Appendix 5

Construction Management Plan

LANDPARTNERS
built environment consultants

2A Carrington Street
PO Box 1134
***LISMORE** NSW 2480*

Tel (02) 6627 5660
Fax (02) 6621 7664

email: info@landpartners.com.au
www.landpartners.com.au

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Construction Management Plan

'Riveroaks'
Lots 1, 2, 3 and 5 DP1074242 and part Lot 269 DP755684
Pacific Highway, Ballina

(Proposed Residential Subdivision on behalf of Rayshield Pty Ltd)

20 January 2008

Bruce Hammond
Civil Engineer, LandPartners Limited

benchmark IN QUALITY AS/NZS ISO 9001

Ref No. **LM070113.000**

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Due consideration has been given to site conditions and to appropriate legislation and documentation available at the time of preparation of the report. As these elements are liable to change over time, the report should be considered current at the time of preparation only.

The report relies on information supplied by the client and on findings obtained using accepted survey and assessment methodology. Specific survey methodology is described in the relevant section of the report.

While due care was taken during field survey and report preparation, LandPartners accepts no responsibility for any omissions that may have occurred due to the nature of the survey methodology.

Conclusions to the report are professional opinions and LandPartners cannot guarantee acceptance or consent of the relevant determining/ consent authorities. Subsequent requests for further work or information will be subject to additional fees.

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1 Introduction

The attached Construction Management Plan has been developed in order to ensure that the construction works proposed in developing the Riveroaks subdivision estate do not adversely affect health, safety, amenity, traffic or the environment of the surrounding area.

This Management Plan is a requirement of the Director Generals Environmental Assessment requirements.

The attached CMP is the proposed template that would be completed by the site head contractor who will be appointed by the developer and who will be in control of the site during the course of the works. Its satisfactory completion would be required prior to any works commencing on site.

1.1 Subject Site and Proposal

The subject site is located on the Pacific Highway, Ballina and is formally known as Lots 1, 2, 3 and 5 DP1074242 and part Lot 269 DP755684. The site is currently zoned 2(a) - Residential in the Ballina Local Environmental Plan (1987). The location of the subject site is shown on Fig. 1.

The proposed development entails a 238 lot subdivision .

The proposed development will include the construction of several internal access roads, access and road widening from the existing Pacific Highway, footpath/cycle-ways, stormwater, sewer and water reticulation, pumping stations, rising mains and flood control works.

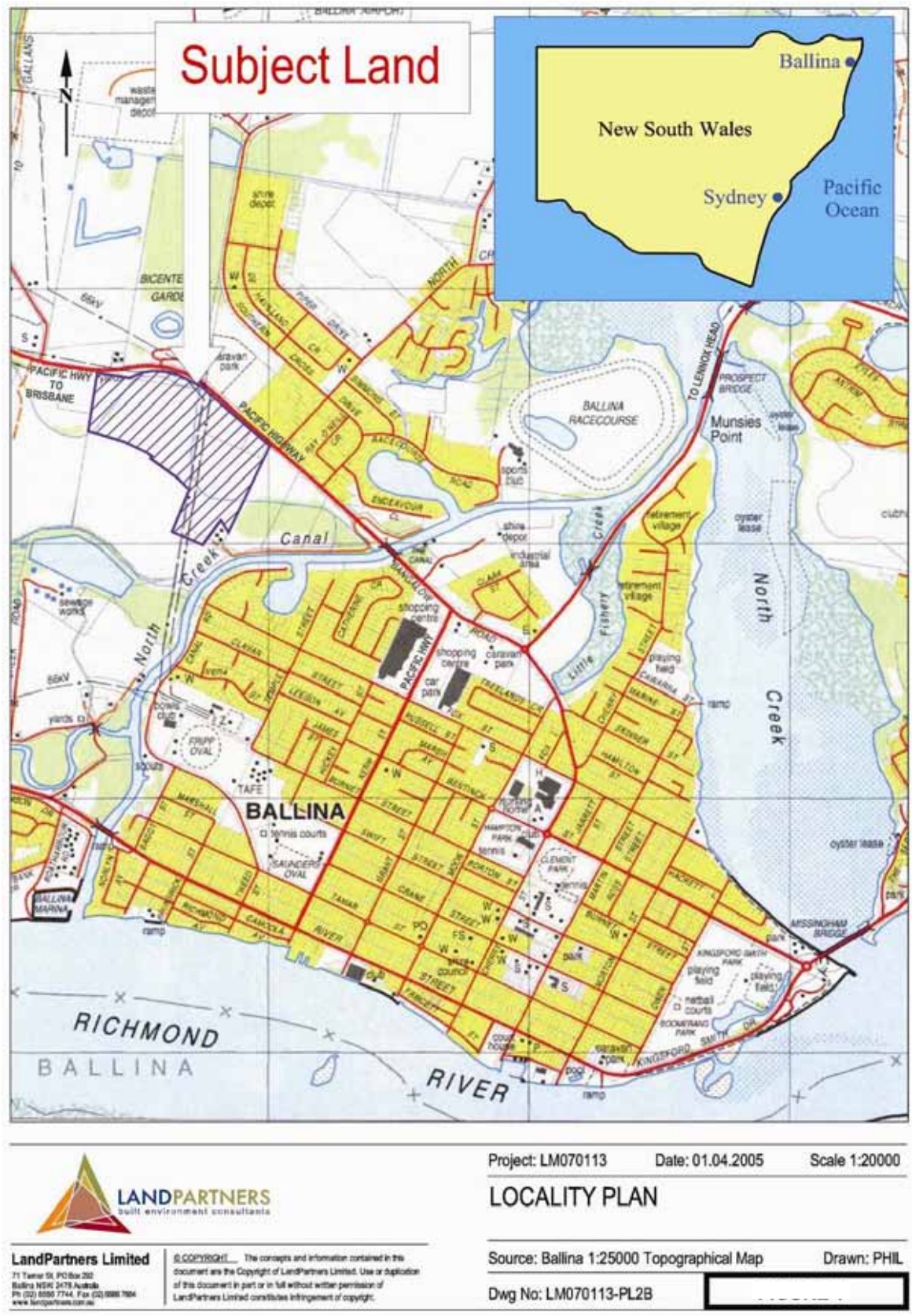

Figure 1. Locality plan.

2 CMP Measures and Objectives

The CMP is divided into five (5) elements:

- Element 1 – Approval, Public Safety, Amenity and Site Security;
- Element 2 – Operating Hours, Noise and Vibration Controls;
- Element 3 – Air and Dust Management;
- Element 4 - Storm water, Pollution and Sediment Control;
- Element 5 – Traffic Management.

2.1 Element 1 – Approval, Public Safety, Amenity and Site Security

The objectives of this element of the CMP are to ensure that:

- **The general public is adequately protected from activities occurring on the site**. This will be achieved by implementing a number of measures including providing adequate notice to the relevant authorities on the commencement of any work, obtaining all required work permits, erecting all required site advisory signage including safety warning signs, providing appropriate fencing for the site, and storing any dangerous chemicals in properly constructed containers;
- **The developer has documented strategies to provide a safe and secure job site**. This will be achieved by requiring the site Head Contractor, as a part of his contractual relationship with the developer to complete, sign for and implement the attached CMP template.
- **Demand for occupation of the street and protection of Council and RTA assets is well managed.** This will be achieved by ensuring that the appropriate notice for commencement of works is given, providing all required maintenance bonds, locating all existing services prior to any excavation works and undertaking a dilapidation survey of all public assets in the immediate vicinity to establish pre development asset condition. During the construction of the temporary intersection and any other road works on the Pacific Highway, a Works Authorization Deed (WAD) will be entered into between the developer and the RTA to ensure the proper management of this asset.

2.2 Element 2 – Operating Hours, Noise and Vibration Controls

The objectives of this element of the CMP are to:

- **Minimize the impact of noise on the immediate neighbourhood.** This will be achieved by undertaking construction work generally only during the following hours; Mon to Friday 7.00 am to 5.00 pm, Sat 7.00 am to 3.00 pm.

Maintenance work on plant and machinery would be permissible at any time as long as no intrusive noise was generated. In addition to the above working hours restrictions, all plant and equipment operating on the site will have appropriate mufflers fitted. Road works being undertaken on the Pacific Highway would be undertaken under the terms and conditions stipulated in the WAD between the developer and the RTA. This WAD may place further restrictions on work times and hours for this part of the works.

- **To provide a framework to plan and cater for construction activities outside of normal hours.** Any works to be undertaken outside of the above working hours would require a special permit from the Council.
- **To minimize the likelihood of damage to adjacent buildings and structures.** This will be achieved by clearly identifying on plans all immediately adjacent structures and advising the owners of the Head Contractors contact details. A house and residence on Lot 2 located to the south east of the work site and a house on the Lot to the west of the site are the only structures within the immediately proximity of the works south of the Highway. To the north of the Highway there is a shopping centre and a mobile home park. The major possible cause of damage to structures would be from vibration during filling works but as there are no structures within 40 m of the proposed major filling areas it is unlikely that any damage will result. To ensure that damage to existing roads is not caused by construction traffic, all plant and vehicles utilizing these public roads will be registered for that purpose and therefore legally entitled to do so.

2.3 Element 3 – Air and Dust Management

The objectives of this element of the CMP are to ensure that:

- **Air quality (airborne dust and pollutants) in and around the construction site is maintained at acceptable levels throughout the construction period.** Dust management will primarily be achieved through the use of water carts. Particular attention will be given to construction haul roads and large open areas of non vegetated fill pads. The re-spreading of topsoil and the re-establishment of grass cover will be undertaken as soon as possible after filling is completed. Any long term stockpiles of material that could potentially cause a dust problem will be seeded immediately to get vegetation cover ASAP. In the event of extreme prevailing winds from the south carrying dust toward the industrial area, works would be halted with only dust suppression watering activities maintained.

2.4 Element 4 - Storm water, Pollution and Sediment Control

The objectives of this element of the CMP are to:

- **Prevent contamination of, or damage to, storm water drains and water ways.** This will primarily be achieved through the implementation of

Erosion and Sediment Control Plan and an Acid Sulphate Management Plan. Erosion and sediment control will be achieved through the construction of appropriately placed sediment fences and sediment detention basins. These will be monitored daily during the course of the work to ensure their successful operation is maintained. Sediment basins that become over full with trapped sediment will be cleaned out. Hay bails will also be used in drainage swales to help trap sediment and reduce water velocities. It is likely that acid sulphate materials will be encountered on site at depths of approximately 750 mm below natural ground. Their method of treatment is detailed in the ASMP but generally will be managed through the use of containment bunds and treatment with lime.

- **Ensure that sediment from the site is retained on site during construction work.** This will primarily be achieved by implementing the erosion and sediment control plan and by providing shake down areas for trucks and vehicles at the site entrance/exit. There will only be one (1) entrance/exit to the site from the Pacific Highway.

2.5 Element 5 – Traffic Management

The objective of this element of the CMP is to:

- **Minimize disruption to traffic (vehicles, pedestrians and cyclists) caused by construction activities to ensure the safety of all road users.** This will be achieved by designing specific Traffic Management Plans applicable to the particular construction activities being undertaken as part of the development works. Different management plans would be developed to reflect the different types of construction activity that will be undertaken as the development progresses. Such different stages of development would be: for times when highway road work was being undertaken, times of peak heavy vehicle movements into and out of the development such as when filling the site and during normal construction times. Any work on the highway will require a WAD between the developer and the RTA to ensure that all traffic management issues pertaining to the highway are addressed to the satisfaction of the RTA.

ATTACHMENT 1 – CMP Template

River Oaks Development Pacific Highway Ballina NSW

CONSTRUCTION MANAGEMENT PLAN

Land Description:

Lot and DP Numbers ……

Approved Plan Numbers ……

Project Contacts:

Company Operational Details ……

Directors Name ……

Company Name ……

Company Business Address ……

Company Contact Number ……

Onsite contact person responsible for compliance with this Construction Management Plan

Name ……

Contact Number ……

After Hours Contact Number ……

Contact person in control of the site

Name ……

Contact Number ……

After Hours Contact Number ……

Construction Works

Is construction in stages? Yes/No

If Yes give details. ……

Demolition □

Excavations □

Construction □

Is your Company in control of the site during this stage of work Yes/No

If you answered **NO** only the Company in control of the site may complete and sign for responsibility of the Construction Management Plan.

I……have due authorisation and delegation to sign this Construction Management Plan on behalf of the Company listed above and take responsibility for ensuring compliance with our commitment specified herein, the EP&A act and any other relevant legislation.

Signed …… Dated ……

Element 1: Approvals, Public Safety, Amenity and Site Security

Objectives

- The general public is adequately protected from activities occurring on this site.
- The developer has documented strategies to provide a safe and secure job site.
- Demand for occupation of the street and protection of Council assets is well managed.
- The building site is kept neat and tidy to maintain public safety and local amenity.

Required Measures

	Public Safety, Amenity and Site Security Requirements	Yes	No	N/A	Outline details/justification	Shown on plan?	CoM
	General Matters						
1	Has 48 hours written notice been given to Council prior to works commencing.				Provide details: …… …… …… ……	Yes / No	
2	Are any bonds required to be lodged with government authorities and if so their details?				Provide details: …… …… …… ……	Yes / No	
3	Has "Dial before you dig" been contacted and all existing services been located and marked in the field?				Provide details: …… …… …… ……	Yes / No	
4	Have currency certificates for the following insurances been provided: Public liability; workers compensation; road vehicles.				Provide details: …… …… …… ……		
	Approvals						
4	Is a Construction Certificate required for the works? If yes, give details of the certificate number.				Certificate Number: …… …… ……	Yes / No	
5	Is a WAD document required for works within RTA jurisdiction? Are all WAD documents required by RTA prepared and signed?				WAD No: …… Drawing No's: …… …… ……	Yes / No	
6	Provide details of any permit to occupy public space on a road or footpath including road occupancy certificates required by RTA.				Permit No: …….. Permit Details: ……	Yes / No	

7	Have S135 & S68 certificates been submitted to Council with fees paid?				Provide details: …… …… …… …… …… …… ……	Yes / No	
8	Has a dilapidation survey report of surrounding footpath/roadway been undertaken?				Provide details: …… …… …… ……	Yes / No	
	Signage						
9	Has all development signage required by the approval been erected?				Provide details: …… …… …… …… …… …… ……	Yes / No	
10	Are all safety advisory signs erected?				Provide details: …… …… …… ……		
	Fencing, Lighting and Site Security						
11	Is the construction site secure?				If yes, state clearly how: …… …… …… …… …… ……	Yes / No	
12	Are dangerous chemicals being stored on site? Appropriate signage must be erected in accordance with *AS1940-1993 Storage and Handling of Flammable and Combustible Liquids* and *AS1216-1995 Class Labels For Dangerous Goods*.				Provide drawing and give details: …… …… …… …… …… …… …… …… ……	Yes / No	
	After Hours						
13	Provide details about after hours site security.				Provide details: …… …… …… ……	Yes / No	

Element 2: Operating Hours, Noise and Vibration Controls

Objectives

- To minimise the impact of noise and vibration on the immediate neighbourhood.
- Provide a framework to plan and cater for construction activities outside of normal hours.
- To minimise the likelihood of damage to adjacent buildings and structures.

Required Measures

	Operating Hours, Noise and Vibration Requirements	Yes	No	N/A	Outline details/justification	Shown on plan?	CoM
	Noise Control						
1	What are the normal operating hours for construction work on the development?				Provide details: …… …… …… …… …… ……		
2	Will excessive noise be emitted from any plant or construction activity on the site? If so, state measures adopted to reduce noise emission.				Provide details: …… …… …… …… …… ……	Yes / No	
3	Will any blasting activities be undertaken?				Provide details: …… …… …… …… …… ……		
	After Hours						
4	Is an after hours work permit required? If so, has an application been made?				Permit No: …….. Permit Details: ……	Yes / No	

Element 3: Air and Dust Management

Objective

- That air quality (airborne dust and pollutants) in and around the construction site is maintained at acceptable levels throughout the construction period.

Required Measures

	Air and Dust Management Requirements	Yes	No	N/A	Outline details/justification	Shown on plan?	CoM
	General Matters						
	Prevention and Control						
1	Specify equipment type onsite which may cause excessive dust or affect air.				Provide details: …… …… …… …… …… …… ……	Yes / No	
2	Specify methods used to prevent impact of dust and airborne matter on the surrounding area. .				Provide details: …… …… …… …… …… …… ……	Yes / No	
3	State how airborne dust from trucks and vehicles entering/leaving the site will be minimised.				Provide details: …… …… …… …… …… …… ……	Yes / No	
4	If dust onsite is to be controlled with water tankers, specify frequency of duration.				Provide details: …… …… …… ……	Yes / No	
	Stockpiling						
5	Specify materials likely to be stored onsite and the methods used to reduce loose materials from wind effects and other prevailing weather elements.				Provide details: …… …… …… …… ……	Yes / No	
	Smoke and Pollution						
6	Is plant and equipment onsite to be maintained and regularly serviced to prevent excessive smoke, pollutants and/or toxic fumes being emitted?				Provide details: …… …… …… …… …… …… ……	Yes / No	

Element 4: Storm water, Pollution & Sediment Control

Objectives

- Prevent contamination of, or damage to, stormwater drains and waterways.
- Ensure sediment from the building site is retained onsite during construction work.

Required Measures

	Storm water and Sediment Requirements	Yes	No	N/A	Outline details/justification	Shown on plan?	CoM
	Storm water Measures						
1	Has all erosion control and acid sulphate management plans been approved.				Provide details of plan numbers and reports: …… …… …… …… …… …… ……	Yes / No	
2	How is contaminated storm water to be prevented from entering adjoining properties and water ways? 1. Erosion & sed control; 2. Acid sulphate.				Provide details: …… …… …… …… …… …… ……	Yes / No	
3	How is upslope water to be diverted to prevent it traveling through the site?				Provide details: …… …… …… …… …… ……	Yes / No	
	Filling & Excavation Work						
4	Will the site area need to be cleared?				Provide details: …… …… …… …… …… …… ……	Yes / No	
5	Will any filling works be undertaken in stages?				Provide details: …… …… …… …… …… …… ……	Yes / No	
	Site Entries						
6	Has the location of site entries been specified on the Plan?				Provide drawing and give details: …… …… …… …… …… ……	Yes / No	

	Drainage and Sediment Control						
7	How is mud and debris from trucks being prevented from leaving the site or spilling on the footpath and roadway?				Provide details: …… …… …… …… …… ……	Yes / No	
8	Provide details of the frequency and method of cleaning of roads and footpaths.				Provide details: …… …… …… …… …… ……	Yes / No	
9	Is there a maintenance program to replace sediment barriers and clean sediment basins when required?				Provide details: …… …… …… …… …… ……	Yes / No	
10	Will drains on and near the site have sediment traps or filters around them? Will these be checked daily?				Provide details: …… …… …… …… …… ……	Yes / No	
	Vegetation						
11	Will vegetation be reinstated as soon as possible on completion of works?				Provide details: …… …… …… …… …… ……	Yes / No	

Element 5: Traffic Management

Objective

- Minimise disruption to traffic (vehicles, pedestrians and cyclists) caused by construction activities to ensure the safety of all road users.

Required Measures

	Traffic Management Requirements	Yes	No	N/A	Outline details/justification	Shown on plan?	CoM
	General Matters						
1	Has a Traffic Management Plan been designed for the works by an accredited designer and approved by the relevant authorities?				Provide drawing details: …… …… …… …… …… …… ……		
2	Specify staging and timing of proposed construction works.				Provide details: …… …… …… …… …… …… ……	Yes / No	
3	Provide details of any temporary vehicle access.				Provide Details: …… ……	Yes / No	
	Traffic Flow and Public Impact						
4	How is adequate pedestrian flow being maintained on adjacent footpaths?				Provide details: …… …… …… …… …… ……	Yes / No	
5	Has the impact of construction site activity on surrounding traffic flows and public transport been considered?				Provide details: …… …… …… …… …… …… ……	Yes / No	
6	Have the general public or surrounding residents been informed of changes in traffic flows? (newspaper, leaflet, community liaison meetings etc)				Provide details: …… …… …… …… …… …… ……	Yes / No	
7	Will traffic controllers be used to coordinate traffic flow around surrounding roads and footpaths?				Provide details: …… …… …… ……	Yes / No	