



C6

VOLUME C: MIDDLE BANKS, MORETON BAY
Cultural Heritage

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KEY FINDINGS

- The Pleistocene layer represents a time when the landscape was a dry, flat plain and, therefore, also represents a time when humans walked this part of South East Queensland. As a consequence, potential exists for sites of cultural heritage to occur so the Pleistocene/Holocene boundary has been identified such that it can be avoided by dredging.
- While five sites in Moreton Bay are registered with the Australian Heritage Commission and appear in the Register of the National Estate, none are within the Middle Banks area.
- Searches of the Indigenous Sites Register and Database were carried out and no sites were found.
- No sites under the Queensland Heritage Register are in the Middle Banks area.
- While a search of the Australian National Shipwrecks Database yielded no result specifically for the Middle Banks area, 10 shipwrecks are listed with ambiguous location data, such as “lost in Moreton Bay”. Given these records and the fact that a similar area to the proposed dredge footprint was previously dredged in the 1980’s, it is unlikely that a shipwreck is present at Middle Banks.
- In response to its public notice of an intention to prepare a Cultural Heritage Management Plan under the Queensland *Aboriginal Cultural Heritage Act 2003*, BAC and the Minjerrabah Moorgumpin Elders in Council have agreed to a Plan for the Middle Banks study area that has been registered by the Department of Natural Resources, Mines and Water.
- During consultation with the Minjerrabah Moorgumpin Elders in Council, no specific sites of cultural significance were defined. However, the overall significance of Moreton Bay to the Elders and the Minjerrabah Moorgumpin People in general was highlighted.
- From a scientific perspective, previous to the formation of Moreton Bay, potential exists for the remains of human occupation sites to exist on what was the Pleistocene ground surface. Since then, this surface has been submerged under a considerable depth of Holocene sand and mud as well as Moreton Bay for at least 6,000 years.
- All of the sand that has been deposited since the formation of Moreton Bay is the result of the movement of sand along the east coast of Australia, from Northern New South Wales through to Fraser Island. There is a very low potential for Holocene evidence of human occupation to be present.
- Every effort has been made to identify where the Holocene deposits end and the Pleistocene layers begin, specifically to avoid entry into the layers with the greater potential for cultural and/or archaeological material to occur during dredging.
- Dredging will be restricted to Holocene deposits. The dredge footprint is in a similar location to the area where sand was dredged previously for the development of Brisbane Airport.
- In the event that something might be recovered during the process of spreading the fill on-site at the NPR, provisions have been made in the Cultural Heritage Management Plan to cover the eventuality.

6.1 Introduction

The construction of the runway will require approximately 15 Mm³ of fill and BAC proposes to source this material from Moreton Bay. The sand fill is to be removed from the Middle Banks area; to the immediate west of the Tangalooma Resort on the west coast of Moreton Island and it is this area of sand extraction that is the subject of this chapter (see **Figure 6.1**).

Figure 6.1: Location of the Study Area.



6.1.1 The Project Brief for Cultural Heritage Issues - Middle Banks

This chapter addresses cultural heritage issues in relation to the area where the dredging of sand for fill on the airport site is planned (see **Figure 6.1**). A separate chapter (Volume B, Chapter 6) addresses the cultural heritage issues associated with the mainland site proposed for construction of the NPR.

6.2 Proposed Development

This component of the project will see 15 Mm³ of marine sand taken from the eastern margin of Middle Banks, that was utilised for extraction during the original dredging program for the construction of the current Brisbane Airport in the 1980s.

As outlined in Chapter C1, considerable care and attention has been applied in determining exactly where the border between the Holocene geological deposits and the Pleistocene geological deposits occur through seismic and geotechnical investigations. The Pleistocene layer represents a time when the landscape was a dry, flat plain and, therefore, also represents a time when humans walked this part of South East Queensland. As a consequence, potential exists for sites of cultural heritage to occur so the Pleistocene/Holocene boundary has been identified such that it can be avoided by dredging. WBM (2002, 2.2)

6.3 Methodology

The cultural heritage study of any site in Moreton Bay including Middle Banks is, if not unique, then certainly unusual. It is extremely difficult to carry out a cultural heritage survey of a landscape below (approximately) 30 m of water. All investigation of the cultural heritage potential of Middle Banks is based upon extrapolations from the geomorphological fieldwork carried out (for this project) by consultants Golders and WBM, and upon a desktop survey of geomorphological research carried out by staff at the University of Queensland (Gourlay and Hacker 1983); archaeological research done by staff at the

University of Queensland (See sub-section 6.5.2); and from consultancy reports carried out in the region of Moreton Bay over the last ten years.

6.3.1 Field Survey Outcomes

A trip to Middle Banks was arranged, in order to acquaint the Elders representing the Traditional Owners for the area with the proposed location of the dredging program. Predictably no items and/or sites of cultural heritage significance were located. It must be stressed however, that the Elders present were vocal in their concern for the environment in general and how disturbance of the seabed might have a flow-on affect in the area and result in detrimental impacts upon the ecosystem and its biomass in general.

6.4 Limitations and Assumptions

6.4.1 Constraints To The Survey

The limitations in this case are clear; it was not possible to survey the seabed. As such ground surface visibility (GSV) was zero. Refer to section 6.4, Chapter B6 for details of this method of analysis.

6.4.2 Technical Assumptions

No cultural heritage survey was carried out prior to sand extraction in preparation for existing airport construction in the early 1980s and so very few clues to where cultural heritage ‘hot spots’ may occur are known. Neither was any research done into the implications of the 1980s dredging program and its potential impact upon cultural heritage resources that might have existed on the seabed at that time in the Middle Banks area. It is assumed in this report that:

1. Being on the edge of a major channel bringing water in and out of Moreton Bay, it can be assumed the seabed at this location would be subject to regular scouring by active currents and as such the probability of remnants of any cultural heritage sites that may once have existed would have been dissipated long ago.
2. It has been assumed the relatively rapid (compared to Pleistocene deposition) deposition rates that occurred during the Holocene development of the mainland coast in the vicinity of the (current) Brisbane River mouth, would have acted against the preservation of archaeological sites.
3. Counter to Point 2 above, it is also assumed that due to the deposition rates that occurred through the mid- to late Pleistocene, human occupation sites may well exist below the Holocene sands and silts, preserved by that more ‘rapid’ Holocene activity.
4. Overall, it has been assumed that no Indigenous cultural and/or archaeological heritage material will be encountered throughout the cultural heritage survey of Middle Banks, up to and including actual sand extraction. However:
 - a. There is always the possibility that cultural and/or archaeological material may appear post-extraction, either at the time of initial sand deposition on-site, or, during further sand-moving activities at a later date; and
 - b. This scenario has been dealt with in the Cultural Heritage Management Plan discussed in Chapter B6 (See section 6.6 – Consultation, in Volume B).

6.5 Baseline Study

6.5.1 The Natural Environment

6.5.1.1 Geology and Geomorphology

During the Pleistocene (2,000,000 to 15,000 years ago), global climatic changes (Chappell, 1983) resulted in fluctuating sea levels in the Moreton Bay region, with the sea maintaining its current level on and off, every 120,000 years (Stephens 1992). From 120,000 years ago sea levels along the east coast of Australia were approximately 5 m higher than present sea level and from this time (120,000) sea levels fell, reaching a minimum of (approx.) 150 m below present sea levels at (approx.) 18,000 years (Chappell, 1983).

At this point in time (the last glacial maximum) the Brisbane River incised a valley across 25 km of dry land bearing northeast, before reaching the ocean between what is now Bribie Island and Moreton Island (Jones, 1992). The entire area of Moreton Bay was exposed as a dry, flat plain. The present-day deep-water channel that abuts the eastern margin of Middle Banks, where sand extraction is to be carried out, represents the Brisbane River bed from that time (approx.) 18,000 years ago. Sea level began to rise as the glacial period ended, and peaked within 1 - 1.5 m of current sea level around 6,500 BP (Chappell 1983).

Site Formation Processes

Sea level change has always been the dominant factor in the geological/geomorphological history of Moreton Bay, producing a series of sedimentary environments, which have in turn, controlled sediment deposition throughout the bay (Stephens 1992). The Bay itself has only existed as such for the last 6,500 years (mid-Holocene), with research suggesting that right across the Pleistocene period (approx. 2,000,000 to 15,000 years) the whole area alternated between being a terrestrial plain and a marine embayment roughly every 120,000 years (Stephens 1992).

6.5.2 Academic research into Aboriginal Cultural Heritage

In 1976 Jay Hall from the University of Queensland initiated the Moreton Region Archaeological Project (MRAP). The aim of this project was to systematically uncover the region's prehistory and it produced a body of research that established prehistoric occupation in the Moreton Bay region (Hall 1980; 1982; 1987; 1990, 1999; Hall and Hiscock 1988; Hall and Robins 1984; Hiscock 1988). Studies at Sandstone Point, Brown's Road, Moreton Island, Bribie Island, Platypus Rockshelter and the Brisbane Airport show occupation dating between 5,000 and 200 years ago.

In 1978 Draper developed a model of Aboriginal subsistence and settlement in the Moreton Bay region as part of an Honours degree, also at the University of Queensland. Using ethnographic and environmental evidence Draper found that a seasonally induced "cycle of subsistence" was more than likely present in the Moreton Bay region as the availability of resources fluctuated throughout the year according to the season (Draper 1978).

A paper discussing the impact of sea level rise on the archaeological record of the Moreton Region was written by Dr Jay Hall in 1999. In this paper Hall discusses the possibility that archaeological sites inundated during the period when sea levels rose (18,000 to 6,000 years ago) have survived on the seabed:

One tantalising thread of evidence, which may eventually resolve this issue, comes from a vibracore sample taken in Moreton Bay and dated at ca 10,000 BP (before present) (Hall 1999: 177).

To date, the earliest evidence for human occupation in and around Moreton Bay has been +20,000 years ago, an estimate based upon archaeological evidence from the Wallen Wallen Creek site on North Stradbroke Island (Neal and Stock 1986). During the period 20,000 to 10,000 BP Wallen Wallen Creek would have been on the western slopes of a sand dune overlooking the broad valley that contained the Pimpama and Brisbane Rivers. By 6,500 years, the period within which the current landscape in the study area was being deposited, this site overlooked Moreton Bay.

6.5.3 Register Searches

Searches of the Register of the National Estate (compiled and maintained by the Australian Heritage Commission) web site and the Indigenous Sites Register and Database (maintained by the Queensland Department of Natural Resources and Mines) were conducted to identify places and sites of cultural heritage significance that may be impacted upon by the proposed development plans.

Register of the National Estate

Five sites registered with the Australian Heritage Commission appear in the Register of the National Estate (**Table 6.5a**), all of these are found in Moreton Bay but none are within the Middle Banks study area. One is an historical location; the others are locations of natural heritage significance. For more details it is suggested the reader follows the following URL - <http://www.deh.gov.au/cgi-bin/ahdb/search.pl>.

Table 6.5a: Natural and Historical Sites Listed on the Register of the National Estate.

Place ID	Description	Location	Legal Status	Date
8394	St. Helena Historical Area	St. Helena Island NP	Registered	12/03/1978
8419	Moreton Island	Moreton Bay	Registered	25/08/1981
8654	King Island Environmental Park	Wellington Point	Registered	22/06/1993
8656	Bird Island Environmental Park	Dunwich	Registered	22/06/1993
16203	S and E Moreton Bay	via Cleveland	Registered	22/06/1993

The Indigenous Sites Register and Database – Dept. Natural Resources and Mines

Searches of the Qld. Department of Natural Resources and Mines (DNRM) sites register and database have been carried out and no sites were found on that database.

The Australian National Shipwrecks Database

The Australian National Shipwrecks Database was also searched to ascertain whether or not any historic shipwrecks are located within the Middle Banks section of the study area. The coordinates in each corner of the marine study area (**Figure 6.1**) were used as a boundary for searches. This returned a result of zero shipwrecks.

A broader search was also conducted. This returned a result of 78 shipwrecks. The coordinates of each of these shipwrecks were compared to the above coordinates.

Those wrecks not falling within those coordinates were discounted, leaving 25 shipwrecks with locations described simply as maximum latitude: 28°, minimum latitude: 27°, maximum longitude: 154°, minimum longitude: 153°.

This area encompasses the majority of Moreton Bay. In some of these instances further location descriptions were given such as Smith Rock/Cape Moreton. These vessels were also discounted. Following this process, 10 vessels remained, the locations of which are described as maximum latitude: 28°, minimum latitude: 27°, maximum longitude: 154°, minimum longitude: 153° (**Table 6.5b**). Ascertaining the exact location of these wrecks has proved difficult, as very ambiguous descriptions of where they were lost are recorded in the literature. For example the wreck of the Lark is described simply as being lost in ‘Moreton Bay’.

Queensland Heritage Register

No sites of historic or natural significance under the Queensland Heritage Register are located in the Middle Banks study area.

Table 6.5b: Ten Shipwrecks with Ambiguous Location Data.

Ship Name	Where Lost	When Lost
Aurora	Brisbane River Bar (Moreton Bay)	21/11/1853
Bard’s Legacy	Moreton Bay	01/06/1872
Caledonia	Unknown	01/02/1832
Eurus	Moreton Bay	01/08/1884
Hinemoa	Moreton Bay	02/11/1896
Juno	Moreton Bay	17/05/1857
Lark	Moreton Bay	01/02/1846
Mary Ann	Moreton Bay	01/01/1850
Mount Elliot	Moreton Bay	29/01/1937
Wendy Joy	Off Moreton Island	06/07/1981

Given these records and the fact that a similar area to the proposed dredge footprint was previously dredged in the 1980s, it is unlikely that a shipwreck is present at Middle Banks.

6.6 Consultation

The *Aboriginal Cultural Heritage Act 2003* (the Act) requires that, where an EIS is being conducted, a Cultural Heritage Management Plan (CHMP) pursuant to Section 7 of the Act must be undertaken.

Searches were conducted of the whole Project Area (land based onshore runway construction area and the offshore dredging area) to ascertain whether or not registered native title claims covered all or part. The external boundaries of two registered claims (Jagera People #2 [QC03/15] and Turrbal People [QC98/026]) include the land-based part of the Project Area.

No registered claim includes the Middle Banks area, nor was an Aboriginal Cultural Heritage Body responsible for providing advice on appropriate Aboriginal people to consult about Aboriginal cultural heritage.

Given the results of these searches, a decision was made to conduct two separate CHMPs: one over the land based area that would be relevant only to the Jagera People and Turrbal native title claim groups; the other over Middle Banks and the path that the dredger will follow between Middle Banks and the point where sand will be unloaded for pumping to the construction site of the NPR.

The Act provides for a situation where no registered native title claim is present; no previously registered native title claim existed but has since failed; and no Aboriginal Cultural Heritage Body exists to provide advice on appropriate Aboriginal people to consult. Section 96 of the Act states that under these circumstances the sponsor (in this case Brisbane Airport Corporation) should ensure that a public notice is published in a newspaper that circulates generally in the Brisbane area. The public notice is required by section 96(5) of the Act to provide a range of information including advice on the sponsor's name and contact details, a map, description and details of the project, and a notice date by which any Aboriginal party for the area must respond. To this end, the public notice appeared in *The Courier-Mail* on 5 November 2005 (**Figure 6.6**).

By the end of the notification period (5 December 2005), one response to the public notice had been received, from the Minjerribah Moorgumpin Elders in Council (the Elders). The Elders were then endorsed to be part of the development of the Middle Banks CHMP. The following consultation occurred:

- An initial meeting on 14 December 2005 between the cultural heritage team of the Brisbane NPR project and representatives of the Elders to discuss a mutually acceptable approach towards consultation. This resulted in the decision to have a formal meeting between parties, and to organize a boat trip to Middle Banks so that as many Elders as possible could be involved and informed.
- A meeting on 6 February 2006 between parties. At the commencement of the meeting, specialist working on the project provided information on coastal processes and marine fauna to the Elders and answered questions about the impact of dredging. Afterwards, discussions turned to the nature of the CHMP agreement, a timetable to achieve agreement within the 84-daytime period provided by the Act, and appropriate resourcing so that the Elders could consult widely and take legal advice. Broad agreement was reached on all of these matters.
- On 7 February 2006, a boat trip to Middle Banks was provided to enable up to 35 Elders to see the area where dredging was planned, to ask further questions of specialists who accompanied the trip, and to talk about concerns and culturally significant sites and areas. At the conclusion of the trip a further short meeting was held, in which the discussions of the previous day were summarised and information supplied about contact details if further questions remained to be answered.
- A CHMP agreement was then drafted to draft stage by BAC's cultural heritage team. This was provided to the Elders in a timely manner so that the Elders and their legal adviser could meet to discuss its content.

Figure 6.6: The Public Notice Advertising the CHMP for Middle Banks.

PUBLIC NOTICE (PROPOSED PLAN) CULTURAL HERITAGE MANAGEMENT

This Notice is to advise all Aboriginal parties within the Plan Area that pursuant to the Aboriginal Cultural Heritage Act 2003 Brisbane Airport Corporation Pty Limited intends to develop a Cultural Heritage Management Plan for the Project.

Project: Brisbane Airport Corporation Pty Limited is proposing to extract approximately 15 million cubic metres of sand from Moreton Bay (Middle Banks). Sand extraction will be by dredge over predominantly previously disturbed areas and will occur over a period of approximately 70 weeks commencing no sooner than 2007. The dredged sand will then be barged to a temporary pump-out facility near the mouth of Brisbane River.

The dredged sand is planned to be used as fill and to provide the foundation for a runway, taxiways and apron areas associated with the planned construction of a new parallel runway at Brisbane Airport.

Sponsors name: Brisbane Airport Corporation Pty Limited

Contact details: Ann Wallin

Address for service: PO Box 333, The Gap, Brisbane, Queensland, 4061

For the purpose of this Written Notice the Notice Day is 5 November 2005.

The Cultural Heritage Management Plan will be conducted over the following Plan Area:

GPS Coordinates: Plan Area bounded by the following points:
(Northings/Eastings UTM56 MGA)

Point No	Easting	Northing
1	535,290.84	6,997,405.40
2	535,450.87	6,997,376.47
3	533,638.56	6,987,352.59
4	522,581.66	6,981,880.43
5	514,966.89	6,969,753.02
6	514,801.59	6,969,837.60
7	522,541.03	6,982,163.56
8	526,761.15	6,990,937.52

Lot/Plan description: Nil, the Cultural Heritage Management Plan Area is over water - see accompanying plan.

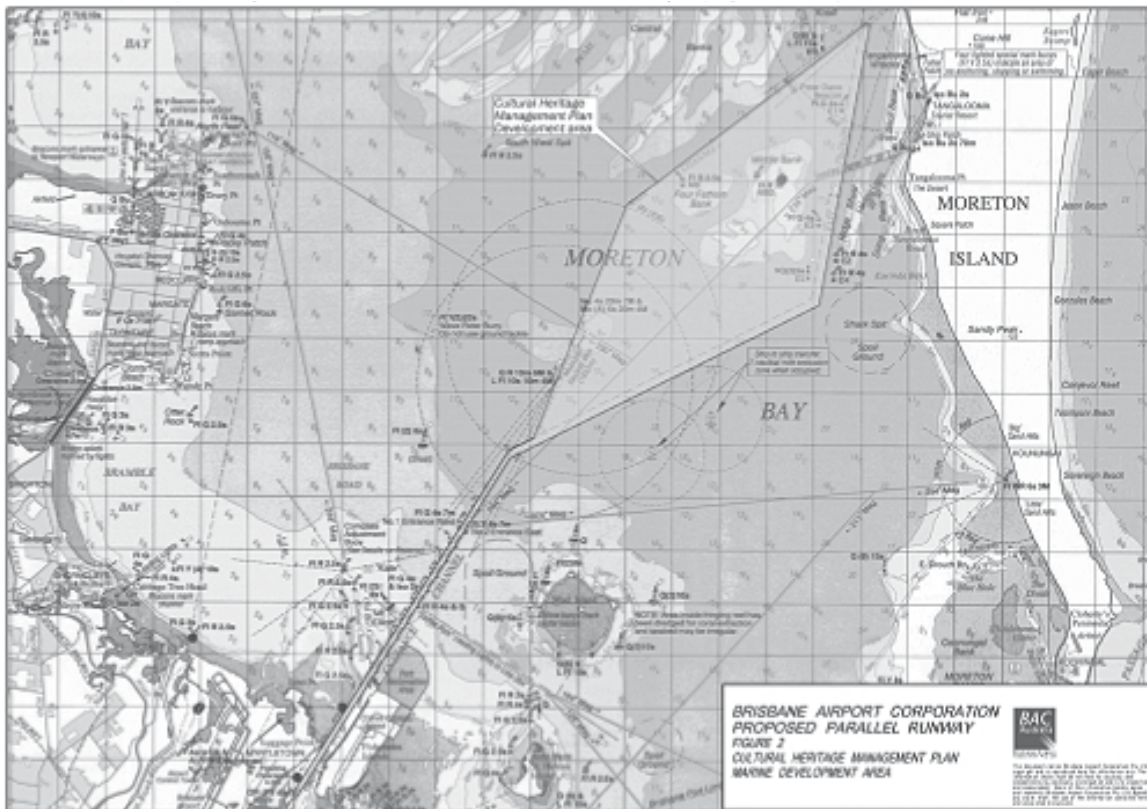
Shire: Immediately west of Moreton Island which is in the Brisbane City Council jurisdiction.

Nearest Town: 40km east of Brisbane City Central Business District.

Other identifiable features: The Cultural Heritage Management Plan Area is over water in the Middle Banks area between the Port of Brisbane and Moreton Island.

If an Aboriginal party wishes to take part in the Cultural Heritage Management Plan, that person or persons must give a written notice to Brisbane Airport Corporation Pty Limited advising that you wish to take part by 5 December 2005.

All parties are advised that Brisbane Airport Corporation Pty Limited may not endorse an Aboriginal party to take part in the development of the Cultural Heritage Management Plan if Brisbane Airport Corporation Pty Limited has not received a written notice from that Aboriginal party within the required time.



- Discussions and a meeting between the legal advisers to both BAC and the Elders then refined the CHMP agreement, resulting in a document that was acceptable to all parties.
- The agreed CHMP was endorsed by the Chief Executive of the Department of Natural Resources and Mines for registration on 27 May 2006.

During this process, no specific sites of cultural significance were defined. The overall significance of Moreton Bay to the Elders and the Minjerrabah Moorgumpin People in general was highlighted.

6.7 Policies and Guidelines

6.7.1 Legislative Framework

Knowledge of cultural heritage legislation is essential when assessing sites, places or items of cultural heritage significance. The following section discusses both National and State Legislation relevant to historical (non-Indigenous) cultural heritage, following on from the assumption made in sub-section 6.4.2 that no Indigenous cultural heritage material would be encountered during the survey (and up to actual commencement of extraction) of the Middle Banks study area.

6.7.1.1 Commonwealth Legislation

At the Commonwealth level, the *Environment Protection and Biodiversity Conservation Act 1999* is now the key national heritage legislation, and is administered by the Australian Government Department of the Environment and Heritage. In addition to the EPBC Act, the following legislation is relevant to heritage.

The *Australian Heritage Council Act 2003* provides for the establishment of the Australian Heritage Council, which is the principal advisory group to the Australian Government on heritage issues. The AHC Act also provides for registration of places considered of national significance on the Register of the National Estate (RNE) or the Australian Heritage Places Inventory (AHPI).

The *Historic Shipwrecks Act 1976* protects wrecks that are over 75 years old and which are located between the low water mark to the edge of the continental shelf. The Act provides for a database to be maintained where shipwrecks protected under Commonwealth authority can be searched.

6.7.1.2 State Legislation

Non-Indigenous cultural heritage issues are covered in the *Queensland Heritage Act 1992*, which provides for a listing of places within a Heritage Register (s.20). Protection is offered to places that have been entered on the Queensland Heritage Register according to a set of criteria. This Act requires that an owner of a heritage building who intends to demolish, subdivide, renovate, alter, add to, change the use of, or substantially modify the appearance of a building must seek approval through the Heritage Council. This Act also requires that all historical archaeological assessment and research is undertaken under permit.

6.8 Assessment

Any determination of cultural heritage significance requires two protocols of assessment. One is through the significance allocated to a place and/or item by its Aboriginal Traditional Owners (TOs), and this can include a range of non-tangible evidence associated with ancestral 'dreaming' locations and/or stories and/or gathering places. The second protocol is by archaeological (scientific) assessment. These protocols are discussed further in Volume B, Chapter B6.

Assessment of the Middle Banks potential for cultural heritage based upon these two protocols is as follows:

1. The general feeling amongst the Stradbroke Island Elders gathered together on the cruise to Middle Banks (**Figure 6.8**) was that the location of the dredging zone on the sea bed was of less importance than the potential effect that dredging would have on the surrounding environment - fish stocks, water quality, dugong habitat, for example. It was accepted that anything of cultural heritage value that might exist on the sea floor would be destroyed, or at best severely damaged and possibly recoverable (only with luck) at some later date in the fill zone on the mainland.
2. From a scientific perspective, given the Pleistocene landscape has been submerged under a considerable depth of Holocene sand and mud for (at least) 6,000 years, there is potential for the remains of human occupation sites to exist at that depth. However, given the rapid (in comparison to the Pleistocene deposition history) and repeated deposition of Holocene sands and mud across Moreton Bay there seems to be a very low potential for there to be Holocene evidence of human occupation located within the Holocene deposits across the seabed at Middle Banks.

6.9 Mitigation Measures

Mitigation measures for the Middle Banks extraction works can only be planned in response to a scenario similar to that described in section 6.10 (and recognised by the TOs during the Middle Banks visit (See section 6.8), where by some coincidence cultural heritage material that has come through the dredging process becomes exposed during the spreading of the fill on-site. Only at the point of final deposition may anything of interest be located and anything recovered at this point has been accounted for in the CHMP signed by the TOs claiming traditional links to the mainland airport site. Collection of these items of cultural interest is the only mitigation option available in this circumstance.

6.10 Residual Effects

After initial extraction and at the point of final deposition on-site, there may be potential for material of cultural interest to be exposed. Any item (other than human skeletal material) that is recovered in this fashion will have very limited archaeological value because the context within which the item was deposited is just as important from a scientific standpoint as is the item itself. In the case of human skeletal material, however, and depending upon the preservation of the material recovered, valuable information about the individual might still be obtainable.

6.11 Conclusion

There is no doubt the dredging program will have an impact upon the natural environment in the Middle Banks area, and the TOs have voiced their concerns on this. They recognise, however, that with regard to cultural heritage material the potential impacts from dredging are low. Every effort has been made to identify where the Holocene deposits end and the Pleistocene layers begin, specifically to avoid entry into the layers with the greater potential for cultural and/or archaeological material to occur. In the event that something might be recovered during the process of spreading the fill on-site, provisions have been made in the CHMP to cover that eventuality.

From a predictive perspective, there is the remote possibility that a shipwreck of some kind might occur within the dredge zone. However, the likelihood of this occurring is low considering the area to be dredged is the same area dredged during the 1980s when the Brisbane Airport was developed.

6.12 Assessment Summary Matrix

No Assessment Summary Matrix has been prepared because no items and/or places of cultural and/or archaeological significance have been located in the Middle Banks study area.

Figure 6.8: *Traditional Elders Gathered Together on the Cruise to Middle Banks.*



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