Barbuda Historical Ecology Project 2009
Seaview Excavation Team Report

Dr. Thomas H. McGovern & Norie Manigault
Anthropology Department
Hunter College and CUNY Graduate Center
nabo@voicenet.com

January 2009

Summary

In January 2009 the CUNY Barbuda Historical Ecology Project carried out small scale excavations at two localities within the Seaview site (BA016) near Two Foot Bay in eastern Barbuda WI. The excavation work was one component of the broader 2009 effort, and was aimed at both site conservation and student training. Field School students under the supervision of Dr. T.H. McGovern continued work begun in 2008 at the Seaview A2 coastal erosion face aimed at both recovering exposed Saladoid midden deposits and at stabilizing the most vulnerable portion of this eroding sand beach cliff. The teams also worked to recover stratigraphic information and stratified samples of artifacts and ecofacts from a pre-existing pit (Seaview inland unit G) located in 2008. Based on 2008 C14 dates, we suspect that the inland G deposits are associated with an earlier phase of Saladoid settlement on Barbuda. Both small excavations were successful in recovering Saladoid artifacts and ecofacts and provided opportunities for collaboration with the soil Phosphate and Resistivity survey teams. Rescue excavation and extensive sand bag reinforcement at the Seaview A2 beach front may have at least temporarily stabilized this area, and the inland G unit shows considerable potential for future stratigraphic excavation.

Objectives 2009.

Our objectives for the 2009 January season were:

- Continue a program of monitoring coastal erosion of midden deposits along the Seaview coastal erosion face (areas A1, A2, A3 in 2008 report).

- Selectively excavate the most immediately endangered portions of the Seaview coastal middens on a rescue- as- needed basis.

- Stabilize the most vulnerable portions of the exposed Seaview coastal deposits.
- Investigate looter pits in the inland portion of the Seaview site noted in 2008. The early C14 Dates obtained from the inland TP5 in 2008 suggested the importance of better understanding deposits in this area.
- Cooperate closely with the archaeological survey team, the Phosphate Survey Team, Resistivity Team, Artifact Analysis Team, visiting specialists (Dr. Tina Thurston, Dr. Alison Bain, Dr. Nancy Todd), and the planned Barbuda Heritage Day outreach.
- Provide hands on instruction in archaeological field methods to students participating in the CUNY Barbuda Field School.

Methods

As in 2007 and 2008 we made use of a slightly modified version of the successful FSI/NABO field recording system (based on a single context approach and ultimately modeled upon the Museum of the City of London, FSI manual available as download via www.nabohome.org). All photography was digital at 8 to 14 effective megapixels. All finds and samples are centrally registered using a system designed in collaboration with Dr. Reg Murphy of the *Antigua and Barbuda Parks Department*. Vertical & horizontal control was maintained with a Sokkia optical transit backed by the project mapping GPS (+/- 15 mm accuracy). All excavated deposits were dry sieved through 3 mm mesh sieves. All shell was retained for later analysis, fire cracked stones were counted per context and discarded. Whole soil samples for insect, charcoal, and phytolith analysis were collected (2 lt/context) from the G unit.

Seaview A2 Area 2009

The Seaview sea cliff erosion area had absorbed most of our resources in 2007 and 2008, and 2008 saw a major rescue effort by staff and students. Massive amounts of slumping cultural deposits full of eroding artifacts and ecofacts were found cascading down slope at the beginning of both prior seasons. The major rescue excavation and stabilization program of 2008 supervised by supervisor Konrad Smiarowski had successfully recovered a large collection of in situ finds across a profile extending over 10 m in A2 and 4 m in A1 and A4 respectively, but we were still concerned that ongoing beach cliff erosion could undo these efforts rapidly. If erosion of cultural deposits from the sea cliff face had caused a major collapse in 2008 we were prepared to concentrate much of our efforts on recovery of endangered stratified deposits in this area in 2009. Fortunately the initial view of the beach cliff areas indicated far less erosion than in previous visits in 2007 and 2008- only a few pot sherds and large shells (mainly West Indian Top Shell) had fallen from the cliff face over the summer and fall of 2008, and these had mainly come from the southern portions of the erosion face not excavated in 2008. It appears that at least for the present, our efforts in 2008 have served to stabilize this portion of the Seaview beach cliff, and have certainly not caused any additional damage (figure 1).

Figure 1. Seaview A2 erosion face Jan 09 showing only minor erosion damage since early 2008 (facing N).

The inspection in 2009 indicated that the only area where *in situ* cultural deposits were in danger of erosion was in the N end of the A2 excavation unit, in a strip approximately 1.5 m wide that had been covered by the improvised access stairway then partially covered with wooden pallets and flour sacks. This small area (ca 1.5 x 3 m in maximum dimensions) was catching wind and its erosion could contribute to the undermining of the nearby beach vegetation patch which is stabilizing the larger in situ deposit in area A4 just to the north. We decided to stratigraphically excavate this small patch, and to make use of the large stock of purchased sandbags acquired after the 2008 season to attempt a major reinforcement of this vulnerable area. We set up a temporary sub-datum (sub datum 2 at GPS N 17 42.576, W 61 46.507, + 13 m asl, accuracy +/- 4 m) which will be more precisely located with the mapping GPS unit, but which is located about 15 m SE of the 2009 A2 excavation unit.

We were able to directly match cultural layers in the 2009 A2 northern extension with the long profile drawn by Konrad Smiarowski and his team in 2008, and we have continued to use his context numbering system for the 2009 deposits, as these can be securely connected to the same layers observed and excavated in 2008. The contexts recorded and excavated in 2009 are:

[851] Light tan fine sand – natural overburden with some eroded artifacts and shells included.
[852] Slumped cultural deposits that have been undercut by erosion of sand deposits below and have moved as a semi-coherent mass downhill (the cultural deposits are far more compact and hardened than the natural beach sand deposits above and below). These are almost certainly derived from the uppermost midden layer [856] but as we cannot stratigraphically demonstrate this relationship we follow the 2008 practice of giving these deposits a new context number. Very little material was recovered from this context in 2008.
[856] Medium brown compact sandy loam that is rich in artifacts, bone, and shell. This was the uppermost midden deposit excavated in the 2008 season, and it is our main target for the 2009 small scale dig. This layer produced much ceramics (including both Zone Incised and White on Red painted pot sherds), bone (fish, turtle, rice rat) and many crab and West Indian Top Shell remains. In contents this deposit closely resembles the assemblage excavated in 2008 from the same deposit. A large piece of sea turtle lower shell was recovered from the upper portions of [856].

Figure 2. Sea Turtle lower shell plastron in [856] Seaview A2 2009

In 2009 we deliberately chose to leave the lower midden deposits unexcavated, as they provide a firmer base for sandbag reinforcement than the softer natural sand deposits below. We thus stop excavation at the base of the [856] context, and do not go deeper. The sandbag effort creates both a secure temporary access stairway via the A4 area and a thick stepped revetment protecting the beach plants at the A2/A4 boundary area. Additional sandbags have been added at backfilling after the group picture of the hard working crew shown below.

Figure 3 Excavation Crew 2 after sand bag work

Seaview Area G 2009

In 2008, Dr. Reg Murphy directed the excavations of a series of test pits on the landward (E) side of the dune complex at Seaview. Many of these small test pits encountered cultural material, and one (TP5) was expanded into a 2 x 4 m excavation unit which documented a charcoal filled post hole and a large deep storage pit. These stratified deposits were excavated by Dan McGovern and Jennifer Brown, and provided three consistent AMS C14 dates on wood charcoal that range from ca 250 BC to 100 AD, placing these deposits in the early Saladoid period and suggesting the presence of a substantial settlement pre-dating the later Saladoid materials eroding out of the Seaview coastal cliff face in the A2 area (see 2008 report for details). At the same time, we noted the presence of an open recently excavated pit approximately 100 m to the south of TP5, and collected sherds of Saladoid pottery, WI Top Shells, and lithics from the upcast debris surrounding the hole. Surface indications suggested that this pit had penetrated what could be a substantial linear midden feature, possibly one associated with the settlement documented by the TP5 unit in 2008.

Figure 4. Unit G Pit depression after clearing vegetation 2009

In 2009 we returned to this pit at Seaview with the intention of making use of the existing intrusion to obtain a better understanding of the Seaview inland site and to attempt to document any surviving stratigraphy. After some minor brush clearing the depression was emptied out, appearing as a rough oval ca 2 x 1.3 m in extent. The pit had been carried to the limestone bedrock, and was 60-70 cm deep. We squared up the pit, cutting back the slumping walls to provide fresh profiles on all four sides, dry sieving all excavated spoil and fill material through 3 mm mesh. Another sub datum was set up (Sub Datum 3, at GPS N 17 40 540 W 61 46.514 accuracy +/- 5 m, elevation ca 6 m asl) and this area was named Seaview inland unit G. The clearing of the pit produced both Incised and White on Red painted pottery, lithics (including two pieces of rose quartz) and substantial amounts of shell and bone. Perhaps even more importantly, the squared faces of the pit showed clear stratigraphy which could be followed all around the pit sides.

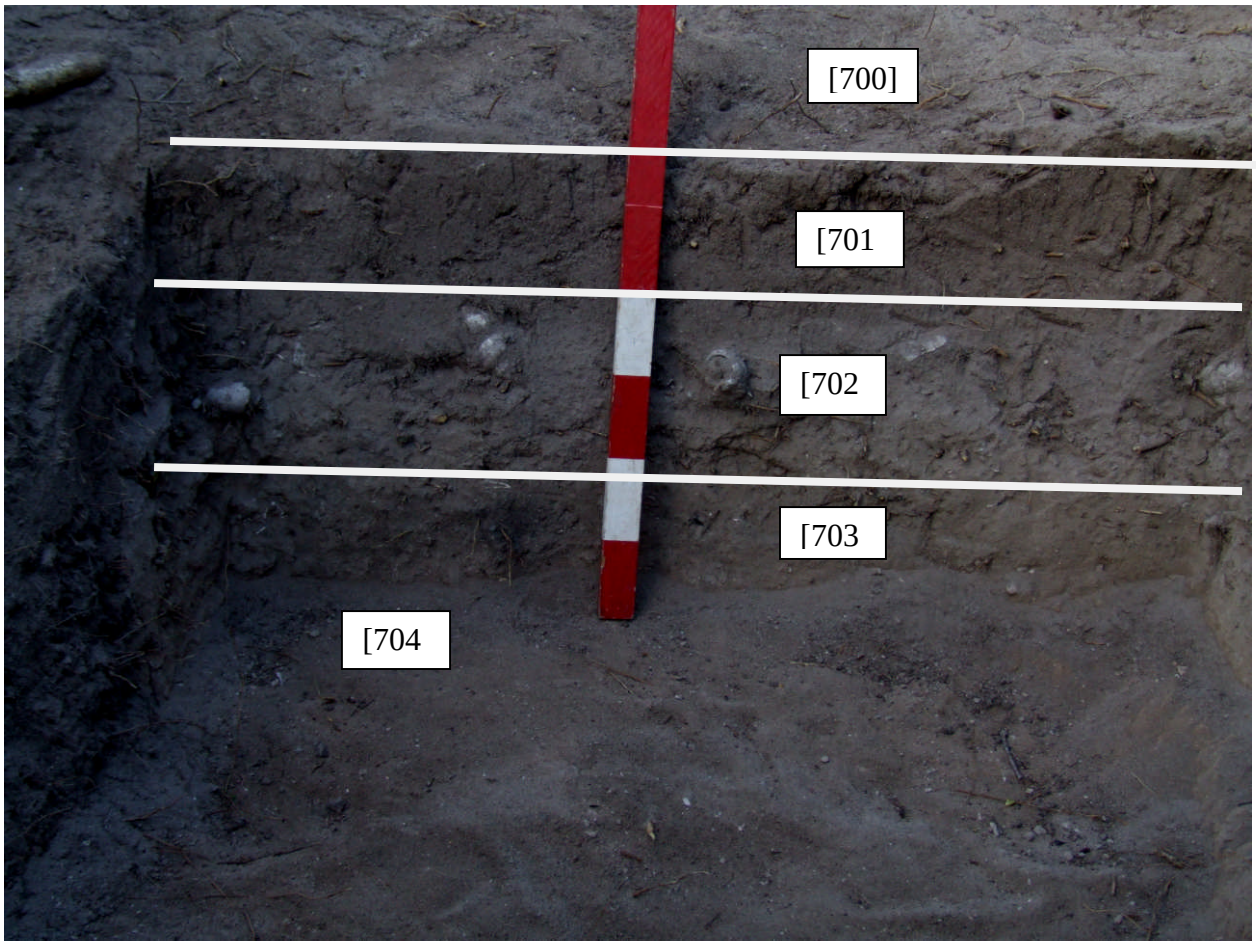

Figure 5 East Facing Profile Unit G with contexts

We were able to identify 6 contexts in the G unit at Seaview inland (see context sheets and profile G 2 for fuller description):
[699] the cut of the pit (not visible in figure 5 above)
[700] A light grey brown fine natural sand topsoil mixed in this area with some upcast spoil from the pit excavation.
[701] Medium brown sandy loam with some potsherds, bone, shell, fire cracked stones and charcoal- a cultural layer.
[702] Medium grey brown sandy loam with dense concentrations of bone, shell, fire cracked stones and potsherds. A rich midden deposit that contained substantial amounts of fish and turtle bone, including a concentration of turtle shell in the eastern side. This context produced the great majority of finds, including both Incised and White on Red pot sherds *in situ*.
[703] Light brown /tan loose sand, no cultural deposits visible. This appears to be the original top soil surface.
[704] Limestone bedrock surface with some exfoliated fragments. Natural bedrock surface.
We are able to do some small scale horizontal excavation around the edges of the squared pit, giving the students experience in combining horizontal and vertical excavation approaches. We also expanded the unit to the East, adding a 1 x 1 m extension unit onto

the east face of the unit. This provides some additional in situ material and provides some practice in following layers horizontally. While the boundaries of the contexts in G are somewhat blurred due to ongoing bioturbation (roots, land crabs, insect burrows), it proves very easy to peel back along the interfaces, and this suggests that a larger scale stratigraphic excavation with a greater horizontal exposure could be added to the G unit in the future without unduly over-taxing the skills of beginning excavators. The G unit reveals an amazingly dense Saladoid midden deposit in context [702], with a substantially less dense cultural deposit above in [701]. A substantial segment of a sea turtle plastron appears in [702] in the G extension unit, along with a disarticulated adult small dog jaw. The dog jaw does not seem to be associated with an entire skeleton, but appears to be of the same general configuration (compact, powerful, slightly bowed) as seen on the later Saladoid dogs in the Seaview coastal burials.

Figure 6 Seaview Area G surface of [702]

Figure 7. Seaview G [702] Dog jaw

Figure 8. Area G Seaview Excavation 2009 with extension unit.

Results and Recommendations

The BHEP excavation team carried out very small scale investigations in 2009, especially by comparison with the major effort and achievement on the Seaview erosion face in 2008. However, this small scale effort did accomplish its objectives, and contributed to the ongoing stabilization program at Seaview coastal erosion face. It was also possible to convert the intrusive pit from site damage to a useful view of what appears to be a substantial clearly stratified Saladoid midden in area G. Area G clearly offers potential for expansion, and may provide a good target for additional excavation in a field school or research context. The 2009 excavation team would thus recommend:

- Seaview coastal erosion face should be monitored, but additional large scale excavation there is probably not needed or desirable unless a large scale slump occurs.

- Seaview interior Area G can be expanded and additional Saladoid midden material appears to extend over a wide area in the immediate vicinity of this unit.

APPENDIX 1: Preliminary Artifact Assessment

Norie Manigault

Included is a basic quantitative field analysis of ceramic excavated at Sea View, January 2009. The analysis is based on Dr. Reg Murphy's methods and ceramic rim typology. The following steps included from Murphy's dissertation:

1. Sorting and classification: identification of diagnostic traits (e.g. rim shards, body shards, bases, griddle rims or fragments, spouts, and handles)
2. Recording/classification of surface finish (e.g. slip, scratching, ZIC, WOR)
3. Illustration of rim and vessel profiles. (Murphy: 1995)

Site	Context	Area	Unit	Total Shards	Total Rims	Total Bases	Handles	Legs	Griddles	Total MNI
BA016	[700]	G	Surface	2	0	2	2	0	0	0
BA016	[701]			2	0	0	0	0	0	0
BA016		G	Surface	21	0	0	0	0	0	0
BA016	[702]	G		81	10	0	0	3	0	6
BA016	[856]	A2		81	11	0	0	1	1	6

Site	Context	Area	Unit	Polychrome	WOR	ZIC	Incised	Scratched	Red/One Side	Red/ Both Sides	Black Paint
BA016	[700]	G	Surface	0	0	0	0	0	0	0	0
BA016	[701]			0	0	0	0	0	0	0	0
BA016		G	Surface	0	3	6	3	0	0	0	0
BA016	[702]	G		2	7	2	2	0	22	11	2
BA016	[856]	A2		0	0	4	6	0	11	11	3

The rim shards were segregated for further diagnostic analysis based on Reg Murphy's typology:

Site	Context	Area	Unit	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Type 8	Type 9	Type 10	Type 11
BA016	[700]	G	Surface	0	0	0	0	0	0	0	0	0	0	0
BA016	[701]			0	0	0	0	0	0	0	0	0	0	0
BA016		G	Surface	0	0	0	0	0	0	0	0	0	0	0
BA016	[702]	G		2	1	1	2	0	0	0	2	0	0	2
BA016	[856]	A2		2	0	1	3	1	0	1	2	0	0	0

The rim types above, from Murphy's Dissertation, are classified into 13 basic types:

1. Type 1 rim, wedges-shaped: Shape most common found in post-Saladoid assemblages.
2. Type 2, round

3. Type 3, tapered-point
4. Type 4, squared
5. Type 5, one-side rounded
6. Type 6, tapered
7. Type 7, thickened rim wall
8. Type 8, tee-shaped: This is common in Saladoid and Terminal Saladoid assemblages.
9. Type 9, one-side tee-shaped
10. Type 10, flanged rim: There is often incising along the flange, and this type of rim is a diagnostic feature of Saladoid pottery.
11. Type 11, out-turned, curved, and decorated: This unusual Saladoid rim has broad labial-flanges that often have a raised or elevated band, which is commonly incised.
12. Type 12, coiled (Murphy: 1995)

Contexts [702] and [856] from Sea View produced a high quantity of red slip shards, including painted White-on-Red and painted Zone-Incised-Crosshatched shards. These attributes correlate to Irving Rouse and Reg Murphy's typology dating to the Saladoid/Barrancoid phases.

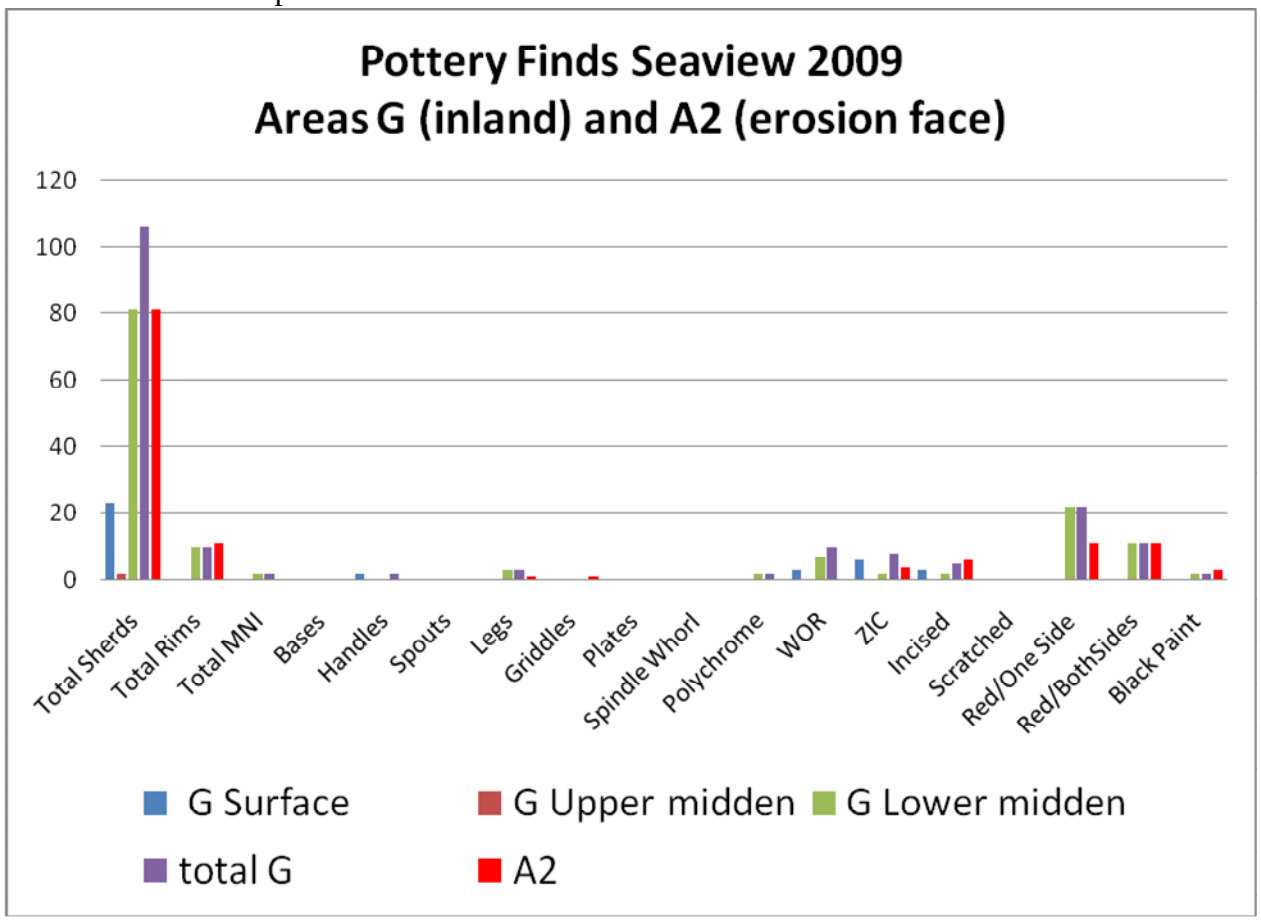

Figure 9 presents an initial count of pottery fragments and diagnostic sherds for the area G midden and the A2 midden area. Note that most pottery finds came from the lower midden layer at G, and probably most of the G surface finds also derive from this layer.

Other Artifact types:

Surface near A2 erosion face 1

Context	Area	Lithics	Shell Bead	Pumice Tools	Clay Pipe	Coral	Shell Axe	stone zemi
[702]	G	1	3	4		2	1	
[857]	A2		2					1
[856]	A2	1						
Pit fill	G	8	4			1		

APPENDIX 2 Registers from BA 016

BHEP 09 Sieve Bulk Sample register							***Jan-09***		running bag count	21
No.	Site	Area	Context	GPS	Grid	Vol	Wt.	# of bags	Description	date dd/mm/yy
1	BA 016	A2	856					1		12/1/2009
2	BA 016	A2	856					1		12/1/2009
3	BA 016	G	surface					1	small objects	12/1/2009
4	BA 016	A2	856					1		12/1/2009
5	BA 016	G	surface					1	bones and small shell	9/1/2009
6	BA 016	g	surface					1	small bones	9/1/2009
7	BA 016	G	fill					1		9/1/2009
8	BA 016	G	fill					1		9/1/2009
9	BA 016	A2	856					1		12/1/2009
10	BA 016	A2	856					1		13/1/09
11	BA 016	G	profile cleaning					1		13/1/09
12	BA 016	A2	856					1		12/1/2009
13	BA 016	G	profile cleaning					1		13/1/09
14	BA 016	g	surface					1		13/1/09
15	BA 016	G	surface					1		13/1/09
16	BA 016	g	profile cleaning					1		13/1/09

17	BA 016	g	700					1	Sieve	15/1/09
18	BA 016	g	701					1	Sieve	15/1.09
19	BA 016	g	702					1	Sieve	15/1/09
20	BA 016	g	702					1	Sieve	15/1/09
21	BA 016	g	702					1	Sieve	15/1/09

BHEP 09 Shell Sample Register									number in circle on bag	
#	Site	Area	Context	GPS	Grid	Vol.	Wt.	Quantity	Description	Date
								Bag/Buckets		dd/mm/yy
1	BA 016	A2	856					1	large shells	12/1/2009
2	BA 016	g	fill					1	Shells	13/1/09
3	BA 016	g	fill and profile					1	large shells	13/1/09
4	BA 016	A2	856					1	large shells	12/1/2009
5	BA 016	g	fill and cleaning					1	large shells	13/1/09
6	BA 016	A2	856					1	large shells	12/1/2009
7	BA 016	g	702					1	large shells	15/1/09
8	BA 016	g	702					1	large shells	15/1/09
9	BA 016	g	702					1	large shells	15/1/09
10	BA 016	g	701					1	large shells	15/1/09

BHEP 09	Drawings Register			

Author	Date	Media	Location	Description
McG & crew	Jan 14 2009	mylar context sheet	West Profile of unit G Seaview Inland	profile of cleaned and straightened looter pit w/ C14 sample point noted
McG & crew	Jan 8 2009	mylar context sheet	Area A2 N portion	composite plan of context [856] and surrounding features.
McG & crew	jan 15 2009	mylar context sheet	Area G	context sheet plan of [701]
McG & crew	jan 15 2009	mylar context sheet	Area G	context sheet plan of [702]
McG & crew	jan 15 2009	mylar context sheet	Area G	context sheet plan of [703]