

# Nelson Monument Calton Hill, Edinburgh

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## *Archaeological evaluation*

*for City of Edinburgh Council*

*September 2016*



*New bedding to east of Nelsons Monument*

# Addyman Archaeology

Archaeology

Heritage Consultancy

Architecture

### *Acknowledgements*

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# Nelson Monument

## Calton Hill, Edinburgh

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### *Archaeological evaluation September 2016*

*Job No. 2235*

Data Structure Report

*September 2016*

by Kenneth Macfadyen

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# Nelson's Monument

## Calton Hill, Edinburgh

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### *Archaeological evaluation September 2016*

#### *Executive Summary*

Addyman Archaeology was commissioned by the City of Edinburgh Council to undertake an archaeological evaluation of an uncovered stone feature. The feature was partially exposed during the formation of a series of planting beds to the east of Nelson's Monument on Calton Hill. A trench was excavated across the top of the feature to identify its extent and purpose.

The feature was formed from a deep cut into the bedrock of the hill, forming a large square chamber. The chamber was lined with dry stone and sealed with a 1m square stone capping. Two ceramic pipes ran in/out of the chamber; one of these was possibly from a down pipe and the other was perhaps an overflow. The feature proved to be drainage related. Its full purpose was not clear, but it was possibly a cistern tank for collecting rainwater.

#### *1. Introduction*

##### *i. General*

Addyman Archaeology was commissioned to undertake an archaeological evaluation of an exposed large masonry feature with a void beneath, which had been partially exposed during gardening works to the east of Nelson's Monument on Calton Hill. The gardening works were creating a terraced garden down the slope and the feature was clipped on the west side of one of the terraces. Construction of the garden was halted until the feature could be archaeologically investigated and recorded.

The feature as exposed was initially cleaned up to identify its extent. It quickly became apparent that it continued beyond the extent of the terraced bed and the trench was extended to uncover the entirety of the feature. The trench was approximately 2m x 1.5m aligned SW-NE (*figure 1*) and was situated 2.40m to the east of the Monument.

A record of the evaluation has been deposited with the Online Access to the Index of Archaeological Investigations (OASIS) website hosted by the Archaeological Data Service (OASIS ID addymanal-addymanal-262216) and with *Discovery and Excavation in Scotland* (DES), the annual publication of fieldwork by Archaeology Scotland.

The trench was hand excavated by Kenneth Macfadyen, on the 8<sup>th</sup> of September 2016. The weather varied between light rain to very heavy rain.

##### *ii. Setting*

The evaluation site sits near the highest point on Calton Hill to the east of Nelson's Monument, a Category 'A' Listed Building (LB27823; Canmore ID 52378). The site is located at NGR NT 26252 74107. The surrounding landscape has large areas of bedrock exposed to the east and a turf covering elsewhere.



Figure 1 site location



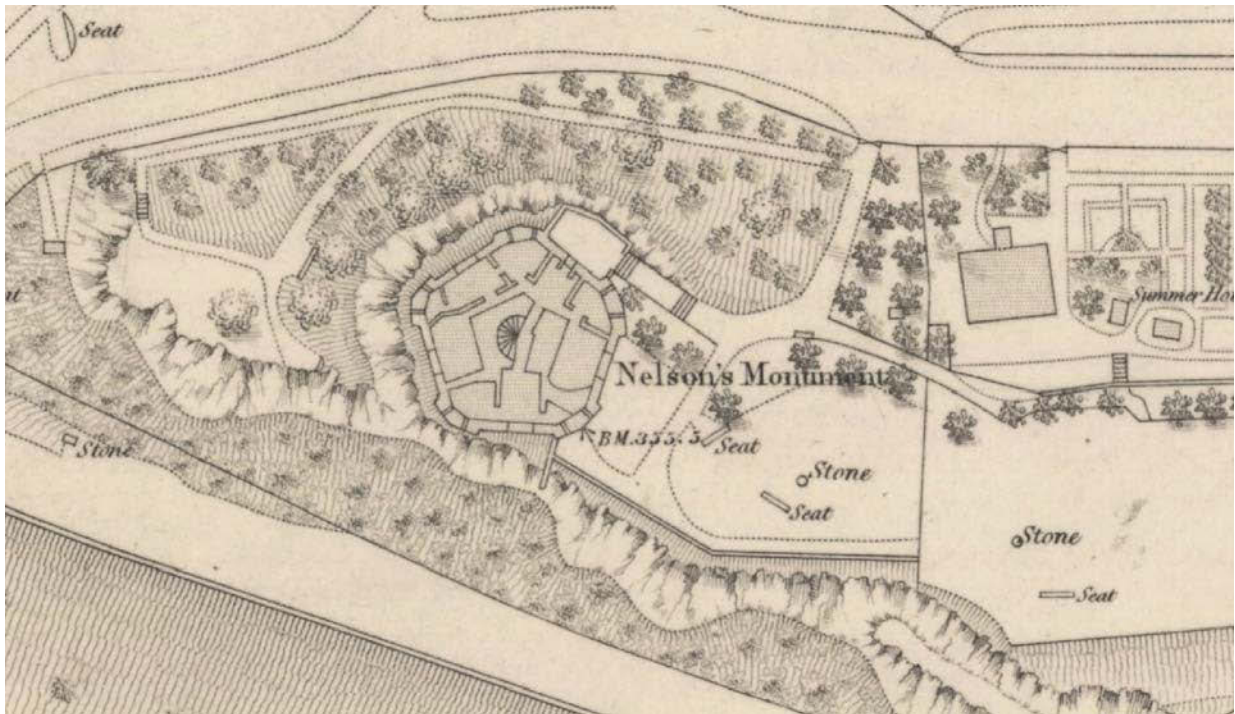
The underlying bedrock geology is of Arthur's Seat Volcanic Formation, a Plagioclase-Macrophyric Basaltic-Rock. This is an Igneous Bedrock formed approximately 339 to 352 million years ago in the Carboniferous Period.

The monument was constructed in the early 19<sup>th</sup> C between 1807 and 1815 to a design by Robert Burn and commemorates Admiral Lord Nelson and the Battle of Trafalgar.

## **2. Map regression**

Available Ordnance Survey mapping was examined for any evidence to aid interpretation of the feature. Pre-Ordnance Survey mapping did not show any clear detail of this area.

The first clear mapping of the area was the first edition Ordnance Survey map of 1852; this shows the monument in detail with internal partitions marked. However, no indication of any feature to the east of the monument can be seen (*figure 2*).



*Figure 2 OS mapping of 1852*

The OS mapping of 1890s shows the monument in lesser detail, with again no indication of the feature (*figure 3*): this is perhaps not surprising if it was a buried drainage feature. There is little change in later mapping.

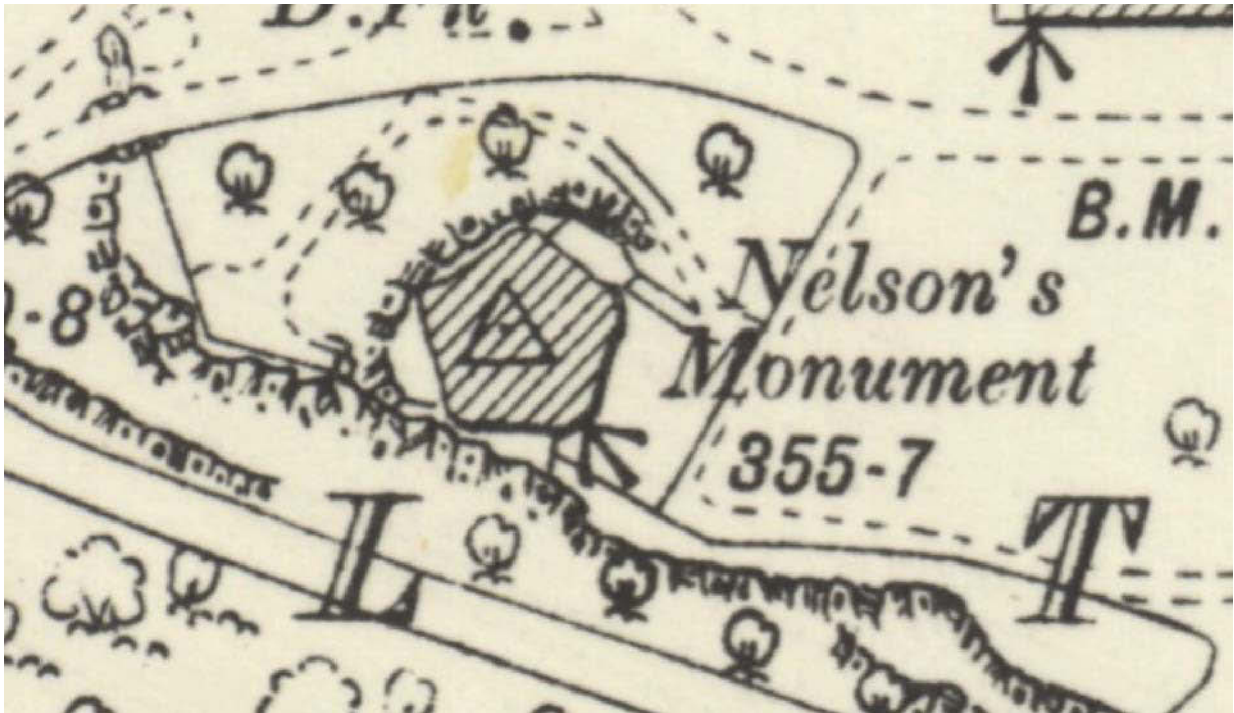


Figure 3 OS mapping of 1890s

### 3. Results

#### i. General

The excavation was undertaken under natural lighting. The conditions were wet ranging from light rain to heavy rain all day. All excavation was undertaken by hand.

Reduction of the ground for the new garden beds had stopped with the discovery of the feature. This was initially identified as a potential well by the discoverers. However a well on the highest point of a rocky hill made little sense.

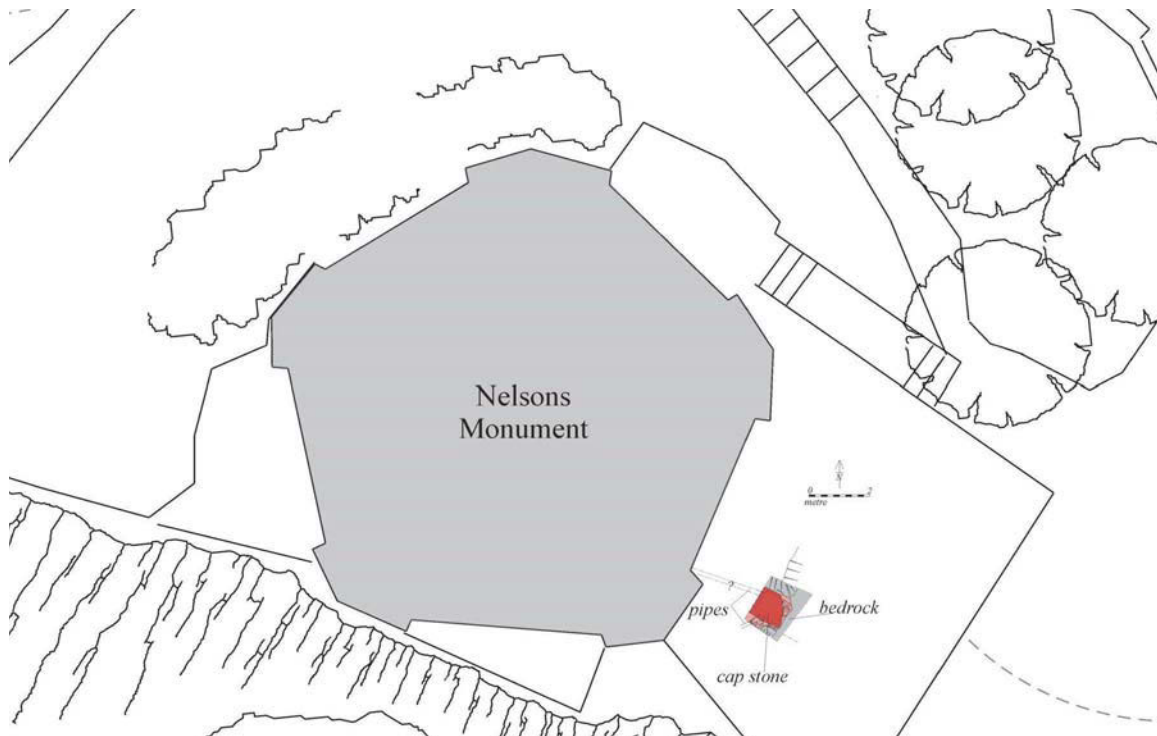
#### ii. Evaluation Trench

Within the terraced bedding the feature had been partially exposed and left as found once the void beneath the capping was noted (*figure 4; plate 1*).





*Plate 1 masonry feature as found*



*Figure 4 Trench Location*

An initial clean-up of the loose debris and roots uncovered a large slab of stone 007 approximately 1m square and lying roughly horizontal. The NE corner appeared to have been damaged with a chunk missing; this potentially happened during the initial uncovering, but the damage allowed a look under the slab (*plate 2/3*).



*Plate 2 Slab capping 007 as exposed looking NE (0.5m scale)*



*Plate 3 Slab capping 007 as exposed looking SW (0.5m scale)*

The slab was too big to move by myself so the interior was not fully exposed but by putting a camera down into the chamber, photographic coverage was made of the interior. This showed the chamber to be roughly square and roughly formed from unbonded blocks of rubble stone (*plate 4 & 5*).

The base was covered with a light spread of silts and some spoil fallen in from the recent exposure; a probe pushed into the silts showed them to be shallow and only a few centimetres deep overlying a hard base - presumably a flagged floor or even just bare bedrock.



*Plate 4 composite detail of W and S sides (006 masonry) with pipes 008 to left and 009 to right*



*Plate 5 composite detail of chamber base*



The chamber was approximately 0.85m square and measured approximately 0.75m from base to the underside of the capping. The only other features noted were two ceramic pipes built into rubble channels within the masonry sides. The first 009 came in from the west and may have formerly come from the nearby corner downpipe; however it is clearly blocked /damaged and not been in use for a long time. This was only seen from within the chamber and appeared to be of terracotta clay construction.

The second pipe 008 came in/out to the southwest and likely ran towards the edge of the hill top. This pipe was of glazed clay and was laid in a rough rubble-lined channel running through the masonry side of the chamber and capped with a stone slab (*plates 6 & 7*). The rubble channel seemed to be contemporary with the chamber although the general construction is so poor that an intervention might not be easily identified. Further out from the chamber it is possible the pipe may just sit within the soil.



*Plate 6 008 with capping intact*



*Plate 7 008 after capping lifted showing the pipe part exposed*

The pipe itself does not run into the chamber but stops short with the stone lined channel continuing the run into the chamber.

The surrounding lower deposit is of bedrock 004 that forms the hill. In places the bedrock is exposed only a few centimetres below the surface, extending to up to 0.60m below elsewhere. The stone lined chamber 006/007 and the pipe channel 008 to the south were cut (005) down into this bedrock; the cutting down utilised natural cracking lines in the bedrock in part giving the slightly off square shape to the cut. The upper part of the bedrock is quite friable and breaks up easily. Overlying the bedrock was 0.15m of degraded bedrock 003 with a little soil; above this was 0.25m of stony dark soil 002, effectively a mix of degraded bedrock and soils. This was overlain by 0.25m of lightly stony dark soils 001, which is probably an imported top soil (*figures 5 & 6*).

From these deposits a number of 19/20<sup>th</sup> century ceramic sherds were noted but not kept; nothing earlier was seen.

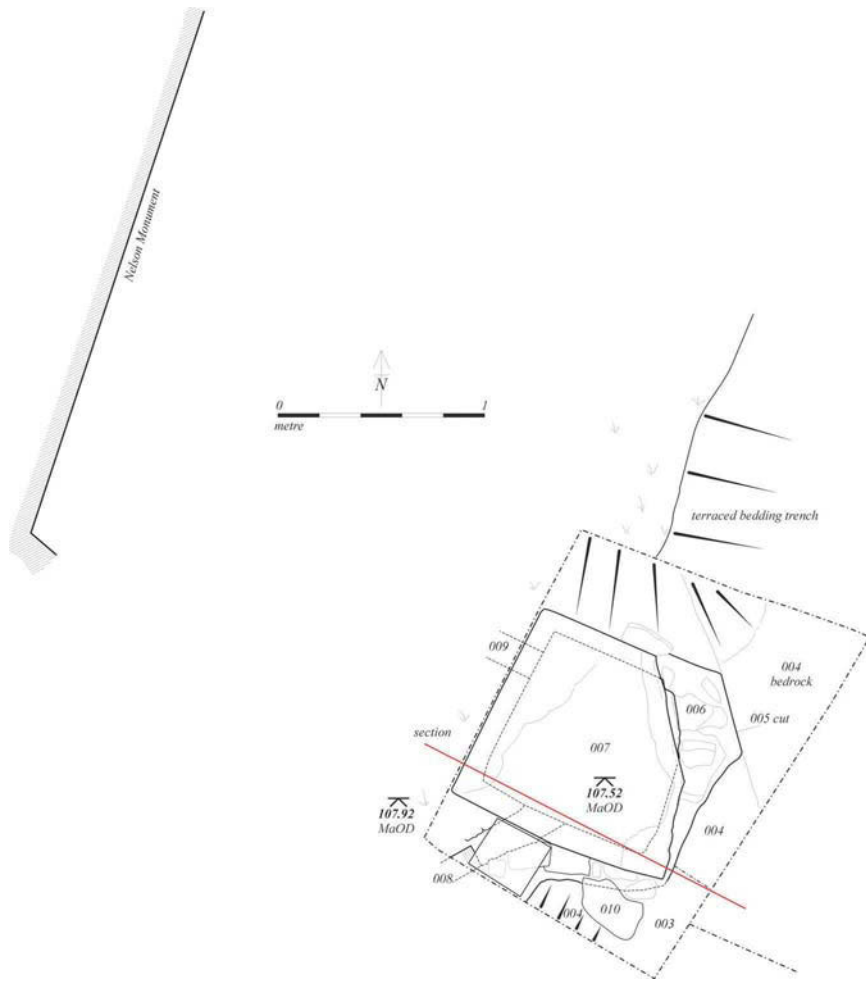


Figure 5 Plan of feature exposed

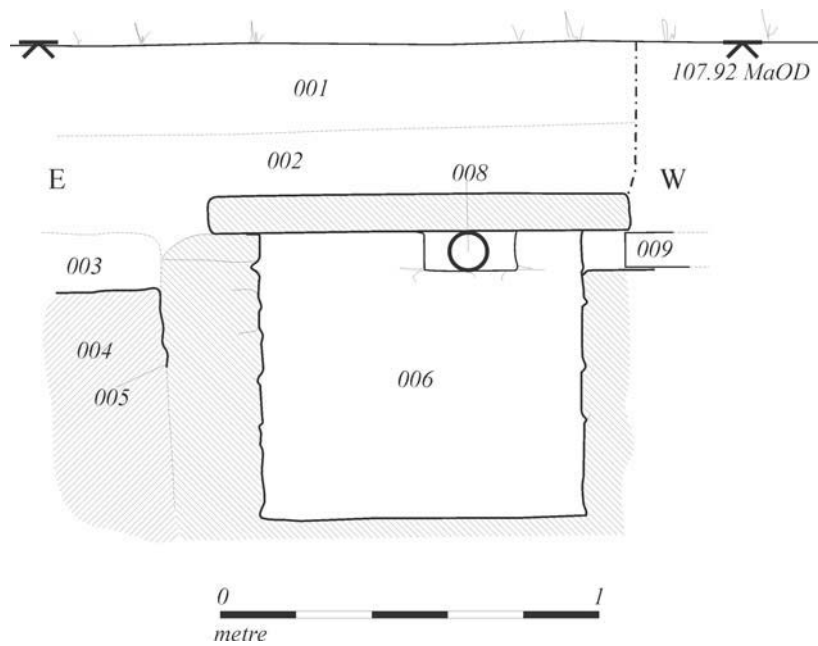


Figure 6 Section through feature



### **3. Conclusion**

The feature as exposed was initially considered to possibly be a well or some kind of water cistern; other initial interpretations were perhaps as a cess pit. The position of the feature on the top of a high rocky hill made it unlikely to be a well and following excavation it can be said to be related to drainage and likely to be a water cistern taking water from the roof and overflowing to the south over the edge of the hill through a ceramic pipe.

The interior of the chamber was dry and lightly silted showing it to be out of use with no water ingress from the pipes for a long time. The probable pipe from the down pipe appears to be broken and filled with soil and pieces of broken pipe showing it to be out of use; this was likely broken during more recent groundworks. The current downpipe at the corner discharges onto the ground surface and not into piping as the original may have.

How the retained water was then recovered is not clear as the capping was of a single large and very heavy slab, clearly not intended to be moved - perhaps from a pipe and hand pump long lost.

**Appendix A: Context Register**

Context	Trench	Date	Initial	Description	Comments
001	1	08/09/16	Kmacf	Topsoil, dark fine silty soils. 20-25 cm deep	Possibly imported to site
002	1	08/09/16	Kmacf	Stony soils , a mix of 001 and angular lumps of degraded bedrock	
003	1	08/09/16	Kmacf	Degraded bedrock	
004	1	08/09/16	Kmacf	Bedrock, breaks up easily at the surface	bedrock
005	1	08/09/16	Kmacf	Cut for for feature 006/007 and 008, cuts deeply into bedrock partially following natural splits in the rock.	
006	1	08/09/16	Kmacf	Stone lined manhole, sides roughly formed from unworked blocks of split bedrock built against the cut. No bonding was noted	
007	1	08/09/16	Kmacf	Large flat stone slab cover to 006, approximately 1m square and 0.10 m thick, delaminating on the surface and the eastern corner has been removed possibly by gardening	
008	1	08/09/16	Kmacf	Glazed ceramic pipe entering/leaving the chamber 006 from the south. Sits just below the capping stone 007 and within a channel formed and capped with unbonded rubble	Possible overflow
009	1	08/09/16	Kmacf	Ceramic pipe entering/leaving the chamber 006 from the west. Sits just below the capping stone 007	Possibly from downpipe to the west
010	1	08/09/16	Kmacf	Small spread of creamy lime mortar overlying the side of 006	Construction deposit ,possibly from the main monuments construction

**Appendix B: Drawings Register**

Dwg No.	Sheet	Type	Scale	Description	Date	Drawn by
001	001	PLAN	1:20		08/09/16	Kmacf
002	001	SECTION	1:20		08/09/16	Kmacf

**Appendix C: Photographic Register**

Shot Num.	Direction facing	Contexts	Description	Date	Initial
001	NW		general view pre excavation	13/08/16	TOA
002	W		general view pre excavation	13/08/16	TOA
003	SW		general view pre excavation	13/08/16	TOA
004	W		general view pre excavation	13/08/16	TOA
005	SW		general view pre excavation	08/09/16	Kmacf
006	SW		general view pre excavation	08/09/16	Kmacf
007	W	007	Initial clean up showing capping stone	08/09/16	Kmacf
008	W	007	Initial clean up showing capping stone	08/09/16	Kmacf
009	W	007	Initial clean up showing capping stone, location	08/09/16	Kmacf
010	W	006,009	Internal west elevation and pipe 009	08/09/16	Kmacf
011	SW	006,008	Internal south elevation and pipe 008	08/09/16	Kmacf
012	S	006	Internal south elevation	08/09/16	Kmacf
013	V/S		View of base	08/09/16	Kmacf
014	V/S		View of base	08/09/16	Kmacf
015	W	007	Capping stone fully exposed	08/09/16	Kmacf
016	W	007	Capping stone fully exposed	08/09/16	Kmacf
017	W	007	Capping stone fully exposed	08/09/16	Kmacf
018	W	007	Capping stone fully exposed	08/09/16	Kmacf
019	W	007	Capping stone fully exposed	08/09/16	Kmacf
020	W	007	Capping stone fully exposed	08/09/16	Kmacf
021	SW	007	Capping stone fully exposed	08/09/16	Kmacf

<i>Shot Num.</i>	<i>Direction facing</i>	<i>Contexts</i>	<i>Description</i>	<i>Date</i>	<i>Initial</i>
022	SW	007	Capping stone fully exposed	08/09/16	Kmacf
023	S	007	Capping stone fully exposed	08/09/16	Kmacf
024	N	007	Capping stone fully exposed	08/09/16	Kmacf
025	N	007	Capping stone fully exposed	08/09/16	Kmacf
026	N	007	Capping stone fully exposed	08/09/16	Kmacf
027	N	007	Capping stone fully exposed	08/09/16	Kmacf
028	N/V	007/008	Capping stone fully exposed and capping to 008 pipe to bottom	08/09/16	Kmacf
029	S		South section of trench	08/09/16	Kmacf
030	V	008	Capping stone lifted exposing ceramic pipe	08/09/16	Kmacf
031	S	008	Detail of ceramic pipe	08/09/16	Kmacf
032		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
033		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
034		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
035		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
036		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
037		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
038		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
039		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
040		006	Internal masonry from the SE corner to the NW	08/09/16	Kmacf
041			Internal baser of chamber shows silting	08/09/16	Kmacf
042			Internal baser of chamber shows silting	08/09/16	Kmacf
043			Internal baser of chamber shows silting	08/09/16	Kmacf
044			Internal baser of chamber shows silting	08/09/16	Kmacf
045			Internal baser of chamber shows silting	08/09/16	Kmacf
046			Internal baser of chamber shows silting	08/09/16	Kmacf
047			Internal baser of chamber shows silting	08/09/16	Kmacf
048			Internal baser of chamber shows silting	08/09/16	Kmacf
049			Internal baser of chamber shows silting	08/09/16	Kmacf
050			Internal baser of chamber shows silting	08/09/16	Kmacf
051			Internal baser of chamber shows silting	08/09/16	Kmacf
052			Internal baser of chamber shows silting	08/09/16	Kmacf
053	W	009	West internal elevation showing pipe 009	08/09/16	Kmacf
054	S		General location view of feature	08/09/16	Kmacf
055	S		General location view of feature	08/09/16	Kmacf
056	SW		General location view of feature	08/09/16	Kmacf
057	S	007	General view of feature	08/09/16	Kmacf

*Appendix D: Photographic Thumbnails*







2235 Nelson Monument (31).JPG

2235 Nelson Monument (32).JPG

2235 Nelson Monument (33).JPG

2235 Nelson Monument (34).JPG

2235 Nelson Monument (35).JPG



2235 Nelson Monument (36).JPG

2235 Nelson Monument (37).JPG

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2235 Nelson Monument (54).JPG



2235 Nelson Monument (55).JPG



2235 Nelson Monument (56).JPG

2235 Nelson Monument (57).JPG



*Appendix E: Provisional Discovery and Excavation Scotland (DES) entry*

<b>LOCAL AUTHORITY:</b>	City of Edinburgh
<b>PROJECT TITLE/SITE NAME:</b>	Nelson Monument ,Calton Hill, Edinburgh
<b>PROJECT CODE:</b>	AA 2235
<b>PARISH:</b>	Edinburgh
<b>NAME OF CONTRIBUTOR:</b>	Kenneth Macfadyen
<b>NAME OF ORGANISATION:</b>	Addyman Archaeology
<b>TYPE(S) OF PROJECT:</b>	Excavation
<b>NMRS NO(S):</b>	NT27SE 348
<b>SITE/MONUMENT TYPE(S):</b>	19 <sup>th</sup> C Monument
<b>SIGNIFICANT FINDS:</b>	Drainage
<b>NGR (2 letters, 8 or 10 figures)</b>	NT 26252 74107
<b>START DATE (this season)</b>	08/09/16
<b>END DATE (this season)</b>	08/09/16
<b>PREVIOUS WORK (incl. DES ref.)</b>	-
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	<p>During gardening work to the east of the 19<sup>th</sup> century Nelsons Monument on the top of Calton Hill a large block of stone with a large void beneath was part uncovered initially considered to potentially be a well. The City of Edinburgh instructed an archaeological excavation of this to identify what it was.</p> <p>The structure was cleaned up and excavated on the 8<sup>th</sup> of September 2016. The feature proved to be a large square chamber cut down into the surrounding bedrock, lined with unbonded rubble and capped with a single 1m square slab. This was interpreted as a water cistern collecting rain water.</p> <p>Two ceramic pipes were associated with the cistern, the first believed to take water from a downpipe to the west of the monument and the second an overflow pipe discharging over the edge of the hill.</p> <p>The feature most likely relates to drainage and dates to the early 19<sup>th</sup> century at the earliest.</p>
<b>PROPOSED FUTURE WORK:</b>	none
<b>CAPTION(S) FOR ILLUSTRS:</b>	
<b>SPONSOR OR FUNDING BODY:</b>	City of Edinburgh Council
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	St. Ninian's Manse, Quayside Street, Edinburgh, EH6 6EJ
<b>EMAIL ADDRESS:</b>	kennymacfadyen@addyman-archaeology.co.uk
<b>ARCHIVE LOCATION</b> (intended/deposited)	HES