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Bugesera Airport Company Limited

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**NEW BUGESERA
INTERNATIONAL
AIRPORT
ENVIRONMENTAL AND
SOCIAL IMPACT
ASSESSMENT REPORT-
ARCHAEOLOGY AND
CULTURAL HERITAGE**

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14. ARCHAEOLOGY AND CULTURAL HERITAGE

14.1 Introduction

This chapter of the ESIA Report considers the potential impacts of the Proposed Project on archaeology and cultural heritage. It predicts and evaluates the potential impacts of the Proposed Project and the associated likely impacts on archaeology and cultural heritage, arising from the construction works, and operation of the completed Proposed Project.

This chapter provides a description of the archaeological and cultural heritage characteristics of the Proposed Project Area and identifies the potential impacts on the cultural heritage environment arising from the Proposed Project activities. The assessment follows the recommendations and requirements of IFC Performance Standard 8 (PS8): Cultural Heritage¹.

For the purposes of this assessment, the definition for cultural heritage set out in IFC PS8 was used:

- *“Tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), palaeontological, historical, cultural, artistic, and religious values;*
- *Unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and*
- *Certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.”*

14.2 Policy, Legal and Administrative Framework

14.2.1 Rwanda Policy

14.2.1.1 Rwanda Environmental Policy, 2013²

The overall objective of the Rwanda Environmental Policy is the improvement of man’s well-being, the judicious utilisation of natural resources and the protection and rational management of ecosystems for sustainable and fair development. EIA/ESIA is one of the vital tools it considers necessary to ensure environmental quality and resource productivity on long term basis. The policy requires the integration of environmental aspects into all of the development policies, in planning and in all activities carried out at the national, provincial and local level, with the full participation of the population.

The policy aims to conserve, preserve and restore ecosystems and maintain ecological and systems functioning, which are life supports, particularly the conservation of national biological diversity; and to create awareness among the public to understand and appreciate the relationship between environment and development. The policy further aims to ensure the participation of individuals and the community in the activities for the improvement of the environment with special attention to women and youth.

As a general principle, the policy requires that environmental and socio-cultural impacts are analysed during the consideration of developmental Projects, such as the Proposed Project.

¹ IFC, 2012. Performance Standard 8 (PS8) Cultural Heritage.

² Republic of Rwanda. 2003. Ministry of Lands, Resettlement and Environment. Rwanda Environmental Policy.

14.2.1.2 *National Cultural Heritage Policy, 2015*³

The main objective of the National Cultural Heritage Policy is to provide an appropriate framework for the preservation and protection of Rwandan culture in order to provide a foundation upon which the country's sustainable development is anchored.

The policy aims to provide a framework for nurturing, preserving and protecting Rwandan culture and use this as an effective mechanism for realisation of the country's development goals; to strategically position culture as a tool for enhancing good governance and social cohesion among Rwandans; and to unleash the business potential and opportunities embedded in the Rwandan cultural heritage to contribute to the development goals.

14.2.2 Legal Framework

14.2.2.1 *Law N° 28/2016 of 22/7/2016 on the Preservation of Cultural Heritage and Traditional Knowledge*⁴.

This law sets out measures for the preservation of cultural heritage and traditional knowledge. It defines cultural heritage as tangible or intangible heritage of a local community or of a natural person related to the cultural tradition, passed down from generation to generation, and with a particular value in terms of science, technology, history and archaeology, philosophy, art and religion and other areas related to culture. An inventory of assets has been compiled by district cultural officer and approved by the Minister. The law recognises both known listed and unknown heritage assets. Any person who knows any unregistered cultural heritage must immediately notify the administrative authority of the district where the heritage is located. No person shall destroy, move, repair or modify in any way cultural heritage without the prior written approval of the Minister.

During the Proposed Project implementation, primarily during construction, unseen cultural heritage assets may be encountered within the Proposed Project Area, and these will require preservation.

14.2.3 International Standards

14.2.3.1 *International Finance Corporation Performance Standards*

IFC PS8 recognises the importance of cultural heritage for current and future generations. The objectives of IFC PS8 are outlined as follows:

- To protect cultural heritage from the adverse impacts of project activities and support its preservation; and
- To promote the equitable sharing of benefits from the use of cultural heritage.

The requirements of IFC PS8 apply to cultural heritage regardless of whether or not it has been legally protected or previously disturbed. In the event that a project has an impact on cultural heritage resources, a competent professional is required to assist in the identification and protection of the resource. Communication with relevant regulators and surrounding communities is also required. Furthermore, should a cultural heritage resource be identified, the community (following consultation) is to be allowed to continue access to the cultural site or an alternative access route must be considered.

³ Republic of Rwanda, 2008. Ministry of Sports and Culture.

⁴ Republic of Rwanda, 2016: Law N° 28/2016 Of 22/7/2016 On the Preservation of Cultural Heritage and Traditional Knowledge

14.2.4 International Agreements

Rwanda is a signatory to a number of conventions relevant to the cultural heritage protection and assessment. These are listed below.

14.2.4.1 *The Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict*⁵

The Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict was signed on 14 May 1954 and ratified on March 2016. The Hague Convention is the first multilateral treaty to focus exclusively on the protection of cultural heritage during hostilities.

The convention specifically highlights UNESCO's fundamental belief that the cultural heritage of each nation belongs to all of humankind. It also promotes the granting of enhanced protection so that the list of cultural property will grow over time.

14.2.4.2 *Convention Concerning the Protection of the World's Cultural and Natural Heritage*⁶

The Convention Concerning the Protection of the World's Cultural and Natural Heritage was signed on 16 November 1972 in Paris, and ratified on 28 December 2000.

To ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each state that is party to the convention must endeavour, in so far as possible, and as appropriate for each country (Article 5):

- To adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes;
- To set up within its territories, where such services do not exist, one or more services for the protection, conservation and presentation of the cultural and natural heritage with an appropriate staff and possessing the means to discharge their functions;
- To develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage;
- To take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and
- To foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field.

14.2.4.3 *Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property 1970*⁷

The Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, which was signed in 1970 in Paris and ratified on 25 September 2001, aims to ensure the protection of the cultural property of the states party to this convention against illicit import, export and transfer of ownership. Each state party to this convention must set up within their territories one or more national services, where such services do not already exist, for the protection of the cultural heritage. Qualified staff must be engaged in sufficient numbers for the effective carrying out of the following functions:

⁵ Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict and its two (1954 and 1999) Protocols, 1954.

⁶ United Nations Educational, Scientific and Cultural Organisation (UNESCO), 1975. The Convention Concerning the Protection of the World Cultural and Natural Heritage.

⁷ UNESCO, 1970. Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property.

- Contributing to the formation of draft laws and regulations designed to secure the protection of the cultural heritage and particularly prevention of the illicit import, export and transfer of ownership of important cultural property;
- Establishing and keeping up to date, on the basis of a national inventory of protected property, a list of important public and private cultural property whose export would constitute an appreciable impoverishment of the national cultural heritage;
- Promoting the development or the establishment of scientific and technical institutions (museums, libraries, archives, laboratories, and workshops) required to ensure the preservation and presentation of cultural property;
- Organising the supervision of archaeological excavations, ensuring the preservation in situ of certain cultural property, and protecting certain areas reserved for future archaeological research;
- Establishing, for the benefit of those concerned (curators, collectors, antique dealers, etc.), rules in conformity with the ethical principles set forth in this convention; and taking steps to ensure the observance of those rules;
- Taking educational measures to stimulate and develop respect for the cultural heritage of all states, and spreading knowledge of the provisions of this convention; and
- Ensuring that appropriate publicity is given to the disappearance of any items of cultural property.

14.2.4.4 *The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions*

The 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions was signed in Paris and ratified on 16 July 2012. The objectives of this Convention are:

- To protect and promote the diversity of cultural expressions;
- To create the conditions for cultures to flourish and to freely interact in a mutually beneficial manner;
- To encourage dialogue among cultures with a view to ensuring wider and balanced cultural exchanges in the world in favour of intercultural respect and a culture of peace;
- To foster inter-culturally in order to develop cultural interaction in the spirit of building bridges among peoples;
- To promote respect for the diversity of cultural expressions and raise awareness of its value at the local, national and international levels;
- To reaffirm the importance of the link between culture and development for all countries, particularly for developing countries, and to support actions undertaken nationally and internationally to secure recognition of the true value of this link;
- To give recognition to the distinctive nature of cultural activities, goods and services as vehicles of identity, values and meaning;
- To reaffirm the sovereign rights of states to maintain, adopt and implement policies and measures that they deem appropriate for the protection and promotion of the diversity of cultural expressions on their territory; and
- To strengthen international cooperation and solidarity in a spirit of partnership with a view, in particular, to enhancing the capacities of developing countries in order to protect and promote the diversity of cultural expressions.

14.2.4.5 *The 2003 Convention for the Safeguarding of the Intangible Cultural Heritage*⁸

The objectives of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage for the safeguarding of the intangible cultural heritage are to:

- Safeguard the intangible cultural heritage;
- Ensure respect for the intangible cultural heritage of the communities, groups and individuals concerned;
- Raise awareness at the local, national and international levels of the importance of the intangible cultural heritage, and of ensuring mutual appreciation thereof; and
- Provide for international cooperation and assistance.

14.3 **Assessment Methodology**

This section sets out the methodology that was adopted to identify potentially sensitive receptors in the context of possible impacts to cultural heritage during the construction and operation phases of the Proposed Project. Potential identified impacts are discussed in more detail in Section 14.4 but summarised below to set the context for the approach:

- Positive
 - Employment and provision for income generating activities; and
 - Exposure of unknown sacred burial sites for relocation.
- Negative
 - Destruction of archaeological and cultural heritage sites;
 - Destruction of cultural heritage artefacts; and
 - Destruction of unknown burial sites.

No impacts are expected for the operation phase of the Proposed Project as the ground will not be disturbed.

14.3.1.1 *Baseline Characterisation*

Baseline data were gathered through a variety of methods as outlined below.

14.3.1.2 *Data Review*

A data review was undertaken, which comprised of discussions with Rwanda museums, specifically the Institute of National Museums of Rwanda (INMR). The INMR reported that no existing information or reports are available on cultural heritage within the Bugesera District.

The data review included an extensive review of policy, national legal and international agreements on culture and heritage in Rwanda from websites archives (Section 14.1) and consultations with local members of the public and the INMR.

14.3.1.3 *Field Survey*

A field survey was conducted within the Airport Area⁹, which included walking over selected sample locations within the area looking for visible cultural heritage signs such as surface materials (i.e. pottery shreds, stone tools, slag, etc.) and any structural remains (i.e. historic buildings, evidence of historic settlement, etc.).

⁸ UNESCO. Convention for the Safeguarding of the Intangible Cultural Heritage, 2003

⁹ Due to the similar land uses along the Expressway and Water Pipeline route, no detailed site walkovers were conducted in these areas. However, residents in these areas as well as relevant museum personnel were interviewed to assess the potential for cultural heritage along the routes.

The survey was conducted during 29 May and 2 June 2017. Potential areas of importance were also targeted and surveyed for signs of graves, headstones or unusual formations. No below-ground investigation was conducted.

A hand-held GPS was used to navigate and record the area surveyed. The GPS points and routes were downloaded to a computer, together with digital photographic images. Each location found with any archaeological material GPS co-ordinates (longitude and latitude) was recorded. The GPS locations are provided in Section 15.3.

Surrounding community leaders from Kakeru and Nyabagendwa in the Rilima Sector were consulted in order to obtain local knowledge of known and potential sites of cultural heritage. Due to lack of inventories of physical cultural resources, there was limited to no secondary data available for review. Therefore, the collection of archaeological and cultural heritage baseline information was obtained through an onsite survey and stakeholder consultations.

14.3.1.4 Stakeholder Consultation (Cultural Heritage Focussed)

Four consultation meetings were organised during the archaeological and cultural heritage resources baseline study. These included meetings with the INMR, the Rilima Sector Office, the Karera Cell and the Nyabagendwa Cell. Distances and directions of the meeting locations from the Airport Area are provided in Table 14-1. Administrative records from the meetings are included in Table 14-2. Summaries of these meetings are provided below.

Table 14-1: Locations and Distance of Consultation Meetings		
Location	Distance	Direction from Airport Area
Institute of National Museum of Rwanda	25.5 km	Northwest
Rilima Sector Office	5.3 km	East-southeast
Karera Cell	4.8 km	North
Nyabagendwa Cell	8.5 km	South

Institute of National Museum of Rwanda

The main objective of this consultation was to obtain information related to the Proposed Project Area from the INMR, which is responsible for cultural heritage in Rwanda. A request was made for the list of recorded/declared sites (archaeological, historical and cultural) in Bugesera District, as well as information on the legal framework governing the cultural heritage resources in Rwanda. The following is a summary of the information that was obtained from INMR.

History and Archaeology

The community within Bugesera District has moved in to the area within the last 100 years and practises subsistence farming (cattle and crops), relocating to different pastures as required. The INMR representatives indicated that there are no declared archaeological or cultural sites in the Proposed Project Area and in the Eastern Province in general. There are known recorded sites on the border with Burundi; however, these findings have not been published to date.

Legal Framework

The GoR, through the INMR, is working on formulating and improving the legal framework on cultural heritage.

Rilima Sector Office

At the Rilima Sector Office, Mr Gasirabo Gaspard, the Executive Secretary, indicated that no cultural heritage sites have been identified within the Proposed Project Area. Furthermore, no burial grounds have been recorded. There is a 1994 Genocide memorial site at Gashora for the four sectors nearby (Rilima, Juru, Gashora and Gweru). However, between 2005 and 2006 the community started their own sector burial sites assisted by Bugesera District Local Government, which are managed on a village level. The communities within the wider area are reportedly either Christian or Muslim.

Karera Cell

A meeting was held at the Karera Cell Office with Ms Esperance Mukamana, the Executive Secretary. She indicated that communities within the wider area practise subsistence farming. Social facilities located in the wider area include schools, market places and shops. No identified burial ground has been identified within the Karera Cell; however, localised graves in close proximity to house dwellings may exist. Additionally, the communities within the wider area practice Christian or Muslim beliefs and therefore few traditional practices are now maintained.

Nyabagendwa Cell

A meeting was held at the Nyabagendwa Cell Office with Mr Alain Forbien. He indicated that in the cell there are no tangible or intangible cultural sites or burial grounds that have been identified. It was noted that people who died during the Genocide had been buried at the Gashora Memorial Site. Furthermore, it was recorded that the community now follows Christian or Muslim religions and no traditional religious activities are practised.

Table 14-2: Attendees Consulted during the Baseline Assessment					
Date	Location	Institution	Name	Position	Contacts
30/5/2017	Rilima	Rilima Sector	Gaspard Gasirabo	Executive Secretary	+2507886 97572
30/5/2017	Rilima	Rilima Sector	Marc Ntigurirwa	Sector Land Manager	+2507849 16861
31/5/2017	Kakera	Karera Cell	Esperance Mukamana	Executive Secretary	+2507895 01138
31/5/2017	Nyabagendwa Cell	Nyabagendwa Cell	Alain Forbien	Executive Secretary	+2507868 61745
1/5/2017	Huye: INMR	INMR	Andrea Ntangwabira	Archaeologist	+2507884 40068
1/5/2017	Huye: INMR	INMR	Maurice Mugabowagahume	Archaeologist	+2507884 36448

14.3.1.5 Rwanda Genocide

14.3.2 In the 100-day Genocide period from early April to mid-July 1994, between 800,000 and 1,000,000 Rwandans were killed, and many of the graves were not adequately recorded. In the event that unidentified graves are identified within the Proposed Project Area during the construction phase, work will need to stop and these finds must be reported.

14.3.3 Construction Phase Method of Assessment

The data gathered from the desktop review, stakeholder consultation and site visit have been interpreted to provide the areas of archaeological, cultural or heritage importance. The potential impact on the areas of archaeological, cultural or heritage importance from the Proposed Project

were assessed during the construction phase based on the general methodology described in Section 14.2.4.

14.3.4 Operation Phase Method of Assessment

As stated previously, no impacts on baseline cultural heritage are expected during the operation phase of the Proposed Project due to the ground not being disturbed and, as such, no methodology has been provided. However, the existing Chance Finds Procedure, described further in Section 14.4, must be kept live in the event that archaeological, cultural or heritage finds are identified.

14.3.5 Significance Criteria

Significance is specific to a location, receptor and the importance of the artefact identified. The magnitude of the effect is subject to the potential change/impact that can occur to either the landscape/location, receptor and condition of the artefact. The receptor sensitivity and magnitude of impact criteria utilised to identify the impact significance on cultural heritage are provided in Table 14-3 and Table 14-4.

Table 14-3: Receptor Sensitivity	
Sensitivity of Receptor	Criteria for Assessment
High	<ul style="list-style-type: none"> Sites of acknowledged international importance designated as World Heritage Sites. Nationally-designated archaeological monuments, sites, buildings or historic landscapes protected by national laws. Undesignated sites, structures or historic landscapes of demonstrable national value. Assets that can contribute significantly to acknowledged national or international research objectives, whether designated or not. Well or extremely well preserved historic landscapes or seascapes with considerable or exceptional coherence, time-depth, or other critical factors. Intangible cultural heritage listed in national registers, or associated with movements or individuals of national or global significance.
Moderate	<ul style="list-style-type: none"> Designated or undesignated sites, landscapes or seascapes that can contribute significantly to regional research objectives. Designated or historic (unlisted) buildings that have exceptional qualities or historical associations, with important historic integrity and contributing significantly to historic character. Designated or undesignated historic landscapes or seascapes of regional value, which would warrant designation. Intangible cultural heritage areas listed in local registers, or associated with movements or individuals of local importance.
Low	<ul style="list-style-type: none"> Designated or undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations, or with little or no surviving archaeological interest. Undesignated historic landscapes or seascapes with importance to local interest groups, whose value is limited by poor preservation and/or poor survival of contextual associations. Intangible cultural heritage activities of local significance, or associated with individuals of local importance. Poor survival of physical areas in which activities occur or are associated. Areas with few intangible cultural heritage associations or vestiges surviving.
Negligible	<ul style="list-style-type: none"> Assets with little or no surviving archaeological interest.

Table 14-3: Receptor Sensitivity	
Sensitivity of Receptor	Criteria for Assessment
	<ul style="list-style-type: none"> Buildings or urban landscapes of no architectural or historical merit; buildings of an intrusive character. Areas with few intangible cultural heritage associations or vestiges surviving.
Unknown	<ul style="list-style-type: none"> The importance of the resource cannot be ascertained.

Table 14-4: Magnitude of Impact	
Magnitude of Impact	Criteria for Assessment
High	<ul style="list-style-type: none"> Changes to most or all key archaeological sites/key architectural and artistic building elements/historic landscape elements such that the resource is totally altered. Major changes to an area affecting intangible cultural heritage activities, associations, visual links and cultural appreciation.
Moderate	<ul style="list-style-type: none"> Changes to most or all key archaeological sites/key architectural and artistic building elements/historic landscape elements such that the resource is clearly modified. Considerable changes to an area affecting intangible cultural heritage activities, associations, visual links and cultural appreciation.
Low	<ul style="list-style-type: none"> Minor changes to key archaeological sites/key architectural and artistic building elements/historic landscape elements such that the resource is slightly altered or clearly modified. Slight changes to setting, or changes to setting that affect the character of the asset. Minor changes to area that affect intangible cultural heritage activities, associations, visual links and cultural appreciation.
Very Low	<ul style="list-style-type: none"> Very minor or no changes to archaeological asset, historic building fabric or setting. Very minor or no changes to elements, parcels or components of landscapes or seascapes; no visual or audible changes. Very minor or no changes in amenity or community factors.

14.3.6 Assumptions and Limitations

This assessment has been completed for the known cultural heritage sites identified within the Proposed Project Area. It is possible that other sites of cultural heritage interest may exist that are not currently identifiable, as the basis for site identification was through a site walkover, community/regulator interviews and the disclosure of information to the survey team. Due to the similar land-uses along the Expressway and Water Pipeline route, detailed site walkovers were not conducted in these areas. However, according to the INMR, potential for significant findings of archaeological or cultural heritage aspects is considered low.

Potential exists for additional artefacts with low cultural heritage significance to be identified across the Proposed Project Area. Furthermore, areas of individual burial sites may occur within the Proposed Project Area.

14.4 Baseline Conditions

Before the colonial era, Rwanda was a nation-state with people sharing the same religious beliefs, traditions and customs, and speaking the same language, Kinyarwanda. The

Constitution of the Republic of Rwanda of 4 June 2003, as amended to date, reaffirms the GOR's commitment to protecting sound traditional and cultural practices based on Rwandan philosophy and culture in general. The Constitution stipulates that the GOR has the obligation to ensure preservation of its cultural heritage, memorials and the Genocide sites.

There are no declared archaeological, paleontological and or historic monuments sites in the Bugesera District. The INMR has plans to conduct archaeological and ethnographical surveys to record significant sites in the Eastern Province and Bugesera District will be covered as part of this.

Table 14-5 summarises the locations that were sampled during the site survey and these are shown in Figure 14-2.

Table 14-5: Sample Locations during the Baseline Survey		
Date	Easting	Northing
	(Zone UTM 36M, WGS 1984)	
29/5/2017	0184916	9764676
29/5/2017	0187696	9761655
29/5/2017	0188079	9761294
29/5/2017	0188405	9760912
29/5/2017	0189137	9760185
30/5/2017	0190153	9760619
30/5/2017	0187673	9760194
30/5/2017	0188369	9759705
30/5/2017	0189442	9761300
30/5/2017	0185567	9765141
30/5/2017	0184577	9764660
31/5/2017	0185624	9762971
31/5/2017	0184651	9762455
31/5/2017	0184759	9764290
31/5/2017	0185032	9764080
31/5/2017	0184156	9763756
31/5/2017	0184861	9763047
31/5/2017	0184759	9764290
2/6/2017	0187648	9763050
2/6/2017	0187305	9762588
2/6/2017	0187278	9763143
2/6/2017	0186929	9763253

14.4.1 Onsite Findings

A number of scatters of potsherds (pottery fragments) were observed in various locations across the Airport Area (Plates a, b and c – Table 14-6, and Figure 14-1 and Figure 14-2). It should be noted that the Proposed Project Area has already been disturbed due to human activities such as settlements, agricultural practices, including cattle grazing, and therefore these scatters of

potsherds are not in their natural context (in situ). The potsherds with decorations resemble the i'kagera pottery tradition (as seen from the Museum Ethnographic Collection).



Figure 14-1: Potsherds Recorded within the Proposed Project Area

The potsherds that were recorded are as a result of human skills in pottery making, within or by nearby communities. They were from pots that were presumably used for cooking, brewing alcohol or storage.

The relevance of pottery and pottery sites is that they give evidence of the range and contacts of the particular group from which the pottery came from. This information can help in the understanding of the trade or lack of trade which existed amongst the ancient peoples under study. For example, if a piece of pottery was sourced 500 km from where it was discovered, it can be assumed that the group of people from which it belonged had contact directly or indirectly with the site 500 km away showing either a very broad ranging community, as associated with nomadic groups or, alternatively, an established trade link, as associated with a more settled community.

The very existence of pottery indicates the emergence of a more sedentary life. The presence of pottery within a culture shows the beginnings of complexity where trade and production are beginning to establish themselves. It is also important to note that pottery lends itself not only to the study of early technology and complexity but also to simpler aspects of early peoples' lives. Beliefs and religious practices can often be seen on ancient pottery. Depictions of the arts and music can also be found on ancient pottery.

The locations of the scattered potsherds are listed in Table 14-6 and shown in Figure 14-2.

Table 14-6: Locations of Scattered Potsherds Identified in the Proposed Project Area			
GPS Coordinates (UTM 36M) Location		Number of Sherds	Condition/Status
Easting	Northing		
0184814	9762496	1	Plain weathered brownish potsherd
0184889	9762329	2	Plain darkish potsherd
0188299	9760917	1	Plain darkish potsherd
0188237	9760937	2	Decorated darkish potsherds

Table 14-6: Locations of Scattered Potsherds Identified in the Proposed Project Area			
GPS Coordinates (UTM 36M) Location		Number of Sherds	Condition/Status
Easting	Northing		
0188235	9760943	10	Plain darkish potsherds
0188841	9760599	2	Plain brownish potsherds
0184577	9764660	5	Plain darkish potsherds
0184556	9764717	1	Plain darkish potsherd
0184612	9764845	4	Plain darkish potsherds
0184820	9764772	1	Decorated darkish potsherd
0185567	9765141	2	Plain brownish potsherds
0184900	9764169	1	Plain brownish potsherd
0185051	9764116	1	Plain brownish potsherd

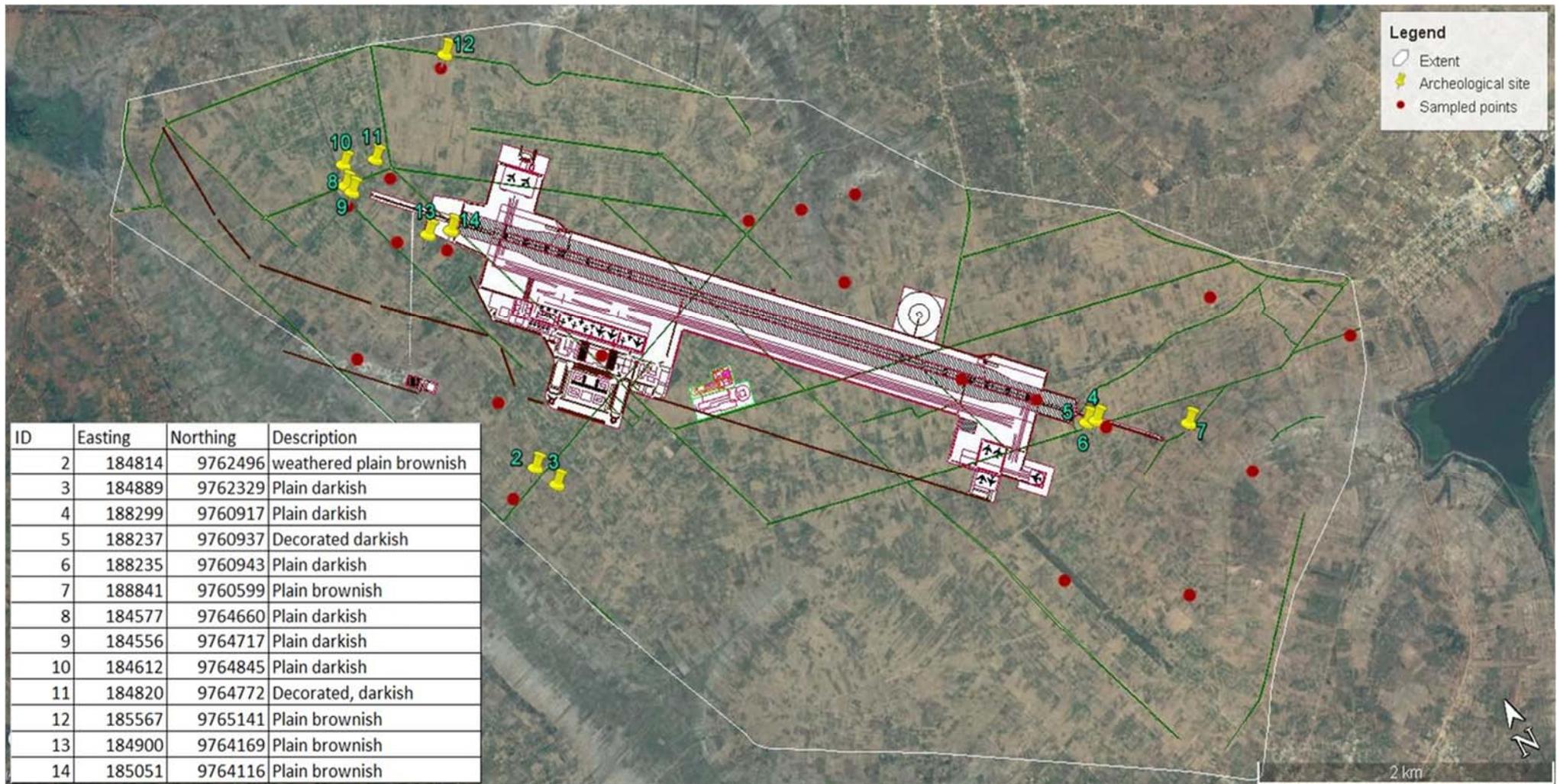


Figure 14-2: Locations of Potsherds Recorded in the Area of Influence (base map sourced from Google Earth)

14.4.2 Fossils

No fossils were found in the study locations and there are no earlier records of these in the area. However, this conclusion can only be made after detailed inventories are undertaken by the relevant Rwanda Authorities or in case of chance finds during the Proposed Project implementation.

14.4.3 Sensitive Receptors

Potential sensitive receptors identified in the Proposed Area Project include, but are not limited to, family graves in close proximity to rural dwellings, larger graves, plants that may have medicinal properties, and undiscovered/unknown archaeological artefacts or areas of cultural heritage.

14.5 Potential Impacts

14.5.1 Construction Phase Impacts

Undiscovered cultural heritage, archaeological or palaeontological objects or features may potentially be disturbed as a result of ground intervention activities associated with construction of the Proposed Project. Objects of spiritual value or that relate to worship or community gathering may also be disturbed if they are present in the Proposed Project Area.

The construction of the Expressway and widening of the quarry road also have the potential to result in disturbance or damage to the physical sites of cultural heritage and places that represent sacred meaning to the local communities, such as objects of living tangible heritage, including features of the natural landscape and man-made structures.

For the area surveyed around the Airport Area, only tangible forms of cultural heritage (tangible movable objects) were discovered through ground truthing the site and looking for visible cultural heritage.

Construction of the Proposed Project has the potential to directly damage these pottery sites, which are indicators of the beginnings of trade and production in the early years. Construction of the Proposed Project may also disturb human remains outside gazetted burial grounds/cemeteries. No known gazetted burial grounds exist within the Proposed Project Area.

Although no palaeontological sites were discovered during the survey, these may be identified during site excavation activities.

14.5.1.1 Design Controls

Mitigation through design controls which are being implemented across the Proposed Project for construction activities include the development and implementation of a Chance Finds Procedure. The Chance Finds Procedure¹⁰ provides measures to follow should archaeological or cultural heritage findings be identified. Furthermore, the following design controls will be in place in the event that finds are encountered:

- The culture of the people in the Proposed Project Area will be handled as a sensitive matter;
- Relocation of the burials within the Proposed Project Area will be done in consultation with the INMR and the Affected Community, and all the ritual requirements for the relocation will be followed; and
- Consulting the area elders on the way forward and requirements needed in case of relocation of human remains.

¹⁰ It should further be noted that should firearm caches be unearthed during the construction phase relating to historic activities, the police will be informed of the discovery.

14.5.1.2 *Impact Assessment Prior to Mitigation*

Data from the archaeological and cultural heritage assessment revealed that the Project activities will have the potential to insert positive and negative, direct and indirect impacts during the construction phase. The purpose of the assessment was to identify potential artefacts or areas of cultural heritage importance, consider potential impacts thereof and thereafter enhance the positive impacts and minimise or avoid the negative impacts, thereby encouraging perseverance in totality as the first priority.

Destruction of Archaeological Sites

The removal of vegetation, top soil stripping, site clearance and earthworks have the potential to lead to the exposure and possible damage or destruction of archaeological artefacts.

The extent of the impact would be local, covering the Proposed Project Area for construction of the airport and associated infrastructure and the duration would be short term only, lasting for the duration of the earthworks until 2020 and then in subsequent airport expansion works. The magnitude of this impact is therefore medium and the receptor sensitivity is considered low. Impact significance before mitigation is **Minor Adverse**.

Destruction and Exposure of Human Remains and Burials

The Proposed Project Area has previously been home to resident communities. The potential exists for family graves to exist within the Airport Area. According to the stakeholders consulted in Rilima Sector, and in Karera and Nyabagendwa cells, from around 2005 and 2006 villages created burial grounds in specific locations. However, prior to the initiation of the burial grounds, communities will have buried family members in close proximity to homesteads.

The extent of impacts in the event that a burial site is discovered would be local, impacting the Proposed Project Area. Duration of the impact would be short term as relocation/reburial will be made a priority. The magnitude of this impact is assessed as medium and receptor sensitivity high. Impact significance before mitigation is therefore **Major Adverse**.

14.5.2 Operation Phase Impacts

No impacts to archaeological or palaeontological features are anticipated during operation.

14.6 Mitigation Measures

A Chance Finds Procedure will be developed and implemented to salvage sites where archaeological or cultural heritage finds, and all chance finds will be reported to the INRM. Additional mitigation measures include:

- All site workers will be trained on the Chance Finds Procedure to help assist with their identification, documentation and reporting during the construction phase; and
- Should an artefact be identified, all work is to stop and the INMR will be contacted.

14.7 Residual Impacts

With implementation of mitigation measures mentioned herein, the significance level of the impacts identified will be reduced to either **Minor Adverse** or **Negligible**.

14.8 Summary of Mitigation and Residual Impacts

Table 14-7 provides a summary of the impacts and mitigation measures associated with cultural heritage during the construction of the Proposed Project. When taking account of incorporated mitigation measures there is an overall **Minor Adverse** impact significance during construction for identified impact scenarios. With the implementation of further recommended mitigation the

overall residual impact significance remains **Minor Adverse** or **Negligible**. There are not expected to be any impacts during the operation phase as the ground will not be disturbed.

Table 14-7: Summary of Findings

Impact	Receptor	Phase	Impact Magnitude	Receptor Sensitivity	Pre-Mitigation Impact Significance	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
Destruction of Archaeological sites	Local communities	Construction	Impact Magnitude: Medium Nature: Adverse Type: Direct Extent/Scale: Local Duration: Short Term Frequency: Infrequent Reversibility: Irreversible	Low	Minor Adverse	<ul style="list-style-type: none"> • Chance Finds Procedure; • Relocation of burials, if found, within the Proposed Project Area will be done in consultation with the INMR and the Affected Community, and all the ritual requirements for the relocation will be followed; and • Consultation with the area elders on requirements needed in case of relocation of human remains. 	<ul style="list-style-type: none"> • Chance Finds Procedure • Should an artefact be identified, all work is to stop and the INMR will be contacted. 	Negligible
Destruction and Exposure of Human Remains and Burials	Local communities	Construction	Impact Magnitude: Medium Nature: Adverse Type: Direct Extent/Scale: Local	Medium	Major Adverse			Minor Adverse

Table 14-7: Summary of Findings

Impact	Receptor	Phase	Impact Magnitude	Receptor Sensitivity	Pre-Mitigation Impact Significance	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
			Duration: Short term Frequency: Infrequent Reversibility: Reversible					