

PROPOSED SKATE PARK EXPANSION

CROOKLETS

BUDE

CORNWALL

Results of a Geophysical Survey



South West Archaeology Ltd. report no. 231130



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PROPOSED SKATE PARK EXPANSION, CROOKLETS, BUDE, CORNWALL

RESULTS OF A GEOPHYSICAL SURVEY

By P. Webb & N. Boyd
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Work undertaken by SWARCH for Bude Town Council (the Client).

SUMMARY

This report presents the results of a geophysical survey carried out by South West Archaeology Ltd. (SWARCH) on land adjacent to the extant Skate Park, Crooklets, Bude, Cornwall ahead of the proposed construction of a larger skate park. The site lies in the modern town of Bude, within the parish of Poughill, in the historic hundred of Stratton and the deanery of Trigg-Major. The site is situated between two manors: those of Flexbury and Maer. In the early 19th century Flexbury was the residence of Mr. Ralph Cole but belonged to the Reverend Charles Dayman; the property of Maer being both owned and resided in by Richard Martyn Braddon, Esq..

The site lies within a shallow valley located within an area of unenclosed land at Crooklets, between the car park, skate park and the Cricket Ground off Crooklets Road; and comprises a roughly rectangular area of approximately 0.45 hectares. The site lies within an area recorded on the Cornwall HLC as Coastal Rough Ground: Unenclosed sloping ground beyond enclosed fields but above precipitous cliffs. A narrow band of land (from 50m to 800m wide) running along most stretches of the Cornish coast.

The Cornwall HER indicates that only a small amount of archaeological work has been carried out in the immediate area. A walkover survey was carried out on Crooklets beach ahead of the installation of a cable trench in 2002, with a focus on identifying the nature and extent of the submerged forest documented since the 19th century and collecting suitable samples where identified. A peat deposit was found and several large pieces of wood were recovered and sent for analysis, revealing the area to have been carr woodland, fen carr and reedbeds in a system of freshwater streams and ponds.

The LiDAR for the site shows the undulating, rough ground of the area but does not appear to show anything of clear archaeological origin or interest.

The geophysical survey identified two groups of anomalies across the site. These comprised a linear modern utility and possible pit or natural features. Anomalies associated with metallic debris and ground disturbance were also apparent.

The results of the geophysical survey would suggest that the archaeological potential for the site is low. Only a small number of features have been identified, predominantly associated with the modern utilities and the construction of the existing skate park and cricket pitch, although the presence of prehistoric funerary features in the wider landscape means that features of this date cannot be ruled out.



November 2023

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BUDE TOWN COUNCIL (THE CLIENT)
CORNWALL COUNCIL HER STAFF

PROJECT CREDITS

DIRECTOR: DR. SAMUEL WALLS, MCIFA
FIELDWORK: ALASTAIR NOCK
REPORT: PETER WEBB; NATALIE BOYD
EDITING: NATALIE BOYD
GRAPHICS: PETER WEBB

1.0 INTRODUCTION

LOCATION:	LAND ADJACENT TO THE SKATE PARK, CROOKLETS
PARISH:	BUDE
COUNTY:	CORNWALL
NGR:	CENTRED ON SS 20399 07061
PLANNING NO.:	PA21/03010/PREAPP
SWARCH REF.	BSKP23
OASIS REF:	SOUTHWES1-520984

1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Bude Town Council (the Client) to undertake a geophysical survey on land adjacent to the current Skate Park, Crooklets, Bude, Cornwall as part of proposals for the construction of a larger skate park. This work was undertaken in consultation with the HEP (Arch), and in line with best practice and ClfA guidance.

1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site is located within an area of unenclosed land at Crooklets, between the car park, skate park and the Cricket Ground off Crooklets Road; and comprises a roughly rectangular area of approximately 0.45 hectares. The site lies in a shallow valley at a height of c.8m AOD. The soils of this area are the well-drained fine loamy soils over rock of the Neath Association (SSEW 1983), which overlie the sedimentary sandstone of the Bude Formation (BGS 2023).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

The site lies in the modern town of Bude, within the parish of Poughill, in the historic hundred of Stratton and the deanery of Trigg-Major (Lysons 1814). The manor of Poughill was given by the Earl of Kent, Hubert de Burgh, to the abbey of Clive, Somerset. King James I sold the manor to George Salter and John Williams. It was recorded by Borlase as being owned for a time by Mr. John Stanbury of Broomhill and Lysons records that in the early 19th century it was held by a London surgeon, John Cunyngham Saunders, Esq. before being sold to Thomas Trood, Esq.. The site is situated between two manors: those of Flexbury and Maer. In the early 19th century Flexbury was the residence of Mr. Ralph Cole but belonged to the Reverend Charles Dayman; the property of Maer being both owned and resided in by Richard Martyn Braddon, Esq..

The site lies within an area recorded on the Cornwall Historic Landscape Characterisation (HLC) as *Coastal Rough Ground: Unenclosed sloping ground beyond enclosed fields but above precipitous cliffs*. A narrow band of land (from 50m to 800m wide) running along most stretches of the Cornish coast.

A Desk-Based Assessment was carried out for the site by Oakford Archaeology in October 2023 (Steinmetzer and Patkai 2023). This considers the documentary and cartographic history of the site, as well as the heritage assets within the surrounding landscape. The section on the history of the site reads:

The Poughill Tithe Map of 1840 indicates that the site was located within a large open area of land known as 'Summery Lays' owned and occupied by Thomas Carnsew who owned the manor of Flexberry or Flexbury. Used for pasture, no buildings were located within the field. Following his death his estates were inherited by his son Thomas, a Justice of the Peace and Vicar at Poughill.

The area was mapped by the Ordnance Survey in 1883, when the site was shown in the greatest detail thus far. The land remained open, with the area formerly known as 'Summery Lays' renamed to 'Summerleaze Down'. There may have been commoners grazing rights, although the land had by this time probably already become part of the Thynne Estate which laid out the Cricket Ground to the south of the site at this time.

The land remained remarkably unaltered throughout the early 20th century, as is evidenced by the 1906 Ordnance Survey map, although Flexbury had begun to spread southwards and westwards, towards Maer Down. At the southern end of Maer Down a number of properties had been built, while croquet and tennis pitches had been added to the Cricket Ground on Summerleaze Down.

Summerleaze remained relatively unchanged during the inter-war period and the name Crooklets appears for the first time on the 1933 Ordnance Survey map. The housing to the north of the site expanded around Crooklets, Maer and Flexbury, while a small rectangular building is shown on the western edge of the proposed site, divided into two halves and listed as 'Lavatories'. During the latter half of the 20th century the car park was encroaching on the northern part of the site, while the skatepark was built during the early 21st century.

The Cornwall Historic Environment Record (HER) indicates that only a small amount of archaeological work has been carried out in the immediate area. A walkover survey was carried out on Crooklets beach ahead of the installation of a cable trench in 2002, with a focus on identifying the nature and extent of the submerged forest documented since the 19th century and collecting suitable samples where identified. A peat deposit was found and several large pieces of wood were recovered and sent for analysis, revealing the area to have been carr woodland, fen carr and reedbeds in a system of freshwater streams and ponds.

The LiDAR for the site shows the undulating, rough ground of the area but does not appear to show anything of clear archaeological origin or interest.

1.4 METHODOLOGY

The geophysical (gradiometer) survey was undertaken in accordance with current best practice and CIfA guidance; and follows the guidance outlined in *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008b); *Standard and Guidance for Archaeological Geophysical Survey* (CIfA 2014b); *EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider* (Europae Archaeologiae Consilium/European Archaeological Council 2016).

'Archaeological geophysical survey uses non-intrusive and non-destructive techniques to determine the presence or absence of anomalies likely to be caused by archaeological features, structures or deposits, as far as reasonably possible, within a specified area or site on land, in the inter-tidal zone or underwater. Geophysical survey determines the presence of anomalies of archaeological potential through measurement of one or more physical properties of the subsurface.' (Standard and Guidance for Archaeological Geophysical Survey 2014).

The results of the survey will, as far as possible, inform on the presence or absence, character, extent and in some cases, apparent relative phasing of buried archaeology to inform a strategy to mitigate any threat to the archaeological resource.

PROPOSED SKATE PARK EXPANSION, CROOKLETS, BUDE, CORNWALL

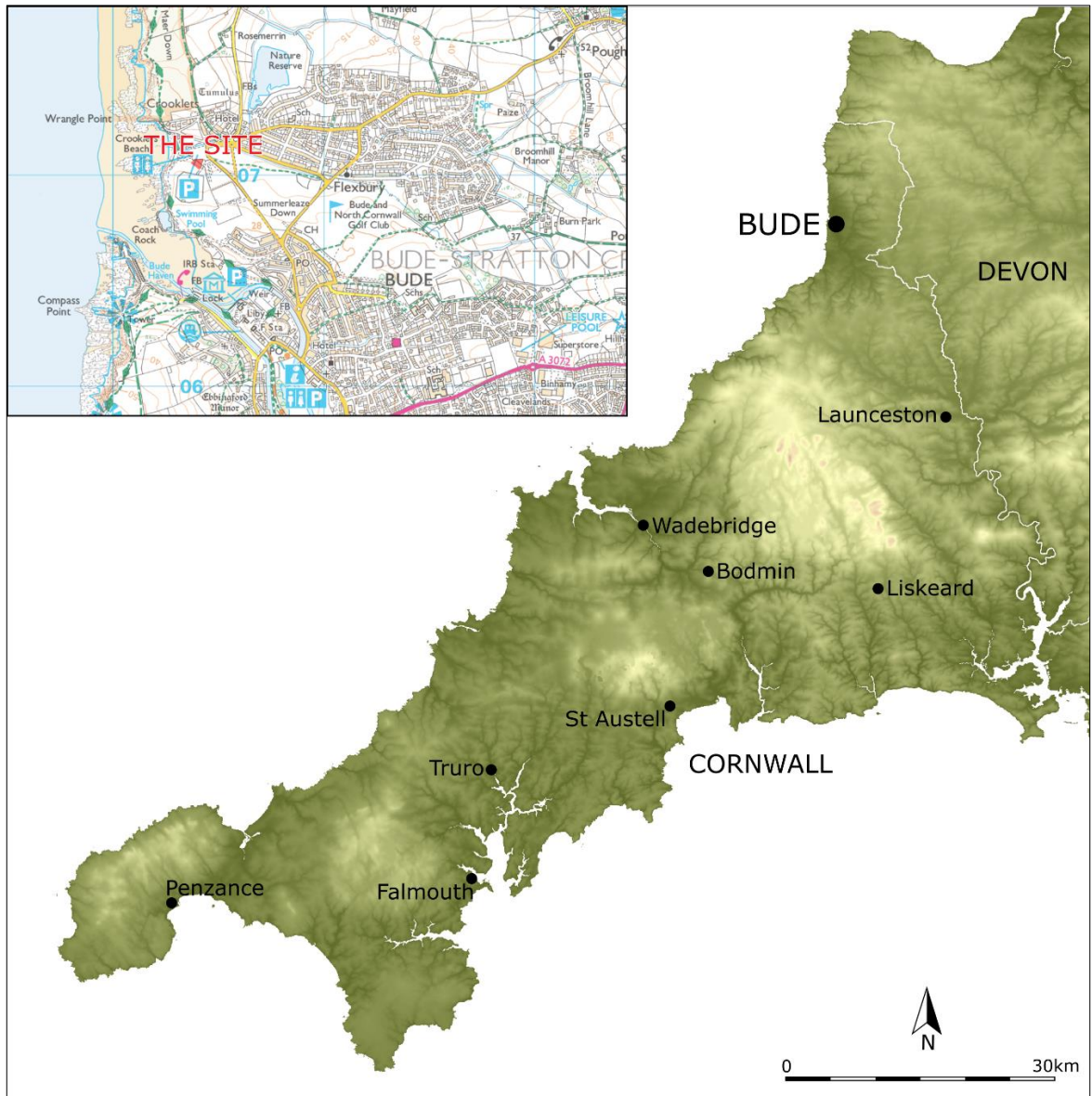


FIGURE 1: SITE LOCATION.

2.0 GEOPHYSICAL SURVEY

2.1 INTRODUCTION

The site comprises part of a larger area of unenclosed land containing chalets, a cricket pitch and an existing skate park. The survey area (F1; located at the northern tip of this area measuring c.0.45ha) was the subject of a magnetometry (gradiometer) survey. The purpose of this survey was to identify and record magnetic anomalies within the proposed site. While identified anomalies may relate to archaeological deposits and structures the dimensions of recorded anomalies may not correspond directly with any associated features. The following discussion attempts to clarify and characterise the identified anomalies. The survey was undertaken on 27th November by Alastair Nock and the survey data processed by P. Webb. Supporting photographic evidence from the site inspection can be found in Appendix 1; detailed survey data in Appendix 2; and additional graphic images of the survey data and numbered grid locations can be found in Appendix 3.

2.2 SITE INSPECTION

The survey area comprises the northern end of a larger irregular parcel of land orientated broadly north to south at the western edge of settlement at Bude. At the time of survey, the site was under scrub. The topography of the site is undulating with dunes which extend to the west. The survey area is bordered to the north and east by car parks and chalets; the north-east by the existing concrete skate park; to the south by a cricket pitch; and to the west by sand dunes. The site is bounded by modern fencing.

No earthworks of an archaeological nature were identified within the site boundary.

2.3 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *EAC Guidelines for the use of geophysics in Archaeology: Questions to Ask and Points to Consider* (Europae Archaeologiae Consilium/European Archaeological Council 2016) and *Standard and Guidance for Archaeological Geophysical Survey* (ClfA 2014b).

The survey was carried out using a twin-sensor fluxgate gradiometer (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid and set out using a Leica CS15 GNSS Rover GPS. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor64 Version 4.1.1.0*. The primary data plots and analytical tools used in this analysis were *Shade* and *Metadata*. A technical summary of the survey method, and data details and processing can be seen in Appendix 2.

2.4 RESULTS

Table 1 with the accompanying Figures 2-3 show the analyses and interpretation of the geophysical survey data. Additional graphic images of the survey data and numbered grid locations can be found in Appendix 3.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
Field F1				
1	Very strong positive & negative, probable	Linear	Modern utility	Indicative of buried modern utilities. Orientated approximately north-west to south-east. Responses of between -115.93nT to -20.01nT and +8.84nT to +117.90nT.
2	Weak positive, possible	Discrete	Pit or natural feature	Indicative of discrete cut and infilled features such as pits. Weaker responses may indicate natural features. Responses of between +0.41nT and +15.32nT.
	Moderate dipolar (mixed response)	Discrete	Ferrous anomaly	Indicative of metallic objects. Responses of between -100.89nT and +100.60nT.
	Strong bipolar (mixed response)	Irregular	Modern disturbance	Indicative of disturbed ground and disturbance caused by proximity to metallic fences and debris. Responses of between -108.49nT and +97.60nT.

2.5 DISCUSSION

The survey identified two groups of anomalies across the site. These comprised a linear modern utility and possible pit or natural features. Anomalies associated with metallic debris and ground disturbance were also apparent.

The general response variation across the site was between +/-1nT with occasional clear background geological variation up to +/-3nT. The response strength of probable archaeological activity was low (typically between +/-15nT), the much stronger responses (+/-120nT) representing metallic anomalies and modern utility features. The weaker responses of some of the anomalies may indicate that these are only likely to survive to a shallow depth or that they have a natural origin.

The anomaly groups identified include: modern utilities (Group 1) and possible pits (Group 2).

2.6 ARCHAEOLOGICAL POTENTIAL AND IMPACT SUMMARY

Whilst none of the identified features can at this stage be dated, the surrounding land is classified as *Coastal Rough Ground* and which was largely open common land bordering enclosed fields and it is possible that prehistoric features could be present.

The strength of the responses of the Group 1 anomaly, along with its alignment along the edge of the existing skate park, indicates that this is likely a modern utility; the disturbed ground responses surrounding it and the skate park, and the edge of the cricket pitch likely a result of their construction.

A small number of possible pit features (Group 2) were identified across the site, though the weak and irregular nature of the responses may indicate that they are natural in origin.

The degree of preservation of the identified features appears to be good, mostly likely due to their modern origin. Whilst this suggests that few, if any, other features may be present on the site, it is possible that additional ephemeral features are masked by the background geology and depths of wind-blown sands.

The results of the geophysical survey would suggest that the archaeological potential for the site is *low*. Only a small number of features have been identified, predominantly associated with the modern utilities and the construction of the existing skate park and cricket pitch, although the presence of prehistoric funerary features in the wider landscape means that features of this date cannot be ruled out.

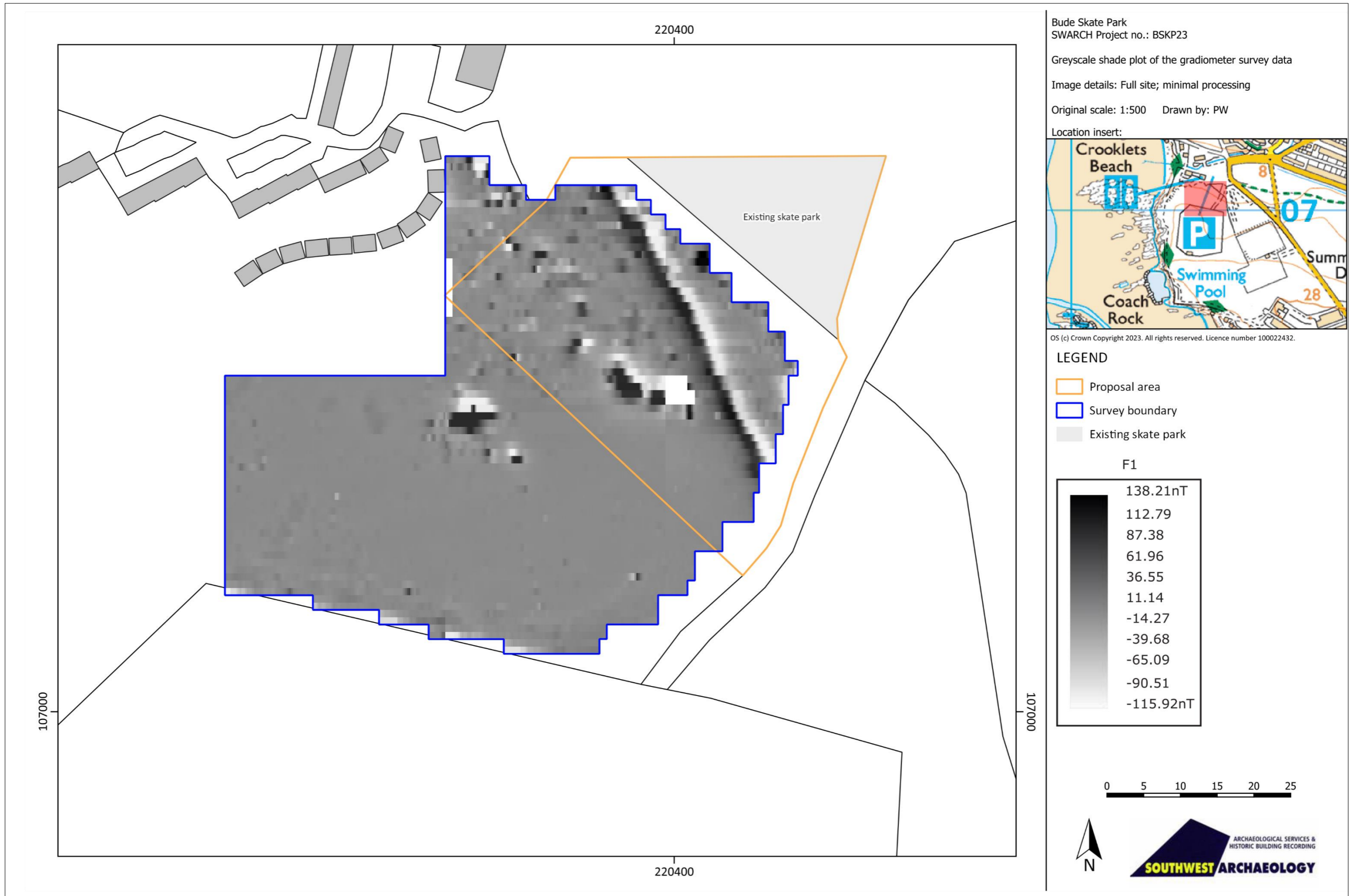


FIGURE 2: GREYSCALE SHADE PLOT OF THE GRADIOMETER SURVEY DATA; MINIMAL PROCESSING (CONTAINS ORDNANCE SURVEY DATA © CROWN COPYRIGHT 2023. LICENCE NUMBER 100022432).

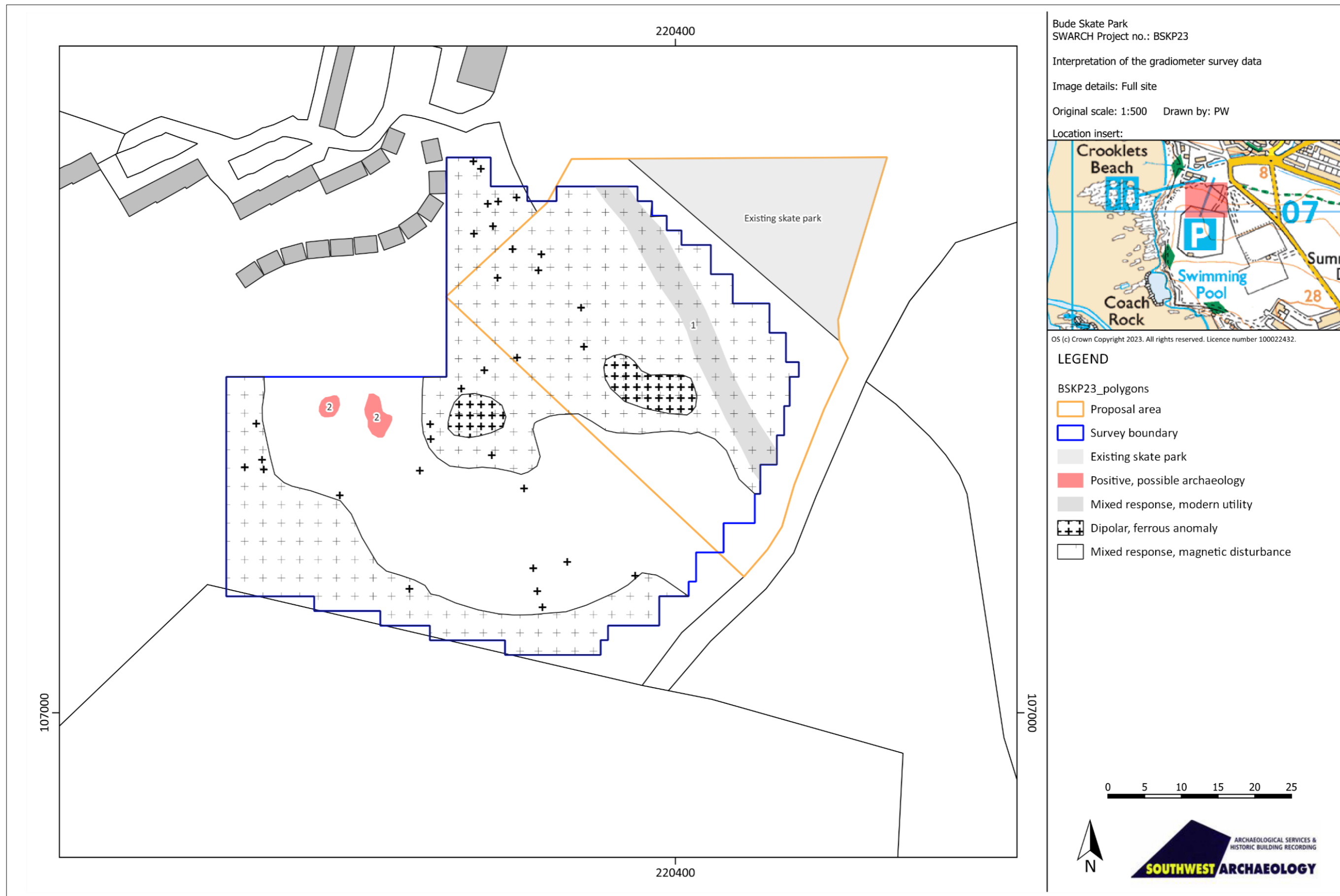


FIGURE 3: INTERPRETATION OF THE GRADIOMETER SURVEY DATA (CONTAINS ORDNANCE SURVEY DATA © CROWN COPYRIGHT 2023. LICENCE NUMBER 100022432).

3.0 CONCLUSION

The site lies in the modern town of Bude, within the parish of Poughill, in the historic hundred of Stratton and the deanery of Trigg-Major. The site is situated between two manors: those of Flexbury and Maer. In the early 19th century Flexbury was the residence of Mr. Ralph Cole but belonged to the Reverend Charles Dayman; the property of Maer being both owned and resided in by Richard Martyn Braddon, Esq..

The site lies within a shallow valley located within an area of unenclosed land at Crooklets, between the car park, skate park and the Cricket Ground off Crooklets Road; and comprises a roughly rectangular area of approximately 0.45 hectares.

The Cornwall HER indicates that only a small amount of archaeological work has been carried out in the immediate area. A walkover survey was carried out on Crooklets beach ahead of the installation of a cable trench in 2002, with a focus on identifying the nature and extent of the submerged forest documented since the 19th century and collecting suitable samples where identified. A peat deposit was found and several large pieces of wood were recovered and sent for analysis, revealing the area to have been carr woodland, fen carr and reedbeds in a system of freshwater streams and ponds.

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No earthworks were identified within the site boundary during the site inspection.

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4.0 BIBLIOGRAPHY & REFERENCES

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British Geological Survey 2023: *Geology of Britain Viewer*.

<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

APPENDIX 1: SUPPORTING PHOTOGRAPHIC EVIDENCE – SITE INSPECTION



1. VIEW SOUTH FROM THE SITE.



2. VIEW ALONG FOOTPATH TO EAST OF THE SITE FROM THE NORTH-EAST.



3. BOUNDARY WITH EXISTING SKATE PARK, VIEWED FROM THE SOUTH-EAST.



4. VIEW OF EARTHWORKS TO SOUTH-WEST OF THE SITE.



5. EROSION ALONG FENCE.



6. VIEW OF SITE FROM THE SOUTH-WEST.



7. VIEW OF CROOKLETS CAR PARK AND THE SITE, FROM THE SOUTH-EAST.



8. VIEW OF



9. VIEW OF CROOKLETS BEACH, FROM THE SOUTH-EAST.



10. VIEW TOWARDS BUDE ACROSS THE SITE.



11. VIEW TOWARDS BUDE ACROSS THE SITE.



12. REMAINS OF MODERN STRUCTURE ON THE SITE.



13. VIEW OF MODERN STRUCTURE ON THE SITE.



14. VIEW TOWARDS CROOKLETS BEACH, FROM THE SOUTH-EAST.



15. VIEW ACROSS THE SITE FROM THE WEST.



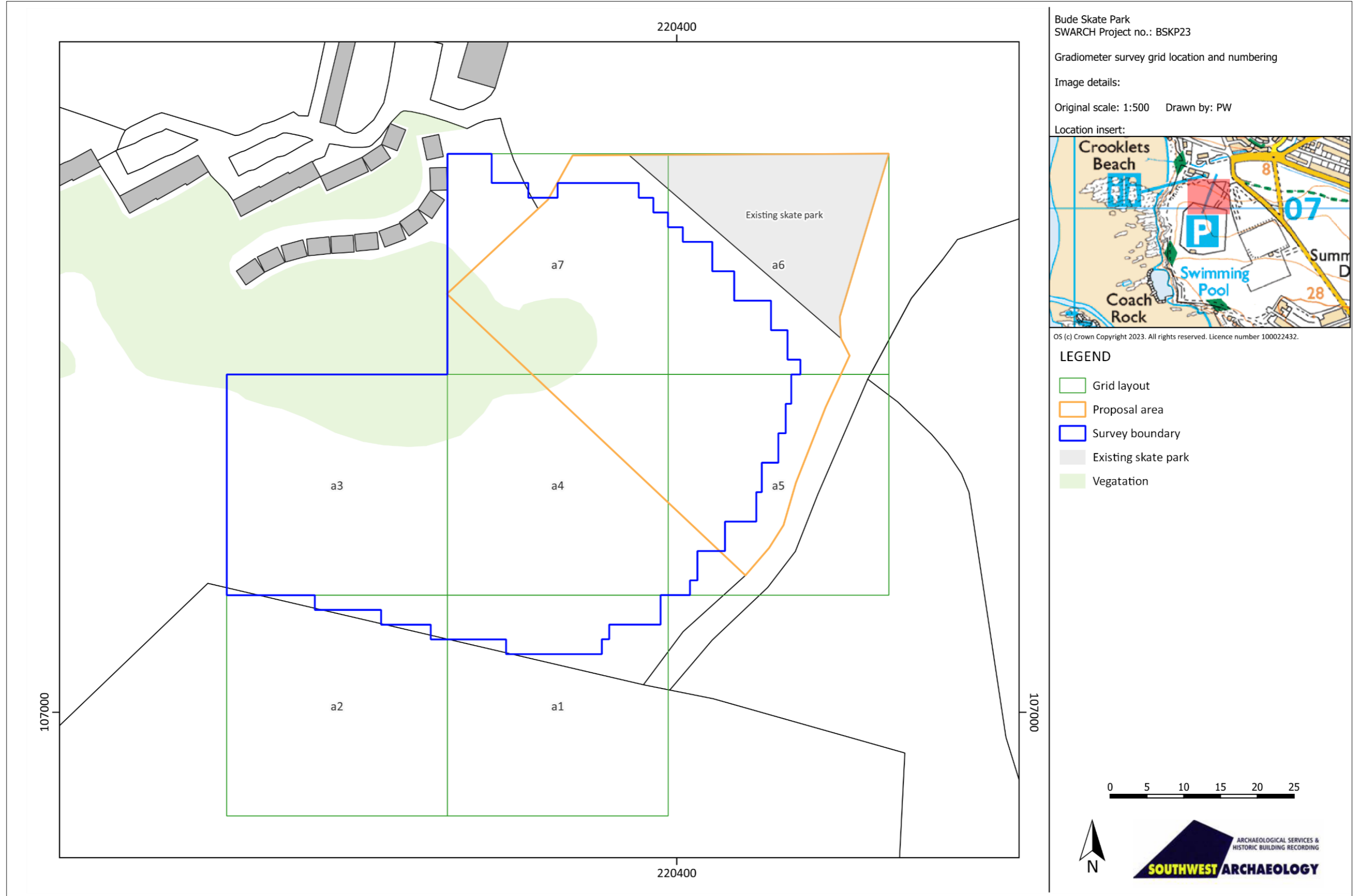
16. VIEW OF REMAINS OF MODERN SERVICE.

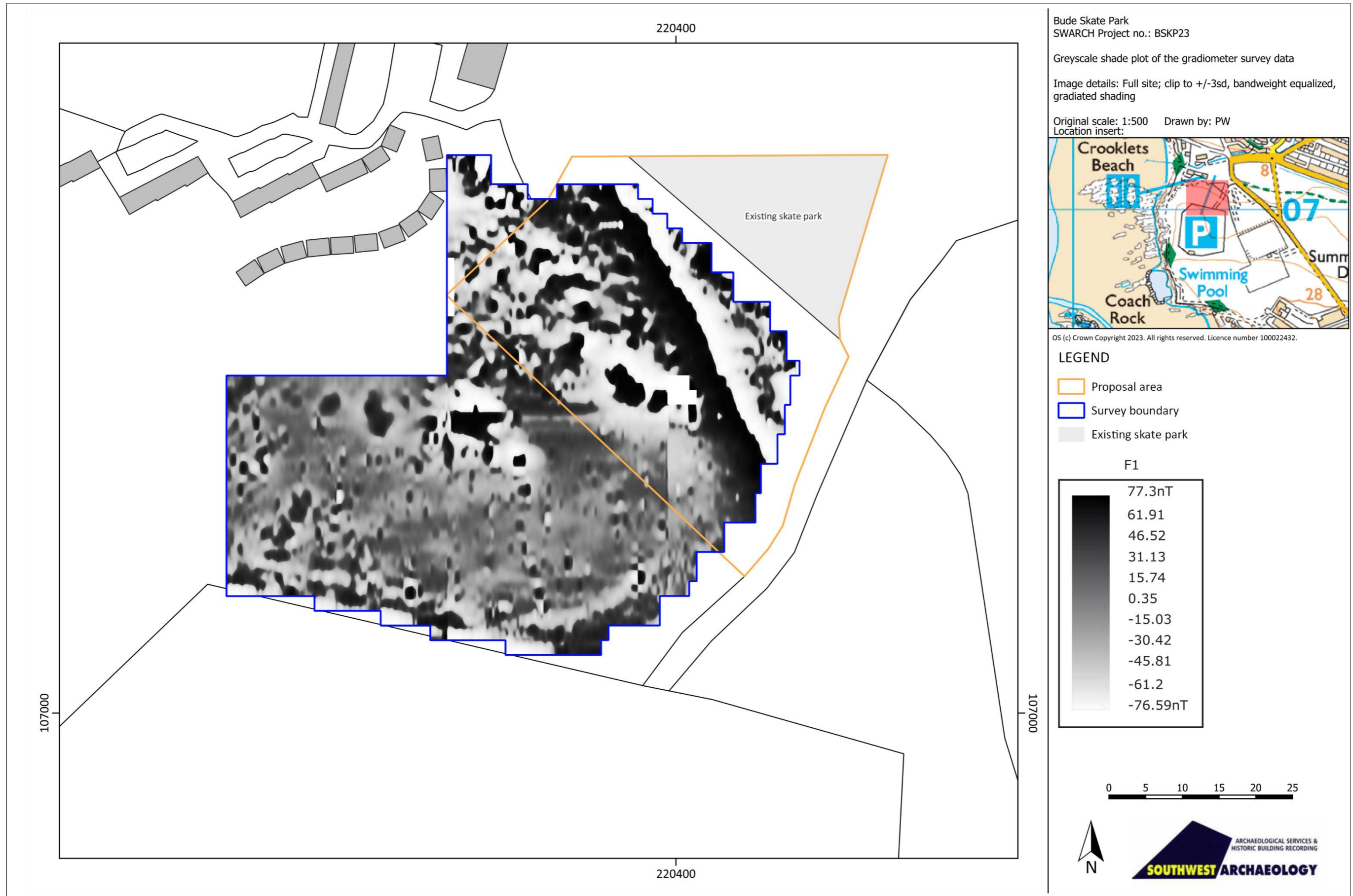
APPENDIX 2: METADATA FOR GEOPHYSICAL SURVEY PROCESSING

TECHNICAL SUMMARY OF MAGNETOMETRY SURVEY METHOD AND METADATA.

SWARCH Ref.	Site Name	Site Type	Period
BSKP23	Bude Skate Park, Bude, Cornwall	-	-
Survey Type:	Magnetometry		
Equipment:	Twin sensor fluxgate gradiometer (Bartington Grad601)		
Software:	TerraSurveyor64 - Version 4.1.1.0		
Instrument Settings / Parameters:	Survey Mode: Range: Threshold: Sensors: Reject:	Grid Mode 100nT 2nT 2 50 Hz	
Collection parameters:	Sample Intervals: Traverse Intervals: Traverse Pattern: Traverse Direction: Adjustment frequency:	0.25m 1m Zigzag West / 270° 0.5-1ha	
Survey Size Metadata:	Individual Grid Size Composite Area: Area Surveyed:	30m x 30m 0.81ha / 90m x 90m 0.33705ha	
Raw Response Metadata:	Max.: Min.: Standard Deviation: Mean: Median:	98.46nT -100.00nT 26.57nT 0.78nT 2.58nT	
Processed Response Metadata: pre-clipping	Max.: Min.: Standard Deviation: Mean: Median:	138.21nT -115.93nT 25.60nT 0.30nT 0.00nT	
Processes:	DeStripe all traverses, median Clip from Min -76.49nT to Max 77.1nT (3 Standard Deviation)		

APPENDIX 3: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY





Bude Skate Park
SWARCH Project no.: BSKP23

Greyscale shade plot of the gradiometer survey data

Image details: Full site; clip to +/-3sd, bandweight equalized, graduated shading

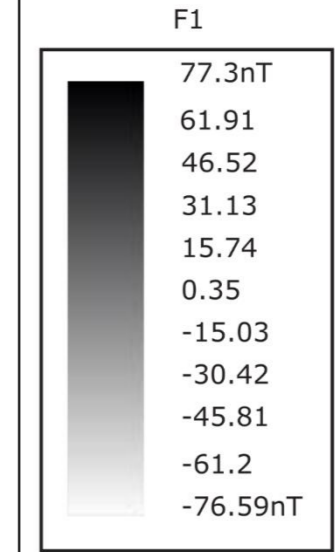
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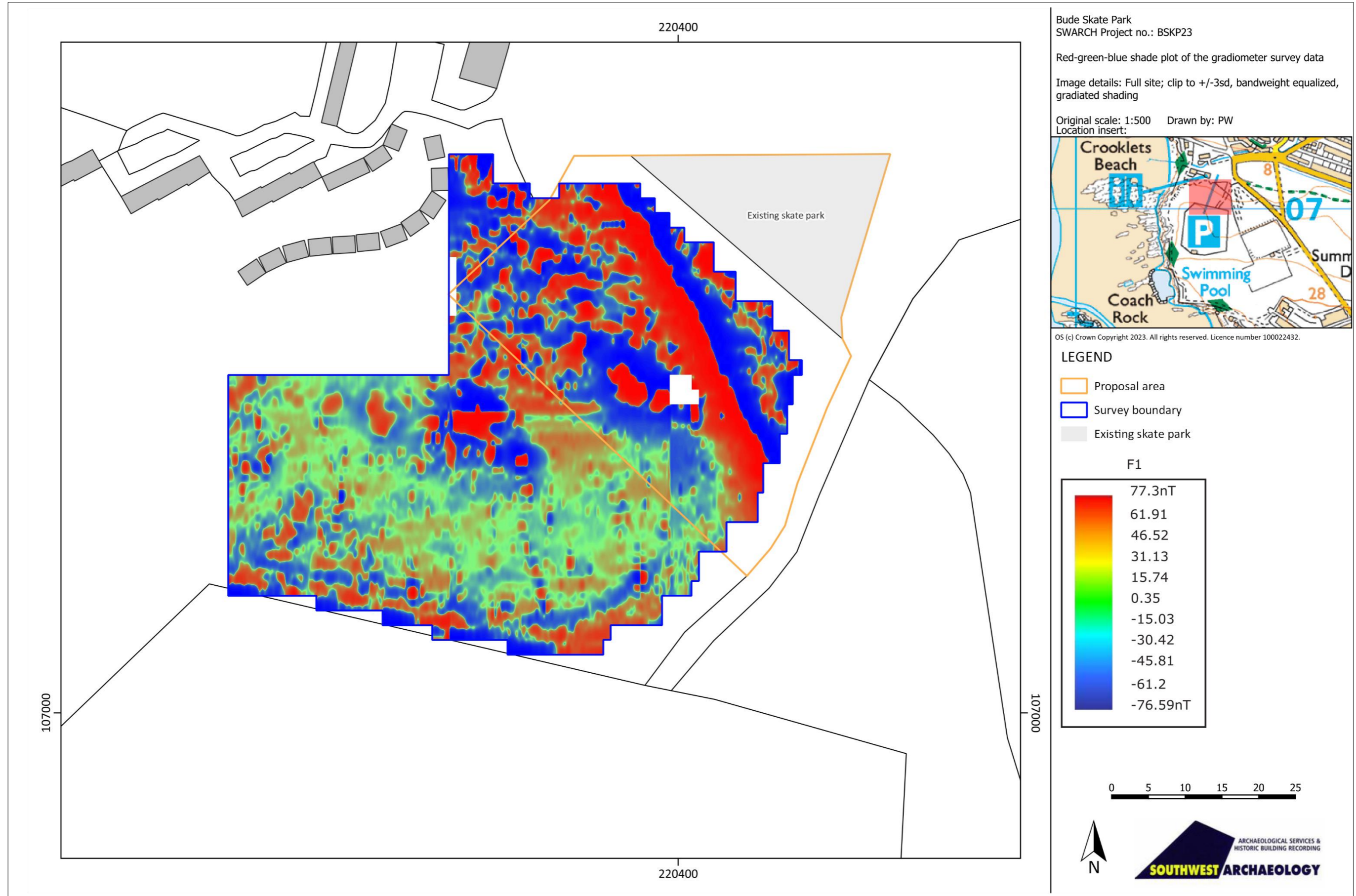


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LEGEND

- Proposal area
- Survey boundary
- Existing skate park







THE OLD DAIRY
HACCHE LANE BUSINESS PARK
PATHFIELDS BUSINESS PARK
SOUTH MOLTON
DEVON
EX36 3LH

01769 573555

01872 223164

MAIL@SWARCH.NET