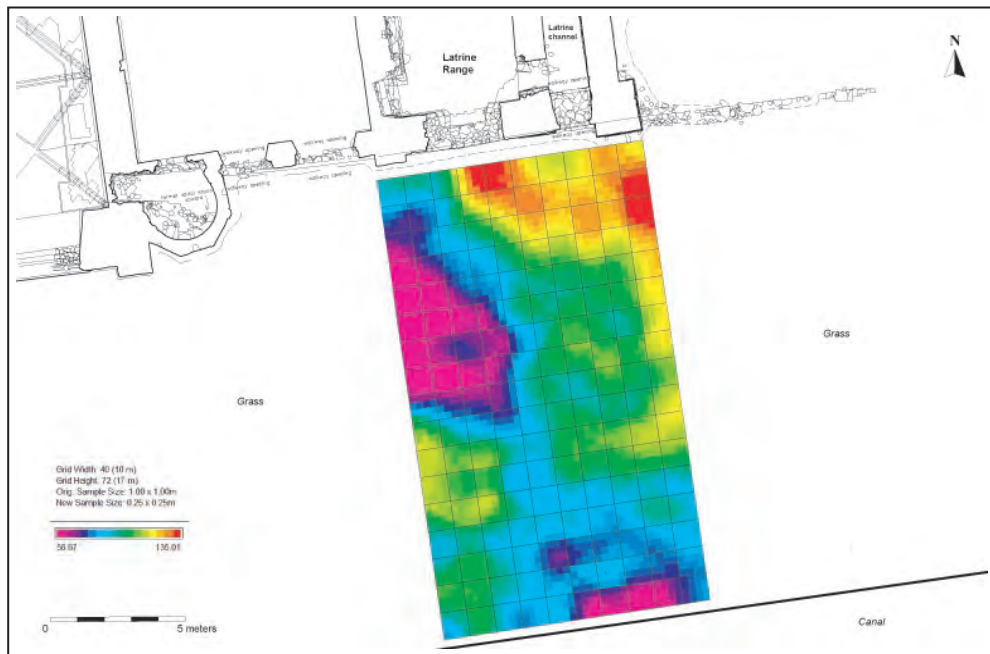




# The Tudor Mansion, Neath Abbey, Neath, Swansea, Glamorgan (Phase 3).

## Archaeological Geo-physics Survey



*By*

Richard Scott Jones (*BA, MA, MCIfA*)

September 2020

HRS Wales  
Report No: 223

# ARCHAEOLOGICAL GEO-PHYSICS SURVEY

## The Tudor Mansion, Neath Abbey, Neath, Swansea, Glamorgan (Phase 3).

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*On behalf of:*

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*Date:* September 2020

HRSW Report No: 223



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## **Non Technical Summary**

*The following report presents the results of a small Archaeological Geo-physical Survey undertaken during the 3<sup>d</sup> phase of conservations works at Neath Abbey, Swansea, Glamorgan, to help inform drainage solutions in the southern part of the Re-redorter (Latrine Range).*

*The specific objectives of this work were to undertake a Geo-physical survey using electrical resistivity in two targeted areas of the Tudor Mansion at Neath Abbey, in order to inform possible drainage solutions to water-logging in the southern end of the Re-redorter (Latrine Range)*

*The two small archaeological geo-physical surveys using electrical resistivity in the areas at the northwest end of the Latrine Range and at the far southern end of the Latrine Range, did not managed to reveal the remains of any obvious buried leat or channel in either area. However, this maybe that any leat with structure is actually too deep to easily detect or else any channel is only soil cut and therefore hard to detect. However, given the known depth of overburden in both areas the former suggestion is the most likely, that is that any former channel is just too deep to detect using the current survey equipment.*

*Although no obvious channel or leat has been detected in either of the survey areas, the survey has not been entirely fruitless archaeologically. In Area 2, against the southern wall of the Latrine Range, the resistivity survey has revealed an apparent possible polygonal structure immediately adjacent to the south wall toward the east end. Investigation of the upper external fabric of this elevation above the area of this apparent buried structure does indeed show the residual remains of a former roofed structure once attached to the south-eastern corner of the Latrine Range.*

*Regarding information to help inform possible drainage solutions to water logging at the far end of the Latrine Range, a few days earlier, before the survey was undertaken, heavy rainfall had caused flash flooding, which had completely flooded the southern end of the building, including floodwater all the way to the canal.*

*The recent shallow trial trenches undertaken within the Latrine Range revealed that the ground water was very high at the time and subsequent heavy rains had also revealed that the water table in this area is also very high. The trial trenches also revealed that there has also been continual flooding in this room, at least since before and following the 1950s MoW works undertaken on the elevations on the Latrine Range, which would suggest that the groundwater in this area is much higher than it was in the medieval periods and the building of the canal in the 1790s may well have contributed further to this problem. Given that the issue of water-logging may well be associated with the ground water table rather than flooding from compromised medieval leats or channels, drainage answers may not be easily resolved without some serious engineering solutions.*

*As part of this program of archaeological works, to help inform possible drainage solutions to water-logging in the southern part of the Latrine Range, it was also recommended that a trial trench was undertaken in the area against the southern external elevation of the south wall of the Latrine Range. Following the results of the geo-physics survey in this area, although it is very unlikely that any evidence will become exposed associated with any former leat or channel in this area because of the apparent depth of deposits in this*

*area, this trench should nevertheless shed some light on the character, form and date of the apparent buried polygonal structure revealed in this area and its association with the Latrine Range.*

## 1 Introduction

1.1 The following report presents the results of a small Archaeological Geo-physical Survey undertaken during the third phase of conservations works at Neath Abbey, Swansea, Glamorgan, to help inform drainage solutions in the southern part of the Re-redorter (Latrine Range).

1.2 The specific objectives of this work were to:

- Undertake a Geo-physical survey using electrical resistivity in two targeted areas (see Figure 4) of the Tudor Mansion at Neath Abbey, in order to inform water drainage solutions to water-logging in the southern end of the Re-redorter (Latrine Range)

1.3 The Technical Appendices for this report contains the following information:

*Appendix I: Figures;*

*Appendix II: Photographs*

*Appendix III: Archive Cover Sheet*

### **Site Location & Description** (see Figures 1 - 4)

1.4 Neath Abbey was a former Cistercian Monastery, located near the present day town of Neath, near Swansea, in South Wales. The Abbey is centered on NGR: SS 738 974. Neath Abbey is a Scheduled Monument (SM Ref: GM006) and is managed and cared for by Cadw.

1.5 The Tudor Mansion House is located at the southern end of the Abbey complex. The Phase 3 conservation work in 2020 affects the south-eastern range of the Tudor Mansion House, at Neath Abbey. The Latrine Range or Reredoter (aka *Necessarium*) is positioned east of the Monks Dormitory (Undercroft) and also runs parallel with it.

1.6 The Latrine Range formerly consisted of a long vaulted building with latrine cubicles likely once positioned on the upper floor level. Running parallel with the Latrine Range on its east side is a long water channel or leat/culvert that would have taken effluent and deposited it into the river to the south, which is now occupied by the Neath canal built in the 1790s. Water management is not fully understood at the Neath Abbey Complex, but it is generally understood that originally water was exported across the site via an underground leat from the river at the southwest end of the site in the outer precinct and then circulated across the site to diverted positions, two positions being the Latrine Range and the former Infirmary, positioned at the far east end of the abbey site.

1.7 Other than the Latrine Range channel itself, which is presently filled with overburden and silt to a depth of at least 2 meters, the actual position of the inflow and outflow of the Latrine Channel is presently unknown. The southern end of the Latrine Range is presently very water-logged, which is causing some concern as to the structural integrity of the southern end of the range, as well as compromising the laying down of any future *hoggin* ground surface material.

### **Historical & Archaeological Background** (see Figures 5 - 7)

- 1.8 Neath Abbey is ranked as one of the most important monastic remains in south Wales. It was established in 1129 AD, when Richard I de Granville, one of the 12 Knights of Glamorgan, gave 8,000 acres of his estate in Glamorgan, to Savigniac monks from Normandy. The first monks arrived in 1130. Following the assumption of the Savigniac order into the Cistercian order in 1147, Neath Abbey became a Cistercian House. The Abbey was laid out to the standard Cistercian plan. #
- 1.9 During the Dissolution of the Monasteries by King Henry VIII, the last abbot, Lleison ap Thomas, managed to buy time through payment of a large fine in 1537, but the abbey was eventually dissolved in 1539. At this time, the abbey was then turned into a large estate.
- 1.10 In about 1500 the abbot carved a private house for himself out of the southern end of the refectory and monks dormitory. The fabric of the Abbot's House is very hard to discern now as it was overlain by the later house built in the second half of the 16<sup>th</sup> Century by either Sir Richard Williams, who purchased the property in 1542, or his son Henry. This 16<sup>th</sup> Century rebuilding is clearly distinguishable by its distinctive mullioned windows. As well as several alterations, a new wing was also built at the far northeast corner.
- 1.11 By 1730 many of the buildings within the abbey complex were being used for copper smelting and then later used as ironworks in the late 18<sup>th</sup> century, when a foundry was opened near the abbey ruins by a company owned by the Price, Fox and Tregelles families. Decay continued throughout the 19<sup>th</sup> century and it wasn't until the 20<sup>th</sup> century that the ruins were rediscovered. Extensive archaeological excavation of the abbey was undertaken between the years 1924 and 1935.
- 1.12 During the 1950s the Ministry of Works (MoW) undertook conservation works on the standing remains of both the Abbey and the Tudor Mansion House.
- 1.13 In 2017 Cadw commissioned Sally Strachey Historic Conservation (SSHC) to undertake *Phase 1* of conservation works on the Tudor Mansion, which covered the west side of the mansion house, including the Monks Dormitory and Undercroft. As part of this first phase of work, HRS Wales undertook the archaeological building investigation and recording (ABIR). In 2018 SSHC undertook *Phase 2* of the conservation works on the Tudor Mansion, focused on the southwest corner of the former Abbots House, with HRS Wales again undertaking the ABIR works.
- 1.14 In early 2020, *Phase 3* of the Conservation Works was commenced, with HRS Wales undertaking the required archaeological works at the site. These works affected the south-eastern range of the Tudor Mansion House located on the south side of the Abbey complex, encompassing part of the rear courtyard between the undercroft and the former Re-redorter / Latrine range and part of the Re-redorter itself.

- 1.15 Due to Covid-19 restrictions these works were suspended in March 2020 for a few months, but work re-commenced in July 2020.
- 1.16 In March and July 2020 a series of trial trenches were excavated in both the Latrine Channel and the Latrine Range. The objective of the Latrine Channel trenches was to inform the character, age and depth of any underlying deposits, which in turn would inform any future clearance proposals and possibly any engineering solutions that may arise in any future seasons of work.
- 1.17 The excavation of the trenches in the Latrine Channel revealed that the probable base of the channel appears to lie between 2 meters - 2.5 meters below the present ground surface. This channel is now filled with both overburden containing medieval and post medieval material and dark organic silt. Water-logging of the trench appeared at approximately 0.50m below the present ground surface.
- 1.18 The objective of the trial trenches in the Latrine Range was to help inform the character and depth of the immediate underlying deposits prior to a future watching brief during groundwork for the laying down of *hoggin* ground cover material. However, due to continued water-logging at the far southern end of the Latrine Range, it was decided that the proposed preliminary groundwork for the *hoggin* ground cover material was to be postponed until the water-logging at the far southern end of the range has been resolved. As such, a further objective of the proposed trial pits was to now help inform drainage design solutions to help alleviate the water-logging.
- 1.19 With regard to informing drainage solutions, the trial pits in the Latrine Range revealed that there has been repeated flooding in the Latrine Range, at both the southern end and the central area from at least before the 1950s when the MoW undertook conservation works on the elevations in the Latrine Range. This is evidenced from the fact that continual silt deposits were sealed beneath an apparent MoW construction deposit.
- 1.20 Following a meeting with the Neath Abbey Phase 3 design team in August 2020 concerned with the water-logging at the far southern end of the Latrine Range, it was recommended that a small Geophysical Survey should be undertaken in two areas, firstly, in the area between the Monks Dorter (Dormitory) and the Reredorter (Latrine Range) at the far northern end to try and inform the possible position of the former inflow to the Latrine Range from the west, and secondly, in the likely position of the former outflow from the Latrine Range at the southern end of the Latrine Range. It is hoped that the results from this survey will help inform drainage design solutions.
- 1.21 To further inform solutions a trial trench was also recommended to be excavated close the southern external wall of the Latrine Range, in the position of the likely outflow from the Latrine Channel. However, this trial trench would not be undertaken until the results of the geo-physics have been analysed and interpreted and only once the existing scaffold in this area has been dismantled.

## **Geology**

- 1.22 The geology of the area belongs to the South Wales Upper Coal Measures Formation laid down in the Bolsovian (Westphalian C) period (311,000,000 – 306,000,000 years ago). This formation consists of Mudstone, Siltstone, Sandstone, Coal, Ironstone and Ferricrete.

## **2 Aims & Objectives**

- 2.1 An archaeological geo-physical survey will determine, as far as is reasonably possible, the nature of the detectable archaeological resource within the two specified areas using appropriate methods and practices. The results from the geo-physical survey will be included in the Phase 3 final archaeological report. A small interim report will also be produced to help inform drainage solutions in preparation for Phase 4 conservation works.
- 2.2 These will satisfy the stated aims of the project, and comply with the Code of conduct, and other relevant regulations of ClfA.

### *Definition of geophysical survey*

- 2.3 `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.

### *Purpose of geophysical survey*

- 2.4 The survey will be undertaken to the Standard and will, as far as possible, inform on the presence or absence, character, extent and in some cases, apparent relative phasing of buried archaeology, in order to make an assessment of its merit in the appropriate context, which may lead to one or more of the following:
- i)* The formulation of a strategy to ensure further recording, preservation or management of *ii)* The formulation of a strategy to mitigate a threat to the archaeological resource
  - iii)* The formulation of a proposal for further archaeological investigation within a programme of research

## **3 Methodology**

- 3.1 The Geo-physical survey was undertaken using an RM Frobisher TAR-3 Resistance Meter with both a 0.50m wide array and a 1 meter wide array. Given that former small investigative excavations have revealed that the medieval periods of much of the abbey complex surrounding the Tudor mansion are buried below an overburden of approximately 450mm, it was decided to not only survey the targeted areas using a 0.50m wide array, but also use a 1m wide array in order to offer more survey depth.

- 3.2 The first survey area (Area 1) was positioned, between the Monks Dorter (undercroft) and the Latrine Range (Reredorter) at the northern end. This survey area consisted of a stringed grid measuring 10m (N-S) x 6m (E-W). In order to avoid exposed bedrock and the modern steel steps at the east end of the Slype passage, erected in Phase 2 of the conservation works, the survey grid was positioned immediately east of these steps.
- 3.3 The second survey area (Area 2), was positioned close to the external elevation of the south wall of the Latrine Range. At the time of the survey scaffolding was still in place against the southern external wall of the Latrine Range, but this did not interfere with the survey. The stringed survey grid in this area measured 17m (N-S) x 10m (E-W).
- 3.4 Due to the sensitivity of the electrical equipment two dry days were required to undertake the survey. The survey was undertaken on the 3<sup>rd</sup> and 4<sup>th</sup> September 2020
- 3.5 All work was carried out by a suitably qualified archaeologist (Richard Scott Jones BA, MA, MICfA) with relevant level membership of the Chartered Institute for Archaeologists (CIfA). The survey followed the CIfA Standard and Guidance for Archaeological Geo-physical Surveys (CIfA 2014).
- 3.6 All features identified were tied in to both the OS National Grid and all local site and ground plans.
- 3.7 Photographs were appropriated in digital format, using a 24 mega-pixel DSLR camera in RAW format, and later exported to TIFF format.
- 3.8 All measured data points from each survey were saved as a .txt file onto an installed micro SD memory card. The data from the card was then transferred to Snuffler software (V1.3) where the data for each survey was then analysed and interpreted. Within the software, the survey data first had all data spikes removed and then each was interpolated in order to enhance resolution. Both survey results were then saved as both grayscale and colour maps.

#### *Limitations of Survey*

- 3.9 As with all types of geo-physical survey equipment, each type has its limitations. Regarding electrical resistivity, this equipment is ideally suited for ground that has high water content in order for the electrical current to travel easily through the ground. The environment at Neath Abbey is ideally suited to electrical resistivity due to its wet conditions.
- 3.10 Each survey area was undertaken twice, once using a 0.50m wide array and a second time using a 1m wide array. As a general rule, a 0.50m wide array in ideal moist ground will penetrate to a minimum depth of 0.25m, with the maximum depth being dependent on the moisture content of the soil. However, a 1m wide array will penetrate to a minimum depth of between 0.50m, again with the maximum depth being reached being dependent on the moisture content of the .

## **4 Results of Geo-physical Survey** (see Figures 4 – 20 and Photos 1 – 8))

### Area 1 (see Figures 5 – 12)

- 4.1 Area 1 was positioned, between the Monks Dorter (undercroft) and the Latrine Range (Reredorter) at the northern end. This survey area consisted of a stringed grid measuring 10m (N-S) x 6m (E-W). In order to avoid exposed bedrock and the modern steel steps at the east end of the Slype passage, erected in Phase 2 of the conservation works, the survey grid was positioned immediately east of these steps.
- 4.2 The first survey area was positioned in this location in order to inform the nature and character of the ground in this area. Given that the small 13<sup>th</sup> – 14<sup>th</sup> century bedrock cut basement area or *cell*, directly below the slype passage, is presently being used to hold run-off water from the roof of the undercroft, there is a concern that the increased amount of rain-water in the basement cell is helping to contribute to the excess of water-logging in the southern end of the Latrine Range by seeping through an existing buried channel or leat that feeds into the Latrine Channel. As such, the survey in this area was hoping to reveal the presence or absence of a former channel running E-W from the basement area. Investigation of the fabric of the external wall immediately above the basement area at the end of the slype has shown that there appears to be a former access opening positioned directly below the recently installed steps. This opening is characterised by a voussoirs arch and the fact that a former opening, now blocked up, is plainly evident in this position when investigating the interior of the basement cell.
- 4.3 Also worth pointing out, investigation of the south facing external face of low walling in the area of walling surrounding this courtyard area, reveal that the ground immediately north of the bridge is approximately 1m above the present ground surface below the bridge. This is also confirmed by an apparent former doorway evident from the remains of two stop ends still visible in this position. This implies that the survey area is covered in approximately 1m of overburden.
- 4.4 Analysis of the 0.50m wide array survey data results for Area 1 has not revealed any *obvious* channel or leat running across the surveyed area. However, it has revealed the character of the ground in a number of areas, such as in grid no's 4C through to 5F, where the survey shows areas of medium resistance, suggestive a loose rubble deposit, likely rubble filled overburden. An area of high resistance is also shown from grid no's 1A through to 1F. This area is the position of the partly exposed cross wall immediately north of the bridge.
- 4.5 Another interesting area is within grid no's 10C through to 10F, where an area of low resistance shows a very moist area of ground.
- 4.6 The results from the 1m wide array show a very similar pattern of results from the 0.50m wide array but give better delineation of resistance edges, Of particular interest is the larger extent of wet ground at the far north east end of the survey area (grid no's 5F, 6F, 7E, 7F, 8F, 9E, 9F, 10D –



10F). Also more apparent is the extent of the rubble filled overburden at both the northwest and southwest ends of the survey grid.

- 4.7 The areas between the rubble filled overburden and the wet ground reveal areas of medium to low resistance, likely loose soil overburden.

Area 2 (see Figures 13 – 20)

- 4.8 Survey Area 2 was positioned close to the external elevation of the south wall of the Latrine Range. At the time of the survey scaffolding was still in place against the southern external wall of the Latrine Range, but this did not interfere with the survey. The stringed survey grid in this area measured 17m (N-S) x 10m (E-W).

- 4.9 This second survey area was positioned here in order to inform on the character and nature of buried deposits in this location in order to offer information to help inform possible future drainage solutions to alleviate water logging at the far southern end of the Latrine Range.

- 4.10 This particular location was chosen for survey as it is directly opposite the former 13<sup>th</sup>-14<sup>th</sup> century Latrine Channel, where effluent from the latrines would have been taken to the river to the south, now occupied by the Neath canal. As such an outflow channel or leat would once have been positioned in this area.

- 4.10 An excavation for a French drain was undertaken directly opposite the southern wall of the undercroft as part of Phase 1 conservation works. Excavation of this trench revealed that the ground in this position is covered in approximately 450mm of rubble filled overburden, whereupon a significant compacted surface becomes exposed, likely medieval in date.

- 4.11 The results from the 0.50m wide array have again unfortunately not revealed evidence of any former leat or channel and it may very well be that this channel is just too deep to detect its position. Excavation in the latrine channel undertaken in Phase 3 of conservation works had already revealed that dark water-logged silt within the channel is at least 0.70m below the present ground surface of the latrine channel in the latrine range and the fact that this ground surface here is also a further 0.70m below the exterior ground surface in the surveyed area. This implies that the remains of any cut channel could well be at least 1.4m below the ground surface in this location, a depth beyond the reaches of this survey.

- 4.12 What the survey in this area has offered in terms of information however is not worthless and in fact has been very rewarding in terms of archaeology.

- 4.13 The results from the 0.50m wide array have revealed the remains of a former buried structure or building that appears to be positioned up against the southern wall of the Latrine Range. This is shown by areas of high resistance in grid no's 1D through to 1J, 2D through to 2J, 3I – 3J, 4J, 5J, 6J and 7J. In grid row J examination of the ground surface in the areas of 1J and 2J do show the remains of a cross wall

running N-S but the survey has revealed that the structure in this area is far more complex than initially thought.

- 4.14 The results using the 0.50m wide array have also revealed areas of rubble filled overburden and an area of very wet ground shown by an area of low resistance in the northwest part of the survey grid. This wet area could very well be partly responsible for the subsidence in the southwest wall of the Latrine Range.
- 4.15 The results from the survey using the 1m wide array have revealed a more detailed map of the nature of the ground and features within the survey area at a slightly greater depth.
- 4.16 Again, although no obvious leat or channel has become revealed in the area associated with the outflow from the Latrine Range, use of the wider array has offered a more outlined view of the apparent structure in grid no's 1D through to 1J, 2D through to 2J, 3I – 3J, 4J, 5J, 6J and 7J, which suggest that in this position there is the foundation remains of a possible polygonal structure set up against the external elevation of the Latrine Range, seemingly with a hollow centre, suggestive of a possible former stair tower.
- 4.17 As part of this seasons Phase 3 building investigation of the upper area of the south facing external elevation of the Latrine Range at the far east end, do show the residual remains of a former roof line, which does suggest that there was once a tall structure of some kind in this position. However, this roofline is set slightly further to the east and cuts directly into the eastern buttress of the Latrine Range than the apparent buried foundation remains. In order to shed some light on these buried remains ideally a trial trench would need to be excavated in the position of this apparent structure as part of any future investigations.
- 4.18 Other features becoming more revealed using the wider 1m array in this survey area include the more outlined areas of rubble overburden and the increased area of wet ground to the northwest.

## **5. Conclusion & Recommendations**

- 5.1 The two small archaeological geo-physical surveys using electrical resistivity in the areas at the northwest end of the Latrine Range and at the far southern end of the Latrine Range, have not managed to reveal the remains of any obvious buried leat or channel in either area. However, this maybe that any leat with structure is actually too deep to easily detect or else any channel is only soil cut and therefore hard to detect. However, given the known depth of overburden in both areas the former suggestion is the most likely, that is, that any former channel is just too deep to detect using the current survey equipment.
- 5.2 Although no obvious channel or leat has been detected in either of the survey areas, the survey has not been entirely unsuccessful. In Area 2, against the southern wall of the Latrine Range, the resistivity survey has revealed an apparent possible polygonal structure immediately adjacent to the south wall toward the east end. This is very apparent in the 1m array colour map. Investigation of the upper external fabric of this elevation above the area of the apparent buried structure does show the residual remains of a former roofed structure once attached to the south-eastern corner of the

Latrine Range. *If* the apparent polygonal outline does turn out to be the remains of a former tall structure, then it may suggest that its shape is similar in design to the abbot's tower attached to the undercroft to the west of the Latrine Range, and *if* this is the case then it is a very significant discovery and extends the former abbots residence quite significantly further to the east. However, until any excavation has been undertaken to confirm the presence and form of this structure all suggestions must remain speculative at this stage.

- 5.3 Regarding information to help inform possible drainage solutions to water logging at the far end of the Latrine Range, a few days earlier, before this survey was undertaken, heavy rainfall had caused flash flooding which completely flooded the southern end of the building, including floodwater all the way to the canal.
- 5.4 The recent shallow trial trenches undertaken within the Latrine Range revealed that the ground water was very high at the time and subsequent heavy rains have also shown that the water table in this area is also very high. The trial trenches also revealed that there has also been continual flooding in this room, at least since before and following the 1950s MoW works undertaken on the elevations on the Latrine Range, which would suggest that the groundwater in this area is much higher than it was in the medieval periods and the building of the canal in the 1790s may well have contributed further to this problem. Given that the issue of water-logging may well be associated with the ground water table rather than flooding from compromised medieval leats or channels, drainage answers may not be easily resolved without some serious engineering solutions.
- 5.5 As part of this program of archaeological works, to help inform possible drainage solutions to water-logging in the southern part of the Latrine Range, it was also recommended that a trial trench was undertaken in the area against the southern external elevation of the south wall of the Latrine Range. Following the results of the geo-physics survey in this area, although it is very unlikely that any evidence will become exposed associated with any former leat or channel in this area because of the apparent depth of deposits in this area, this trench should nevertheless shed some light on the character, form and date of the apparent buried polygonal structure revealed in this area and its association with the Latrine Range.

## **6 Acknowledgements**

Thanks to; Cadw for allowing access to the site to undertake the survey and also thanks to SSHC for their patience and understanding during the survey work.

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# **APPENDIX I:**

## **Figures**



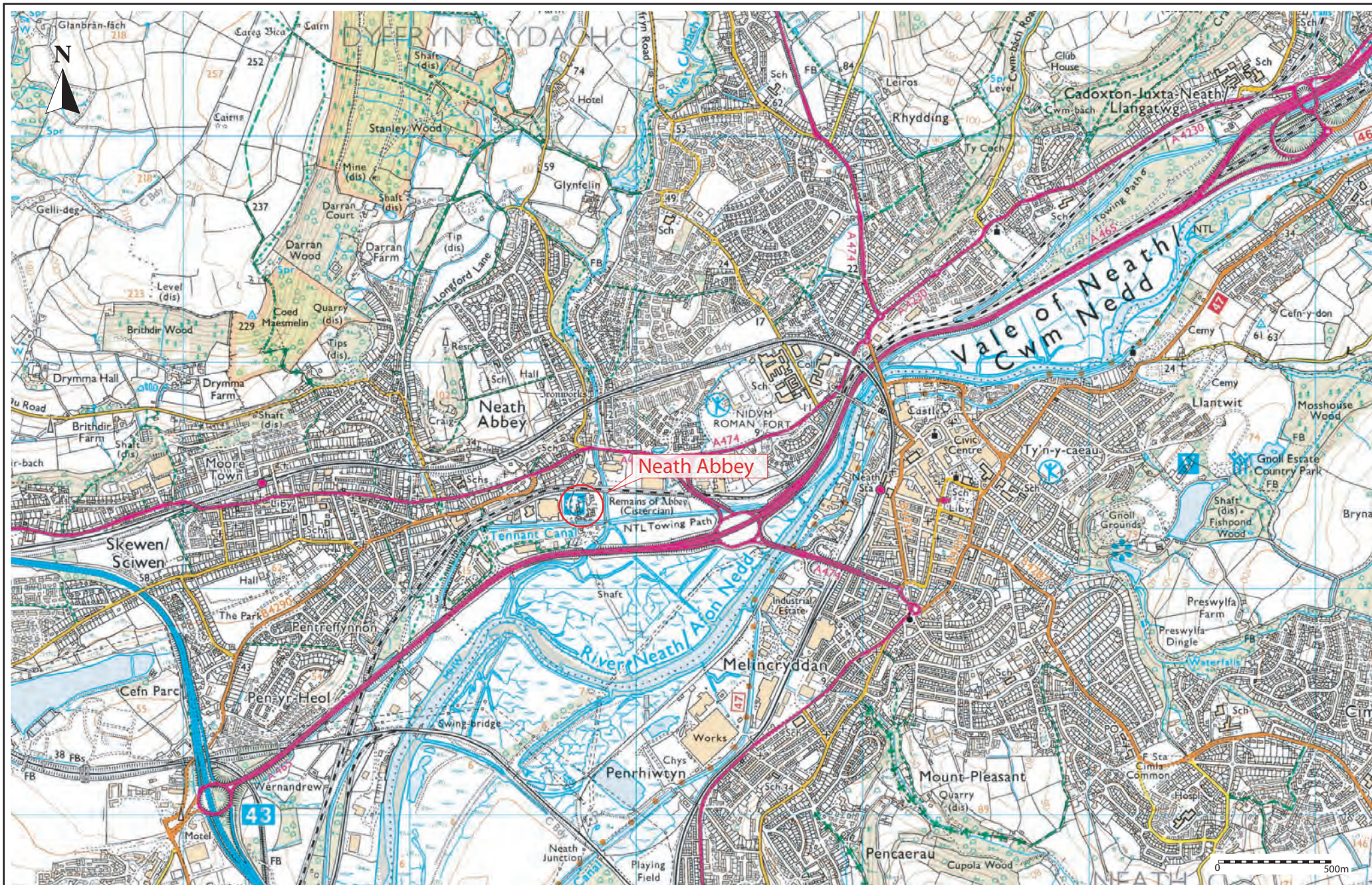


<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 1.** Location Map (OS 1:50,000 Landranger)







<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 2.** Location Map (OS 1:25,000 Explorer)





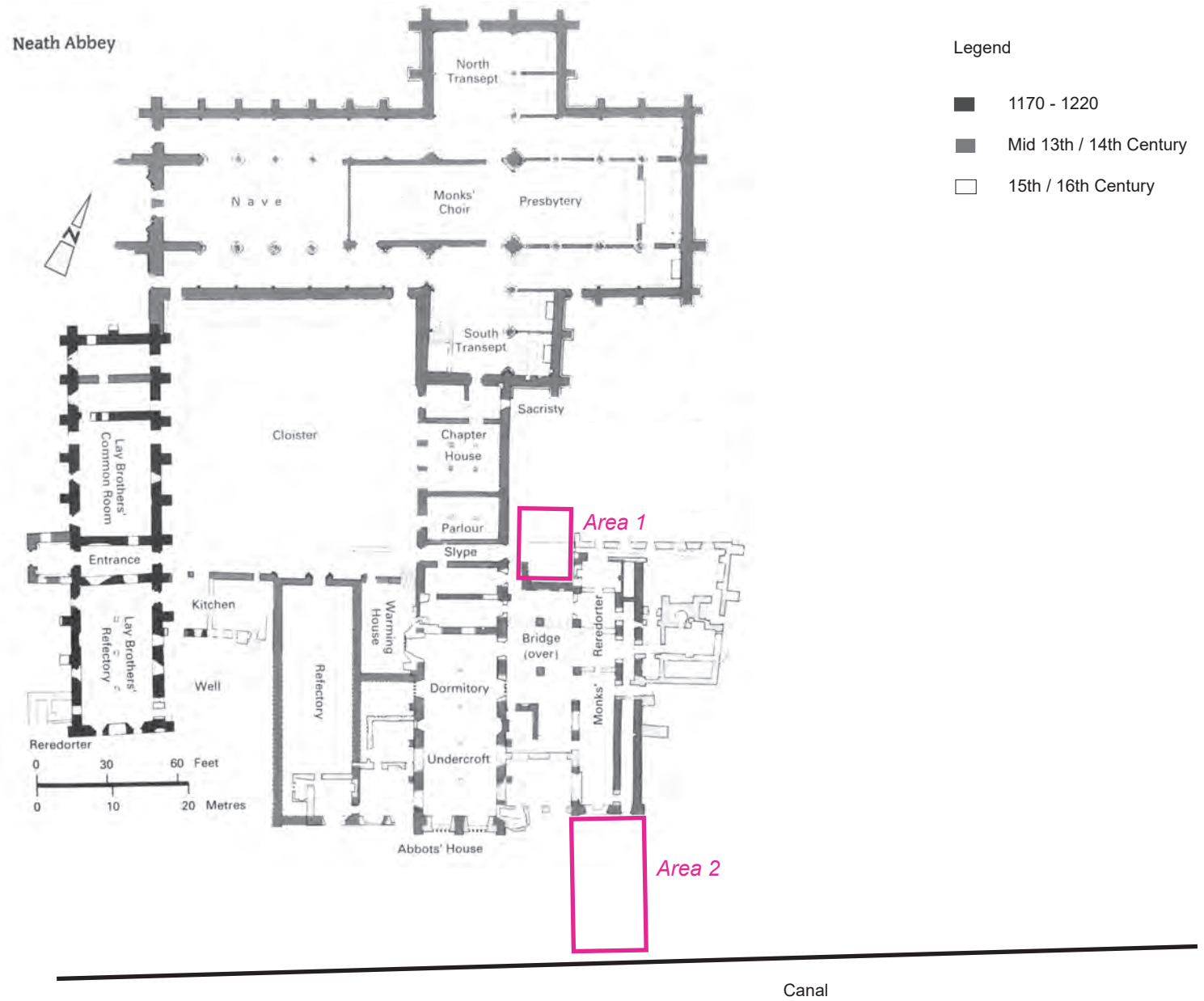


<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 3.** OS Aerial Photo (Areas of Geophysics investigation - Phase 3 highlighted).







**Project Title:** Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)

**Date:** September 2020

**Approx. Scale (@ A4):**

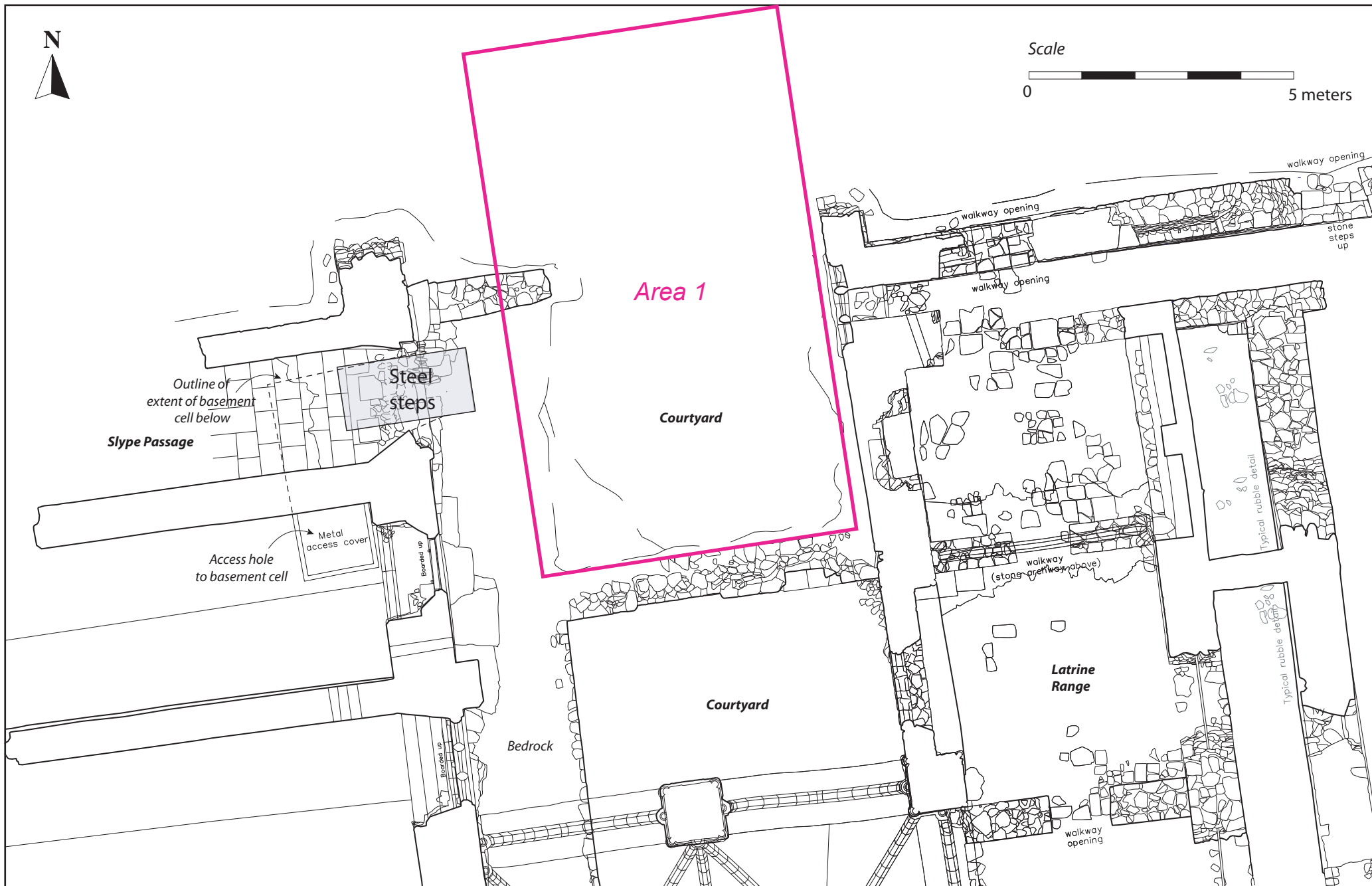
**Drawn by:**

**Drawing No.:**

**Figure 4.**

Ground Plan of Neath Abbey with areas of Gewophysics investigation highlighted.  
(after Cadw's Guide to Ancient and Historic Wales: Glamorgan and Gwent - 1992)

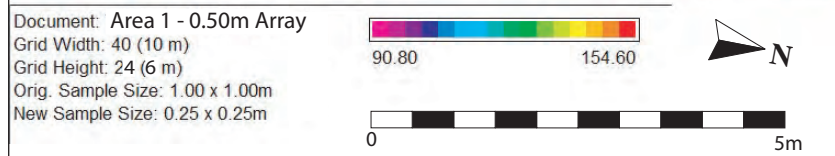
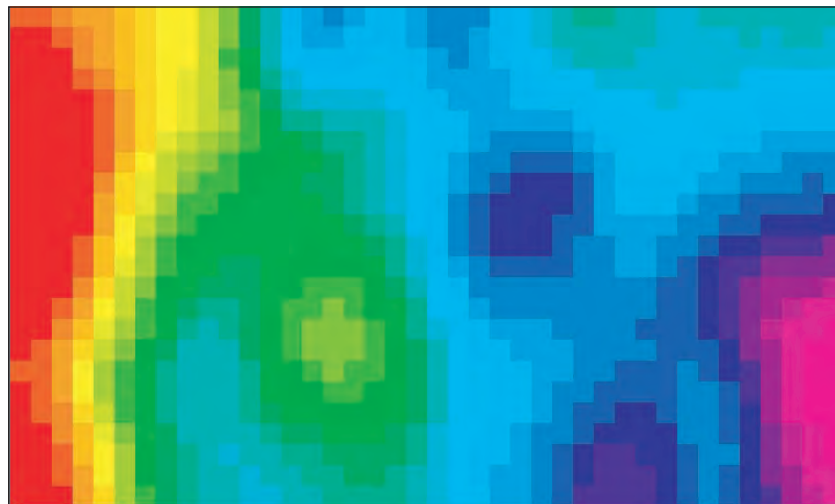
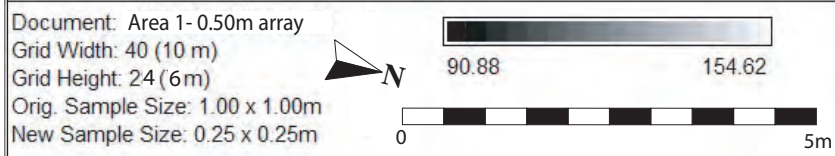




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)
<b>Date:</b> September 2020
<b>Drawn by:</b>
<b>Approx. Scale (@ A4):</b>
<b>Drawing No.:</b>

**Figure 5.** Ground showing position of Geophysics Area 1 between slype passage and northern extend of Latrine Range.

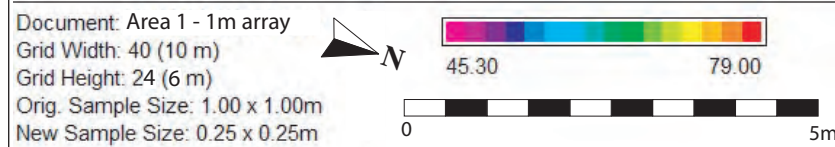
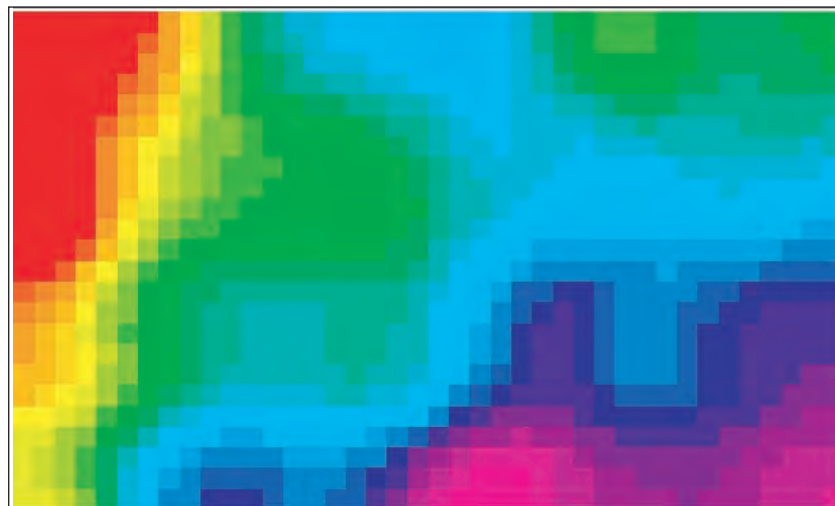
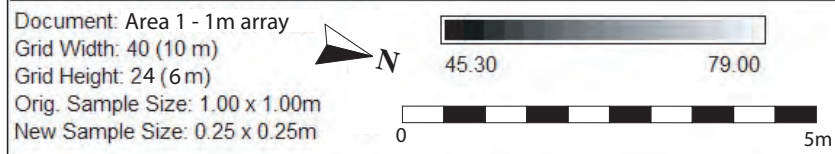
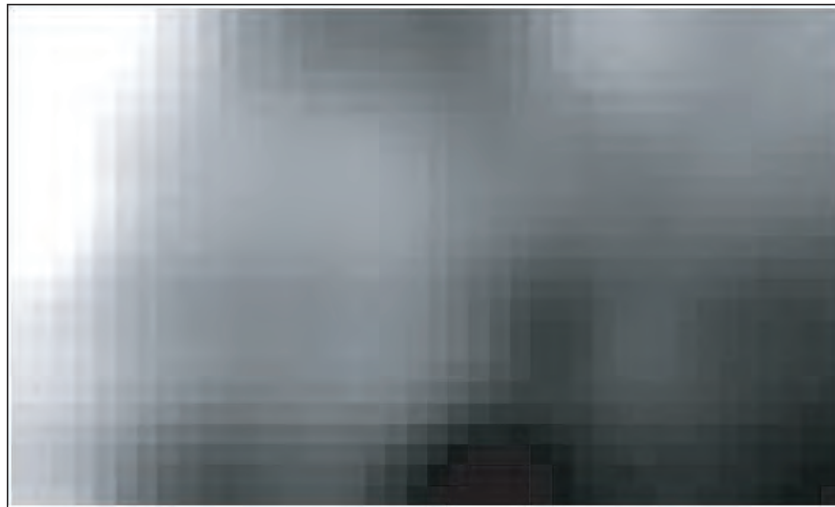




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date:</b> 7th September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.:</b>

**Figure 6.**  
 Area 1 - Resistivity Survey results using 0.50 Meter array (Greyscale and colour mapping).

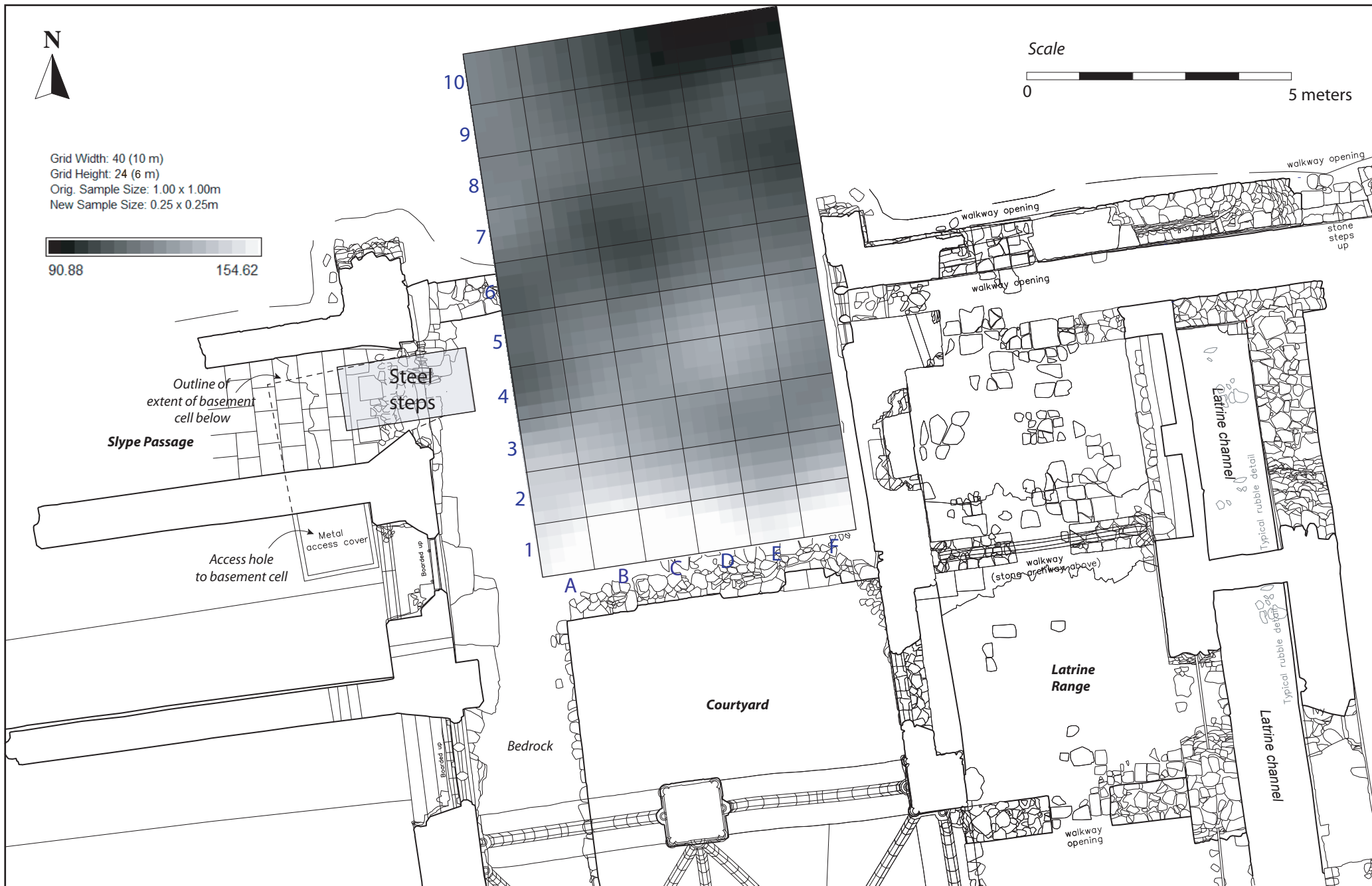




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date:</b> 7th September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.:</b>

**Figure 7.**  
 Area 1 - Resistivity Survey results using 1 Meter array (Greyscale and colour mapping).





<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.:</b>

**Figure 8.**  
**Area 1 - Results of Resistivity survey using 0.50m bar array overlying site plan (Greyscale).**



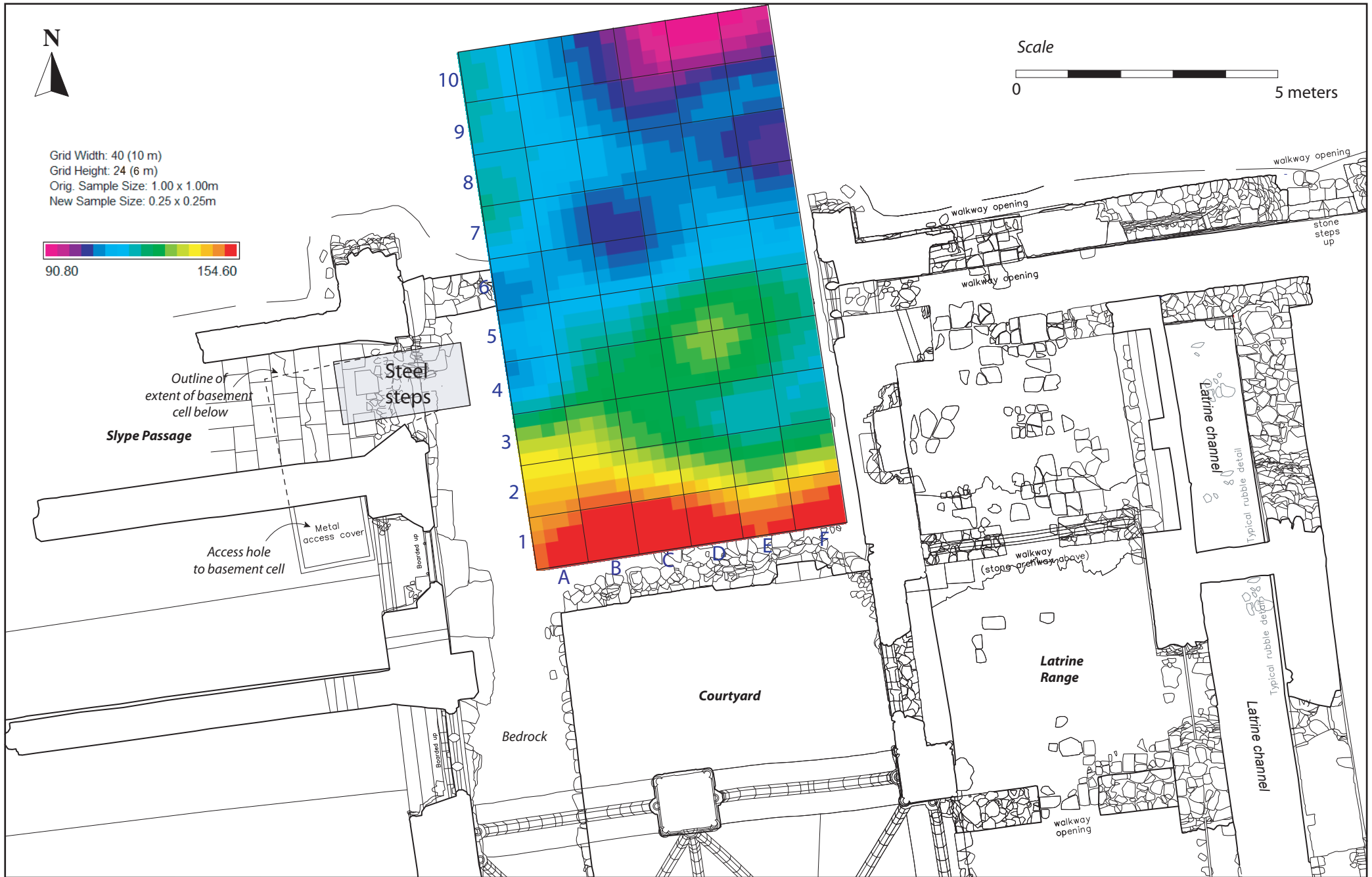




Grid Width: 40 (10 m)  
Grid Height: 24 (6 m)  
Orig. Sample Size: 1.00 x 1.00m  
New Sample Size: 0.25 x 0.25m



Scale



**Project Title:** Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)

**Date:** September 2020

**Surveyed by:** RSJ

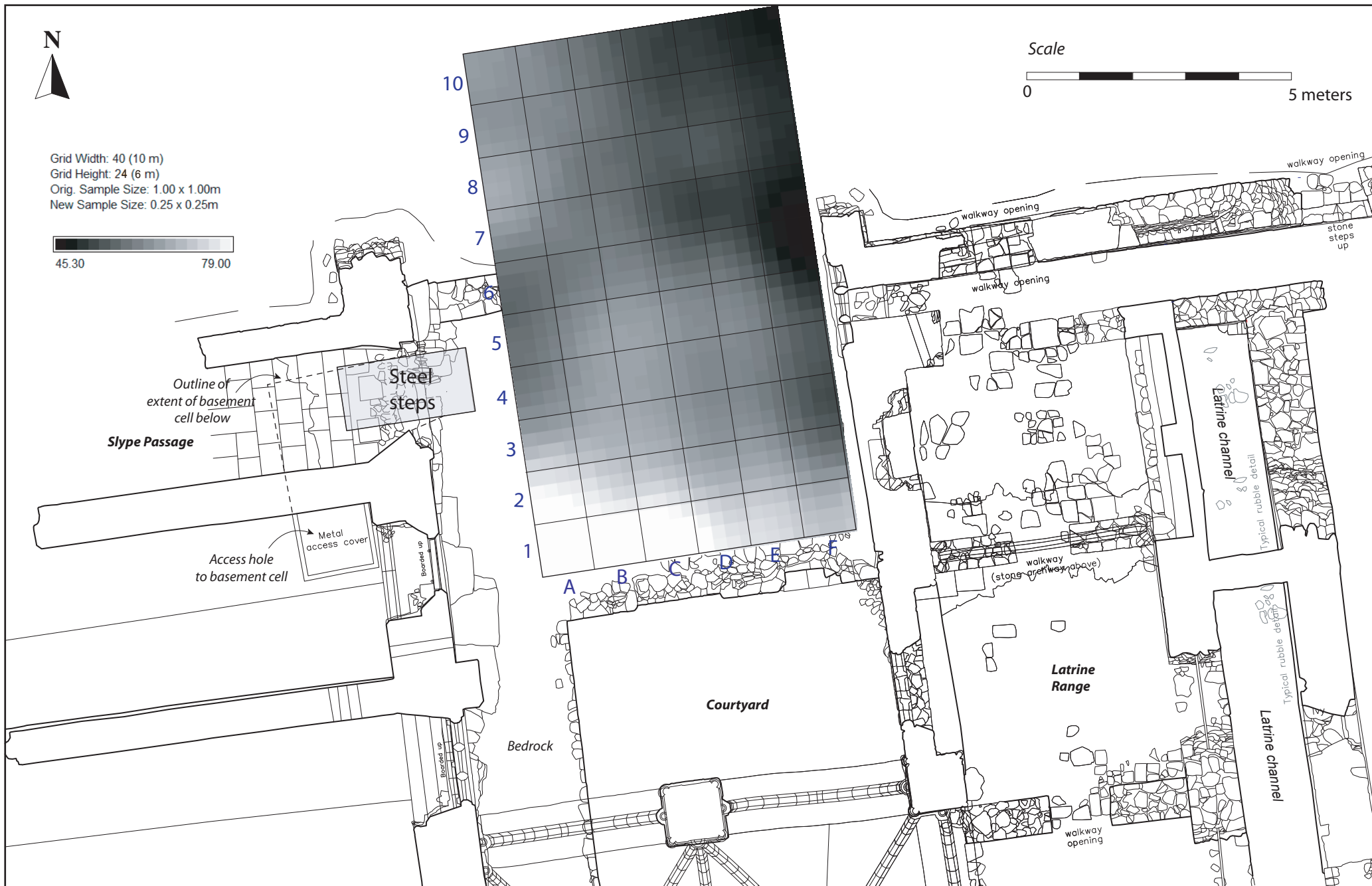
**Approx. Scale (@ A4):**

**Drawing No.**

**Figure 9.**

**Area 1 - Results of Resistivity survey using 0.50m bar array overlying site plan (Colour).**

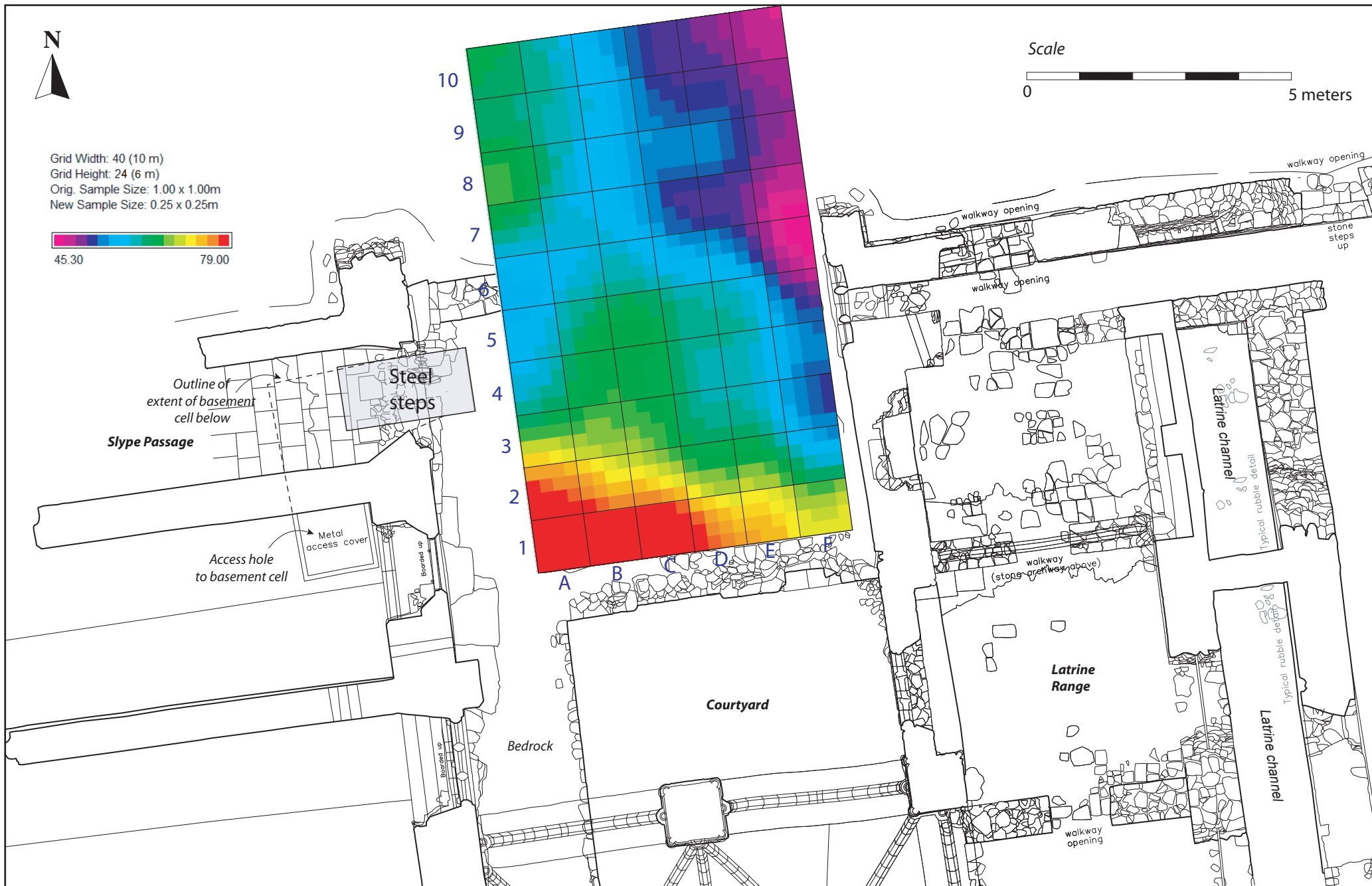




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.:</b>

**Figure 10.**  
**Area 1 - Results of Resistivity survey using 1m bar array overlying site plan (Greyscale).**



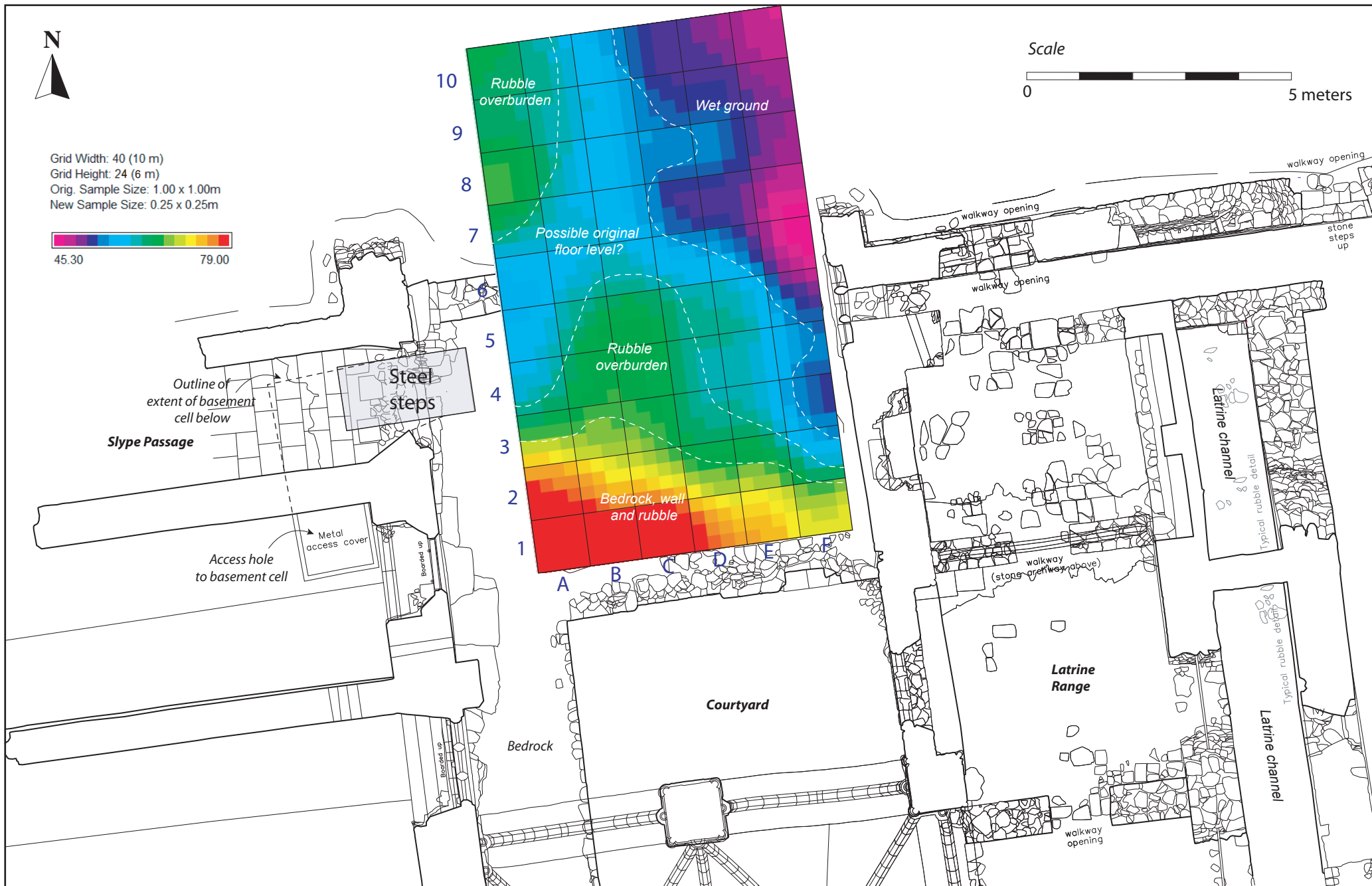


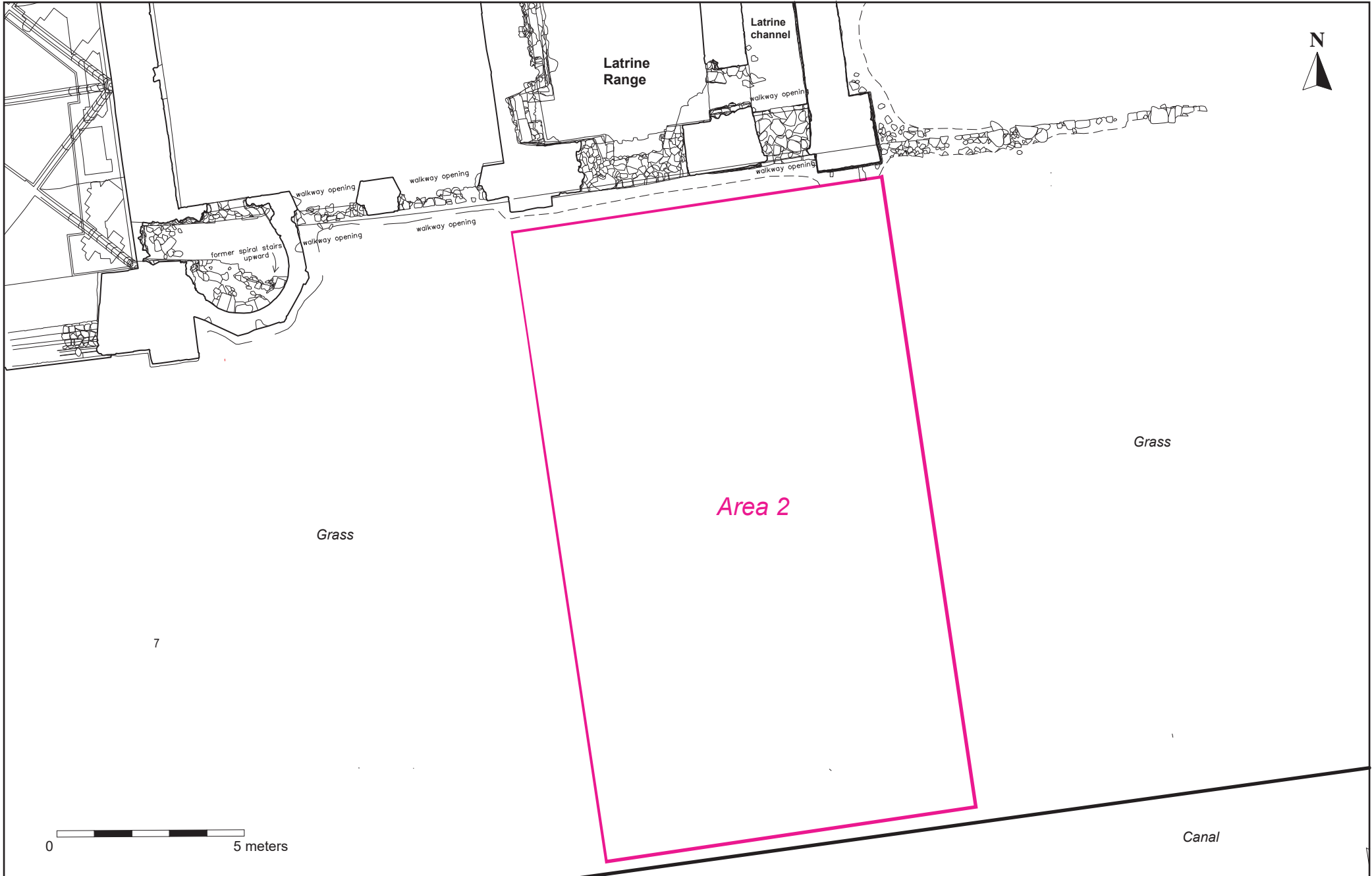
<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.:</b>

**Figure 11.**  
**Area 1 - Results of Resistivity survey using 1m bar array overlying site plan (Colour).**





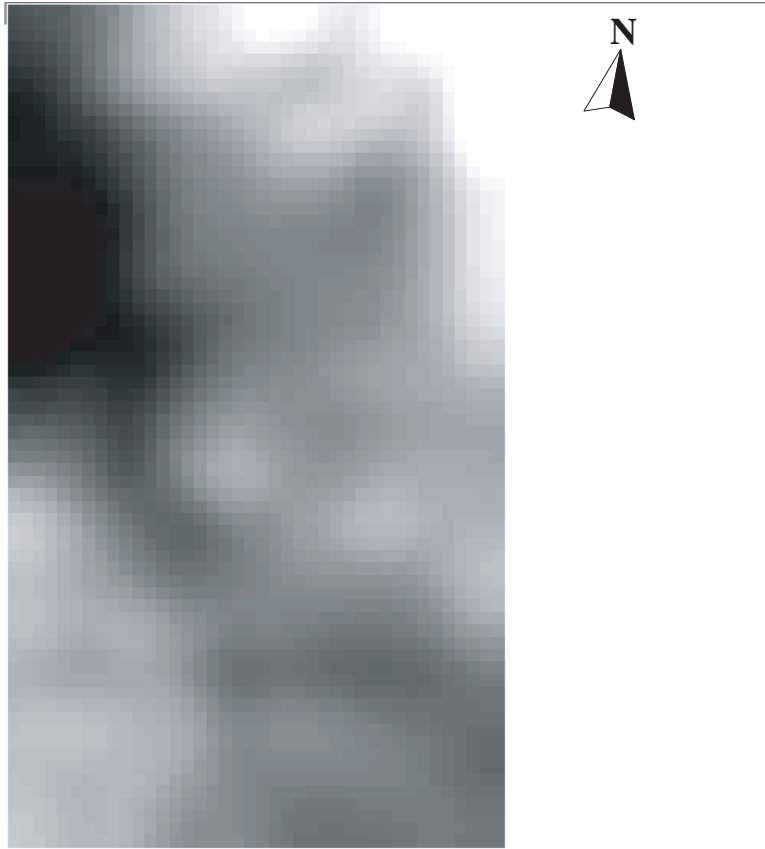




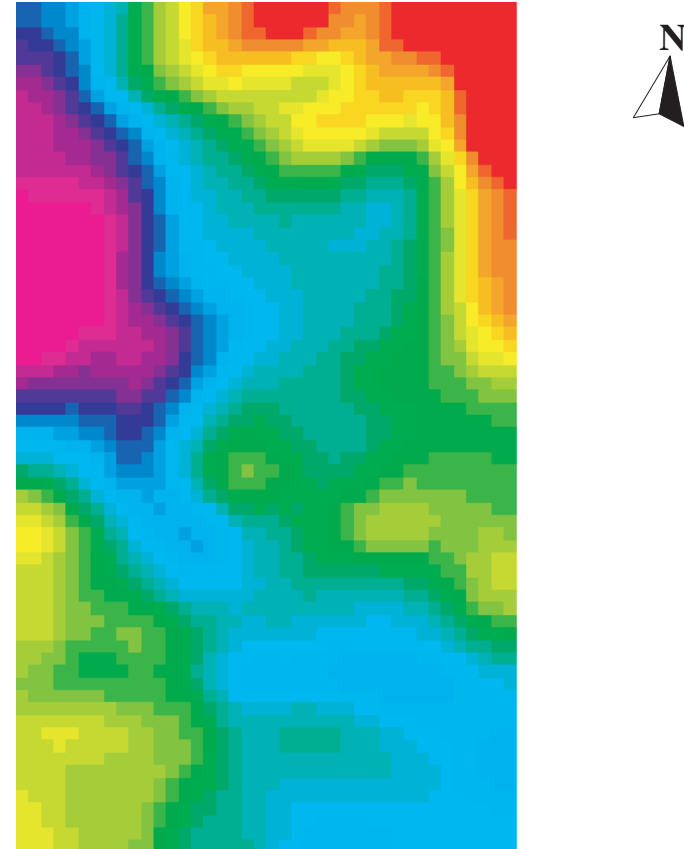
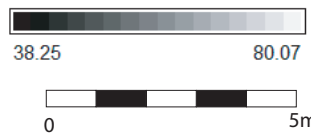
<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 13.**  
Ground plan showing position of Geo-physics **Area 2** between southern external elevation of Latrine Range and Canal

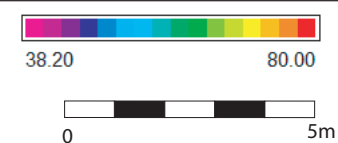




Document: Survey Area 2 (0.50m array)  
 Grid Width: 40 (10 m)  
 Grid Height: 72 (17 m)  
 Orig. Sample Size: 1.00 x 1.00m  
 New Sample Size: 0.25 x 0.25m



Document: Survey Area 2 (0.50m array)  
 Grid Width: 40 (10 m)  
 Grid Height: 72 (17 m)  
 Orig. Sample Size: 1.00 x 1.00m  
 New Sample Size: 0.25 x 0.25m

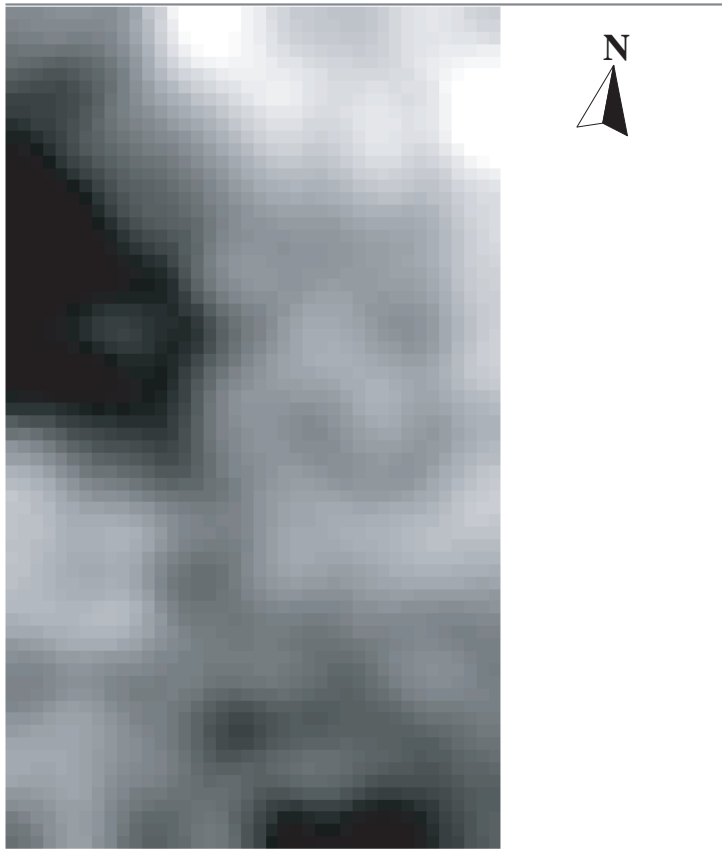


<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date:</b> 7th September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.</b>

**Figure 14.**

Area 2 - Resistivity Survey results using 0.50m array (Greyscale and colour mapping).

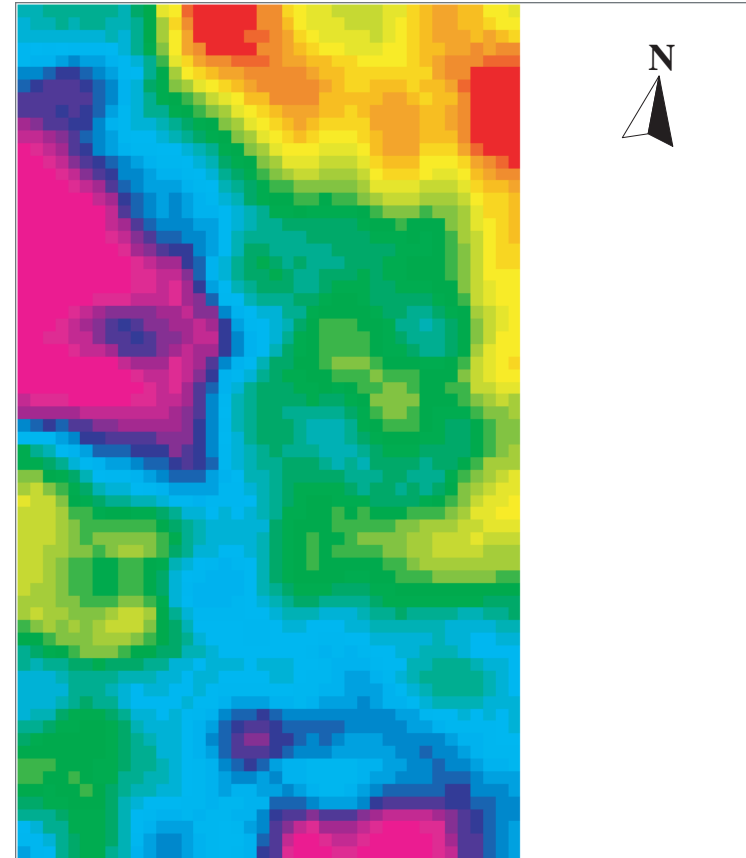




Document: Survey Area 2 (1m array)  
 Grid Width: 40 (10 m)  
 Grid Height: 68 (17 m)  
 Orig. Sample Size: 1.00 x 1.00m  
 New Sample Size: 0.25 x 0.25m

9.50 22.30

0 5m



Document: Survey Area 2 (1m array)  
 Grid Width: 40 (10 m)  
 Grid Height: 68 (17 m)  
 Orig. Sample Size: 1.00 x 1.00m  
 New Sample Size: 0.25 x 0.25m

56.67 135.01

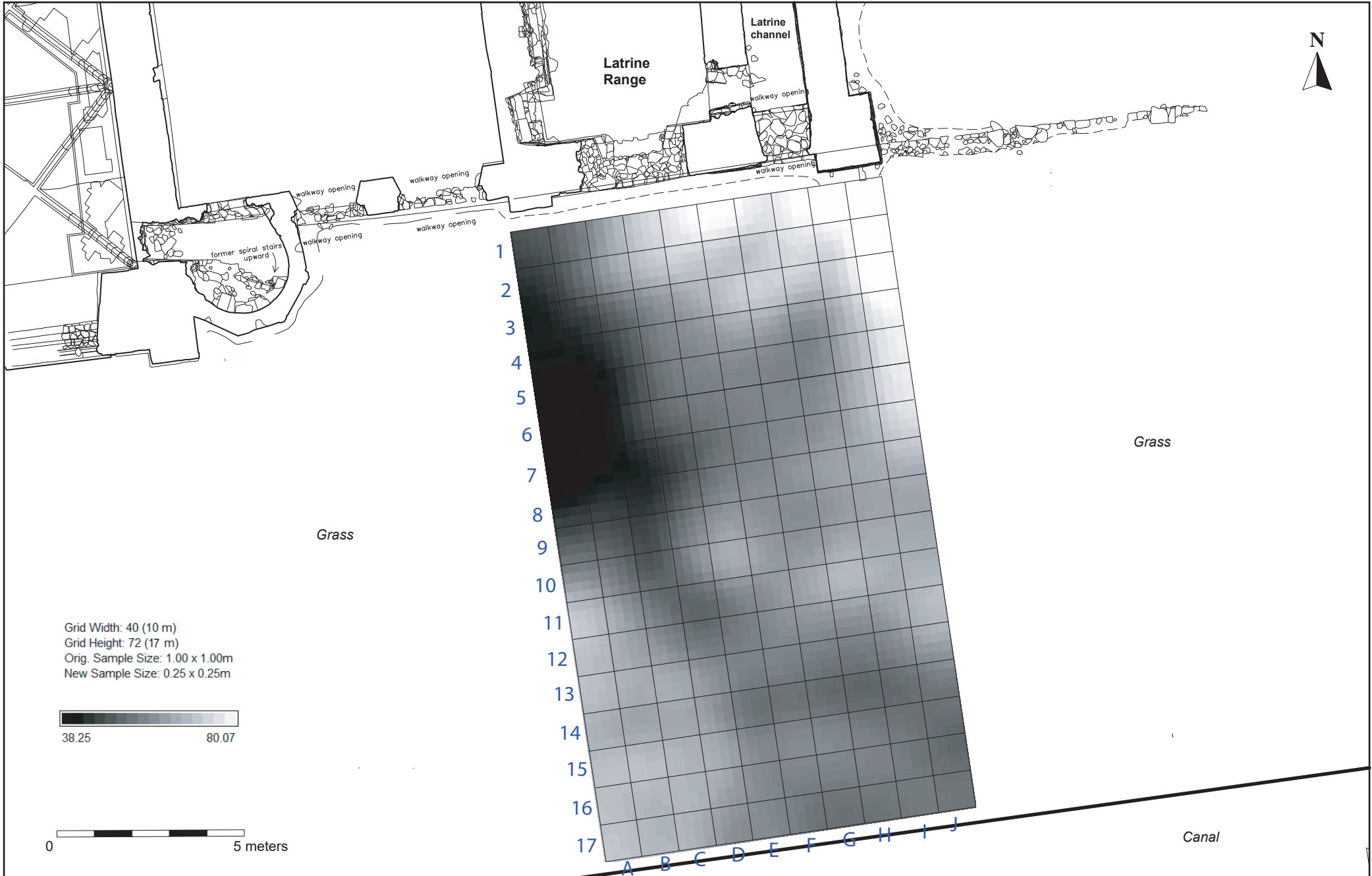
0 5m

<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date:</b> 7th September 2020	<b>Approx. Scale (@ A4):</b>
<b>Surveyed by:</b> RSJ	<b>Drawing No.</b>

**Figure 15.**

Area 2 - Resistivity Survey results using 1m array (Greyscale and colour mapping).

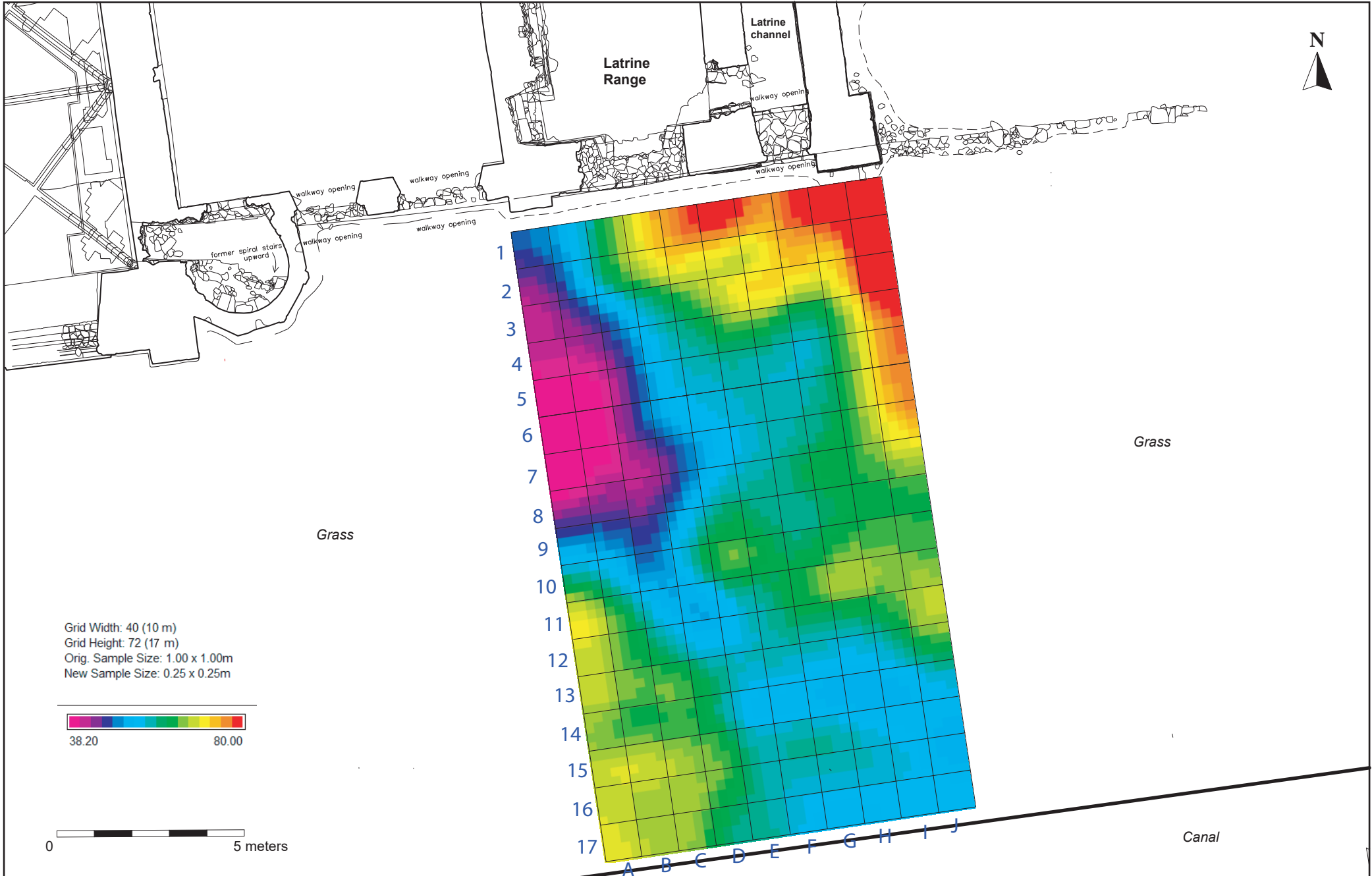




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 16.**  
 Area 2 - Results of Resistivity survey using 0.50m bar array overlying site plan (Greyscale).

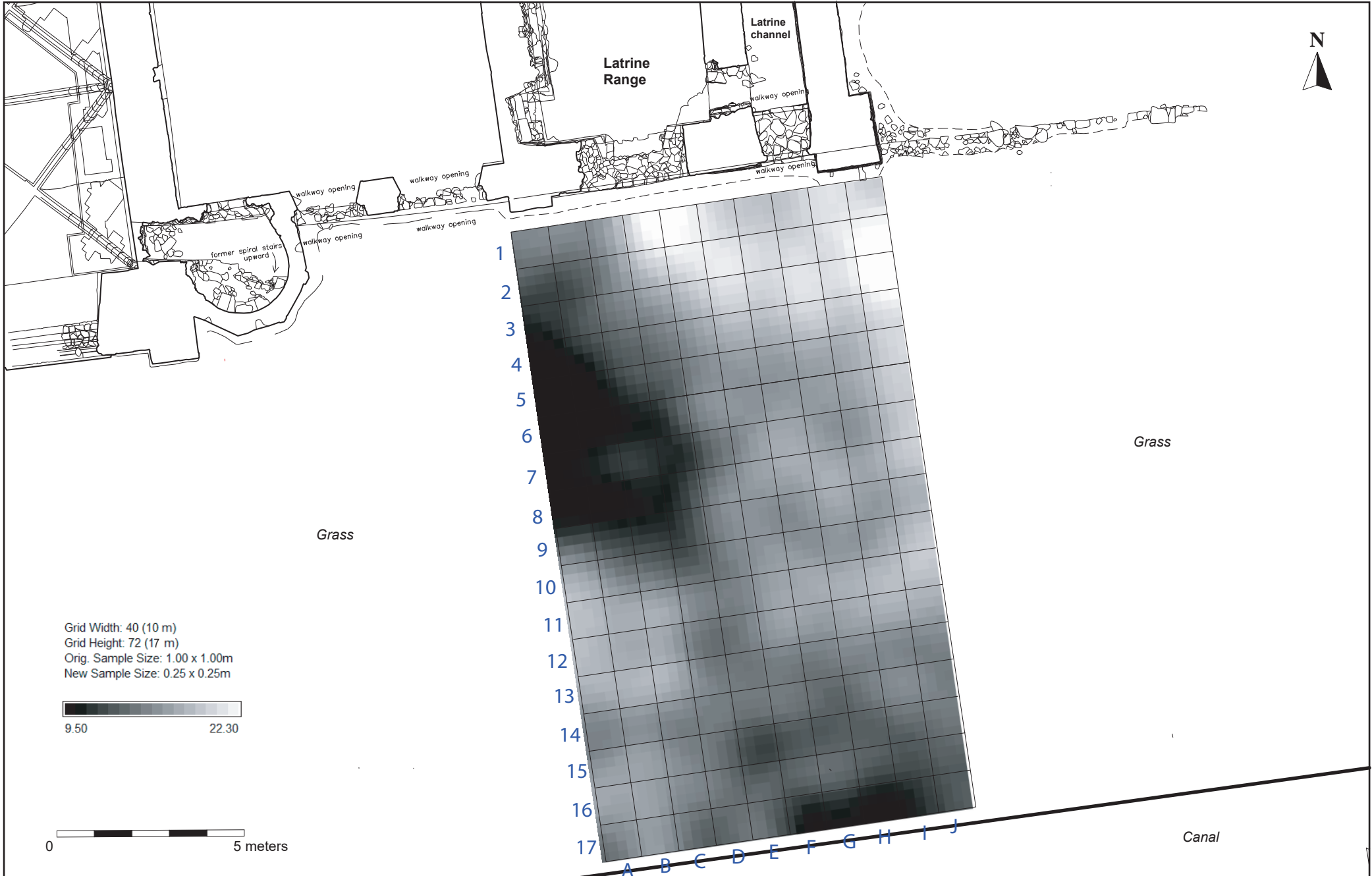




<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 17.**  
 Area 2 - Results of Resistivity survey using 0.50m bar array overlying site plan (Colour).



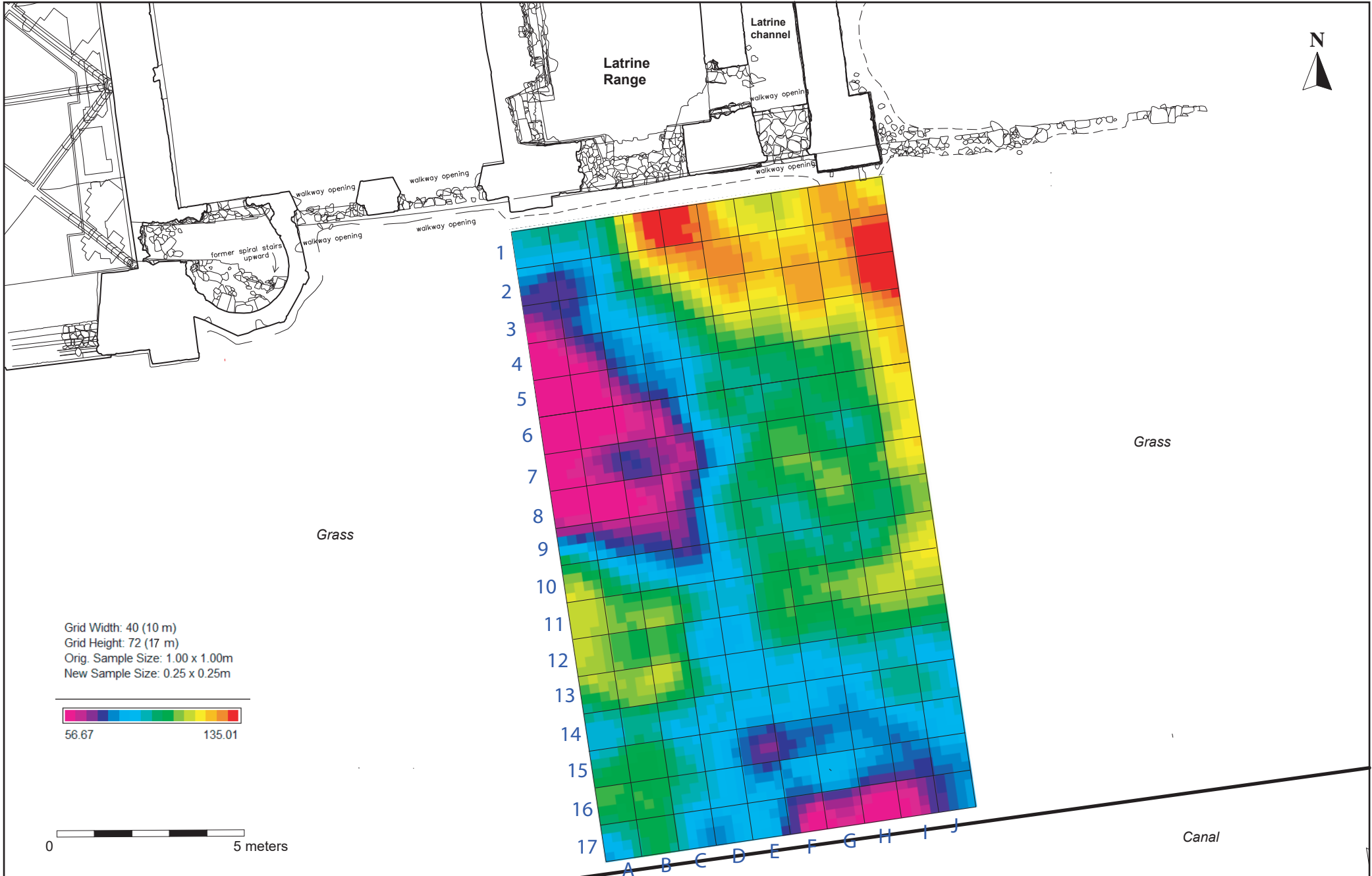


<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 18.**  
 Area 2 - Results of Resistivity survey using 1m bar array overlying site plan (Greyscale).





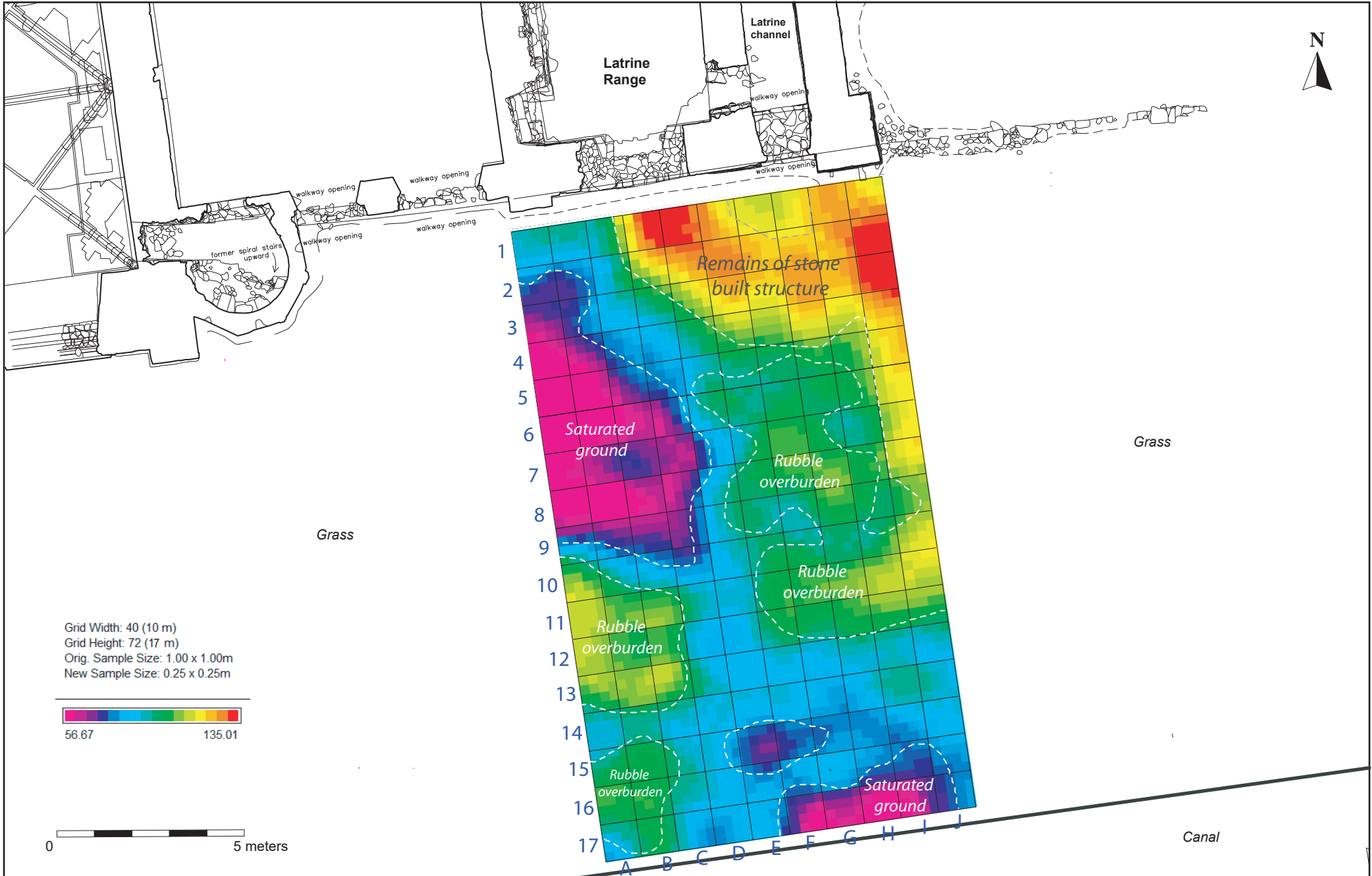


<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 19.**  
 Area 2 - Results of Resistivity survey using 1m bar array overlying site plan (Colour).







<b>Project Title:</b> Neath Abbey, Tudor Mansion, Glamorgan (Phase 3)	
<b>Date:</b> September 2020	<b>Approx. Scale (@ A4):</b>
<b>Drawn by:</b>	<b>Drawing No.:</b>

**Figure 20.**  
 Area 2 - Interpretation of results of resistivity survey using 1m bar array overlying site plan (Colour).



**APPENDIX II:**  
**Photo plates**



Plate 01. Area 1 - Looking Southeast.



Plate 02. Area 1 - Looking southwest.

<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)		<b>Photo Plates</b>  01 - 02	
<b>Date Taken:</b> 3rd September 2020	<b>Approx. Scale (@ A4):</b>		
<b>Appropriated by:</b> RSJ	<b>Drawing No.</b>		





*Plate 03. Area 1 - Oblique view of modern steel steps covering former opening to cell or basement area below slype passage at northern end of Dorter / Undercroft. Looking northwest.*



*Plate 04. Area 1 - Detail of blocked opening in north end of west facing external elevation of Reredorter (Latrine Range). Looking southeast.*

<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date Taken:</b> 3rd September 2020	<b>Approx. Scale (@ A4):</b>
<b>Appropriated by:</b> RSJ	<b>Drawing No.</b>

**Photo Plates**  
03 - 04







Plate 05. Area 1 - Working shot. Laying out the survey grid. Looking southeast.



Plate 06. Area 1 - Area 1 - Working shot. Laying out the survey grid. Looking west.

<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date Taken:</b> 3rd September 2020	<b>Approx. Scale (@ A4):</b>
<b>Appropriated by:</b> RSJ	<b>Drawing No.</b>

**Photo Plates**  
05 - 06







Plate 07. Area 2 - View of survey area at southern external side of Reredorter (Latrine Range). Looking north.



Plate 08. Area 2 - Working shot. Laying out the survey grid and equipment preparation. Looking eastward.

<b>Project Title:</b> Neath Abbey, Tudor Mansion, Neath, Glamorgan (Phase III)	
<b>Date Taken:</b> 4th September 2020	<b>Approx. Scale (@ A4):</b>
<b>Appropriated by:</b> RSJ	<b>Drawing No.</b>

**Photo Plates**

07 - 08



**APPENDIX III:**  
**Archive Cover Sheet**

## ARCHIVE COVER SHEET

The Tudor Mansion, Neath Abbey, Neath, Glamorgan

ARCHIVE DESTINATION - RCAHMW

<b>Site Name:</b>	Cwm Rheidol Led & Zinc Mine, Ystumtuen, Ceredigion
<b>Site Code:</b>	NATH/2020/GP
<b>PRN:</b>	00585w
<b>NPRN:</b>	133
<b>SAM No.</b>	<b>GM006</b>
<b>Other Ref No.</b>	HRSW Rpt No. 223
<b>NGR:</b>	SS 738 974
<b>Site Type:</b>	Cistercian Monastery & Tudor Mansion.
<b>Project Type:</b>	Archaeological Geophysical Survey
<b>Project Manager:</b>	Richard Scott Jones
<b>Project Date(s):</b>	3rd - 4th September 2020 (Phase 3)
<b>Categories Present:</b>	None
<b>Location of Original Archive:</b>	Cadw
<b>Location of Duplicate Archive:</b>	RCAHMW
<b>Number of Find Boxes:</b>	N/A
<b>Location of Finds:</b>	N/A
<b>Museum Ref:</b>	N/A
<b>Copyright:</b>	HRS Wales
<b>Restrictions to Access:</b>	None





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