14 Cultural Heritage

14.1 Introduction

This chapter assesses the impact of the Simandou Port on cultural heritage, including both tangible and intangible features. Tangible features include archaeological sites, historic sites and monuments, traditional sacred sites and other places of importance. Intangible cultural heritage includes traditional beliefs and practices such as religious rites of passage, ritual, crafts, and other cultural traditions. These intangible aspects are an integral part of Guinea’s contemporary way of life and are likely to influence the responses and attitudes of the Guinean people towards the Simandou Project.

This assessment considers the following types of impacts:

- disturbance or damage to both terrestrial cultural heritage and underwater archaeological and historic sites causing a loss of cultural value or historical and scientific information about Guinea’s past and potential damage to local and national cultural identity;
- disruption of access to currently used cultural heritage sites;
- changes to the setting of such sites which could inhibit spiritual or traditional practices and cause potential damage to local and national cultural identity and values;
- threats to cultural knowledge and activities causing potential loss of cultural identity and cohesion; and
- infringement on cultural norms, causing offence to local communities and possible exacerbation of social impacts and negative sentiment towards the Project.

The Project recognises the diversity of stakeholder groups within the Project area, and their right to maintain or redefine their identity. Some of these stakeholder groups include women’s groups, men’s groups, traditional authority figures, and religious and ethnic groups; and there is also the significant distinction between rural and urban stakeholder groups. Cultural heritage forms the basis upon which the shared history, identity and culture of these different groups is built. By preserving cultural heritage, the Project aims to protect the foundations of ethnicity, religion, and culture within the Project area.

The assessment includes a consideration of physical impacts on cultural heritage and also addresses potential social implications of these impacts. Voluntary social or cultural change chosen by Guineans that may result from the Simandou Project is not considered an impact in this assessment. The cultural heritage assessment cannot recommend mitigation for all cultural change, as such change may naturally occur when a traditional society like that of Guinea is subject to a large-scale development project. The assessment will only address the involuntary loss of traditional cultural knowledge and practices found to be critical to local communities. The assessment involves a formalised process to develop a comprehensive baseline understanding of the community’s cultural heritage values and then seeks, through ongoing community consultation, to define an acceptable level of change to intangible cultural resources or values. This assessment process is then used to identify required mitigation measures in consultation with affected communities.

The remainder of the chapter is organised as follows:

- Section 14.2: describes the assessment methodology used;
- Section 14.3: presents the baseline situation;
- Section 14.4: reports on the assessment of impacts of the port prior to mitigation;
- Section 14.5: describes the planned approach to mitigation and the anticipated residual effects of the port after mitigation; and
- Section 14.6: summarises the findings of the assessment.
The chapter is supported by the following annexes:

- 14A: Description of Simandou Archaeological Potential Model;
- 14B: Maps of Archaeological Potential and Known Sites;
- 14C: Cultural Context for West Africa and Guinea;
- 14D: Inventory of Known Cultural Heritage Sites in the Port Area; and
- 14E: Simandou Project Cultural Heritage Management Plan.

14.2 Approach

14.2.1 Study Area

The port is located in the region of Lower Guinea. The study area for the assessment was defined as an area of approximately 1 300 km² of which approximately 260 km² falls on land, the rest falling on the Atlantic Ocean. This area was chosen to include all sites that could be directly affected by construction and to encompass other locations where sites could be affected by indirect impacts from the Project. The boundary of the study area is illustrated in the maps in Annex 14B: Maps of Archaeological Potential and Known Sites.

14.2.2 Legal and Other Requirements

The assessment has been carried out with reference to the following legislation and other requirements.

- Republic of Guinea’s Mining Code, Land and Domain Code and Environmental Code. There is no specific legislation in Guinea dealing with the protection of cultural heritage.

- The Convention on the Protection of Underwater Cultural Heritage (UNESCO 2001), which applies to the maritime aspects of the Project. Although Guinea has not ratified the Convention, the convention represents international standards for underwater cultural heritage. The purpose of the Convention is to strengthen the protection of underwater cultural heritage through cooperative preservation programmes using the best practicable means. Protection efforts should focus first upon in situ preservation, and also recognise that underwater cultural heritage should not be commercially exploited.

- International Finance Corporation’s Performance Standard 8 for Cultural Heritage and the accompanying PS 8 Guidance Note, which seek to protect cultural heritage from the adverse impacts of project activities and to support its preservation.

- Rio Tinto’s internal guidance: “Why cultural heritage matters: A resource guide for integrating cultural heritage management into Communities work at Rio Tinto”; 2011.

- International Council on Mining and Metals’ Sustainable Development Framework Article 3, which commits to respecting cultures, customs and values of project affected people; 2011.

- Rio Tinto’s Cultural Heritage Management Plan for the Simandou Project, the purpose of which is to protect cultural heritage from adverse impacts associated with the construction and operation of any of the components of the Simandou Project and to preserve such heritage for future generations. The Plan will be updated based on the findings and measures described in this chapter.

Project cultural heritage commitments are identified in the 2010 Simandou Cultural Heritage Management Plan, presented in Annex 14E: Simandou Project Cultural Heritage Management Plan. It is based on Why Cultural Heritage Matters, which itself is in line with IFC Performance Standard 8.
14.2.3 Types of Cultural Heritage Relevant to the Assessment

14.2.3.1 Tangible Cultural Heritage

The assessment considers two broad categories of tangible cultural heritage: Archaeological Cultural Heritage (ACH) and Living Cultural Heritage (LCH).

ACH refers to sites whose primary value is historical or scientific and includes three types of sites:

- Settlement sites – those with evidence of ancient human occupation (such as a village or cave dwelling);
- Special Purpose sites – those with evidence of ancient human activity that does not include occupation (such as a former ritual site, craft workshop, or shipwreck); and
- Burial sites – places of internment, separate from ancient settlements, which are no longer visited by living populations (such as an ancient necropolis or tomb).

LCH is any cultural site of importance in use by local living populations and includes:

- Religious sites – places of worship, cemeteries, and tombs;
- Sacred sites – places where spirits live, or where fetishes are displayed or buried; and
- Initiation sites – male and female rite of passage sites.

Some sites may be both ACH and LCH sites, having both scientific value and value to living communities. An example of this type of site would be a community cemetery at a former village site which would be important to residents at the new ‘daughter’ village, but may also have archaeological significance in the case where the old village is of some antiquity.

From a resource management perspective, tangible cultural heritage has several common characteristics. Tangible cultural heritage is generally:

- fixed on the landscape with discrete boundaries;
- unique, non-renewable, and sometimes irreplaceable;
- sensitive to ground-disturbing construction impacts;
- difficult to identify and evaluate when underground (ie archaeological sites);
- possible to avoid for impact mitigation, if the location is known; and
- potentially disruptive to construction schedules and project reputation if encountered as unexpected discoveries (chance finds) during construction or later.

The value of tangible cultural heritage sites varies depending on their importance to local or wider regional, national or international communities, and to the scientific community. Value may be indicated by protection of sites under local, national or international legislation or other recognised systems of designation (1). Physical dimensions of the sites are also relevant, as they will determine how difficult a site may be for the Project to avoid and/or evaluate and remove.

The IFC’s Performance Standard 8 specifically addresses management of Cultural Heritage. Table 14.1 presents the types of cultural heritage resources and the proper mitigation to be applied to each category of heritage as defined by PS8.

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(1) It must be noted that the Guinean Environment Code provides minimal legal protection of heritage resources in Guinea at present and there is a limited capacity for implementation of this minimal protection.
Table 14.1  Classification & Mitigation Recommendations for Cultural Heritage under Performance Standard 8

<table>
<thead>
<tr>
<th>Replicable Heritage</th>
<th>Non-Replicable Heritage</th>
<th>Critical Cultural Heritage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangible forms of</td>
<td>Relates to the social,</td>
<td>Consists of one or both of</td>
</tr>
<tr>
<td>cultural heritage</td>
<td>economic, cultural,</td>
<td>the following types of</td>
</tr>
<tr>
<td>that can themselves</td>
<td>environmental, and</td>
<td>cultural heritage: (i)</td>
</tr>
<tr>
<td>be moved to another</td>
<td>climatic conditions of</td>
<td>the internationally</td>
</tr>
<tr>
<td>location or that</td>
<td>past peoples, their</td>
<td>recognised heritage of</td>
</tr>
<tr>
<td>can be replaced by</td>
<td>evolving ecologies,</td>
<td>communities who use, or</td>
</tr>
<tr>
<td>a similar structure</td>
<td>adaptive strategies,</td>
<td>have used within living</td>
</tr>
<tr>
<td>or natural features to</td>
<td>and early forms of</td>
<td>memory the cultural</td>
</tr>
<tr>
<td>which the cultural</td>
<td>environmental</td>
<td>heritage for long-</td>
</tr>
<tr>
<td>values can be</td>
<td>management, where</td>
<td>standing cultural purposes;</td>
</tr>
<tr>
<td>transferred by</td>
<td>cultural heritage is</td>
<td>or (ii) legally protected</td>
</tr>
<tr>
<td>appropriate measures</td>
<td>unique or relatively</td>
<td>cultural heritage areas,</td>
</tr>
<tr>
<td></td>
<td>unique either (i) for</td>
<td>including those proposed</td>
</tr>
<tr>
<td></td>
<td>the period it</td>
<td>by host governments for</td>
</tr>
<tr>
<td></td>
<td>represents, or (ii) in</td>
<td>such designation.</td>
</tr>
<tr>
<td></td>
<td>linking several periods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in the same site.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Specific Mitigation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most cultural heritage is best protected by preservation in its place, since removal is likely to result in irreparable damage or destruction of the cultural heritage.</td>
<td>Non-replicable cultural heritage is not to be removed unless all of the following conditions are met: i) there are no technically or financially feasible alternatives to removal; ii) the overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal; and iii) any removal of cultural heritage is conducted using the best available technique.</td>
<td>Critical cultural heritage will not be removed, significantly altered, or damaged. In exceptional circumstances when impacts on critical cultural heritage are unavoidable, the client will use a process of Informed Consultation and Participation (ICP) of the Affected Communities (as described in PS 1) which uses a good faith negotiation process that results in a documented outcome. The client will retain external experts to assist in the assessment and protection of critical cultural heritage.</td>
</tr>
</tbody>
</table>

These three types of cultural heritage are relevant to an assessment of resource importance and possible Project impacts. The PS8 Guidance Note, which supports the understanding of PS8 and provides guidance on how to fulfil PS8 requirements, has also been taking into account in this assessment.

14.2.3.2  Intangible Cultural Heritage

The assessment considers two types of Intangible Cultural Heritage: Cultural Knowledge and Cultural Activity.

Cultural Knowledge is the belief system or knowledge base that is maintained and passed down over generations, including the categories of cultural concepts, traditional techniques and traditional forms of social organisation.

- Cultural concepts – language, religion, cosmology, cultural values, myths and stories of the group’s history, which together form the basis of a people’s understanding of their relationship with the physical and spiritual world.

- Traditional techniques – traditional technologies, fishing, hunting or agricultural techniques, and knowledge of traditional craft production techniques.

- Traditional forms of social organisation – community organisation and the systems in which power and resources are shared among individuals or groups. Traditional land management systems are an example of a traditional Guinean social organisation potentially affected by the Project, as in-migration can cause a change in the distribution of land and undermine traditional sources of local authority.
Cultural Activity is defined as an activity that represents expressions of social or cultural identity for a particular group in which multiple members of the community take part. Cultural Activity can be divided into the subcategories of ritual, cultural expression and traditional life-ways:

- Rituals – festivals, initiation ceremonies and mortuary practices;
- Cultural expression – song, dance, clothing, and the production of folk art; and
- Traditional lifestyles – means of subsistence, social and political activities, and other daily activities which form the basis of cultural identity.

Cultural activities are often informed by cultural knowledge, but they are distinct in that cultural activities are event based (ie they take place at a particular time and place) while cultural knowledge exists in the consciousness of a community.

From a resource management perspective, intangible cultural heritage is very different from tangible cultural heritage. Intangible cultural heritage is generally:

- without a fixed location or discrete boundaries;
- embedded in traditional residential and economic patterns;
- widely shared and resilient but also subject to loss under conditions of rapid social change; and
- sensitive to changing socio-economic situations, and to outside cultural influence.

Although the assessment distinguishes between tangible and intangible cultural heritage, it should be noted that they often overlap. Communal knowledge and belief systems (eg oral history and rituals) are often embodied within the tangible manifestations of a culture (eg a cemetery, mosque or sacred forest), so direct impacts to physical objects or places may also have impacts on intangible cultural values.

14.2.3 Ecosystem Services

Impacts on ecosystem services include the potential loss of non-material benefits obtained from ecosystems, such as recreation, spiritual values, and aesthetic enjoyment. These cultural services can be related to Intangible Cultural Heritage and Living Cultural Heritage Sites. Services include ritual and economic practices not associated with specific sites and potential impacts can include reduction in natural settings appropriate for ritual activities such as forests streams, and limiting access to natural foods and materials used in traditional practices. These impacts are specifically addressed in Chapter 24: Ecosystem Services.

14.2.4 Baseline Data Sources

14.2.4.1 Terrestrial Cultural Heritage

Neither the history nor the archaeology of Guinea is a well-studied topic (1). While major discoveries in West African archaeology were occurring in the 1970s and 1980s in Sierra Leone, Liberia, Senegal and Mali, Guinea remained poorly understood. The available archaeological site data probably represent only a portion of the total resources present in the study area and it is likely that further sites will be encountered as chance finds during construction if not identified in advance.

The cultural heritage baseline for the area around the proposed port has been established through a combination of desktop research, field visits and local consultation. The desk study included the review of a Screening Study of the proposed railway and port, conducted in 2007, which highlighted general information about cultural and historical sites and provided data on the social and ethnic groups within the port study area. This study did not address specific cultural heritage sites, but led to an understanding of cultural patterns in the port study area (Section 14.3.3.2). One source of known cultural heritage site locations is a list of 20 touristic sites compiled by the Guinean government, two of which fall within the port area. The

(1) The main resource is IFAN (Institut Fondamental d’Afrique Noir previously Institut Français d’Afrique Noir) in Dakar (see www.ifan.ucad.sn). During the colonial period, the IFAN in Mali was housed in the Mali National Museum in Bamako. Today it is located at the University of Cheikh Anta Diop in Dakar.
precision of the coordinates for the sites is not exact, with coordinates being taken from standard maps. No indication of site importance has been given for the sites in the port area by the Guinean government and very little information is recorded about these sites. Pending field research, therefore, all sites on the list are assumed to be of non-replicable, and thus of high importance. In addition, the general scarcity of archaeological research in Guinea means that each archaeological site has the potential to greatly increase the understanding of Guinea’s history and prehistory, and is more likely to be considered non-replicable even after investigation.

Another source of cultural heritage data was an investigation conducted specifically for Project logistic sites that included field visits and consultation with local communities. Consultation entailed community meetings and interviews with villagers in the study area. The field visits involved walk-over reconnaissance and photographic documentation of sites. The types of sites identified by the survey include: sacrifice and offering sites, sites where genies or spirits live, sacred sites, initiation sites, religious sites, and historic sites. The locations of many of these LCH sites are highly guarded knowledge. In order to respect the secrecy surrounding traditional sacred, religious and initiation sites, the Project has adopted a commitment to site confidentiality. This means that the general locations of sensitive sites in the port area will not be mapped, nor will their coordinates be publicly disclosed in this document.

Archaeological sites were not encountered during this LCH field survey aside from a single ancient sacred site home to a genie (CCH-33). Lack of ancient cultural heritage from port baseline studies does not preclude actual existence of ancient populations, as field studies conducted in the port area have not included archaeological reconnaissance. The desktop review for the baseline indicated a lack of past archaeological reconnaissance but a high likelihood that undiscovered archaeological sites are present throughout the country, including the port area.

All identified cultural heritage sites are listed in the site inventory in Annex 14D: Inventory of Known Cultural Heritage Sites in the Port Area. In some cases, the precise locations of sites are neither reported nor mapped due to the confidentiality of the sites. Detail continues to be added to the baseline by an on-going programme of Project-wide fieldwork that is now occurring in the port area. Additional on-going fieldwork is gathering more details on known sites, and will also identify additional sites. Where the Project footprint may overlap sites, apparent site boundaries will be recorded. Site coordinates collected by the corresponding fieldwork and desktop analysis are used to assess potential site impacts in the present chapter and will also be used to manage potential impacts as the Project progresses, using data handling procedures that ensure that confidentiality of sites will be maintained.

### 14.2.4.2 Underwater Cultural Heritage

No field data on underwater cultural heritage of the coast of Guinea is available, since no investigations have been reported in the region. The underwater cultural heritage baseline was established through a literature review of available sources, which allows the formulation of predictive statements about the potential presence of shipwrecks from the colonial period and perhaps earlier. Historical data on pre-European maritime activities are very limited, but the literary sources suggest that there was significant maritime traffic along the coasts of West Africa using small watercraft (1). Historical accounts of Portuguese explorers, who arrived in the 15th century, describe local people who traded and fought from shallow watercraft adapted to the local waterways (2). Vessel types included reed boats, dugouts, and dhows. The literature review indicates that during the colonial period, settlement of the coastal region increased and led to the movement of people into the interior of the country. This settlement pattern in turn led to an increase in riverine traffic and the establishment of port facilities during this time. European exploration and settlement of West Africa initially followed the coast and then used shallow draft vessels to penetrate the interior waterways in the 19th and 20th centuries. It is expected that this increasing traffic and the presence of this infrastructure would indicate a higher potential for shipwrecks from the later colonial periods in the riverine area influenced by the port.

The historical records from West Africa suggest that there is potential for underwater cultural heritage, particularly the indigenous shallow watercraft and colonial era vessels mentioned above. These cultural resources would be expected to exist in the littoral zones of near-coastal and riverine settings within the port area.

14.2.5 Identifying Areas of Archaeological Potential

Baseline investigations confirmed that no comprehensive archaeological survey has been conducted in the study area. To address the lack of comprehensive data, an archaeological modelling exercise was undertaken for all project components, including the port. The results are presented as maps indicating areas of high archaeological potential, in other words, areas in which the greatest density and complexity of archaeological finds are most likely to occur. Areas of moderate and low potential are also identified. In addition to filling a significant knowledge gap for the Project, this approach has the advantage of characterising the archaeological potential of the entire Project area using a single terminology and scale of reference.

The Simandou archaeological model was designed specifically for the Simandou Project and was developed by characterising the environmental settings of known traditional villages and residential archaeological sites in Guinea and West Africa, identifying the key factors that attracted their inhabitants. Examples of these factors include flat and well-drained land, rich agricultural land, availability of water, and access to ancient transport networks. The model used scores for 46 geographic variables, together with satellite imagery of areas around traditional village sites and a geographical information system (GIS) platform to assess archaeological potential. The unit of analysis was 500 m blocks based on the UTM coordinate system with the predictive grid extending over the port area. The result was an ordinal ranking of blocks from highest to lowest based on their probability for containing unknown archaeological sites. Blocks in the 90th percentile (i.e. the top 10% of all blocks within the port area) were designated as having potentially high archaeological interest. Blocks in the 70th – 90th percentile range (i.e. the next highest 20% of blocks) were designated as having medium archaeological interest, and the remaining blocks were considered to be of low archaeological interest (1). This information was then used to generate maps indicating areas of dense concentrations of high and medium archaeological potential within the study area that exceed 2.5 km² in size. For the purposes of the assessment, these are designated as areas of high archaeological potential (AHAPs). More detailed information on the modelling, including both methodology and resulting maps, are provided in Annex 14A: Description of Simandou Archaeological Potential Model and Annex 14B: Maps of Archaeological Potential and Known Sites respectively.

It is important to note that models of this type do not identify with certainty where archaeological sites will be found. Rather, they exploit broad and statistically reliable archaeological patterns to suggest areas that are more likely to contain sites. A typical range of accuracy for this type of approach is for the high and medium interest blocks (30% of the study area) to contain 60 - 80% of all unknown sites. Despite this uncertainty, the model is a useful tool for assessing the likely impacts on previously unreported archaeological sites. The model will be refined based on additional pre-construction field reconnaissance and testing in the port area, a process that will increase its accuracy and value in identifying and managing potential archaeological impacts.

Underwater areas of high potential were not included in the archaeological potential model, although certain marine and riparian areas are more likely to contain prehistoric or historic remains than others. Near shore areas (within approximately 3 km of the shoreline) have the highest potential for pre-18th century watercraft. Historic and modern period vessels are more commonly found in the approaches to known ports, although they may be found in both deep and shallow waters.

In addition to the archaeological potential model, an expedient satellite remote sensing analysis was conducted for the port area. The analysis sought to identify possible pre-colonial settlements within the port area. Results from the analysis have identified 15 possible prehistoric sites that show features commonly observed in West African Medieval and Iron Age floodplain settlement patterns. Such ancient settlement

(1) Within the GIS, each 500 m square block is identified by its centre point providing a standard reference for future management activities such as reconnaissance or construction phase monitoring.
patterns are evident elsewhere in Guinea itself at Niani, the possible ancient capital of the Malian Empire near the border with Mali on the banks of the Sankarani River (a tributary of the Niger). Niani was excavated in the 1970’s and is characterised as an urban complex dating back to the early first millennium AD. The central area of Niani was a raised cultural mound built up over centuries of occupation. The cultural mound at Niani is located in a floodplain and well situated to take advantage of fertile fields and other natural resources. The 15 potential archaeological sites identified in the port area identified during the remote sensing analysis exhibit landscape features suggestive of flood plain sites and cultural mounds similar to other known sites in the region, such as Niani. These possible sites are included in the baseline.

14.2.6 Evaluating Site Importance and Predicting Magnitude of Impact

14.2.6.1 Tangible Cultural Heritage

Archaeological Cultural Heritage

The value of an ACH site is determined by:

- national or international protection status (if applicable);
- potential to contain scientific and cultural information as indicated by the amount, types and quality of artefacts and features it is thought to contain, its length of use, stratigraphy, and state of preservation;
- uniqueness; and
- value as indicated by local stakeholders.

In cases where there is not enough available information to evaluate the importance of the sites, ACH sites are assumed to be non-replicable, and thus of high importance, pending further investigation by an archaeologist. The fact that relatively few archaeological sites have been investigated in Guinea means that identified sites in the study area more likely to be considered non-replicable even after investigation, as they are somewhat rare and of potentially high scientific and historic value. Some large and / or unusual ACH sites may also have future touristic value as well as local or national significance as symbols of identity and shared history.

Since the primary value of ACH sites is the information inherent in their physical remains, in most cases the magnitude of impacts to ACH sites is measured by the proportion of the site that is disturbed by Project activities and the severity of the disturbance or damage.

14.2.6.2 Living Cultural Heritage

LCH impacts are caused by physical damage to the site, disruption of user access to the site, or change in the setting or character of the site. Impacts to LCH sites would affect their function and disrupt the practice of religious, spiritual or other cultural activity. The value of a LCH site is determined by:

- national or international protection status (if applicable);
- importance to local, tribal, ethnic, or national identity;
- role of the site in the spiritual and cultural lives of people; and
- potential to be relocated or replaced.

As the value of LCH sites is dictated by their use and significance to local people, the importance of sites is based principally on information provided by local informants who are users of the sites. In cases where site users’ evaluation of the importance of the sites is unknown, LCH sites are assumed to be non-replicable, and therefore of high importance, pending stakeholder engagement to verify importance.

The magnitude of impacts on LCH sites is measured by the degree to which the use of the site, its use, or its meaning is affected by Project activities. This is measured either through extent of physical damage, the level of disturbance of the site’s function or the duration and severity of interruption of site use.
14.2.6.3 Intangible Cultural Heritage

Impacts to intangible cultural heritage are caused when socio-economic changes and involuntary resettlement cause the loss of traditional knowledge and/or practices that may serve important functions for local communities. Examples of potentially affected heritage include:

- traditional practices such as ritual dance;
- rights of passage; or
- traditional economic strategies, such as fishing and hunting.

Impacts on ICH occur when Project activities result in the termination or decline of a traditional practice, ritual, or economic strategy, against the will of the Guinean people. Some of the impacts are related to specific Living Heritage Sites (eg rite of passage sites) and others (eg traditional dance) are not. An example of an ICH impact would be if the port facilities cut off locals from an initiation site, causing a decline in traditional rite of passage practices in a village or wider area. The magnitude of such impacts is very difficult to judge as this requires assessing the balance between the negative and positive values associated with cultural change. Potentially significant negative impacts are currently being identified by the Community Team based on direct knowledge or gained through the communities through close and ongoing contact.

14.2.7 Evaluating Impact Significance

The coordinates of sites are used in the assessment process to indicate potential cultural heritage impacts caused by physical encroachment of planned Project activities on cultural heritage sites. Impact determinations are made conservatively when planned Project activities will occur close to sites. Impact significance is a product of the magnitude (duration and severity) of the impact and the importance or value of the site.

Table 14.2 presents the overall assessment methodology as applied to the evaluation of the significance of potential impacts on both terrestrial and underwater cultural heritage sites.
<table>
<thead>
<tr>
<th>Grade</th>
<th>Magnitude of impact</th>
<th>Negligible</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>No discernible change in the condition, setting or accessibility of the site.</td>
<td></td>
<td></td>
<td></td>
<td>A notable portion of the site is lost or damaged, or setting undergoes a change that significantly affects its perceived cultural value, function, and use, or the site remains in tact but is no longer accessible to current users, or site must be relocated or replaced.</td>
</tr>
<tr>
<td>Value of cultural heritage resource</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td></td>
</tr>
<tr>
<td>Negligible Site is not recognised by local people or external parties as being of value to community or for scientific or cultural research.</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td>Not Significant</td>
<td></td>
</tr>
<tr>
<td>Low Site is considered replicable heritage under the IFC’s PS8 and is recognised by local stakeholders as having some limited value for local tradition and culture, or has minor interest for research (ie site has little potential to augment an understanding of Guinea’s past).</td>
<td>Not Significant</td>
<td>Minor</td>
<td>Minor</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Medium Site is considered replicable heritage under the IFC’s PS8 and is recognised over a wider area (regionally or nationally), is of high local value, or has significant interest for research (ie site has the potential to augment an understanding of Guinea’s past).</td>
<td>Not Significant</td>
<td>Minor</td>
<td>Moderate</td>
<td>Major</td>
<td></td>
</tr>
<tr>
<td>High Site has the type of cultural or scientific qualities that merit highest level of national or international designation. The site is considered non-replicable or critical cultural heritage under the IFC’s PS8. It is recognised by local stakeholders as having outstanding cultural value, or recognised by local stakeholders as having outstanding cultural value or by scholars as having outstanding scientific value (ie a proper investigation of the site would fill in substantial knowledge gaps in understanding Guinea’s past).</td>
<td>Not Significant</td>
<td>Moderate</td>
<td>Major</td>
<td>Critical</td>
<td></td>
</tr>
</tbody>
</table>
14.3 Cultural Heritage Baseline

Baseline studies produced the following outputs: 1) a cultural context (most terrestrial and marine) for Guinea, including a chronology of prehistoric and historic periods, 2) locations and descriptive information for cultural heritage sites recorded in the study area, 3) Areas of High Archaeological Potential, identified through a modelling exercise, and 4) a baseline for intangible cultural heritage. The cultural context and ICH baseline are high-level descriptions of the general conditions throughout Guinea. The cultural context includes discussions of Guinea's prehistory and history and indicates the types of archaeological and historic sites that may potentially exist in the port study area. The tangible baseline focuses on terrestrial sites in the port study area, and presents specific cultural heritage sites and Areas of High Archaeological Potential, where sites described in the cultural chronology are most likely to be found. The intangible cultural heritage baseline describes cultural patterns in Guinea and in the port study area, and indicates the types of ICH issues that the Project may face.

14.3.1 Cultural Context

14.3.1.1 Terrestrial Context

The country of Guinea forms part of West Africa, an area whose prehistoric past witnessed large-scale population migrations, interregional trade, warfare, and the rise of urbanism. West Africa has a long history of human occupation dating to the Early Stone Age (200,000 – 100,000 BC). During the early historic period Guinea's location between the three great medieval empires – Ghana, Mali and Songhai – led to sweeping cultural shifts as Islam first took root and spread within the African continent. Guinea's coastline would have made it an attractive place to settle and trade from prehistoric times to the present. The resource-rich coastal regions of Guinea would have provided important subsistence commodities for trade with other early populations documented across much of West African during the Iron Age (500 BC – AD 1000), Medieval Period (AD 1000 – 1591), Post-Medieval Period (1591 – 1895) and continuing into the modern period as evidenced by the ruins of French colonial plantations that dot the coast and the dense rural populations that now inhabit the landscape. West Africa has received the least amount of archaeological research of any major region of the world. Since the late 1970s, however, when West Africa was recognised as the home of several prehistoric urban civilisations, archaeological research has slowly increased in intensity. Still, little is known about how wider historic trends played out within the area of modern Guinea.

Although a wealth of historical texts from the Islamic Medieval period and colonial-period are available, very little archaeological survey has been conducted within Guinea’s borders, so relatively little is known of Guinea’s prehistory. As such, the present cultural chronology for the area relies on archaeological information from surrounding regions in order to fill in the current gaps in Guinean cultural history. This absence of archaeological research in Guinea means that virtually none of the physical evidence corresponding to the periods described above has been identified and systematically studied or preserved within the country. Discovery and study of these remains will contribute important details to the history and prehistory of the country, perhaps adding entirely new chapters to the prehistory of Guinea.

14.3.1.2 Maritime Context

The coast of West Africa has witnessed maritime activities for centuries, beginning with local tribal peoples and increasing with European colonial expansion and exploitation. Prior to the arrival of Europeans, and extending into the Medieval period, West Africa saw the expansion of the Mandé empires and the arrival of Islam. Both of these historical movements brought with them inter-regional interaction with attendant opportunities for both trade and conflict. The extensive stretches of sea coast and the major rivers in the port area would have enhanced these opportunities for interaction. The vessels types that would have plied coastal reaches and rivers generally would have had shallow drafts and been of a vernacular design (eg the dugout) that was easily copied and passed from community to community. The reported presence of the dhow, an ancient sailing design from the Arabian Gulf and Indian Ocean, likely reflects interactions with Islamic peoples with access to the seaborne techniques used by Arab traders along the East or North African coast.
By the 15th century, the Portuguese, led by Henry the Navigator (AD 1394 – 1460), were sailing down the coast of West Africa to learn about and ultimately control trans-Saharan trade routes. The vessel most commonly used during this period was the caravel, which was small, highly manoeuvrable, and with a shallow keel. Larger carracks, or nau, were used along the trade routes that opened as a result of the period of exploration initiated by Henry the Navigator in the 15th century.

By the 18th and 19th centuries, western European powers were struggling to establish dominance over trade out of West Africa. This trade included slaves and a variety of commodities, such as gold and ivory. Goods imported to West Africa included rum and manufactured items for the relatively few permanent European colonists. A variety of vessel types would have been seen in coastal waters, including different classes of merchantmen, as well as military craft (e.g., frigates, ships-of-the-line, barques / barks, and armed sloops). Sailing craft with shallow drafts and oared vessels were likely used in the major rivers and to reach harbours with shallow waters.

By the mid-19th century, a variety of schooners from Europe and the Americas had reached the coast of West Africa for trade. By the later part of the century, steamboats and riverboats gained prominence because of their dependability and cargo capacities.

14.3.1.3 Cultural Chronology

An in-depth presentation of the West African cultural context and chronology is provided in Annex 14C: Cultural Context for West Africa and Guinea. Key points are summarised below and in Table 14.3.

<table>
<thead>
<tr>
<th>Date</th>
<th>Period</th>
<th>Example Sites Known in Guinea</th>
<th>Example Sites Elsewhere in West Africa</th>
<th>Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 000 - 100 000 BC</td>
<td>Early Stone Age (ESA)</td>
<td>El Beyyed, Yapei, Jos Plateau</td>
<td>-</td>
<td>Expansion of Homo erectus into Western Africa and beyond, reliance on basic stone tools.</td>
</tr>
<tr>
<td>100 000 - 30 000 BC</td>
<td>Middle Stone Age (MSA)</td>
<td>Southern Ivory Coast, near Abidjan</td>
<td>-</td>
<td>First diversification of stone tool sets: Mousterian and Aterian.</td>
</tr>
<tr>
<td>30 000 - 500 BC</td>
<td>Late Stone Age (LSA)</td>
<td>Tichitt Tradition, TinTan, Iwo Eleru, Kintampo, Dutsen Kongba</td>
<td>-</td>
<td>Earliest use of pottery in West Africa, trend toward specialised subsistence patterns.</td>
</tr>
<tr>
<td>500 BC - AD1000</td>
<td>Iron Age (IA)</td>
<td>Koumbi Saleh, Niani, Jenne-Jeno, Tombouze, Gao, Sinthiou Bara, Igbo Ukwu</td>
<td>-</td>
<td>Development of iron smelting technology, Ghana Empire, urbanisation, trade expansion, emergence of political elites, construction of burial mounds (tumuli).</td>
</tr>
<tr>
<td>AD 1000 - 1591</td>
<td>Medieval Period</td>
<td>Niani, Timbuctu, Gao, Jenne, Kano, Tuareg, Kong, Begho</td>
<td>-</td>
<td>Mandé Empires (Ghana, Mali and Songhai), control of gold and iron resources, West African hero epics such as the story of Soundiata Ketia, increased trade, promotion of Islam, beginning of foreign in-migration to Guinea; Portuguese presence on Guinea’s coast.</td>
</tr>
<tr>
<td>AD 1591 - 1895</td>
<td>Post-Medieval Period</td>
<td>Goree Island, Fouta Djalon</td>
<td>-</td>
<td>European disputes over land and control of West African trade market, slave trade, Fulani empire, Wassoulou Empire, many foreign ethnic groups settle in Guinea.</td>
</tr>
<tr>
<td>AD 1878 - 1898</td>
<td>Pre-Colonial</td>
<td>Kérouané</td>
<td>-</td>
<td>Wassoulou Empire: resistance of French invasion.</td>
</tr>
</tbody>
</table>
### 14.3.2 Tangible Cultural Heritage Baseline

#### 14.3.2.1 Cultural Heritage Sites

A total of 26 sites have been identified in the port study area; 19 are ACH sites; six are LCH sites; and one site has both ACH and LCH components. A full list of the sites identified in the port area is presented in Annex 14D: Inventory of Known Cultural Heritage Sites in the Port Area. The inventory includes information on the type of site and the importance rating of the site. The local users of some of the recorded LCH sites have requested that the locations of these sensitive sites be kept confidential. For this reason, although all known sites are listed in the Annex 14D inventory, the coordinates of confidential cultural heritage sites (labelled CCH-#) will not be published anywhere in this assessment. The locations of all recorded cultural heritage sites are mapped in Figure 14.1 and shown in greater detail in Annex 14B: Maps of Archaeological Potential and Known Sites, with the exception of the confidential cultural heritage sites, which will not be mapped to maintain the Project’s commitment to confidentiality. The maps also do not include mosques (or *massidi*) among the cultural heritage sites because, with few exceptions, every village in the area has at least one mosque. It is likely that many more sites than those identified are present within the study area.

The identified sites include:

- **ACH Sites:**
  - potential prehistoric settlement mounds; and
  - historic sites.

- **LCH Sites:**
  - village and family cemeteries;
  - legendary sites;
  - residences of genies; and
  - sacrifice sites.

The importance levels of the majority of the sites in the port area are unknown. Only seven of the sites, those identified by field investigation, have been evaluated based on importance and given a rating. Following common heritage management practice, unevaluated sites are presumed to be non-replicable and thus of high value, pending further investigation. The seven confidential cultural heritage sites (CCH-#) were identified during field visits and community consultation. These have been evaluated for importance based on the criteria described previously in Section 14.2.4. As stated previously, in order to respect the wishes of local informers, confidential sites will not be mapped nor will their coordinates be published in this report.

Although none of the sites identified by the port baseline desktop and field analysis pre-date the 19th century, it is highly probable that archaeological sites of much greater antiquity exist within the study area. The proximity of the port to northern Sierra Leone, where Iron Age towns built of raised earthen walls and numerous Late Stone Age rock shelters are known to exist makes the study area a likely place for both Iron Age settlements dating between 500 BC and AD 1000 and Late Stone Age occupations dating between 30 000 and 500 BC. In Sierra Leone near the Guinean border, for example, a large fort constructed of stone

measuring 1.5 metres high, 25 metres across and dating to the pre-colonial period was recorded by archaeologist Matthew Hill in 1968. Hill also recorded some 100 other archaeological sites within the Lei Chiefdom close to the Guinean border \(^{(1)}\). Fifteen possible Iron Age sites have been identified in the port area though an expedient satellite remote sensing analysis. These 15 potential cultural heritage sites (PCH-#) share common settlement patterns with the ancient capital of Medieval Mali at Niani, located in northern Guinea near the Malian border. The archaeological excavation at the ancient site of Niani in the 1970’s by the Polish archaeologist W. Filipowiak uncovered an expansive urban settlement dating back to the first millennium AD \(^{(2)}\). The possible sites identified in the port area share some of the features found at Niani, such as a large central mound surrounded by agricultural floodplains.

All known non-confidential cultural heritage sites, including potential cultural heritage sites in the study area are mapped in Figure 14.1.


Figure 14.1

Sites de patrimoine culturel et zones à potentiel archéologique élevé dans la région du port / Cultural Heritage Sites and Areas of High Archaeological Potential in the Port Area

Projection: WGS 1984 UTM Zone 22N

Date: 18/09/2012  Vérifié par: AM
Projet: 0131299

Dessiné par: WB  Approuvé par: KR
Echelle: Comme Barre d'échelle
14.3.2.2  Areas of High Archaeological Potential

As noted previously, since undiscovered archaeological sites are likely to be present in the Project area, archaeological modelling has been used to identify Areas of High Archaeological Potential (AHAPs) where additional finds are most likely to occur. Sites are most likely to include ancient Iron Age and Medieval settlements, found across West Africa. The study area also contains several former slave-driver centres, in particular the village of Bassia \(^{(1)}\), in the Allassoyah Sub-Prefecture at the northern limit of the proposed port. Bassia is a major Moria village, settled in the 18\(^{th}\) century \(^{(2)}\). The former French colonial trading city of Benty, located 20 km to the South, likely served as an exit point for the slave trade across the Atlantic during its early history. By the mid-19\(^{th}\) century, however, France had outlawed such activities and Benty became a commercial port exporting goods and foodstuffs. No evidence of colonial architecture or underwater cultural heritage resources has been identified in the current Simandou Port area.

For the port area, the model identified seven different areas of high archaeological potential of varying sizes. Because these areas consisted of the densest groupings of high and medium interest blocks, they are all considered to be high value resources for the assessment. These are listed in Table 14.4 and also illustrated in Figures 14.2 and 14.3, and mapped in greater detail in Annex 14B: Maps of Archaeological Potential and Known Sites. As previously mentioned, underwater areas of high archaeological potential were not included in the model. A detailed explanation of the AHAP modelling effort is presented in Annex 14A: Description of Simandou Archaeological Potential Model.

Table 14.4  Inventory of Areas of High Archaeological Potential in the Port Area

<table>
<thead>
<tr>
<th>ID #</th>
<th>Value</th>
<th>Location (UTM)</th>
<th>Overlapped by Port footprint?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(H,M,L,N) (^{(2)})</td>
<td>E</td>
</tr>
<tr>
<td>PA-1</td>
<td>3.40 sq km</td>
<td>H</td>
<td>25908</td>
</tr>
<tr>
<td>PA-2</td>
<td>4.42 sq km</td>
<td>H</td>
<td>24379</td>
</tr>
<tr>
<td>PA-3</td>
<td>4.10 sq km</td>
<td>H</td>
<td>21141</td>
</tr>
<tr>
<td>PA-4</td>
<td>3.56 sq km</td>
<td>H</td>
<td>20932</td>
</tr>
<tr>
<td>PA-5</td>
<td>3.40 sq km</td>
<td>H</td>
<td>16615</td>
</tr>
<tr>
<td>PA-6</td>
<td>3.30 sq km</td>
<td>H</td>
<td>16508</td>
</tr>
<tr>
<td>PA-7</td>
<td>2.34 sq km</td>
<td>H</td>
<td>13855</td>
</tr>
</tbody>
</table>

Notes:
\(^{(1)}\) Coordinates provided in WGS 84 UTM 29 North.
\(^{(2)}\) Value is (H) high, (M) medium, (L) low, (N) not significant. In the absence of further investigation, all areas of high archaeological potential are assumed to contain non-replicable cultural resources (High value).

To supplement the AHAP model, identification of high potential areas also included an analysis of satellite imagery, which revealed 15 possible pre-colonial archaeological sites, listed in Table 14.5. These potential sites appear as mounds in the satellite images. Nearly all of the possible sites identified in the satellite image analysis fall within blocks of high or medium archaeological interest as identified by the Simandou archaeological model (Annex 14A: Description of Simandou Archaeological Potential Model). The 15 possible sites are shown in Figure 14.2. Figure 14.3 shows a closer view of three of these possible sites on a satellite image of the port area. Both figures illustrate the correlation between the potential cultural heritage sites identified and the Areas of Moderate and High Archaeological Interest indicated by the Simandou Archaeological Model. None of the potential archaeological sites are overlapped by the port footprint, although PCH-8 has already been disturbed by the development of the MOF.

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\(^{(1)}\) Volume 1 – Final Report. Screening Study: Railway Corridor and Port Sites Simandou Project. SNC Lavalin (December 2007).
Table 14.5 Inventory of Areas of Potential Cultural Heritage Sites in the Port Area

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Nearest Village</th>
<th>Site Description</th>
<th>Value</th>
<th>Location (UTM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCH-1</td>
<td>Boléma</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>14788</td>
</tr>
<tr>
<td>PCH-2</td>
<td>Friyah</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>14962</td>
</tr>
<tr>
<td>PCH-3</td>
<td>Friyah</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>14329</td>
</tr>
<tr>
<td>PCH-4</td>
<td>Sini</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>18674</td>
</tr>
<tr>
<td>PCH-5</td>
<td>Sini</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>18670</td>
</tr>
<tr>
<td>PCH-6</td>
<td>Sini</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>18553</td>
</tr>
<tr>
<td>PCH-7</td>
<td>Sini</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>18993</td>
</tr>
<tr>
<td>PCH-8</td>
<td>Fandiema</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>19057</td>
</tr>
<tr>
<td>PCH-9</td>
<td>Maligya</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>20077</td>
</tr>
<tr>
<td>PCH-10</td>
<td>Seriya</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>15444</td>
</tr>
<tr>
<td>PCH-11</td>
<td>Makayah</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>15831</td>
</tr>
<tr>
<td>PCH-12</td>
<td>Kondebounyi</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>21790</td>
</tr>
<tr>
<td>PCH-13</td>
<td>Kondebounyi</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>21967</td>
</tr>
<tr>
<td>PCH-14</td>
<td>Kondebounyi</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>21617</td>
</tr>
<tr>
<td>PCH-15</td>
<td>Senguelen</td>
<td>Raised area in floodplain - potential prehistoric settlement mound</td>
<td>H</td>
<td>22105</td>
</tr>
</tbody>
</table>

Notes:
[1] Coordinates provided in WGS 84 UTM 29 North.
[2] Value is (H) high, (M) medium, (L) low, (N) not significant. In the absence of further investigation, all possible archaeological sites are assumed to contain non-replicable cultural resources (High value).
Sites de patrimoine culturel et zones d'intérêt archéologique élevé à moyen dans la région du port / Cultural Heritage Sites and Areas of High and Medium Archaeological Interest in the Port Area

Légende:
- Site de patrimoine culturel / Cultural Heritage Site
- Site potentiel de patrimoine culturel / Potential Cultural Heritage Site
- Zone archéologique d'intérêt moyen / Area of Medium Archaeological Interest
- Zone archéologique d'intérêt élevé / Area of High Archaeological Interest
- Infrastructures portuaires / Port infrastructure
- Canal de dragage / Dredging Channel
- Tracé indicatif de la voie ferrée / Indicative Rail Alignment
- Dépôt terminus (indicatif) / Railroad Yard (indicative)

Agglomération / Settlement
- Chef-lieu de préfecture / Prefecture Chief Town
- Chef-lieu de sous-préfecture / Sub-Prefecture Chief Town
- Village / Village
- Route principale / Primary Road
- Route secondaire / Secondary Road
- Route tertiaire / Tertiary Route

Échelle: Comme Barre d'échelle

Date: 18/09/2012

Imprimé par WB
Approuvé par KR
Échelle: Comme Barre d'échelle

Figure 14.2

RioTinto

WGS 1984 UTM Zone

0 5
kilomètres

Senegal
Guinea
Guinea-Bissau
Sierra Leone
Liberia
Guinea
Mali
Sierra Leone
Liberia

Verifié par: AM
Project: 0131299
Sites potentiels de patrimoine culturel
PCH-12, PCH-13 et PCH-14 / Potential Cultural Heritage Sites
PCH-12, PCH-13 and PCH-14
14.3.3 Intangible Cultural Heritage Baseline

14.3.3.1 Cultural Patterns in Guinea

Guinea’s intangible cultural heritage is best understood within the context the county’s traditional tribal composition which has its origins in the complex and dynamic colonial and pre-colonial history of the region. Although the relevance of tribes has changed throughout the post-colonial period, tribal affiliation has an enduring character that includes a definable but dynamic geographic distribution of the present tribally-based ethnic groups. Of Guinea’s two dozen traditional tribal groups, three predominate among the present national population of over 10 million.

- **Peul** constitute approximately 40% of Guinea’s population. Their primary geographic location is Fouta-Djalon region. They are herders and farmers and speak a Niger-Congo language called Pular, having moved into the central part of Guinea approximately 200 years ago. The Peul are nearly all Muslims but maintain many traditional beliefs that are not a part of mainstream Islam.

- **Malinké (also Maninka)** and related Mandé groups form 30% of the population and are located primarily in Upper Guinea in the towns of Kankan, Sigui, Kouroussa and Mandiana. They are Muslim farmers and herders that trace their origins to the late Medieval Mali Empire, a historically significant state that based its success on control of the gold trade with North Africa and the Mediterranean.

- **Soussou (also Susu or Sosoxui), another Mandé sub-group,** make up some 20% of Guinea’s population and are located primarily in Conakry, Forécariah and Kindia. The Soussou, more than other traditional ethnic groups, tend to peacefully incorporate other ethnic groups by intermarriage and other means, a process which both reflects and ensures their continuing significant role in the coastal region of Guinea. Although several other ethnic groups reside in the coastal area, the Soussou language operates as a *lingua franca* of the coastal region. As with the other major ethnic groups of Guinea, the Soussou are Muslims.

Many other smaller ethnic or tribal groups exist throughout Guinea and in the Project area, accounting for the remaining 10% of the country’s population. These small groups tend to be more isolated and conservative, having resisted assimilation into the large groups, and they remain more faithful to traditional African religious practice. Within the ethnic groups of Guinea, especially within the smaller groups, there is a clan structure based on lineage and tribal agreements. Specific subgroups may be associated with a particular natural entity such as forest, a particular animal, or geography such as mountain or other physical feature. Villages, the predominant settlement type in Guinea, are typically associated with a particular dominant tribal group and a founding clan. Some of the villages in the area are hundreds of years old.

Before the establishment of an independent Guinean state from the former French Guinea, tribal groupings were the basis of traditional governance. Although it is frequently said that the French influenced the composition and even the definition of tribal groups during the colonial period (1) there is no doubt that the tribes were the largest traditional units of independent social and political action in the territory of Guinea. They vied for control of land and resources by both peaceful and military means, and they developed a kind of symbiosis with one another involving established geographic ranges and specialisation in agricultural, craft and profession, and with distinguishing languages and cultures. The tribal structure knitted together communities over broad geographic areas and developed distinctive integrating cultural and religious patterns as well. Historically, tribal groups such as the Peul united to form small pre-colonial states. Today with the existence of Guinea’s central government and the broad national acceptance of Islam, the Peul, Soussou and others are considered to be ethnic groups rather than tribes.

Religion and traditional belief are also an essential part of Guinean culture and serve both to unify and distinguish local groups. According to oral traditions, most of Guinea’s population, including the three main

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(1) This is a point that is commonly made by anthropologists and other students of post-colonial traditional societies. The assertion is that colonial powers, in search of legitimating local partners for colonial administration, often influenced and even created tribal groupings through their patronage. Such groupings, so the argument goes, were then often erroneously interpreted by colonial-period anthropologists as being authentic pre-colonial social structures.
ethnic groups described, has been Muslim since before their arrival in Guinea. Local oral history of the project area town of Kérouané, however, refers to Samory Touré’s forced conversion of the local population to Islam as late as the 1880s. There is also ample evidence of traditional non-Islamic religious practice and belief from the colonial period into the present. Islam therefore is a unifying national religion from a national perspective while tribally distinct forms of animistic and magical belief tend to distinguish local ethnic groups. The Guinean people, including residents of the port study area, practice a religious dualism where both belief systems operate simultaneously.

In traditional Guinean belief, some woodlands are perceived as secret settings related to specific rituals and festivities. One common tradition is of the initiation rituals into secret societies, a tradition that spread over large parts of the country and beyond (1). Often mentioned are the Poro and Sande types of secret societies into which either men (Poro) or women (Sande) are initiated. In former times, the political and economic role of these societies knit together culturally diversified and mobile groups. These societies were also crucial for the organisation of local political authority. In addition, the Poro and Sande institutions have engaged in education and traditional medical treatment. An important dimension of the secret societies is related to intergenerational relations, as secret knowledge separated initiated elders from youth. Thus, the forests, in contrast to the settlements, were the areas of greatest secrecy, privacy and mystery. Through initiations, each younger generation was invited into this world. Initiation has traditionally intensified respect for the elders as a result of their perceived knowledge and mystical power. The elders, in turn, maintained the generational barriers of knowledge to protect their social control. Secrecy can be a political strategy, employed within the community and in the interrelations with external groups. As mentioned previously, initiation rituals also have an integrative character. External groups or individuals could join with the host society through the act of initiating the children of mixed marriages (stranger-host marriages) into the host’s initiation society. Poro and Sande also define identity – or affiliation and belonging – within different Guinean ethnic groups. The secret societies also controlled female initiation rituals, part of the female rites of passage and still a wide-spread practice in contemporary Guinea.

One of the major influences on youth and the entire society was the demystification campaign, which Touré implemented from around 1959 to 1961. Followers of the demystification campaign were opposed to local practices such as secret societies and beliefs. They asserted that traditional customs such as the consumption of alcohol, masks, ritual elders, and secret societies were keeping Africa behind in its development. In the course of the campaign, local militants forcibly collected hidden masks and fetishes related to the secret societies and revealed them to women and uninitiated youth. This was intended to cause changes in local intergenerational and gender relations. Young men perceived the campaign as providing quicker access to growing social, economic, political and cultural opportunities. For young girls and women demystification also had an impact. They saw for the first time specific ritual figures and music instruments that had been the basis for asymmetrical age and gender relations. The campaign was in the end unsuccessful in fully breaking down traditional practice and belief. Short-term initiation camps were still allowed during school vacations and the local beliefs and practices were not entirely banned. Finally, the campaign shifted and became much more of an educational effort, relying particularly on state media like radio and national theatre. The latter was designed to replace ritual initiations and was used by the national government for the purpose of creating a national folklore composed of a collection of masks and objects from different regions.

Now, many Guineans perceive these relatively new performances as quite typical for their traditional culture. However, dance is not only related to the former national unification efforts. Traditional dances are also related to the diverse ethnic groups and are most often inspired by nature. Almost all of these dances are, or at least originally were, connected to initiation and rites-of-passage ceremonies or other similar occasions. Other documented rituals in Guinea are related to agriculture, especially rice-growing.

Traditional religion and animistic beliefs and practices are not simply an aspect of cultural conservatism; they are a part of an ongoing process of by which Guineans maintain social cohesion and cope with social and political challenges at a local and national level. These traditions have in the past, and most probably will serve in the future, as mechanisms of local integration and as validation for claims to specific resources

(1) D’Azevedo (1962) describes the area within which secret societies were found as the “Central West Atlantic Region”.

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including land and other bases of livelihood. Therefore, the treatment of traditional beliefs and practices by the Project needs to consider such traditional practice not only as traditions to be respected and in some cases preserved, but also as subjects that are open to transparent discussion and decision making in local communities.

14.3.3.2 Cultural Patterns in the Study Area

The port study area measures 1,256 km². Roughly 260 km² of the area covers dry land; the rest extends out into the Atlantic Ocean. The port area is located in southern Guinea, relatively close to the border of Sierra Leone, only 26 km to the South. It is also located around 20 km north of the well-known French colonial trading port at Benty. Unlike Benty, the port site was not heavily used during the colonial period. The port’s geographic region is known as Lower Guinea, located within the Forécariah prefecture. The area is comprised of a coastal ecology of mangroves, floodplains and small patches of forest. The port area includes less ecological and topographic diversity than either the rail or mine areas. Moreover, while diverse ethnic compositions and settlement histories exist in the port area, the situation may be somewhat less complex than either the rail or mine areas, due to the port’s smaller geographical area. Unlike the mine and the eastern portion of the rail, the religious situation at the port suggests a population with more Islamic cultural affiliations. While indigenous belief systems still persist in the port area, it is less prevalent in daily life for many, but not all, of the local population in Lower Guinea than those populations living further inland.

Today, the main ethnic group of the port area is the Soussou, who are also the most populous group for Lower Guinea in general and have been for the past 40 years. An earlier occupation of the port area is known to have occurred in the 18th century by the Maninkomary group. The Islamic Peul arrived later, at the end of the 19th century. Other less numerous ethnic groups in the port area today are: Baga, Téménè, Maninka, Peul, Kissi, Toma, Wolof and Mèni. These ethnic groups share a common ideology through their adherence to Islam, but also maintain distinct languages and cultures. Soussou is the most widely spoken language in the area.

The Baga ethnic group of coastal Guinea is the most well-known internationally for its colourful ritual dances with D’mba masks. These masks have been purchased by collectors or collected by anthropologists over the years; many are now displayed internationally in major museums. The D’mba represents the mother of fertility, protector of pregnant women, and presides over all agricultural ceremonies. The local Baga suggest that the D’mba is a central component to their traditional cultural worldview, which is largely under the influence of Islam. A local saying is: “D’mba is the joy of living; it is the promise of abundant harvest.” In recent years, the D’mba has become a national symbol of Guinea.

The port area is the least researched region of the Project in terms of pre-colonial cultural heritage. The presence of human populations in the port area that predate the 18th century have not yet been confirmed. This is likely due to the limited research conducted into Guinea’s more ancient history, both historically and archaeologically. Linguistically, the Baga language may be the oldest in southern coastal Guinea. Specialists in West African linguistics suggest the date for the initial settlement of the Baga along the Guinean coast as early as the first millennium AD. It is known in general terms that the Malinké group, referred to locally as the Konianké who are traditionally traders and pastoralists, came to Guinea as early as the 13th century. They are known to originate from regions of the Medieval Malian Empire to the North, outside of the present boundaries of Guinea. On arrival, they intermarried with the local ethnic groups already living in the area, a cultural practice preserved in Malian oral histories. They were the first Islamic group in the area and have gained a prestige and local authority that generally exceeds that of other groups. Their schedule of festivals includes both the Muslim lunar calendar and holidays and the solar calendar with its agriculturally-based festivals that mark the beginning of the rainy season and planting in April or May, and the Dougou-so harvest festival in October. Thus, it is highly likely that populations existed in the port area well before the 18th century.

Throughout the port area, agriculture is the main form of livelihood, including rice, peanut and maize cultivation in irrigated wetlands. The cultivation of rice not only functions as a means of subsistence, but also as an important cultural activity. In agrarian societies, the connection between crops and the ancestors is an essential part of community life. In the port area, rice plays an important role in community rituals and ceremonies and is often used as part of ritual sacrifices to ancestors. Other important economic activities
include fishing, livestock breeding, salt production and market gardening. Fishing is practiced mostly by households who live close to the sea and makes up approximately 19% of the economic activity in the Kaback and Maférynya road area, and 15% (1) of the economic activity in Kakossa (2). Other aquatic resources are also important to the economy in the port area. Shellfish, particularly mangrove oysters, serve as a reserve food source in times of drought (3). In addition to the role that fishing plays as a form of livelihood, for those communities close to the sea, fishing plays an important cultural role. In traditional religious beliefs, deities are important figures in orchestrating activities such as fishing. Communities often establish traditions tied to water and the animals that live within the rivers and the sea. Areas of rocky outcrop near bodies of water may likely be important areas to local traditions surrounding fishing activity. The population is relatively poor, yet less so when compared to those living further inland. The port area has been heavily modified from centuries of agricultural activity and represents a cultural landscape of indigenous agricultural practices. Unlike in some other parts of Guinea, the port area has yet to see large scale development of western farming techniques.

Villages have a traditional character with the founding clan drawing its moral authority from founding events that may have occurred hundreds of years earlier. Despite their often long histories, villages in the study area are also dynamic, often moving, growing or shrinking in response to a variety of factors including local inter-ethnic conflict, national political issues, fluctuation of resources, natural disasters and so on. The most common reason for the foundation of new villages is some type of social conflict.

Groups in the port area have traditionally drawn resources from their environment to support their material needs, although less so than groups further inland. The coastal regions tend to be more cosmopolitan and crafts and small jobs are also more prevalent in the port area than in the other two Project areas. These jobs include carpenters, masons, tailors, chauffeurs, mechanics and welders.

14.4 Assessment of Impacts

14.4.1 Types of Cultural Heritage Impacts

14.4.1.1 Overview

The assessment of cultural heritage impacts follows the overall impact assessment methodology of predicting the magnitude of impacts, evaluation of their significance and development of mitigation measures and identifying residual impact. Five types of impacts to cultural heritage were predicted, and these are shown in Table 14.6.

<table>
<thead>
<tr>
<th>Type of Heritage:</th>
<th>Cultural Heritage Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeological Cultural Heritage Sites</td>
<td>Tangible Cultural Heritage (Sites)</td>
</tr>
<tr>
<td>Living Cultural Heritage Sites</td>
<td>Intangible Cultural Heritage (Cultural Knowledge and Cultural Activity)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Impacts:</th>
<th>Applies to All Sites -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical disturbance or damage to site.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applies only to Terrestrial Sites -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruption of access to site.</td>
</tr>
<tr>
<td>Change in setting of site.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Impacts:</th>
<th>Physical disturbance or damage to site.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruption of access to site.</td>
<td></td>
</tr>
<tr>
<td>Change in setting of site.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Impacts:</th>
<th>Infringement of cultural norms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threats to cultural knowledge and activities.</td>
<td></td>
</tr>
</tbody>
</table>

(1) Social and Environmental Baseline Studies 2012.
(2) Social and Environmental Baseline Studies 2012.
(3) Social and Environmental Baseline Studies 2012.
### Cultural Heritage Impact

<table>
<thead>
<tr>
<th>Type of Heritage:</th>
<th>Tangible Cultural Heritage (Sites)</th>
<th>Intangible Cultural Heritage (Cultural Knowledge and Cultural Activity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeological Cultural Heritage Sites</td>
<td>Living Cultural Heritage Sites</td>
<td></td>
</tr>
</tbody>
</table>

#### Result of Impacts:

- **Applies to All Sites**:
  - Loss of cultural or scientific information.
  - Loss of potential future tourism benefits.

- **Applies only to Terrestrial Sites**:
  - Damage to national or local identity.
  - Negative sentiment towards and opposition to the Project.

- **Applies to All Sites**:
  - Loss of religious, spiritual or cultural activity.
  - Damage to national or local identity.
  - Negative sentiment towards and opposition to the Project.
  - Loss of potential future tourism benefits.

- **Negative sentiment and community opposition to the Project**.
- **Loss or cultural means for social cohesion and cooperation**.

#### 14.4.1.2 Physical Disturbance or Damage to Cultural Heritage Sites

Cultural heritage sites are fixed and discrete. Project impacts will come from direct physical disturbance or damage to the resources themselves. Disturbance can result directly from earth-moving activities, from vibration and dust from heavy vehicles and machinery, or damage resulting from a change in water flows. Physical impacts are also relevant to underwater cultural resources, particularly from dredging and other construction activities. The magnitude of this kind of impact is based on the percentage of the total site physically impacted by Project activities. This is the only impact applicable to underwater cultural heritage sites and the severity of the disturbance or damage.

#### 14.4.1.3 Disruption of Access to Cultural Heritage Sites

Project activities may disrupt access to cultural heritage sites, preventing their usage and limiting their value to site users, who may include local residents and visitors. The magnitude of this type of impact is measured by the duration and severity of the disruption of access and the potential for alternative access routes. An example of a low magnitude impact would be construction activities which temporarily restrict direct access, but do not completely block users from accessing a site. An example of a high magnitude impact would arise in a situation in which port operation acts as a barrier cutting off access to sites from the communities that use them or making access difficult or dangerous.

#### 14.4.1.4 Change in the Setting of Cultural Heritage Sites

Although cultural heritage sites are tangible resources, they may also have intangible value for local residents and visitors. The character and ambience of sites is often important in interpretations of their value and function. For example, the peace and tranquillity found in a mosque contributes to its value and function place of prayer and contemplation. Thus, changes to the setting in which sites are found may affect the function or value of the sites. These impacts can be caused by a variety of factors, including construction activities and the movement of vehicles, equipment and personnel which can cause noise, dust or aesthetic issues. Changes in the experience of LCH sites are important because of the intangible values that are often associated with them. For example, noise from heavy machinery might impact a mosque by interfering with its intended use.

Physical changes to the landscape can also alter natural site features or the general aesthetics of a site. An example of landscape change which could impact cultural heritage sites is if the Project caused the dewatering of a lake that was considered an important genie residence by local people. Changes to the natural features of a site could significantly impact the site’s perceived power, use and value.
The magnitude of this type of impact is measured by the duration and severity of the affect on the setting of the site. An example of a low magnitude impact would be the movement of vehicles around a sacred site which temporarily affects the site atmosphere, making it less likely to be visited by local people whilst vehicles are present. An example of a high magnitude impact would be permanent alteration of the landscape surrounding a sacred site, which results in the loss of its perceived value to local people and the end of its use as a sacred site.

14.4.1.5 Infringement of Cultural Norms

This type of impact includes Project activities which do not follow proper social or cultural protocol and may cause offence to local communities. These impacts will be inherently difficult to predict. Examples of impacts of this type would include undertaking community relations through improper channels or failing to conduct expected rituals. The project Community Team has engaged in local consultation with priority villages and other communities to identify traditional channels of communication and decision-making. These include traditional community elders, representatives of traditional hunters, members of male and female (Poro and Sande) societies, and others. Social and cultural norms are not as clearly definable as heritage site locations and boundaries. Expectations may be unspoken and highly situational, making impacts more difficult to predict in advance. Due to the nature of this kind of impact, the significance of these impacts cannot yet be predicted. However, the process of identifying potential impacts through community consultation has already begun in areas where early construction camps and the MOF are planned.

14.4.1.6 Threats to Cultural Knowledge and Activities

Traditional practice and knowledge serve to unite a community and to give it cohesion. Traditional dance, music, oral histories and stories, and common language are examples of intangible heritage that provide this type of internal cohesion for the communities in the port area. They represent an intangible resource that, once lost, would be hard to recover.

This impact encompasses Project activities that would directly threaten cultural knowledge or restrict traditional activities. This impact does not, however, include cultural shifts voluntarily adopted by Guinean people. Examples of impacts that endanger cultural knowledge would be religious conversion, linguistic change, or the abandonment of traditional dance and festivals. These could be caused by in-migration or changing employment that could reduce available time and opportunity for such activities.

As with the identification of and respect for traditional cultural norms and protocols, the identification of key cultural knowledge and activities is not a finite task. Due to the nature of this kind of impact, the significance of these impacts cannot yet be predicted.

14.4.2 Impacts on Tangible Cultural Heritage Resources

None of the 26 known cultural heritage sites identified in the port area are anticipated to incur direct physical impacts from Project activities. However, there are likely to be direct impacts on cultural heritage sites that have yet to be identified in the study area. It is almost certain that undiscovered terrestrial archaeological resources exist in the port area. Recorded prehistoric human settlements in the port area already demonstrate the area's long history of human occupation. Since no archaeological surveys have been conducted in the area, the probability is very high that additional unrecorded archaeological sites exist in the general study area. Any unknown terrestrial archaeological resources not identified prior to construction would be impacted by ground-disturbing activities and recorded as Chance Finds. Chance Finds are most likely to occur when ground-disturbing activities take place in areas of high archaeological potential (AHAPs). A total of 15 AHAPs have been identified by the baseline, one of which is intersected by the port. It is less certain whether underwater cultural resources (ie shipwrecks) exist within the port area, or if they exist, whether their state of preservation would be high enough to be of any scientific or cultural value. If these resources do exist, however, disturbance of the sea floor (through activities such as dredging) would cause impacts to them.

Sites and AHAPs anticipated to be impacted by the port are identified in Table 14.7, with an assessment of the significance of impact on each prior to mitigation.
Direct physical impacts on sites are not anticipated to occur at any sites in the port area. However, two confidential cultural heritage sites (CCH-36 and CCH-37) and one potential archaeological site (PCH-8) in the port study area are expected to have already been disturbed through the development of the MOF.

In addition, impacts will occur if potential unidentified archaeological sites (ACH category) are found in the port footprint area. Chance Finds are most likely to occur in the Area of High Archaeological Potential (AHAP) that intersects the port footprint (PA-3). Unidentified underwater archaeological sites may also exist in the port footprint area. The 3km-wide zone extending out from the shore along the coast has a higher likelihood of containing the remains of pre-18th century boats. The riparian areas in the port area have the highest potential to contain shipwrecks dating to the colonial period.

Disruption of site access is expected to impact one cultural heritage site, a village cemetery of reported high importance (CCH-31). Site access may be restricted temporarily during construction of the conveyor belt and other port facilities. Site access issues will be managed through pre-construction stakeholder identification and consultation.

Change in site setting (which may interfere with use, meaning or function of the site) is not a predicted impact at any of the known sites in the port area. Potential impacts to changes in site setting will be identified and managed through pre-construction stakeholder identification and consultation.

Prior to mitigation, direct physical impacts on sites in the construction corridor are not anticipated at any known sites, although two confidential cultural heritage sites (CCH-36 and CCH-37) and one potential site (PCH-8) will have already been impacted by development of the MOF. Changes to site setting which may interfere with use, meaning or function of the site are not predicted to impact any known sites. One site (CCH-31) is expected to experience minor and temporary disruption of site access, resulting in one potentially moderate impact.

The assessment predicts that as yet identified cultural heritage resources located in one Area of High Archaeological Potential (PA-3) would be impacted by the port as well. In the absence of field reconnaissance to verify the subsurface contents of this area, the assessment must assume that this area contains high importance archaeological resources. Without mitigation, the development of the port in the AHAP is anticipated to result in the risk of one potentially major impact to cultural heritage resources.

The precise significance of impacts cannot be confirmed, however, until both the value of the resource and the magnitude of the impact have been verified. The methodology for determining the significance of impacts can be found in this chapter in Section 14.2.7.
### Table 14.7 Significance of Potential Impacts to Cultural Heritage Resources

<table>
<thead>
<tr>
<th>Site Name/ Description</th>
<th>CH Code</th>
<th>Location (UTM)(^{[1]})</th>
<th>Site Type</th>
<th>Site Value (^{[2]})</th>
<th>Project Impact</th>
<th>Impact Magnitude (^{[3]})</th>
<th>Impact Significance (^{[4]})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village cemetery (gabourou yiré)</td>
<td>CCH-31</td>
<td>-</td>
<td>-</td>
<td>LCH</td>
<td>High</td>
<td>Possible temporary disruption of user access to site</td>
<td>Potentially Low</td>
</tr>
<tr>
<td>Area of High Archaeological Potential</td>
<td>PA-3</td>
<td>21141.30</td>
<td>1045322.7</td>
<td>Potential ACH</td>
<td>Potentially High</td>
<td>Portion of area physically impacted through development of port</td>
<td>Potentially Medium</td>
</tr>
<tr>
<td>Chance Finds that have not yet been identified</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Potential ACH</td>
<td>Potentially High</td>
<td>Loss of archaeological and historic resources through the development of the port and associated facilities and logistics (primarily through ground-disturbing Project activities)</td>
<td>Potentially High</td>
</tr>
<tr>
<td>Potential underwater cultural heritage sites that have not yet been identified</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Potential ACH</td>
<td>The presence of underwater cultural heritage is unconfirmed; value of resources, if they exist, may range from Not Significant to High</td>
<td>Loss of archaeological and historic resources through the development of the port and associated facilities and logistics (primarily through ground-disturbing Project activities)</td>
<td>Impact magnitudes may range from Not Significant to Critical, but are highly uncertain</td>
</tr>
</tbody>
</table>

Notes:

\(^{[1]}\) Coordinates provided in WGS 84 UTM 29 North. Coordinates for Confidential Cultural Heritage sites (CCH-#) will not be presented, as their locations are confidential information.

\(^{[2]}\) Value is High, Medium, Low, and Not Significant.

\(^{[3]}\) Impact magnitude expressed as High, Medium and Low. Criteria for determining impact magnitude presented in Table 14.2 in Section 14.2.7.

\(^{[4]}\) Criteria for determining impact significance are presented in Table 14.2 in Section 14.2.7.
14.4.3 Potential Impacts on Other Currently Unknown / Undiscovered Sites

The coastal setting of the port area would have been attractive in the past to pre-colonial and prehistoric populations for many of the same reasons it is an appealing landscape for modern populations. Flood agriculture and access to marine, mangrove and littoral resources are perhaps three of the most obvious reasons. Although it is uncertain whether underwater archaeological resources exist and would have preserved in the port area, the probability for terrestrial archaeological resources remains high. Moreover, it is proposed by numerous researchers that the early and indigenous domestication of a variety of African rice (Oryza glaberrima) occurred across multiple floodplains in West Africa. Coastal Guinea is considered a likely area for such early experiments in rice domestication (1). With this in mind, in addition to the sites and AHAPs identified in Table 14.6, it is likely that unidentified archaeological resources of high importance exist throughout the area. Further archaeological finds which may occur throughout the development site will result in impacts to cultural heritage. The significance of the impacts on undiscovered sites cannot be assessed at this stage as it will depend on the nature of each find and the degree of impact caused by the Project. However, because archaeological sites have been relatively unexplored and under-researched in Guinea, well-preserved sites uncovered during construction would be considered more important on average, thus the probability of major or even critical significant impacts exists and will require mitigation as described in Section 14.5.2.

The significance of impacts on unknown / undiscovered sites cannot be assessed at this stage. However, prior to mitigation, there is a possibility of impacts of up to critical significance on these resources.

14.4.4 Impacts on Intangible Cultural Heritage

The baseline section has identified a number of elements of traditional life in Guinea such as tribal affiliation, religion, traditional beliefs, dance, rituals, oral history, traditional crafts, and substance activities. Development of the Project will introduce a number of pressures on these aspects of intangible cultural heritage, and they are likely to change and be eroded over time. Although the Project will actively seek to protect and preserve the tangible sites and artefacts of Guinea’s past, it is not an objective to advocate either preservation of the traditional life-ways or their modernisation in Guinea. The Project considers some cultural change inevitable, but aims to ensure that any changes which occur are acceptable to local communities. It is not therefore considered appropriate to make a judgement on the direction of impact (i.e. whether it is beneficial or adverse) within this assessment, but it must be acknowledged that major impacts which may be perceived as positive by some and negative by others is likely to occur.

Major impacts (which may be perceived as either positive or negative) are anticipated on intangible cultural heritage.

14.5 Mitigation and Assessment of Residual Impacts

14.5.1 Overview

Mitigation and residual impacts on cultural heritage are considered in this section under the two main headings of:

- impacts on tangible cultural heritage including:
  - physical disturbance or damage to ACH sites;
  - physical disturbance or damage to LCH sites;

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• disruption of access to cultural heritage sites;
• change in setting of cultural heritage sites; and
• impacts on intangible cultural heritage.

In each case proposed mitigation measures are described and a summary of residual impacts is provided.

The overall approach to be followed will be set out in an update to the existing Cultural Heritage Management Plan (see Annex 14E: Simandou Project Cultural Heritage Management Plan) and implementation will be led by a specialist Simandou Cultural Heritage Working Group. The Cultural Heritage Management Plan describes the processes, procedures, and resources that will be used by the Simandou Project to ensure successful implementation of mitigation measures. The plan applies to all tangible cultural heritage found in the study area. Non-tangible cultural heritage will be addressed in the Plan, but protection of these resources with respect to immigration and social impacts will also be covered in the following plans and codes: the Project's Immigration Plan, Code of Conduct and the Social Action Plan.

The Simandou Cultural Heritage Working Group will direct investigations to be carried out prior to the start of construction works on the Project, oversee the Chance Finds Procedure and be responsible for consulting with the Guinean government on matters relating to sites and finds. This will include consultation on the overall programme and on all investigations and other actions. It will also advise on technical staffing and contracting.

14.5.2 Mitigation of Impacts on Tangible Cultural Heritage

14.5.2.1 Physical Disturbance or Damage to ACH Sites

Because of the limited amount of archaeological survey conducted in Guinea to date, the project approach to assessing potential archaeological impacts is based in part on a predictive model that identifies where archaeological sites are likely to be found. So far the model has been used to identify likely archaeological settlement sites in the port area. The next step in the process will involve preconstruction field research in target areas that will be affected by port construction and operations. In this pre-construction archaeological work, described below, the model will be both tested and refined as a basis for further use in identifying and managing archaeological impacts.

Physical impacts on terrestrial ACH will be mitigated as follows.

- Surveys to be conducted during the detailed design planning will focus on defining the boundaries and assessing the importance of known ACH sites, as well as investigating the Potential Cultural Heritage site (PCH-8) and four Areas of High Archaeological Potential within the port footprint. Additional survey outside the AHAPs will be conducted to test the predictive model and refine its accuracy as a basis for further use in identifying and managing archaeological impacts. The work will be conducted according to best practice standards, using a sampling strategy guided by the refined model and considering other types of specialised sites not targeted by the model. Activities will include non-intrusive walkover surveys, non-intrusive ground-based geophysical survey techniques, and trial intrusive investigation using hand tools or mechanical equipment (shovel, screen and auger) where appropriate. In applicable situations, the reconnaissance will be assisted by analysis of high-resolution satellite imagery.

- In cases where cultural heritage sites of high importance identified through pre-construction surveys, the final design of the port layout will be refined to avoid impacts where feasible. One cultural heritage site (PCH-15) has already been avoided in the optimisation process. When identified sites are avoided but still lie in close proximity to ground disturbing Project activities, they will be marked with appropriate protective flagging to assure that accidental encroachment during construction does not occur.

- Where archaeological sites cannot be avoided (ie all or part of the site will be lost or damaged) non-intrusive and intrusive investigations will be carried out to determine site boundaries, stratigraphy, and artefact content, in order to evaluate the site’s importance level and whether it would be considered non-replicable heritage. If a site is deemed non-replicable cultural heritage under the criteria of PS8, it will
require special preservation efforts and could only be removed under extraordinary circumstances. The conditions of removal of non-replicable cultural heritage are listed in Table 14.1 in Section 14.2.3.1 of this chapter. Future preconstruction surveys will verify whether or not cultural heritage sites in the port study area qualify as non-replicable cultural heritage. No critical cultural heritage sites, as defined by PS8, identified in the study area to date. The Cultural Heritage Management Plan for Port will address impacts on the cultural heritage on the small rock impacted by the MOF project.

- An appropriate strategy will then be decided by the Simandou Cultural Heritage Working Group in consultation with the relevant government authorities. Depending on the findings of the investigations and decision by the Guinean authorities, mitigation may include intensive investigation and site rescue. In these cases, the site will be studied in situ, and archaeological materials may be removed for long-term museum curation. Detailed technical and photographic records of the work will be kept and technical reports prepared to international standards. More accessible information suitable for public education will be prepared and made available as well. The Republic of Guinea will be the ultimate owner and steward of all recovered archaeological resources.

- When impacts are unavoidable to replicable ACH sites, special construction techniques such as site burial, use of hand tools as opposed to mechanised equipment, and reduced working areas will be adopted where feasible to minimise the impact.

- During construction, a Chance Finds Procedure complying with international best practice will be operated to address any finds encountered during ground disturbing activities. The Chance Finds Procedure will include:
  
  - training relevant staff and contractors in recognition, handling, and response to archaeological chance finds;
  
  - deploying archaeologists to monitor all construction fronts to guide the recognition of and response to archaeological finds made during ground disturbance;
  
  - establishing protocols for responding to Chance Finds, including cessation of work for finds deemed significant by an archaeologist and notification of Simandou Cultural Heritage Working Group;
  
  - use of expedited procedures for evaluation and treatment of significant chance finds as defined in steps 2-6 above in order to limit impacts while minimising construction delays; and
  
  - keeping of an auditable record of monitoring activities.

The Chance Finds Procedure will continue during operation of the port when new ground disturbance is required for the development of new infrastructure or for maintenance activities.

Physical impacts on underwater ACH will be mitigated as follows.

- An appropriately skilled nautical archaeologist will do a desk review of the findings of the “hazard survey”, that the port contractor will conduct prior to the start of offshore activities. This will probably be side-scan sonar data as that is normally part of advance work for offshore dredging and construction.

- Anomalies identified in the review that are suspected to be wrecks would be subject to more direct investigations, conducted by a nautical archaeologist along with the contractor team that would be investigating any hazards they identified with the “hazard survey”. The archaeologist would utilise the direct methods used by the hazard team in this follow-up investigation.

- Shipwrecks confirmed by this method would be avoided if possible, but not removed scientifically unless considered necessary due to national legislation or international standards.

Mitigation of potential archaeological impacts of the Simandou Project in accordance with the strategy described above will contribute substantially to the understanding of Guinea’s past. This contribution to
Guinean archaeology and history will be all the more valuable because so little archaeological work has been done in the country to date. To support protection of cultural heritage, the Project will also work through the Simandou Cultural Heritage Working Group to build capacity for heritage management as a function of government in Guinea. The Project will seek opportunities to invest in Guinean heritage such as:

- training government staff and local university students in the practice of managing and preserving cultural heritage;
- creating museum exhibitions to share the discoveries and findings of the Project’s heritage protection programme with the public;
- funding scientific studies and publications based on Simandou Project finds; and
- continuing thematic studies on the ethnographic and archaeological dimensions of traditional iron working in Guinea.

Furthermore, if a major underwater cultural heritage site were to be identified and rescued by the Project, the Project’s contribution to nautical history would produce significant positive impacts. In addition, the Project would certainly enjoy reputational advantages, particularly in light of the public interest and international press attention devoted to the deep water Roman wrecks of Corfu for a contemporary pipeline project.

These investments will enhance the Project’s contribution to Guinean cultural heritage and the Guinean public’s appreciation of that heritage.

14.5.2.2 Physical Disturbance or Damage to LCH Sites

A project-wide site reconnaissance and local consultation process is now being undertaken and will include identification of additional LCH sites in the port area. The effort will add detail to studies initially conducted for the port social baseline. Specific additional LCH and ACH topics to be investigated in the port areas include: 1) identification of new sites LCH sites within the port or its logistic facilities; 2) establishing additional details about traditional uses of LCH sites that will assist in the Community Team’s management of potential impacts; 3) identification of archaeological sites that may be known to local communities in the port area.

It is likely that many LCH sites in the Project area have not have yet been identified by the Project. Pre-construction mitigation will rely on continued community engagement to identify additional unknown sites within the Project area of influence. Community engagement will focus not only on widely known LCH sites, but will also engage sensitive groups such as religious minorities, women’s groups or secret societies, who many not wish to share the exact location of their sacred sites. A stakeholder engagement strategy will be implemented with such groups in order to avoid LCH sites while maintaining the confidentiality of their location. As a part of this strategy, coordinates of such sites are established on site walks with stakeholders. The locations and details of the sites are kept confidential within the Community Team. Mitigation of potentially impacted LCH sites will involve stakeholder identification and establishment of a stakeholder engagement plan to evaluate site use, boundaries and importance, identify potential impacts, and develop mitigation strategies with affected site users. Confidential LCH sites will be designated for avoidance using procedures that assure that inappropriate information is not revealed.

The strategy for LCH will also include the following measures listed below.

- Consultation with affected groups (local community, women’s groups, men’s groups, traditional authority figures, different religious and ethnic groups) conducted by the Community Team will determine significance, function, access and use of the site. The Community Team, working in conjunction with the Simandou Cultural Heritage Working Group, will engage affected groups to develop appropriate mitigation and negotiate relocation or compensation if necessary, and in accordance with the guidance outlined in PS8. Consultation with affected groups and agreements reached between users and the Project will be formally documented.
• Where LCH resources will be lost or damaged by Project activities, the Project will consult with and gain the consent of affected communities and site users before proceeding with any non-avoidance mitigation. If possible and acceptable to affected people, natural and man-made objects and moveable spiritual sites will be relocated to avoid impacts, using approaches for moving and placing objects that are sensitive to local wishes.

• Where relocation is not possible, or where displacement of a feature will result in the loss of some of its cultural value or functionality, consideration will also be given to the need for compensation. Compensation will be handled in good faith negotiations between affected communities and the Community Team. The Project Resettlement and Compensation Framework, as described in Chapter 20: Land Use and Livelihoods, will also include provision for displacement of features of cultural importance.

Mitigation of physical impacts to both ACH and LCH will be undertaken as follows.

• Sites near the port footprint will be clearly marked and if necessary fenced to prevent encroachment by Project personnel and activities and to protect them from accidental disturbance. All project personnel working in the area will be made aware of their importance and any actions needed to avoid impacts. Sites will be inspected regularly to confirm no inadvertent or unreported damage has occurred and to identify any risk of impact from the Project.

• If a cultural heritage site is damaged, this will be treated as an incident and managed in accordance with the approved incident management procedures established for the Project and in consultation with the users of the site, if any. The Cultural Heritage Management Plan (CHMP) will address procedures for cultural heritage-related incidents. If any grievance should arise in this regard, this will be managed in accordance with the approved Grievance Procedure established for the Project (see Annex 1G: Simandou Project Grievance Procedure). Where features of importance for LCH or well-known ACH are lost or damaged, the mitigation strategy will develop under the direction of the Cultural Heritage Working Group and in consultation with affected people.

14.5.2.3 Disruption of Access to Cultural Heritage Sites

Mitigation of potential disruption of access to LCH or known ACH sites will be undertaken as follows.

• The Project will consult with site users to understand site access issues, stakeholder concerns, and alternative mitigation options, prior to construction.

• Paths, roads, and other access routes identified through local informants will be marked and preserved wherever practicable.

• Site access will only be restricted by the Project after consultation and agreement with the affected communities is reached. If access to a cultural heritage site is restricted by Project activities or facilities, the Communities Team and Cultural Heritage Working Group will continue consultation with the affected people to discuss mitigation options. Mitigation measures to be considered and negotiated include: alternate access to the site, relocation the site or the essential site features, and compensation in accordance with the Project Resettlement and Compensation Framework, where appropriate.

14.5.2.4 Change in Settings of Cultural Heritage Sites

Mitigation of changes in settings of LCH or known ACH sites will be undertaken as follows.

• Measures will be undertaken to minimise disturbance from noise, dust and the movement of equipment, vehicles and personnel through adoption of good practice in construction and operating methods (see Chapter 8: Noise and Vibration, and Chapter 9: Air Quality).

• Consideration will be given to mitigating impacts on views of and from LCH sites, including screening by landscape planting or earthworks (see Chapter 15: Landscape).
• The Project Employee Code of Conduct will include language prohibiting employee interference with LCH and ACH sites.

• If the setting of a cultural heritage site is affected by Project activities to the extent that it would lose its original function or cease to be used, the Project will consult with the affected community to arrive at agreed upon mitigation options. The mitigation hierarchy that will be considered under this circumstance is as follows: first avoidance, then relocation, then replacement, and lastly compensation if all other mitigation strategies prove impracticable.

14.5.2.5 Residual Impacts on Tangible Cultural Heritage

Wherever a cultural heritage site can be physically avoided by design or planning of construction activity, this approach will be adopted. This will apply to sites already known, sites discovered through pre-construction surveys, and finds encountered through the chance finds procedure. Project avoidance will leave cultural heritage resources intact, with setting unchanged and accessible to local people, cultural and scientific researchers, and people who may visit the Project area and its surrounding region in the future, and in these cases impacts will be not significant.

When this is not possible, residual impacts to cultural heritage will occur either as a result of partial or complete destruction of the resource or as a result of its rescue and removal. Rescue and removal will reduce the impact but loss of value will occur as removal cannot achieve the same level of preservation as avoidance. Despite the Chance Finds Procedure, archaeological chance finds are likely to result in at least partial destruction of resources due to unavoidable incidents or failure to recognise chance finds in a timely manner. It is not possible to predict the level of impact at this time but the aim will be to prevent impacts being more than moderate in significance. This will, however, depend on what is found and when, and the extent to which it can be protected or preserved by rescue.

Tangible cultural heritage sites may also be affected by changes in their settings or restriction of site access as a result of presence of the port. For LCH sites, stakeholder identification and consultation conducted prior to finalisation of the port design will enable an understanding of locations, boundaries, use, access, and importance, and should allow for either redesign (if required) or the development of appropriate mitigation in consultation with the affected communities. With appropriate responses in terms of avoidance, relocation and compensation, residual impacts should be no more than moderate for most LCH sites.

Mitigation of potential archaeological impacts of the Simandou Project in accordance with the strategy described above will contribute substantially to the understanding of Guinea’s past. This contribution to Guinean archaeology and history will be all the more valuable because so little archaeological work has been done in the country to date. To support protection of cultural heritage, the Project will also work through the Simandou Cultural Heritage Working Group to build capacity for heritage management as a function of government in Guinea.

14.5.3 Mitigation of Impacts on Intangible Cultural Heritage

The baseline has identified a number of cultural domains that could be sensitive to Project activities in the construction and operations phases, including language, ethnicity, religion and certain types of cultural knowledge and activity. To address this, the Project aims to identify valued traditional cultural practices and beliefs, and to then assure socioeconomic or other pressures do not cause their unwanted abandonment. The Project is continuing to develop an understanding of the communities’ cultural heritage and traditional practice which is then used to design mitigation and monitoring which will further assess the impacts and the effectiveness of the mitigation.

The most effective method is detailed and localised community consultation, which is currently being carried out by the Project Community Team prior to start of local works. Community consultation will continue as the Project proceeds and will form part of a broader programme of public consultation and community engagement as identified in Chapter 4: Scoping and Stakeholder Engagement. The Community Team aims to establish of a full understanding of cultural patterns and issues such as holidays, inter-ethnic relations, and...
organisation of community authority in order to effectively manage community relations and scheduling of
Project activities. Findings from community consultations will inform cultural sensitivity training for Simandou
staff, in order to decrease the likelihood for cultural friction or misunderstandings.

As the Project develops, the Community Team will develop feasible, locally validated responses and
solutions during construction and operations. Issues that emerge, whether socio-economic or cultural, will
be pinpointed quickly and addressed through on-going community dialogue and good faith negotiations with
affected people to plan appropriate and feasible mitigation measures. As a result of these consultations, the
Community Team will be able to design and implement programmes and partnerships to promote and
enhance the conservation of intangible cultural heritage. If resettlement or compensation issues emerge, the
PARC Framework may be used as a secondary source of guidance where necessary (see also Chapter 20:
Land Use and Livelihoods and implementation of economic development plans and mitigation measures
regarding employment and livelihood outlined in Chapter 18: Employment and Economic Development and
Chapter 21: Social Structures and Community Life). Mitigation outlined in these chapters includes fair
access to employment and other opportunities, skills-based training, general education and raising
awareness. It is likely that some living cultural heritage impacts will be identified only through the Project
grievance procedure (see Annex 1G: Simandou Project Grievance Procedure) but the local knowledge
developed by the Community Team will ensure that the Project response to those grievances is both locally
informed and culturally appropriate.

The key aspects of the approach to mitigation of impacts on intangible cultural heritage, as well as the
possible benefits that may result from successful implementation are summarised in Table 14.8.

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation</th>
<th>Potential benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infringement of Cultural Norms (Applies to Cultural Knowledge and Activities)</td>
<td>Maintaining understanding of and respect for cultural norms (language, ethnic affiliation, religion, social organisation, gender roles, rituals, forms of cultural expression, traditional techniques and activities, local leadership patterns) of local communities through consultation and staff training.</td>
<td>Integration and rationalisation of traditional life ways with the new experiences and positive impact that the Project will bring to the area and the country. Positive sense of social and cultural cohesion associated with the Project. Retention of social and cultural cohesion of local communities in the study area.</td>
</tr>
<tr>
<td>Threats to Cultural Knowledge and Activities (Applies to Cultural Knowledge and Activities)</td>
<td>Identifying and supporting key cultural knowledge and activities of local communities to assure that they are not impacted by project activities or lost due to uncontrollable social changes. Key investment to be made such as already ongoing for traditional dance and hunting practice. Additional priority areas of knowledge and activity to be identified and supported.</td>
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</tbody>
</table>

14.5.3.1 Residual Impacts on Intangible Cultural Heritage

Residual impact cannot be determined at this stage but the aim will be to maximise positive impacts, avoid
significant adverse impacts where possible, and mitigate remaining impacts so that they are no more than
minor or moderate.

14.6 Summary of Findings

Prior to mitigation, impacts of potentially moderate significance are anticipated at one known tangible
heritage site (CCH-31) in the port area.

Prior to mitigation there is also a risk of:

- potentially major impacts in one Area of High Archaeological Potential (PA-3);
- potentially critical impacts on chance finds that have not yet been identified; and
potential impacts on underwater cultural heritage which may range anywhere from *not significant* to *critical*. The presence of underwater archaeological sites in the port area is still unconfirmed.

There may be *major* impacts on intangible cultural heritage, which may be perceived as positive by some and negative by others.

Mitigation measures will include the following:

- rigorous efforts will be made to identify and record unknown cultural heritage sites and record site boundaries and importance of known sites through further survey and investigation during detailed design and prior to the start of construction in order to potentially avoid cultural heritage constraints through redesign;
- an effective Chance Finds Procedure will be in place during construction;
- impacts on tangible cultural heritage will be avoided wherever possible by locating project works to avoid sites of importance for archaeology or living cultural heritage;
- where sites cannot be avoided, impacts will be mitigated:
  - for archaeological sites, by either avoidance or investigation and preservation by rescue; and
  - for living cultural heritage sites, by either avoidance or appropriate measures for relocation, replacement, or compensation agreed upon with the community through consultation.
- impacts on changes to site setting and restriction of site access will be mitigated by avoidance, if feasible, adoption of good construction site practices, protection of sites from encroachment, and consultation with affected people on appropriate mitigation, or compensation; and
- impacts on intangible cultural heritage will be managed by seeking to maximise beneficial responses to the project and minimise adverse effects, including consultation with the affected communities to develop a full understanding of and respect for their cultural norms, knowledge and activities. The workforce will also receive educational training on local norms and traditions in order to mitigate potential conflicts between locals and Project employees. The employee code of conduct will also include specific regulations with respect to cultural heritage.

Residual impacts cannot be determined at this stage for either tangible or intangible impacts, but the aim will be to avoid significant impacts where possible and mitigate remaining impacts so that they are no more than *minor or moderate*.

The findings of the assessment of impacts on cultural heritage are summarised in Table 14.9.
<table>
<thead>
<tr>
<th>Site Name / Description</th>
<th>CH Code</th>
<th>Site Type</th>
<th>Project Impact</th>
<th>Unmitigated Impact Significance</th>
<th>Specific Mitigation Suggestions</th>
<th>Residual Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Known Tangible Heritage Sites</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Village cemetery (gabourou yiré)</td>
<td>CCH-31</td>
<td>LCH</td>
<td>Possible disruption of user access to site</td>
<td>Risk of Moderate impacts</td>
<td>Avoidance, or if not possible and if acceptable to stakeholders, mitigation strategies developed through good faith negotiations with local stakeholders. Consultation with site users to understand site boundaries, use and access issues. Implementation of the Cultural Heritage Management Plan (CHMP).</td>
<td>Residual impact cannot be determined at this stage but aim will be to avoid significant impacts where possible and mitigate remaining impacts so that they are no more than minor or moderate.</td>
</tr>
<tr>
<td><strong>Potential Tangible Heritage Resources</strong></td>
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<tr>
<td>Area of High Archaeological Potential</td>
<td>PA-3</td>
<td>Potential ACH</td>
<td>Portion of area physically impacted through development of conveyor belt</td>
<td>Risk of Major impacts</td>
<td>Archaeological survey of affected area, including intrusive testing where required, prior to construction. Avoidance, or if not feasible, archaeological rescue excavation of any finds. Implementation of the Cultural Heritage Management Plan (CHMP), including rigorous implementation of Chance Finds Procedure. Publication of archaeological findings.</td>
<td>Residual impact cannot be determined at this stage but aim will be to avoid significant impacts where possible and mitigate remaining impacts so that they are no more than minor or moderate.</td>
</tr>
<tr>
<td>Chance Finds that have not yet been identified</td>
<td></td>
<td>Potential ACH</td>
<td>Loss of archaeological and historic resources through development of port and associated facilities and logistics</td>
<td>Risk of Critical impacts</td>
<td>Rigorous implementation of the archaeological chance finds programme including expert monitoring and localised cessation of construction when needed; Consultation with Guinean government in the event of significant finds; Avoidance or mitigation techniques, potentially including rescue excavation; Publication of archaeological findings.</td>
<td></td>
</tr>
<tr>
<td>Site Name / Description</td>
<td>CH Code</td>
<td>Site Type</td>
<td>Project Impact</td>
<td>Unmitigated Impact Significance</td>
<td>Specific Mitigation Suggestions</td>
<td>Residual Impact</td>
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<tr>
<td>Underwater cultural heritage sites that have not yet been identified</td>
<td>Potential ACH</td>
<td>Loss of archaeological and historic resources through dredging and construction of offshore facilities.</td>
<td>Impacts may range from Not Significant to Critical, but are unconfirmed</td>
<td>Remote sensing analysis of existing Hazard Survey data with assistance of a maritime archaeologist; assess any potential underwater cultural heritage sites that are found; attempt to avoid any identified underwater cultural heritage; rescue excavations of underwater heritage sites that cannot be avoided.</td>
<td>Residual impact cannot be determined at this stage but aim will be to maximise positive impacts, avoid significant adverse impacts where possible, and mitigate remaining impacts so that they are no more than minor or moderate.</td>
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</tbody>
</table>

**Intangible Cultural Heritage**

| Impacts on Cultural Knowledge and Cultural Activity (may be considered positive or negative) | Major | Maintaining understanding of and respect for cultural norms (language, ethnic affiliation, religion, social organisation, gender roles, rituals, forms of cultural expression, traditional techniques and activities, local leadership patterns) of local communities. | Continue on-going stakeholder engagement with affected communities, including leaders, site users and minority groups. | Identifying and supporting key cultural knowledge and activities of local communities to assure that they are not impacted by project activities or lost due to uncontrollable social changes. Additional priority areas of knowledge and activity to be identified and supported. | Implementation of the Cultural Heritage Management Plan (CHMP), including cultural sensitivity training required for all Project staff. |