## **Geophysical Survey Report**

Metro West Tallaght To Dardistown Archaeological Geophysical Survey MW7120\_10 Co. Dublin

License No. 09R195

TAG Project No. 09033

Client: Irish Archaeological Consultancy

On Behalf Of:



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#### **NON-TECHNICAL SUMMARY**

#### **Baseline environment**

Archaeological geophysical investigation was undertaken for the preferred Metro West route corridor between Tallaght and Dardistown, in Fingal and South County Dublin. A total of 54.33 hectares (ha) of Greenfield and agricultural lands were examined within an investigation corridor approximately 26 kilometres in length. A total of 64 survey areas (SA) within Area MW201, Area MW202, and Area MW203 of the proposed scheme were investigated by gradiometer scanning and detailed survey, with further resistance survey conducted at one location.

## **Impacts & mitigations**

Four areas of archaeological settlement were recorded during this investigation. These include enclosure and structural features associated with National Monuments Church and Graveyard sites DU013-019001 and DU013-019002 in Coolmine townland (Area MW202 SA28, GA62E); one possible prehistoric enclosure in Kildonan townland (Area MW203 SA48, GA's 48A and 48B); a possible ringfort in Merryfalls townland (Area MW203 SA62, GA62E); and a potential prehistoric settlement in Silloge townland (Area MW203 SA66, GA66). These remains should be targeted for further archaeological assessment.

A significant number of anomalies identified in Area MW201 SA6, and Area MW203 SA33, SA77, SA62, SA64, SA65, SA67, and SA72 should also undergo further archaeological assessment. This would confirm as to whether the anomalies represent features of archaeological interest, or are the result of non-archaeological interference to instrumentation.

The numerous further anomalies recorded from this survey are detailed as being of limited archaeological interest as they demonstrate no specific archaeological characteristics or arrangement. An archaeological interpretation for these anomalies should however, not be entirely discounted.

No archaeological features been recorded within the broad sections of ferrous disturbance noted from survey though Area MW201 SA1 – Area MW203 SA53. This is due to the extensive modern ferrous interference encountered in these locations.

## 1.0 INTRODUCTION

Geophysical survey was conducted along the Metro West preferred route corridor, between Tallaght and Dardistown, in Fingal and South County Dublin. The scheme represents an orbital route, of approximately 26km in length, and extends through three main geographical zones: Tallaght to Liffey Valley (Area MW201); Liffey Valley to the Sports Campus (Area MW202) and from the Sports Campus to Dardistown (Area MW203).

This work was commissioned by Irish Archaeological Consultancy Ltd. on behalf of the Railway Procurement Agency. The aim of this survey was to identify potential sub-surface archaeological remains that may be contained within the route of the proposed scheme, and its results will inform the archaeological strategy for Metro West.

#### 2.0 PROJECT AREA

The route of the proposed scheme has been divided into three main geographical zones or areas (Area MW201, Area MW202 and Area MW203), The geophysical investigation for the proposed scheme was similarly sub-divided.

**Area MW201** Extends from Tallaght along Belgard Road, through Clondalkin, along Fonthill Road to Liffey Valley.

Area MW202 Extends from Liffey Valley, across the River Liffey and west of Carpenterstown, across the Royal Canal, along Blanchardstown Road South, through Millennium Park and Blanchardstown Town Centre, across the N3 and Tolka River and along Snugborough Road to a point east of the Sports Campus.

Area MW203 Extends from east of the Sports Campus, across largely agricultural ground in Abbotstown and Cappoge, across Cappagh Road, south of Huntstown Quarry and across the N2. The corridor then runs across agricultural lands and Greenfields in Meakstown, Silloge and Harristown, before connecting to the proposed interchange with Metro North at Dardistown.

## 2.1 Survey Locations

The geophysical survey of the proposed scheme, through Area MW201, Area MW202 and Area MW203, extended over a total 54.33ha of Greenfield and agricultural land, examining a total of 64 available Survey Areas ("SA"), including Area MW201, SA1–SA20; Area MW202, SA21–SA31; & Area MW203, SA32–SA79. Details of these survey locations are provided below in Table 2.1.1, with the relevant drawing numbers for each area and their respective townlands indicated. Note that SA5, SA7 and SA55, which were originally included in the license application for this project were later excluded from survey due to land access issues:

**Table 2.1.1 Survey locations** 

Area MW	SA	Townland	Drawing No.
MW201	Cover Sheet SA1 – SA20	Tallaght To Clonburris Great	QMW71201300ENQ01
MW201	SA1	Tallaght	QMW7120EN1301Q01
MW201	SA2	Tallaght	QMW7120EN1301Q01
MW201	SA3	Tallaght	QMW7120EN1301Q01
MW201	SA6	Garranstown or Kingswood	QMW7120EN1302Q01
MW201	SA9	Commons	QMW7120EN1303Q01
MW201	SA10	Clondalkin	QMW7120EN1303Q01
MW201	SA11	Clonburris Great	QMW7120EN1304Q01
MW201	SA12	Clonburris Great	QMW7120EN1304Q01
MW201	SA13	Clonburris Great	QMW7120EN1304Q01
MW201	SA14	Clonburris Great	QMW7120EN1304Q01
MW201	SA16	Belgaddy	QMW7120EN1305Q01
MW201	SA17	Ronanstown	QMW7120EN1305Q01
MW201	SA18	Irishtown	QMW7120EN1306Q01
MW201	SA19	Irishtown	QMW7120EN1306Q01
MW201	SA20	Irishtown	QMW7120EN1306Q01
MW202	Cover Sheet SA 21 – SA31	Fonthill To Kildonan	QMW7120EN2300Q01
MW202	SA21	Fonthill	QMW7120EN2301Q01
MW202	SA22	Astagob	QMW7120EN2302Q01
MW202	SA23	Astagob	QMW7120EN2302Q01
MW202	SA24	Annfield	QMW7120EN2302Q01
MW202	SA25	Porterstown	QMW7120EN2303Q01

Area MW	SA	Townland	Drawing No.
MW202	SA27	Coolmine	QMW7120EN2304Q01
MW202	SA28	Coolmine	QMW7120EN2304Q01
MW202	SA29	Coolmine	QMW7120EN2304Q01
MW202	SA30	Coolmine	QMW7120EN2304Q01
MW202/MW203	SA31	Deanestown	QMW7120EN2305Q01
MW203	Cover Sheet SA32– SA79	Snugborough / Ballycoolen To Ballymun	QMW7120EN3300Q01
MW203	SA32	Snugborough / Ballycoolen	QMW7120EN3301Q01 QMW7120EN2305Q01
MW203	SA33	Ballycoolen & Sheephill	QMW7120EN2305Q01 QMW7120EN3301Q01 QMW7120EN3302Q01
MW203	SA34	Sheephill	QMW7120EN3301Q01 QMW7120EN3302Q01
MW203	SA35	Sheephill	QMW7120EN3302Q01
MW203	SA36	Sheephill	QMW7120EN3302Q01
MW203	SA38	Cappoge	QMW7120EN3302Q01
MW203	SA42	Cappoge	QMW7120EN3303Q01
MW203	SA43	Cappoge	QMW7120EN3303Q01
MW203	SA44	Cappoge	QMW7120EN3303Q01
MW203	SA45	Cappoge	QMW7120EN3303Q01
MW203	SA46	Cappoge	QMW7120EN3303Q01 QMW7120EN3304Q01
MW203	SA47	Cappoge	QMW7120EN3303Q01 QMW7120EN3304Q01
MW203	SA48	Kildonan	QMW7120EN3304Q01
MW203	SA49	Kildonan	QMW7120EN3304Q01
MW203	SA50	Kildonan	QMW7120EN3304Q01
MW203	SA51	Kildonan	QMW7120EN3304Q01
MW203	SA52	Kildonan	QMW7120EN3304Q01
MW203	SA53	Kildonan	QMW7120EN3304Q01 QMW7120EN3305Q01
MW203	SA54	Dubber	QMW7120EN3304Q01 QMW7120EN3305Q01
MW203	SA61	Merryfalls	QMW7120EN3306Q01 QMW7120EN3307Q01
MW203	SA62	Merryfalls	QMW7120EN3307Q01
MW203	SA63	Silloge	QMW7120EN3307Q01
MW203	SA64	Silloge	QMW7120EN3307Q01
MW203	SA65	Silloge	QMW7120EN3307Q01
MW203	SA66	Silloge	QMW7120EN3307Q01
MW203	SA67	Silloge	QMW7120EN3307Q01

Area MW	SA	Townland	Drawing No.
MW203	SA68	Silloge	QMW7120EN3307Q01
MW203	SA69	Silloge	QMW7120EN3307Q01 QMW7120EN3308Q01
MW203	SA70	Silloge	QMW7120EN3308Q01
MW203	SA71	Silloge / Ballymun	QMW7120EN3308Q01
MW203	SA72	Ballymun	QMW7120EN3308Q01
MW203	SA74	Meakstown	QMW7120EN3305Q01 QMW7120EN3306Q01
MW203	SA75	Meakstown	QMW7120EN3306Q01
MW203	SA76	Meakstown	QMW7120EN3306Q01
MW203	SA77	Meakstown	QMW7120EN3306Q01
MW203	SA78	Meakstown	QMW7120EN3306Q01
MW203	SA79	Merryfalls	QMW7120EN3306Q01

## 2.2 Landscape, Soils & Geology

Area MW201 and Area MW202 form the southern and middle sections of the proposed scheme. The geophysical survey through these areas extended mainly across narrow margins of land adjacent to existing roads, residential areas, and parkland. These areas were interspersed with agricultural land, and situated within mostly low-lying accessible level ground. The soil morphology for most SA's within Area MW201 and Area MW202 can be estimated as being of mixed urban character, overlying a bedrock comprising till of Irish Sea origin with limestone and shale.

The majority of lands contained within Area MW203 extend through mainly low-lying arable and pasture fields. Soils typical of this region are dry and mineral in form, predominantly grey brown podzolics, with gley soils occurring locally. Bedrock comprising till of Irish Sea origin continues throughout Area MW203.

## 2.3 Archaeological Background

An EIS, which will form a component of the Railway Order Application for Metro West is currently being prepared. Railway Procurement Agency ("RPA") is undertaking the assessment of archaeological, architectural and cultural heritage. The assessment comprises a review of the published and unpublished documentary, aerial and cartographic sources, supported by a field inspection of the proposed scheme.

## 2.3.1 Previous archaeological investigations

Previous archaeological works in connection with the scheme include geophysical survey at the ecclesiastical site of St. Brigid's Well (DU021:010; Area MW201), in Brideswell Commons townland, Clondalkin (Nicholls 2008; Detection License. 08R144). The site of a probable rectangular building, (marked on the 1<sup>st</sup> Edition OS map of 1837) was detected from this survey shortly to the south of the Fonthill Road South and Boot Road crossroads.

Archaeological investigations in the vicinity of the scheme, namely in the vicinity of the proposed depot, were undertaken by the Archaeology Company Ltd in 2007. The investigations comprised an archaeological assessment of lands in the townlands of Silloge, Merryfalls and Dubber, and included a geophysical survey (Detection License 07R156) of a possible field system RMP DU014-021 (Turgel 2007).

Targeted archaeological testing was undertaken on behalf of the RPA by Headland Archaeology Ltd at the site of the proposed depot in Merryfalls townland (Hackett 2009; 09E0274; Area MW203). Investigations identified the nature and extent of the demolished remains of a small structure towards the north boundary of the proposed depot site. This structure is depicted on various 19<sup>th</sup> and 20<sup>th</sup> century cartographic sources including Taylors Map of 1816, on which it is annotated as "the Mad House".

# 2.3.2 Recorded Monuments (RMP's) Drawings QMW7120EN1300Q01, QMW7120EN2300Q01 and QMW7120EN3300Q01

A national monument comprising a Church (DU013-019001) and Graveyard (DU013-019002) is situated within SA28, in the townland of Coolmine (Castleknock). One further recorded monument, possible field system DU014-021, is also traversed by SA's 63 – 65, in Silloge townland. No further RMP sites are located within the areas selected for geophysical survey by the client. A large number of RMP's are located within a 1km radius of the proposed scheme. Details of these monuments are provided in Table 2.3.2.1 below.

**Table 2.3.2.1 Recorded monuments** 

RMP	NGR	Townland	Class	Distance
DU013-014	308540	Corduff	Barrow -	0.37km North-West Of
D0013-014	240437	(Castleknock)	Mound	Area 31
DU013-015	307764 239831	Corduff (Castleknock)	Ringfort - Unclassified	0.72km West Of Area 31
DU013-019001 National Monument	306947 238891	Coolmine (Castleknock)	Church	Within Survey Area 28

RMP	NGR	Townland	Class	Distance
DU013-019002 National Monument	306497 238880	Coolmine (Castleknock)	Graveyard	Within Survey Area 28
DU013-025	307938 239966	Corduff (Castleknock)	House – 16 <sup>th</sup> /17 <sup>th</sup> Century	0.55km West Of Area 31
DU014-020	313603 240880	Meakstown	Dwelling Site	0.33km South-East Of Area 75
DU014-021	314261 241774	Silloge	Field System (Possible)	Within Survey Areas 63 - 65
DU014-027	310622 239870	Cappoge	Castle – Tower House	0.41km West Of Area 38
DU014-028	310944 239734	Cappoge	Habitation Site	0.16km South-West Of Area 42
DU014-029	311433 239759	Cappoge	Ringfort - Unclassified	0.28km South-East Of Area 43
DU014-047	312671 241368	Dubber	Inn	0.27km North-West Of Area 54
DU017-005	306237 236850	Porterstown	Ringfort - Unclassified	0.72km East Of Area 23
DU017-007	306287 236421	Astagob (Castleknock)	Ringfort - Unclassified	0.5km South-East Of Area 22
DU017-023	306463 234366	Irishtown	Castle – Tower House	0.17km East Of Area 20
DU017-031	305772 233487	Balgaddy	Ritual Site – Holy Well	0.29km West Of Area 17
DU017-032001	306570 232903	Neillstown	Castle - Unclassified	0.6km South-East Of Area 16
DU017-036	305899 232 567	Cappagh	Enclosure	0.83km North-West Of Area 14
DU017-041008	306928 231549	Clondalkin	Watermill - Unclassified	0.37km North-East Of Area 10
DU017-074 National Monument	306372 236497	Astagob (Castleknock)	Burial Ground	0.36km South-East Of Area 22
DU021-01001	306965 230644	Clondalkin	Ritual Site – Holy Well	0.46km South-East Of Area 9
DU021-01002	306961 230642	Clondalkin	Inscribed Stone	0.46km South-East Of Area 9
DU021-01003	306963 230640	Clondalkin	Children's Burial Ground	0.46km South-East Of Area 9
DU021-009	306028 230885	Fairview	Well (Possible)	0.43km West Of Area 9
DU021-014	307332 230367	Newlands Demesne	Gateway	0.52km North-West Of Area 7
DU021-016	307191 230324	Belgard & Brideswell	Road / Trackway	0.58km North-West Of Area 7

#### 3.0 METHODOLOGY

## 3.1 Gradiometer Scanning

Gradiometer scanning totalling 54.33ha was undertaken through all 64 available survey areas along the preferred route corridor of the proposed scheme in Area MW201, SA1–SA20; Area MW202, SA21–SA31; and Area MW203, SA32–79. The scan objective was to identify areas of potential archaeological response where present within each SA, which would subsequently be targeted for further examination by detailed gradiometer survey.

The scan was undertaken employing Bartington Grad601 gradiometers examining each available SA along traverses spaced at 10m intervals, whilst monitoring instrumentation for significant fluctuations in response. Where these occurred the responses were examined in closer detail, and their locations referenced to the national grid using a differential global positioning system (DGPS). Anomalies deemed to be of potential archaeological interest were highlighted further analysis by detailed gradiometer survey.

## 3.2 Detailed Gradiometry

On the basis of the results from scanning a total 22.253ha of detailed gradiometer survey was conducted within Area MW201, SA1–SA20; Area MW202, SA21–SA31; and Area MW203, SA32–79 as outlined in Table 2.1. Detailed survey blocks focused initially on anomalies noted during scanning, with survey grids extended to ensure a 40% coverage of each SA within Area MW201, Area MW202 and Area MW203.

Gradiometer data was recorded at 0.25m intervals along 1m traverses collecting a total 1600 measurements per 20m<sup>2</sup> grid. Instrumentation was set to record data at a 0.1nT resolution, collecting 2 lines of data per traverse using two sensors per instrument.

# 3.3 Electrical Resistivity

Electrical resistivity survey was also undertaken on a targeted basis over 0.24ha at SA28 (Area MW202). This technique employed a Geoscan Research RM15 resistivity meter and single twin probe array, recording data at 0.5m sample intervals along 1m traverses.

## 4.0 GROUND CONDITIONS AND GENERAL CONSIDERATIONS

The majority of lands made available for survey through Area MW201–Area MW203, SA1–SA79, comprised accessible level ground including a mixture of roadside verges, parkland, public spaces, pasture and arable fields. Area MW201, SA1 to Area MW203, SA74 were largely situated adjacent to existing roads bound by perimeter fencing, construction sites and residential areas, all locations within which networks of underground electrical, gas and drainage services are common. Such environs typically produce widespread magnetic disturbance, and any subtle variations in response caused by buried archaeological features in these locations are likely to remain beyond detection. No accurate archaeological interpretation of a magnetic data set collected from survey within such environs can therefore be provided.

## 5.0 GRADIOMETER SCANNING RESULTS

Few anomalies of potential archaeological interest were recorded during gradiometer scanning through Area MW201, SA1 to Area MW203, SA79. Areas MW201, SA1 to Area MW203, SA74, in particular exhibited large-scale magnetic interference resulting from adjacent traffic, perimeter fencing, underground services and other sources of ferrous interference. The detection of potential archaeological responses by gradiometer survey within such environs will be significantly compromised, and may prove uninformative.

Where survey extended through lands more suitable to the scan procedure, background variation was found to be generally within the +/-1.5nT threshold. Occasional increases in background response were observed, and these were suspected as deriving from former cultivation and natural soil/geological variation. Such instrument 'noise' was noted during scanning through SA6 Area MW201, and SA's 38, 48, 62, 67 and 72 Area MW203. Further scan anomalies deriving from suspected former boundaries and land drains were also detected during the scan through SA6 Area MW201, and SA's 48, 54, 62, and 72 Area MW203.

The scan identified potential significant responses within a total of four survey areas along the route of the proposed scheme. These were located in Area MW201, SA6; and Area MW203, SA48, SA62, SA66 & SA72. Details of these scan anomalies are provided below in Table 5.1, with reference to the relevant drawing numbers, and a brief description of observations made in the field.

Table 5.1 Responses noted from scanning

Area MW	SA	Drawing Number	Summary Of Observations
MW201	6	QMW7120EN1302Q01	Erratic, poorly defined responses, including possible interference from former boundaries, and natural variation.
MW202	48	QMW7120EN3304Q01	Possible linear response detected above very "noisey" ferrous background.
MW203	62	QMW7120EN3307Q01	Network of closely-spaced strong magnetic linear responses -?possible network of land drains.
MW203	66	QMW7120EN3307Q01	Strong magnetic and well-defined linear responses - ?possible archaeology.
MW203	72	QMW7120EN3308Q01	Strong magnetic linear responses – suspected former boundaries.

No further responses of potential archaeological interest were noted during the scan within the areas highlighted for this investigation.

## 6.0 DETAILED GRADIOMETRY RESULTS

A total of 70 areas (GA) of detailed gradiometer survey were conducted along the preferred route of the proposed scheme, through Area MW201, SA1–Area MW203, SA79. These were undertaken on the basis of the results from scanning and extended, where possible, to conduct the 40% detailed sample stipulated by the client.

The results from detailed gradiometry are presented as a series of greyscale plots at -1/+1.5nT, with subsequent interpretations, all presented at a scale of 1/1500. Table 6.1 below details the relevant greyscale and interpretation diagrams provided for each section of detailed survey for this project:

Table 6.1 Detailed gradiometry greyscales & interpretations

Area MW	SA	Drawing Numbers	Detailed Gradiometry Area(s)
MW201	1 & 2	QMW7120EN1307Q01 QMW7120EN1315Q01	1 & 2
MW201	3	QMW7120EN1308Q01 QMW7120EN1316Q01	3
MW201	6	QMW7120EN1309Q01 QMW7120EN1317Q01	6A & 6B
MW201	9	QMW7120EN1310Q01 QMW7120EN1318Q01	9
MW201	10	QMW7120EN1311Q01 QMW7120EN1319Q01	10
MW201	11, 13, 14	QMW7120EN1312Q01 QMW7120EN1320Q01	11, 13, 14
MW201	16 & 17	QMW7120EN1313Q01 QMW7120EN1321Q01	16 & 17

Area MW	SA	Drawing Numbers	Detailed Gradiometry Area(s)
MW201	18, 19, 20	QMW7120EN1314Q01 QMW7120EN1322Q01	18, 19, 20
MW202	23	QMW7120EN2306Q01 QMW7120EN2313Q01	23
MW202	24	QMW7120EN2307Q01 QMW7120EN2314Q01	24A & 24B
MW202	25	QMW7120EN2308Q01 QMW7120EN2315Q01	25
MW202	27	QMW7120EN2309Q01 QMW7120EN2316Q01	27A & 27B
MW202	27 & 28	QMW7120EN2310Q01 QMW7120EN2317Q01	27C & 28
MW202	29 & 30	QMW7120EN2311Q01 QMW7120EN2318Q01	29/30
MW202	31	QMW7120EN2312Q01 QMW7120EN2319Q01	31
MW203	32	QMW7120EN3309Q01 QMW7120EN3326Q01	32
MW203	33	QMW7120EN3310Q01 QMW7120EN3327Q01	33A
MW203	33, 34 & 35	QMW7120EN3311Q01 QMW7120EN3328Q01	33B, 34 & 35
MW203	36 & 38	QMW7120EN3312Q01 QMW7120EN3329Q01	36, 38A & 38B
MW203	42, 43 & 44	QMW7120EN3313Q01 QMW7120EN3330Q01	42, 43 & 44
MW203	45 & 47	QMW7120EN3314Q01 QMW7120EN3331Q01	45 & 47
MW203	48 - 52	QMW7120EN3315Q01 QMW7120EN3332Q01	48A, 48B, 49A, 49B, 50 - 52
MW203	53 & 54	QMW7120EN3316Q01 QMW7120EN3333Q01	53 & 54A – 54D
MW203	74, 75 & 76	QMW7120EN3317Q01 QMW7120EN3334Q01	74, 75 & 76
MW203	77 & 78	QMW7120EN3318Q01 QMW7120EN3335Q01	74 & 78
MW203	79 & 61	QMW7120EN3319Q01 QMW7120EN3336Q01	79 & 61
MW203	62	QMW7120EN3320Q01 QMW7120EN3337Q01	62A & 62B
MW203	62, 63 & 64	QMW7120EN3321Q01 QMW7120EN3338Q01	62C, 62D, 63 & 63
MW203	62, 65 & 66	QMW7120EN3322Q01 QMW7120EN3339Q01	62E, 65 & 66
MW203	67 & 68	QMW7120EN3323Q01 QMW7120EN3340Q01	67 & 68
MW203	71	QMW7120EN3324Q01 QMW7120EN3341Q01	71A & 71B
MW203	72	QMW7120EN3325Q01 QMW7120EN3342Q01	72A & 72B

## 6.1 Area MW201, Drawings QMW7120EN1307Q01-QMW7120EN1322Q01

## 6.1.1 SA1-SA3, GA's 1-3

The results from detailed gradiometry through SA1-SA3, GA's 1–3, demonstrate extensive magnetic interference throughout. No archaeological features that may be present in this location will be visible in the data due to the large-scale interference from modern sources.

## 6.1.2 SA6, GA's 6A & 6B

Broad increases in background response from natural soil/geological variations have been recorded extending east to west through GA6A. Isolated positives within these bands of natural variation are also present, and these are largely expected to derive from further soil/geological 'noise.'

Several interconnecting linear responses, highlighted as anomalies A1–A4, extend through GA's 6A & 6B, and these are mostly aligned north-west to south-east or north-east to south-west. Whilst an archaeological origin for these responses should not be discounted, the absence of any clear enclosure type patterns or pit groupings suggests that the majority represent remains of former boundaries.

A pair of possible pit type features has been recorded as A5, close to the northern edge of GA6B. One further broad area of increased response highlighted as A6 is also present *c*.20m to the south-east. The latter may represent potential burnt mound/fulacht fiadh remains, although interpretation remains highly tentative due to the incoherent nature of the response.

The remaining weak trends and isolated positives recorded from survey in this location are deemed to represent mainly modern or natural sources of interference.

## 6.1.3 SA9-SA14, GA's 9, 10, 11 & 14

The results from detailed gradiometry through SA9-SA14, GA's 9–11 and 14, indicate widespread magnetic interference throughout. The range of disturbance present in these locations is similar to that recorded from survey in SA1-SA3 (GA's 1–3). Due to the extent of this disturbance it has not been possible to identify any features of archaeological interest that may be present in these locations.

## 6.1.4 SA16-SA20, GA's 16, 17, 18 & 19/20

As is the case with the results from detailed survey in GA's 1-3, 9-11 and 14, extensive magnetic disturbance from modern ferrous surfaces has been recorded throughout GA's 16, 17, 18 & 19/20. Any archaeological remains that may be present

within these locations will remain undetected by gradiometer survey due to magnetic disturbance from modern sources.

## 6.2 MW202, Drawings QMW7120EN2306Q01-QMW7120EN2319Q01

## 6.2.1 SA21-SA25, GA's 23, 24A, 24B & 25

Large-scale ferrous disturbance has been recorded throughout GA's 23, 24A, 24B and 25. The pattern of disturbance recorded from GA's 23–24B suggests that a buried service extends through the middle of these survey areas.

A total of four small-scale pit type anomalies have been recorded in the northern portion of GA23 (SA23). A modern ferrous source is expected for these in view of the scatter of modern debris present.

## 6.2.2 SA27-SA30, GA's 27A, 27B, 28, & 29/30

Remains of enclosure ditches, and possible pit type features associated with national monuments Church (DU013-019001) and Graveyard (DU013-019002), in Coolmine townland have been recorded from detailed gradiometer survey in GA28. These are indicated by anomalies A7-A9, which display the eastern portion of a sub-circular enclosure measuring c.50m north/south, and further ditch remains extending to the east and north-east. Anomaly A10 demonstrates sufficient characteristics to suggest the location of a possible burnt/fired feature. Such responses are normally associated with remains of kilns or hearths.

Anomaly A11, to the north-west, indicates a zone of increased response which may be of archaeological interest. However, the potential that it derives from modern or natural sources of interference should not be dismissed.

A section of an existing footpath extends roughly north to south through GA27C. One isolated positive anomaly shortly to the east of this has been highlighted. Whilst an archaeological source for this anomaly should not be excluded, it is located at the edge of an existing boundary and the potential that it is expected to represent remains of deeply buried modern ferrous debris.

The results from the remainder of GA's 27A–29/30 demonstrate widespread interference from ferrous sources. This is likely to have masked features of potential interest, where present.

#### 6.2.3 SA31, GA31

No archaeological remains have been recorded from detailed gradiometer survey in GA31. As with the majority of results from detailed survey through Area MW201 and Area MW202 the data from this location indicate widespread ferrous interference

from modern sources. No archaeological features that may be present in this location will have been recorded.

## 6.3 Area MW203, Drawings QMW7120EN3309Q01-QMW7120EN3342Q01

## 6.3.1 SA32-SA38, GA's 32, 33A, 33B, 34, 35, 36, 38A & 38B

Large-scale ferrous disturbance has been recorded through GA's 32, 34, 35, 36, 38A and 38B. Where archaeological features may be present here they will remain undetected due to the range of interference present.

One linear band of ferrous response extending through the north-western portion of GA33A is thought to represent a possible former boundary, with further interconnecting linears suggesting additional boundary remains. The latter are indicated by positive linear anomalies A15 to the east.

Two regions of magnetic disturbance at the southern edges of GA's 33B and 34 are likely to represent concentrations of modern ferrous material.

Several poorly defined isolated positive anomalies have been recorded from detailed survey in GA's 33B, 35 and 38A. These display no specific grouping or patterns to suggest they are of significant archaeological interest. In view of the extent of modern disturbance indicated in the results from this section of survey, these anomalies are expected to derive from modern and/or natural sources of interference.

Remains of former cultivation aligned roughly east to west have been recorded through GA38B. Weak trends are also present in the data. An archaeological source for these anomalies should not be entirely discounted. However, they are at the limits of instrument detection, and such low level responses are more commonly associated with soil/geological variation or patterns of former land use where no clear archaeological context is apparent in the data.

## 6.3.2 SA42-SA47, GA's 42, 43, 44, 45, & 47

A concentration of strong magnetic positive anomalies recorded as A16 in GA47 suggest a group of possible curvilinear ditch type features and pit remains. Interpretation of these responses has been compromised by a band of ferrous disturbance to the south-east. The latter extends through GA's 43–47 and may indicate the course of a buried service aligned parallel with the M50 Motorway.

Weak trends recorded from survey through GA's 43, 45 & 47 are largely expected to derive from patterns of former land use or natural soil/geological variation.

#### 6.3.3 SA48-SA52, GA's 48A, 48B, 49A, 49B, 50, 51 & 52

A sub-rectangular possible prehistoric ditched enclosure, measuring 35m by 20–25m, with possible pit type features and external ditch remains has been recorded from detailed survey in GA's 48A and 48B. These responses are highlighted as anomalies A17–A20. Anomaly A19 was detected during the initial scan of this area. However, the remaining responses were not, and this may be due to background interference from ferrous debris, as is demonstrated throughout GA's 48A & 48B. A section of a probable former boundary, potentially a cause of this ferrous scatter, is suggested to the west in GA48A.

Numerous weak trends also occur throughout GA's 48A and 48B. The potential that these represent remains of additional enclosure features associated with anomalies A17–A20 should not be dismissed. However, interpretation remains unclear due to their limited range, and a natural or possible recent land use origin should not be dismissed.

Further positive responses are present in GA's 48A, 48B, 49A, 49B and 51. These are in most cases poorly defined, recorded above a broad scatter of ferrous "noise", and none display any clear form or concentration to warrant an archaeological interpretation. The majority are deemed to represent a combination of modern ferrous debris, possible natural variation, and patterns of former land use.

## 6.3.4 SA53-SA54, GA's 53, 54A, 54B, 54C, & 54D

Remains of former cultivation and a disused boundary are indicated throughout the results from detailed survey in GA's 54B-54D. The former are visible as a series of closely spaced parallel linear anomalies aligned north-west to south-east. The field boundary remains occur as a fragmented positive linear response highlighted as anomaly A21, and are aligned parallel to the former cultivation. Further boundaries are suggested by a series of interconnecting linear trends extending through GA's 54B, 54C & 54D.

Several poorly defined positive responses apparent through GA's 53–54D, notably anomalies A22 and A23 may be of archaeological interest, although no clear representations of enclosure or pit type remains are indicated.

## 6.3.5 SA74-SA79, GA's 74, 75, 76, 77, 78 & 79

Linear responses highlighted as A24 in GA77, and A25 in GA78 have been recorded. These are located within regions of strong ferrous disturbance, and a modern origin should not be discounted. A slight variation in response, probably due to soil/geological interference, has been recorded in the south-western portion of GA78.

Elsewhere the data from detailed survey in GA's 74 – 79 are largely ferrous or natural in character.

## 6.3.6 SA61 and SA62, GA's 61, 62A, 62B, 62C, 62D & 62E

Remains of former cultivation extend north-west to south-east through GA61, and further weak trends are indicated. The latter are deemed to be of limited archaeological potential, and expected to derive from former land use or natural soil/geological variation.

One broad area of increased response highlighted as A26 in the south-western portion of GA62A may represent the plough damaged remains of a *fulacht fiadh* or burnt mound. Interpretation remains tentative however, as the response is poorly defined, and natural interference can cause similar patterns of magnetic variation.

A substantial spread of strong magnetic disturbance at the northern edge of GA62B may represent ferrous debris associated with the demolished structure identified during testing at the proposed depot site (Hackett 2009).

As indicated by the scan conducted through the central and southern region of SA62 a network of suspected land drains has been recorded. These are visible as anomalies A27, which are aligned mainly north-east to south-west, and demonstrate a herringbone pattern of discrete positive linear responses extending through GA's 62B and 62C. A possible continuation of these land drains may be indicated by linear anomaly A28, in GA62D. The potential significance of anomalies A27 and A28 should not be dismissed in view of their location within the area of archaeological potential for possible field system RMP site DU014-021. Extensive natural variation also occurs through GA's 62B, 62C and 62D.

The location of one circular enclosure measuring *c*.30m in diameter has been recorded from survey in GA62E, to the south-west. This is highlighted as anomaly A29 and is expected to represent remains of a ringfort. This enclosure was not detected during scanning, possibly due to its range of enhancement being barely above background variation. A significant number of positive linear anomalies, subangular pit type features and zones of increased response have been recorded in association with enclosure A29, and these are indicated as anomalies A30–A34.

Further small-scale positives, poorly defined linear anomalies and weak trends have been recorded from survey through GA's 62A–62E, and are thought mostly to be the result of recent land use, natural soil/geological interference, and modern ferrous.

#### 6.3.7 SA63-SA66, GA's 63, 64, 65, & 66

GA's 63, 64 & 65 show the presence of several positive responses recorded in close proximity to existing boundaries. The majority of these are expected to represent buried modern ferrous. However the potential significance of anomalies A35 and A36 in GA64 and GA65 should not be dismissed. These anomalies are located within the area of archaeological potential for possible field system RMP site DU014-021.

The remains of one sub-rectangular ditched enclosure with associated pit type anomalies and zones of increased response have been recorded from detailed survey in GA66. These anomalies are highlighted as A37–A41 and expected to represent remains of a potential prehistoric settlement. The presence of further positive linear anomalies highlighted as A42 and A43 to the south and west, suggest a large area of settlement activity in SA66. The potential that further features of archaeological interest have not been detected by the gradiometer in this location should not be dismissed.

# 6.3.8 SA67-SA72, GA's 71A-72B

The arrangement of positive responses extending north-west to south-east through the eastern portion of GA67 suggests the locations of two possible land drains. These anomalies are highlighted as anomalies A44.

No clear archaeological patterns have been recorded from through GA's 71A & 71B, the majority of responses in this area being poorly defined, bordered by interference from modern ferrous, and lacking any specific pattern to warrant an archaeological interpretation.

Patterns of former cultivation have been recorded through GA72, with further strong magnetic linear anomalies extending both through GA72A and GA72B. The latter are highlighted as A45 and A46, and expected to represent the remains of two former boundaries.

#### 7.0 RESISTANCE RESULTS

# 7.1 MW202, SA28, GA28 Drawings QMW7120EN2310Q01 and QMW71202317Q01

Table 7.1.1 Resistance survey greyscale & interpretation

Area MW	SA	Drawing Numbers	Resistance Survey Area
MW202	28	QMW7120EN2310Q01 QMW7120EN2317Q01	28

On the basis of the results from gradiometer survey in GA28, in Coolmine townland over National Monuments Church and Graveyard sites DU013-019001 and DU013-019002, targeted resistance survey totalling 0.24ha was undertaken. The resistance survey was specifically applied to examine the potential for any structural remains that may be present in this location.

The survey identified the buried remains of a sub-circular stone wall (A12) measuring 15–20m east to west, and bound to the north by a possible ditch (A13). A13 demonstrates no clear correlation with ditch A6 noted by detailed gradiometry, and is expected to represent a separate feature associated with DU013-019001 and DU013-019002. A12 is expected to represent the perimeter of graveyard site DU013-019002. No visible indication of a church in this location has been recorded by either technique.

Further high resistance features were detected, notably anomaly A14, which extends northwards through anomaly A12. The presence of a tree at A14 however is likely to have caused this increase in resistance. Also present in the resistance data are surrounding areas of high resistance, which have been interpreted as being of natural origin.

#### 8.0 CONCLUSIONS

A total of four concentrations of definite archaeological remains have been recorded from archaeological geophysical survey along the preferred route for the proposed scheme. These are located in Area MW202 SA28, GA28; Area MW203 SA48, GA's 48A and 48B; Area MW203 SA62, GA62E; and Area MW203 SA66, GA66. These include enclosure and structural features associated with national monuments Church and Graveyard sites DU013-019001 and DU013-019002; one possible prehistoric enclosure; a ringfort; and a potential prehistoric settlement respectively. These anomalies represent areas of archaeological activity and should be targeted for further examination by full archaeological excavation. Where features of an

archaeological nature are identified avoidance or preservation in situ is normally recommended. If preservation in situ is not possible, full archaeological excavation (preservation by record) is recommended.

Responses from suspected land drains in Area MW203 GA's 62B, 62C and 62D have also been recorded, and these lie within the area of archaeological potential for possible field system DU014-021. The potential significance of these anomalies has been suggested in view of their location and they should therefore be investigated by archaeological test excavation. Further anomalies of potential interest have been identified in Area MW201 SA6, and Area MW203 SA's 33, 77, 62, 64, 65, 67, and 72. These anomalies represent linear responses, discrete positives, areas of increased response, and regions of magnetic disturbance, for which an archaeological source cannot be totally discounted. These anomalies require further examination by archaeological test excavation.

A multitude of isolated positive anomalies, poorly defined linears, and regions of incoherent response are also present in the survey results from Area MW201–Area MW203, SA1–SA79. These are mostly expected to derive from former land use, including drainage improvement, landscaping, and past cultivation. Whilst these anomalies demonstrate no clear archaeological patterns, the possibility that they may represent isolated or plough damaged remains should not be ignored. Where feasible archaeological test excavation of these anomalies may be required.

Extensive modern ferrous interference has been encountered through a significantly large proportion of the proposed scheme, notably though Areas MW201 SA1–Area MW203 SA53. The geophysical survey in these areas has proved highly uninformative with regard to archaeological features that may be present in these locations. No archaeological features will have been recorded from survey within these sections of the scheme, and the method of assessment for these survey areas therefore needs to be reviewed.

Please note that all mitigation measures within this report are recommendations only and are subject to the approval of the Department of the Environment, Heritage and Local Government.

Table 8.1 Significant anomalies highlighted

Area MW	SA	GA (s)	Anomaly	Recommendation
MW201	6	6A and 6B	A1 – A6	Pre-development archaeological testing
MW202	28	28	A7 – A14	Full archaeological excavation
MW203	33	33A	A15	Pre-development archaeological testing
MW203	48	48A and 48B	A16 – A20	Full archaeological excavation
MW203	54	54	A21 – A23	Pre-development archaeological testing
MW203	77	77	A24	Pre-development archaeological testing
MW203	78	78	A25	Pre-development archaeological testing
MW203	62	62A	A26	Pre-development archaeological testing
MW203	62	62C and 62D	A27 and A28	Pre-development archaeological testing
MW203	62	62E	A29 – A33	Full archaeological excavation
MW203	62	62E	A34	Pre-development archaeological testing
MW203	64	64	A35	Pre-development archaeological testing
MW203	65	65	A36	Pre-development archaeological testing
MW203	66	66	A37 – A43	Full archaeological excavation
MW203	67	67	A44	Pre-development archaeological testing
MW203	72	72A and 72B	A45 – A46	Pre-development archaeological testing

**Full archaeological excavation** involves the scientific removal and recording of all archaeological features, deposits and objects to the level of geological strata or the base level of any given development (IFA 2008). Full archaeological excavation is recommended where initial investigation has uncovered evidence of archaeologically significant material or structures and where avoidance of the site is not possible. Where excavation has been recommended, please note the DoEHLG will not normally allow excavation without first identifying the nature and extent of subsurface remains through archaeological testing.

**Pre-development archaeological testing** can be defined as 'a limited programme... of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present archaeological test excavation defines their character and extent and relative quality,' (IFA 2008).

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Personnel John Nicholls MSc MIAI, Karla Poot MA and Dan Shiel BSc

## 9.0 BIBLIOGRAPHY

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#### 10.0 DIGITAL ARCHIVE

A complete digital archive for this project is provided on CD with this report. The archive includes the report text with digital versions of all drawings and displays relating to this work.

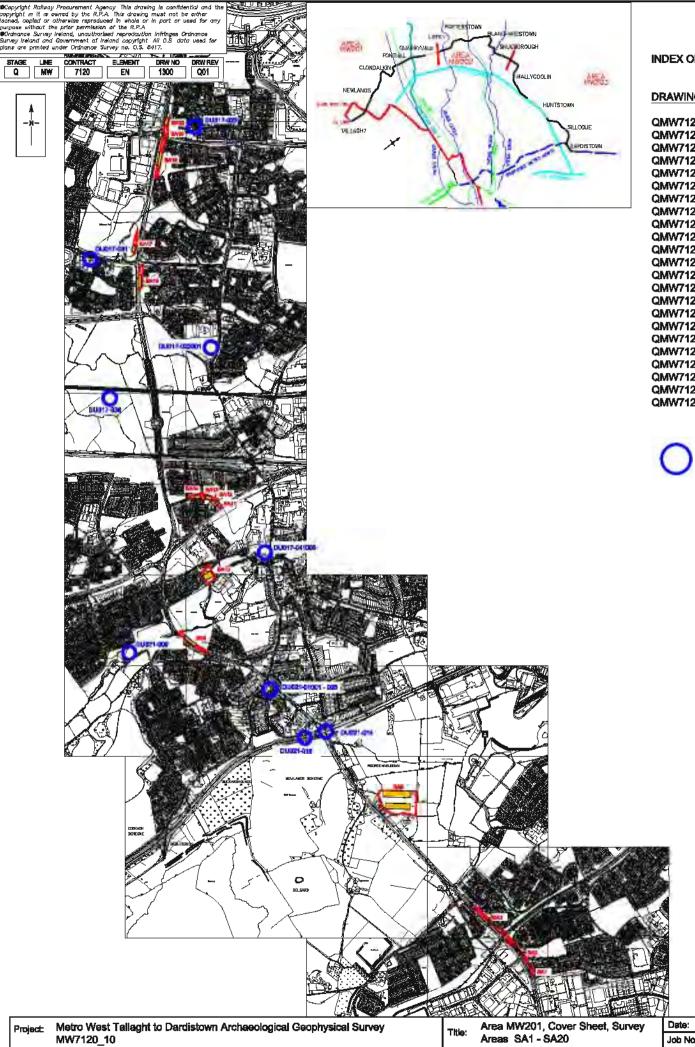
All report figures are included in AutoCad format (.DWG, Version 2004), and can be re-referenced to the raw and processed data included as part of this archive. Gradiometry greyscale and XY Trace displays forming part of this archive are provided at -1/1.5nT and 15nT/cm respectively unless otherwise stated. Display parameters used are as indicated.

A complete PDF version of this report is also included.

Table 10.1 below details the various file types provided.

**Table 10.1 Digital archive files** 

Description	File Type
Survey Location	.DWG
Greyscale (Interpolated Data)	.DWG
Interpretation	.DWG
Greyscale (Raw Data)	.BMP
XY Trace (Raw Data)	.TIF
Area Interpretation	.DWG
Report Text	.DOC
Entire report as PDF	.PDF



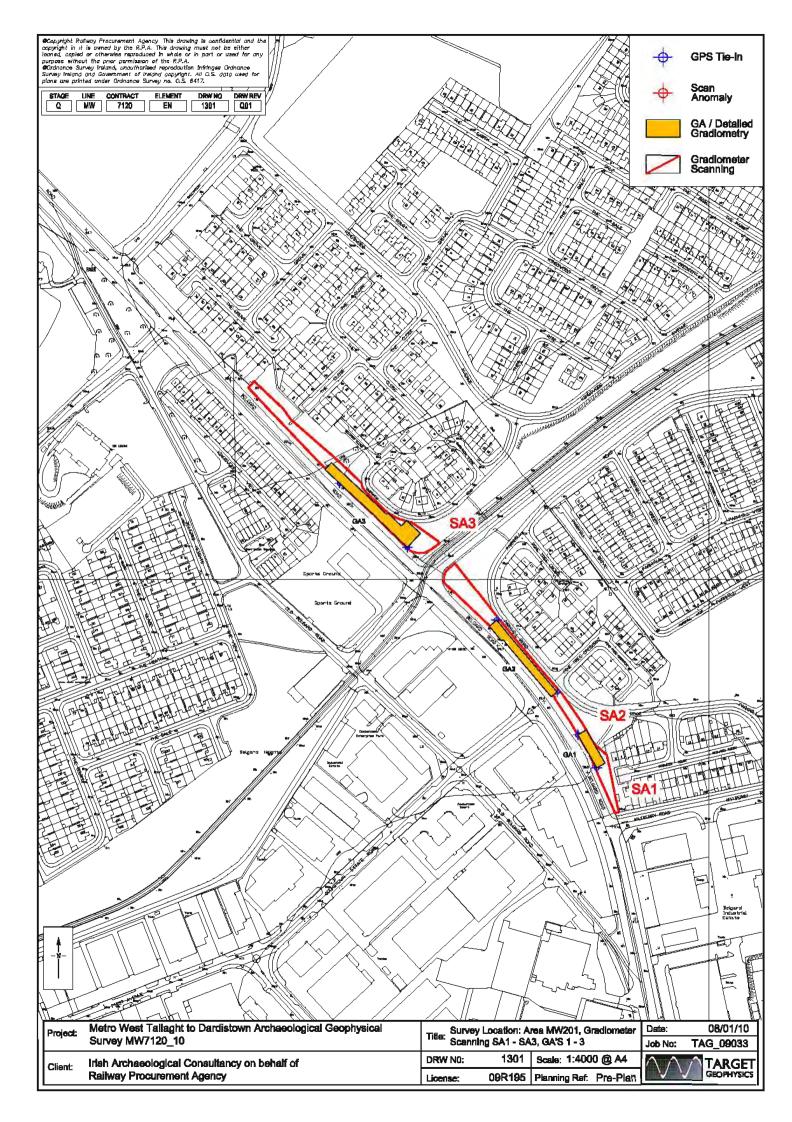
## INDEX OF DRAWINGS

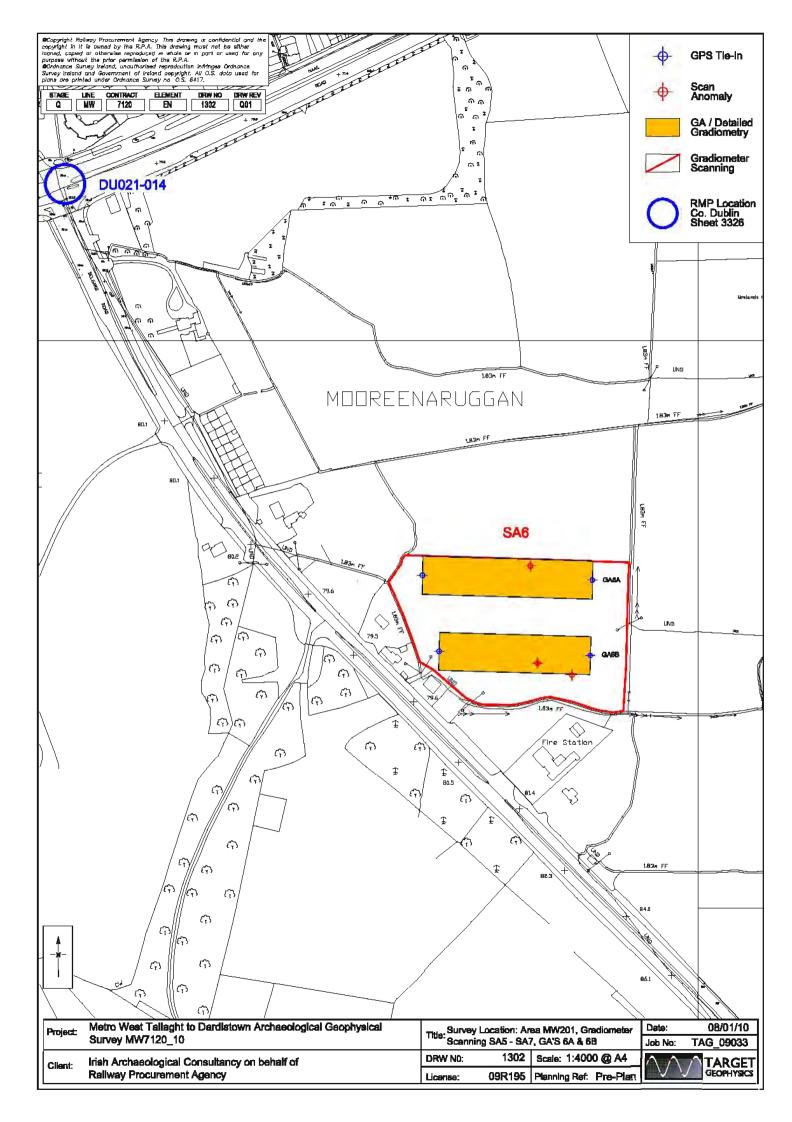
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QMW7120EN1302Q01	SA5 - SA7	SURVEY LOCATION: MW201, GRADIOMETER SCANNING SA5 - SA7, GA'S 6A & 6B	08.01.10
QMW7120EN1303Q01	SA9 - SA10	SURVEY LOCATION: MW201, GRADIOMETER SCANNING SA9 - SA10, GA'S 9 & 10	08.01.10
QMW7120EN1304Q01	SA11 - SA14	SURVEY LOCATION: MW201, GRADIOMETER SCANNING SA11 - SA14, GA'S 11, 13 & 14	08.01.10
QMW7120EN1305Q01	SA16 - SA17	SURVEY LOCATION: MW201, GRADIOMETER SCANNING SA16 - SA17, GA'S 16 & 17	08.01.10
QMW7120EN1306Q01	SA18 - SA20	SURVEY LOCATION: MW201, GRADIOMETER SCANNING SA18 - SA20, GA'S 18 & 19/20	08.01.10
QMW7120EN1307Q01	\$A1 - \$A2	GREYSCALE: MW201, SA1 & SA2, GA'S 1 & 2	08.01.10
QMW7120EN1308Q01	SA3	GREYSCALE: MW201, SA3, GA3	08.01.10
QMW7120EN1309Q01	SA6	GREYSCALE: MW201, SA6, GA'S 6A & 6B	08.01.10
QMW7120EN1310Q01	SA9	GREYSCALE: MW201, SA9, GA9	08.01.10
QMW7120EN1311Q01	SA10	GREYSCALE: MW201, SA10, GA10	08.01.10
QMW7120EN1312Q01	SA11 -14	GREYSCALE: MW201, SA11 - SA14, GA'S 11, 13 & 14	08.01.10
QMW7120EN1313Q01	SA16 - SA17	GREYSCALE: MW201, SA16 & SA17, GA'S 16 & 17	08.01.10
QMW7120EN1314Q01	SA18 - SA20	GREYSCALE: MW201, SA18 & SA20, GA'S 18 & 20	08.01.10
QMW7120EN1315Q01	SA1 - SA2	GREYSCALE: MW201, SA1 & SA2, GA'S 1 & 2	08.01.10
QMW7120EN1316Q01	SA3	INTERPRETATION: MW201, SA3, GA3	08.01.10
QMW7120EN1317Q01	SA6	INTERPRETATION: MW201, SA6, GA'S 6A & 6B	08.01.10
QMW7120EN1318Q01	SA9	INTERPRETATION: MW201, SA9, GA9	08.01.10
QMW7120EN1319Q01	SA10	INTERPRETATION: MW201, SA10, GA10	08.01.10
QMW7120EN1320Q01	\$A11 -14	INTERPRETATION: MW201, SA11 - SA14, GA'S 11, 13 & 14	08.01.10
QMW7120EN1321Q01	SA16 - SA17	INTERPRETATION: MW201, SA16 & SA17, GA'S 16 & 17	08.01.10
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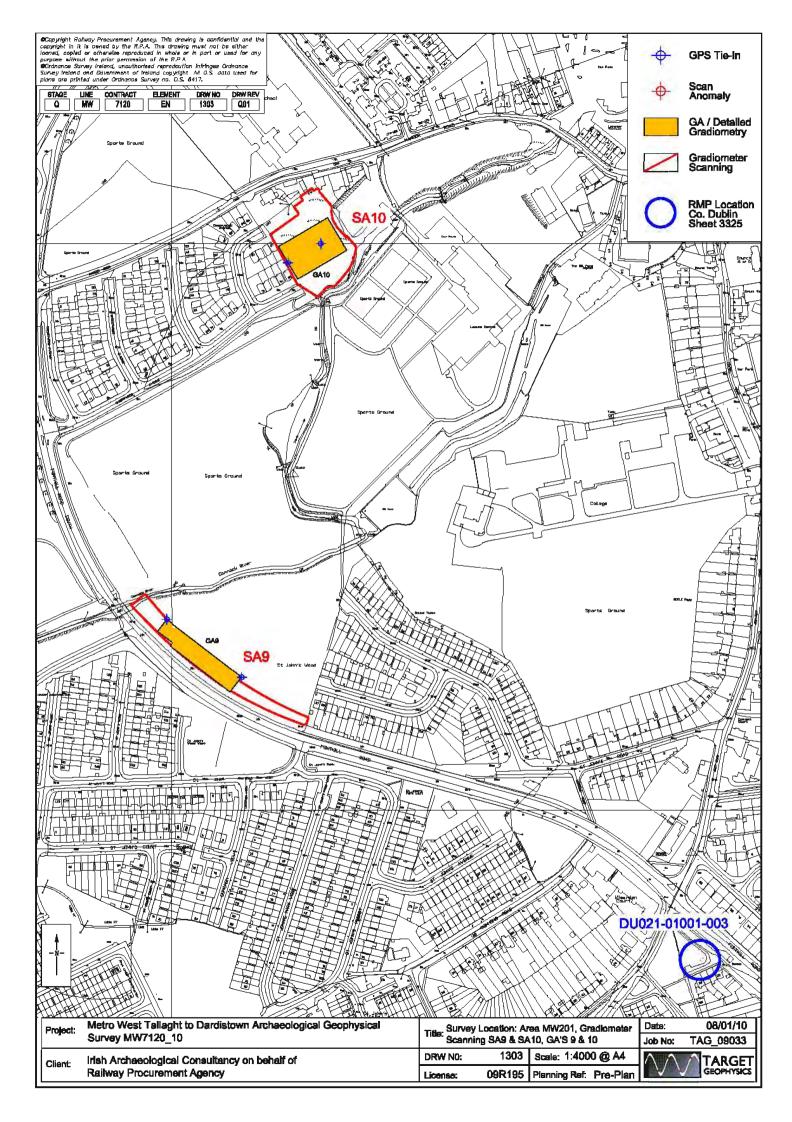
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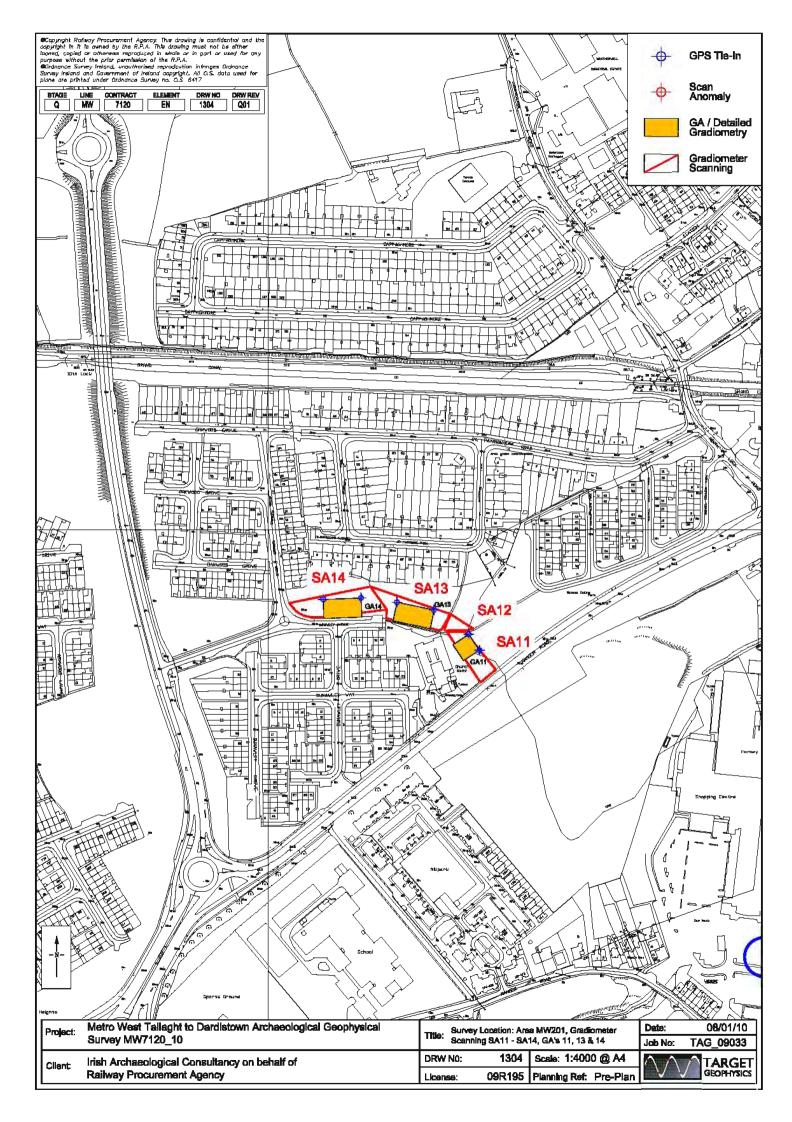
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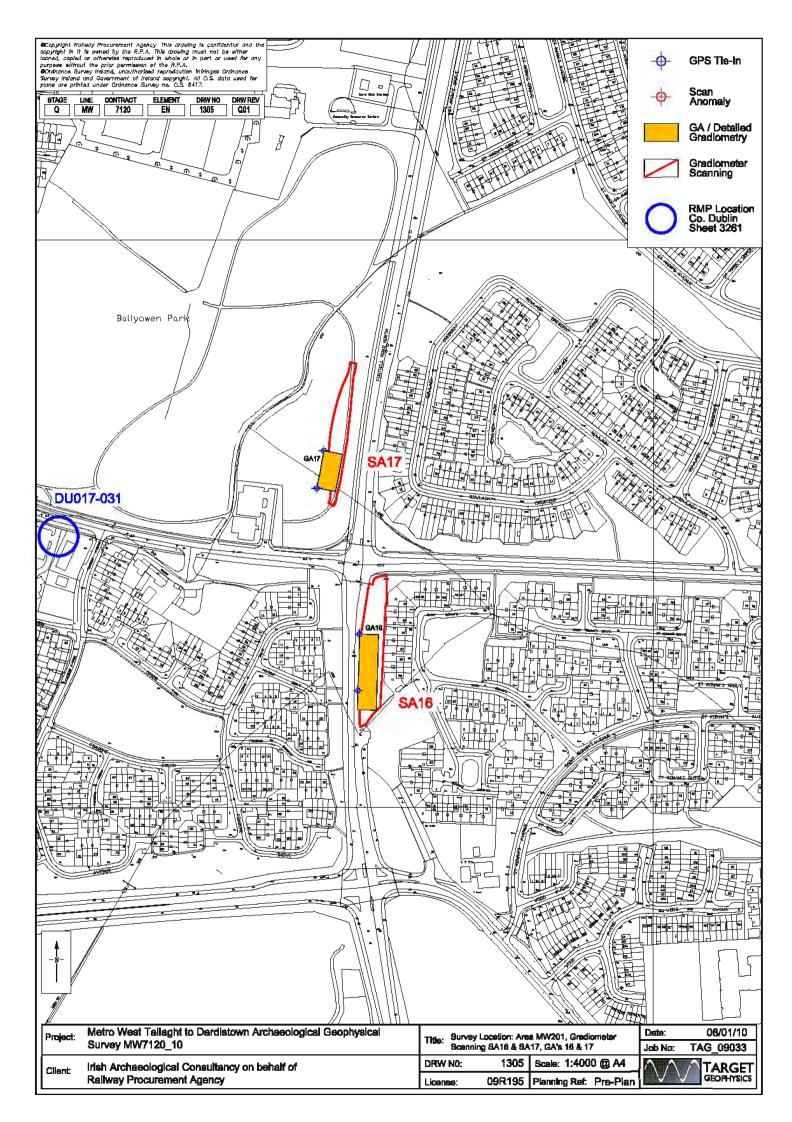


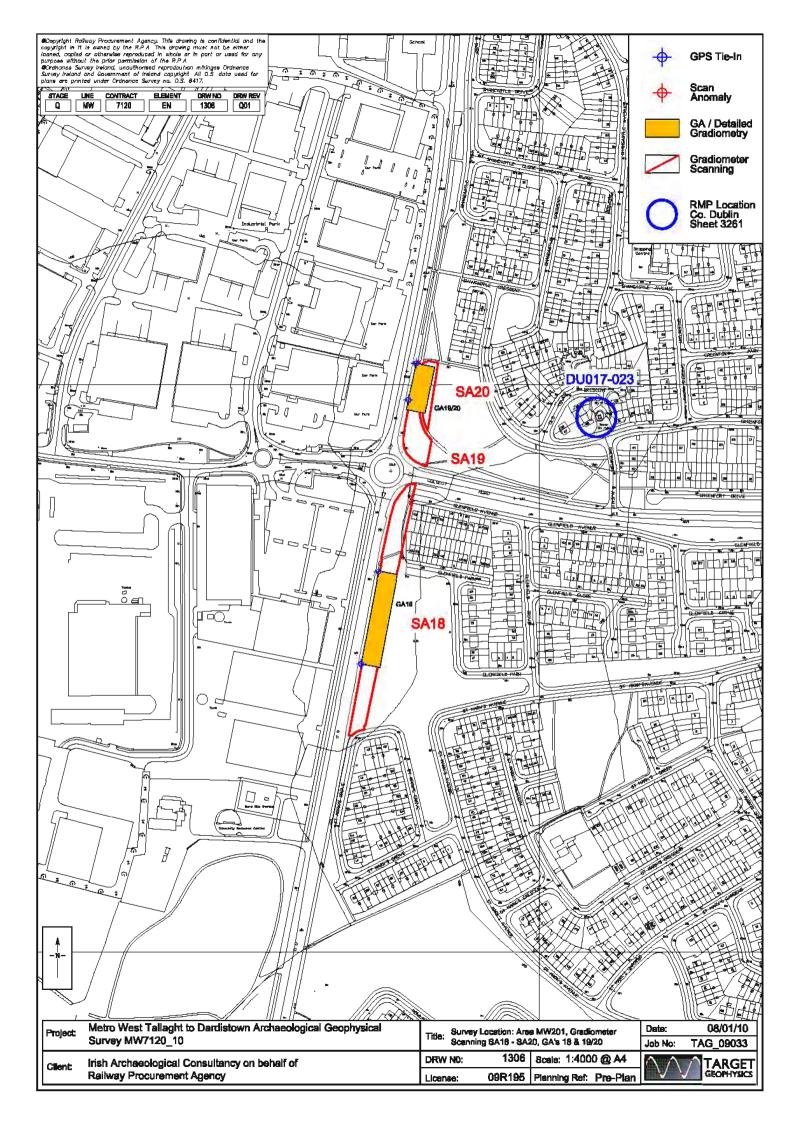


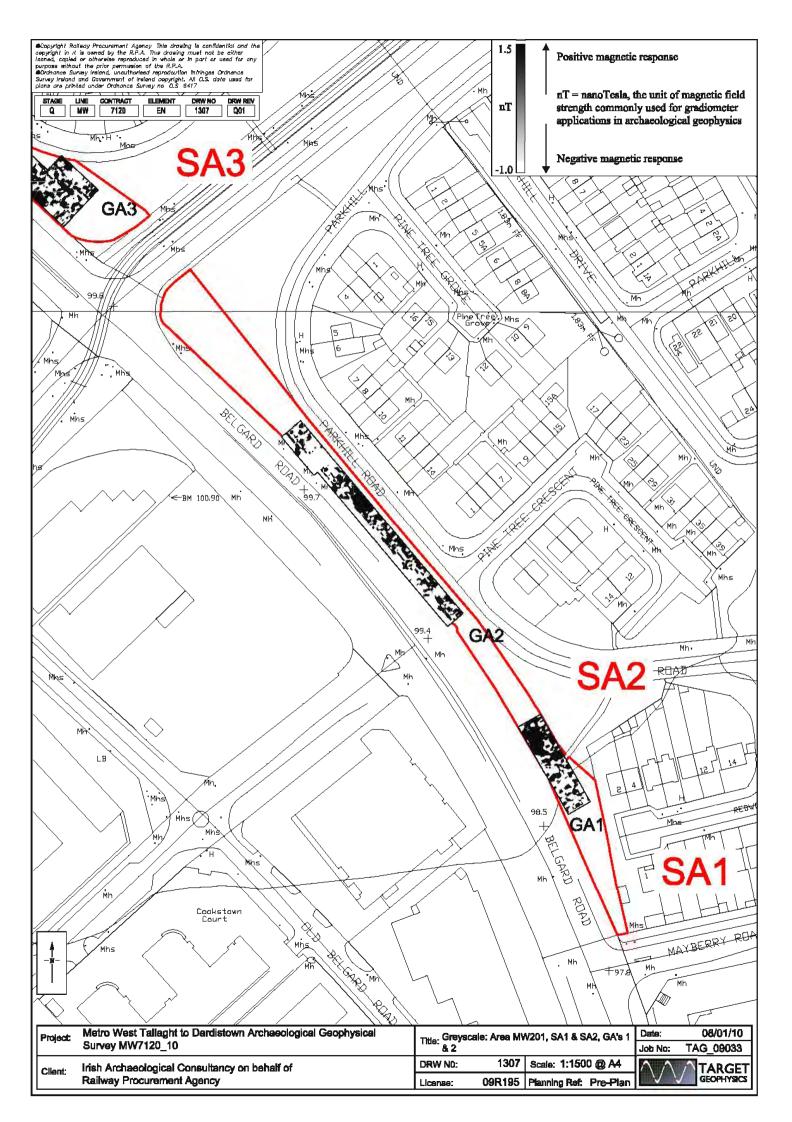


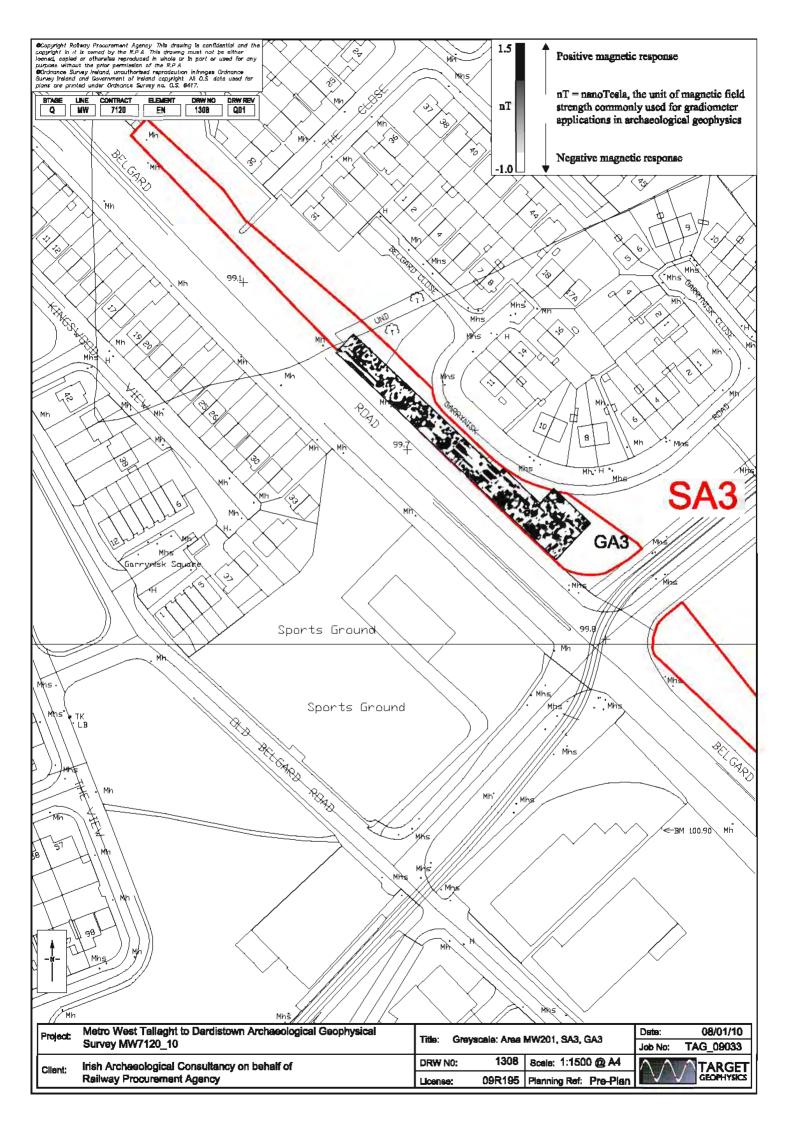


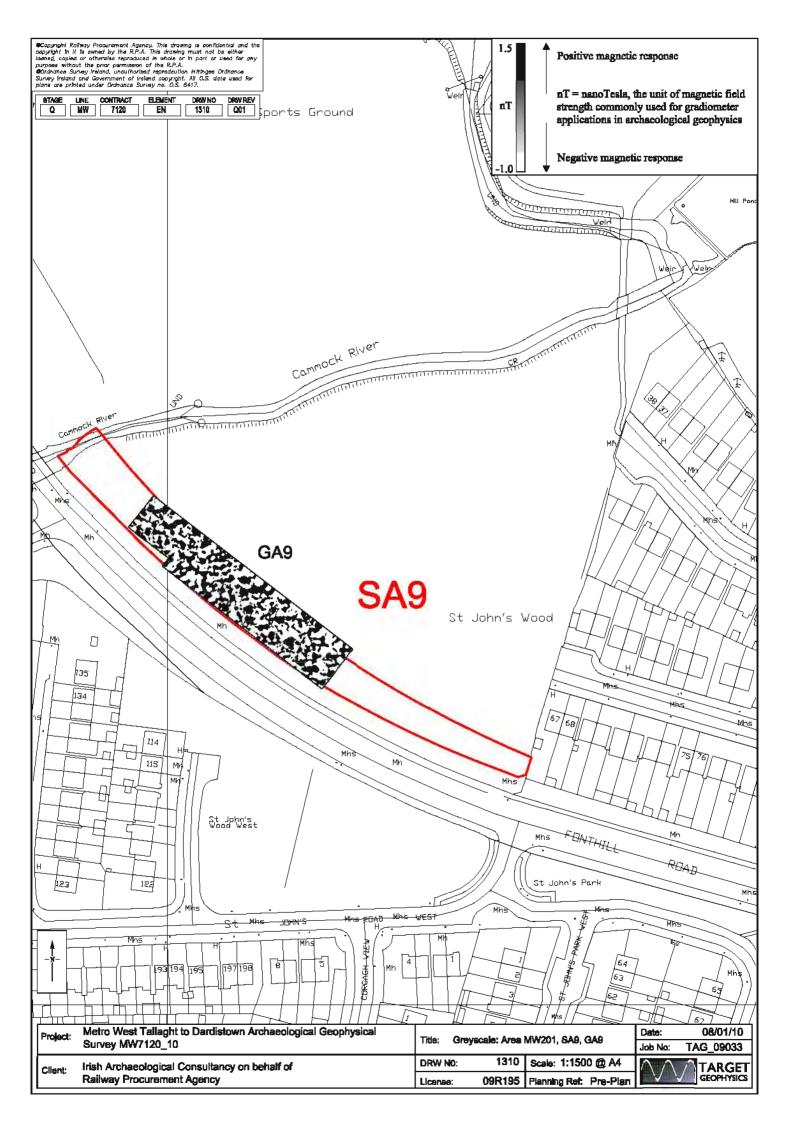


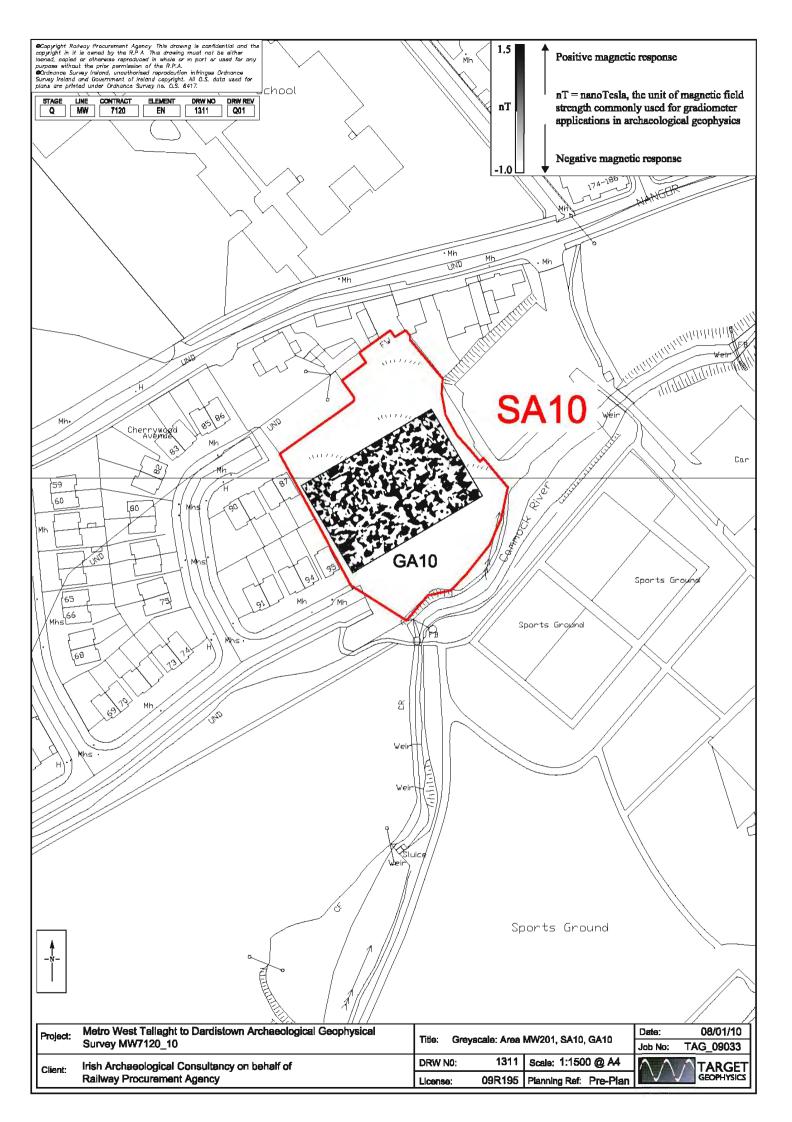


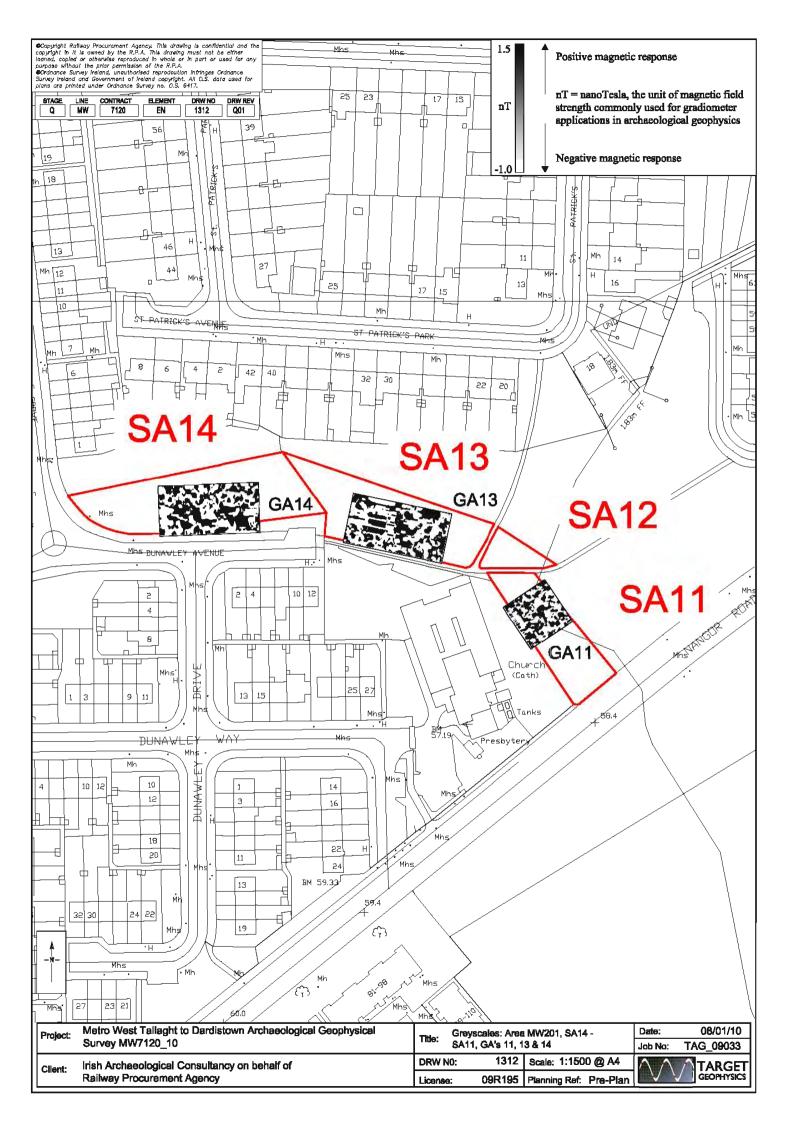


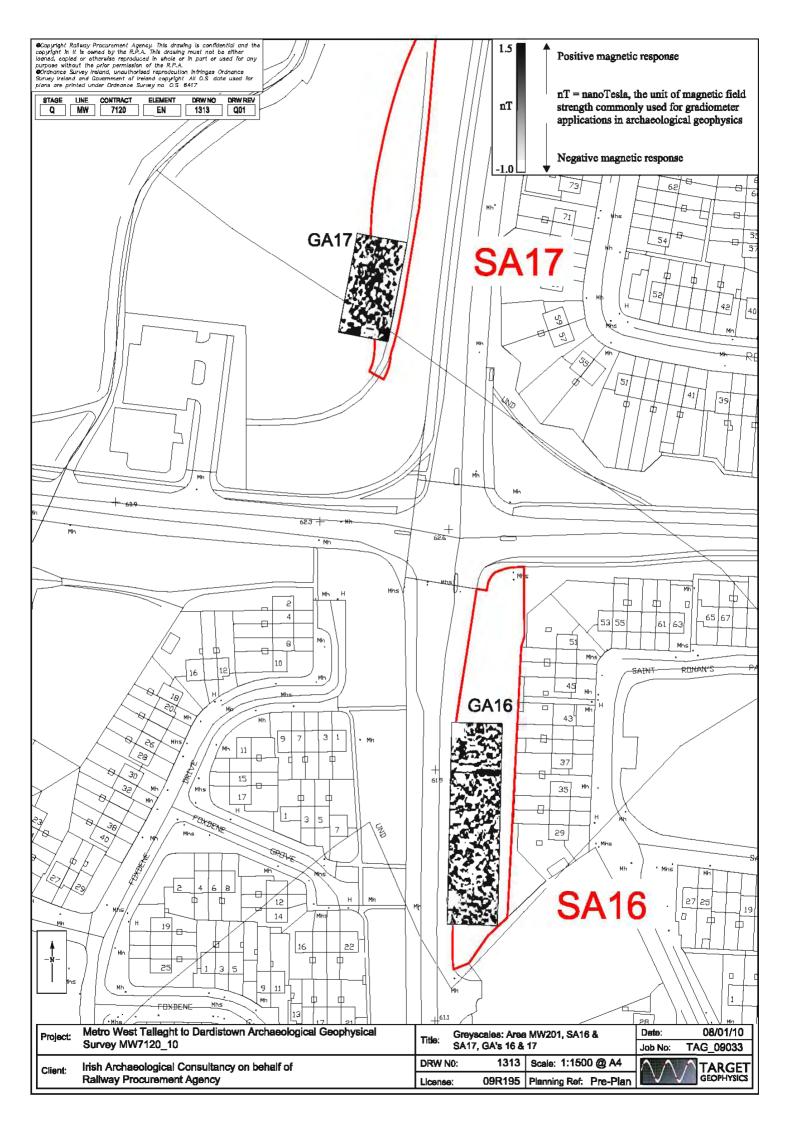


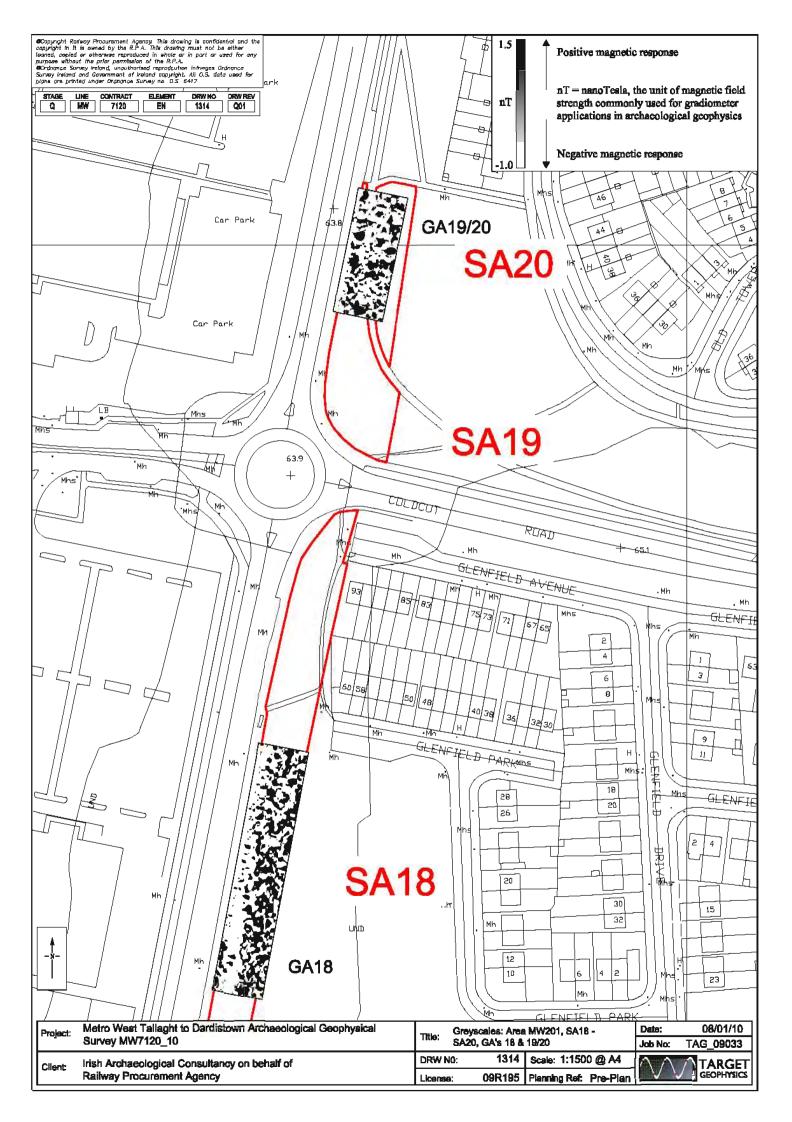


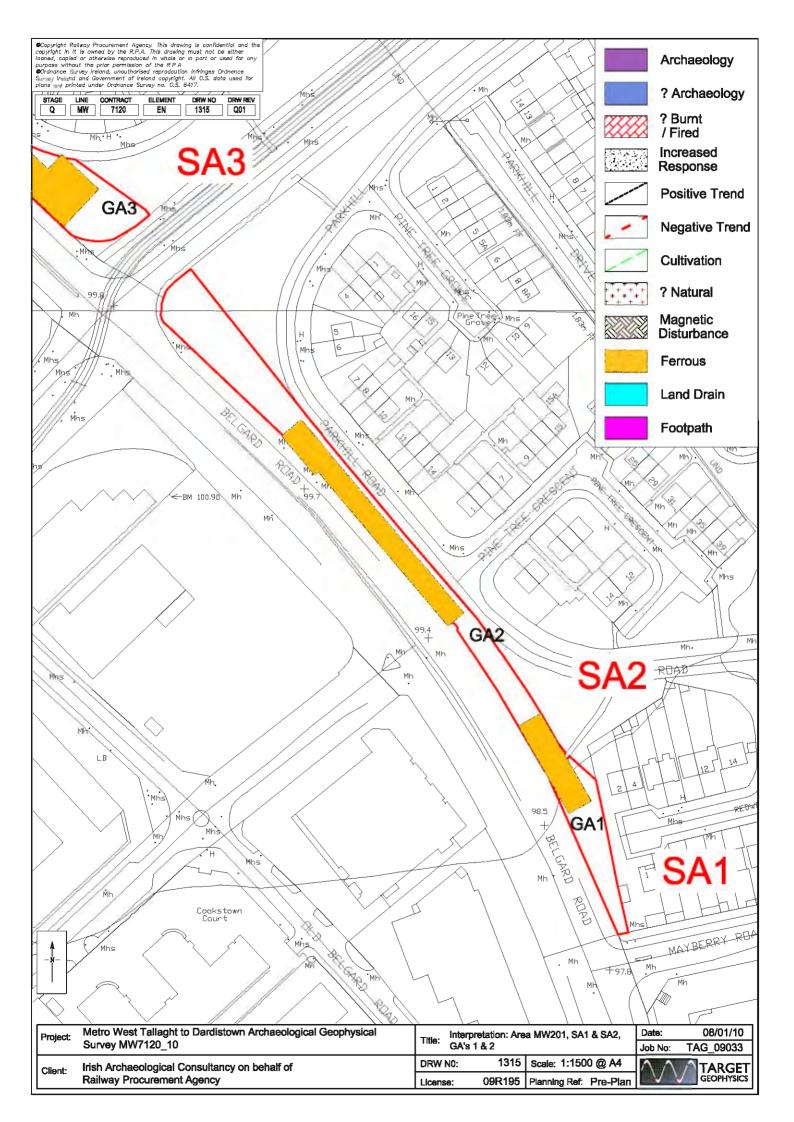


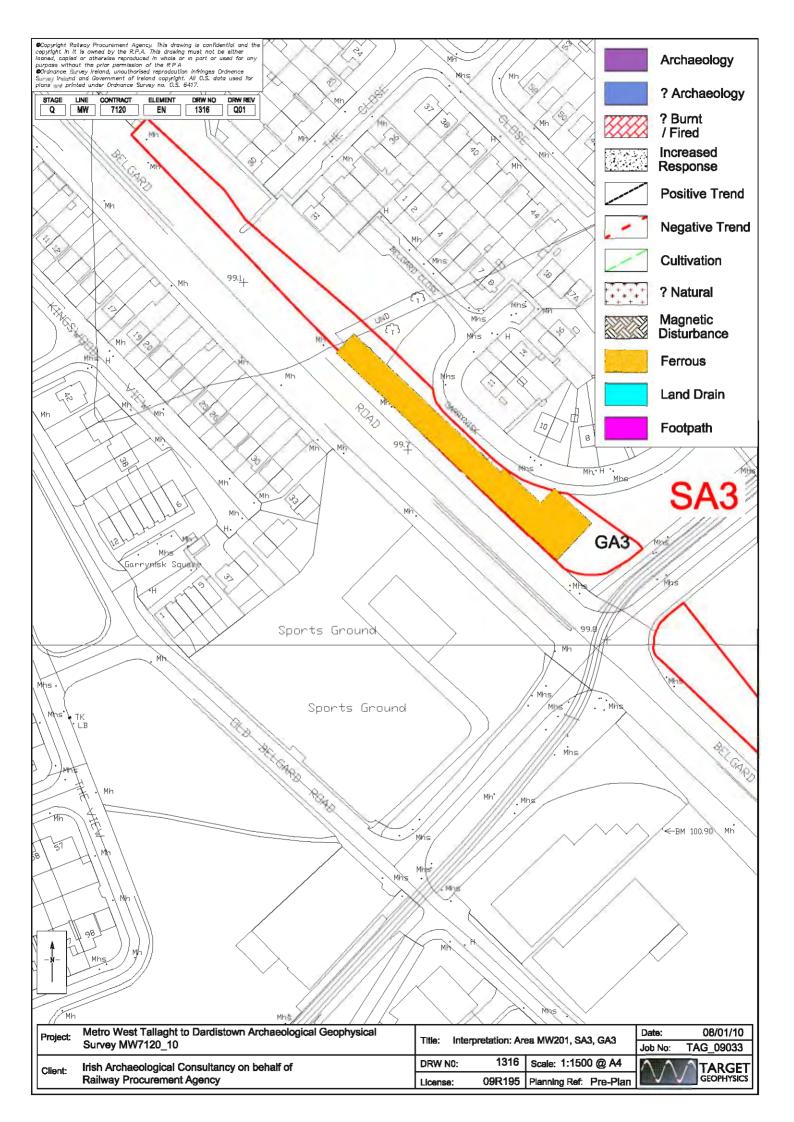


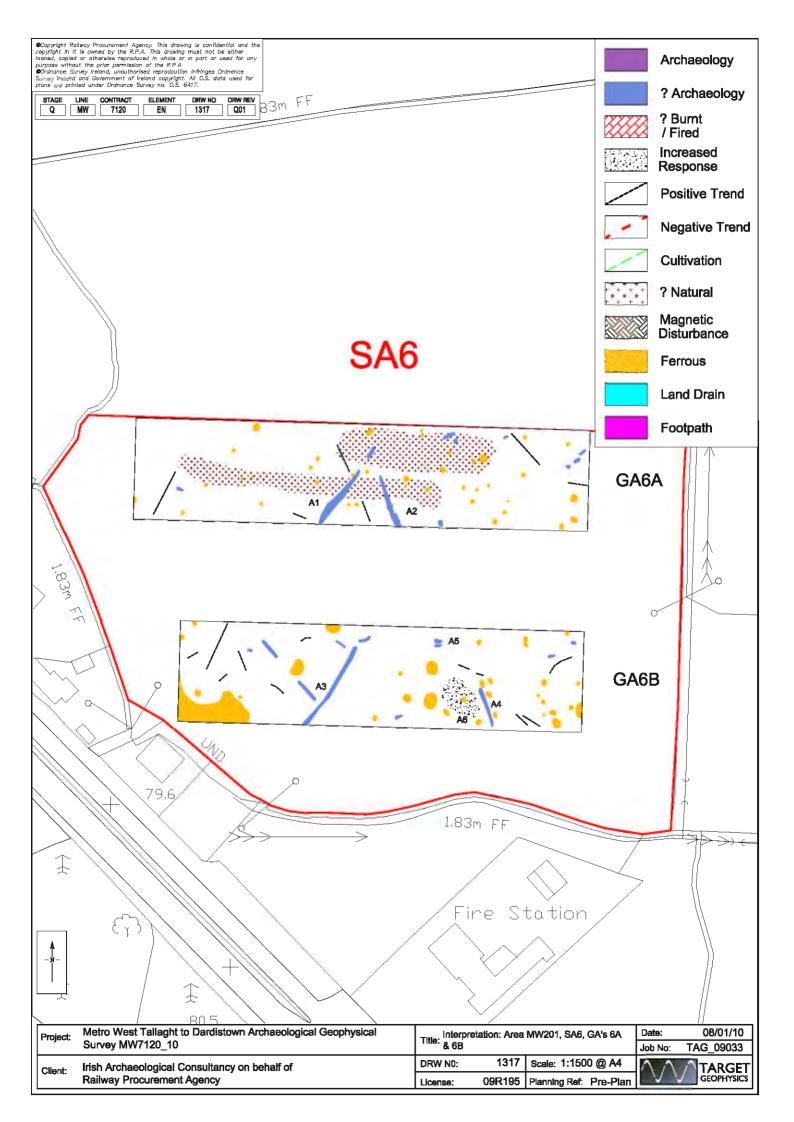


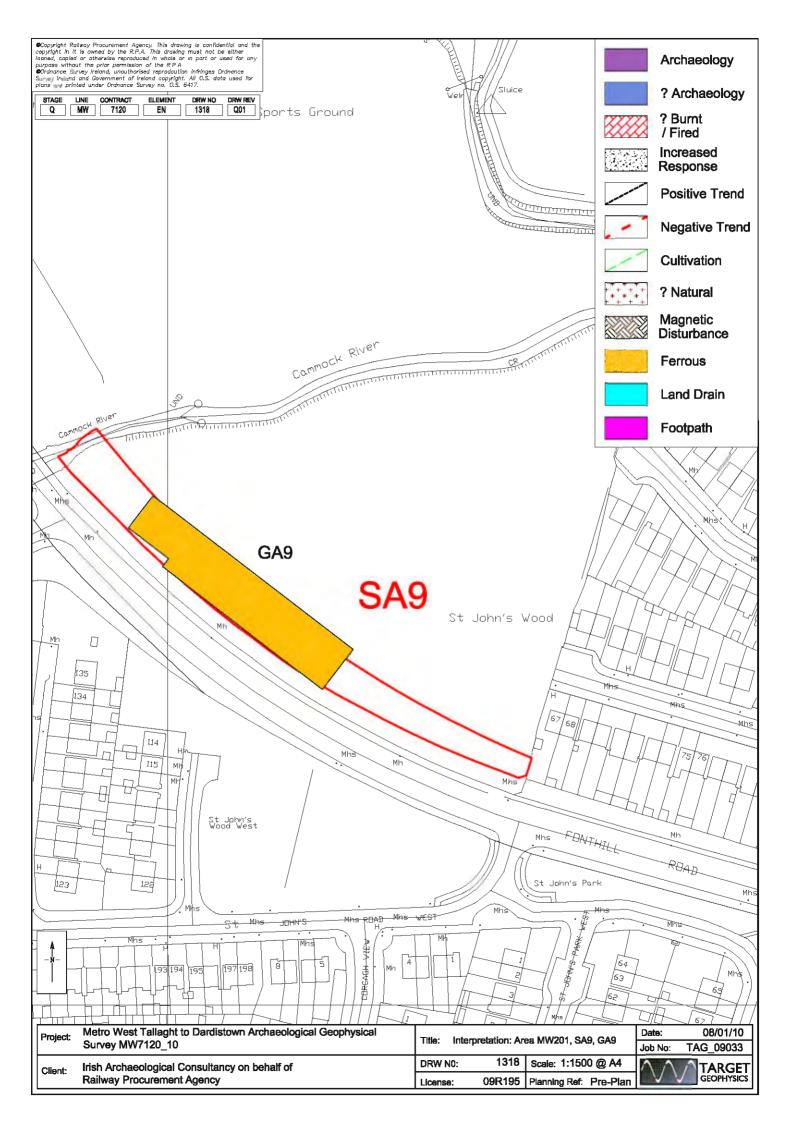


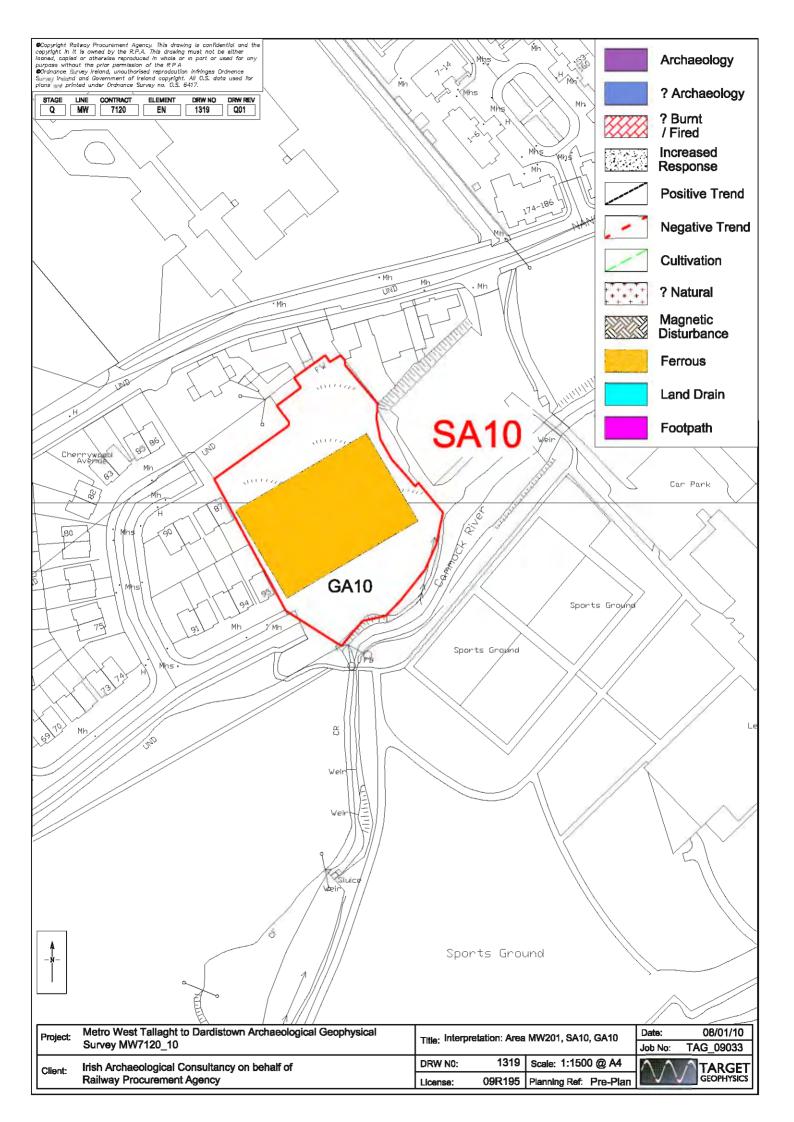


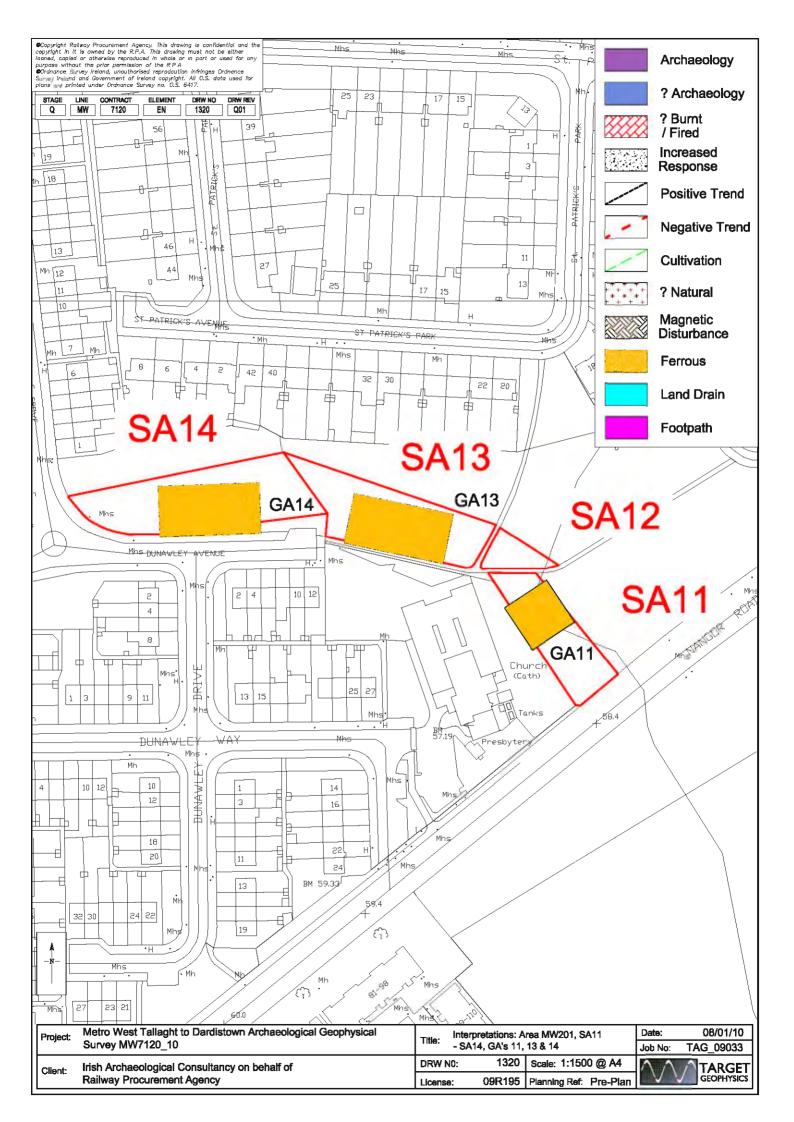


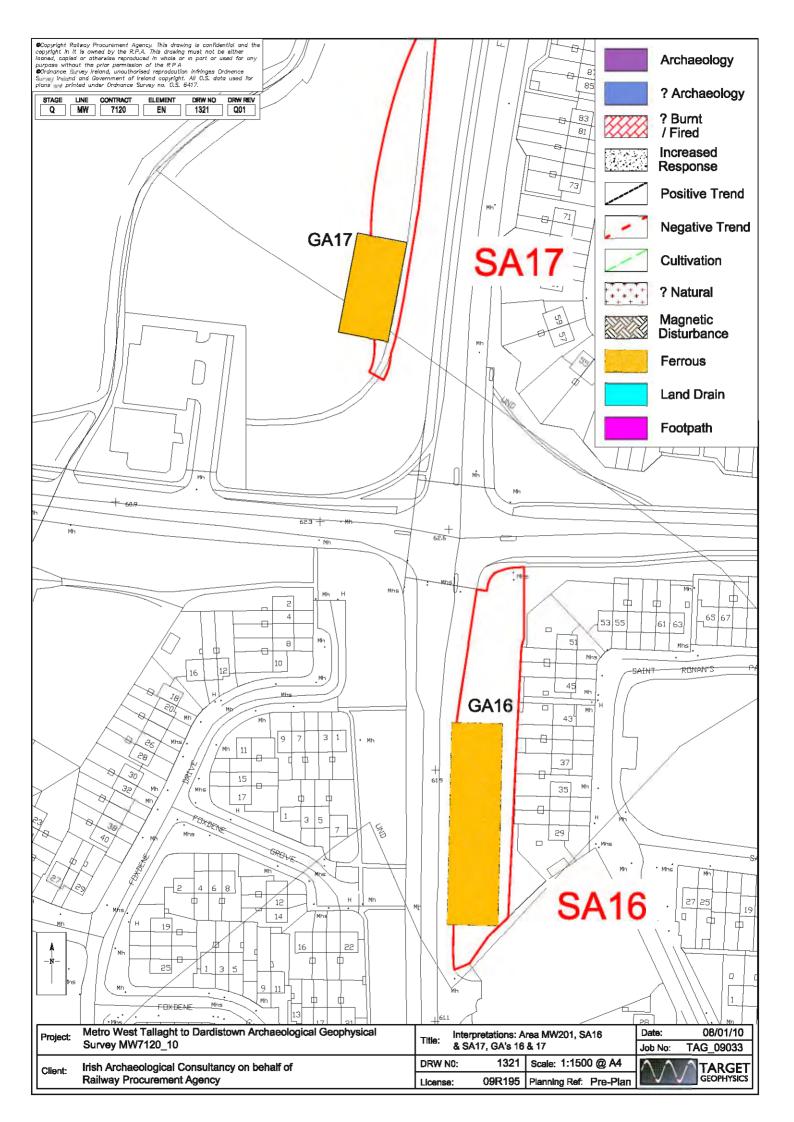


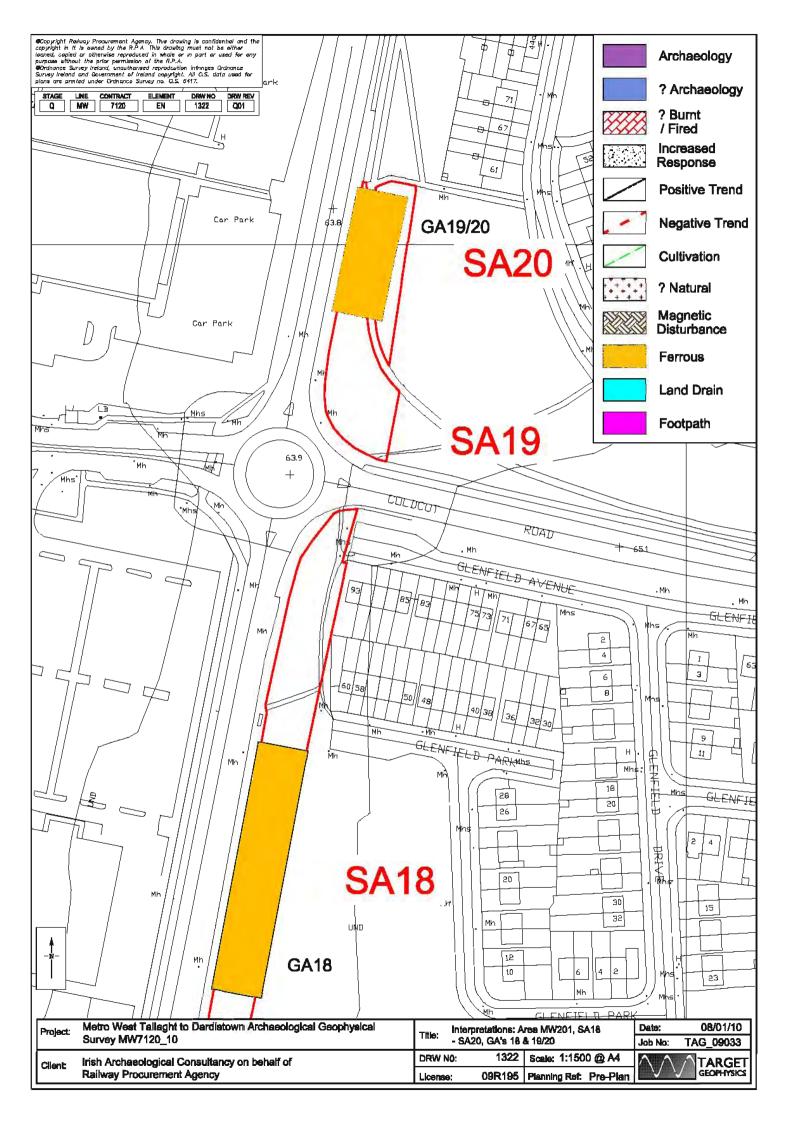


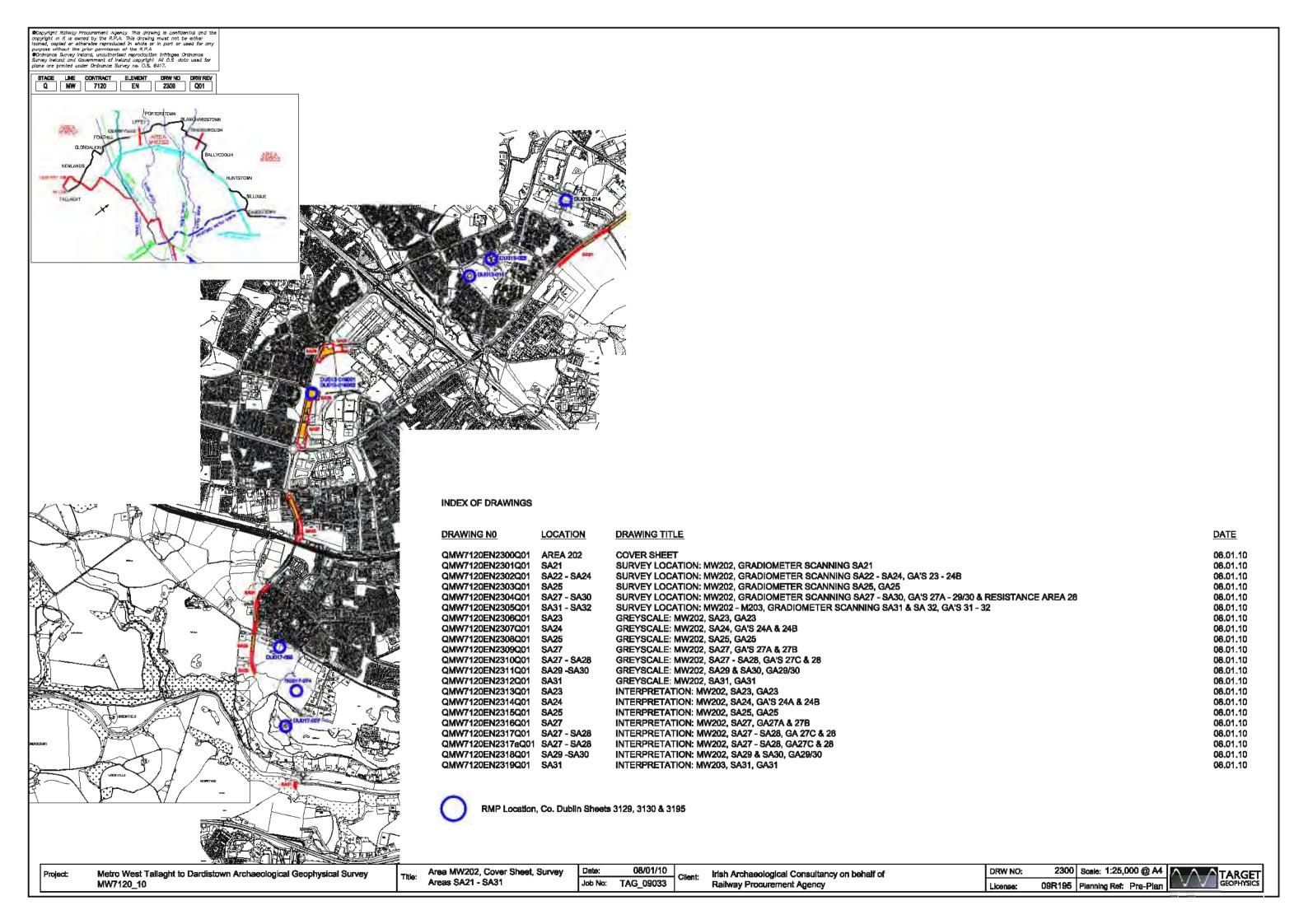


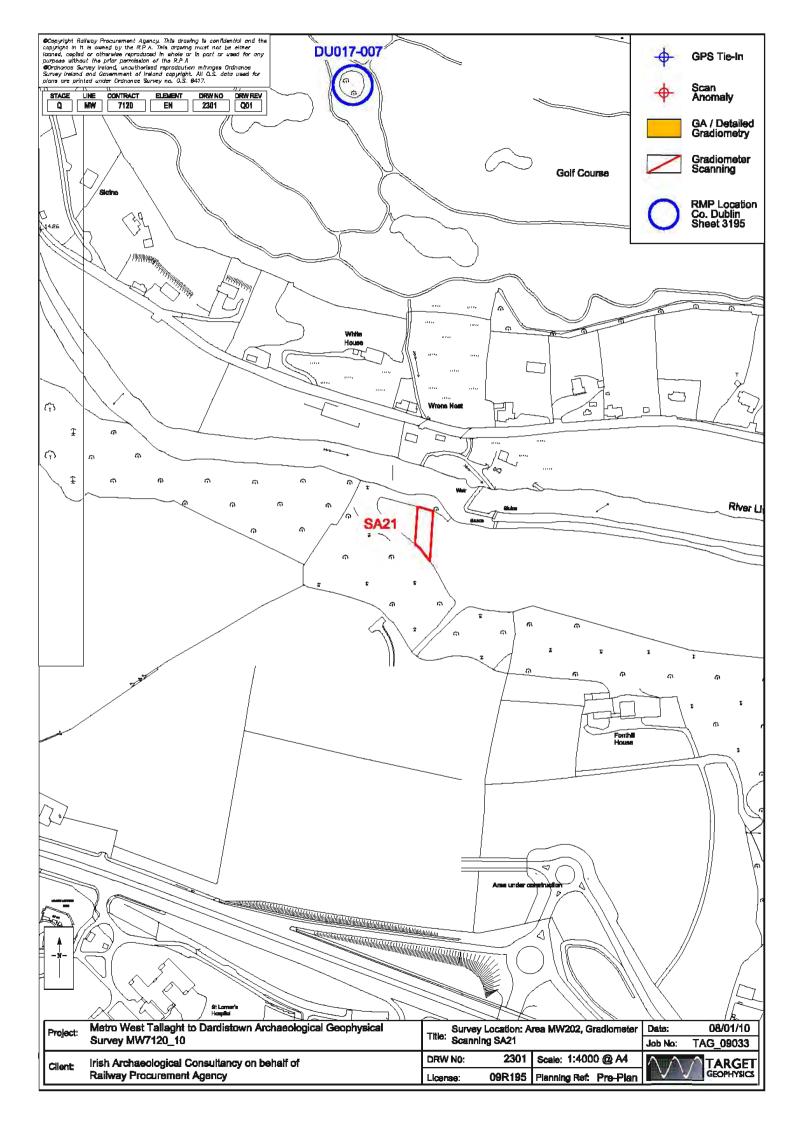


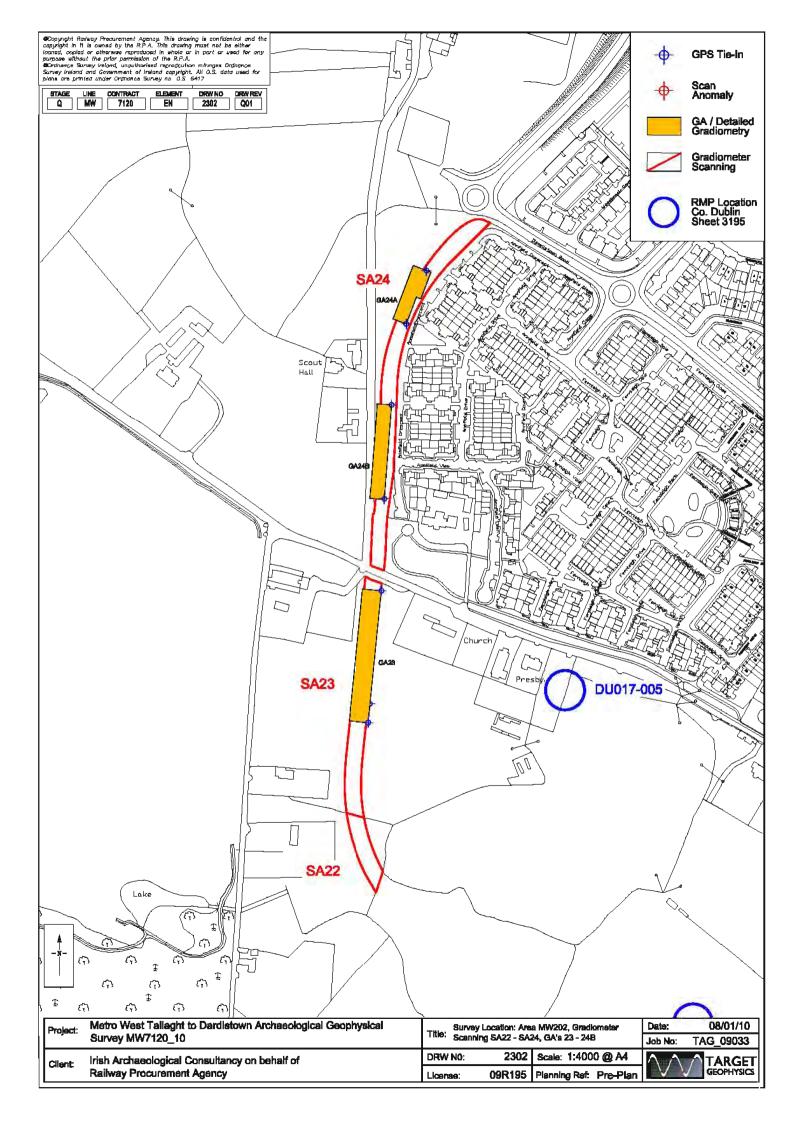


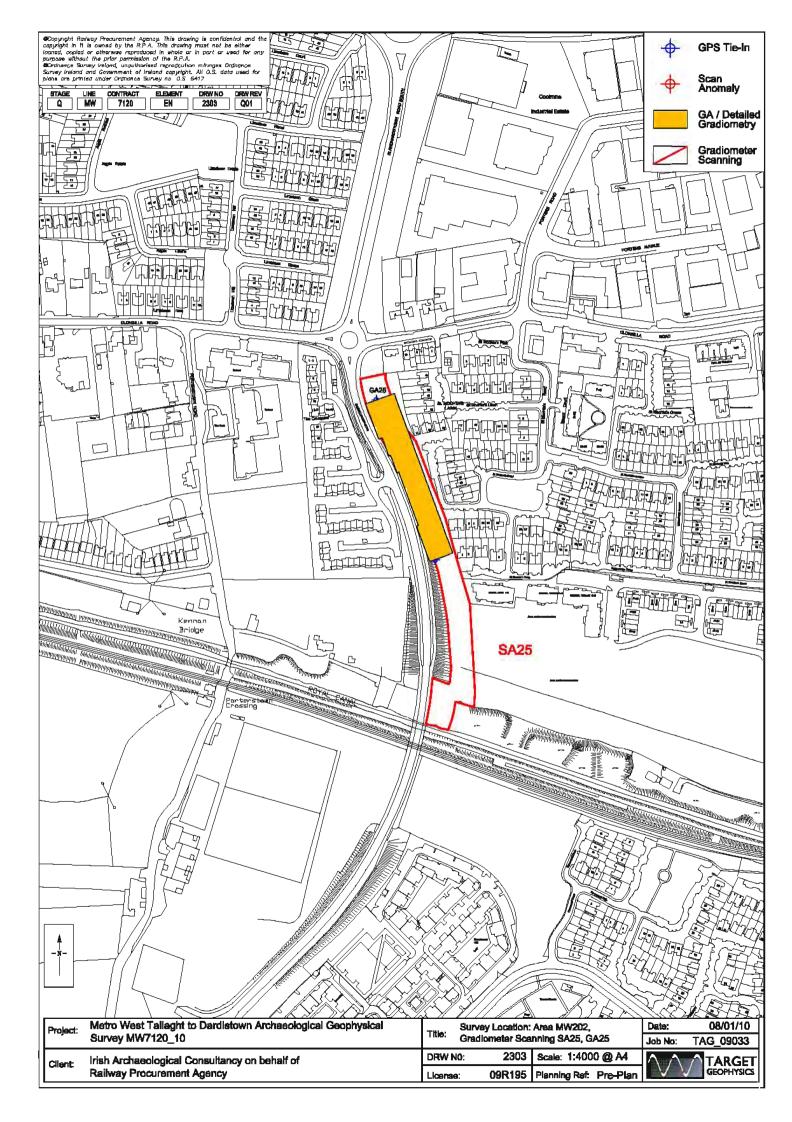


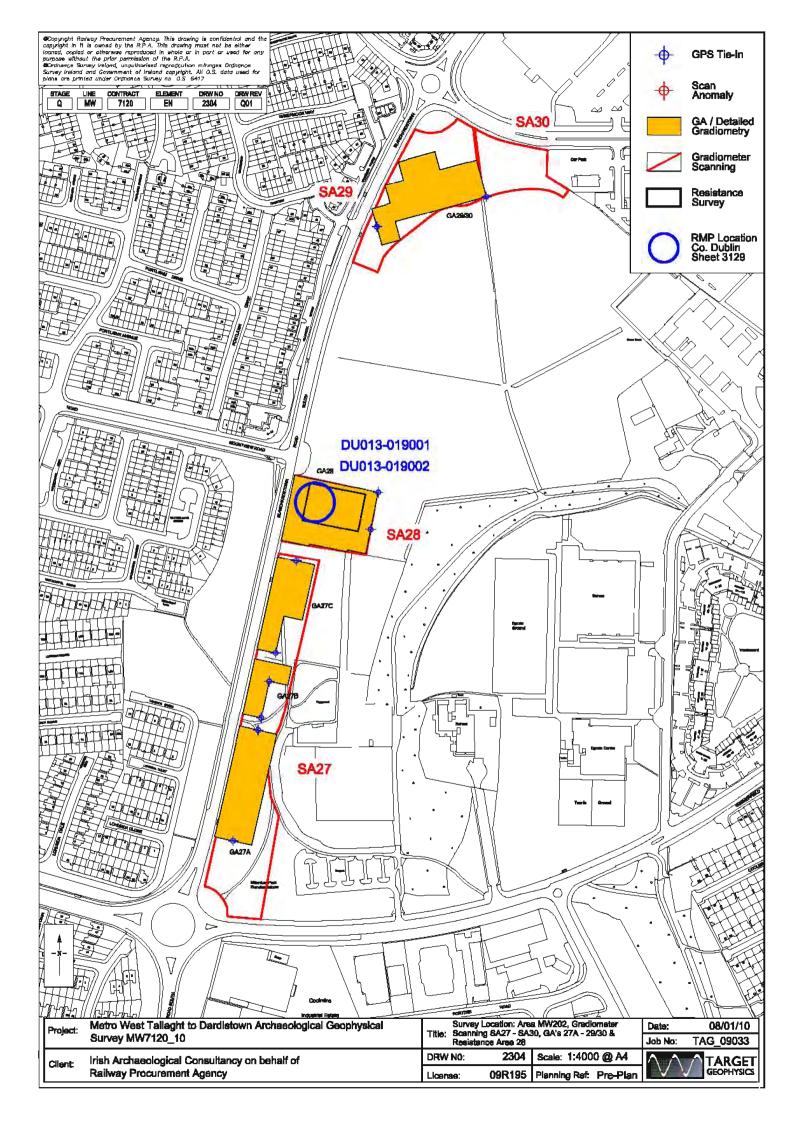


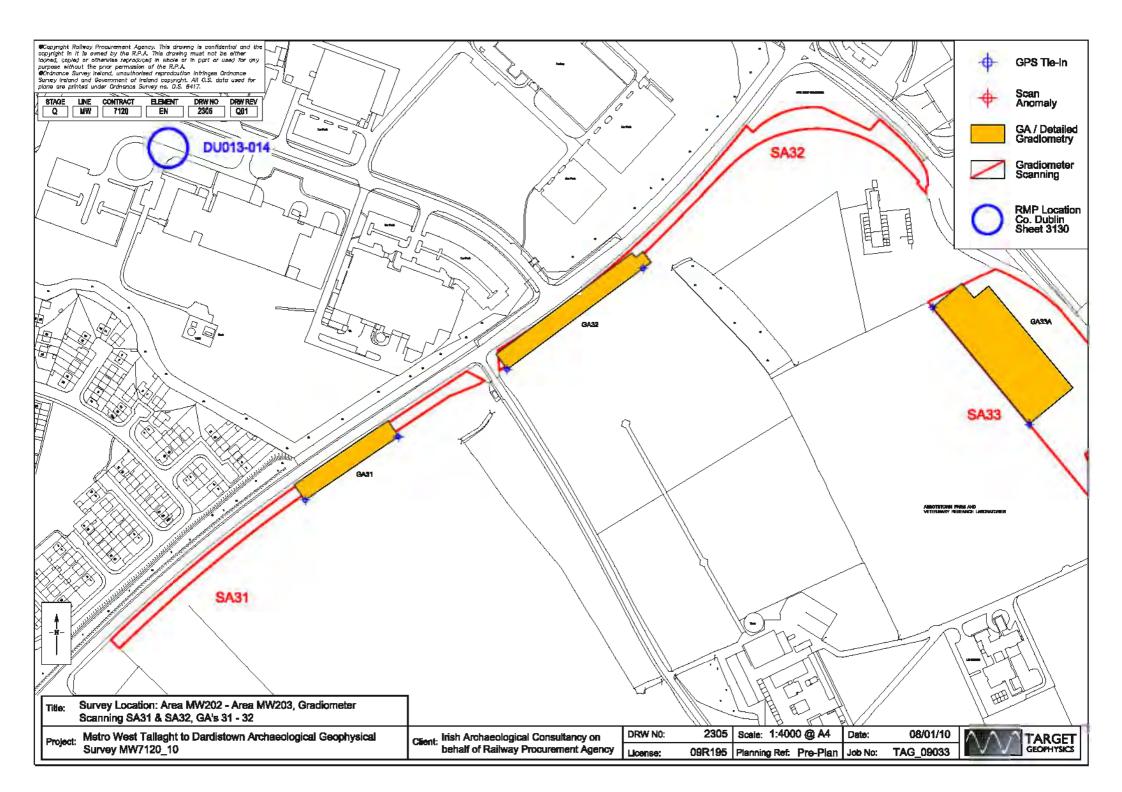


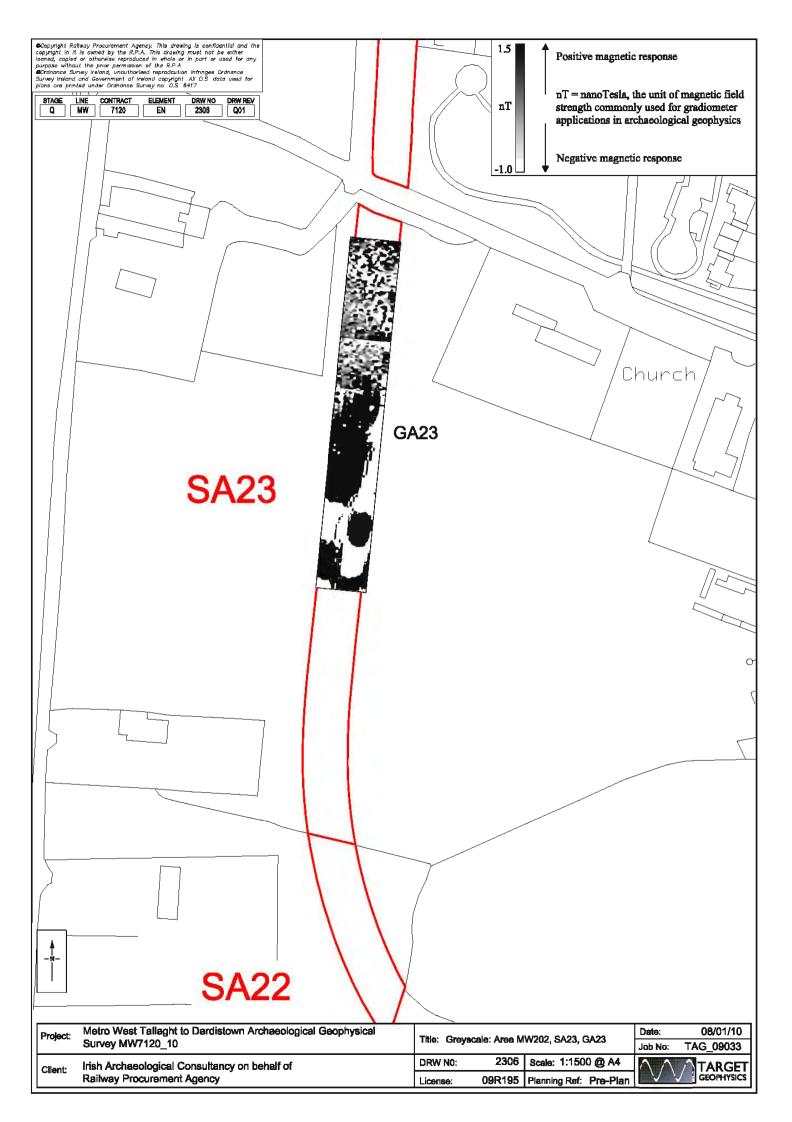


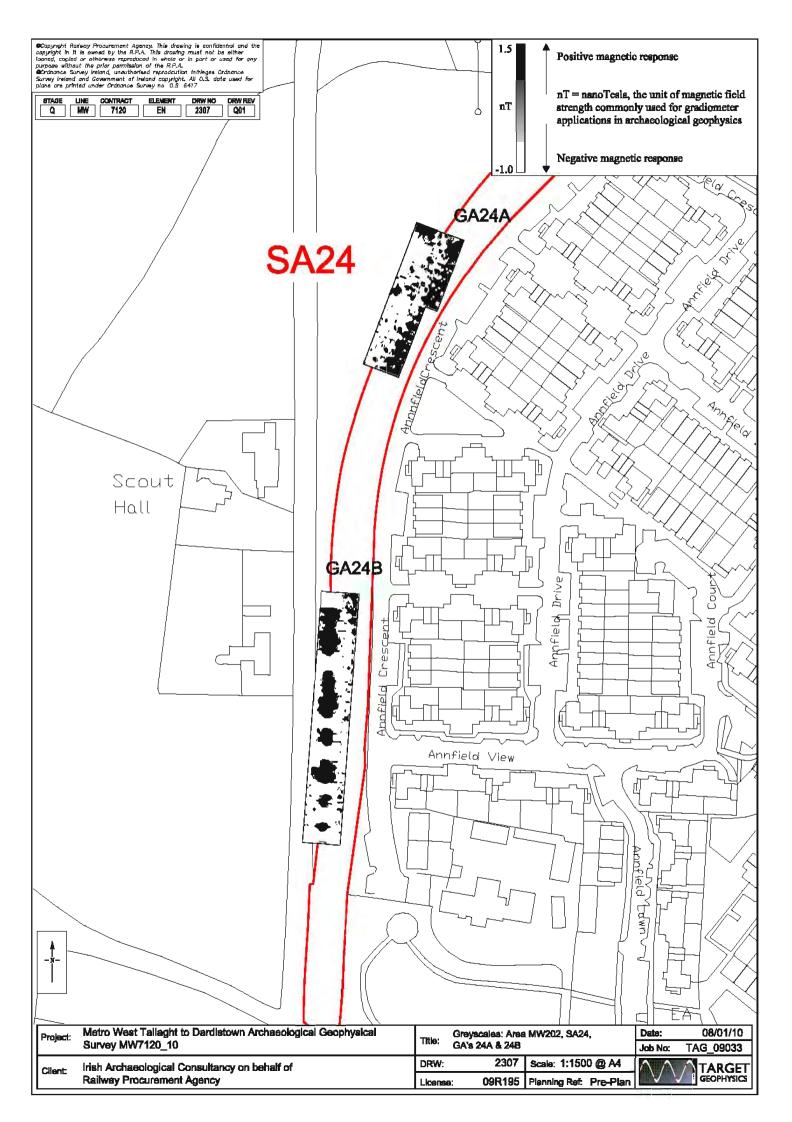


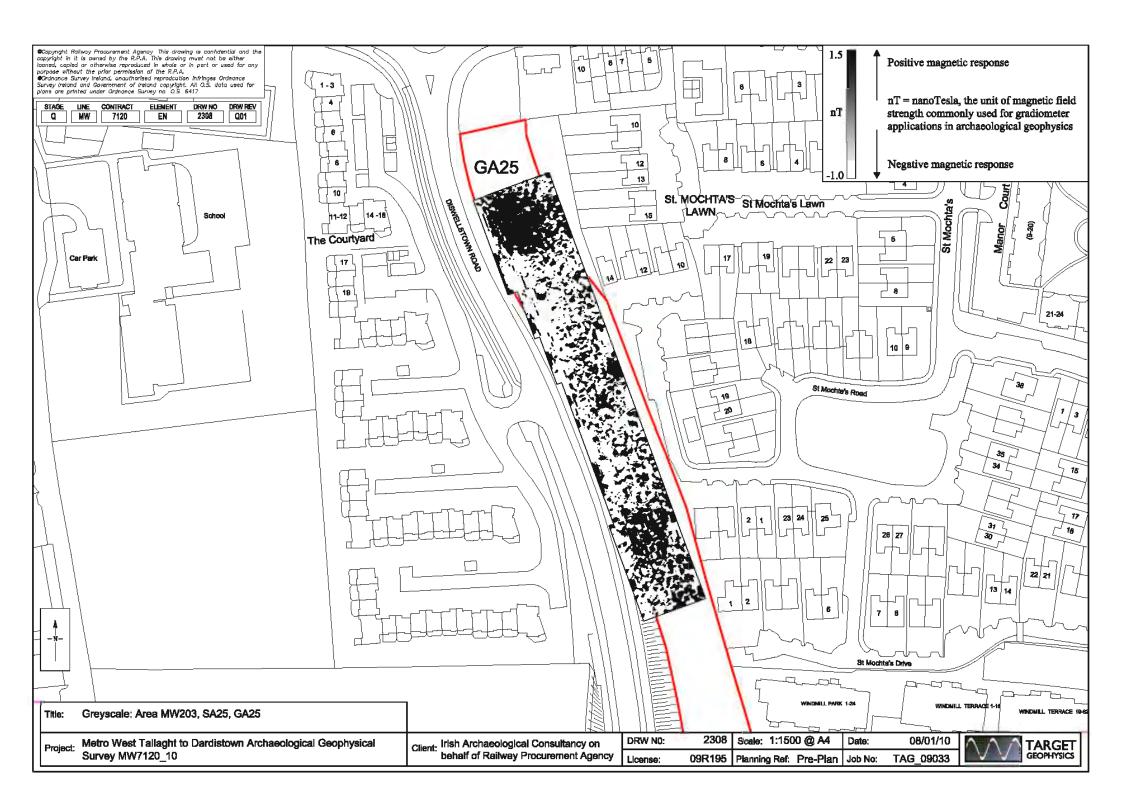


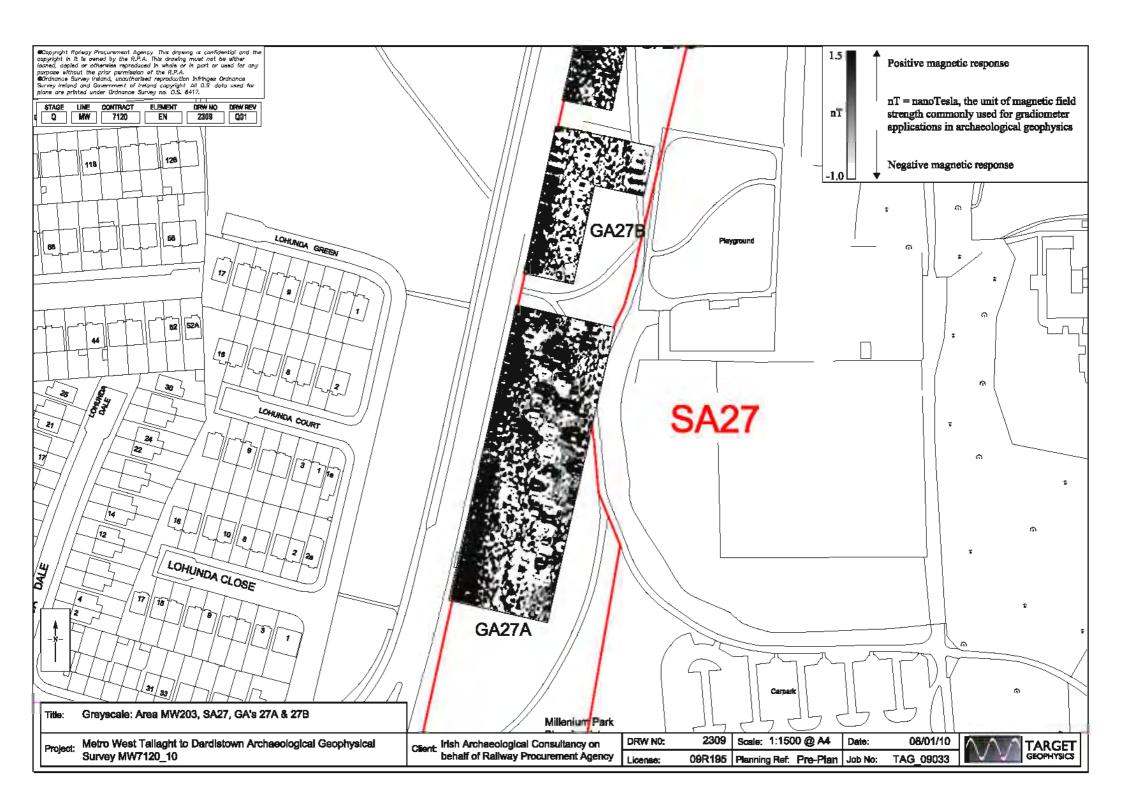


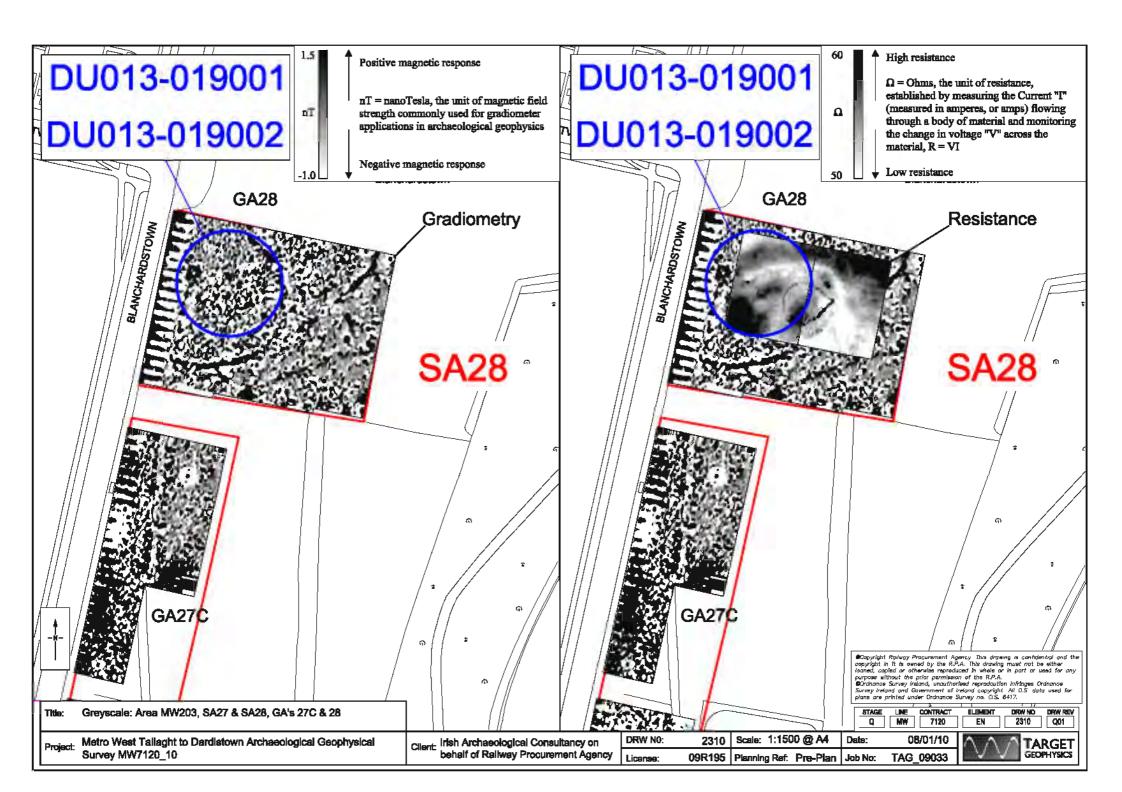


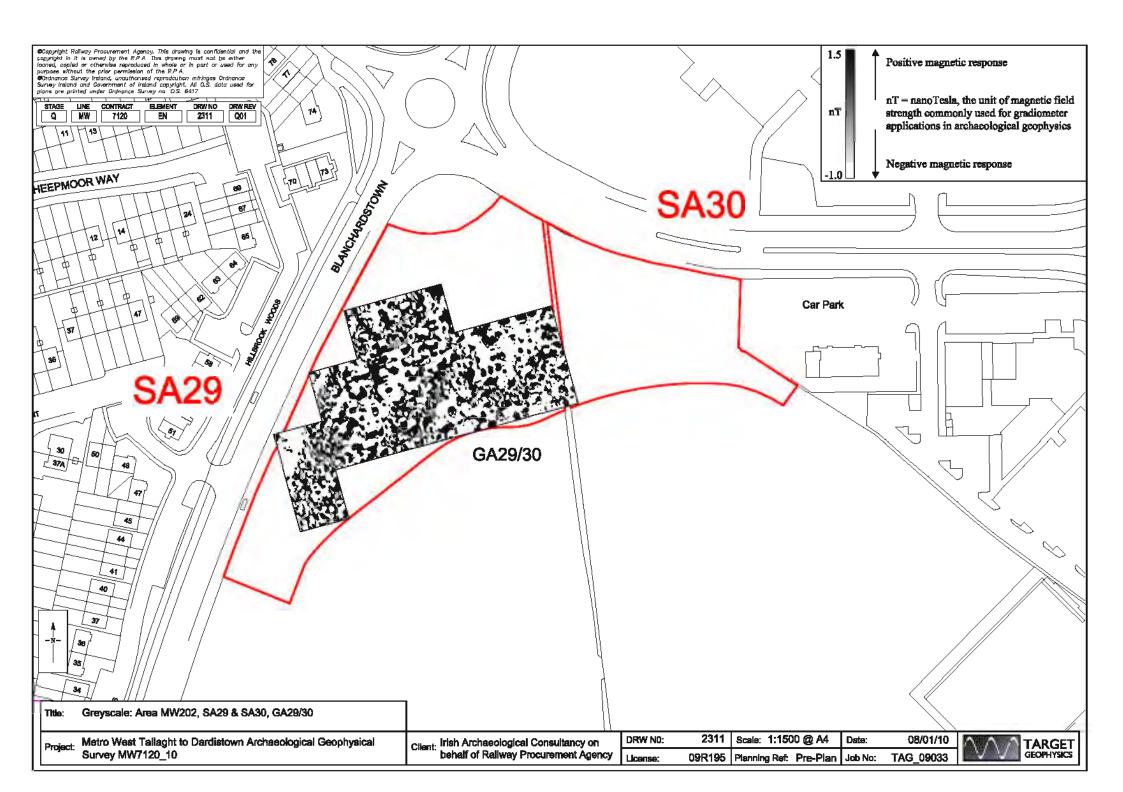


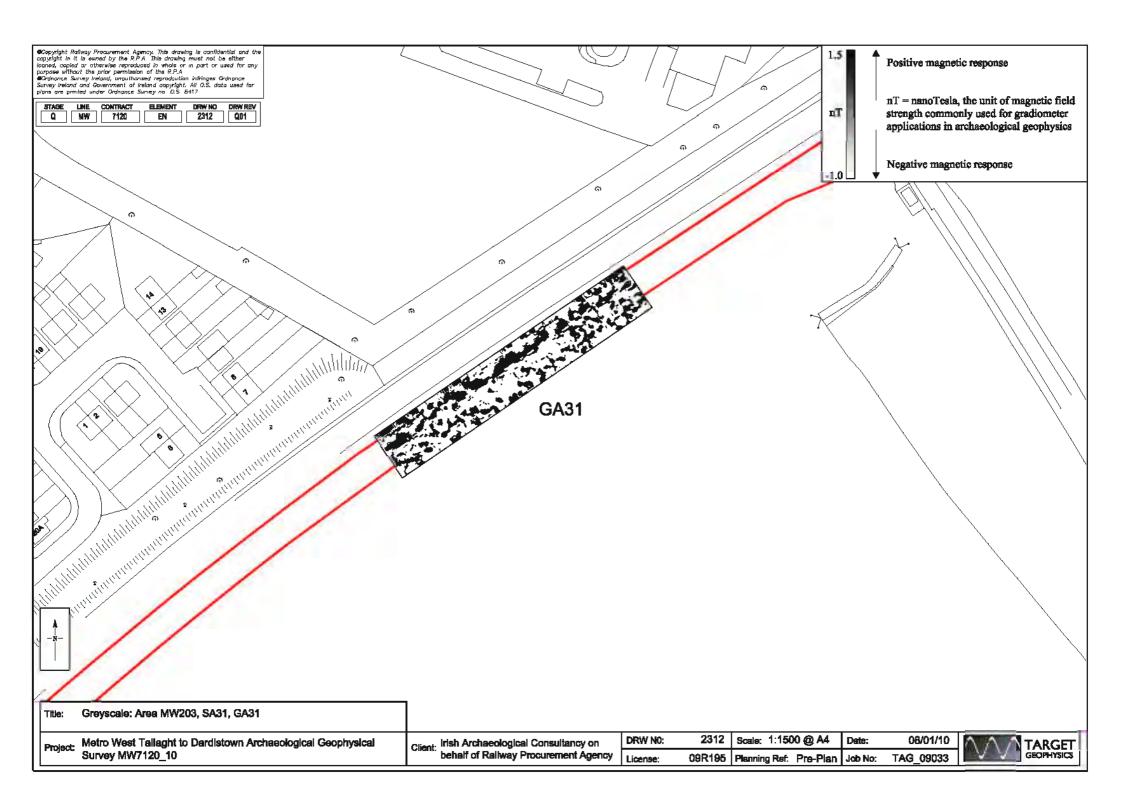


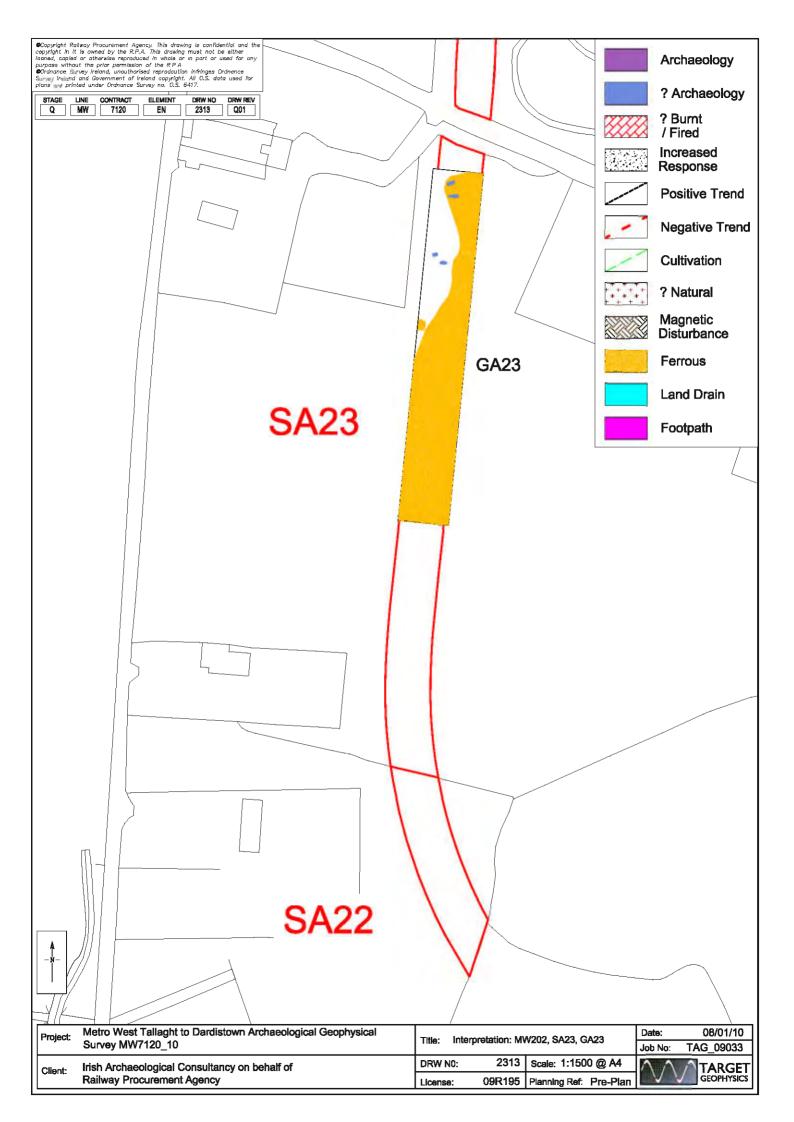


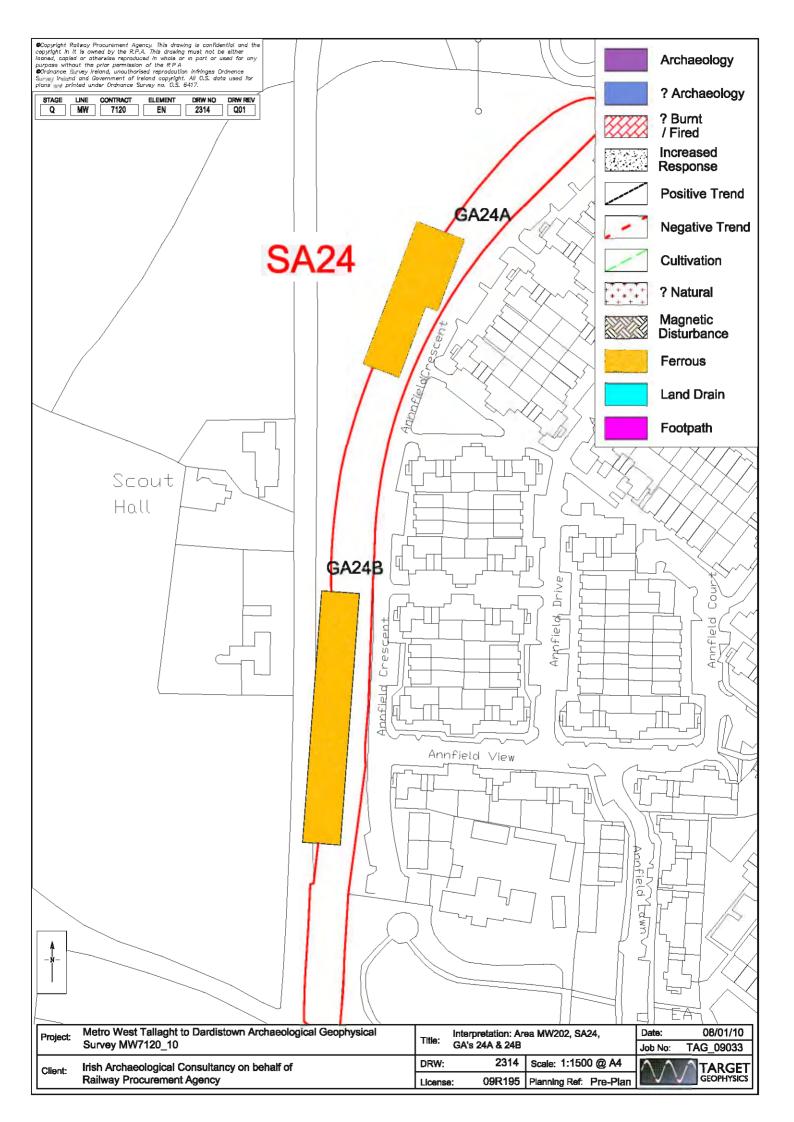


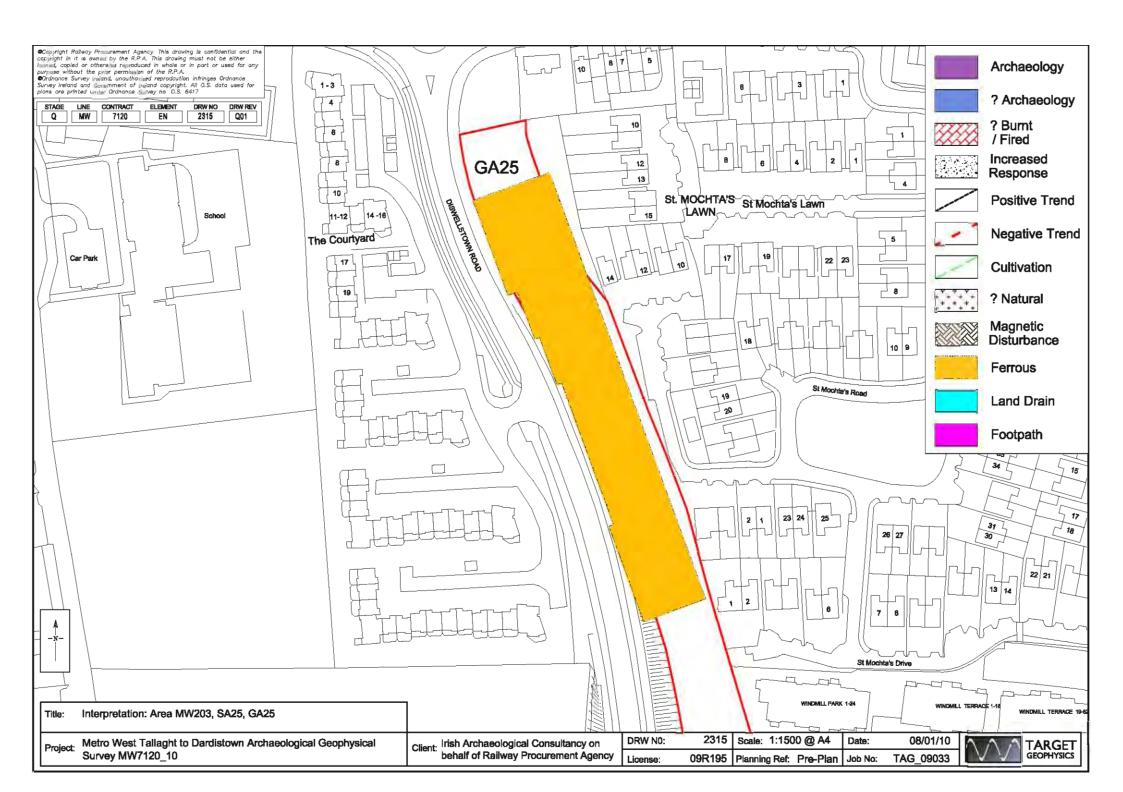


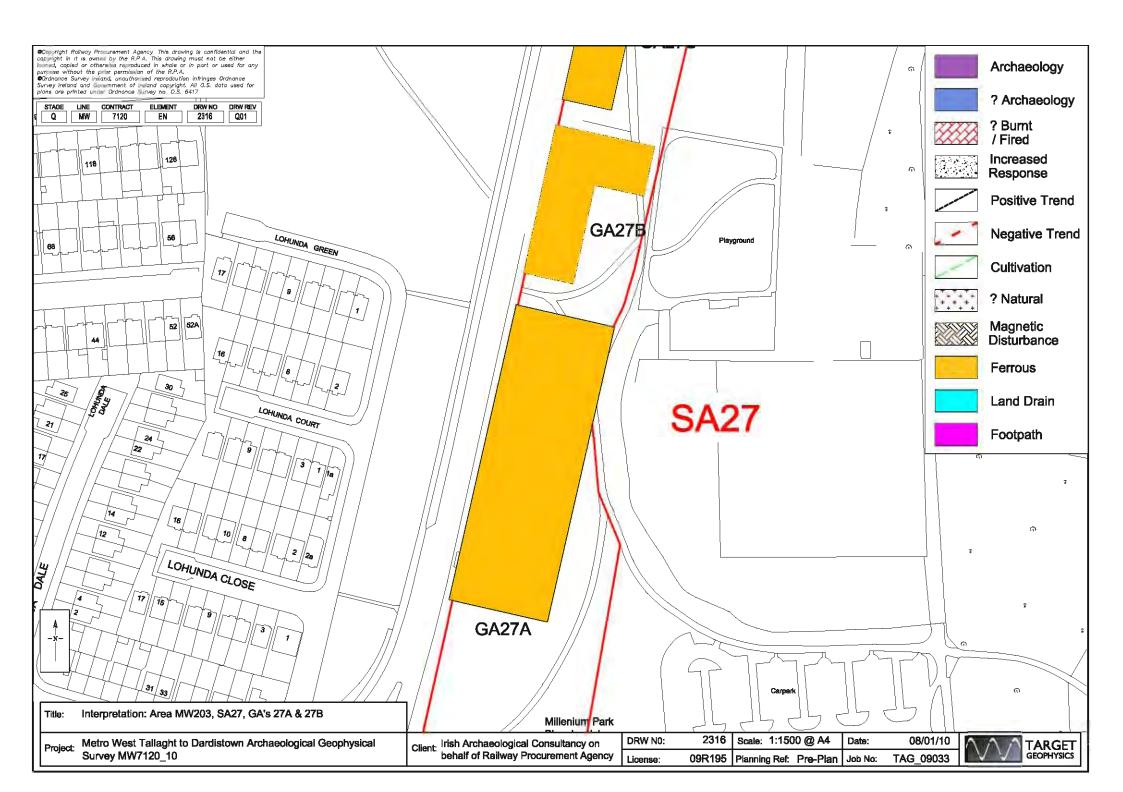


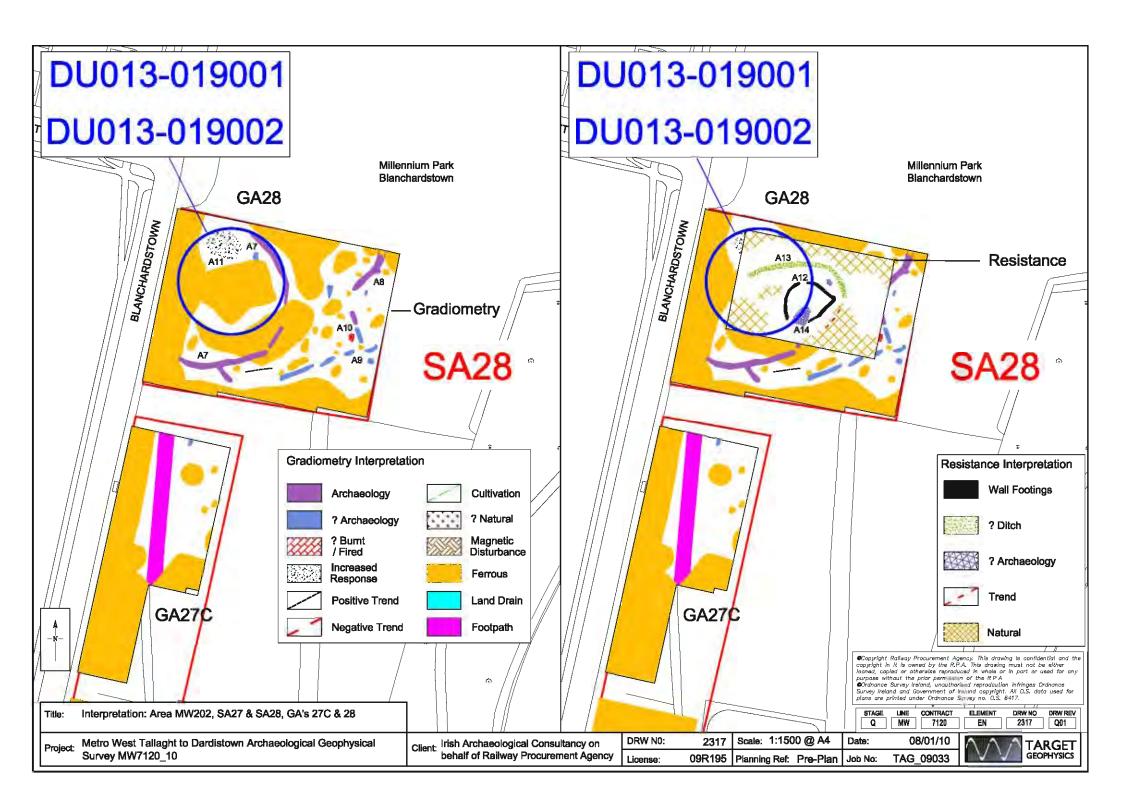


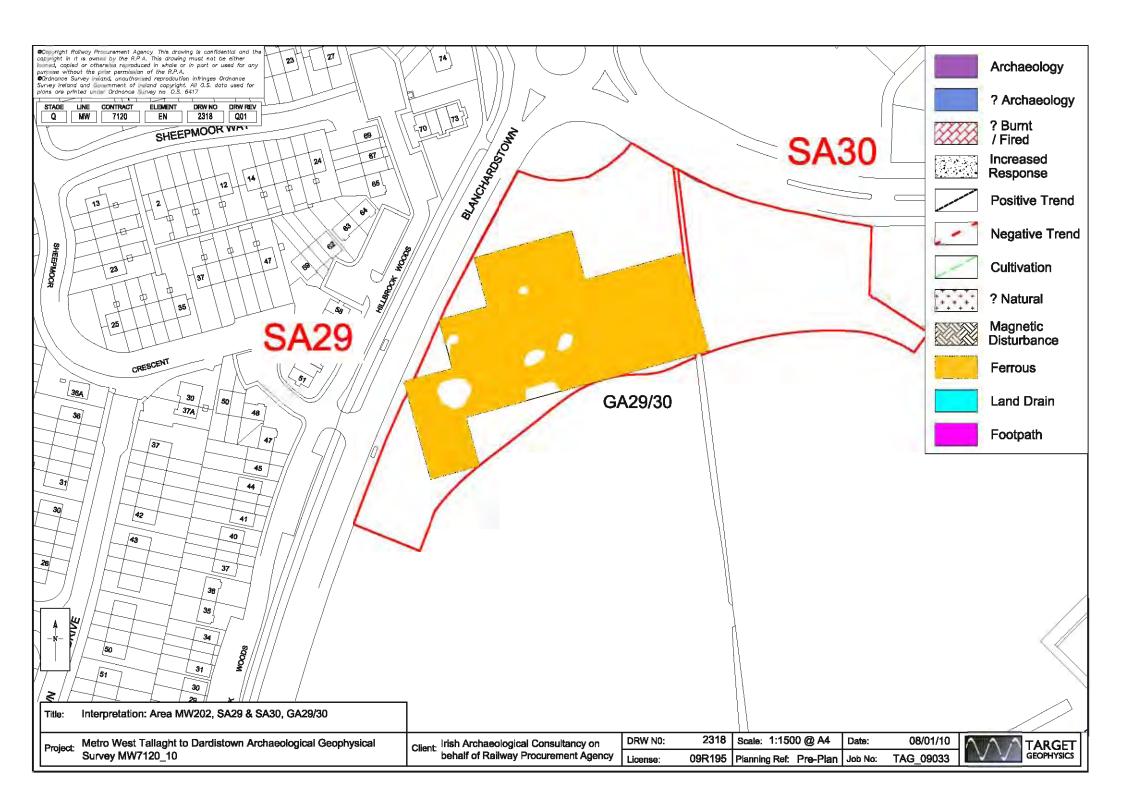


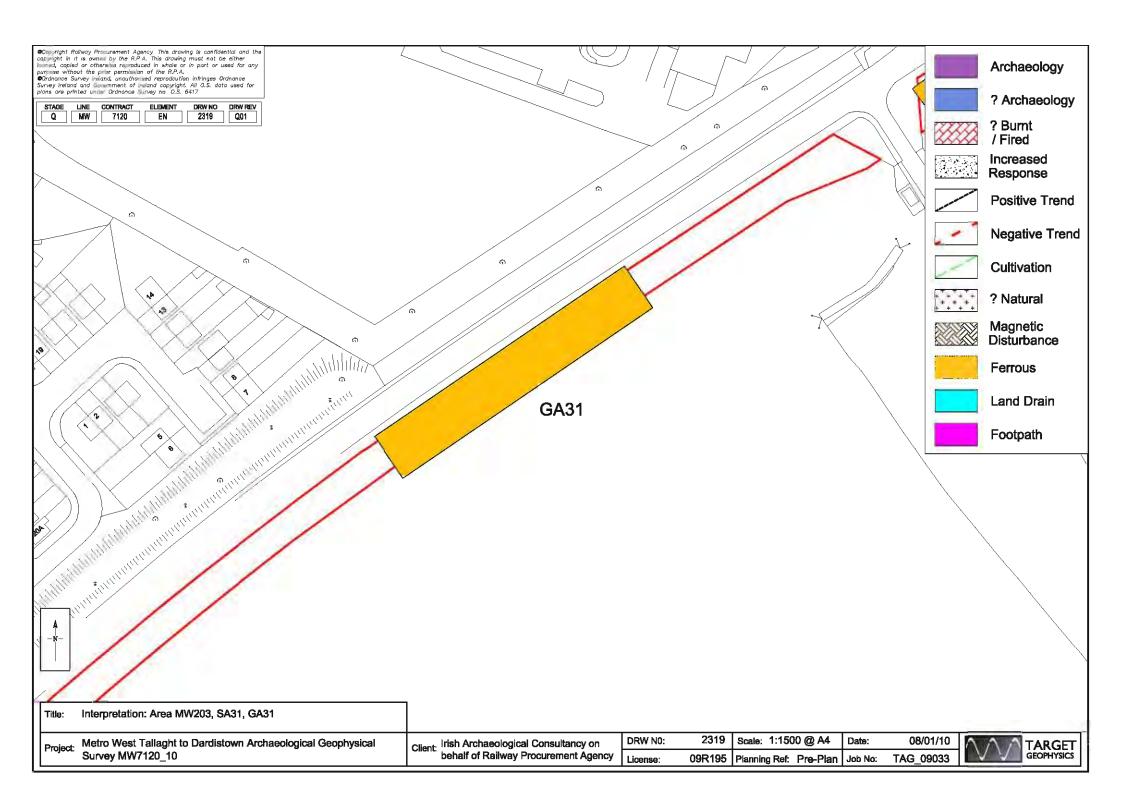












## INDEX OF DRAWINGS

DRAWING NO	LOCATION	DRAWING TITLE	DATE
QMW7120EN3300Q01	AREA 203	COVER SHEET	08.01.10
QMW7120EN3301Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA32 - SA34, GA'S 32 - 34	08.01.10
QMW7120EN3302Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA33 - SA38, GA'S 33A - 38B	08.01.10
QMW7120EN3303Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA42 - SA47, GA'S 42 - 47	08.01.10
QMW7120EN3304Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA46 - SA52, GA'S 47 - 52	08.01.10
QMW7120EN3305Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA53 - SA74, GA'S 53 - 74	08.01.10
QMW7120EN3306Q01	SA74 - SA61	SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA75 - SA61, GA'S 74 - 61	08.01.10
QMW7120EN3307Q01		SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA61 - SA68, GA'S 61 - 68	08.01.10
QMW7120EN3308Q01	SA69 - SA72	SURVEY LOCATION: MW203, GRADIOMETER SCANNING SA69 - SA72, GA'S 71A - 72B	08.01.10
QMW7120EN3309Q01	SA32	GREYSCALE: MW203, SA32, GA32	08.01.10
QMW7120EN3310Q01	SA33	GREYSCALE: MW203, SA33, GA33A	08.01.10
QMW7120EN3311Q01	SA33 - SA35	GREYSCALE: MW203, SA33 - SA35, GA'S 33B -35	08.01.10
QMW7120EN3312Q01	SA36	GREYSCALE: MW203, SA36 - SA38, GA'S 36 - 38B	08.01.10
QMW7120EN3313Q01	SA42 - SA44	GREYSCALE: MW203, SA42 - SA44, GA'S 42 - 44	08.01.10
QMW7120EN3314Q01	SA45 - SA47	GREYSCALE: MW203, SA45 & SA47, GA'S 45 & 47	08.01.10
QMW7120EN3315Q01		GREYSCALE: MW203, SA48 - SA52, GA'S 48A - 52	08.01.10
QMW7120EN3316Q01	SA53 & SA54	GREYSCALE: MW203, SA53 & SA54, GA'S 53 - 54D	08.01.10
QMW7120EN3317Q01		GREYSCALE: MW203, SA74 - SA76, GA'S 74 - 76	08.01.10
QMW7120EN3318Q01		GREYSCALE: MW203, SA77 & SA78, GA'S 77 - 78	08.01.10
QMW7120EN3319Q01		GREYSCALE: MW203, SA79 & SA61, GA'S 79 & 61	08.01.10
QMW7120EN3320Q01		GREYSCALE: MW203, SA62, GA'S 62A & 62B	08.01.10
QMW7120EN3321Q01		GREYSCALE: MW203, SA62 & SA64, GA'S 62C, 62D, 63 & 64	08.01.10
QMW7120EN3322Q01	<b>,</b>	GREYSCALE: MW203, SA77 & SA78, GA'S 62E, 65 & 66	08.01.10
QMW7120EN3323Q01		GREYSCALE: MW203, SA67 & SA68, GA'S 67 & 68	08.01.10
QMW7120EN3324Q01		GREYSCALE: MW203, SA71, GA'S 71A & 71B	08.01.10
QMW7120EN3325Q01		GREYSCALE: MW203, SA72, GA'S 72A & 72B	08.01.10
QMW7120EN3326Q01		INTERPRETATION: MW203, SA32, GA32	08.01.10
QMW7120EN3327Q01		INTERPRETATION: MW203, SA33, GA33A	08.01.10
QMW7120EN3328Q01		INTERPRETATION: MW203, SA33 - SA35, GA'S 33B -35	08.01.10
QMW7120EN3329Q01		INTERPRETATION: MW203, SA36 - SA38, GA'S 36 - 38B	08.01.10
QMW7120EN3330Q01		INTERPRETATION: MW203, SA42 - SA44, GA'S 42 - 44	08.01.10
QMW7120EN3331Q01		INTERPRETATION: MW203, SA45 & SA47, GA'S 45 & 47	08.01.10
QMW7120EN3332Q01		INTERPRETATION: MW203, SA48 - SA52, GA'S 48A - 52	08.01.10
QMW7120EN3333Q01		INTERPRETATION: MW203, SA53 & SA54, GA'S 53 - 54D	08.01.10
QMW7120EN3334Q01		INTERPRETATION: MW203, SA74 - SA76, GA'S 74 - 76	08.01.10
QMW7120EN3335Q01		INTERPRETATION: MW203, SA77 & SA78, GAIS 77 - 78	08.01.10
QMW7120EN3336Q01 QMW7120EN3337Q01		INTERPRETATION: MW203, SA79 & SA61, GAIS 79 & 61	08.01.10 08.01.10
		INTERPRETATION: MW203, SA62, GA'S 62A & 62B INTERPRETATION: MW203, SA62 & SA64, GA'S 62C, 62D, 63 & 64	08.01.10 08.01.10
QMW7120EN3338Q01 QMW7120EN3339Q01			08.01.10
QMW7120EN3339Q01 QMW7120EN3340Q01		INTERPRETATION: MW203, SA77 & SA78, GA'S 62E, 65 & 66 INTERPRETATION: MW203, SA67 & SA68, GA'S 67 & 68	08.01.10
QMW7120EN3340Q01		INTERPRETATION: MW203, SA07 & SA08, GAS 67 & 66 INTERPRETATION: MW203, SA71, GA'S 71A & 71B	08.01.10
QMW7120EN3342Q01		INTERPRETATION: MW203, SA71, GA3 718 & 718 INTERPRETATION: MW203, SA72, GA'S 728 & 728	08.01.10
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RMP Location, Co. Dublin Sheets 3063, 3130 & 3131

