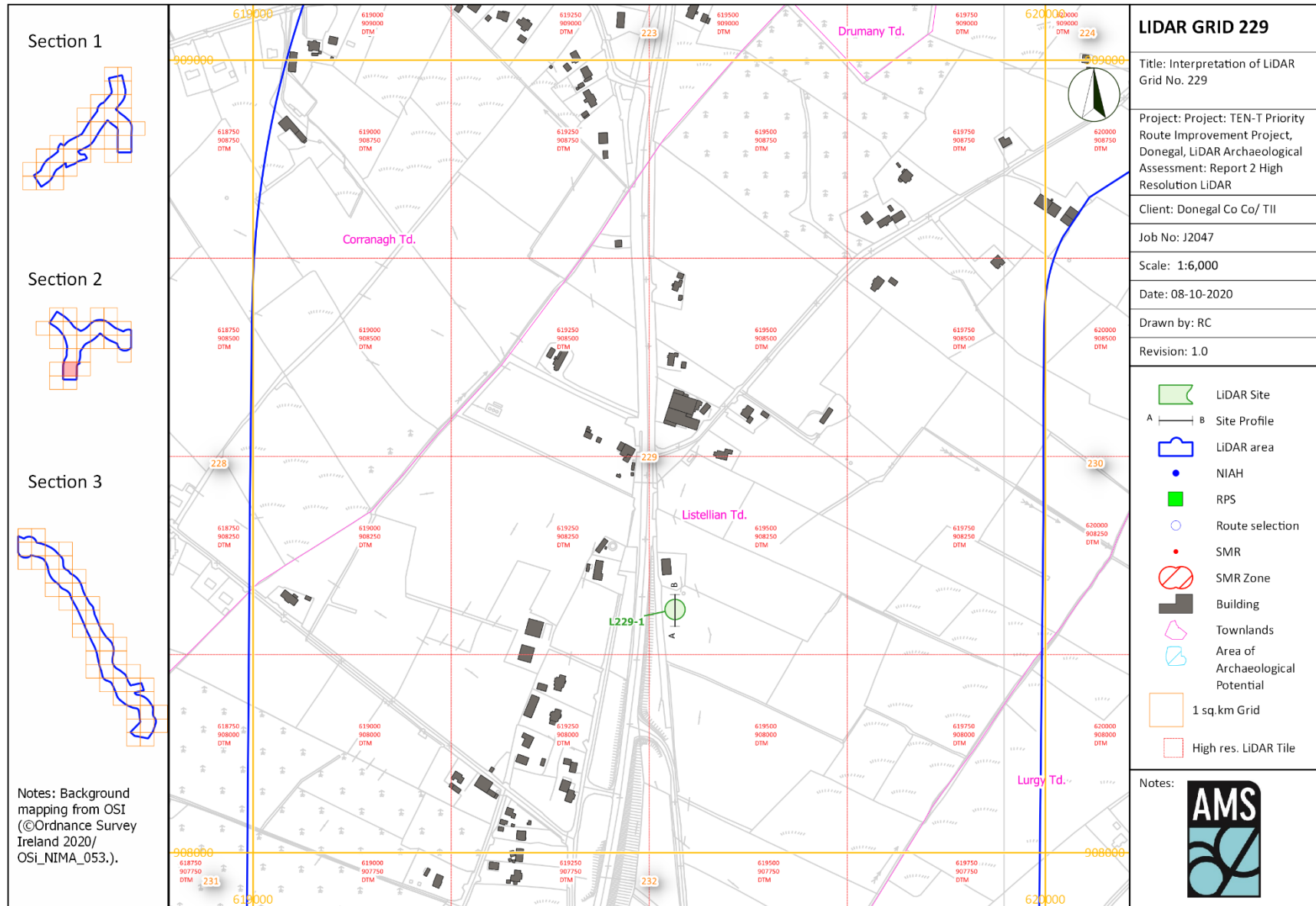
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile



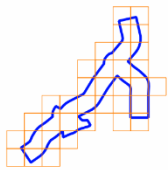




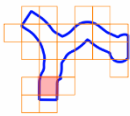




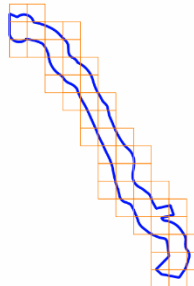
Section 1



Section 2



Section 3



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 229

Title: Interpretation of LiDAR Grid No. 229

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

Date: 08-10-2020

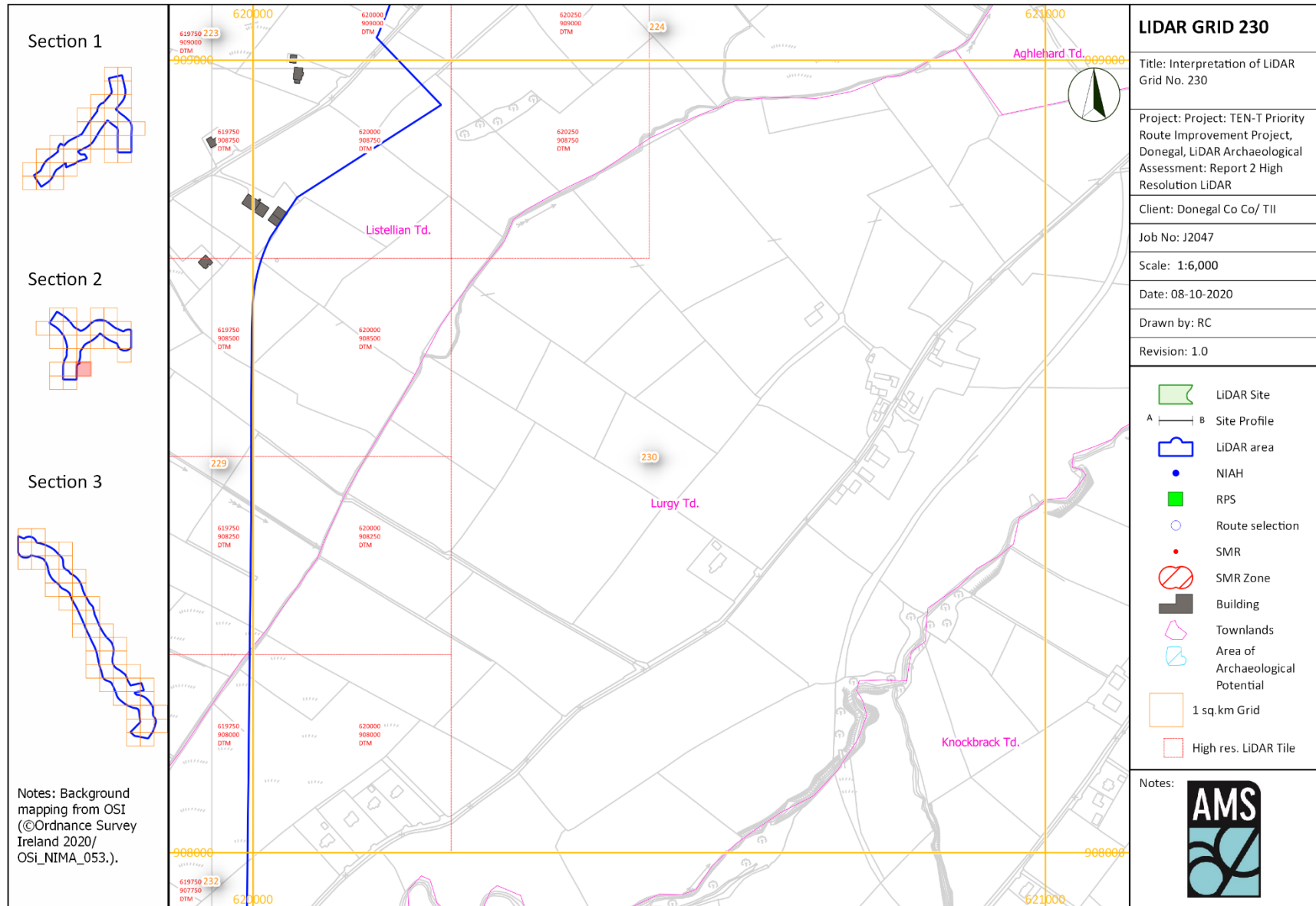
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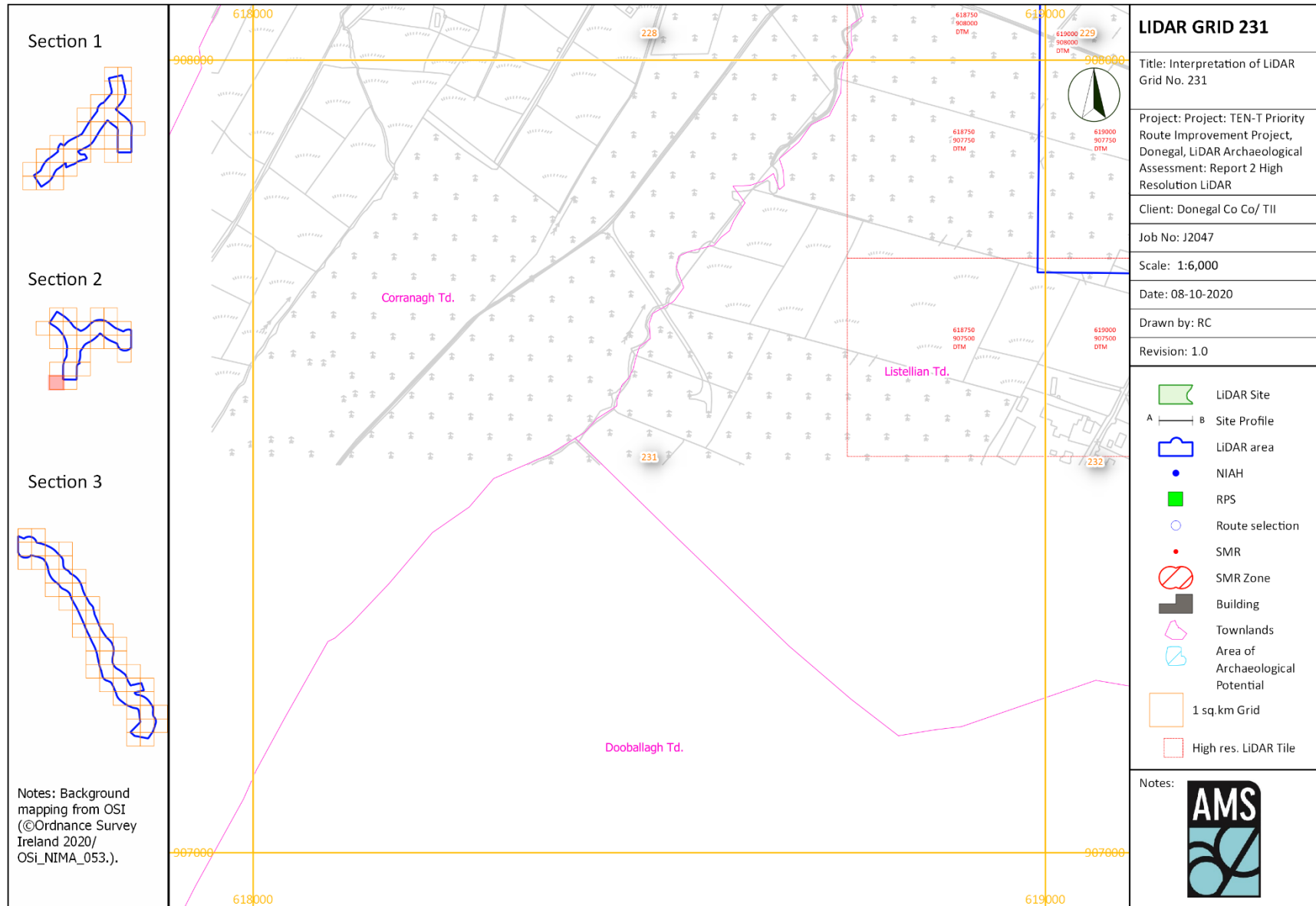
Revision: 1.0


- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes:

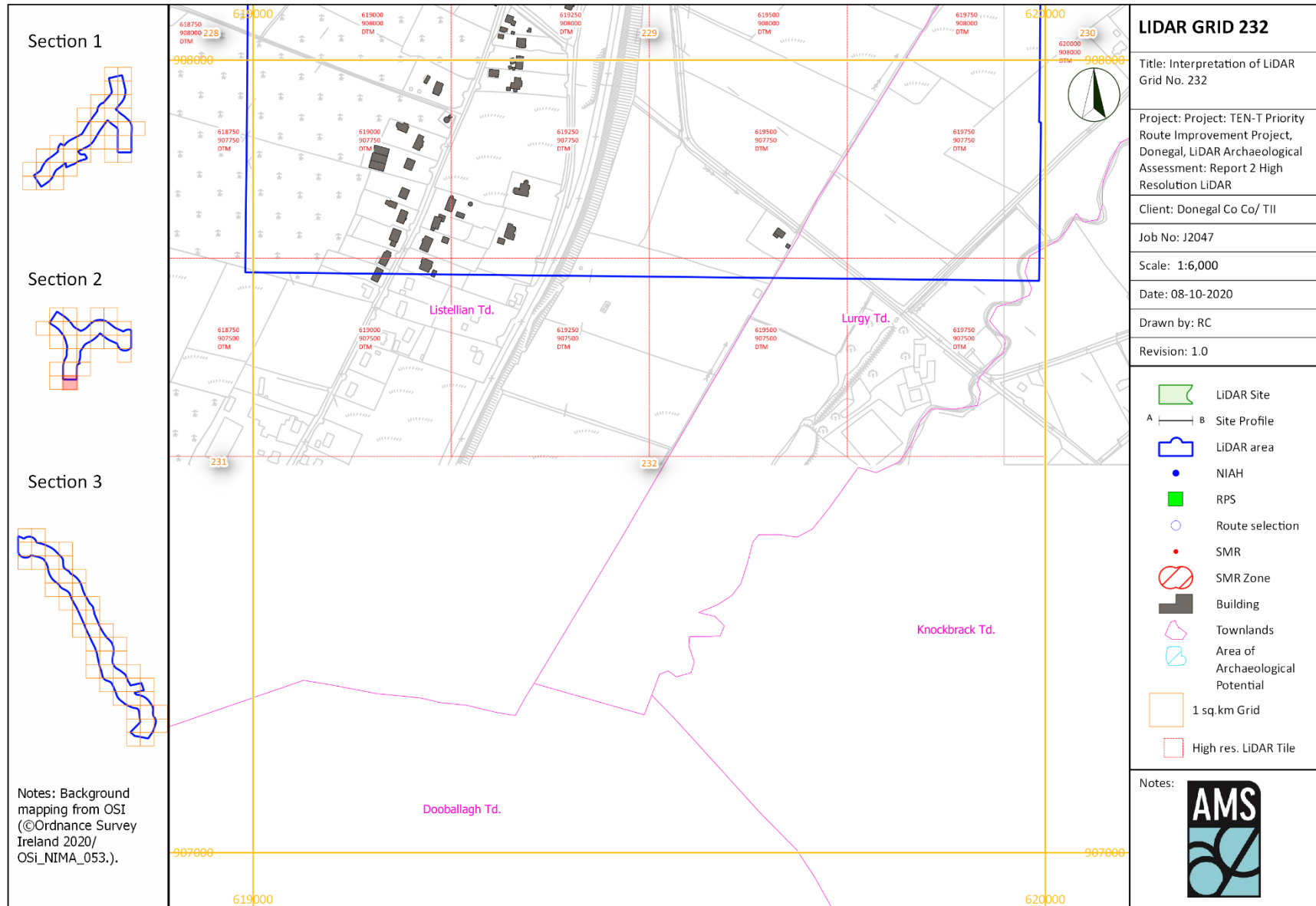






LIDAR GRID 231	
Title: Interpretation of LiDAR Grid No. 231	
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR	
Client: Donegal Co Co/ TII	
Job No: J2047	
Scale: 1:6,000	
Date: 08-10-2020	
Drawn by: RC	
Revision: 1.0	
<ul style="list-style-type: none"> LiDAR Site A — B Site Profile LiDAR area NIAH RPS Route selection SMR SMR Zone Building Townlands Area of Archaeological Potential 1 sq. km Grid High res. LiDAR Tile 	<p>Notes:</p> 

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).



Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 232

Title: Interpretation of LiDAR Grid No. 232

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

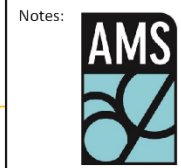
Scale: 1:6,000

Date: 08-10-2020

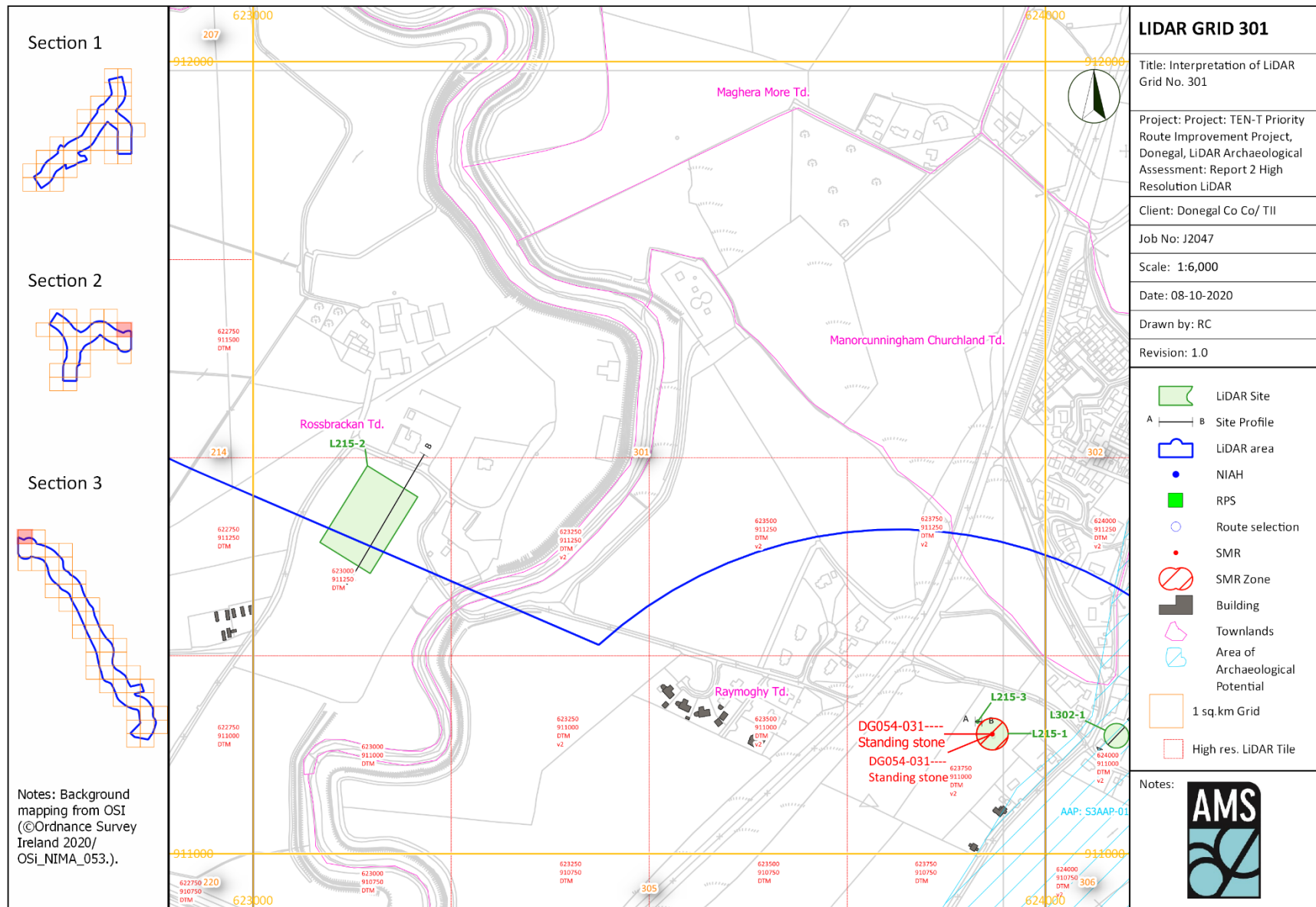
Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile



Section 3 Grid Tiles



Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 301

Title: Interpretation of LiDAR Grid No. 301

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

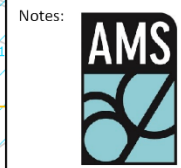
Scale: 1:6,000

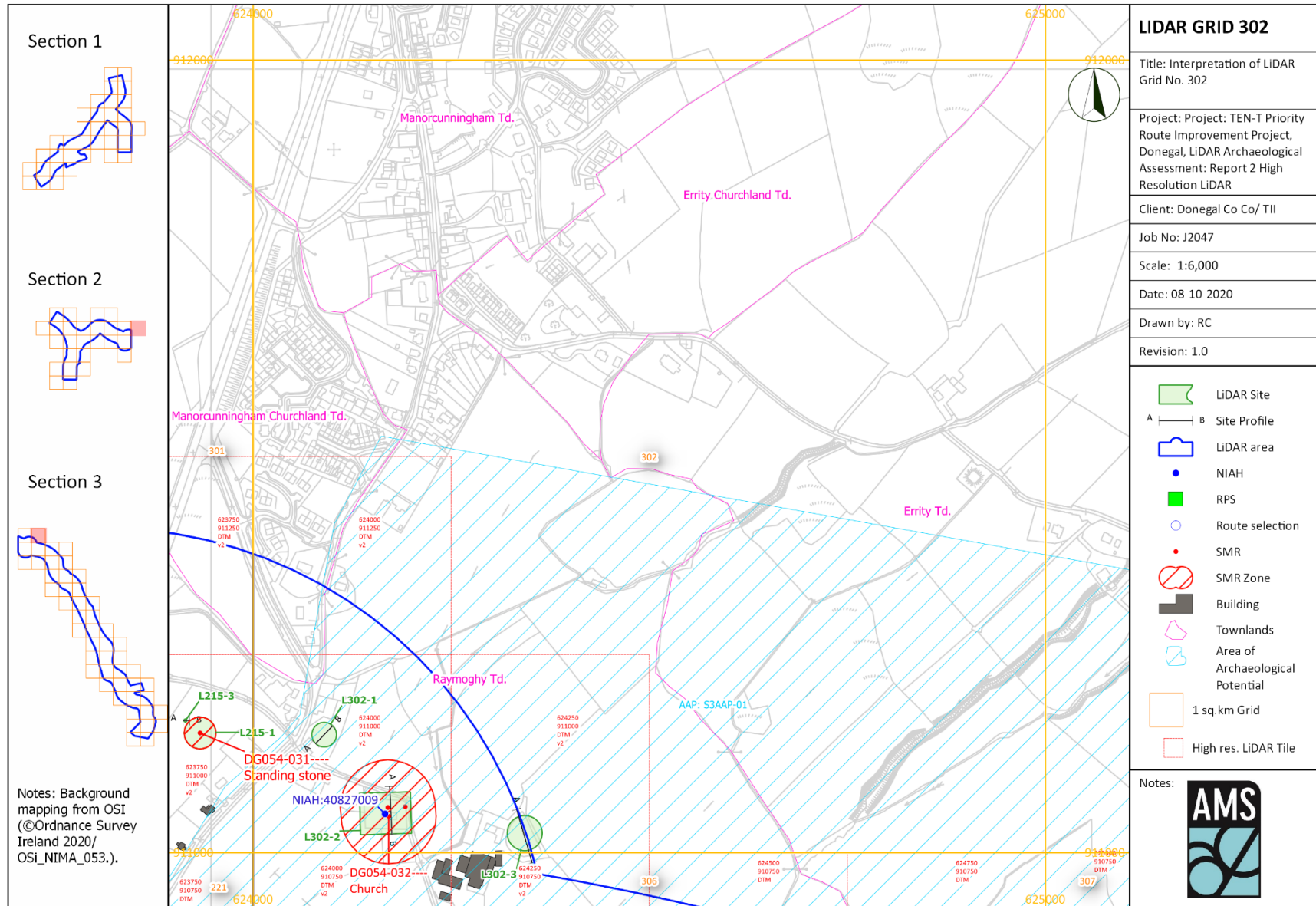
Date: 08-10-2020

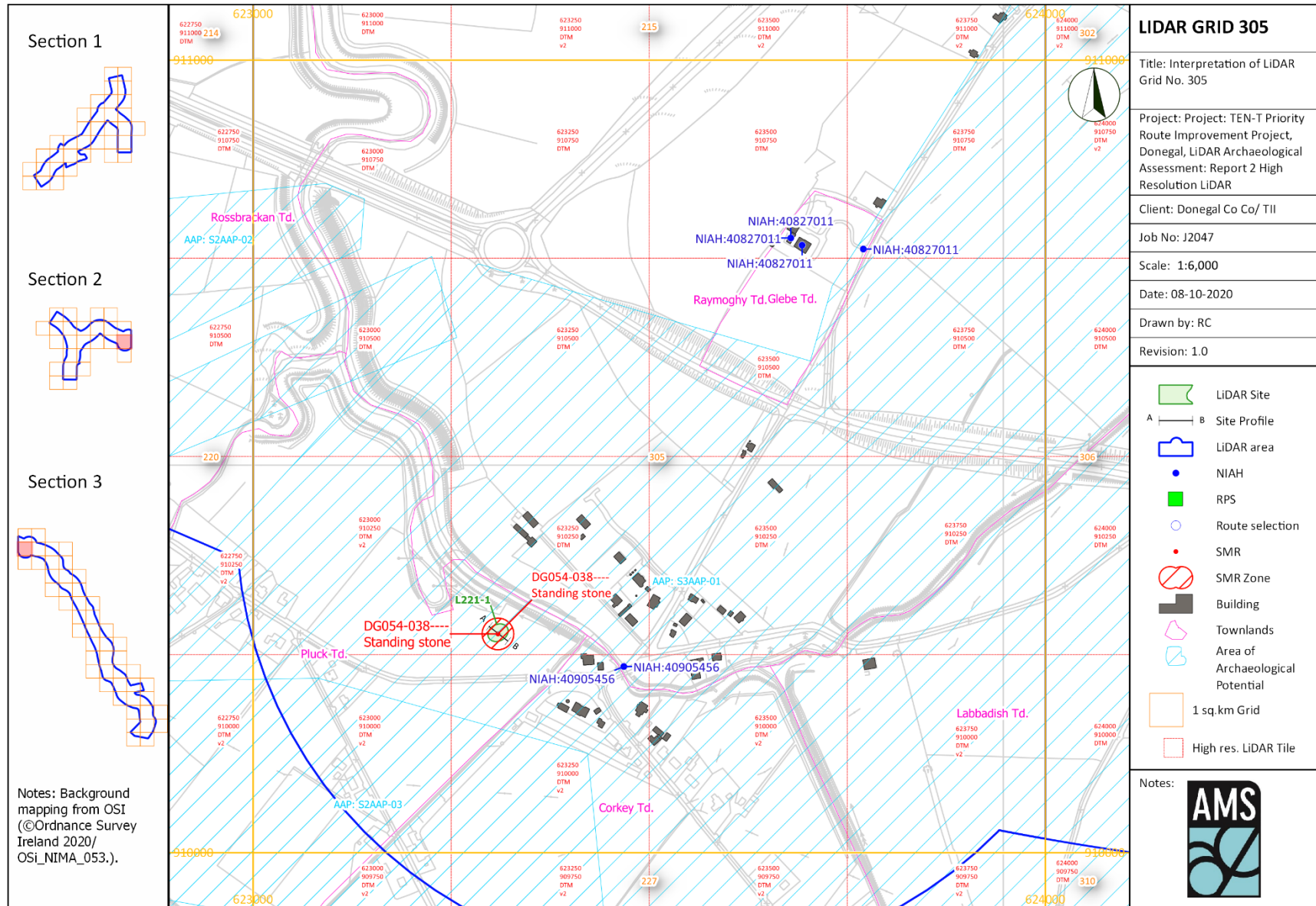
Drawn by: RC


Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

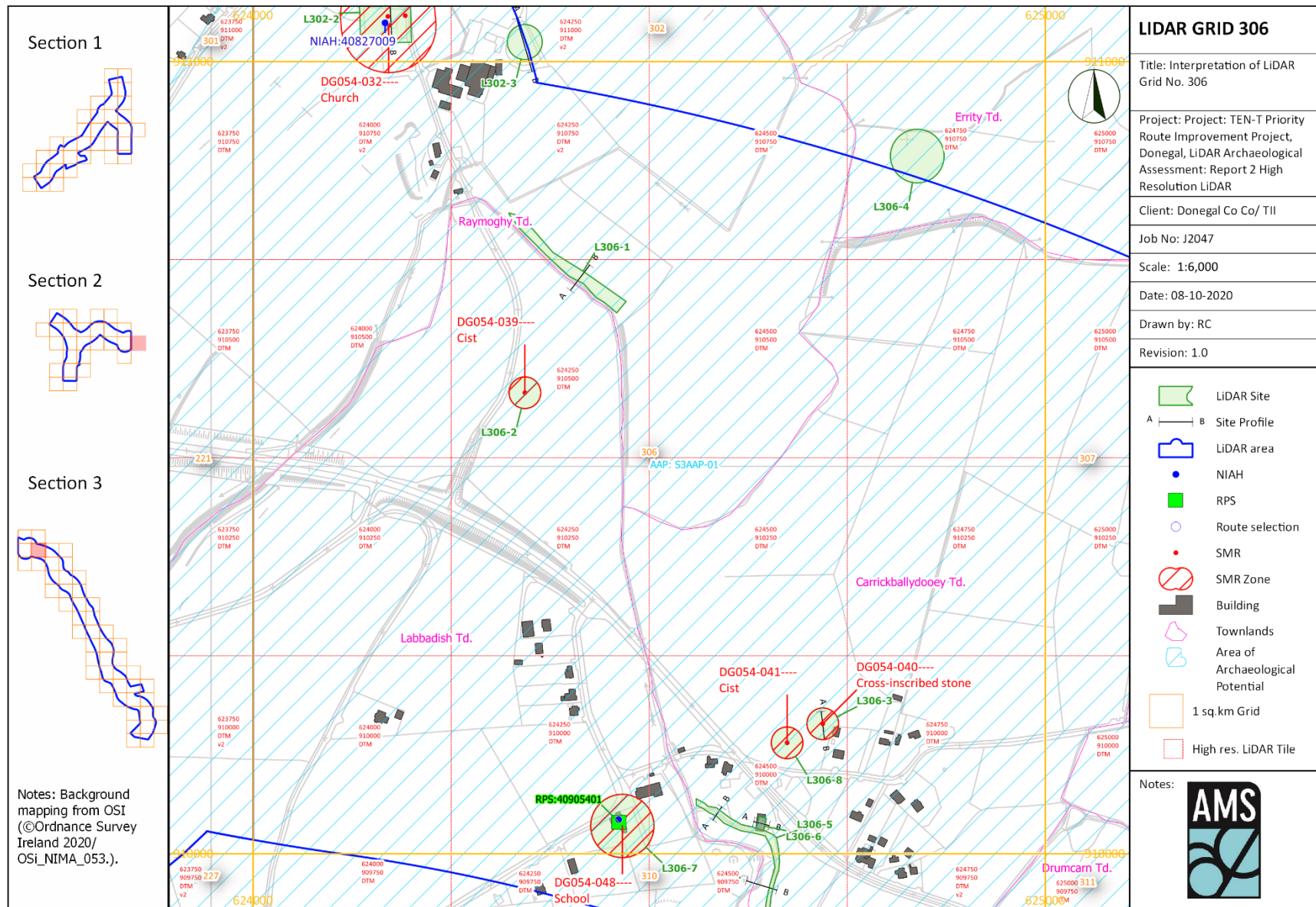






LIDAR GRID 305	
Title: Interpretation of LiDAR Grid No. 305	
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR	
Client: Donegal Co Co/ TII	
Job No: J2047	
Scale: 1:6,000	
Date: 08-10-2020	
Drawn by: RC	
Revision: 1.0	
<ul style="list-style-type: none"> LiDAR Site A — B Site Profile LiDAR area NIAH RPS Route selection SMR SMR Zone Building Townlands Area of Archaeological Potential 1 sq. km Grid High res. LiDAR Tile 	<p>Notes:</p> 

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

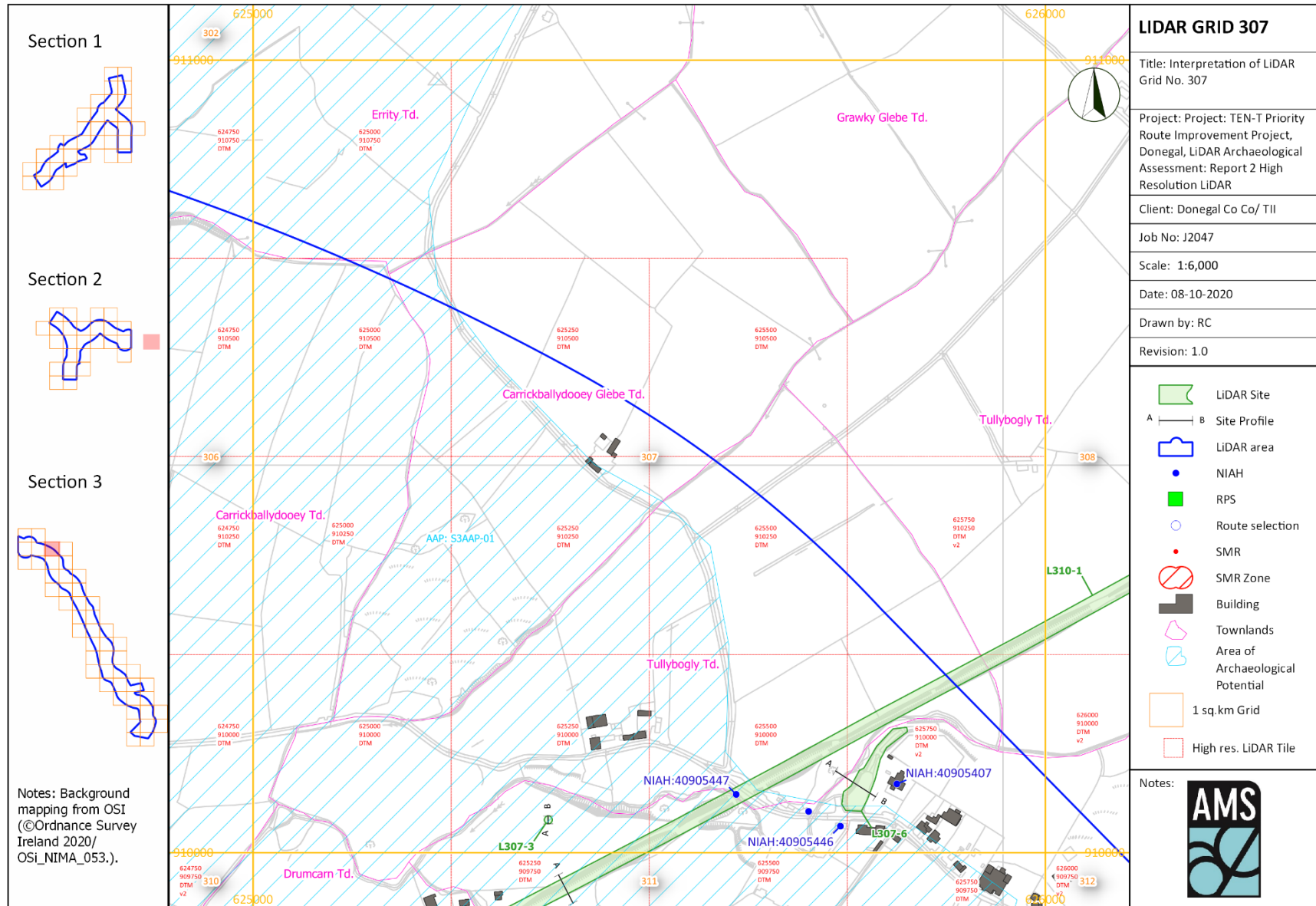


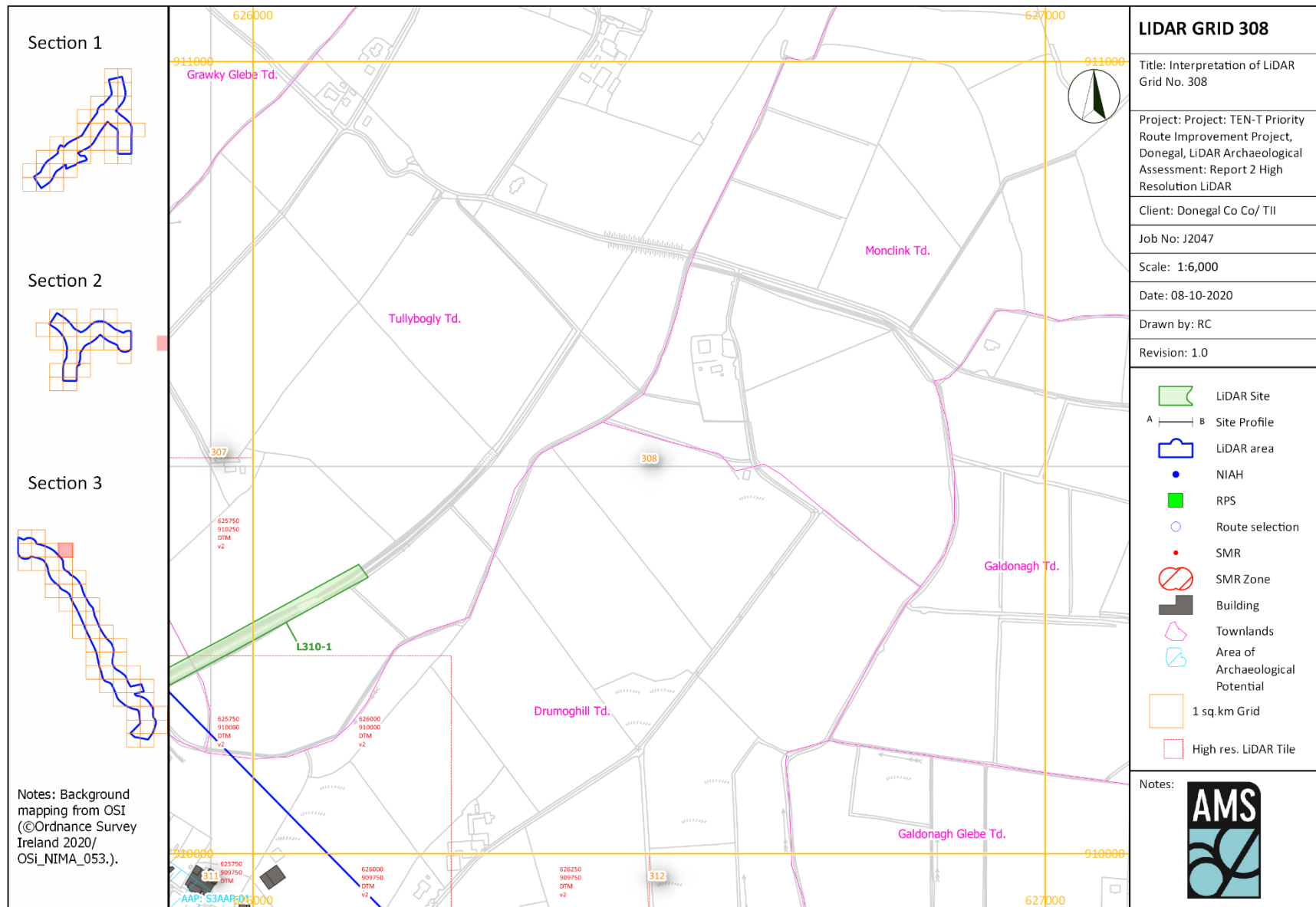
LIDAR GRID 306
Title: Interpretation of LiDAR Grid No. 306
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client: Donegal Co Co/ TII
Job No: J2047
Scale: 1:6,000
Date: 08-10-2020
Drawn by: RC
Revision: 1.0

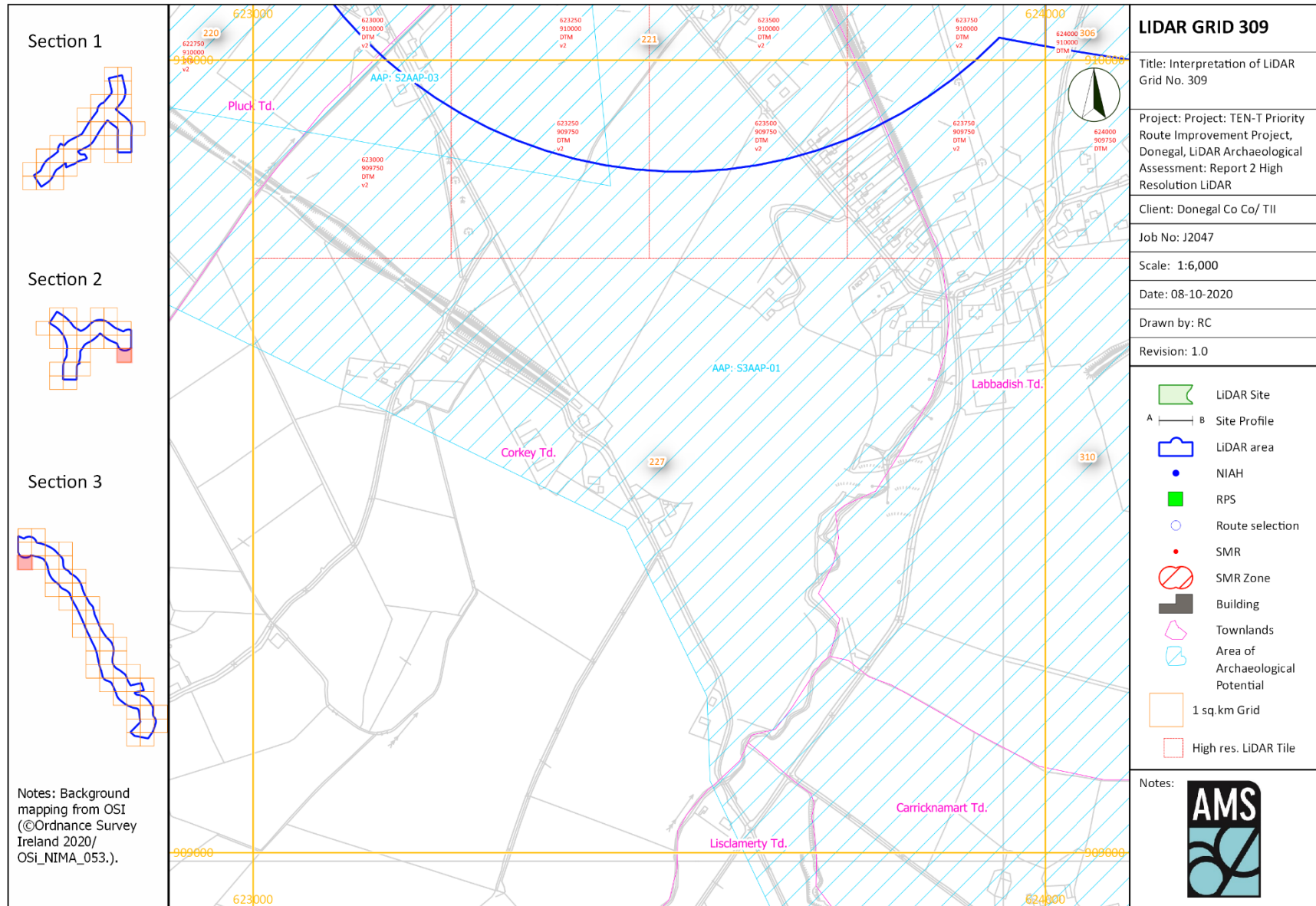
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).









LIDAR GRID 309

Title: Interpretation of LiDAR Grid No. 309

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

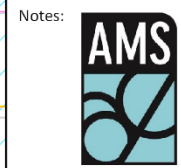
Date: 08-10-2020

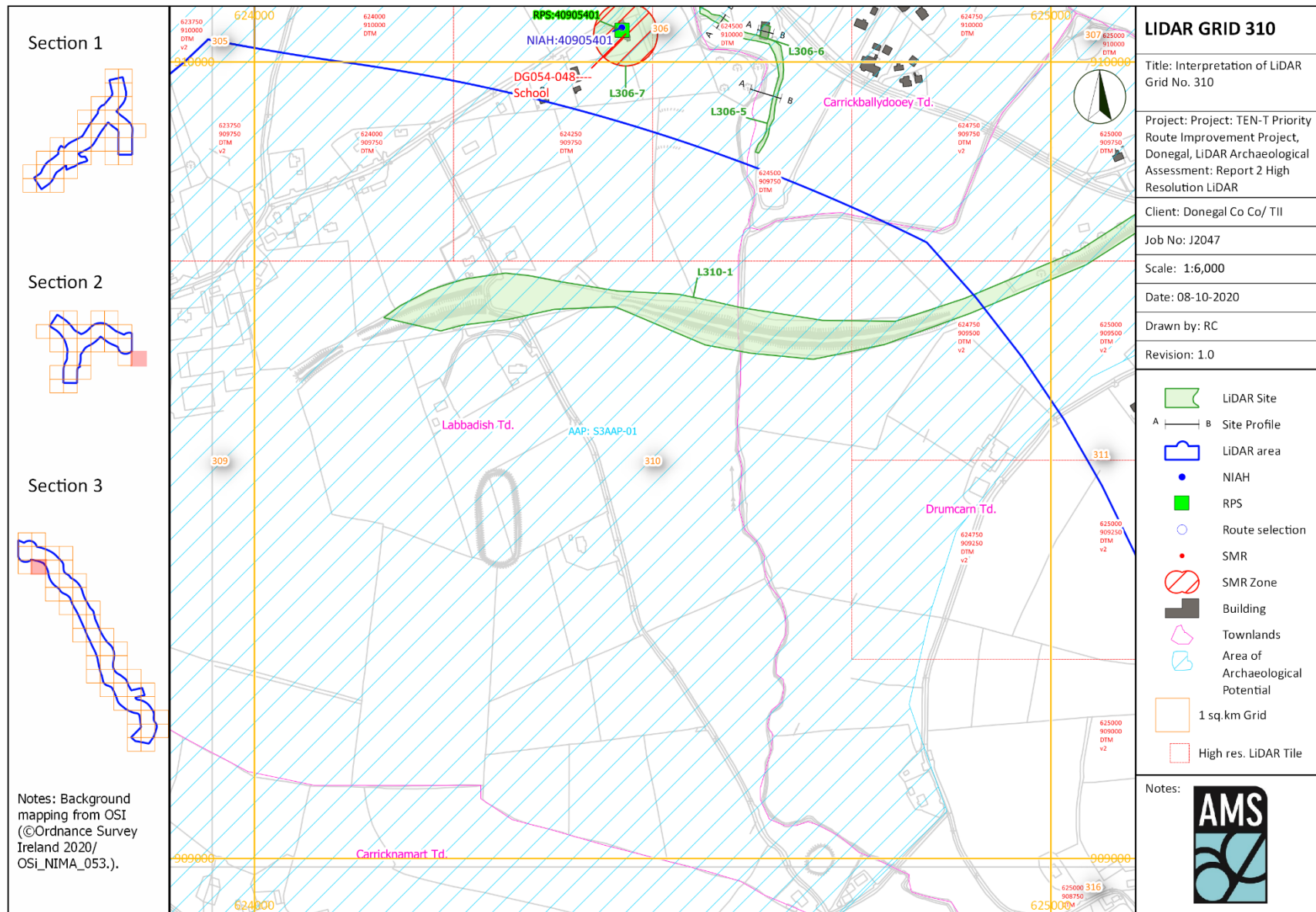
Drawn by: RC

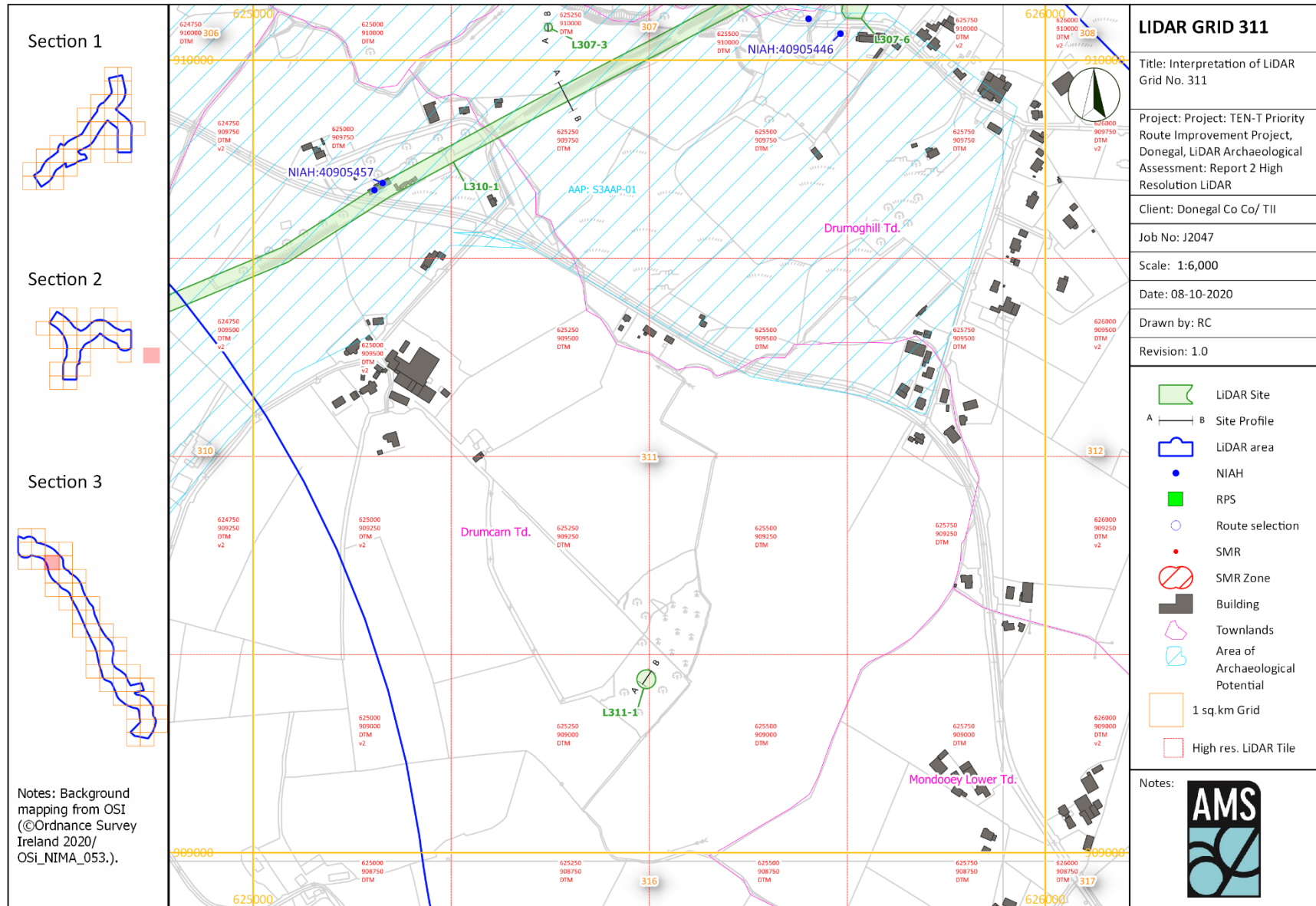
Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

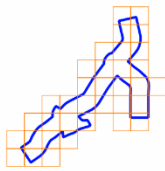
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).



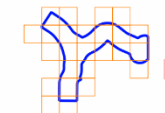




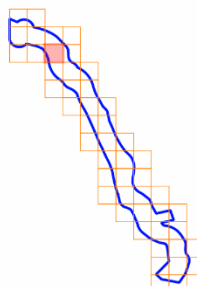
Section 1



Section 2



Section 3



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 311

Title: Interpretation of LiDAR Grid No. 311

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

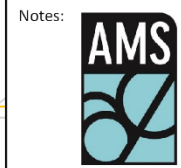
Scale: 1:6,000

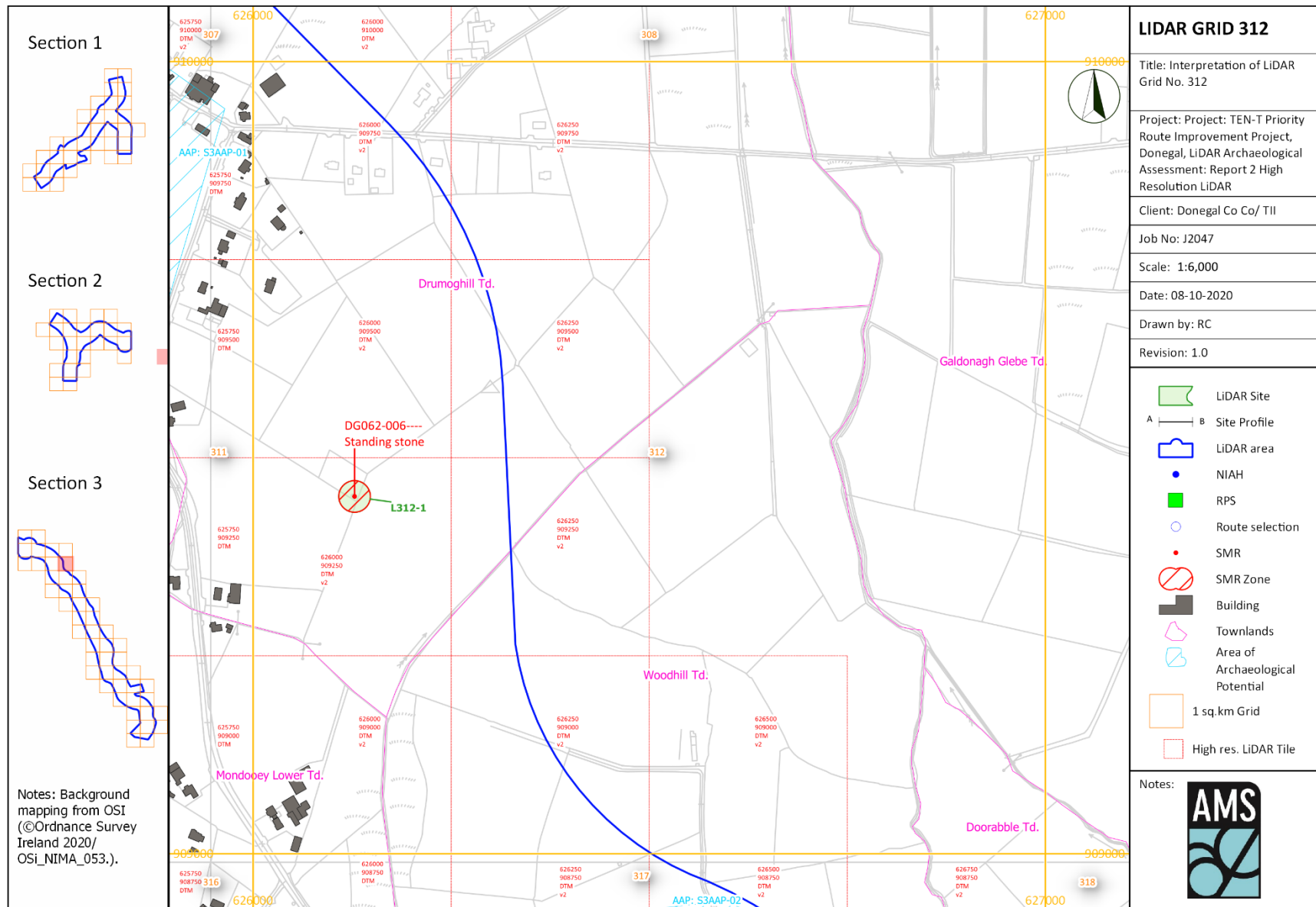
Date: 08-10-2020

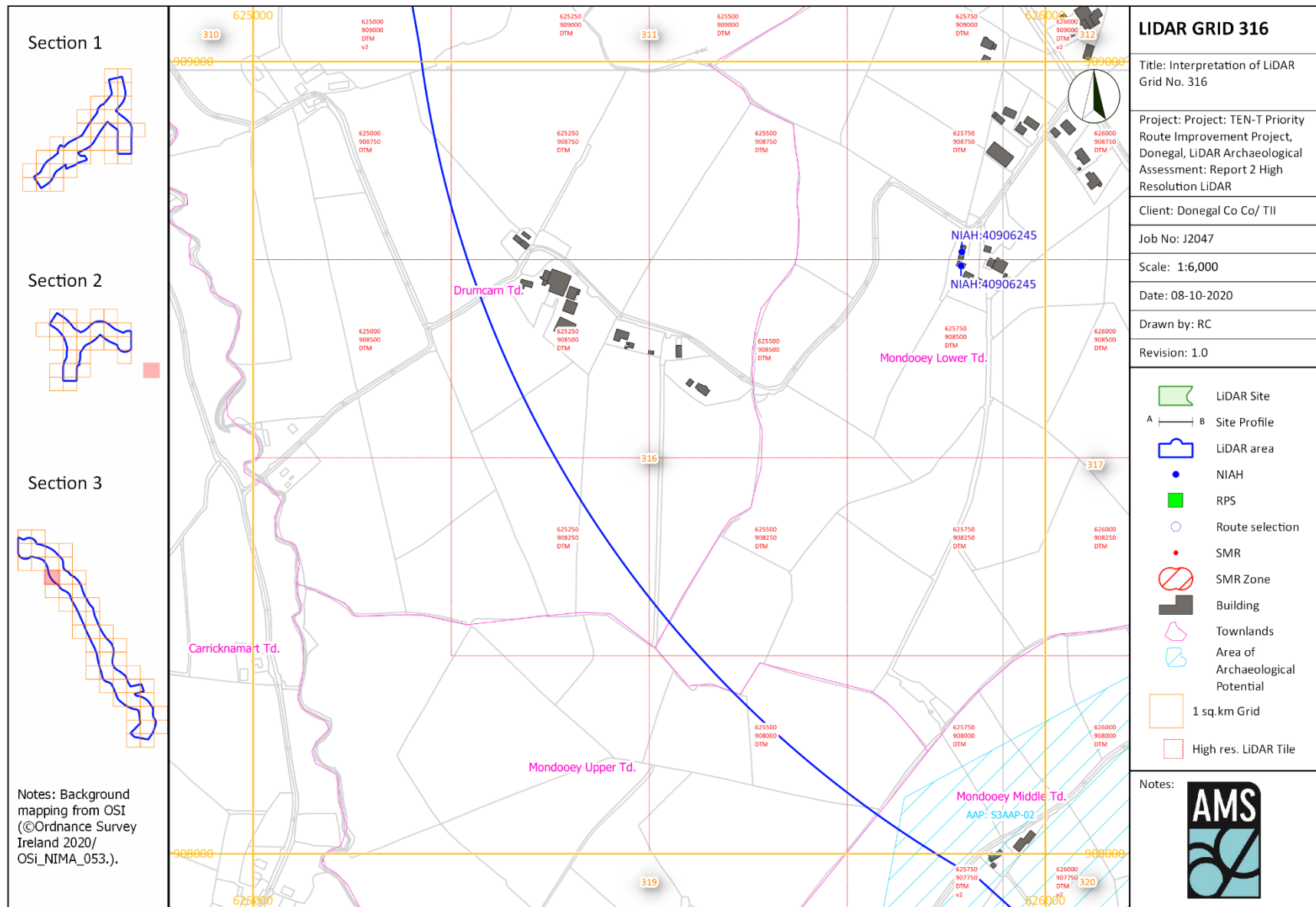
Drawn by: RC

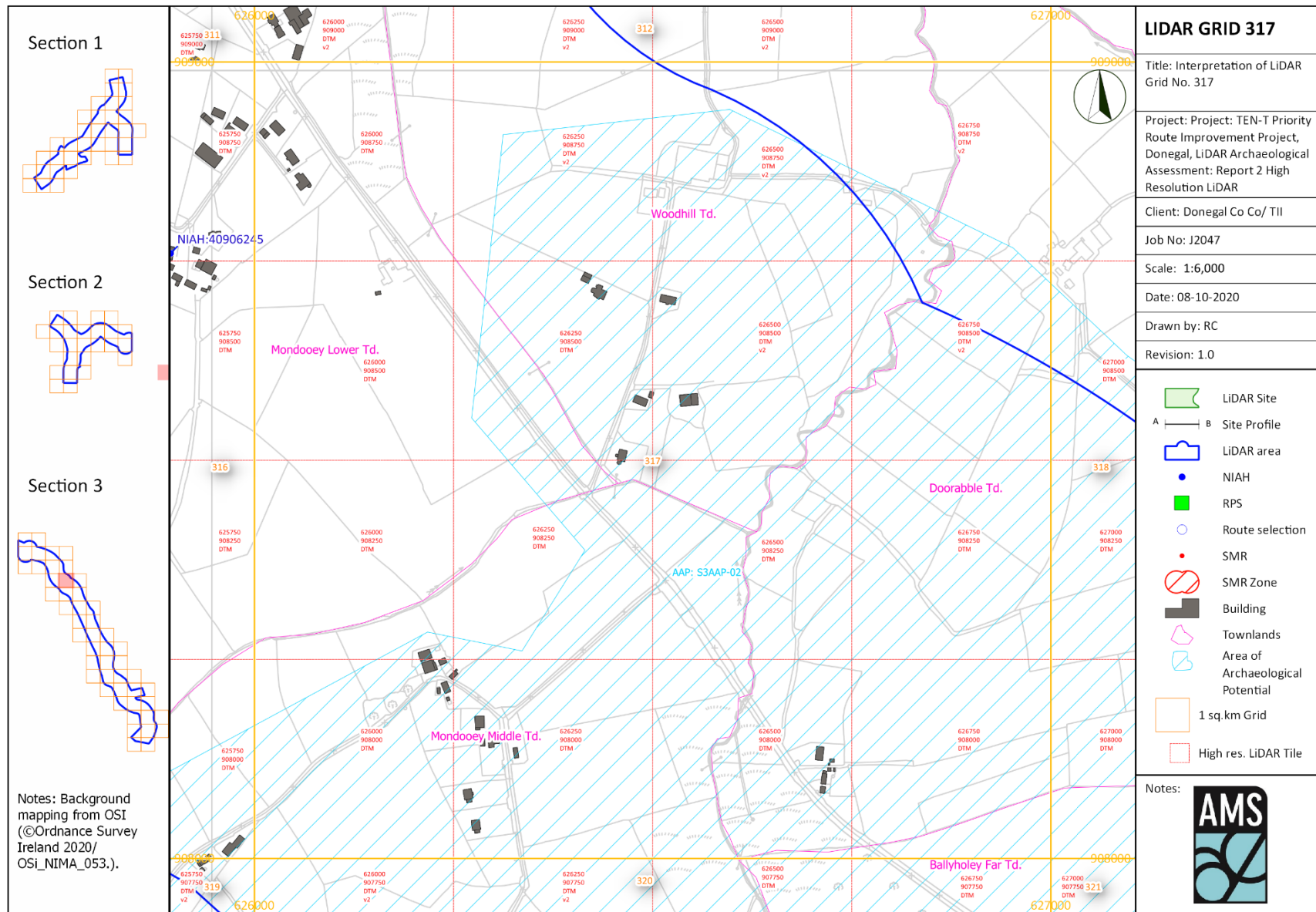
Revision: 1.0

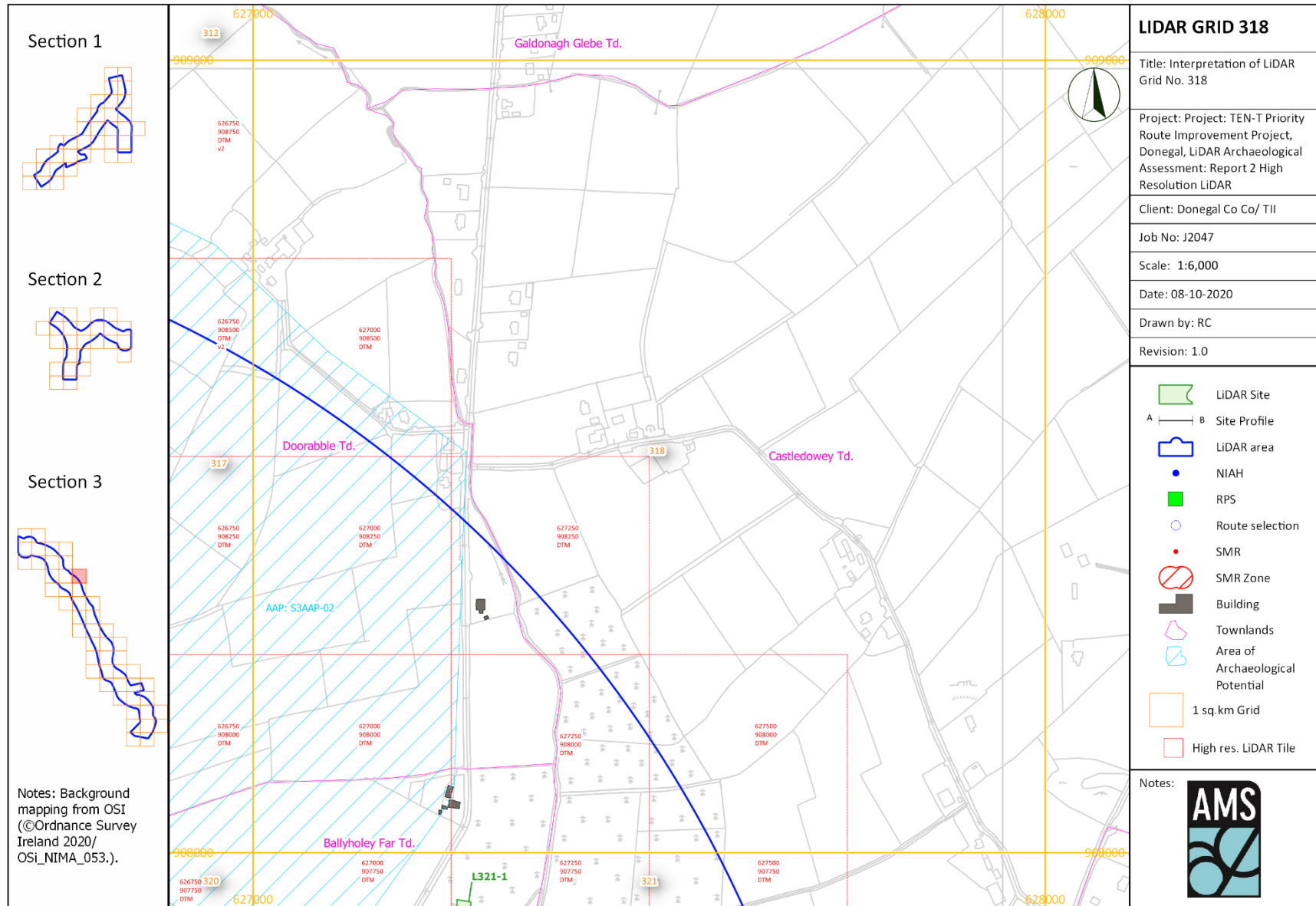
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile











LIDAR GRID 318

Title: Interpretation of LiDAR Grid No. 318

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

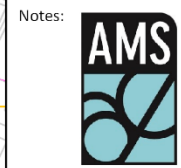
Date: 08-10-2020

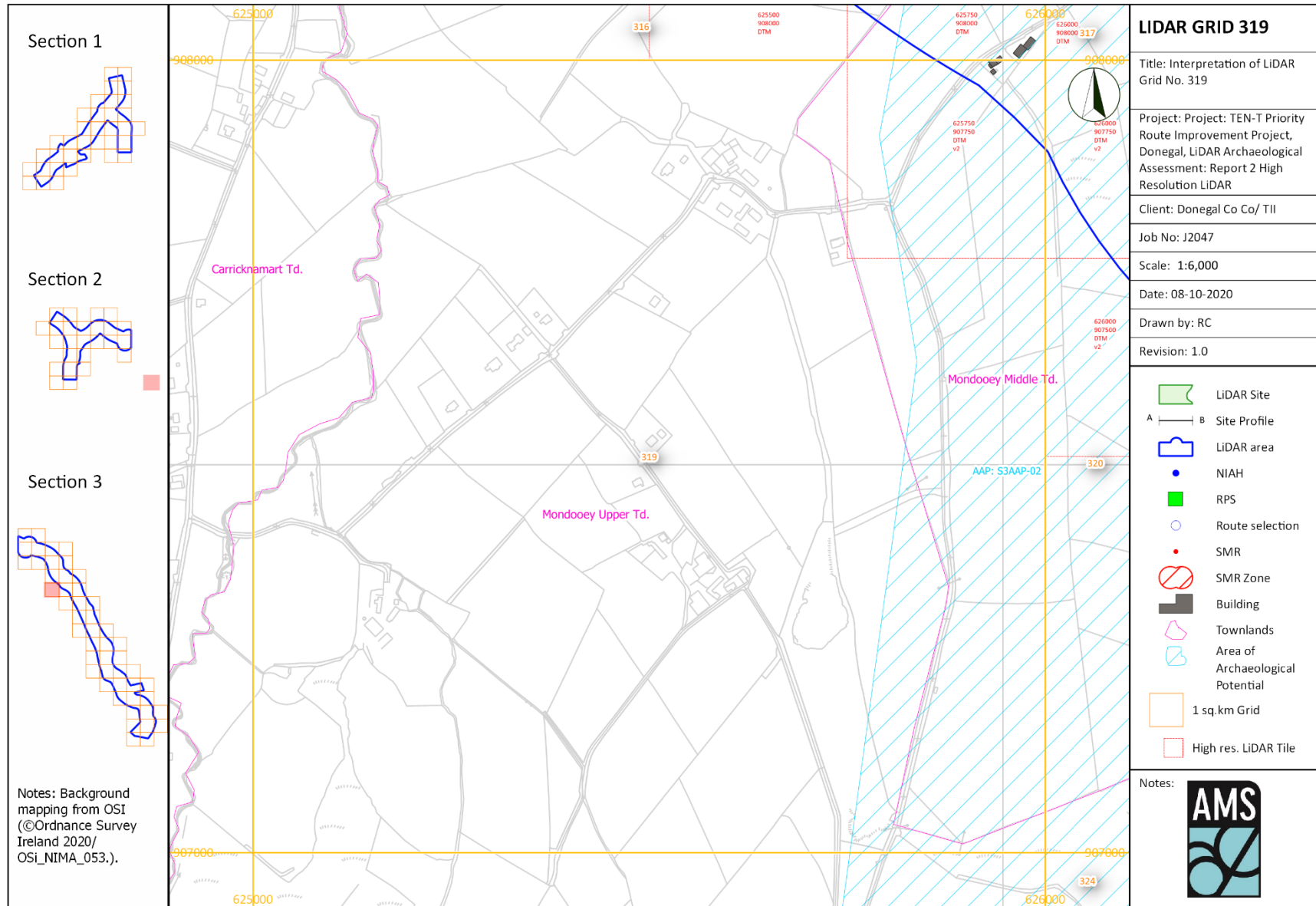
Drawn by: RC

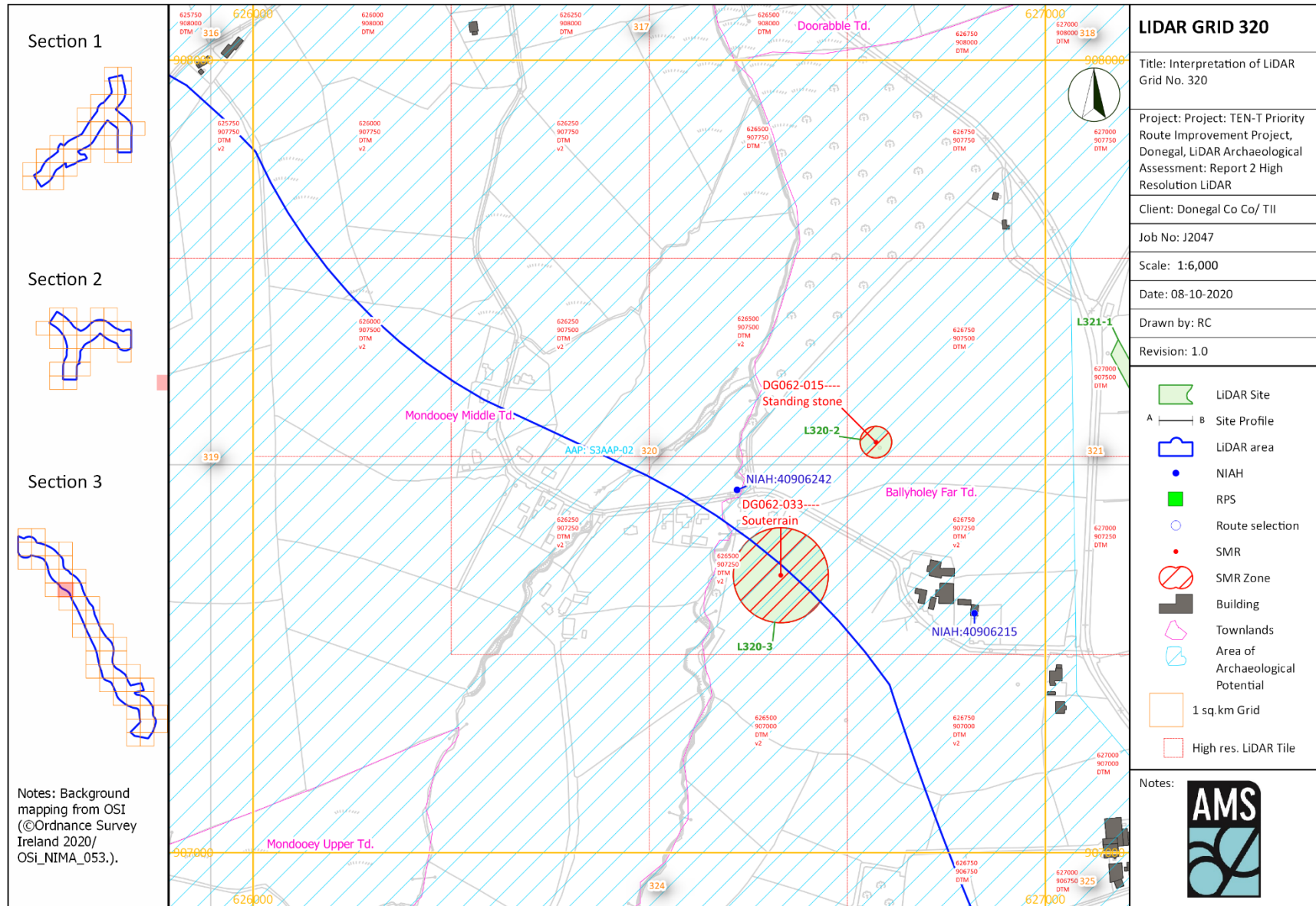
Revision: 1.0

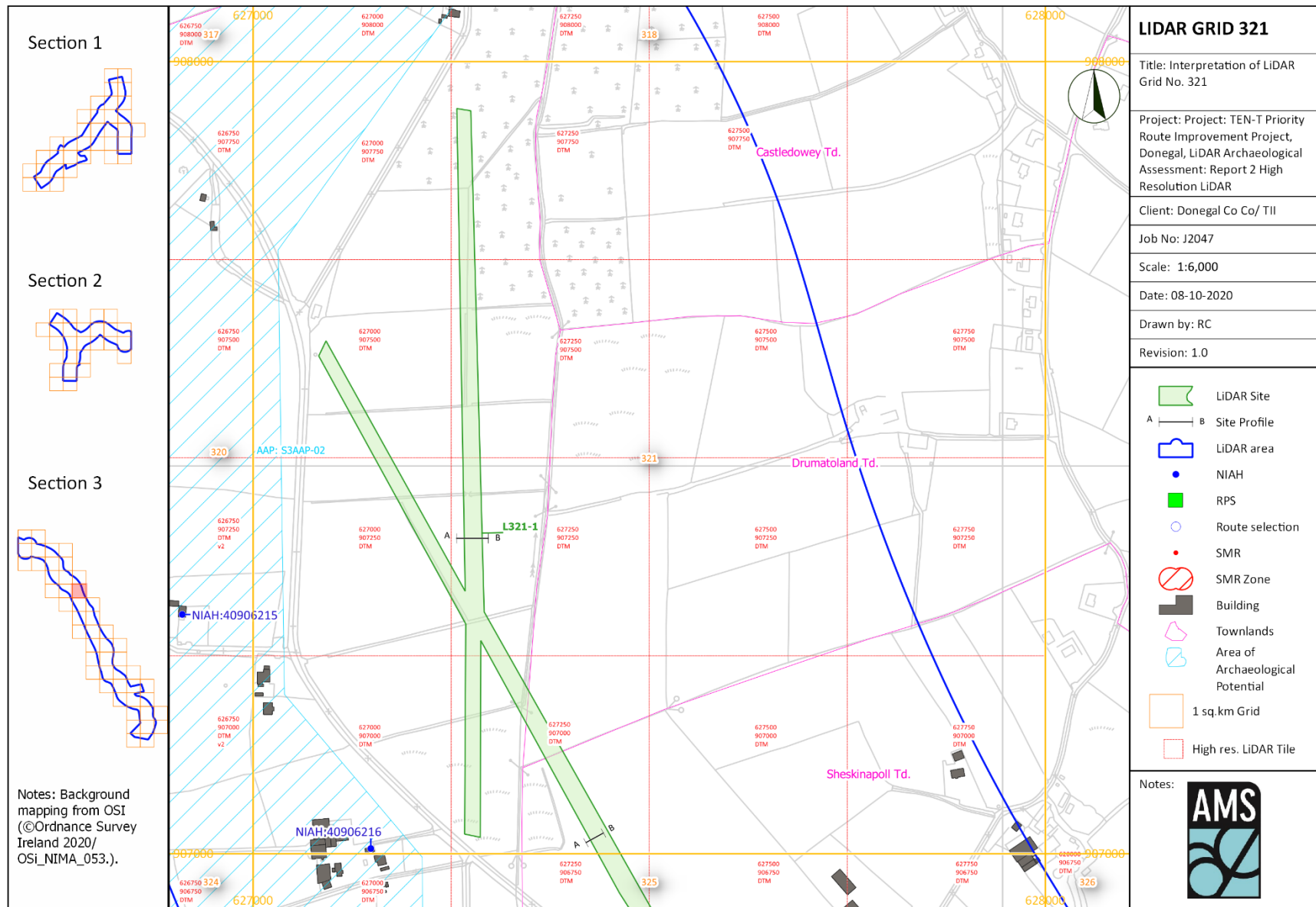
- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

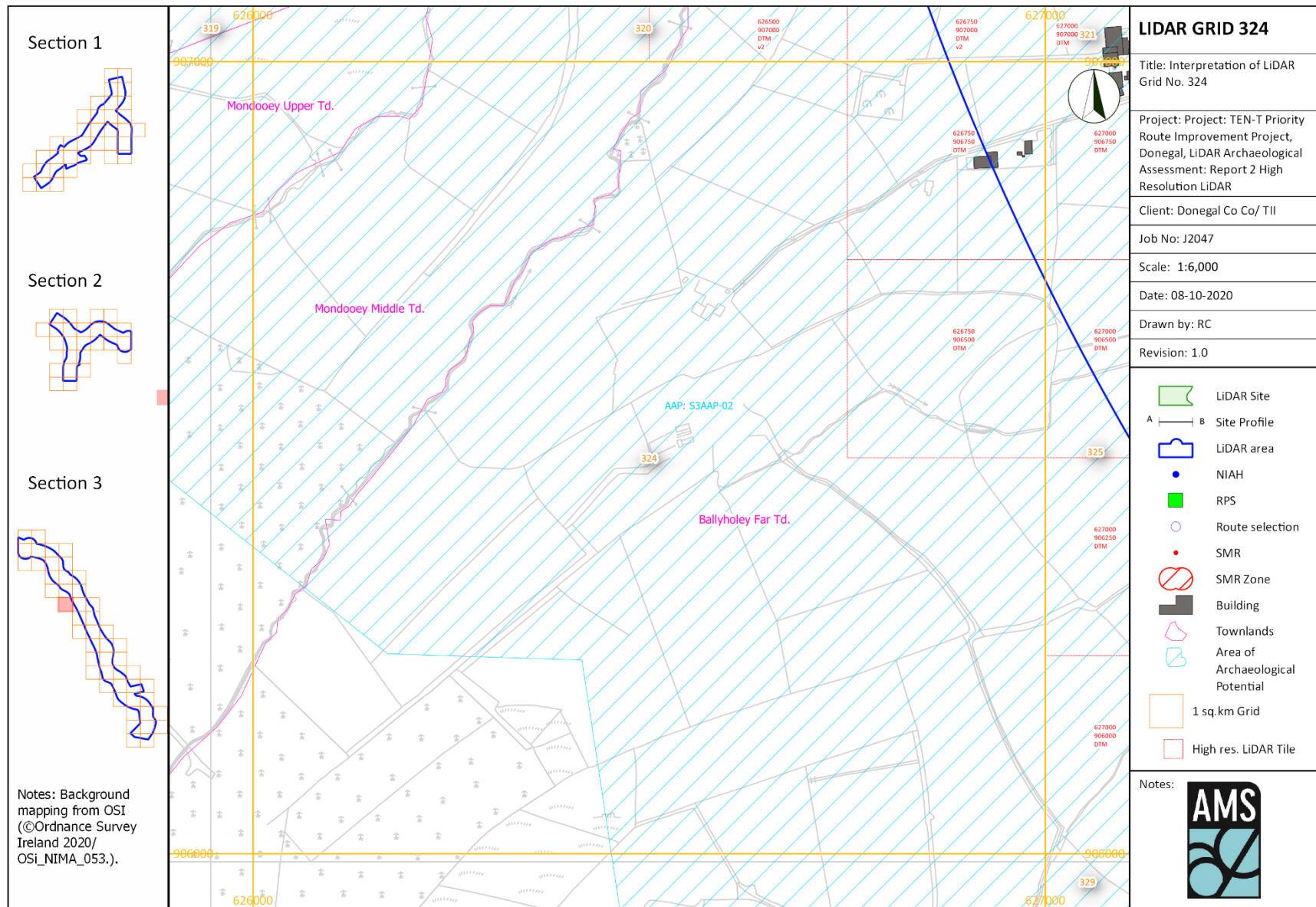
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

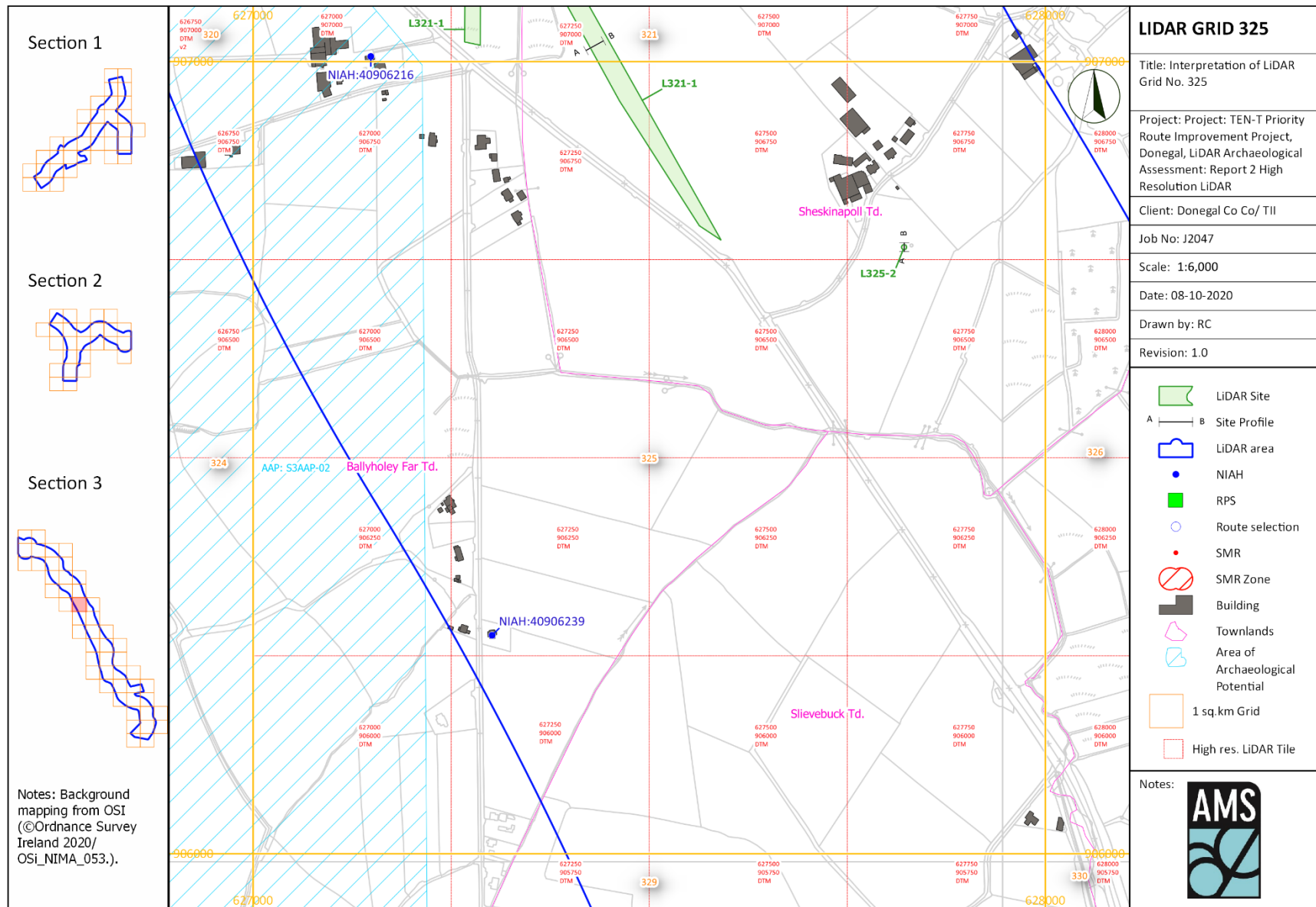


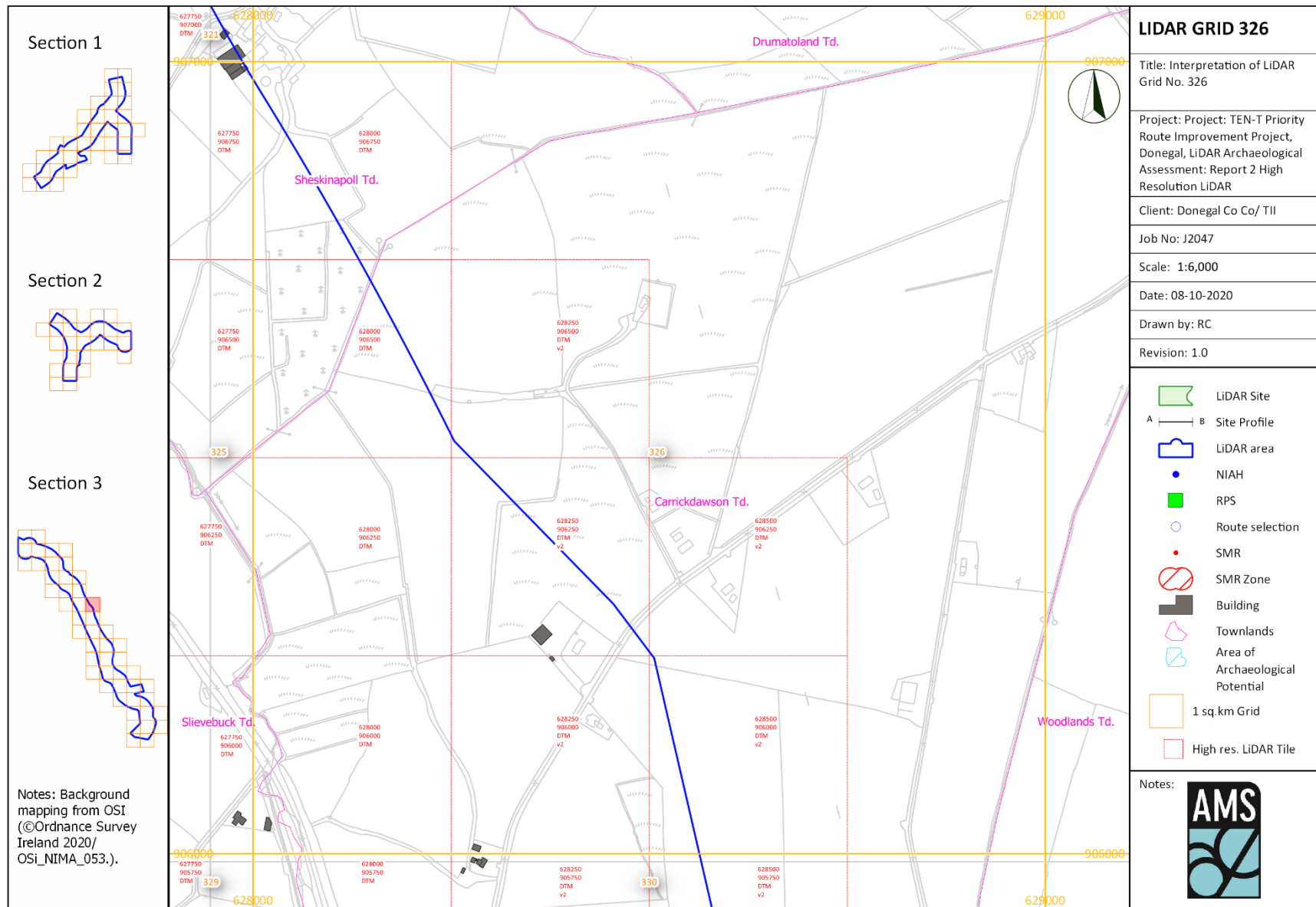












Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 326

Title: Interpretation of LiDAR Grid No. 326

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

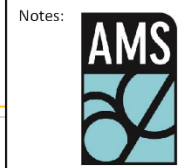
Scale: 1:6,000

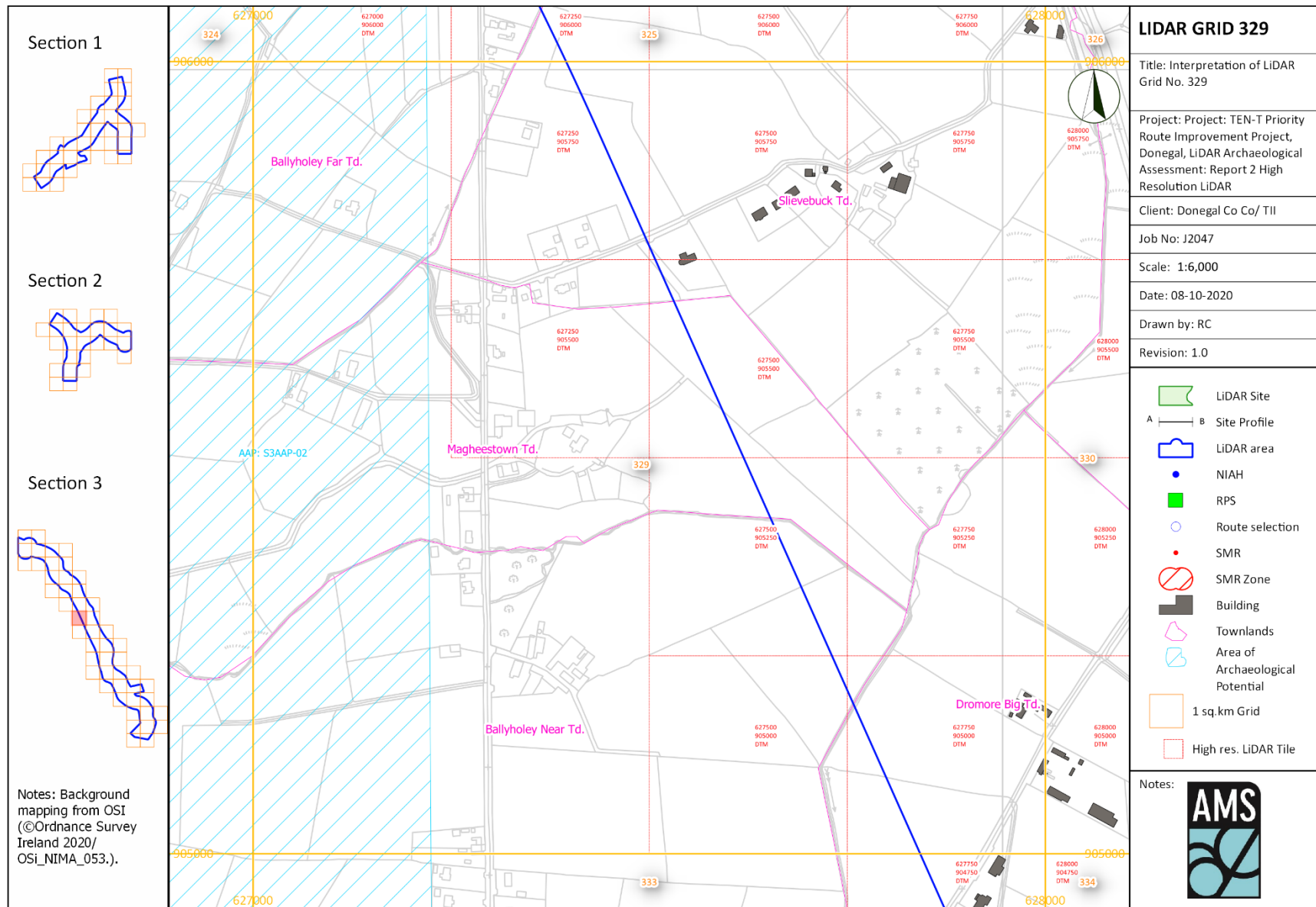
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 329

Title: Interpretation of LiDAR Grid No. 329

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

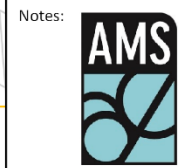
Scale: 1:6,000

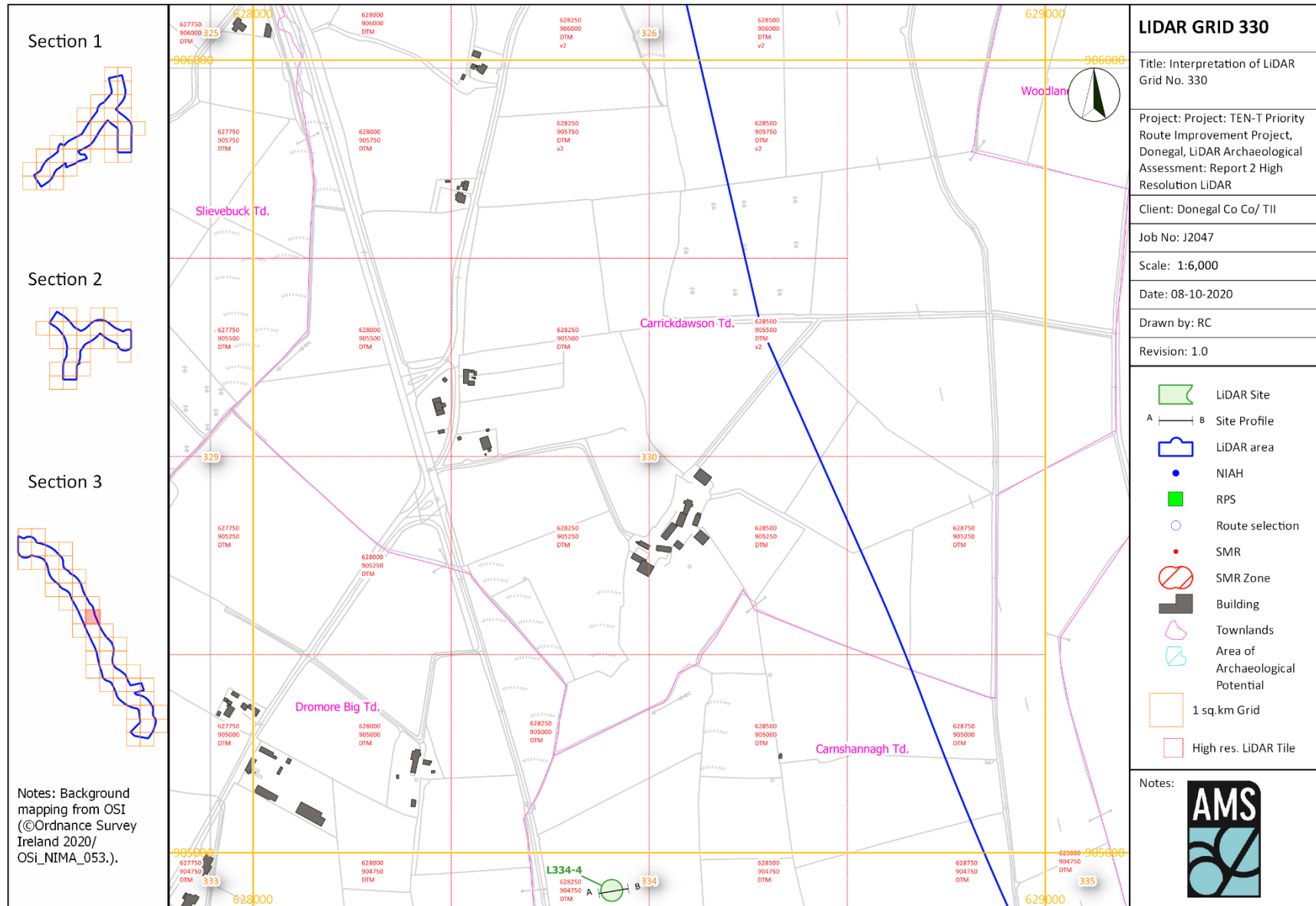
Date: 08-10-2020

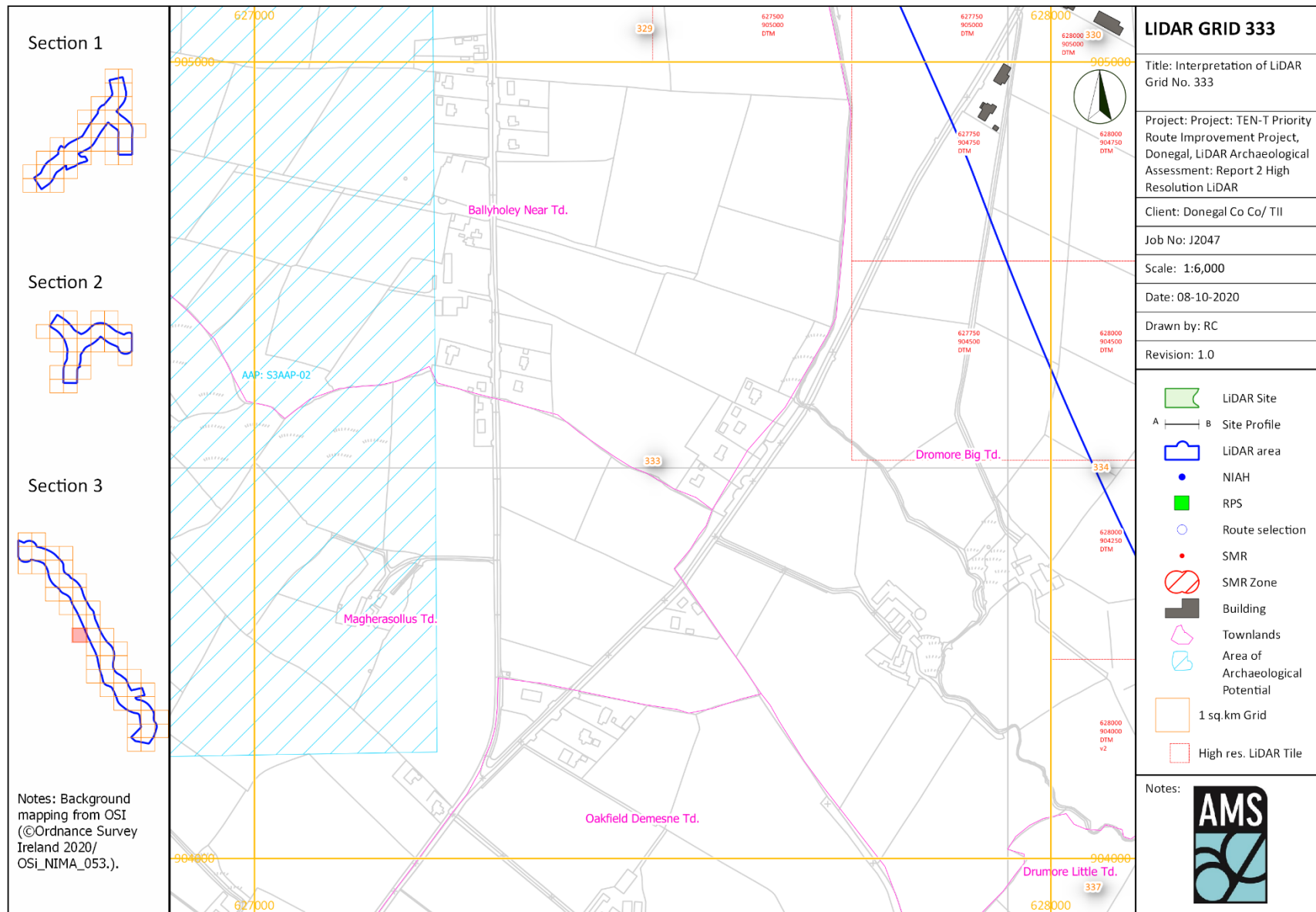
Drawn by: RC

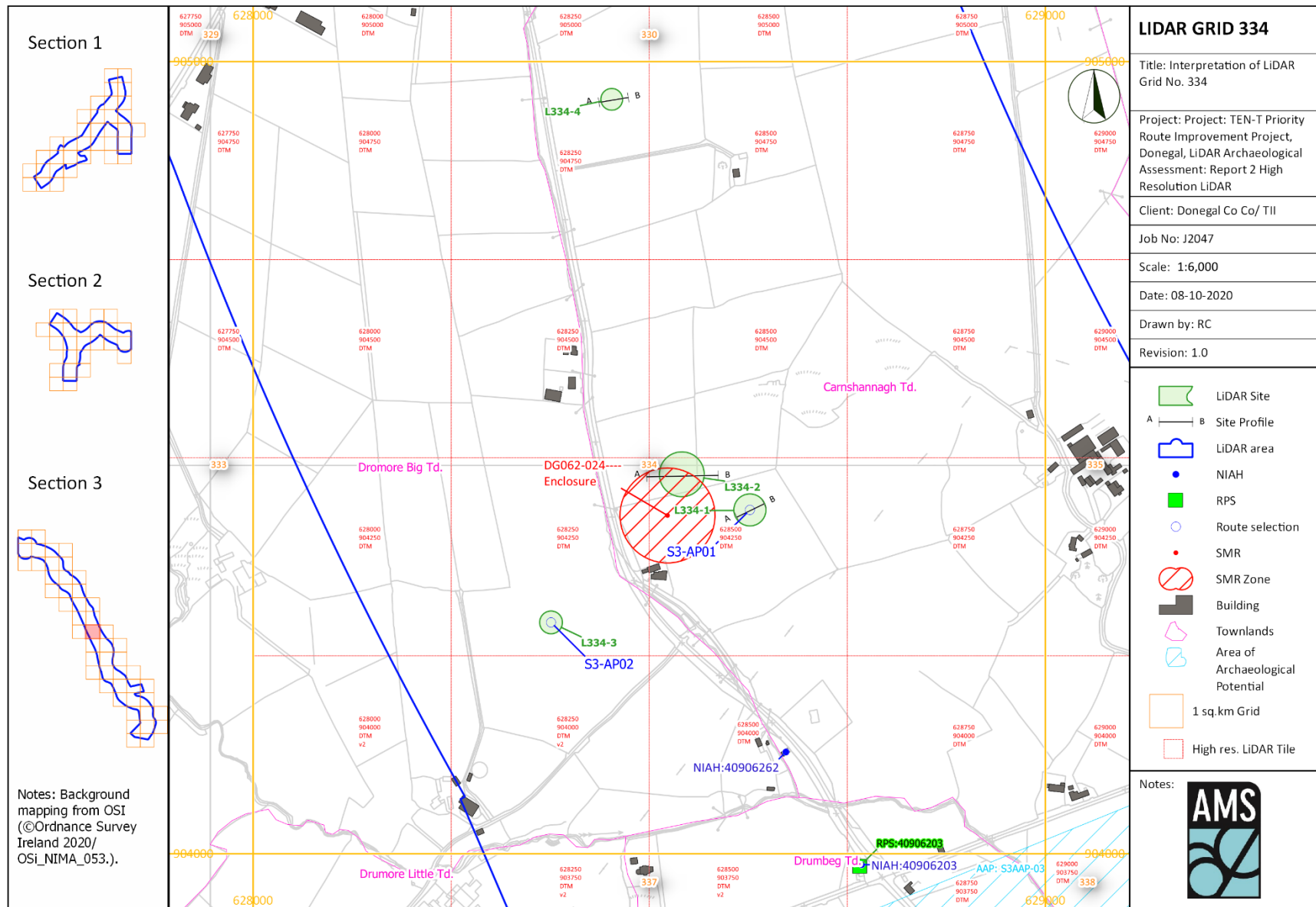
Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile









Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 334

Title: Interpretation of LiDAR Grid No. 334

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

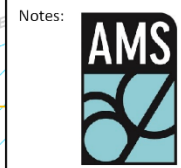
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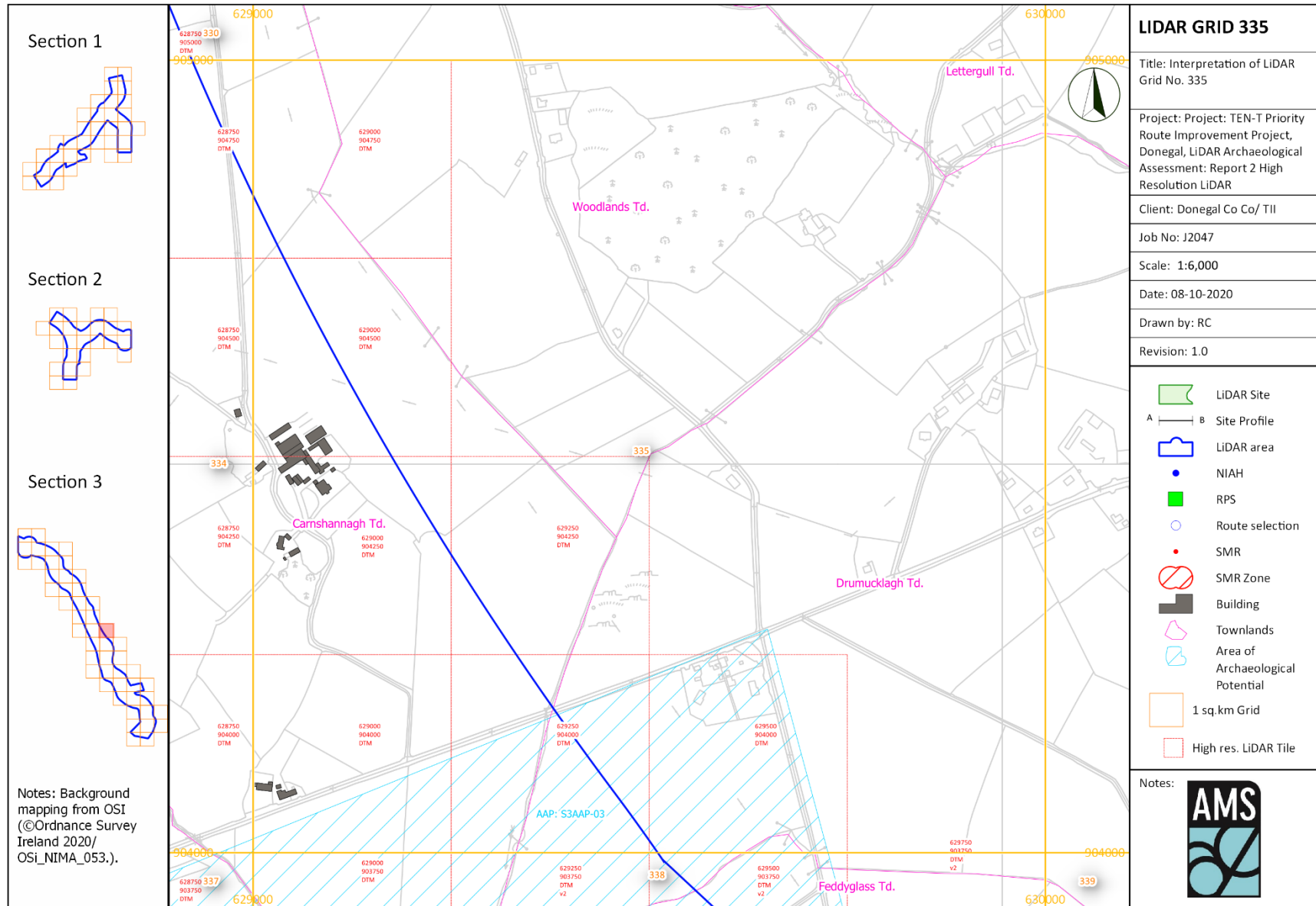
Date: 08-10-2020

Drawn by: RC

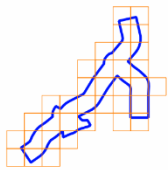
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

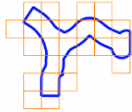




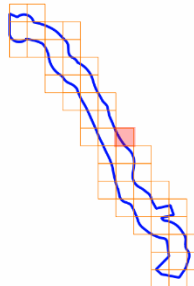
Section 1



Section 2



Section 3

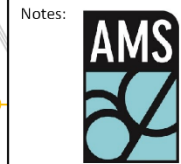


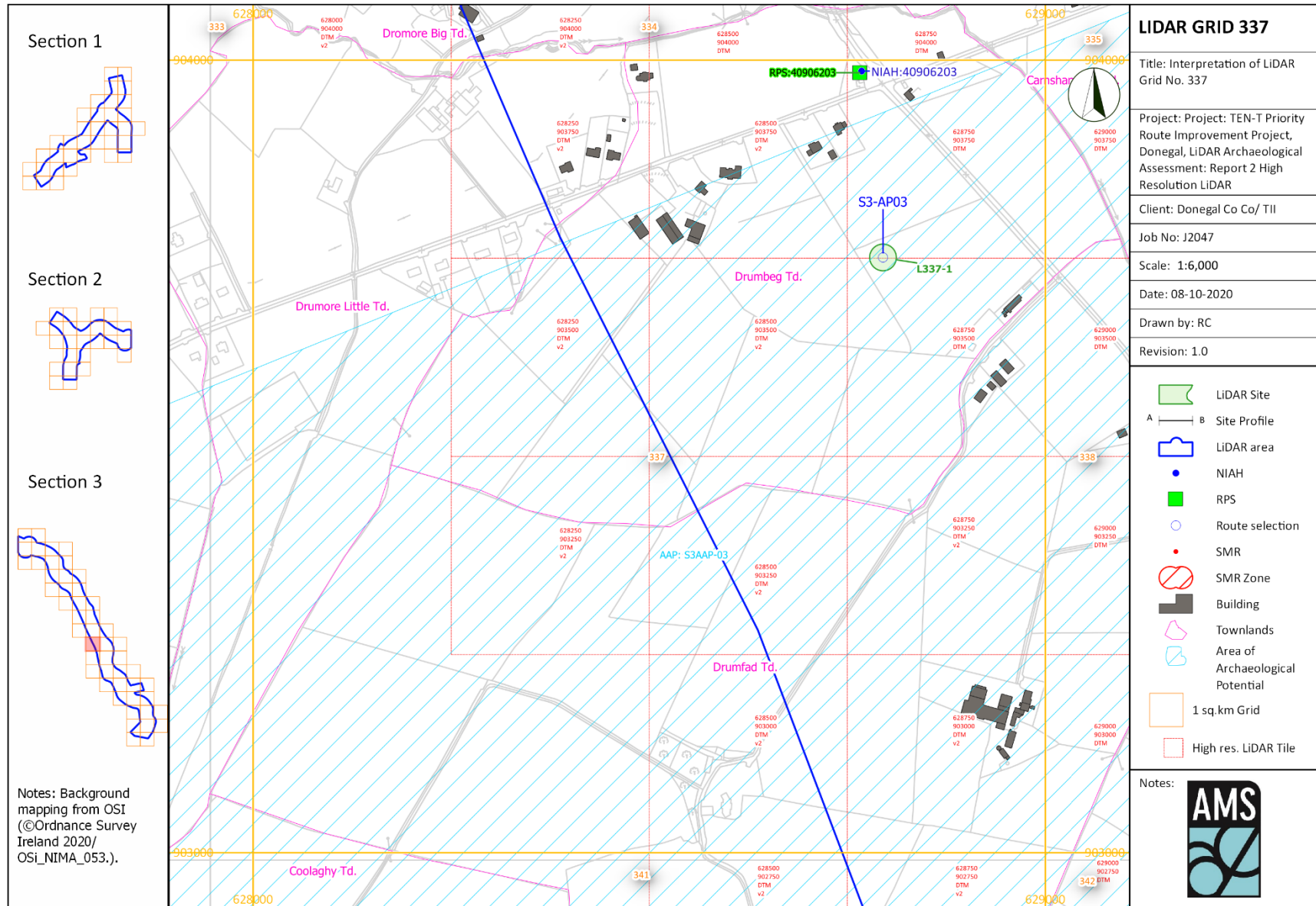
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 335

Title: Interpretation of LiDAR Grid No. 335
Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR
Client: Donegal Co Co/ TII
Job No: J2047
Scale: 1:6,000
Date: 08-10-2020
Drawn by: RC
Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 337

Title: Interpretation of LiDAR Grid No. 337

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

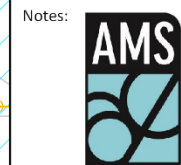
Scale: 1:6,000

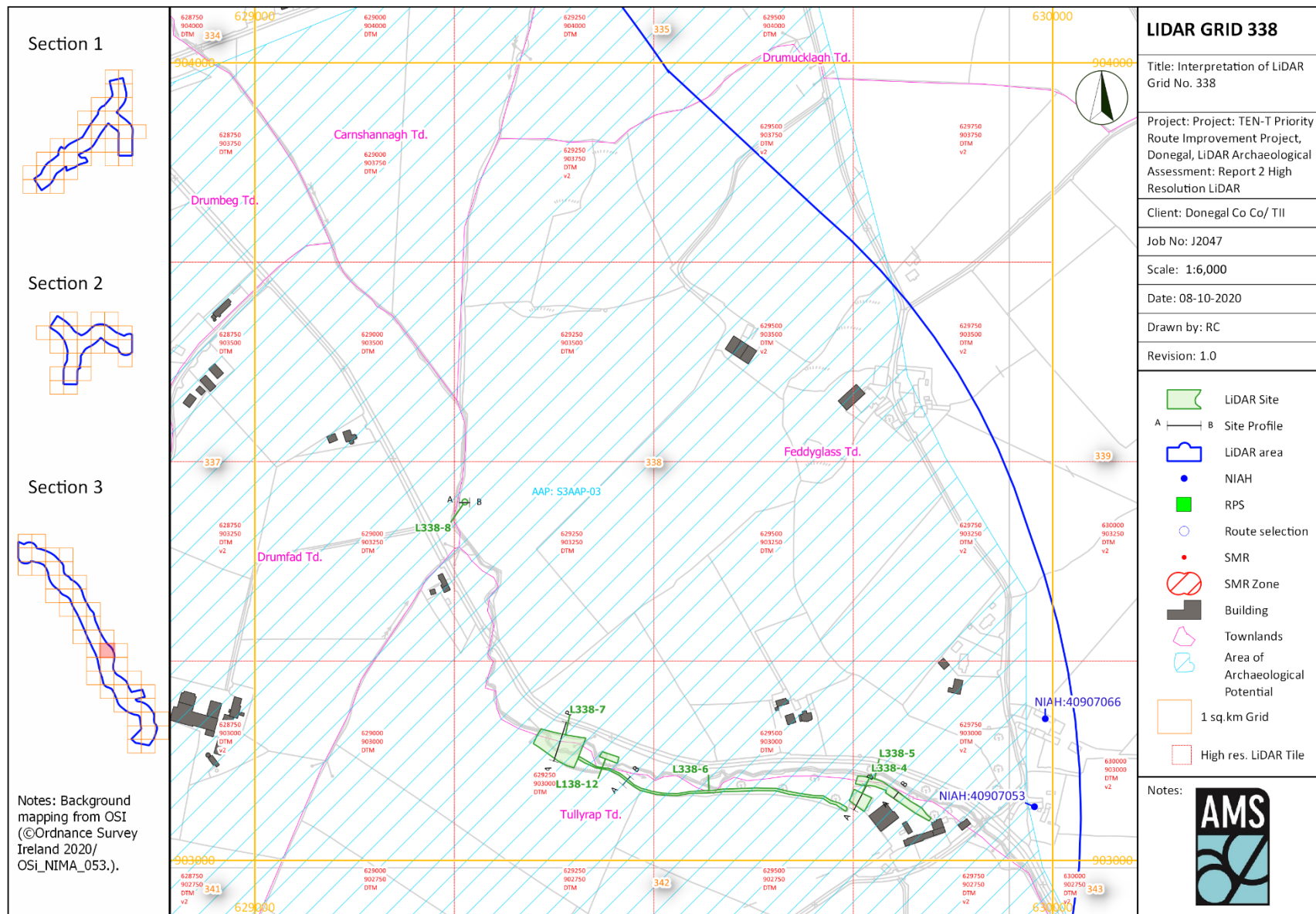
Date: 08-10-2020

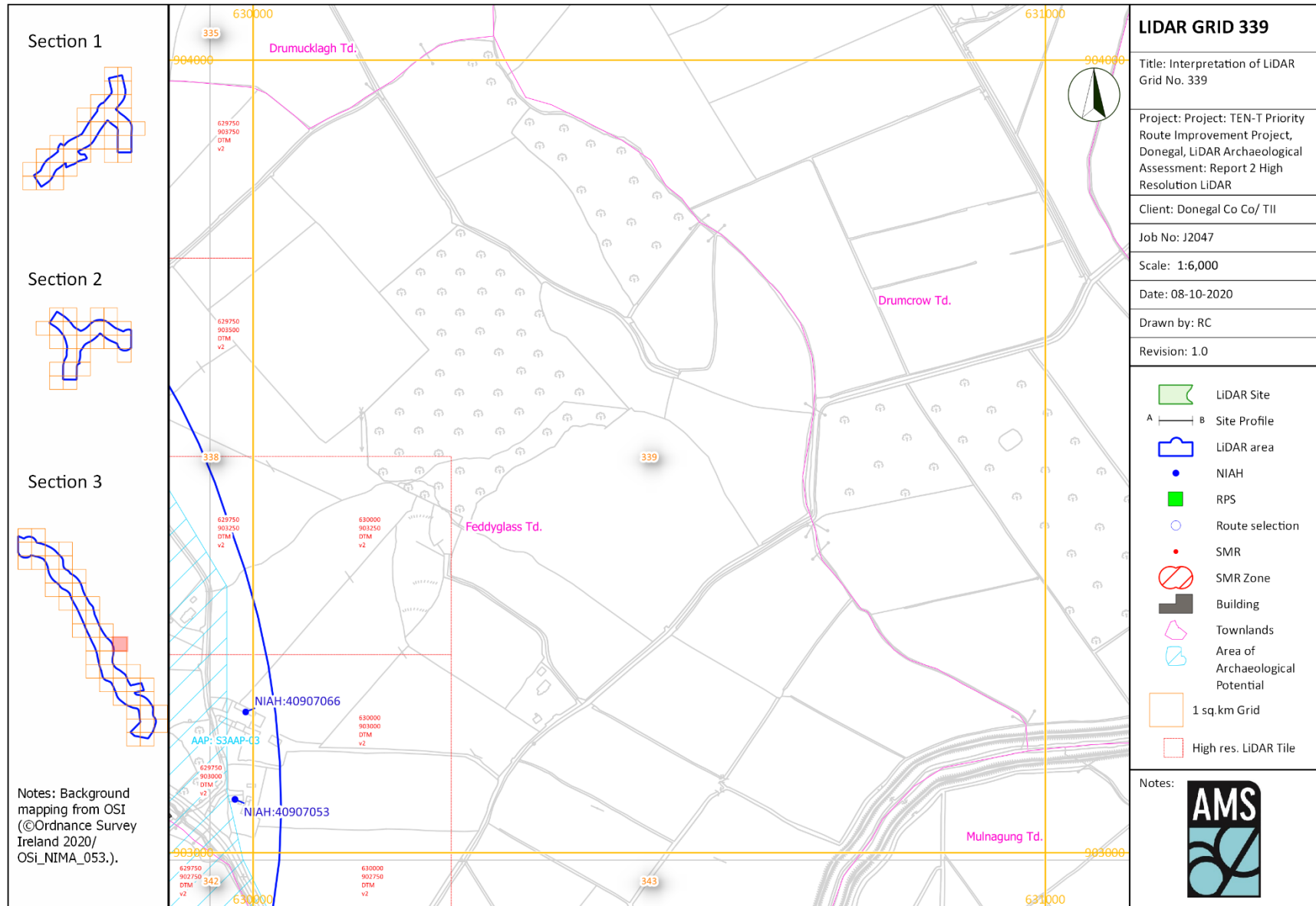
Drawn by: RC

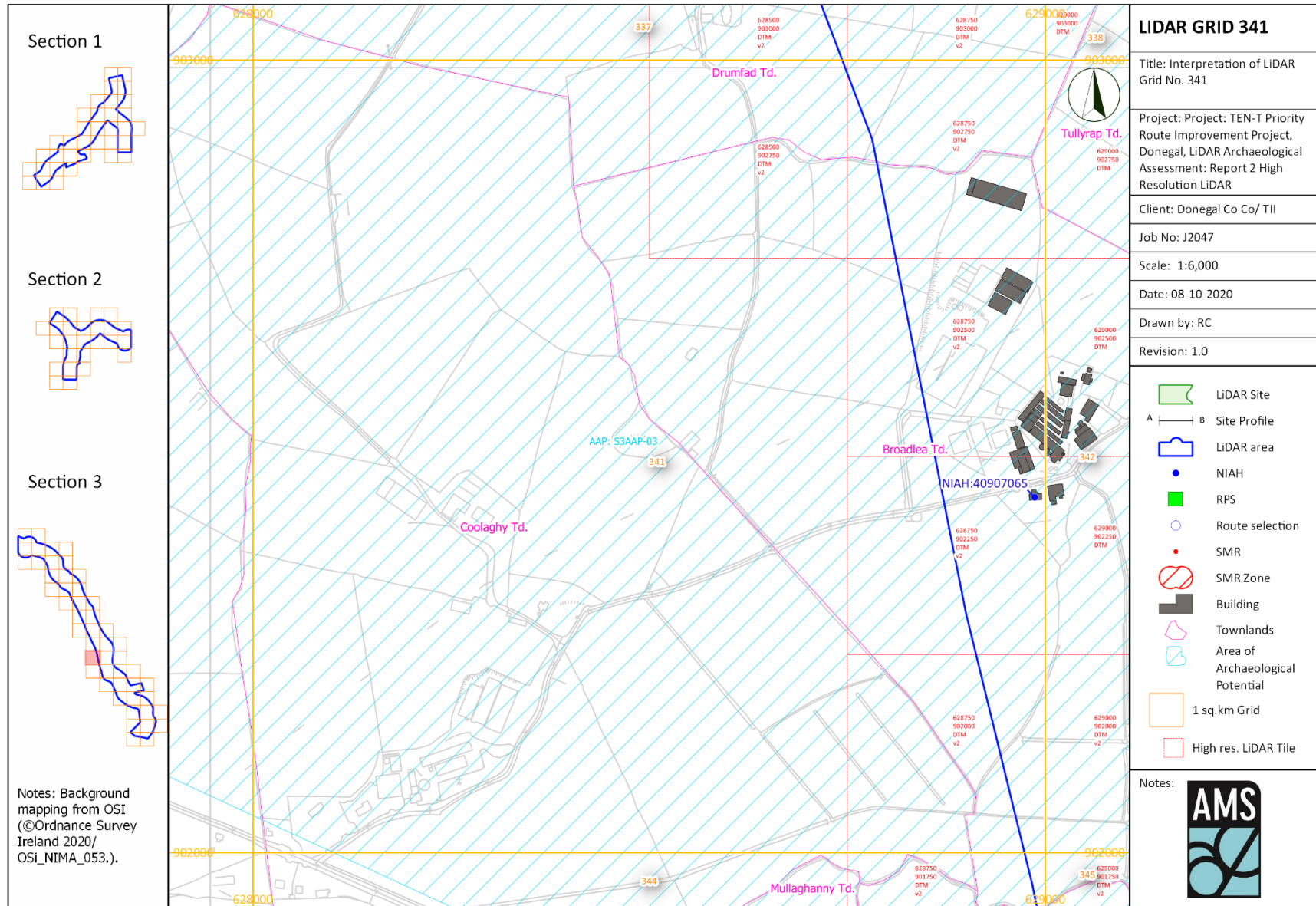
Revision: 1.0

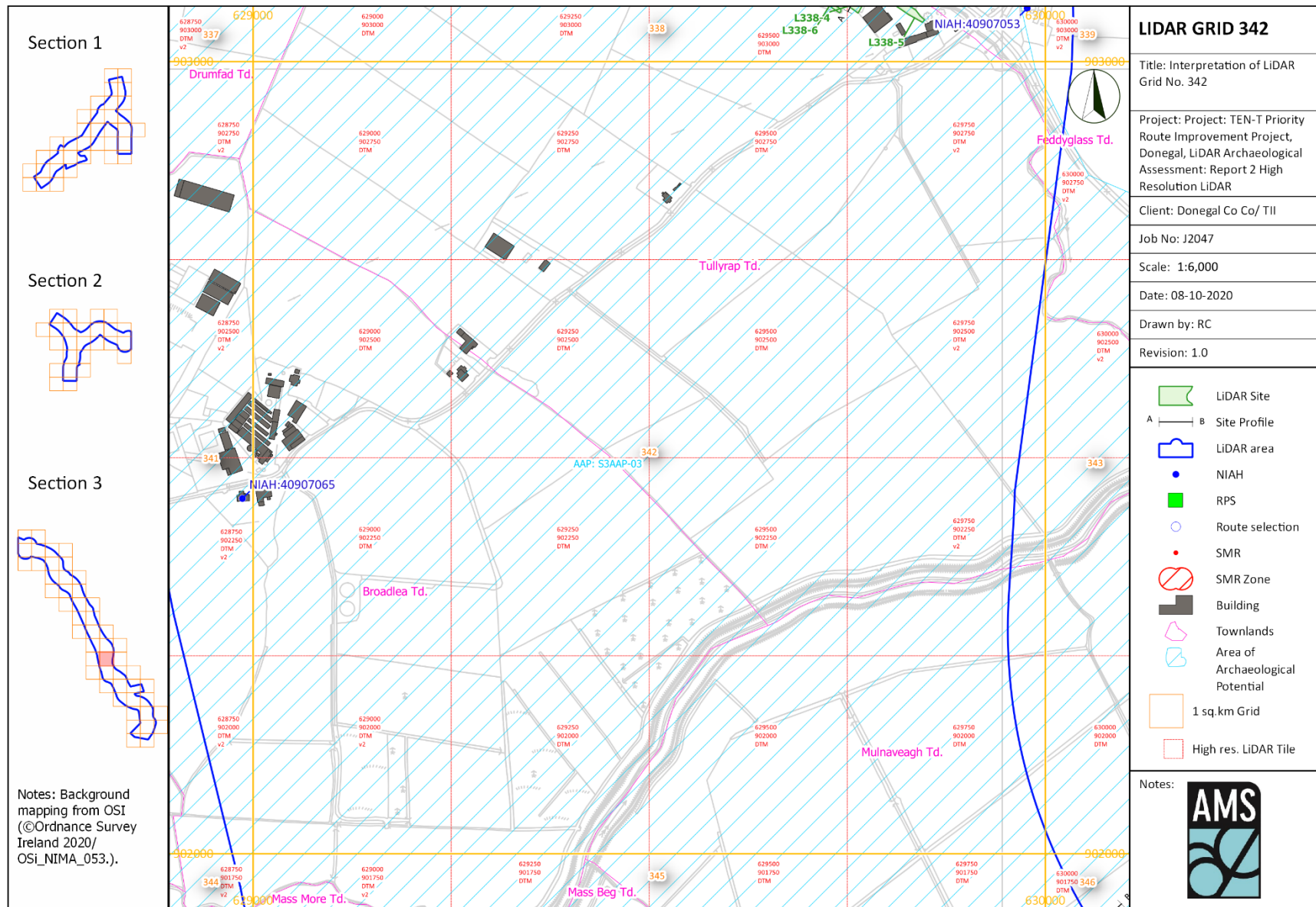
- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

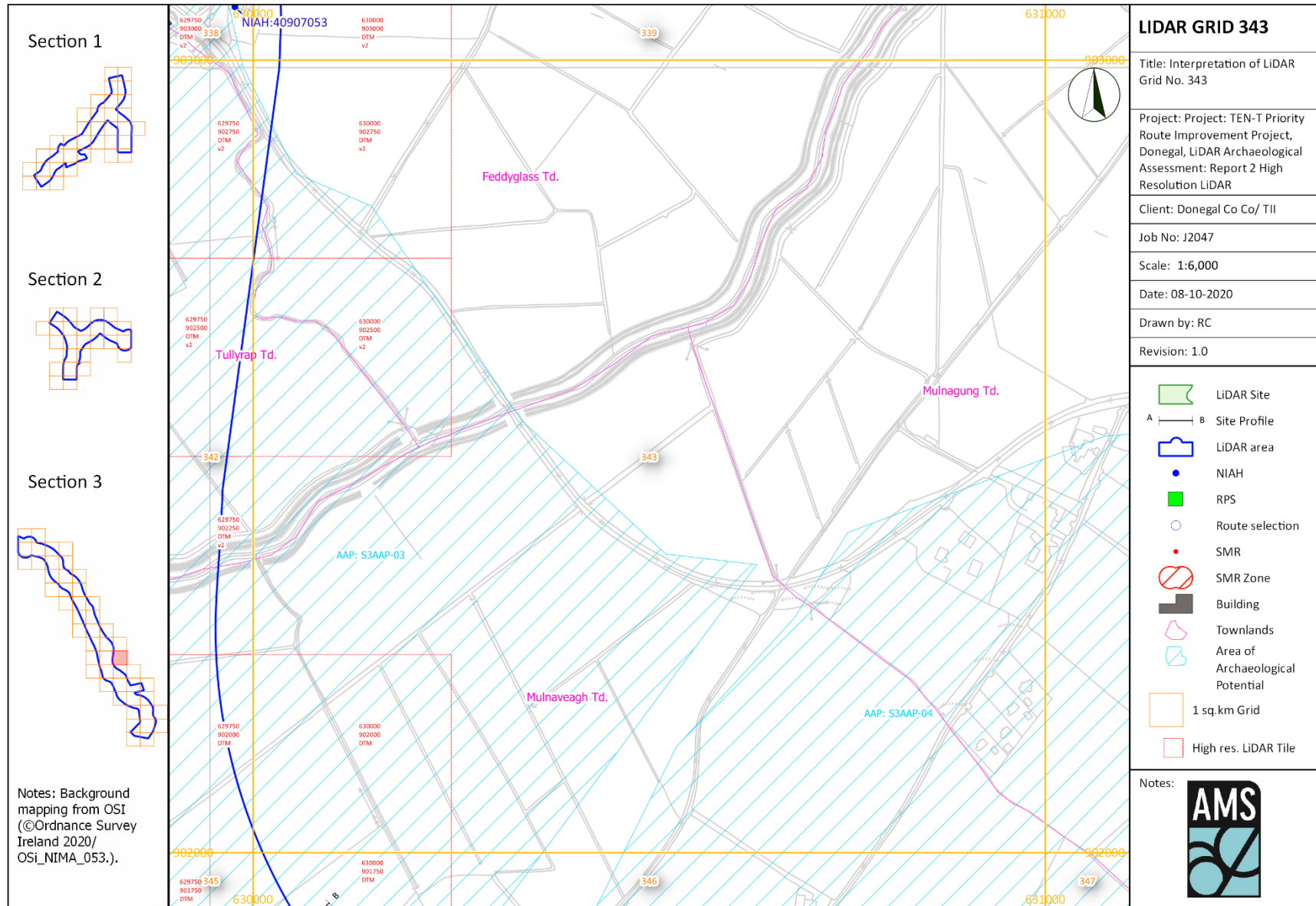


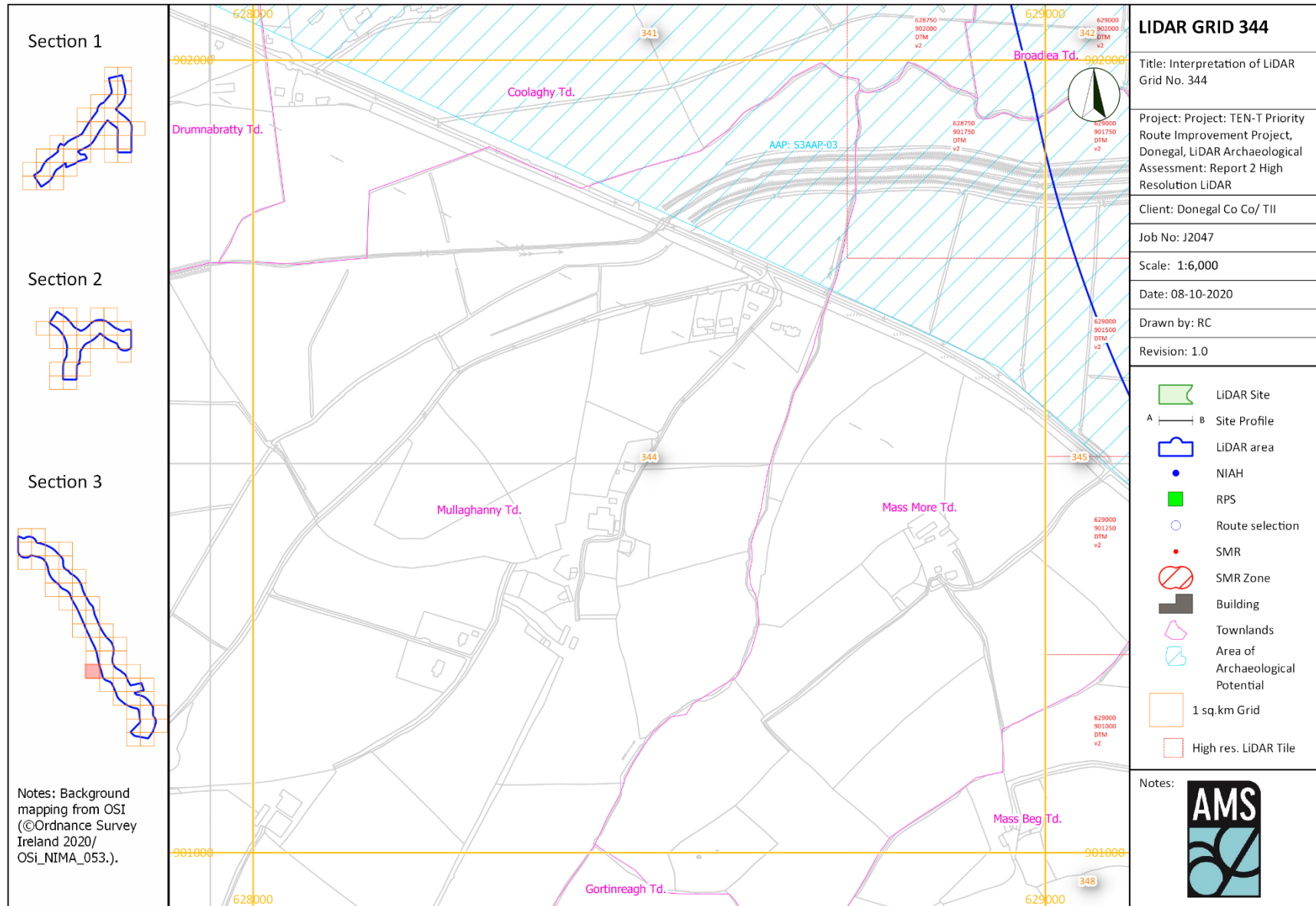


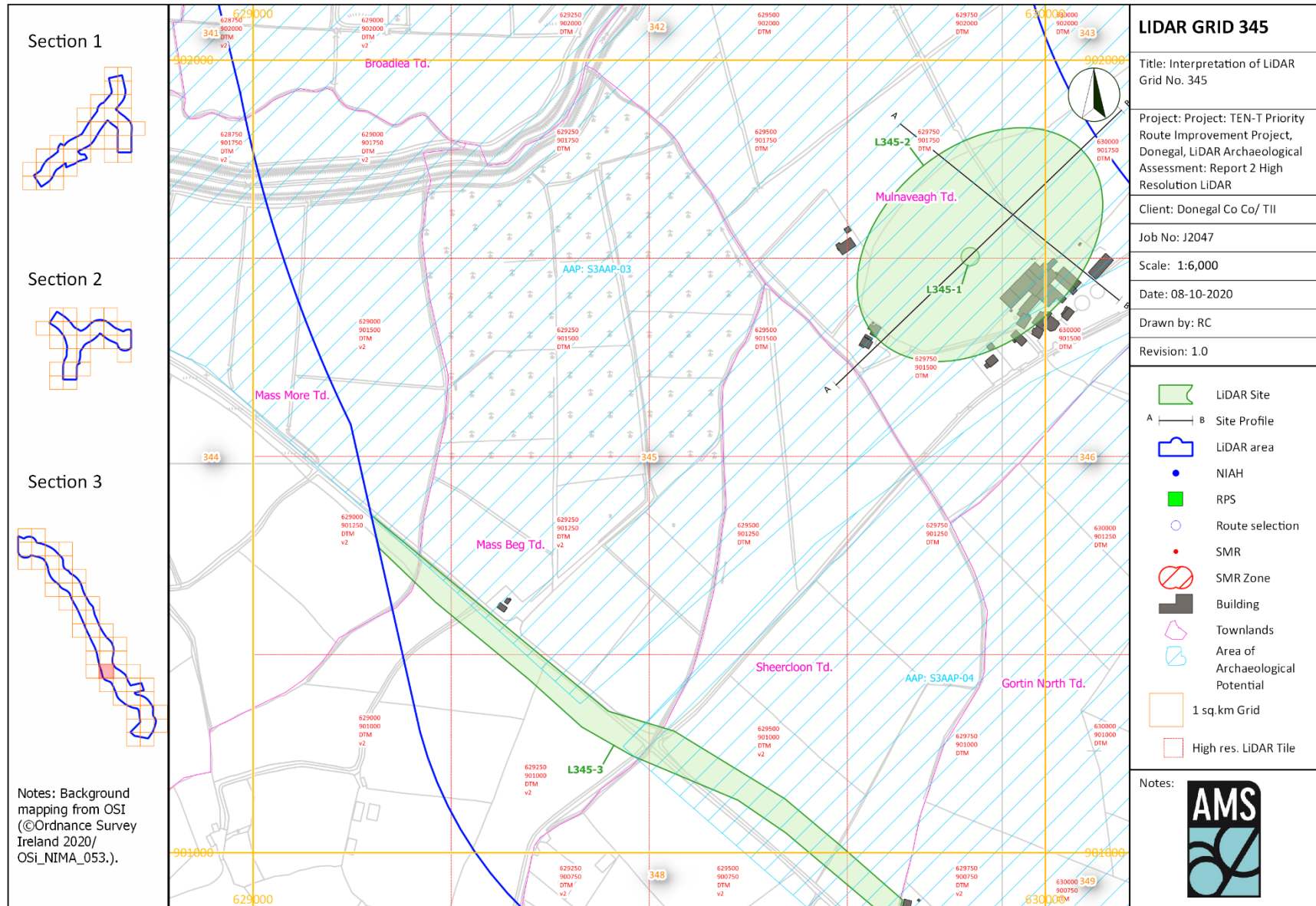












LiDAR GRID 345

Title: Interpretation of LiDAR Grid No. 345

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

Date: 08-10-2020

Drawn by: RC

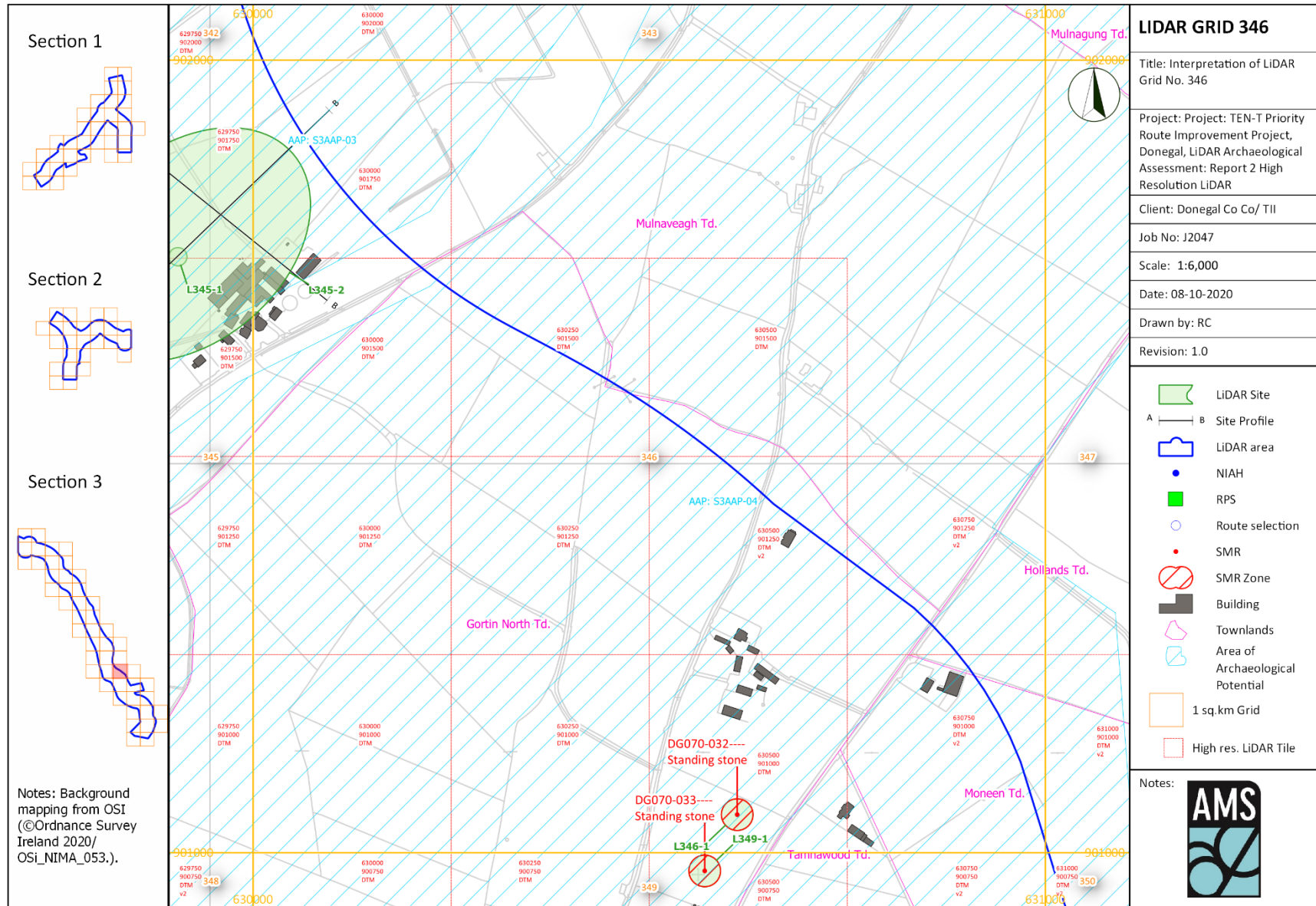
Revision: 1.0

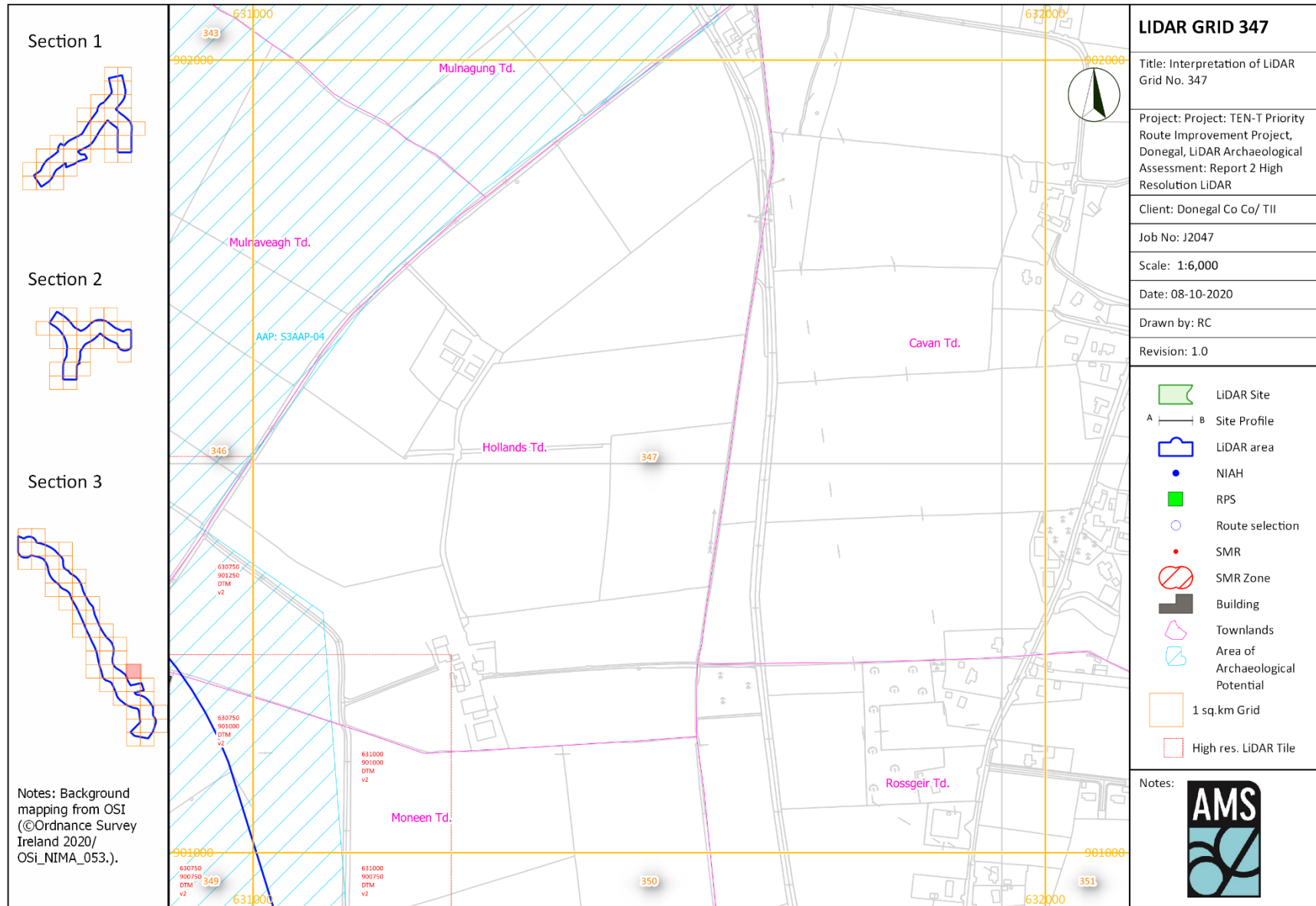
- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes:



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).





LiDAR GRID 347

Title: Interpretation of LiDAR Grid No. 347

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

Date: 08-10-2020

Drawn by: RC

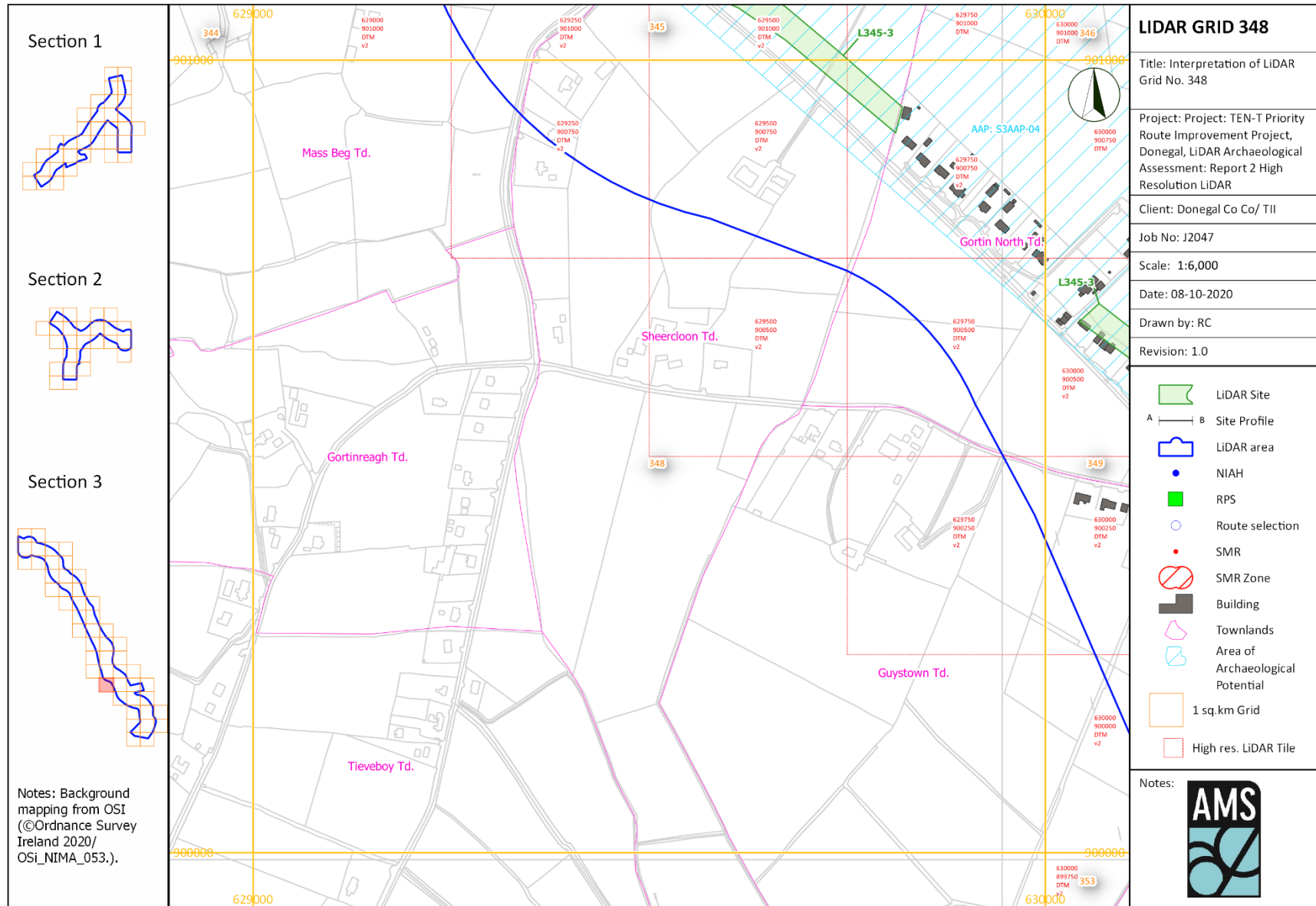
Revision: 1.0

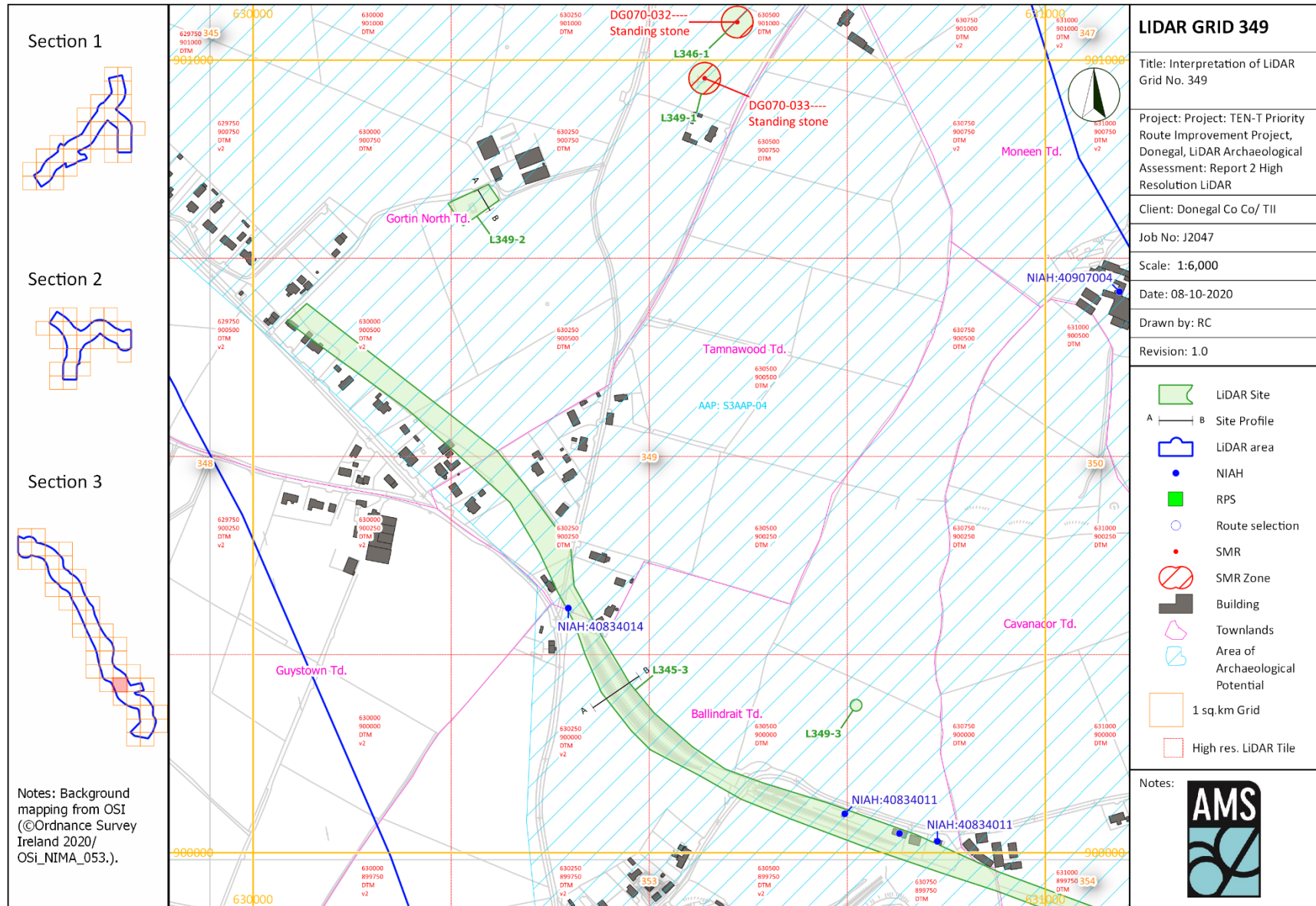
- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

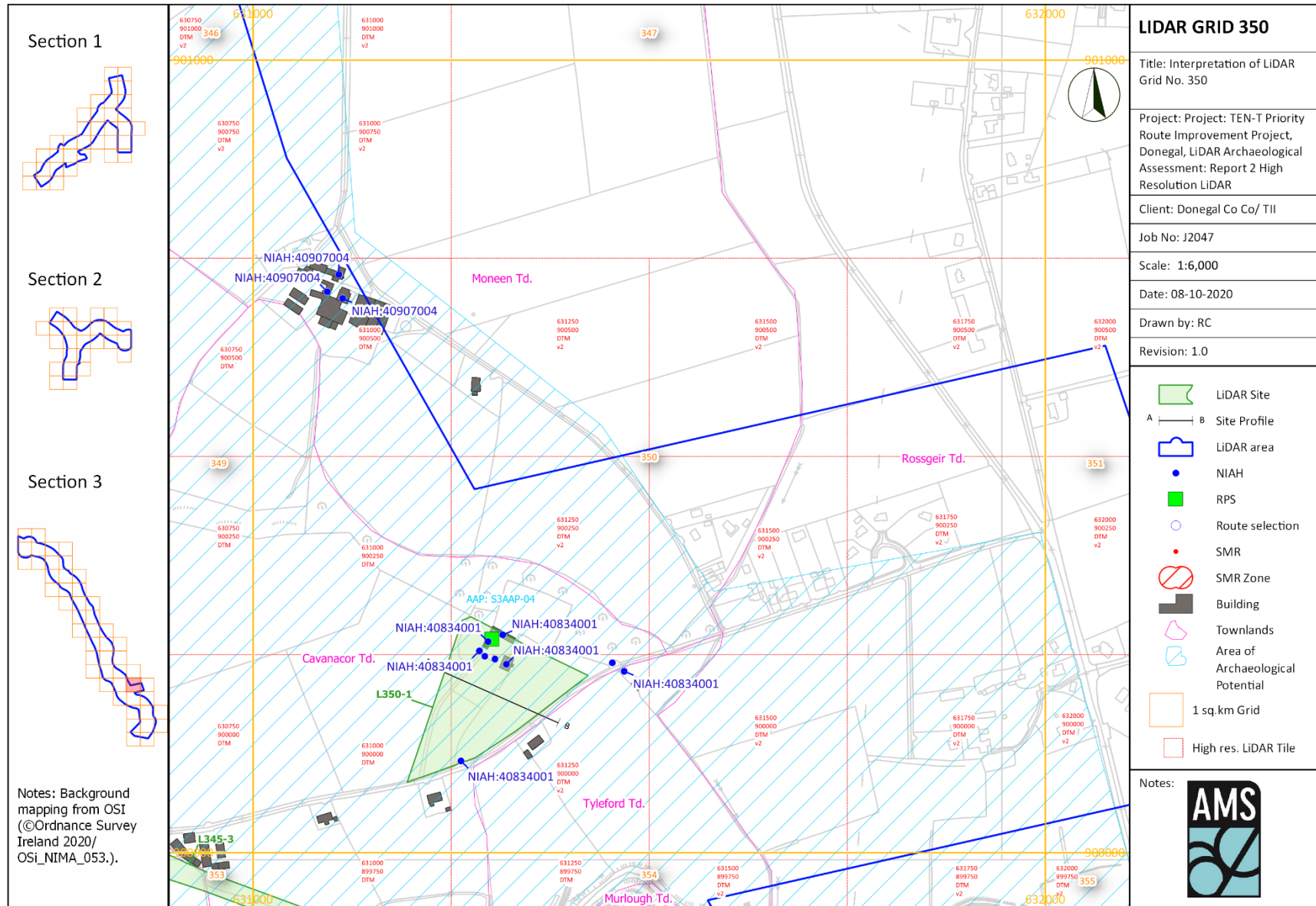
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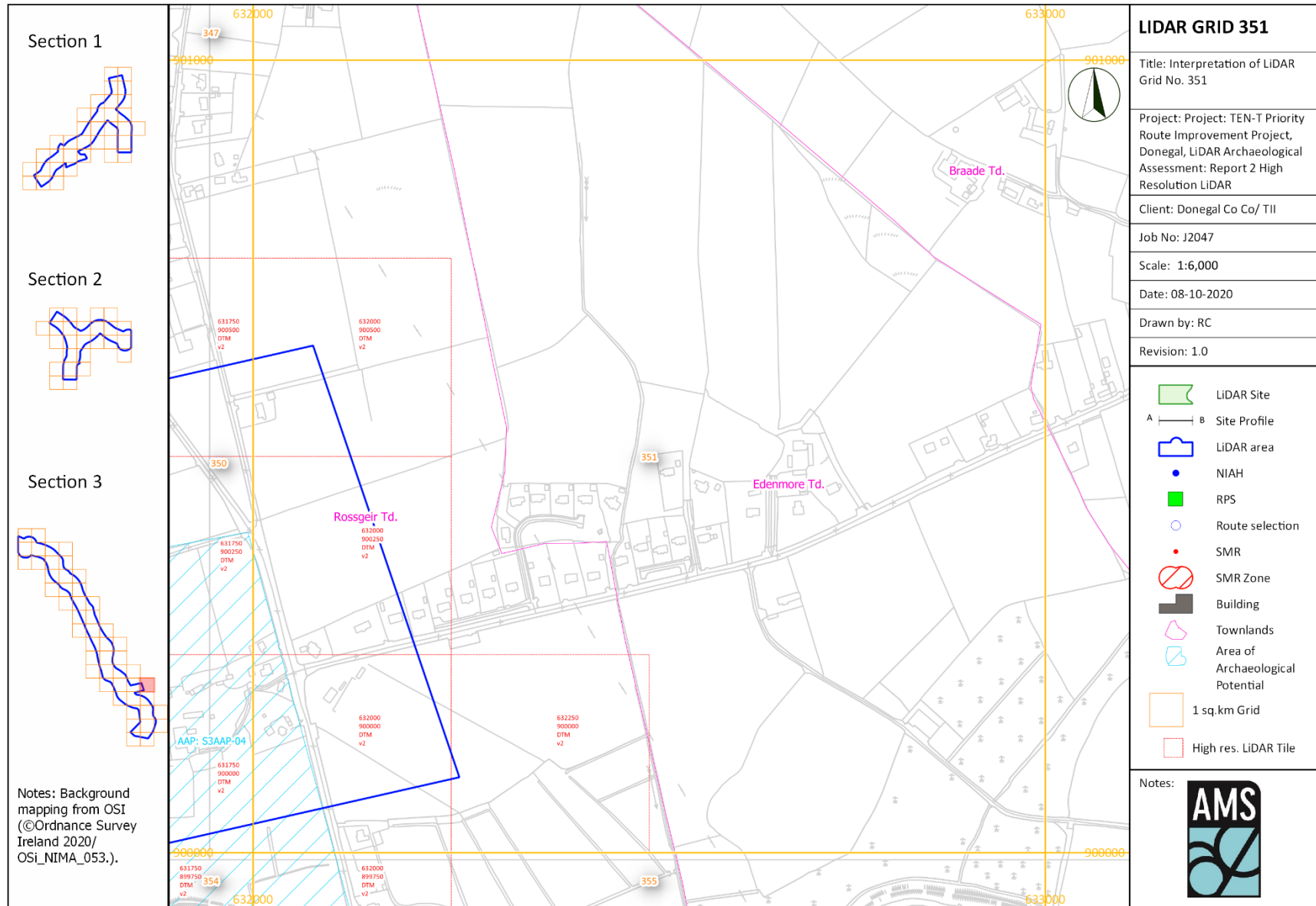


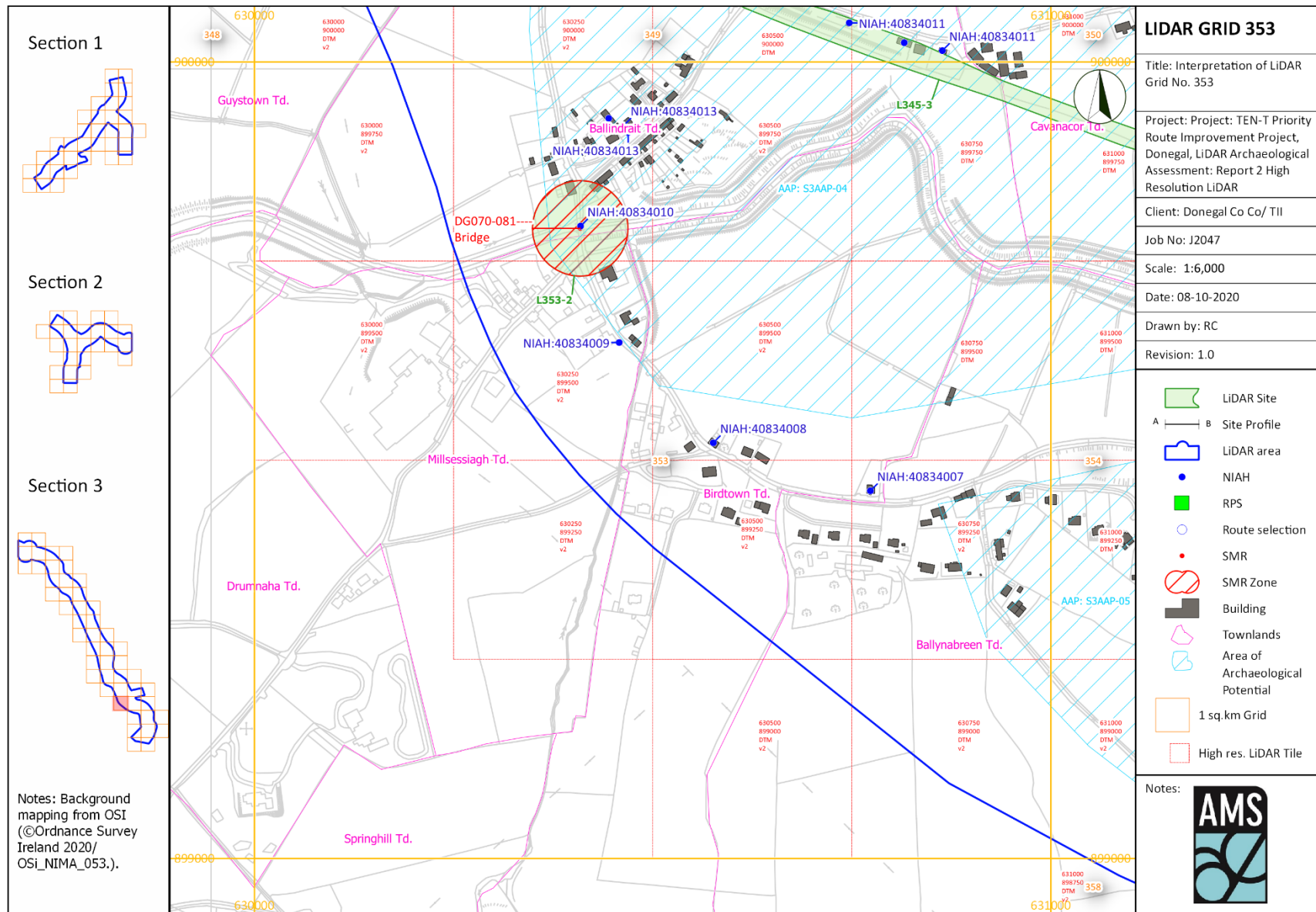
Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).











Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 353

Title: Interpretation of LiDAR Grid No. 353

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

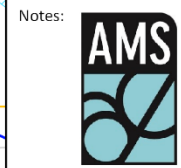
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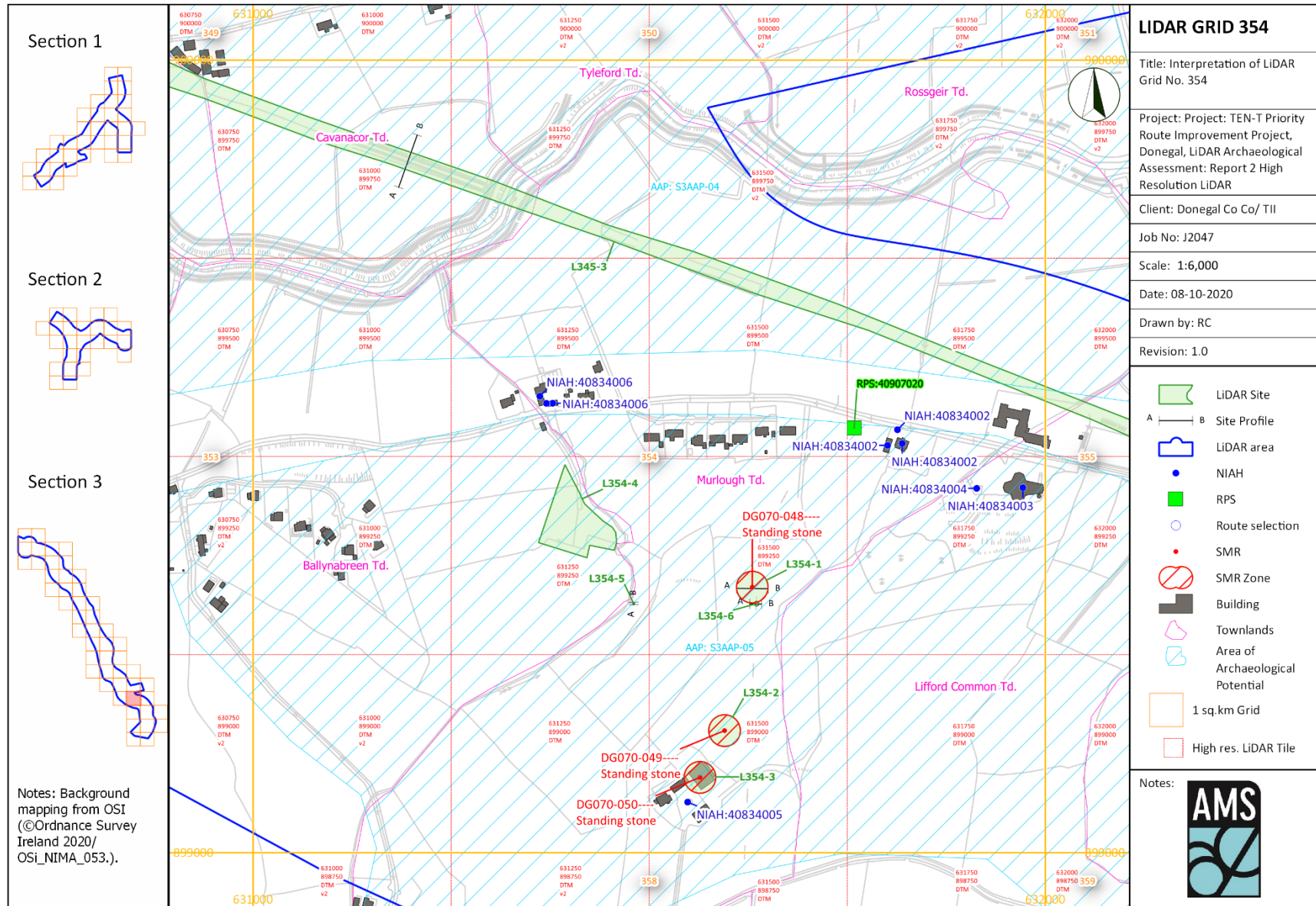
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq.km Grid
- High res. LiDAR Tile

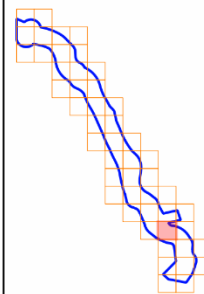
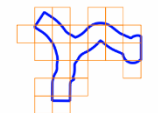
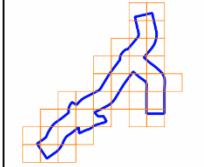




Section 1

Section 2

Section 3



Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 354

Title: Interpretation of LiDAR Grid No. 354

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

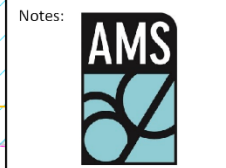
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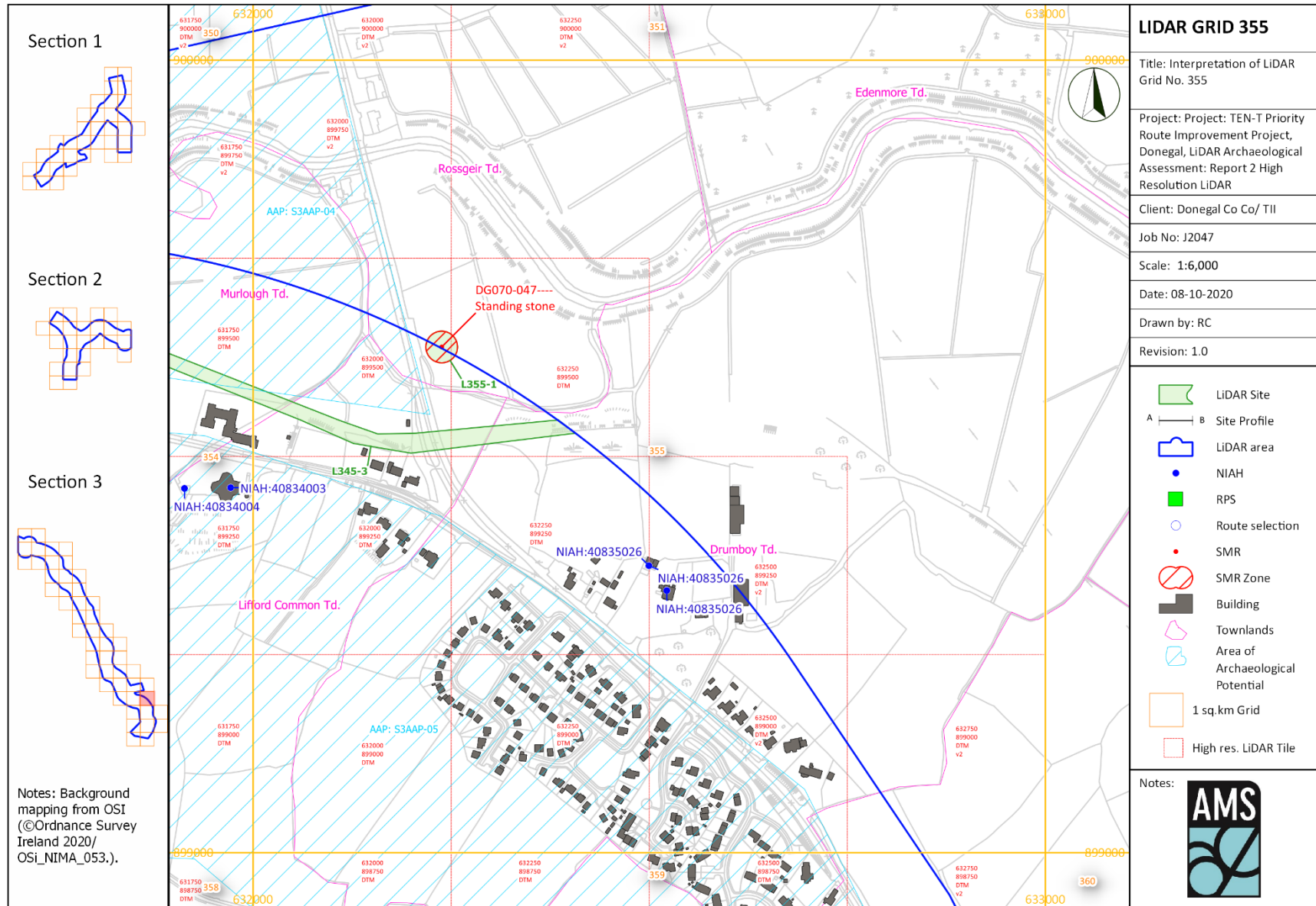
Date: 08-10-2020

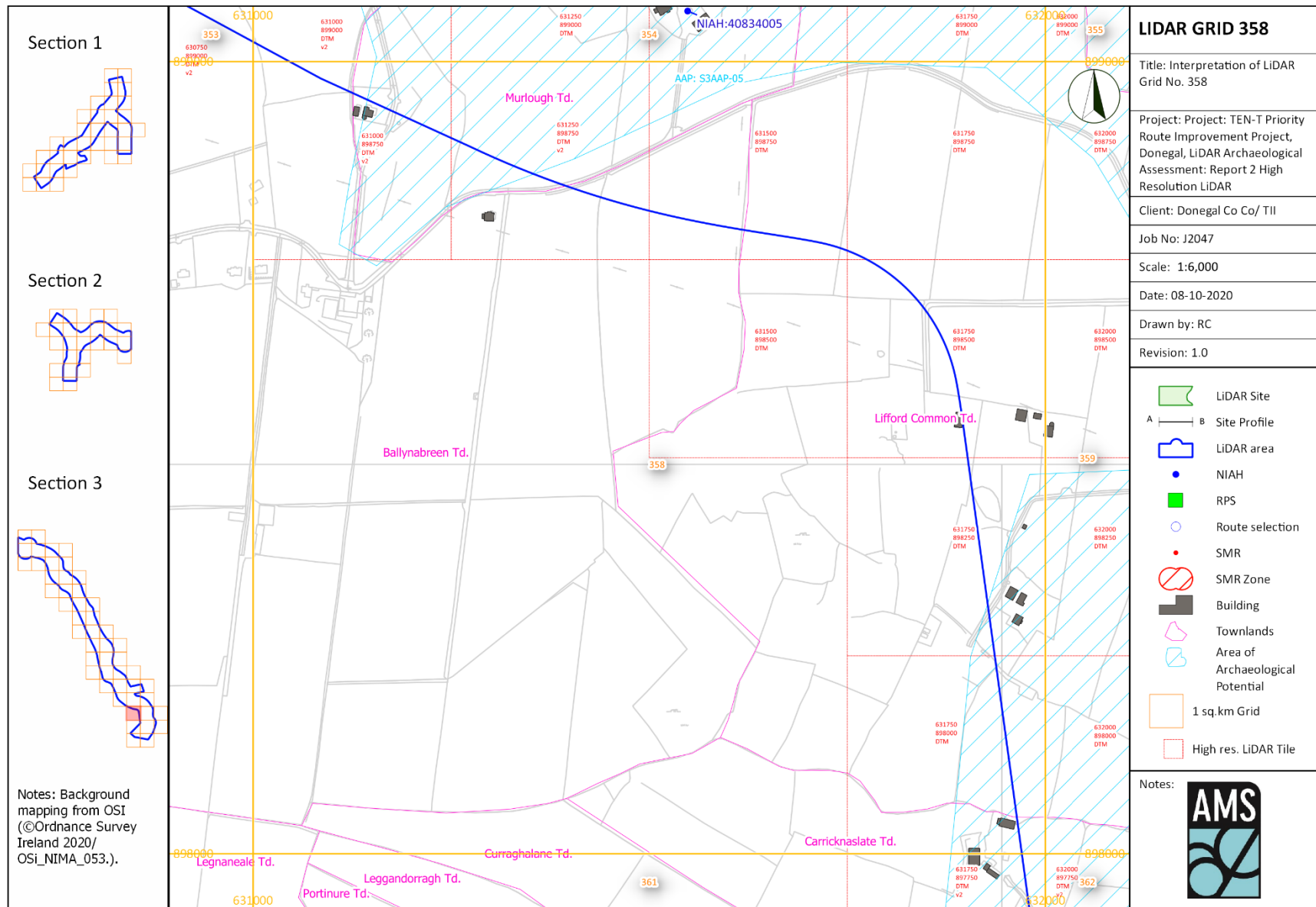
Drawn by: RC

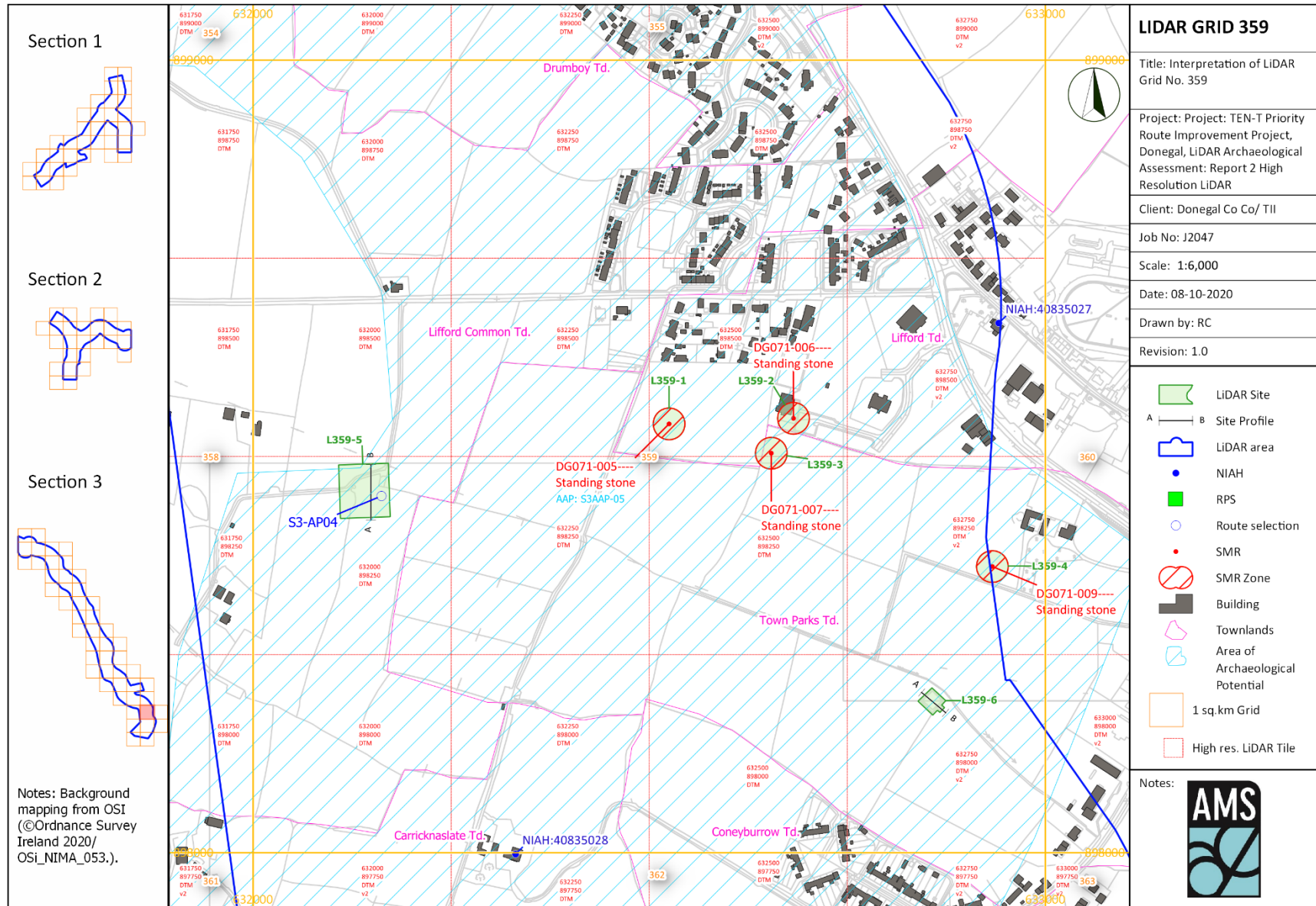
Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile









Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 359

Title: Interpretation of LiDAR Grid No. 359

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

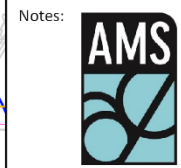
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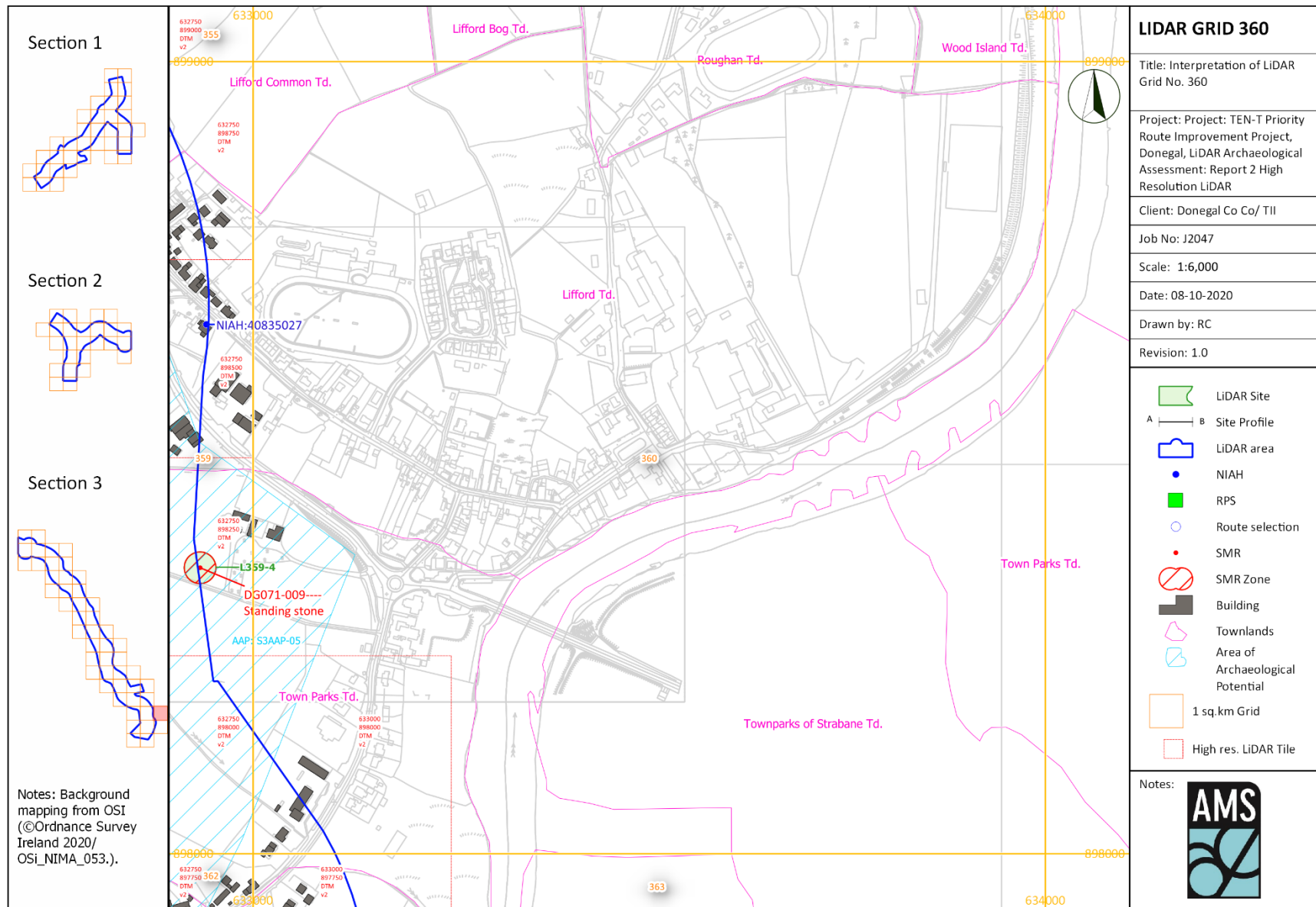
Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile





Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LiDAR GRID 360

Title: Interpretation of LiDAR Grid No. 360

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

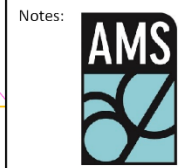
Scale: 1:6,000

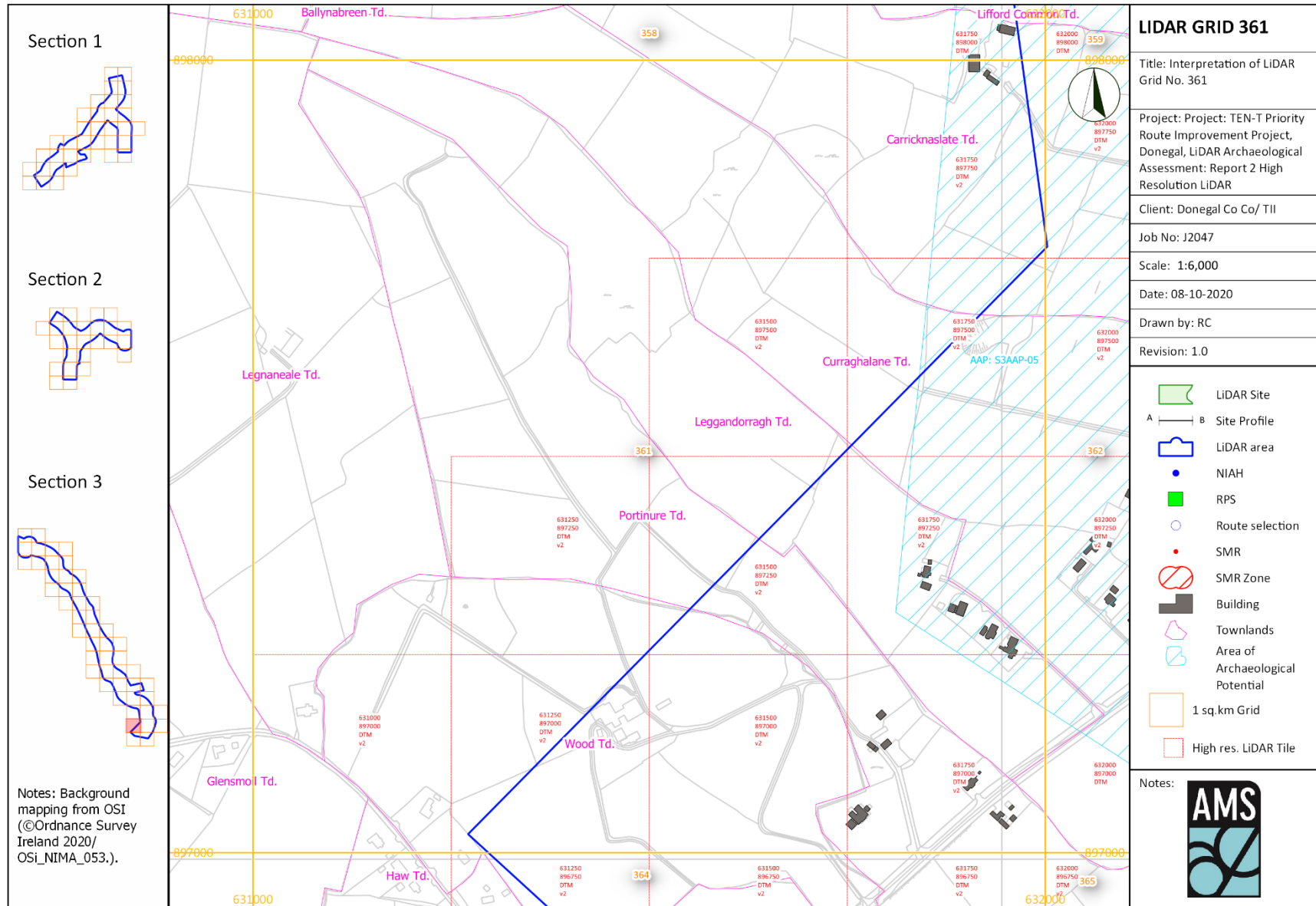
Date: 08-10-2020

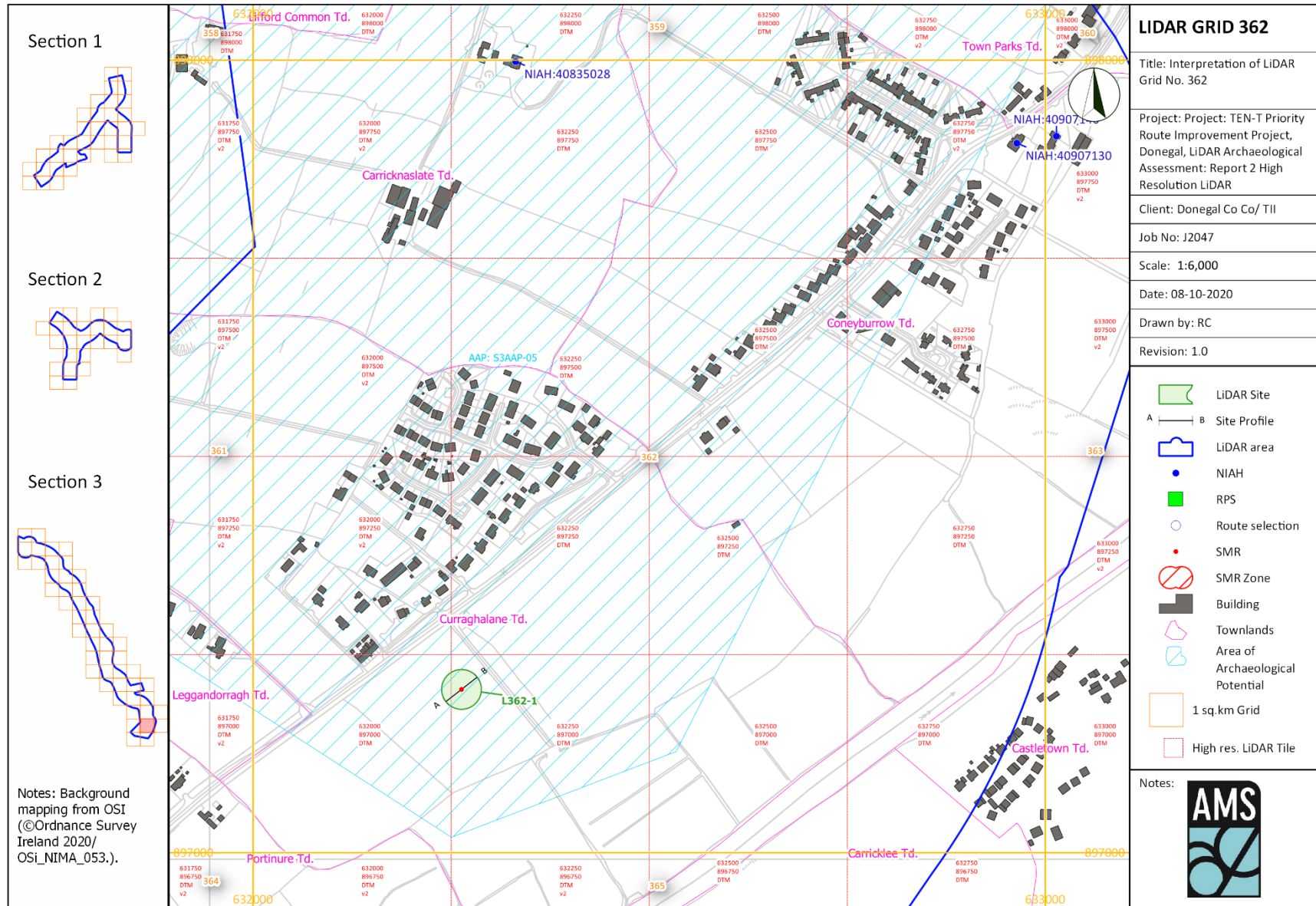
Drawn by: RC

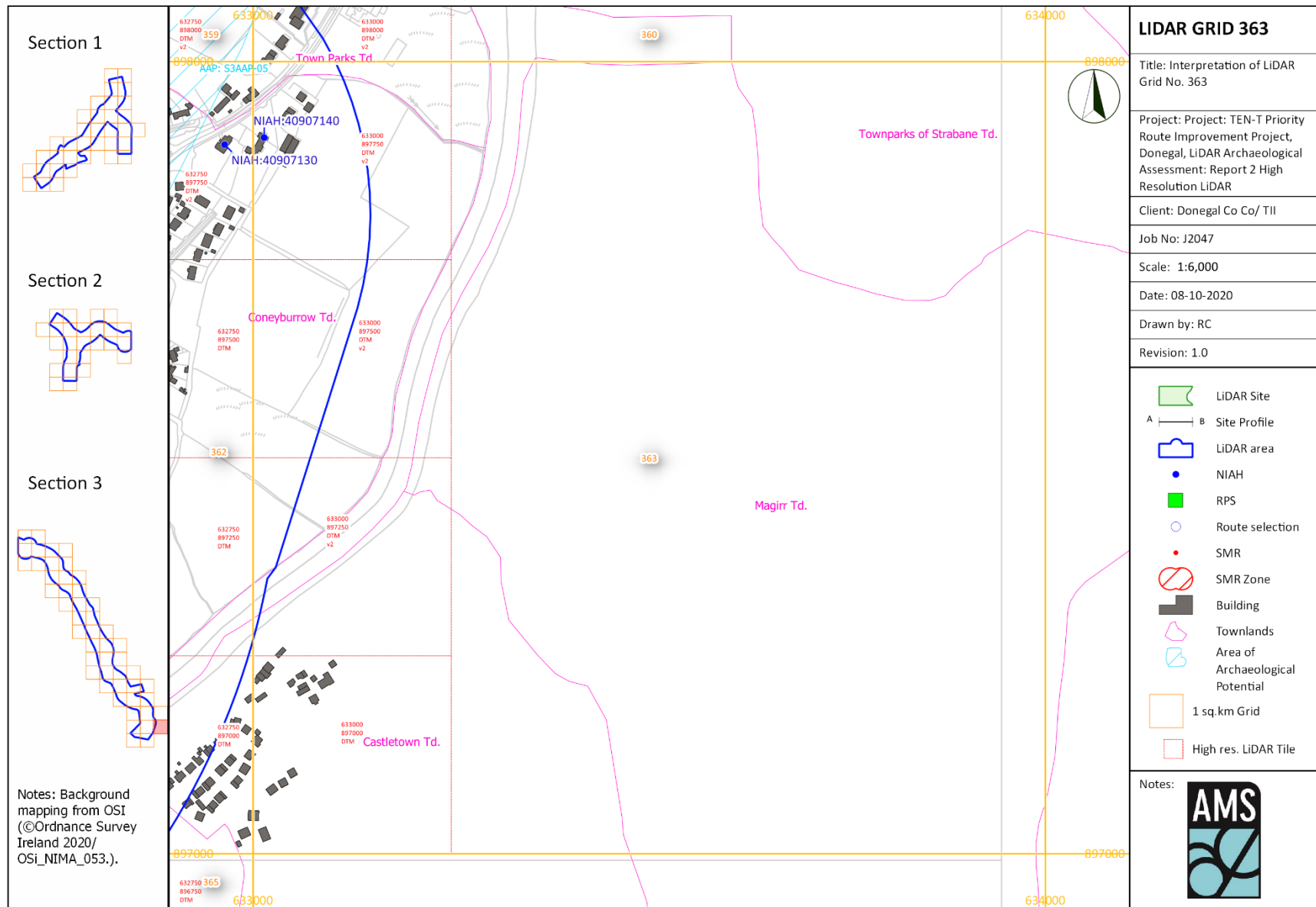
Revision: 1.0

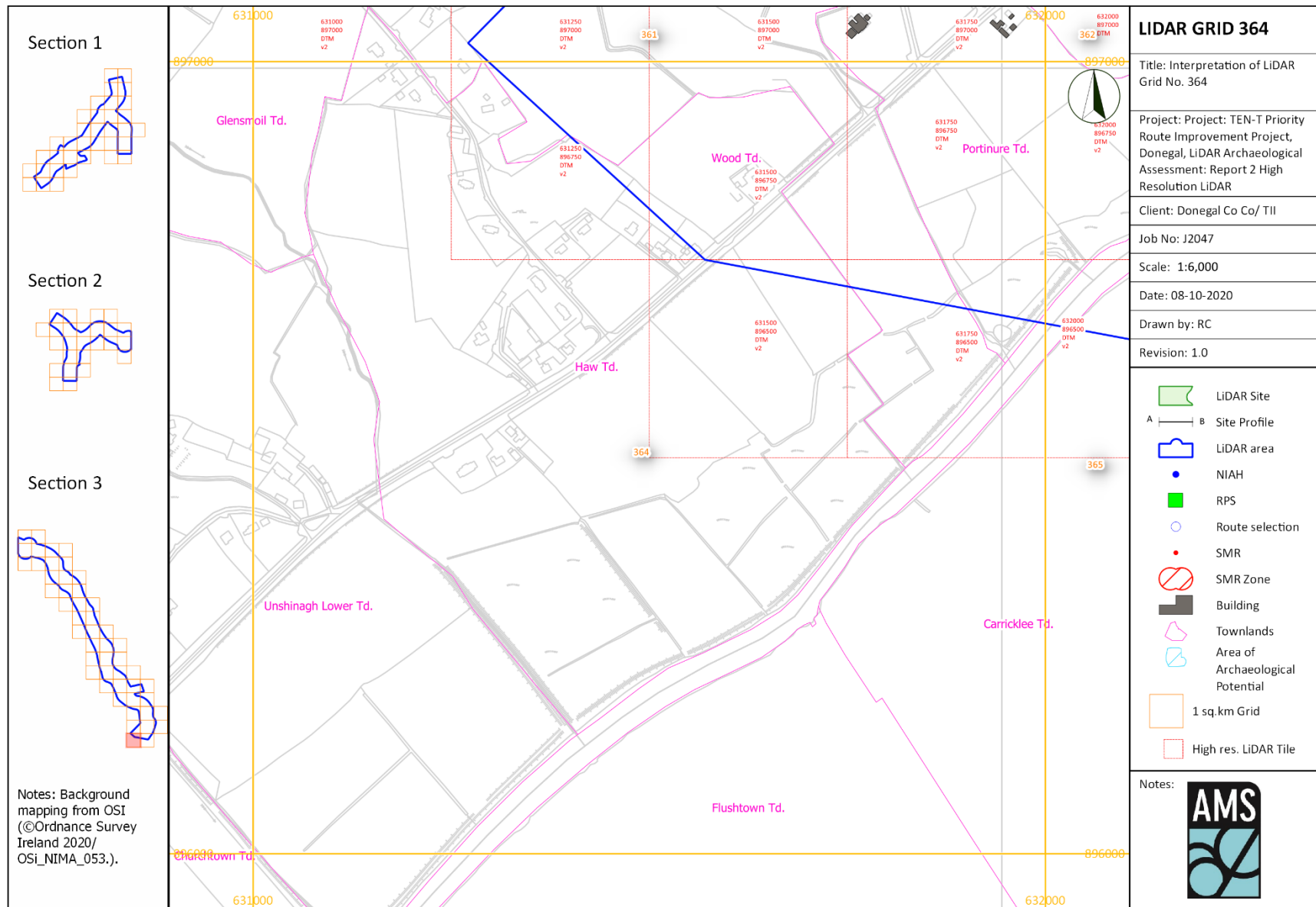
- LiDAR Site
- A — B Site Profile
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile











Section 1

Section 2

Section 3

Notes: Background mapping from OSI (©Ordnance Survey Ireland 2020/ OSI_NIMA_053.).

LIDAR GRID 364

Title: Interpretation of LiDAR Grid No. 364

Project: Project: TEN-T Priority Route Improvement Project, Donegal, LiDAR Archaeological Assessment: Report 2 High Resolution LiDAR

Client: Donegal Co Co/ TII

Job No: J2047

Scale: 1:6,000

Date: 08-10-2020

Drawn by: RC

Revision: 1.0

- LiDAR Site
- Site Profile A-B
- LiDAR area
- NIAH
- RPS
- Route selection
- SMR
- SMR Zone
- Building
- Townlands
- Area of Archaeological Potential
- 1 sq. km Grid
- High res. LiDAR Tile

Notes:

