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**ARCHAEOLOGICAL EXCAVATION OF A REFUSE DUMP AT UMUMERI UMUNDU,  
ENUGU STATE, NIGERIA**

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**Abstract**

*Archaeologically, Umundu came into limelight between 1976 and 1980 when Dr. F. N. Anozie first excavated an iron smelting site in Umundu. Subsequently, other scholars excavated sites in Umundu where remarkable finds including dates for iron working were obtained. Since then, Umundu has witnessed a lot of physical and infrastructural development which impacts negatively on the preservation of archaeological and cultural sites. At Umumeri village, a refuse dump was stumbled upon while clearing a piece of land for the construction of a house. Cultural materials like potsherds, bones, slag, and pieces of tuyere nozzle were recovered in an area. Thus, an archaeological excavation was conducted on the dump site to recover more cultural materials to be able to throw more light on the subsistent strategies of the early inhabitants of the area. Finds from the excavated site revealed early human existence and occupation. Unearthed materials such as slag, potsherds, smoking pipe, palm kernels, bone, and grinding stone attest to that fact. These identified materials suggest a trade relationship with her neighbours, long-time occupation of the area, and evidence of food processing. The paper argues that if properly harnessed, the site and others within the area could boost tourism.*

**Keywords:** *Archaeological, Excavation, Refuse, Dump, Umundu*

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**Introduction**

Umundu is a town in the Old Nsukka Division; a region notable for ironworking. Late Dr. F. N. Anozie between 1976 and 1980 first excavated an iron smelting site in Umundu (Anozie, 1979). Prof. E. E. Okafor, excavated an iron smelting site in Umundu and went ahead to excavate other sites at Opi, Lejja, Owere-Elu, and Aku among others and their research was published in reputable academic journals and books (Okafor, 1984; 1992 and 1995). Umundu and other iron-working communities in Nsukka like Opi, Aku, Lejja, Orba, Obimo, Owerre-Elu, and Nru have produced remarkable evidence of early ironworking including dates (Okafor, 1995:88). Anozie (1979) noted that iron smelting in Lejja and Umundu lasted between 1625 and 1925. Similarly, Eze-Uzomaka (2009) obtained dates of 4005BP-2005BP and 3445BP-1445 BP from Lejja. Also, (Okafor 1995; Okafor & Phillips, 1992 and Whiteman & Okafor

2003) delineated three phases of early iron smelting in Nsukka area, with Opi, Lejja and Aku belonging to the earliest group dated about 8<sup>th</sup> Century B.C; Owerre-Elu, Nru-Isiakpu axis (800-1450 A. D) belonging to the middle period and Umundu, Orba and Ehandigu (1430-1950) grouped to the late period. These dates were obtained from twelve samples mainly of goethite and sand. These dates seem to point to the earliest date for iron working in Nigeria. Subsequently, scholars like Ugwuoke, (2004); Okonkwo and Odum, (2009); Ibeanu and Okonkwo, (2010); Odum and Oguamanam (2020) studied the indigenous technologies, and cultural practices in Umundu such as iron smithing, palm wine tapping, wood carving, and cashew processing while highlighting their tourism potentials.

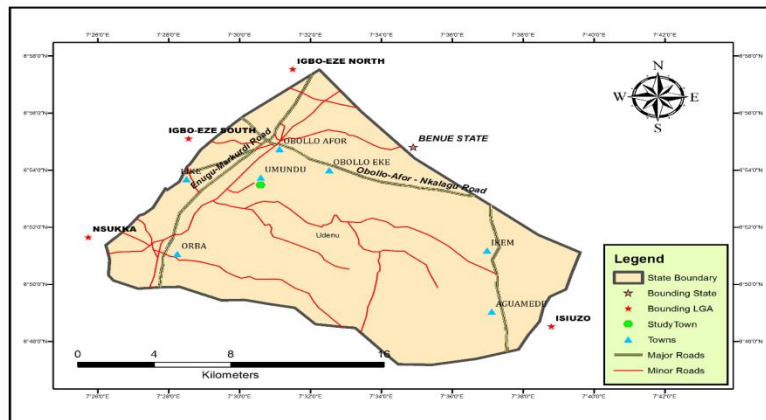
Umundu has witnessed a lot of physical infrastructural development which impacts negatively on the preservation of cultural sites. Prior to now, some archaeological sites and cultural materials including sites earlier excavated have been destroyed in the course of physical development like road expansion, farming, house construction and erection of telecommunication mast. As a result of these physical development most of the archaeological sites and artifacts were destroyed. During reconnaissance, we identified other archaeological sites which are threatened by soil erosion and farming activities that need to be secured. Particularly, Umumeri abandoned refuse dump was stumbled upon while clearing a piece of land for the construction of a building. Some potsherds, plastic materials, bones, slag, and pieces of tuyere nozzle were uncovered in the area. Following these discoveries, it became imperative to excavate the site in order to recover cultural materials to be able to throw more light on the sustenance strategies of the early inhabitants of the area as well as use the same to boost tourism. The aim of the study was to recover archaeological data to enable us to interpret the early human activities within the study area and how they can boost tourism.

### **Research Method**

The research was carried out through an ethnoarchaeological research method which comprises oral interviews, reconnaissance, excavation, and documentation of materials recovered. Oral information was collected from some elders in the community as well as knowledgeable persons on the research topic. They provided us with information about the early history and traditions of the people. Reconnaissance was carried out to identify features and artifacts in order to determine areas suitable for excavation. From the reconnaissance, several abandoned refuse sites, and archaeological sites were identified. However, a refuse dump site at Umumeri was excavated (a place where debris from ironworking and refuse from households were believed to have been deposited). The excavation was conducted at the dump site and cultural materials were retrieved for documentation, analysis, and interpretation. Secondary sources like books, journals, and unpublished materials were used to give further illustrations. Tables, charts, and figures were used for the presentation and analysis of data.

### **Background Information**

Geographically, Umundu is one of the towns that make up the old Nsukka Division. Presently, the town is under the Udenu Local Government Area of Enugu State (fig.1). It lies in the humid tropical region of West Africa. The climate of Umundu is influenced by two major seasons, the rainy season (May-October) and the dry season (November-April). The cool dry Harmattan wind usually dominates from December to early February. The vegetation of Umundu is that of mosaic farmland and rainforest.



**Figure 1: Map of Udenu L.G.A showing the study area.**  
 Source: Google Earth as modified by cartographic unit, Archaeology and Tourism Department, UNN.

Umundu traces their originto aman known as Nsama who migrated from Itchi in Igboeze South Local Government Area of Enugu State. Umundu people just like most Igbo communities practice African Traditional Religion. They worshipped the supernatural god through deities like; *Ugwwunmeri*, *Abonyi*, *Ezenkpume*, *Inyi-akpalu*, *Idem*, *Amanyi* and *Ideyi*. Each deity has a traditional priest and custodian called Atama. They have masquerades like, *Omabe*, *Akatapka*, *Eghiri*, *Abere*, *Ndegbe*, and *Egwugwu*. Umundu has several means of economic activities like; palm oil production, palm wine tapping, cash crops (cashew -*Anacardium occidentale*, mango -*Mangifera indica* and orange -*Citrus sinensis*), animal rearing (poultry, goat), basket weaving, wood carving, and blacksmithing. The people believe that iron smelting was introduced to Umundu through a woman named *Ashene* from Idah, in the present-day Kogi State, hence, a shrine was dedicated to her worship and to celebrating her achievement.

**Reconnaissance and Excavation:** The researchers traversed the area and identified four refuse dump sites. However, an abandoned refuse dump site in Umumeri village was chosen for excavation because it was on the verge of being destroyed as a result of house construction despite the fact that it contains cultural materials like potsherds, slag, iron ores, baked clay, and animal bones. Archaeological excavation remains one of the principal means by which archaeologists gather data about the past, from beneath the ground surface (Andah and Okpoko, 1994). It is simply the systematic digging of the ground to collect cultural materials as evidence of human activity. The site was cleared and mapped out for excavation. Based on the preponderance of cultural materials collected, a 2m x 2m test pit was dug at the spot where large quantities of cultural materials were collected. An arbitrary spit of 20cm interval was used for the excavation so as to have a systematic digging.

**Spit 1: (0-20cm):** The soil was loamy, black, and humus with lots of roots and rootlets (see Figure 2). A lot of cultural materials were recovered including potsherds, charcoal, slag, iron ores, a fractured grinding stone, an oil bean seed, and a snail shell.

**Spit 2: (20-40cm):** The soil texture was coarse and the colour changed to red-brown with root sand rootlets as shown in Figure 3. Cultural materials like slag, iron ores, and potsherds were excavated. A total of sixty-eight potsherds were collected.

**Spit 3: (40-60cm):** Soil texture and colour at this level remained the same as in the previous spit, figure 4. Forty-one potsherds with different decorative motifs were collected. There was a reduction in the occurrence of roots and rootlets. A fractured smoking pipe was also excavated from this spit.

**Spit 4: (60-80cm):** The soil appeared dark brown and fine textured, see Figure 5. Seventy potsherds were excavated comprising five rims and sixty-five shards having various decorative motifs like zigzag, punctuated, net impression, burnish, and multiple decorations.

**Spit 5: (80-1m):** The soil colour at this level changed to red with compact texture, see Figure 6. Excavated cultural materials are six pieces of slag and fifty-one potsherds.

**Spit 6: (1-120m):** The soil colour remained the same as with the previous spit (see Figure 7). Iron ore, slag pieces, and eighteen potsherds were collected.

**Spit 7: (120-140m):** The soil was red with a compact texture. No cultural material was collected at this spit.



Figure 2: Spit 1 (0-20cm)



Figure 3: Spit 2 (2-40cm)



Figure 4: Spit 3 (40-60cm)



Figure 5: Spit 4 (60-80cm)



Figure 6: Spit 5 (80-1m)



Figure 7: Spit 6 (1-1.2m)

**Stratigraphy:** Derefaka (2003) defined stratigraphy as the analysis of the layers or strata of an archaeological site based on the law of superposition. Joukowsky(1980) described it as the interpretation of the sequential deposit of a site. However, from the definitions above, stratigraphy is seen as the laying down of cultural materials in the ground starting from the oldest up to the latest. The law of super-position is very essential in stratigraphic analysis because it states that older rocks or soil deposits are laid either naturally or by tectonic forces before newer deposits are laid on top. Therefore, cultural materials contained within older soil or rocks are older than those laid on top within the newer soil deposits. The stratigraphy of the northern wall was marked and drawn. There were five strata on the northern wall based on the colour of the soil. No Munsell colour chart was used. Observations were based on our naked eyes. (See Figure 8).

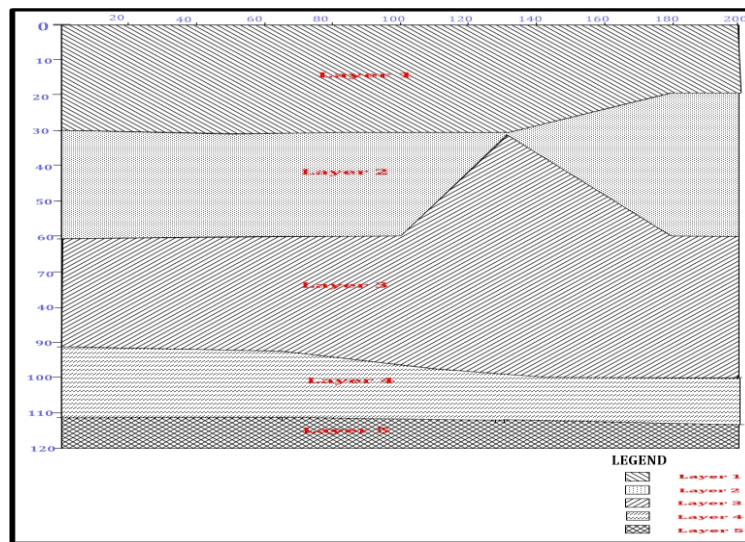


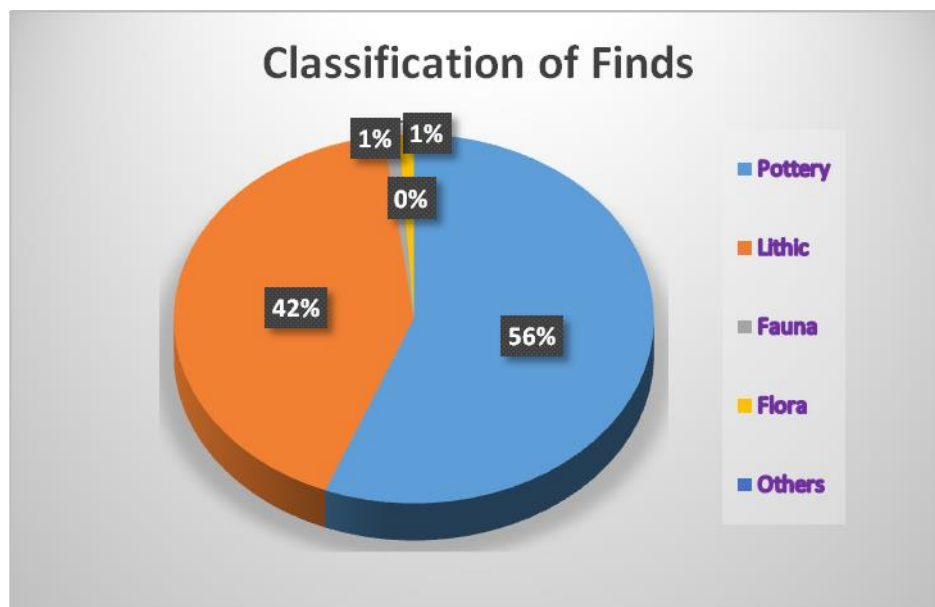
Figure 8: Northern section stratigraphy

**Data presentation and analysis:** Cultural materials excavated from the site are classified thus; flora, fauna, pottery, lithic, and others. (Table: 1 and Figure 9).

**Table 1:** Excavated materials

FINDS	Flora	Fauna	Pottery	Lithic	Others	Total
Surface Collection	9	10	54	49	(2)	124
<b>Spit 1 (0-20cm)</b>	3	-	91	61	-	155
<b>Spit 2 (20-40cm)</b>	-	-	74	80	-	154
<b>Spit 3 (40-60cm)</b>	-	-	42	80	-	122
<b>Spit 4 (60-80cm)</b>	-	-	70	19	-	89
<b>Spit 5 (80cm-1m)</b>	-	-	51	6	-	57
<b>Spit 6 (1m-120cm)</b>	-	-	18	19	-	27
<b>Total</b>	12	10	400	304	2	728

This is represented in a pie chart (Figure 9).



**Figure 9:** Percentage of excavated materials

The analysis is a detailed examination of the elements or structures of something (Denzin and Lincoln, 2001). Analysis of the materials was done according to nature and type. Pottery products are categorized into rims and body sherds as shown in table 2. Illustrations of the reconstructed body and rim potsherds are shown in Figures 10 and 11.

**Table 2:** Percentage distribution of potsherds

Spit	Rim	Body	Total	Rim%	Body%	Total%
Surface Collection	19	35	54	35.19 %	64.81 %	100%
<b>Spit 1(0-20cm)</b>	9	82	91	9.89 %	90.11 %	100%
<b>Spit 2(20-40cm)</b>	6	68	74	8.11%	91.89%	100%
<b>Spit 3(40-60cm)</b>	5	36	41	12.20%	87.80%	100%

Spit 4(60-80cm)	5	65	70	7.14%	92.86 %	100%
Spit 5(80-1m)	9	42	51	17.65%	82.35%	100%
Spit 6(1m-120m)	1	17	18	5.56%	94.44%	100%
<b>Total</b>	<b>54</b>	<b>345</b>	<b>399</b>	<b>13.53%</b>	<b>86.47</b>	<b>100%</b>

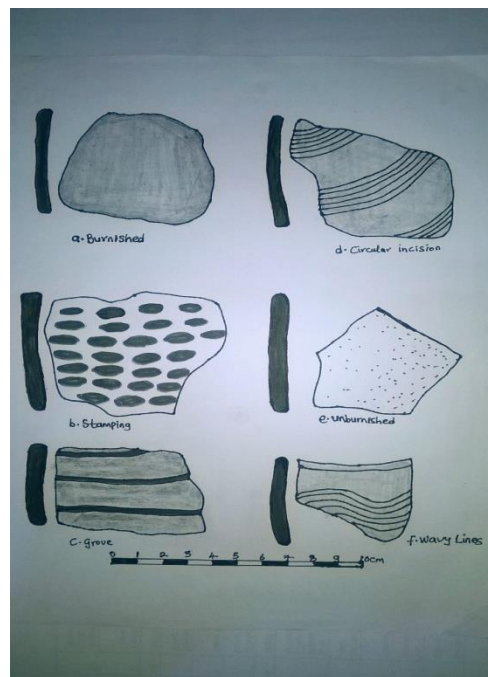


Figure 10: Reconstructed body sherd

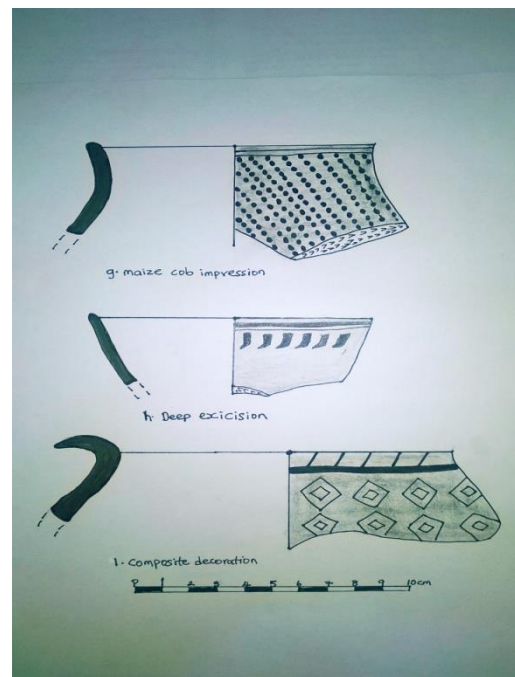


Figure 11: Reconstructed rims

Nine bones and one snail shell were part of the surface collection. The bones belong to a cow (*Bovis*) as they are still fresh. The bones are identified as femur, scapular, heap bone (pelvic girdle), broken part of the frontal skull, humor, and vertebral arch. The skull looked intentionally broken, maybe as they were searching for the animal’s brain. The snail shell is that of a snail-*Archatina spp.* Excavated floral remains include four bush mango seeds, two oil bean seeds, three charcoal, and three palm kernel from spit 1 (0-20cm). A total number of three hundred and five lithic materials including iron ore, pieces of slag, and sandstone were excavated from the site. The breakdown is shown in Table 3.

Spit	Sand stone	Iron Ore	Slag	Total
Surface Collection	1	5	44	46
Spit1 (0-20)	-	-	61	61
Spit2 (20-40cm)	-	1	79	80
Spit3 (40-60cm)	-	-	80	80
Spit4 (60-80cm)	-	5	14	19
Spit5 (80cm-1m)	-	-	6	6
Spit6 (1m-120cm)	-	2	7	9
<b>Total</b>	<b>1</b>	<b>13</b>	<b>291</b>	<b>305</b>

**Interpretation:** A lot of cultural materials including grinding stone, charcoal, slag, iron ores, oil bean seed, snail shells, mango seed, bones and palm kernels were recovered as surface collections. It is a refuse dump because most of the recovered materials are still freshly intact. Some of the materials from surface collection give us clue about the vegetation and the diet of the people. Flora remains like Bush mango seed (ujuru, ugiri) *Irvingiagabonsis*, oil bean seed (ukpaka) *Pentaclethramyrophylla* and palm kernel nuts (aki) *Elaise-guinieensis* are edible fruit among the people found in the rain forest belt of Nigeria. Palm trees fruits must have been used by the inhabitants to produce red oil and the trunk for palm wine which they consume and sale for economic purposes. Bones and snail shells constitute the diet of the people just as the animal bones suggest that the animals could have been traditionally reared for social, religious and economic purposes. Hunting and domestication of animals is part of the economic and social activities of the people. The grinding stone was possibly used to grind food items like pepper, tomatoes, corn, maize, vegetables, and local herbs for medicine. It is also part of the food processing technology of the people.

A lot of potsherds were excavated from the site with different decorative motifs. Pottery is one of the cultural artifacts used for the identification of human settlements; they are also used to study the cultural chronology, trade, and process of economic organisation of the people. The majority of the potsherds have corn-cob designs, net impressions, incisions, grooves, and multiple decorations. From oral tradition and personal observation, potsherds with elaborate decorative motifs show that they were vessels-*Oku* used for serving food and for carrying out religious functions. Potsherds with corn-cob motif show that the people who produced the vessels had knowledge of corn in the past. Cob design could also indicate the timeline when the vessels were made as corn did not get to Africa until it was introduced from the new world by the Portuguese between the 16<sup>th</sup> and 17<sup>th</sup> century A. D (Clark, 1970). The large quantities of potsherds show that the site was occupied for a fairly long period during which the people purchased pottery vessels from their neighboring communities, especially Orba market, Eha-Ndiagu, and Nrobo in Uzo-Uwani Local Government Area, Enugu State (Itanyi, 2013). The fact that the early inhabitants of Umundu acquired pottery from other communities is a pointer to the presence of different decorative motifs on excavated potsherds. Further microscopic study of the potsherds will reveal the probable sources of the raw materials including clay and tempered materials. There is a resemblance in decorative motifs between excavated potsherds and the pottery vessels used by the present inhabitants. All the designs found on the excavated potsherds are replicated on pottery vessels used by the present inhabitants, thus there is a cultural continuity between the past and the present inhabitants. Similarly, the trading contact in pottery vessels between the people of Umundu and Nrobo people has continued to the present, judging by the similarity in decorative motifs on potsherds.



A clay smoking pipe was excavated from spit 3 (40-60cm). The bowl was not elaborately decorated, an indication of a locally handmade type; because most European clay pipes were made in molds, have elaborate decorations, bears trademarks and African clay pipes on the other hand are not often made from molds (Gojak and Stuart 1999). African-made smoking pipes date from the latter half of the 17<sup>th</sup> century A. D, most of which are short-stemmed (Ozanne, 1976). Similarly, Okpoko (1984) and York (1973) argued that the indigenous African smoking pipes pre-date the European types in West Africa. The smoking pipe shows the antiquity of smoking (herbs and medicine) in the area. It is also suggestive that the earlier occupants of the area must have improved the method of tobacco consumption from chewing to smoking with a pipe. In as much as European imported large quantities of smoking pipes to Africa, local potters made pipes which are used not only to smoke tobacco but also to smoke medicinal herbs.

There are scatter of slag pieces in different places and also heaps of slag in pathways and bushes, both in big and aggregate forms. Presently, slag is used in the study area for checking erosion, as missiles for hunting, used for road construction, and for making fences and demarcations. Majority of slag recovered from the excavation were in aggregate form. The aggregate slag is typical of those processed using a shaft furnace (Okafor, 1995 and Anozie, 1979). Furthermore, Okafor (1995) categorized Umundu slag as belonging to those of the late phase of iron smelting (1430 cal-1950cal A. D) in the Nsukka area which is very vesicular and less dense than those of the earlier periods. From reconnaissance, blacksmithing is one of the surviving indigenous technologies of the people as a few elderly persons are engaged in it. The occupation is also exclusive to a select group of people as it is not open to everybody. This view is shared by Okafor (1984, Anozie 1979, Ibeanu, and Okonkwo 2010) as they posited that ironworking has been a craft for a closed caste that jealously guarded its privileges and duties and shunned admittance of non-members. Blacksmiths in Umundu are from the Umu ashene clan who claim that the knowledge was handed over to them by their forefathers.

Archaeological tourism has been identified as a major source for avenue generation. Odum and Oguamanam (2020) argue that archaeological sites discovered in Igboland could be used to advance tourism, the conservation of the sites, and increase local revenue through tourist flow. Ekechukwu (2002) and Verkerk, (2017) argue that tourism can become a tool for developing archaeological sites if properly managed. Umundu iron smelting was dated to about 1430-1950 (Okafor, 1995). Arguably it remains one of the leading sites in Igboland with the earliest date hence this will trigger the interest of researchers, scholars, and tourists. Four abandoned refuse dump sites were identified at Umundu during the reconnaissance. All the sites were both partially destroyed due to road expansion, farming activities, house construction, and painfully the cultural materials were destroyed. The need for public awareness creation among the local population on the importance of preserving cultural objects should be paramount at this moment. A blueprint on how to manage cultural objects especially those threatened by physical development should be worked out by Enugu State Tourism Board, Udenu Local Government Tourism Committee, the Umundu community, and archaeology and tourism experts. Part of the reasons for the blueprint will be to have a strategy for prompt rescue archaeology where recovered objects will serve tourism purposes.

### **Conclusion:**

The study has been able to examine several sustenance strategies of the early inhabitants of the area. The fact that early inhabitants of Umundu have lived in the area for a long time was established through the examination of excavated materials like smoking pipe and slag. These are products of an ancient

civilization that were used during the 16<sup>th</sup>- 17<sup>th</sup> century A. D. The study also argues that Umundu people had long-standing trade relationships with their neighbours especially pottery-producing communities like Eha-Ndiagu and Nrobo. This is premised on the fact that Umundu is not clay pottery vessels makers, rather they procured most of these vessels from other pottery-producing communities. Also, the high number of excavated potsherds is a pointer that there was an increased external supply of these products which served several purposes while evidence to suggest the food processing technique of the people and food components was identified. The identified archaeological sites and other excavated cultural objects remain a veritable tool for tourism development.

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