

# NORTHERN NETWORK ALLIANCE MANAGEMENT PLAN

## Heritage Management Plan

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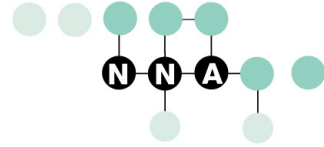
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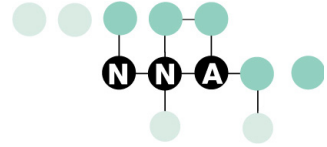
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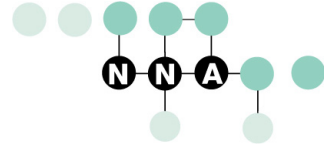
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# 1 INTRODUCTION

This Heritage Management Plan (HMP) is one component of the Construction Environmental Management Plan (EMP) which provides a system and procedures to ensure that the Northern Network Alliance (NNA) establishes and maintains best practice controls to manage potential environmental impacts during the construction of the Northern Pipeline Interconnector Stage 2 and associated infrastructure (hereafter referred to as the Project) and, wherever practicable, realise opportunities for enhanced environmental outcomes.

The NNA Alliance consists of the following partners:

- LinkWater
- Abigroup Contractors
- McConnell Dowell
- Kellogg Brown & Root Pty Ltd

NNA is committed to providing the services it offers in a manner that conforms to the contractual requirements and to all relevant regulatory and legislative requirements. To achieve this, the NNA will plan, implement and control an integrated management system that achieves the stated environmental outcomes.

The NNA will ensure that controls are properly implemented and regularly monitored and audited to assess their effectiveness. Changes to the controls will be instigated if they are not achieving their objectives.

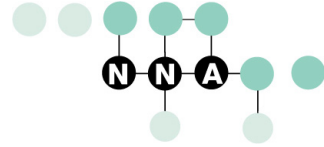
## 1.1 Project Description

NPI Stage 2 forms part of the drought contingency pipeline to connect existing and future water infrastructure on the Sunshine Coast with the Brisbane network. The NPI will be constructed in two stages and will allow the transfer of up to 65 ML/d of potable water between the Sunshine Coast and Brisbane. Stage 1 of the NPI project—between Landers Shute water treatment plant (WTP) and Morayfield—is due for completion by 31 December 2008.

The completed NPI (Stage 1 and Stage 2) will supply a target volume of 65 ML/d of potable fresh water to existing facilities at Caboolture for distribution to localities in the greater Brisbane region. NPI Stage 2 will have the capacity to deliver up to 18 ML/d (under existing utilized entitlements for the Noosa Shire).

Subsequent interconnection of Stages of the NPI may be constructed to link with the proposed Traveston Crossing Dam and/or other bulk water sources proposed for the Sunshine Coast. These subsequent Stages are not considered in this report. However, the use of a large diameter pipe capable of transporting bulk water is a basis for the design of both Stages 1 and 2 of the NPI.

The key components of the NPI Stage 2 project are as follows:



- approximately 48 km of underground pipe between Noosa water treatment plant (WTP) and the termination point of NPI Stage 1 at Eudlo;
- a balance tank with a 5 ML capacity;
- three new pump stations; and
- a new water quality management facility (WQMF) and upgrades to an existing WQMF at Landsborough.

A number of additional above-ground facilities would be required for commissioning, operation and maintenance of the system. These include:

- Water quality maintenance structures
- Water branch mains
- Cleaning and communications stations

## 1.2 Purpose and Scope

Linkwater is committed to conserving and enhancing the biological environment where possible for the duration of the Project while achieving positive environmental, commercial and social outcomes.

This Heritage Management Plan (HMP) addresses the management of both:

- Aboriginal Cultural Heritage
- Non-Aboriginal Cultural Heritage

Both Aboriginal cultural heritage and Non-Aboriginal cultural heritage (i.e historical/ European) must be managed to avoid or minimise harm during pipeline construction by the Alliance.

This HMP identifies activities to be undertaken within areas of interest to manage cultural heritage.

This document identifies:

- chainages and construction zones and processes for managing areas of known Aboriginal Heritage importance identified in the Cultural Heritage Management Plan (CHMP)
- a process for dealing with any additional activities not included in the Aboriginal CHMP
- a process for managing potential impact on historical heritage items and sites which may be encountered during the construction phase

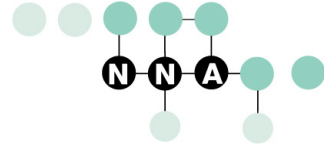
## 1.3 Objectives and Targets

Objectives:

- Protect Aboriginal areas and objects of cultural and heritage value
- Comply with all requirements of the *Aboriginal Cultural Heritage Act 2003* and Guidelines from the Cultural Heritage Coordination Unit, DNR&W
- Engender cultural awareness within the Alliance and wider community, and develop positive working relationships with Aboriginal parties

Targets:

- Develop and adhere to the requirements of the Cultural Heritage Management Plan (CHMP)



- No unauthorised damage to Aboriginal and historical cultural heritage artefacts during construction
- Positive working relationships with Aboriginal parties maintained
- 100% of employees trained in regard to their responsibilities under the Aboriginal Cultural Heritage Act, 2003.

The performance criteria will be linked to key performance indicators (KPI's) for the project.

## 1.4 Background

### 1.4.1 Aboriginal Heritage

This document incorporates the Aboriginal cultural heritage work methods agreed to in the CHMP and details the process for dealing with any additional areas that will be disturbed or may be encountered throughout the construction period.

The Construction EMP is the document that the NNA will refer to on a day-to-day basis to assist in managing the Aboriginal cultural heritage.

The single CHMP is identified as the *Cultural Heritage Management Plan for the Northern Interconnector (Stages 1 & 2)*. This CHMP covers a linear pipeline corridor located between North Pine River and Lake MacDonald and ancillary areas. The CHMP also covers the site on which Ewen Maddock Dam and an associated water treatment plant are located.

The CHMP is agreed between:

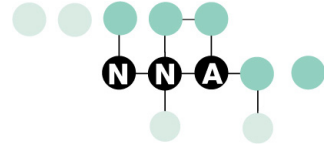
- Southern Regional Water Pipeline Company (now referred to as Link Water)
- Dr Eve Fesl as the sole Endorsed Aboriginal party for the CHMP area.

The Alliance has liaised and engaged with the relevant Aboriginal Party on Aboriginal cultural heritage and native title. Aboriginal cultural heritage may for example include objects and areas. Native title is recognition of links to land.

The pipeline passes over land within the external boundaries of two registered native title claims:

- Gubbi Gubbi QUD6083/98– the Glasshouse Mountains
- Gubbi Gubbi People # 2 QUD6034/99 – the alignment from Pine River to Landers Shute.

At the time of developing the CHMP for the NPI the CHMP area covers one current registered native title claim (QUD6083/98 – Gubbi Gubbi) and one former registered claim (QUD6034/99 – QC99/35 – Gubbi Gubbi People #2). The area also covers two unregistered claims QUD65/06 (Kabi Kabi #2 – QC06/06) and QUD136/06 (Kabi Kabi #3 – QC06/7).



#### 1.4.2 'Other' Heritage

There are two processes involved in cultural heritage – identification and management.

An appreciation of cultural heritage values involves:

- the identification of culturally significant sites, places and landscapes
- the definition of the levels of significance associated with these places
- recommendations for their subsequent management

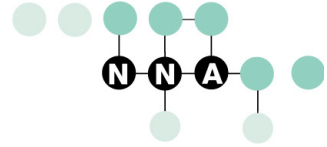
In the case of this HMP the process of identification and significance assessment of non-Indigenous cultural heritage sites which might exist within the Project area has been facilitated by NNA. A record of this identification and assessment is provided in Section 3

The term 'cultural heritage values' refers to the sense of place and connection afforded to a community by items, sites, places and landscapes of cultural heritage significance. The identification of culturally significant places usually begins with consultation and contextual research of relevant literature and heritage register searches. Consultation should involve a range of stakeholders that may include landowners, local historical societies and government agencies. Usually the identification of significant sites, places and landscapes involves preliminary field surveys or field inspections. This is normally performed in partnership with key people who have knowledge (often specialised) of various aspects of historical heritage. These may include archaeologists, heritage architects, heritage engineers, public historians, field workers and so on. Outcomes of research often includes the production of a report that assesses the significance of sites, features and places and identifies any potential impacts that development in the area may have, and recommendations for the avoidance and/or minimisation of impact.

#### 1.5 Consultation

This HMP is based on the one NPI (Stages 1 & 2) registered cultural CHMP pursuant to Part 7 of the *Aboriginal Cultural Heritage Act 2003*, the development of which was achieved through continuous consultation with Aboriginal Parties.

This Plan forms one of a suite of Plans within the Construction Environmental Management Plan. The NNA will liaise with relevant Government Agencies on this plan prior to the commencement of construction.



## 2 LEGISLATION AND REGULATORY REQUIREMENTS

### 2.1 Licences/Permits

Department of Infrastructure (DOI) will approve a single Environmental Impact Statement (EIS) that identifies all licences and permits that may be required for the NNA project. It is anticipated that the heritage sites/objects identified in this HMP will not require any additional licences, permits or approvals.

Note – Schedule 9 of IPA lists development that is exempt from assessment against a planning scheme. The NPI has been determined to fall within the exemptions of Schedule 9 where Table 5 Item 4 states that ‘all aspects of a development a person is directed to carry out under a notice, order of direction made under State law’ constitute exempt development. Therefore, the NPI Stage 2 project is not assessable under local planning schemes (NNA EIS 2008).

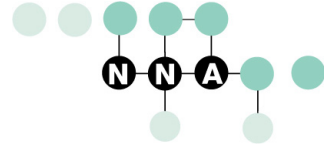
### 2.2 Commitments

The *Environmental Impact Statement* for the proposed Stage 2 NPI will have several commitments for the management of Heritage. Table 1 identifies example of these key commitments.

Table 1. Heritage Requirements/Commitments  
(refer NNA EIS 2008, Appendix E for final commitments)

Document	Section	Requirement/Commitment
	3.9	The approved project cultural heritage management plan will be implemented for construction of the Stage 2 NPI
	3.9	A native title compliance plan will be completed for the project and any relevant notifications made under s.24KA of the <i>Native Title Act 1993</i> .
	3.9	No registered Aboriginal or European cultural heritage sites will be negatively impacted to a significant extent by the project. Any new sites identified will be brought to the attention of relevant government agencies in compliance with the applicable legislation
	3.10	Cross-cultural awareness will be maintained within the project team and in dealings with the public.





## 2.3 Aboriginal Cultural Heritage

### 2.3.1 Licences/Permits

The principal legislation protecting Aboriginal cultural heritage in Queensland is the *Aboriginal Cultural Heritage Act 2003*. As the Project required an Environmental Impact Statement (EIS) a CHMP is the required agreement between the appropriate Aboriginal party and Linkwater.

In the first instance that human remains are located, the legislation concerning the burial of human remains is the *Criminal Code Act 1899*. If human remains or suspected bone material are uncovered all work will immediately stop, the location will be isolated and police will be notified. Investigations will be undertaken by the appropriate government authorities to manage the find.

Relevant national legislation includes:

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*
- *Australian Heritage Council Act 2003*

Relevant state legislation includes:

- *Land and Resources Tribunal Act 1999*
- *Aboriginal Cultural Heritage Act 2003*

Registration of the CHMP under the *Aboriginal Cultural Heritage Act 2003* enlivens these documents as legally binding agreements upon the parties.

### 2.3.2 Guidelines/References

Guidelines gazetted with the *Aboriginal Cultural Heritage Act 2003* include:

- Guidelines to Preparation of a Cultural Heritage Management Plan
- Cultural Heritage Duty of Care Guidelines

## 2.4 Historic Heritage

The following section discusses national, state and local legislation relevant to historical heritage (non-Aboriginal) and the Project.

In general terms, any intervention made by the Project on a site which is listed on an abovementioned national, state or local government heritage register will require prior approvals from the relevant government authority.

'Any intervention' is defined as any work and/or associated activities by the Project, which take place within the boundaries of a recognised heritage site. This intervention should also be considered for all sites which are directly adjoining a registered heritage place.

The following table (Table 2) lists the relevant legislation in place for historical sites of national, state and local significance. It also provides an overview of the need for approval and/or permits which may be required and the relevance to the project.

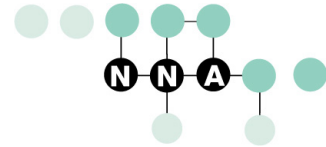
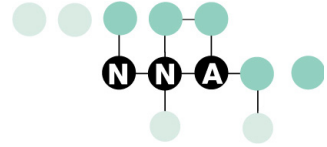


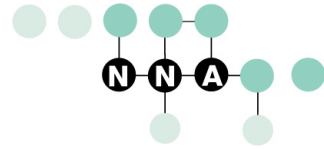
Table 2. Relevant Historic Heritage Legislation

Relevant Legislation	Approval or permit required	Relevance to project
<b>National</b>		
<i>The Environment Protection and Biodiversity Conservation Act 1999</i>	Consultation required for any intervention caused by the Project on sites registered on: The National Heritage Register The Commonwealth Heritage Register Register of the National Estate (RNE) (All above sites are included on the Australian Heritage Database)	Following sites included on the Australian Heritage Database are situated close to (but not on) the Stage2 NPI alignment -Eudlo Creek Environmental Park via Hoopers --Road, Kunda Park -Koongalba, 12 Wharf Street, Yandina -Sunny Brae Private Hospital (former), Bruce Hwy, Eumundi There will be zero interaction with these sites.
<b>State</b>		
<i>Queensland Heritage Act 1992</i>	Consultation required for any intervention caused by the Project on sites registered on: The Queensland Heritage Register CHIEF Database held by EPA	-Koongalba, 12 Wharf Street, Yandina (This site is close to, but not on Stage 2 alignment) -Moreton Central Sugar Mills Nambour. This site is located more than 700m to the west of the Stage 2 NPI alignment and is not under threat of impact. There will be zero interaction with these sites.
<b>Local</b>		
<i>Maroochy Shire Council</i>	Consultation required for any intervention caused by the Project on sites registered on: The Maroochy Shire Plan – Schedule 2 Cultural Heritage Areas	Yandina Township Precinct as listed on the Maroochy Shire Council Heritage Citations 2006, the Maroochy Plan 2000 and the the Council's Planning Scheme. Of significance is house situated corner of Buckle and North Streets (27, North Street) which is listed on Maroochy Shire Council's Heritage Citations 2006.  Above information conveyed via Maroochy Shire's correspondence of 19 December 2007 which can be viewed on Documentum <a href="http://au-webtop-east/AusGI/drl/objectId/09016247800255e1">http://au-webtop-east/AusGI/drl/objectId/09016247800255e1</a>
<i>Noosa Shire Council</i>	Consultation required for any intervention caused by the Project on sites registered on: The Noosa Shire Council Shire Plan	It has been advised by Noosa Shire Council that the Stage 2 NPI alignment does not impact upon any historical heritage sites listed in their planning scheme Above information conveyed through Noosa Shire Council's email dated 12 December 2007 which can be viewed on



Relevant Legislation	Approval or permit required	Relevance to project
		Documentum <a href="http://au-webtop-east/AusGI/dri/objectId/0901624780025645">http://au-webtop-east/AusGI/dri/objectId/0901624780025645</a>
<p><i>Historical Societies</i></p> <p>1. <i>Cooroy-Noosa Genealogical &amp; Historical Research Group Inc</i></p> <p>2. <i>Eumundi and District Historical</i></p> <p>3. <i>Yandina and District Historical Society Inc</i></p>	<p>Consultation will be undertaken to determine any potential interaction caused by the Project on sites considered relevant by societies</p>	<p><u>Consultation in progress</u></p>

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## 3 EXISTING ENVIRONMENT

### 3.1 Aboriginal Heritage

Aboriginal cultural heritage must be managed by the Alliance in any area where topsoil will be stripped and/or excavation will occur. Management will be undertaken through the following survey and monitoring activities:

- walk overs
- test pits
- more detailed archaeological surveys

The Gubbi Gubbi has opted for a field survey to locate any sites of Heritage value. The survey has been completed and sites of interest have been nominated for monitoring during construction activities. Due to rain tall grass in most areas made visibility poor during survey. A search has also been conducted of the database held by the Department of Natural Resources and Water, resulting in zero registered sites within the project area.

Approximately two thirds of the NPI Stage 2 alignment uses existing cleared easement. The existing environment is one which has been considerably disturbed and where extensive clearing of vegetation has occurred in the past. Extensive road building (for example, Maroochy Road), particularly in the more densely populated areas near Cooroy, Pomona and enroute to Noosa Water Treatment Plant have played a large part in ground disturbance and tree removals in what would be considered relevant areas for Indigenous cultural heritage. More recently, the establishment of light and heavy industries, particularly in the vicinity of country towns, has been a catalyst for vegetation clearance.

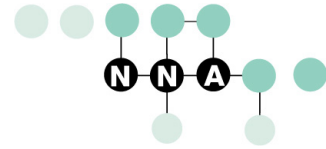
Availability of fresh water was essential for Indigenous people, including the Gubbi Gubbi people. Hence important water courses such as Eudlo Creek, the Maroochy River and Petrie Creek and important sections of the creeks and in the area near to the Maroochy River have been listed for Aboriginal cultural heritage monitoring.

The predominant Aboriginal cultural heritage items expected to be located within the corridor are stone artefacts. The relevant Aboriginal group will decide what they do with located stone artefacts, for example collect them, relocate and/or leave *in situ*.

Any additional disturbance outside of the Alliance corridor (CHMP areas) will need to address cultural heritage. Aboriginal cultural heritage will need to be managed to the CHMP (for example changes to route alignment) – Refer to Section 6.2.1 of this document.

### 3.2 Historic Heritage

The NPI Stage 2 pipeline route traverses the lands of two Shires: Maroochy and Noosa. The Alliance followed a comprehensive process to identify historic heritage sites, refer to table 2.



The following were contacted to ascertain sites of significance in their areas:

1. Maroochy Shire Council
2. Noosa Shire Council
3. Cooroy, Yandina and Eumundi Historical Societies

A Stage 2 NPI route survey and investigation was undertaken by Su Davies, (from Davies Heritage Consultants Pty Ltd) and Maroochy/Noosa Area Historian Berenis Alcorn.

A total of 10 items not registered on Local, State or Nation Heritage Registers were identified during the survey. Of these 10 sites, 4 are potentially interacted with by the project. Table 3 below lists the 10 sites/items identified. Discussion in relation to individual items and recommendations follow (Davies Heritage Consultants Pty Ltd).

Table 3 Stage 2 NPI route survey and investigation results

ITEM No.	NPI MAP No	DESCRIPTION	LOT & RP No
1	B3a	Daniel Morcombe Memorial	----
2	B5c	Nambour Showgrounds	----
3	B6a	House, 45 Creightons Road, Kulangoor	Lot 1 RP 137358
4	B6a/B7	Townscape Precinct, Yandina	----
5	B7	House, Brandons Road, Yandina	Lot 1 CG 3849
6	B7	House, 173 Lees Road, Bridges	Lot 3 CG 6223
7	B8	House, 391 Bunya Road, North Arm	Lot 2 SP127417
8	B9	Eumundi Cemetery	----
9	B10	House, Cnr Neeraway Road and Strong Lane, Eerwah	Lot 3 SP 127428
10	B5a	House, west of Image Flat Road	RP 143299

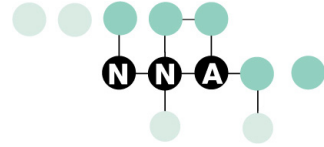
Sites potentially interacted with

Note - Further desktop studies, investigation/surveys may be undertaken prior to construction, as required to satisfy this MP, for example, in the event of route alignment change.

### 3.2.1 Table 3 Items: Discussion & Recommendations

**Item 1: Daniel Morcombe Memorial:** Daniel Morcombe thought to have been abducted from this location. A Memorial to Daniel Morcombe is located under the overpass on the northern side of the Nambour Connection Road. This location is within the proposed NPI alignment.

*Recommendation: Consultation with the Morcombe family. The Alliance Cultural Heritage Advisor must liaise with the consultant undertaking the community liaison/social assessment to ensure that processes are instigated based on the outcomes of the consultation*



**Item 2: Nambour Showgrounds:** The Nambour Showgrounds are located on the south eastern side of the corner of Bli Bli Road and the Nambour Connection Road. The NPI alignment is located within and around the Eastern and Northern boundary of the Showgrounds property.

*Recommendation: It has been recommended that, at a minimum, the NPI alignment must be placed around the margin of showground property and all impacts to built structures and plantings must be avoided.*

**Item 3: House, 45 Creightons Road, Kulangoor; Lot 1 RP 137358:**

*Recommendation: Construction to endeavour to avoid any impacts to the house located on this property.*

**Item 4: Townscape Precinct, Yandina:** After the NPI alignment crosses the South Maroochy River it heads north along Lacey's Lane and then Buckle Street, Yandina.

*Recommendation: Buckle Street, Yandina, is within the Yandina Townscape Precinct which is listed on the Maroochy Shire Council Heritage Citations 2006, and the Maroochy Plan 2000 Council's Planning scheme. It is recommended that realignment (to the west) of the NPI alignment may be considered. Alternatively, the NPI alignment must be contained within the road reserve of Buckle Street, and all impact to plantings and fences etc that may compromise the street pattern must be avoided.*

**Item 5: House, Brandons Road, Yandina, Lot 1 CG3849:** It has been advised that the house which is the oldest in the district was built 107 years (pre-war). Although the NPI alignment is located to the immediate west of the house, 2 sheds are located within the alignment.

*Recommendation: The recommendation is to move the NPI alignment either:*

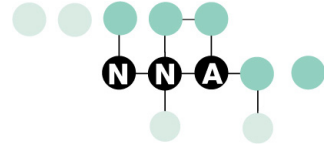
- To the east (preferably adjacent to the Bruce Highway) to avoid all impacts to this property, or*
- The NPI alignment may be moved to a minimum of 100 metres to the west to avoid all impacts to the house, sheds and plantings*

In the event that the NPI Stage 2 alignment will not avoid interaction with these identified sheds, the Alliance will work with an appropriate qualified Heritage Specialist to record the site. A copy of the report will be forwarded to the relevant Government and Historical Authorities, in compliance with this HMP (refer Section 5.7 in this document on 'Recording of Sites Directly Affected as Part of the Project').

**Item 6: House, 173 Lees Road, Bridges, Lot 3 CG6223:** This house has been owned by the current owners since 1963. It was originally constructed in 1911. The NPI alignment is located to the east of the house.

*Recommendation: Although the NPI alignment passes through a corner of the Lot 3 CG6223, it is not recommended that it be moved. However, the recommendation is that all construction & associated activities must avoid any impacts to the house located on this property.*

**Item 7: House, 391 Bunya Road, North Arm Lot 2 SP127417:** This house owned by the current tenant was built by his grandfather approximately 100 years ago. Blyth (2003:40)



notes that the grandfather Henry Dellit purchased the property in 1906 This particular house is located to the immediate east of the NPI alignment; another house constructed in the 1960s is located to the immediate west of the alignment. A shed constructed in the 1960s is located to the immediate west of the alignment. A second shed constructed in the recent past is located adjacent and to the west of the alignment.

*Recommendation: All construction and associated activities must avoid any impacts to the house located on this property.*

**Item 8: Eumundi Cemetery:** The Eumundi Cemetery is located on the corner of Bunya Road and Golden Rain Lane to the west of the NPI alignment. This Cemetery was gazetted in 1903 and the first known recorded burial was in 1906.

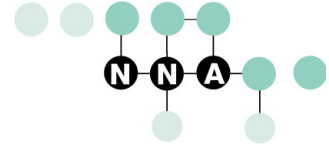
*Recommendation: The Alliance Cultural Heritage Advisor to ensure that this item is clearly marked on applicable construction plans and associated documentation facilitating construction, to ensure zero interaction*

**Item9: House, Cnr Neeraway Road and Strong Lane, Eerwah:** The house is located immediately adjacent to the NPI alignment. The house which is pre 1940s style has been owned by current tenants since 1980

**Item 10: House, west of Image Flat Road:** The house which is an old timber construction is on a property which is not within the NPI alignment. As impacts to this house will not occur, further information has not been sought.

The Alliance Cultural Heritage Advisor will ensure that these items are clearly marked on applicable construction plans and associated documentation facilitating construction, to ensure zero interaction.





### Potential Historic Heritage Places

This section identifies the types of historical heritage sites that might exist within the Project area.

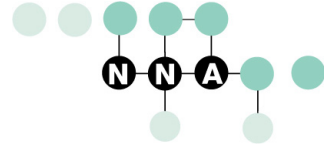
- social infrastructure (including public buildings, schools and hotels)
- industrial infrastructure and commercial development (including industrial sites, commercial buildings)
- residential infrastructure (including residential buildings; homesteads)
- rural infrastructure (including farm infrastructure)
- transport infrastructure (including railway heritage)
- forestry heritage
- mining and extractive industry (including mining heritage and quarries)
- defence sites (military sites)
- commemorative sites and places (including cemeteries and graves, and memorials)
- parks, gardens, landscaping and reserves (including significant trees, retaining walls and fences)

### 3.2.2 Conclusion

The above mentioned sites are not intended to be an exhaustive list of sites that might be found within the Project corridor. They are however a good cross-section of the potential items of historical heritage significance that might exist within the Project area.

Specific types of heritage items that may be found include bottle dumps, unmarked graves, springboard cuts in tree trunks, surveyors and mileage markers, early house sites marked by china metal and wooden remnants, etc.





## 4 PROJECT POTENTIAL IMPACTS

### 4.1 Potential Sources of Impact on Cultural Heritage

Any activity conducted as part of the Project may cause impact on cultural heritage values (both Aboriginal and non-Aboriginal). The following are construction activities that are considered to be likely potential sources for impact:

- general surface earthworks particularly during site establishment and establishment of access roads
- earthmoving activities and excavation including construction of batters and stabilisation of earthworks
- blasting, boring and excavation
- movement of vehicles and construction machinery in and around heritage sites
- transportation of construction materials, fill, rubble and waste in and around known sites and areas

### 4.2 Aboriginal Cultural heritage

Project impacts may cause harm to Aboriginal cultural heritage items and sites. Linkwater has a legal obligation under state legislation to meet its 'duty of care' with regards to Aboriginal cultural heritage. Duty of care is reasonable management measures to avoid or minimise harm. Failure to meet duty of care will result in substantial financial penalties to both the involved individual and Linkwater.

Items identified in Section 3 above will be potentially impacted by the works. Monitoring at these locations will be undertaken as outlined in Section 7.2 below.

### 4.3 Types of Potential Impact

#### 4.3.1 Aboriginal Cultural Heritage

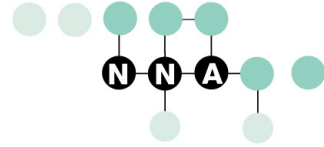
Damage of significant Aboriginal areas and Aboriginal cultural heritage is a potential impact that may breach the Project's cultural heritage duty of care.

#### 4.3.2 Non-Aboriginal Heritage

The significance of heritage structures is quite often contained in the fabric of the site or place, and this fabric should be protected where possible. Unlike other sites and places that can be repaired, should damage occur, heritage sites and places should be maintained in their original and undamaged condition.

A particular heritage site should not be considered in isolation from its context. The spread and extent of a heritage site can be extensive and may include boundary walls, paths and out buildings, as well as landscapes.

In the event that a site is to be interacted with, refer to Section 5.7 in this document on 'Recording of Sites Directly Affected as Part of the Project'.



## 5 ENVIRONMENTAL MITIGATION MEASURES

Environmental mitigation measures for Aboriginal cultural heritage and non-aboriginal heritage will include a suite of activities that may be undertaken depending on the nature of a specific site:

- Heritage database searches, field surveys and consultation
- Walk overs (site survey)
- Test pits
- Inductions and toolbox talks (including presentations by guest Heritage Specialists)
- Monitoring of works
- Management of unexpected finds
- Removal or relocation of cultural heritage finds
- Consultation with Traditional Owners and/or Heritage Specialists

### 5.1 Inductions

The NN Alliance will ensure that relevant contractors and staff are provided with Aboriginal cultural heritage inductions that will include details of responsibilities to the cultural heritage duty of care and the requirements for monitoring of Aboriginal heritage.

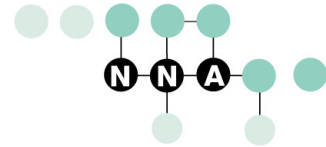
Briefings and updates may be provided for staff and contractors which highlight any new and relevant cultural heritage aspects found to exist within the Project area.

### 5.2 Monitoring of Works

#### 5.2.1

Table 4: Aboriginal Cultural Heritage Monitoring Locations (Gubbi Gubbi)

Stage of Construction Activity	Aboriginal Cultural Heritage monitoring: <a href="#">Map &amp; km ref.</a>	Number of km to be monitored	Responsibility
Clear & Grade	Map Ref: B1 Km: From 65 to 66.5 (approx)	1.5 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B2a, B2b, B3a Km: From 68 to 72.5 (approx)	4.5 km	Environment Manager/Cultural Heritage Advisor



Stage of Construction Activity	Aboriginal Cultural Heritage monitoring: <u>Map &amp; km ref.</u>	Number of km to be monitored	Responsibility
Clear & Grade	Map Ref: B3b Km Ref: 73 to 76 (approx)	3 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref B4 Km Ref: From 76 to 80 (approx)	4 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B5e KM Ref: 80 to 81 km	1 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B6c & B6b Km Ref: From 84 (approx) to 87.5 km Map Ref: B6a; B7; B8 Km Ref: 89.5 (approx) to 95	3.5 km 5.5 km	Environment Manager/Cultural Heritage Advisor Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B10 Km Ref: 102 to 103	1 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B11 Km Ref: 105.5 (approx) to 108.5 (approx.)	3 km	Environment Manager/Cultural Heritage Advisor
Clear & Grade	Map Ref: B12 Km Ref: 110 to 112.5	2.5 km	Environment Manager/Cultural Heritage Advisor

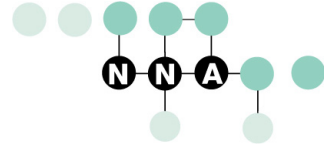
Table 4 above draws from all the Stage 2 NPI tenure maps to reflect the specific km which have been recommended for monitoring during the Clear & Grade phase of the construction process.

The CHMP makes provision for the Traditional Owners/Representatives to monitor on-site to observe clear and grade construction activities. These monitors will alert construction crews to any heritage items located as identified in Section 2. Appendix 1 is a list of tenure maps depicting areas to be monitored.

Monitoring of historic heritage may be required in the event of discovery of and/or possible disturbance of a site (see Section 5.3).

### 5.3 Unexpected Finds

During the Project, unexpected cultural heritage material or sites may be discovered and managed using the following measures:



- All work at the location of the find must cease and reasonable efforts to secure the site will be made – a buffer zone of ten metres should be suitable.
- Work can continue at the distance of ten meters from a find area (or more if an extended find is located i.e. large midden). Note that the material should not be removed or disturbed further. Barriers or temporary fences will be erected as a buffer around the find if required.
- The Environmental Manager and Construction Manager will be notified immediately. They will then notify the relevant parties. In the case of Aboriginal cultural heritage, the Gubbi Gubbi Party will be notified; in the case of historic heritage, the historical archaeologist appointed to the Project – refer to section 7.4 for contact details.
- The Archaeologist will assess significance and recommend a way forward. These may include i) protect and avoid; ii) excavate, record and remove; iii) investigate and preserve or iv) no action if the item is deemed to have no significance
- NN Alliance to advise relevant government agencies as required
- In the case of Aboriginal cultural heritage, the Aboriginal Parties will nominate the appropriate management regime.
- In the case of historic heritage, the historical archaeologist will provide a management recommendation to the Environmental Manager, and agreed approved actions will be undertaken
- If material involves suspected human remains then the work must immediately cease and the Police be immediately contacted. This includes the find of any potential bone material.

## **5.4 Aboriginal Cultural Heritage**

### **5.4.1 Onsite Packs**

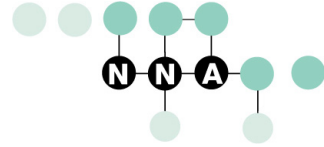
In addition to the above mitigation activities, the Alliance will provide 'cultural heritage onsite packs' for contracted monitors to use for preliminary surveys and monitoring. The onsite packs will contain:

- NNA (NPI Stage 2) Cultural Heritage Monitoring/Find Sheet/Collection Record Sheet (G-FRM-005)
- Appropriate Personnel Protective Equipment (PPE)
- Copy of the CHMP
- Any other items as considered necessary

All contracted heritage surveyors and monitors are required to complete the Alliance induction which will include all project requirements (refer Workplace Health and Safety Management Plan, NNA001-A-PLN-035)

### **5.4.2 Mitigation Measures**

Table 3 identifies other mitigation strategies for the successful management of cultural heritage.



## 5.5 Historic Heritage

This section provides specific management guidelines for historical cultural heritage sites and places potentially impacted by construction of the Project.

As much as possible, the prime mitigation option adopted by the Alliance will be avoidance of impacts. For all items identified, their location will be clearly identified on verification maps and associated documentation facilitating construction, to ensure zero interaction.

Items found during the design and construction stages of the Project that are considered to have potential cultural heritage relevance, should be treated as significant, until qualified advice states otherwise as outlined in Table 3 below.

## 5.6 Reporting of a Heritage Site

If design constraints result in the Project being in proximity to a known place of cultural heritage significance, then assessment and management recommendations for the particular site will be documented.

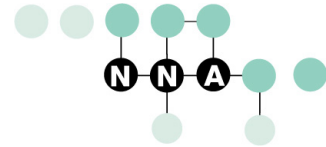
This assessment will provide the Project with:

- A detailed map and description of the features of potential non-Aboriginal cultural heritage significance and their location relative to areas of the proposed works.
- An assessment of the features of significance, including a determination on whether the features are considered to be of Local, State or National Significance.
- A description of potential impacts from the works.
- Specific recommendations for the design and construction teams to manage the Project around key historic sites with minimal impact.
- Preparation (if required) of documents required for impact assessment of the Project with relevant Government bodies.

## 5.7 Recording of Sites Directly Affected as Part of the Project

In the instance that the retention of a cultural heritage place is not possible as part of the Project (for example a building, stone wall, bridge, roadway or significant tree/s need to be removed), then it is recommended that a full archival recording of the site be undertaken prior to construction. The following steps need to be undertaken:

- Collect historical photographs (if available), and archival and current information about the site.
- Identify the site on a map of the local area.
- Make a sketch plan of the site, and identify all relevant items. Show the relationship of the site to its surroundings.
- Make a photographic record before, during and after demolition of the site.
- Collate all information, maps, sketch plan, and photographs into a report.



- Lodge reports with the Cultural Heritage Branch of the Environmental Protection Agency and any other appropriate Heritage Agency, as required.

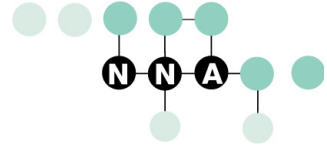
For further assistance in the protection and management of cultural heritage places in accordance with Queensland legislation, refer to the following publications:

- *Cultural heritage protective management guidelines for nature refuge landholders* (Environmental Protection Agency Queensland Parks and Wildlife Service, 2004). The publication is available on the web: <http://www.epa.qld.gov.au/publications?id=1970>
- *Guidelines for Cultural Heritage Management*, (EPA, Brisbane, 2001).

The Guidelines for Cultural Heritage Management produced by the Environmental Protection Agency in 2001 are currently under review following the implementation of the *Aboriginal Cultural Heritage Act 2003*, the *Torres Strait Islander Cultural Heritage Act 2003*, and due to recent amendments to the *Queensland Heritage Act 1992*. A revised set of guidelines may become available during 2008.

Table 3. Mitigation Strategies for Managing Aboriginal/European Cultural Heritage

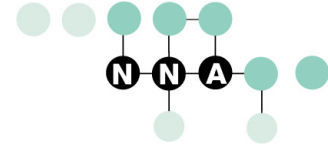
Activity / Construction Item or Detail	Management Mitigation Measures	Responsibility	Timing
Pre-construction engagement	Engagement of relevant <b>Aboriginal</b> Party and <b>European</b> Heritage consultant to advise on cultural heritage prior to the commencement of any works	Environmental Manager/ Cultural Heritage Officer	Pre Construction
Inductions	A general project induction must be completed prior to any person commencing work on site	Safety Manager/ Training Manager	Throughout entire project
Construction - Prior to undertaking any disturbance to top soil (for example the stripping of top soil and excavation)	Confirm that construction has been granted go-ahead in areas of interest identified by the <b>Aboriginal</b> Parties including any additional areas	Liaise with NNA Construction Environmental Team	Construction - A minimum of one week prior to proposed disturbance
Unexpected finds	If any potential significant <b>Aboriginal &amp; European</b> heritage objects or areas are identified in the vicinity of works, works must stop and contact made with the Cultural heritage Officer. Construction can proceed 10m further on. If any NNA personnel are in doubt regarding any heritage ( <b>Aboriginal</b> or <b>European</b> ) issues on site work to stop immediately and contact the Cultural Heritage Officer. If human remains or suspected bone material are found work will immediately stop within a 20 meter buffer and police will be notified. Construction can proceed 20m further on. Investigations will be undertaken by the appropriate government authorities to manage the find. If unsure if bones are human, an archaeologist, vet or chemist can be called upon to identify.	Cultural Heritage Officer/ Site Superintendent	In the event that unexpected finds are encountered



Activity / Construction Item or Detail	Management Mitigation Measures	Responsibility	Timing
Reporting	A copy of any detailed NNA reports on artefacts finds during construction should be provided to the Cultural Heritage Coordination Unit of the Department of Natural Resources and Water (NR&W) in case of Aboriginal heritage, and to the Environmental Protection Authority (EPA) in case of European Heritage.	Cultural Heritage Officer in consultation with Traditional Owners and/or Representatives	During life of project

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## 6 CORRECTIVE AND PREVENTATIVE ACTIONS

### 6.1 Community liaison and complaint management

Complaints represent an opportunity to enhance project environmental performance. All project complaints, including those from members of the public, stakeholder groups and Government agencies, will be managed via the NNA 1800 243 998 phone number to be listed in the Inquiry and Complaints Management Procedure, contained in the Community and Stakeholder Management Plan.

Complaints from any source must be registered using the QESE complaint record section. Where the complaint is environment-related, the complaint will be investigated by the Environmental Manager or Environmental Officer in consultation with the Site Manager or delegate and action/s taken to enable satisfactory closure.

Feedback to relevant personnel will be managed by the Community Relations Team. As required, complaint details (including type and preventative/corrective actions) will be advised to field staff via pre-start meetings, toolbox talks or the Health, Safety and Environment Committee as required.

### 6.2 Environmental incident/emergency reporting

All project staff and subcontractor personnel shall report all environmental incidents to the Environmental Manager, although initial response may go via the Site Manager/Spread Supervisor or Environmental Officer.

### 6.3 Incident/emergency preparedness and response

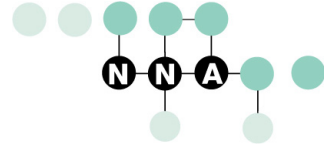
An Incident Response Plan will be prepared for the project. This plan documents suitable incident procedures to ensure effective response in the event of an emergency (including environmental emergencies such as fire, flood and large fuel spills).

The emergency procedures shall be tested on a six-monthly basis. Records are to be maintained of all site emergencies and results of emergency practice drills. The Emergency Response Controller for the project will be defined within the Incident Response Plan.

The key to effective prevention of incidents is monitoring, surveillance and training. During construction activities, inspections and preventative action to be performed by the Alliance will include:

- daily inspections of active worksites and completion of routine environmental checklists
- issue and quick close-out of NCR/EIN
- maintenance of constant supervision on site
- ongoing environmental training
- environmental audits of worksites, subcontractors and compliance issues.





Environmental and safety information on hazardous substances (e.g. Material Safety Data Sheets [MSDS]) will be available at the main site office, including information on where and how such substances are to be stored. An up-to-date list of emergency response personnel and organisations will be maintained at the main office and compounds. A list of key environmental personnel will also be included.

Specific measures will also be implemented to minimise the risk of an incident occurring due to spillage, storage of hazardous materials or fire. Further information will be detailed in the Incident Response Plan.

## 6.4 Incident investigation

All incidents will be documented, investigations conducted and action plans (if required) developed to ensure no repetition of the event. Where current procedures are identified as being ineffective, the CEMP and any relevant WMS will be revised by the Environmental Manager and/or Health and Safety Manager.

An environmental investigation includes the following basic elements:

- advising the environmental authority(ies) if any substantial pollution/infringement has occurred
- identifying the cause and extent of and responsibility for the incident
- identifying and implementing the necessary corrective action
- identifying the personnel responsible for carrying out the corrective action
- implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- recording any changes required to written procedures.

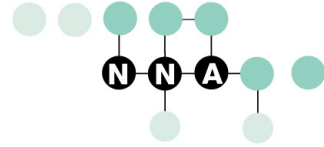
All personnel are required to report all incidents, as incident reporting is regarded as a valuable method of addressing shortcomings in procedures, training or equipment, and is an opportunity for improvement. It is also an offence not to report to the EPA any incident causing serious environmental harm.

## 6.5 Non-conformances

Non-conformances will be resolved according to the Quality Management Plan. The Environmental Manager or delegate will issue a Non-conformance Report (NCR) or an Environmental Improvement Notice (EIN) in response to inappropriate or non-conforming work methods, equipment selection, maintenance of controls or other identified concern.

In the event of a non-conformance:

- the nature of the event will be investigated by the Environmental Manager
- advice may be sought from a specialist
- monitoring may be undertaken
- the effectiveness or need for new/additional controls will be reviewed
- an appropriate preventative and corrective action will be implemented
- strategies will be identified to prevent reoccurrence
- the NCR will be closed-out
- environmental documentation/WMS will be reviewed and revised
- will be documented on QESE and Documentum,



# 7 INSPECTION AND MONITORING

## 7.1 Inspections

A regular monitoring and reporting program for cultural heritage will be conducted in accordance with the specifications of the relevant site WMSs as follows:

- Daily inspections of all cultural heritage management measures by the Site supervisor to ensure that controls are functioning correctly. Any significant issues reported to the Environmental Manager/Officer and/or raised through the non-conformance system.
- Weekly routine inspections by the Environment Manager and/or Site Environmental Officer and reported on the Weekly Site Inspection Checklist (refer G-FRM-001). Any issues that are detected will be reported immediately to the Construction Manager. No work will be permitted that further exacerbates any issues of non-compliance until contingency measures are prescribed and implemented.

## 7.2 Aboriginal Cultural Heritage

### 7.2.1 Construction Phase Monitoring

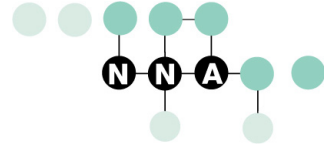
The role of sub-contracted Aboriginal cultural heritage monitors is generally to monitor for the find of artefacts during construction (both during clearing and excavation) on areas that the Gubbi Gubbi pre-construction survey has identified as requiring monitoring during construction.

A minimum of one weeks' notice will be required before construction commences in such an area to enable the arrangement of sub-contracted monitors to be present. The preference is for longer-term notification to avoid and manage any unexpected issues with regards to the resourcing of monitors.

All requests for Monitors must go through the Cultural Heritage Officer for the NNA, who can inform the relevant aboriginal elder of the date, time and location of where works will take place. An advise notice in then signed by the elder demonstrating that the Gubbi Gubbi have been notified. Once this holdpoint has been satisfied, the Verification Checklist can be signed. These populated documents will be filed on Documentum and hard copies retained.

### 7.2.2 Reporting

All Alliance personnel have the responsibility to ensure that completed forms are scanned into the NPI Stage 2 document database (Documentum) which is the official document control system.



### 7.3 Non Aboriginal Heritage

Where construction methods include drill and blast, tunnel boring or other major earthworks and these occur within 50 metres of the boundary of an identified heritage site (building), or an item (stone wall) is found on the easement, then the consultant Archaeologist may be called in to review the item. The consultant Archaeologist may recommend the use of a structural heritage engineer to undertake a detailed visual inspection of each affected site before construction commences. Aims of such an inspection would be to:

- Record the condition of any built fabric within a heritage site, so that the existing structural state of each is understood. Condition reporting should also take into account if timber in any items shows evidence of decay or termite activity, as these can reduce structural adequacy.
- Decide if there are any significant elements within a site which are particularly vulnerable to vibration or explosion, e.g., chimneys, buildings, mineshafts etc.
- Ensure a monitoring regime that takes into account all built fabric of the site, but also emphasises any elements that are particularly vulnerable.

In accordance with the principles of the Burra Charter, no intervention in the building fabric should be carried out as part of the building condition inspection, unless there is good evidence to suggest concealed structural damage.

Any place which is listed on the Queensland Heritage Register will require prior approvals from the Heritage Council for any intervention required.

Monitoring of historical heritage may be required in the event of discovery of and/or possible disturbance of a previously unknown site (see Section 5.3).

### 7.4 Contact Details

#### 7.4.1 Aboriginal Monitors and Surveyors

Contact phone numbers for arranging sub-contracted Aboriginal surveyors and monitors are included in Table 4 below.

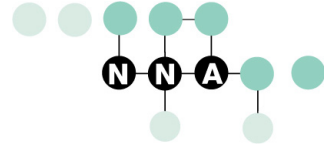


Table 4. Contact Details for Aboriginal Monitors and Surveyors

Area	Company Name	Contact Name	Phone No.
Gubbi Gubbi Country	Ganggala Pty Ltd., 29 Fountain Road, Burpengary, Qld - 4505	Eve Fesl	(07) 38885219 Mob: 0419 023 610

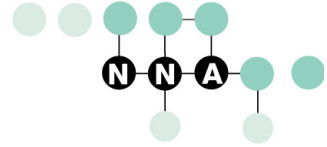
#### 7.4.2 Historic and Aboriginal Archaeologist

Contact phone numbers for Archaeologists are included in Table 5 below.

Table 5. Contact Details for Archaeologists

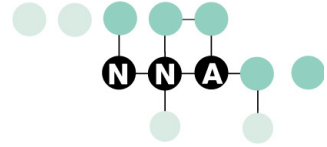
Company Name	Contact Name	Phone No.
Davies Heritage Consultants Pty Ltd	Sue Davies	(07) 3352 6905 Mob: 0419 700 424

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## 8 DEFINITIONS AND ACRONYMS

Acronym	Glossary
CAR	Corrective Action Requests
CH	Cultural Heritage
HMP	This Heritage Management Plan
CHMP	Cultural Heritage Management Plan
DNR&W	Department of Natural Resources and Water
EIN	Environment Improvement Notice
HMP	Heritage Management Plan
KPI	Key Performance Indicators
LinkWater	SRWPCo now trades as Linkwater, which is 100 per cent owned by the Queensland Government
NCR	Non-conformance Report
NPI	Northern Pipeline Interconnector
NNA	Northern Network Alliance
QESE	Quality Environment Safety Engineering Database
SRWP Co.	Southern Regional Water Pipeline Company



## 9 REFERENCE DOCUMENTS

*Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

*Aboriginal Cultural Heritage Act 2003*

*Australian Heritage Council Act 2003*

Australia ICOMOS, *The Burra Charter*. The Australia ICOMOS Charter for Places of Cultural Significance, 1999.

Blyth, A. 2003 *Streets and Roads of Yandina & District: their History and Origins*. Including the Localities of: Bridges,

Cooloolabin, Kiamba, Kulangoor, Maroochy River, North Arm, Valdora and Yandina Creek. Queensland Complete Printing Services: Nambour

*Cultural Heritage Act 2003*

*Cultural heritage protective management guidelines for nature refuge landholders* (Environmental Protection Agency Queensland Parks and Wildlife Service, 2004). The publication is available on the web: <http://www.epa.qld.gov.au/publications?id=1970>

*Environmental Protection Act 1994*.

*Environmental Protection and Biodiversity Conservation Act 1999*

*Guidelines for Cultural Heritage Management*, (EPA, Brisbane, 2001).

*Land and Resources Tribunal Act 1999*

NNA 2008, *NNA Draft Environmental Impact Statement (EIS)*, Northern Network Alliance, Queensland