North Byron Parklands

Technical Paper

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Construction Management Plan

ARDILL PAYNE & PARTNERS

Civil & Structural Engineers – Project Managers – Town Planners – Surveyors

CONSTRUCTION MANAGEMENT PLAN

Prepared for:

North Byron Parklands

Tweed Valley Way & Jones Road,
Yelgun

A project of:
Billinudgel Property Pty Ltd
(Billinudgel Property Trust)

June 2010

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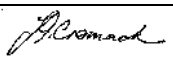
0	11.06.10			T. Cromack	
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1 Introduction

Ardill Payne and Partners (APP) has prepared a Construction Management Plan (CMP) for the proposed development of a world class sustainable cultural events site within an enhanced ecological setting at North Byron Parklands, Tweed Valley Way and Jones Road, Yelgun. The development includes the construction of new road pavements and site accesses, the upgrade of existing road pavements, the construction of a new crossing of Jones Road, and associated infrastructure works.

This plan incorporates the following areas:

- Construction Works
- Traffic and Pedestrian Management
- Noise and Vibration Management
- Materials Storage and Waste Management
- Soil and Water Management
- Flora and Fauna Management
- Pavement Damage and Restoration.

The CMP is to be implemented by adoption of the strategies referred to in various sections of this report, with monitoring, reporting and corrective actions recorded in an Environmental Management Log (EML) or site diary. The EML is to be updated continuously in response to inspections on the site and any breaches of the CMP that may occur.

This document will provide details of mitigation measures to limit the impacts of construction activities on the amenity on adjoining properties, in accordance with the NSW Department of Planning Director-General's Environmental Assessment Requirements (DGRs), dated 25 August 2009, Attachment 2, Project Application, Item 6.

1.1 Terminology

Gate A – main site entry, off Tweed Valley Way, approximately 700m south of Jones Road.

Gate B – off Tweed Valley Way, approximately 200m north of Gate A.

Gate C – secondary site entry, off Tweed Valley Way at the existing site access opposite Yelgun Road (approximately 300m south of the Gate A).

Gate S – off Jones Road.

2 Director General's Requirements

The Director General of the Department of Planning determined that the proposal was a Major Project pursuant to Part 3A of the Environmental Planning and Assessment Act 1979, and issued Environmental Assessment Requirements (DGRs) on 25 August 2009. The DGRs that are addressed in this report are as follows:

- *Attachment 2, Project Application, 6.0 Construction Management Plan – a plan which outlines traffic and pedestrian management during construction and management of impacts on amenity of adjoining properties and appropriate mitigation measures including noise, dust and sediment and erosion controls.*

Additional detail on traffic and pedestrian management during construction, and sediment and erosion controls to be implemented, is provided in separate reports referenced in this document.

3 Site Details and Proposed Development

3.1 Existing Site

The subject site is located on the eastern side of the Tweed Valley Way at Jones Road, approximately 6.5km south of Mooball, 5.5km north of Brunswick Heads north turnoff, and 23.5km north of Byron Bay. A locality plan is included in **Attachment 1**.

In summary, the application area comprises the following land parcels:

Lot No	DP
403	755687
Pt. 402 & 404	755687
1	1145020
Pt. 46	755687
Pt. 10	875112
Pt. 2	848618
Pt. 30	880376
Pt. 102	1001878
Pt. 12	848618

3.2 Proposed Development

The proposed development of the site involves the following main construction activities:

- Site earthworks

- Internal road construction (spine road and event laneways)
- External road construction and widening, including new intersections
- A new crossing of Jones Road (either an underpass or an at-grade intersection)
- Stormwater drainage, including piped culverts, open drains and stormwater management facilities
- Wastewater treatment system, including the construction of a sewage treatment plant, effluent holding dams, effluent polishing wetlands, effluent irrigation areas and reticulation mains
- Water supply, including the construction of a water treatment plant, bulk water storage tanks and reticulation mains, and the construction of a new dam
- Electricity and telecommunication distribution cables (overhead and/or underground)
- Construction of an administration building and gatehouse
- Pedestrian pathways and bridges.

It is not proposed to construct all of the wastewater treatment system and water supply infrastructure in the initial stages – for further details and the proposed staging, refer to *'Integrated Water Cycle Assesment and Management, North Byron Parklands, Tweed Valley Way and Jones Road, Yelgun, NSW'*, Gilbert & Sutherland, May 2010.

An event area and land use structure plan is included in **Attachment 2**.

3.3 Adjoining Development

The site is surrounded by existing rural residences and properties, and Billinudgel Nature Reserve.

3.4 Existing Road Pavements

Road pavements of adjacent roads are described as follows:

- **Tweed Valley Way & Brunswick Valley Way** – the old Pacific Highway from the Yelgun Interchange north is Tweed Valley Way. The old Pacific Highway between the Yelgun Interchange and the Brunswick River is Brunswick Valley Way.

  Both roads have a minimum sealed carriageway width of approx 7.2m (2 x 3.6m lanes), with approx 1.0m wide sealed shoulders. The roads are of typical 2 lane highway standard, in good condition,

centre and edge line marked, with a current speed limit of 90kph. Tweed Valley Way at Gate A has an existing bitumen seal of 13.5m.

- **Jones Road** – Jones Road is a single lane rural road, with a gravel formation of approximately 3.5m in width, and table drains both sides. The road is windy and undulating and is flanked by large trees. The road provides access to several rural properties along its length.

3.5 Parking

On-road parking in the vicinity of the site is limited, especially along Jones Road. Construction vehicles shall be parked on site at all times.

3.6 Traffic Flows

The surrounding area is rural which does not generate high volumes of traffic. However traffic volumes on Tweed Valley Way and Brunswick Valley Way are in the order of 3500 vpd. Traffic flows would be highest during weekday peak periods which generally occur between about 7:30am to 9:00am, and 4:30pm to 6:00pm, and holiday periods. School bus services travel along Tweed Valley Way collecting children at the end of Jones Road.

3.7 Services

Existing telecommunication cables, including Optic Fibre cables, and overhead power lines are located in the road verges of Tweed Valley Way and Jones Road, and across the site. Some of these services may need to be removed or relocated as part of the construction works.

The Principal Contractor is to confirm the location and level of all existing services prior to commencing work on the site.

3.8 Footpath

There are no sealed footpaths or cycleways located in the area. Pedestrians utilise the grassed road verges or the road pavements.

4 Construction Works

4.1 Construction Program

Generally, construction on the site will include the following stages:

- Define and suitably protect identified environmental protection areas
- Install erosion and sediment control devices
- Implement Management Plans
- Undertake site induction program for all contractors and workers
- Earthworks, roadworks and stormwater drainage
- Wastewater treatment and water supply
- Electrical and telecommunication services
- Building construction
- Ancillary works.

4.2 Construction Details

Construction activities will include site earthworks, internal and external roadworks, the installation of site services as required (stormwater drainage, wastewater treatment, water supply, power, and telecommunication), the construction of a new channellised intersection and property access on Tweed Valley Way at Gate A, and the widening of Tweed Valley Way at Gate C to permit temporary turn movements during events. Construction works will also include the erection of an administration building and a gatehouse.

Construction of earthworks, internal roadworks and services is expected to take about 16-20 weeks in total. Construction in the public roads is expected to take about 8-10 weeks if constructed concurrently. Building construction can be undertaken concurrent with other construction activities on the site.

Plant and equipment used in the construction of earthworks, roadworks and services will typically include excavators, bulldozers, dump trucks, graders, water carts, rollers, concrete trucks, and asphalt paving machines.

4.2.1 Earthworks, Roadworks and Stormwater Drainage

Construction materials imported to the site will be free from contaminants. Where possible, material excavated during the construction will be reused on site.

A new crossing of Jones Road is required to connect the southern and northern sections of the site. This crossing will consist of either an underpass beneath Jones Road, or an at-grade intersection.

Construction works in Jones Road will include an upgrade of the road pavement for a length of approximately 350m, bitumen surfacing, and the construction of a new property access (Gate S).

During the proposed road construction on Jones Road, traffic controllers will be in attendance to direct traffic and pedestrians through the works area. Access will be available at all times under traffic control. The contractor will be advised of the specific requirements of the residents of Jones Road, especially with respect to access to bus services for school children in the morning and afternoon.

Should the underpass be constructed beneath Jones Road, a temporary detour road will be constructed on the northern side of Jones Road to provide a bypass around the works area during construction of the underpass.

Construction works at Gates A, B and C will include the construction of piped crossings of the existing drain (as necessary) and sealed entry pavements into the site. Widening of the existing seal and pavement on Tweed Valley Way, and re-linemarking as necessary, will also be required at Gates A and C. Traffic controllers will be in attendance to direct traffic through and past the works area while works are in progress.

In low lying areas, the spine road is generally constructed no more than 300mm above the existing ground level. The event laneways are generally constructed no more than 100mm above the existing ground level.

The section of spine road in the vicinity of Archeological site #22-1-114/115 (Yelgun flat 1 campsite and surrounds – highlighted on sketch SK.01 in **Attachment 3**) shall be constructed generally by placing the road pavement directly on the stripped surface (topsoil removed) to avoid any further substantial disturbance of Aboriginal artefacts within this area. To avoid impact on adjoining sections of the spur (which are similarly likely to contain subsurface artefacts) all heavy machinery activities should be confined to the spine road corridor itself within the highlighted area ('*Cultural Heritage Assessment, Proposed Cultural Events Site, Tweed Valley Way and Jones Road, Yelgun', Jacqueline Collins (Consultant Archaeologist).*

4.2.2 Wastewater Treatment and Water Supply

Imported water will be used to cater for initial events on the site. The construction of permanent water storage, treatment and reticulation infrastructure will occur in later stages.

Temporary sanitary and bathroom facilities will be provided for initial events on the site. The construction of permanent wastewater treatment infrastructure will occur in later stages.

For further details and the proposed staging, refer to *'Integrated Water Cycle Assesment and Management, North Byron Parklands, Tweed Valley Way and Jones Road, Yelgun, NSW'*, Gilbert & Sutherland, May 2010.

It is recommended that specific Construction Management Plans for the permanent infrastructure works be provided at detailed design stage.

4.2.3 Building Construction

Building construction is typically single storey, lightweight steel framed with metal cladding to skillion roof and external walls. Some architectural timber screeing and shade sail structures are included.

4.3 Site Manager

Throughout the construction works, a sign shall be prominently displayed on the site with contact details of the Site Manager, who may be contacted in the event of an accident or emergency on the site, or any other issue associated with the development (refer Section 4.8.1).

The Principal Contractor refers to the nominated representative of the main construction company engaged by the developer. The Site Manager is the Principal Contractor's most senior employee on the site who is responsible for overall site activities.

The Principal Contractor is responsible for implementing the Management Plans for the site. The Site Manager is responsible for ensuring that they are properly maintained, and that all sub-contractors and suppliers are aware of the requirements of the Plans and adhere to these requirements.

4.4 Overhead Power

Overhead power lines shall be “tagged” where necessary to alert the operators of construction equipment such as cranes, excavators, concrete pumps, tippers, etc. Ground level indicators shall also alert operators of the overhead hazard.

4.5 Hours of Operation

Construction activities can be conducted between 7:00am and 6:00pm on weekdays and 8:00am and 1:00pm on Saturdays. No noise generating construction activities are to be conducted on Sundays or public holidays.

Activities disturbing traffic flows are not permitted on weekends or public holidays to also avoid peak periods.

4.6 Deliveries and Access to the Site

Access to the site for construction vehicles and deliveries will be from Tweed Valley Way (southern portion of site) and Jones Road (northern portion of site). Exit the Pacific Highway at the Yelgun Interchange and follow Tweed Valley Way north to Gate A (approximately 1.5km from the interchange). Jones Road intersects with Tweed Valley Way approximately 700m north of Gate A.

Where possible, all deliveries shall occur outside of peak periods on weekdays.

4.7 Refuse / Solid Waste

Waste generated on site will be managed in accordance with Section 7 of this report.

4.8 General Construction Requirements

4.8.1 Builder’s Sign

A suitable sign is to be provided on the site in a prominent location near the site entrance indicating the name, address and contact details (including after hours) of the Principal Contractor, the Principal Certifying Authority, and the Civil Engineer. The approved hours of work shall also be displayed.

Minimum sign dimension shall be 841mm x 594mm (A1 size); text on the sign shall be a minimum of 30 point type size. The

sign shall be durable and weatherproof and be displayed for the duration of the works. The sign shall be mounted at eye level and state that unauthorised entry to the site is not permitted.

4.8.2 Builder's Toilet

A suitable builder's toilet shall be provided on-site before work commences. Such facility shall be an approved chemical toilet.

4.8.3 Site Fencing

Accessible construction areas shall be provided with adequate safety fencing preventing public access onto the site. Signage restricting entry to authorised personnel is to be provided in a visually prominent location near the site entrance.

If construction work (including loading and unloading of delivery vehicles) is likely to obstruct or inconvenience pedestrian or vehicular traffic in a public place, or involves the temporary closure of a public place, the directions in the Traffic Management Plan shall be followed.

4.8.4 Aboriginal Heritage

Tweed-Byron LALC recommends that Aboriginal representatives be engaged to monitor any necessary vegetation clearing and initial development related earthworks.

All contractors engaged in vegetation clearing and sub-surface works shall be advised of their legal requirements with regards to Aboriginal cultural materials.

4.8.5 Sub-Contractors

All subcontractors must complete a general industry OH&S induction course and a site specific induction course prior to initial entry onto the site.

5 Traffic and Pedestrian Management

A Traffic Management Plan (TMP) for construction works is required (refer the '*Traffic Management Plan – Construction Phase*', Ardill Payne & Partners, June 2010).

A brief summary is provided in the following sections.

5.1 Construction Traffic

General

Deliveries of construction materials should be done in off-peak times. Where possible, all deliveries shall occur outside of peak periods on weekdays. All construction vehicles shall enter and leave the site in a forward direction. Adequate space is available on site for the maneuvering of all construction vehicles.

It is advised that the movement of large and articulated vehicles should generally occur outside of peak periods. Therefore these vehicles are not expected to have difficulty merging into the traffic on Tweed Valley Way.

Drivers and sub-contractors will be informed of the proposed traffic management procedures prior to commencing work on the site.

Road Works

Signs and Traffic Controllers will be positioned in both the northern and southern approaches on Tweed Valley Way and on Jones Road. Traffic speeds shall be reduced to 40kph in all locations where traffic controllers are stationed, for the duration of the roadworks. Appropriate approvals shall be obtained for the speed reduction zones.

It will be necessary to close the shoulders of Tweed Valley Way at various times during the construction of the road works. A minimum trafficable width of 3.0m in the adjacent lane shall be maintained during these closures. Partial closures of Tweed Valley Way may also be necessary during new line marking.

Should the underpass be constructed beneath Jones Road, it will be necessary to completely close part of Jones Road. A temporary bypass road will be constructed on the northern side of Jones Road and will be open for the duration of the underpass construction.

Access past or through the work areas shall be available at all times during the works.

Parking

It is expected that construction vehicles will park on the site at all times. Drivers, sub-contractors and staff will be informed of the proposed traffic management procedures and parking requirements prior to commencing work on the site. The Principal Contractor is advised to consider the property access and parking needs of adjoining residents during construction works.

Subcontractors

The Site Manager shall ensure that all subcontractors are aware of the requirements of this plan and enforcement of its requirements. All subcontractors will be advised at "Tool Box Meetings" of parking and access requirements.

5.2 Pedestrians/Cyclists

Pedestrian and cyclists will be excluded from the construction area.

5.3 Signage and Barriers

Signage and barriers erected for the works shall be in accordance with the TMP. Changes are not permitted, except during emergencies, without the approval of the Traffic Engineer or an RTA accredited Council officer.

6 Noise and Vibration Management

6.1 Noise Management

Noise associated with the construction works will primarily be associated with movement of large vehicles and the operation of machinery. Works onsite will be carried out in accordance with the Interim Construction Noise Guideline (2009), prepared by the Department of Environment and Climate Change (DECC). The DECC regulate noise emissions from construction works under the Protection of the Environment Operations (POEO) Act.

Noise management techniques to be employed on site include, but are not limited to the following:

- Use mufflers on equipment to reduce noise emissions
- Regularly maintain machinery and repair or replace noisy equipment

- Turn off unused machinery and minimise the use of alarms on machinery by efficient arrangement of the site
- Use and siting of equipment. By locating noisy equipment as far away from noise sensitive areas as is practical, distance separation will reduce potential noise impacts. Unloading building materials should be conducted as far away from noise sensitive areas as possible
- Construction activities are to be conducted between 7:00am and 6:00pm on weekdays and 8:00am and 1:00pm on Saturdays. No noise generating construction activities are to be conducted on Sundays or public holidays
- Encouraging workers to not congregate outside the site before 6.45am
- Provide sufficient warning to neighbours potentially affected by noise and notify them of contact details for complaints or concerns
- Handle and investigate noise complaints in an efficient manner.

6.2 Vibration Management

Vibration effects may cause concern to nearby residents during construction works. Sources of ground vibration can include bulldozers (ripping), truck traffic over irregular surfaces, and vibratory rollers during road construction. Due to the distance of proposed construction activities from existing residences, vibration from construction is unlikely to be perceptible at most residences. Some vibration from vibratory rollers may be experienced during road reconstruction in Jones Road.

Vibration mitigation shall include, but not be limited to, the following measures:

- Construction activities are to be conducted between 7:00am and 6:00pm on weekdays and 8:00am and 1:00pm on Saturdays. No vibration generating construction activities are to be conducted on Sundays or public holidays
- Vibration monitoring if working within 25m of affected residences
- Advise potentially affected residents when construction activities may generate perceptible levels of vibration
- Handle and investigate noise complaints in an efficient manner.

7 Materials Storage & Waste Management

7.1 Materials Storage

Prior to construction, the Principal Contractor will nominate a position for materials storage. The Principal Contractor will be responsible for providing adequate storage for the duration of the works. The Site Manager will be responsible for storage management during construction.

There shall be no storage of materials, plant or equipment on the road, footway or reserve areas without the prior consent of Council.

Fuels and oils will not be stored on site. Refuelling of heavy vehicles will take place off-site. Some civil works machinery may be refuelled on site from a 4WD mounted tank. Any spills shall not be permitted to discharge to any watercourse. Regular machine and truck maintenance will not be undertaken on site.

7.2 Waste Management

The Principal Contractor will be responsible for providing a waste management procedure for the duration of the works. The Site Manager will be responsible for waste management during construction. Best management practices, such as recycling and reuse, shall be implemented.

In-situ material assessed as being unsuitable for use as subgrade material shall be excavated and respread on site, in an approved flood-free location.

8 Soil and Water Management

Soil and water management shall be in accordance with Landcom's manual "*Managing Urban Stormwater: Soils and Construction*", March 2004, and the following management plans:

- *'Stormwater Management Plan'*, Ardill Payne & Partners, June 2010
- *'Erosion and Sediment Control Plan'*, Ardill Payne & Partners, June 2010.

A brief summary is provided in the following sections.

8.1 Overview

Soil and water management shall cover all civil construction works, including road construction and servicing. Temporary erosion and sediment control measures are briefly covered in Section 8.3 – full details are specified in the *'Erosion and Sediment Control Plan'*. Treatment measures are described in Sections 8.2 to 8.4, and the monitoring and reporting requirements are described in Section 8.5.

Civil works involves the earthworks associated with the construction of roadworks (and possibly the underpass beneath Jones Road), stormwater drainage, effluent disposal and water supply, and ancillary works in accordance with the approved plans.

The following soil and water management issues may be raised during civil works:

- Dust control due to earthworks
- Erosion from exposed construction areas
- Prevention of sediment leaving the site
- Dewatering of excavations.

The Site Manager will ensure that these procedures are followed and that controls measures are maintained and adequate. All loads shall be covered. The Site Manager is responsible for monitoring the condition of adjacent streets and organising for cleaning of the road surfaces if required.

8.2 Dust

Dust from the site should be managed to prevent excessive degradation in air quality or nuisance to adjacent sites. This will be measured by limiting complaints to less than one per week.

During construction works, dust will be controlled onsite by watering sprays or similar as well as the following when necessary:

- Limiting traffic on disturbed areas
- All stockpiles to be covered by anchored geofabric
- Dust covers provided on trucks and dumpers.

Where wind speed exceeds about 10m/s (36km/hr), or a watering spray/truck is not available, activities generating dust shall cease unless the Site Manager certifies that dust controls are operating effectively and air quality does not cause a nuisance.

In the event that dust control is unsatisfactory then some of the following measures may be utilised:

- Inspect existing controls and clean, upgrade or improve as required
- Open weave barrier fencing is to be provided on the windward side in accordance with Landcom's manual "*Managing Urban Stormwater: Soils and Construction*", March 2004
- Disturbed areas are to be covered with geotextile
- Temporary access roads and parking areas shall be sealed with a gravel layer
- Construction activities to stop, disturbed areas stabilised and the dust control measures reviewed.

In the event of continuing complaints, dust monitoring shall be conducted in accordance with AS3580.10.1 (1991). The Site Manager is responsible for visually monitoring air quality and the adequacies of dust control measures at least daily, and as required to ensure that the above requirements are satisfied and performance is satisfactory. In the event of unsatisfactory dust control as indicated by excessive complaints, the Principal Contractor is responsible for initiating a review of the dust controls and dust monitoring as required.

8.3 Erosion and Sediment Control

Temporary erosion and sediment control measures are detailed in the *'Erosion and Sediment Control Plan'*. Erosion of the site shall be minimised and sediment should not adversely impact surrounding water bodies or areas. Generally the stormwater runoff shall be managed by:

- Limiting traffic on disturbed areas
- Careful management of stockpiles using covers if necessary. Stockpiles shall not be located in drainage channels and shall be surrounded by temporary sediment fences on the downslope side
- The implementation of sediment control structures such as temporary sediment traps and basins, diversion drains, sediment fencing, inlet filters, and stabilised site access points
- Backfilling of service trenches as soon as possible
- Street cleaning as required to remove sediment falling off exiting vehicles
- Employ rock scour protection to stormwater inlets and outlets as specified.

Erosion and sediment control devices shall be regularly maintained, and repaired or cleaned as necessary, to retain the effectiveness of the selected measures. Maintenance shall continue until disturbed areas have been adequately revegetated. Unpolluted runoff shall be diverted around disturbed areas.

Where any disturbed area of the site exceeds 2500m^2, temporary sediment basins will be required during construction. Details of the temporary sediment basins are included in the *'Erosion and Sediment Control Plan'*. The basins will be required while the site continues to generate sediment laden runoff.

8.4 Dewatering

Water pumped from excavations shall be directed to temporary sediment basins prior to and necessary treatment and discharge from the site.

8.5 Monitoring and Reporting Requirements

The site shall be inspected by the Site Manager and Engineer at the start of construction works to ensure that the requirements of the *'Erosion and Sediment Control Plan'* are in place. The Site Manager or his nominated representative shall inspect drainage systems and water quality controls during all rainfall events during the construction period. Contact the Engineer for advice where required.

Visual inspections of the construction phase sediment and erosion controls shall be carried out daily and after rainfall events (>25mm in a 24 hour period) to ensure that controls are in place and operational.

Surface water quality (pH, turbidity and suspended solids, and visual survey for oil and grease) entering and leaving the site shall be monitored during the first rainfall event (>25 mm in a 24 hour period) of each month. Details of the water quality parameters and the monitoring locations are contained in the *'Integrated* Water *Cycle Assesment and Management, North Byron Parklands, Tweed Valley Way and Jones Road, Yelgun, NSW'*, Gilbert & Sutherland, May 2010.

Dust control shall be monitored by the Site Manager as described in Section 8.2. In the event of excessive complaints, the Engineer shall be notified and he shall liaise with the Principal Contractor to implement corrective measures.

Monitoring, reporting and corrective actions shall be recorded in an Environmental Management Log (EML) or site diary. The EML is to be updated continuously in response to inspections on the site and any breaches of the CMP that may occur. Include details of inspection time, weather conditions, rainfall reading and any other relevant observations. Record any maintenance or corrective measures implemented as a result of the inspection. All records to be kept on site for inspection by local or state government officers at any time.

8.6 Corrective Action

The Site Manager is to review the effectiveness of environmental controls on site and implement any changes required to improve them.

9 Flora and Fauna Management

Flora and fauna management shall be in accordance with the recommendations contained in the *'Ecological Assessment',* Dr. Mark Fitzgerald, May 2010.

In synopsis, flora and fauna management for construction activities will follow these basic principles:

- Pre-clearing and pre-construction surveys of all construction sites and projects
- Where native vegetation clearing is to occur, an ecologist is to attend
- Where native vegetation clearing is to occur, salvage trees, soil, logs and litter for use on site
- Parklands Environmental Induction must be given to all workers and personnel on site
- Flagging and barrier fencing of threatened plants, threatened species habitats, and endangered ecological communities within the potential impact zone of any construction activity
- Implement measures to reduce or compensate for any barrier effects for terrestrial fauna
- Fauna and flora monitoring of impacts of construction (e.g. roadkill) may be required
- An environmental audit and reporting will apply to all construction activities on site
- Drains, watercourses and wetlands of the site must be properly protected from sediment movement and pollution.

10 Pavement Damage and Restoration

Prior to the commencement of construction it is recommended that a dilapidation survey be carried out on the surrounding street system to assess their existing condition.

The Site Manager shall be responsible for monitoring the condition of the pavements during construction in terms of cleanliness and structural integrity, and organising street cleaning and/or remedial works as required. Following completion of construction, the condition of the pavements shall be jointly inspected by Council and Principal Contractor and assessed against the initial dilapidation survey. Remedial works as agreed between these parties shall be the responsibility of the Principal Contractor.

11 Scope of Engagement

This report has been prepared by Ardill Payne & Partners (APP) at the request of Billinudgel Property Trust for the purpose of preparing a Construction Management Plan for the proposed cultural event site at North Byron Parklands, and is not to be used for any other purpose or by any other person or corporation.

This report has been prepared from the information provided to us and from other information obtained as a result of enquiries made by us. APP accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

APP declares that it does not have, nor expects to have, a beneficial interest in the subject project.

To avoid this advice being used inappropriately it is recommended that you consult with APP before conveying the information to another who may not fully understand the objectives of the report. This report is meant only for the subject site/project and should not be applied to any other.

12 Attachments

Attachment 1 Locality Plan

Attachment 2 Event Area and Land Use Structure Plan

Attachment 3 Spine Road adjacent to Archaeological Site

ATTACHMENT 1

Attachment 1
Locality Plan

Do not scale drawing. Use written dimensions only

Client: Billinudgel Property Trust

Title: North Byron Parklands - Regional Location

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Scale at A4 NTS	Datum -
Design TC	Date June 2010
Drawn NB	File 6883 LocPlan.dwg
Dwg No. LP.01	Job No. 6883

ATTACHMENT 2

Attachment 2
Event Area and Land Use
Structure Plan

Legend:

The Site | Extents of Application Area (Dashed) | Car Parking

Event Area | Conference Centre Uses | Cultural Centre/Administration Uses | Gatehouse

Spine Road (7m wide) | Event access lane (6m wide) | Main pedestrian route

North Byron Parklands

0 160m

1:8000 (@ A3)

Prepared by

design team ink

Date 21.07.10

Author SDR

Reference 09_120

IMPORTANT NOTE |
Cadastral information is subject to survey. The alignment of the aerial photograph and vectorial overlays is approximate only. This plan is conceptual only and subject to detailed survey and design.

Sources | Aerial Photography: Bill Mills (2009) | **Cadastre:** Ardill Payne (2009) | Major contour = 5m | Minor contour = 1m

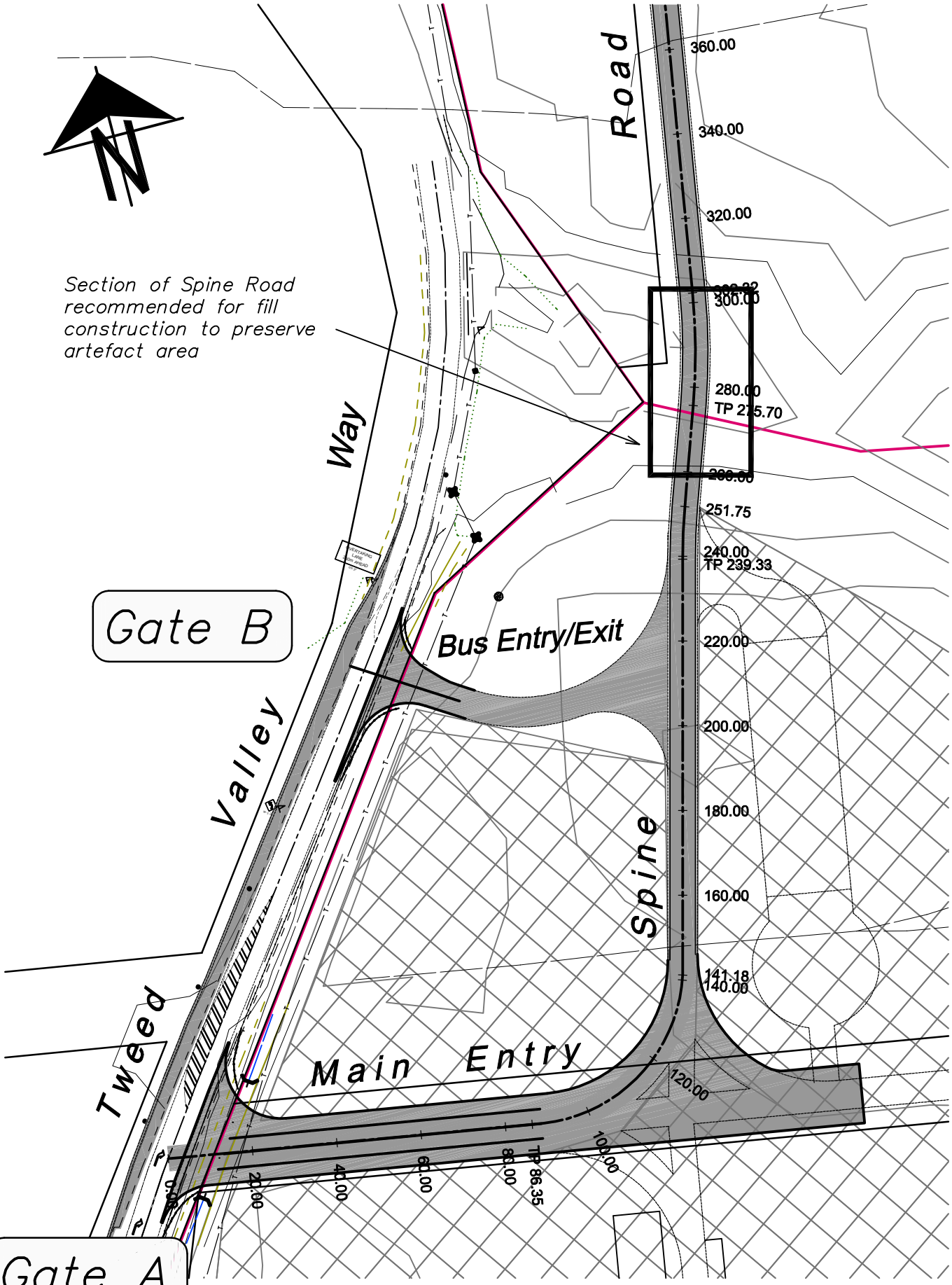
Plan | **1.2**

Event Area and Land Use Structure 14

North Byron Parklands | Tweed Valley Way & Jones Road

ATTACHMENT 3

Attachment 3
Spine Road adjacent to
Archaeological Site



Client:
BILLINUDGEL PROPERTY TRUST

Title: North Byron Parklands
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