



**BORDER-TECH**

GEOTECHNICAL ENGINEERING SERVICES

**PREPARED FOR  
TWEED COAST HOMES PTY LTD**

**CONSTRUCTION MANAGEMENT PLAN  
“Rose Maree”**

LOTS 1-3 in DP29748 and Lot 4 in DP31209  
CYPRESS CRESCENT, CABARITA BEACH, NSW

*Ref: BT 19877(2)*

**BORDER-TECH  
SUITE 10, 8 CORPORATE HOUSE  
CORPORATION CIRCUIT  
TWEED HEADS SOUTH NSW 2486  
Ph: (07) 5524 6199 Fax: (07) 5524 6533  
Email: [info@bordertech.com.au](mailto:info@bordertech.com.au)  
[www.bordertech.com](http://www.bordertech.com)**

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## 1.0 INTRODUCTION

This Construction Management Plan (CMP) addresses environmental issues associated with the planned development on the corner of Cypress Crescent and Tweed Coast Road at Cabarita Beach in Northern NSW. The plan provides guidance on how Tweed Coast Homes Pty Ltd and its contractors will meet their environmental obligations under state and local government regulations over the course of the project.

This CMP identifies risk activities, defines the environmental objectives, and describes appropriate mitigating and corrective actions to be undertaken in relation to likely environmental impacts. As such, this document is an essential link between environmental impacts assessment and project activities, ensuring that likely impacts can be addressed on the ground in a practical fashion.

The environmental impacts addressed in the CMP are as follows:

- Work Hours
- Dust and Air Quality
- Noise
- Erosion and Sediment Control
- Traffic and Pedestrian Management
- Waste Management
- Complaint Procedure

It is intended that all relevant staff involved with the construction project be familiar with this CMP prior to commencing work activities on-site. All workers should be informed of the potential environmental impacts of their activities during the site induction process.

## 1.2 Site Description

The subject site is located on the corner of Tweed Coast Road and Cypress Crescent, Cabarita Beach, NSW, described as Lots 1-3 in DP29748 and Lot 4 in DP31209. The Cudgen Nature Reserve borders the site to the north with the Cabarita Beach foreshore approximately 200m to the east. Covering an area of 2,822 m<sup>2</sup> the site is currently occupied by a caravan park comprising of approximately 25 permanent sites. The site is sloping with a fall of approximately 2.0m from the western boundary to the eastern boundary. Elevations range from roughly 6m to 8m AHD.



### **1.3 Project Discussion**

Border-Tech has received a consultant brief and conceptual drawings by Pat Twohill Designs Pty Ltd (dated 21/4/09) indicating the type of development proposed for the site. From this information it is understood that the project firstly involves the demolition of all existing structures on site, followed by the construction of a three (3) storey development with single storey basement, containing both residential and tourist accommodation.

The complex which is to be accessed via Cypress Crescent includes lap pool, landscaped gardens and basement carpark. A cut depth of approximately 2.5 – 4.5m will be required for the construction of the basement.

## 2.0 WORK HOURS

The recommended standard hours for construction are shown below. These times are not mandatory, there are some situations described in Section 4 where work may need to be undertaken outside of these hours. Consideration needs to be given to the likely noise impacts of particular tasks when scheduling work.

Normal Construction	Monday to Friday 7am – 6pm
	Saturday 8am – 6pm
	No work on Sundays or public holidays



### 3.0 DUST AND AIR QUALITY

<b>Issue</b>	Dust produced during construction works has the potential to reduce air quality and impact negatively on the visual amenity for surrounding residents. In addition, dust settling in waterways and on vegetation has the potential to cause environmental harm.
<b>Risk Activities</b>	Activities with the potential to produce dust and/or air pollution have been identified as: <ul style="list-style-type: none"> <li>• Plant and vehicle emissions</li> <li>• Earthworks activities</li> <li>• General construction activities</li> </ul>
<b>Likelihood</b>	Due to the sandy conditions at the construction site, dust production from earthworks activities is not likely to be a significant issue.
<b>Operational Objective</b>	The objectives of this CMP are as follows: <ul style="list-style-type: none"> <li>• No dust plumes to be visible outside of the construction site or exceeding a height of 10m above the construction site.</li> <li>• To receive no community complaints regarding dust emanating from the construction site</li> </ul>
<b>Mitigating Actions</b>	To reduce construction dust, mitigating actions such as the following are to be implemented when necessary: <ul style="list-style-type: none"> <li>• A water cart or hose is to be available at all times to reduce dust generation</li> <li>• Stockpiles, access roads and work areas to be watered down or covered</li> <li>• Excess spoil will be placed in skip bins or covered stockpiles, re-used on-site or disposed of offsite</li> <li>• Trucks carrying soil or construction waste to have their loads covered</li> <li>• Emission producing machinery is to be in a sound mechanical condition and fitted with the appropriate dust reduction and exhaust systems.</li> <li>• Machinery is to be turned off when not in use.</li> <li>• Periodic visual checks to be made on exhaust system emissions</li> <li>• Consider halting dust producing activities during windy conditions</li> <li>• Landscaping and revegetation is to occur as soon as possible after completion of building activities</li> <li>• The Burning of combustible materials is not permitted onsite at any time</li> </ul>
<b>Corrective Action</b>	In the event that the operational objectives are not being met, the exact source of the dust pollution will firstly need to be identified with consideration then given to implementing the appropriate mitigating

	<p>action.</p> <p>If ongoing complaints are being received a suitably qualified consultant may need to be employed in order to conduct air quality monitoring help resolve the issue.</p>
<b>Responsible Party</b>	<p>The implementation of this CMP is the responsibility of the site manager and/or site manager's representative.</p>



#### 4.0 NOISE

<b>Issue</b>	Noise produced during construction works has the potential to be a nuisance to nearby residents and businesses as well as being a potential health hazard if at excessive levels.
<b>Risk Activities</b>	Activities with the potential to produce noise pollution and/or complaints have been identified as: <ul style="list-style-type: none"> <li>• Plant and vehicle operation</li> <li>• Earthworks activities</li> <li>• Piling works</li> <li>• General construction activities</li> <li>• Site work outside of normal work hours</li> </ul>
<b>Likelihood</b>	Due to the location of the site in a residential area in close proximity to the Cabarita Beach town centre, there exists a considerable potential for noise related complaints.
<b>Operational Objective</b>	<p>Under the 'Interim Construction Noise Guideline' NSW DECC (2009), ongoing noise levels should be maintained below the 'noise affected' level which is defined as the rating background level (RBL) + 10dB.</p> <p>Short period highly noisy activities should aim to maintain noise levels below the 'highly noise affected' level of 75dB (A).</p> <p>The objectives of this CMP are:</p> <ul style="list-style-type: none"> <li>• No noise related complaints</li> <li>• Compliance with the specified noise levels</li> </ul> <p>Due consideration needs to be given to the duration of any highly noisy activities, with corrective actions implemented as necessary.</p> <p>Note: noise levels apply at the site boundary at a height of 1.5m above ground level.</p>
<b>Work Hours</b>	<p>Construction work is to be confined between 7am to 6pm Monday to Friday and 8am to 6pm on Saturdays. No work will be undertaken on Sundays or Public Holidays unless approved by the consent authority.</p> <p>Works where the proponent may be able to demonstrate and justify a need to operate outside of the recommended standard hours include:</p> <ul style="list-style-type: none"> <li>• Delivery of large plant or machinery</li> <li>• Emergency work</li> <li>• Public infrastructure works – where disruption to essential services will occur</li> </ul> <p>Any works outside of the recommended standard hours will require the nearby residents to be notified in writing, 5 days before works commence.</p>



<b>Mitigating Actions</b>	<p>To reduce construction noise, mitigating actions such as the following are to be implemented:</p> <ul style="list-style-type: none"> <li>• All construction work is to be kept within the recommended standard hours wherever possible</li> <li>• All plant and machinery is to be well maintained and operated by trained staff in a manner that does not produce unnecessary noise.</li> <li>• Equipment not in use will not be left idling</li> <li>• All plant and machinery used on site will comply with EPA Guidelines</li> <li>• All stationary and mobile equipment will be fitted with residential type silencers</li> </ul>
<b>Corrective Action</b>	<p>In the event that the operational objectives are not being met, the proponent should apply all feasible and reasonable work practices to achieve the objectives. These may include:</p> <ul style="list-style-type: none"> <li>• Inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details should they have any complaints, prior to excessively noisy work commencing.</li> <li>• Restricting the hours that the very noisy activities can occur, taking into account times identified by the community when they are less sensitive to noise (such as mid-morning or mid-afternoon).</li> </ul> <p>If ongoing complaints are being received a suitably qualified consultant may need to be employed in order to conduct noise monitoring and help resolve the issue.</p>
<b>Responsible Party</b>	<p>The implementation of this CMP is the responsibility of the site manager and/or site manager's representative.</p>



## 5.0 EROSION AND SEDIMENT CONTROL

<b>Issue</b>	Disturbed soil and sand has the potential to leave the construction site leading to negative impacts on the natural environment, visual amenity and nearby residents. Excessive erosion and sedimentation will also contribute to increased dust levels.
<b>Risk Activities</b>	Activities with the potential to produce erosion and lead to sedimentation have been identified as: <ul style="list-style-type: none"> <li>• Transportation of disturbed surface soil during rain</li> <li>• Soil deposited on the road network due to truck movements</li> <li>• Importation of clay based fill</li> </ul>
<b>Likelihood</b>	Due to the sandy soil at the subject site, erosion and sedimentation is not likely to be a significant issue, however best practice techniques will still need to be employed.
<b>Operational Objective</b>	The objectives of this CMP are as follows: <ul style="list-style-type: none"> <li>• Mitigate against any potentially negative impacts arising from erosion during construction work</li> <li>• To construct sediment and erosion control devices in accordance with the approved <i>Erosion and Sediment Control Plan</i></li> <li>• No community complaints</li> </ul>
<b>Mitigating Actions</b>	To avoid any negative impacts associated with erosion and sedimentation, mitigating actions such as the following are to be implemented: <ul style="list-style-type: none"> <li>• All works are to be undertaken in accordance with the approved '<i>Erosion Sedimentation Control Plan</i>' prepared by Cozens Regan Williams Prove</li> <li>• Preferred drainage pathways will be identified and protected using siltation barriers. This is likely to be the southern and eastern margins of the site.</li> <li>• Cleaning of concrete mixing trucks is not allowed on site</li> <li>• Sediment laden water will be prevented from entering the stormwater system by placing geotextile fabric over the grate, the fabric will be secured with sandbags.</li> <li>• Sandbags, haybales wrapped in geotextile fabric etc. will be used to slow water flow and trap sediment where appropriate.</li> <li>• The work area will be kept to the smallest possible size.</li> <li>• The work area will be rehabilitated as soon as work is</li> </ul>



	<p>finished in an area.</p> <ul style="list-style-type: none"> <li>• All sediment control measures will be left in place until the site has been stabilised.</li> <li>• Landscaping and revegetation will be completed as soon as possible following completion of building activities</li> <li>• Do not locate stockpiles within 2 metres of property margins or hazard areas such as spoon drains or areas of high flow.</li> <li>• Connect guttering and downpipes to the stormwater system as soon as the roof is completed</li> <li>• All discharges will be monitored to prevent erosion. If discharges are causing erosion flow will be slowed or energy dissipaters used.</li> </ul>
<b>Monitoring</b>	<p>The following routine monitoring will be required:</p> <ul style="list-style-type: none"> <li>• All erosion and sediment controls will be checked daily and after rain</li> </ul>
<b>Corrective Action</b>	<p>In the event that the operational objectives are not being met, consideration must then be given to why the relevant mitigating action has not been successful. Corrective actions including (but not limited to) the following may need to be implemented.</p> <ul style="list-style-type: none"> <li>• Mud deposited on the current road network due to truck movements to and from the site works is to be cleaned immediately. Street sweeper may be used for the purpose</li> <li>• Enhance or improve the sediment fencing/traps</li> <li>• Any sediment that accumulates behind the silt fences or straw bales will be routinely removed to maintain working efficiency</li> <li>• Any material washed over site boundaries is to be removed and the affected property returned to its original condition</li> </ul>
<b>Responsible Party</b>	<p>The implementation of this CMP is the responsibility of the site manager and/or site manager's representative.</p>



## 6.0 TRAFFIC AND PEDESTRIAN MANAGEMENT

<b>Issue</b>	Traffic entering and exiting the construction site have the potential to cause congestion in local streets as well as cause a safety concern to pedestrians and local traffic.
<b>Risk Activities</b>	<p>Activities with the potential to produce traffic related issues have been identified as:</p> <ul style="list-style-type: none"> <li>• Daily arrival and departure of workers vehicles</li> <li>• Establishment and departure from site of large plant and machinery</li> <li>• Delivery of building materials</li> <li>• Any activity involving large trucks which reduces the availability of the road for regular use</li> <li>• Access and deliveries via Cudgen Nature Reserve</li> </ul>
<b>Likelihood</b>	The site is located in a light traffic area which is easily accessible from Tweed Coast Road. Cypress Crescent is a full width 2 lane road which has 2 points of access to Tweed Coast Road. Traffic related issues should therefore not be a serious issue however best practice techniques will still need to be employed.
<b>Operational Objective</b>	<p>The objectives of this CMP are as follows:</p> <ul style="list-style-type: none"> <li>• To maintain safe access to roads and footpaths with a minimum of disruption to local residents</li> <li>• No access via Cudgen Nature Reserve</li> <li>• No traffic related complaints or accidents</li> </ul>
<b>Mitigating Actions</b>	<p>To reduce the likelihood of traffic related issues, mitigating actions such as the following are to be implemented:</p> <ul style="list-style-type: none"> <li>• Site access is to be via Cypress Crescent, with no direct access to Tweed Coast Road</li> <li>• A temporary fence is to be provided along the site frontage to the Cudgen Nature Reserve to prevent construction access through the Reserve</li> <li>• Access ways shall not be blocked at any time</li> <li>• During the construction period, workers are to park their cars within the available on street car parking on Cypress Crescent</li> <li>• Local residents are to be notified in writing in advance of potential disruption to property access and traffic flows</li> <li>• Warning signs are required to alert road users of any change in conditions. Any such changes will be made in accordance</li> </ul>



	<p>to Tweed Shire Council regulations.</p> <ul style="list-style-type: none"><li>• All temporary traffic signs will be removed as soon as possible following completion of work</li></ul>
<b>Corrective Action</b>	<p>In the event that the operational objectives are not being met, consideration must then be given to why the relevant mitigating action has not been successful. Corrective actions will then need to be developed for the specific problem.</p> <p>If ongoing complaints are being received a suitably qualified consultant may need to be employed to help resolve the issue.</p>
<b>Responsible Party</b>	<p>The implementation of this CMP is the responsibility of the site manager and/or site manager's representative.</p>

## 7.0 WASTE MANAGEMENT

<b>Issue</b>	Waste will be produced at all stages of the project including demolition, construction and site occupation. Appropriate waste management techniques are to be employed to avoid undue draw on natural resources, damage to the environment and risk to personal safety.
<b>Risk Activities</b>	Activities with the potential to produce waste have been identified as: <ul style="list-style-type: none"> <li>• Demolition of the existing buildings onsite</li> <li>• Offcuts and left over quantities of building materials</li> <li>• Excess fill and material generated during earthworks activities</li> <li>• Packaging from construction materials</li> <li>• Food containers and beverage packaging</li> </ul>
<b>Likelihood</b>	Due to the large number of waste generating activities associated with any building project, waste management will be an ongoing issue for the duration of the project.
<b>Operational Objective</b>	The objectives of this CMP is to manage all waste with due consideration to the waste management hierarchy. The preferred order of waste management is as follows: <ul style="list-style-type: none"> <li>• Avoidance</li> <li>• Re-use</li> <li>• Recycling</li> <li>• Disposal</li> </ul>
<b>Performance Criteria</b>	The performance of the waste management strategy will be assessed against the following criteria: <ul style="list-style-type: none"> <li>• No loose rubbish on the development site</li> <li>• Maximised reuse and recycling of all waste materials</li> <li>• Minimum use of natural resources</li> <li>• No adverse health effects related to exposure to hazardous waste</li> <li>• No unnecessary waste to be left behind at completion of construction works</li> <li>• No community complaints</li> </ul>
<b>Mitigating Actions</b>	To help achieve the performance criteria, the following mitigating actions are to be implemented: <ul style="list-style-type: none"> <li>• Waste generated during the project will be minimised and recycled where possible</li> </ul> <b>Demolition Phase</b> <ul style="list-style-type: none"> <li>• Any hazardous waste (i.e asbestos) encountered during demolition works is to be handled and disposed of in accordance with the relevant <i>Hazardous Materials Assessment</i> and Workplace Health and Safety Regulations.</li> </ul>



	<p><b>Construction Phase</b></p> <ul style="list-style-type: none"> <li>• All waste that cannot be re-used or recycled is to be disposed of in a legal manner, with a register of disposed waste to be kept onsite</li> <li>• Recycling and general waste bins will be provided for personal litter, with signage to clearly state the type of material allowable in each bin</li> <li>• Bin lids will be kept closed at all times, with bins to be emptied prior to becoming full</li> <li>• All site sewage is to be collected and disposed of in accordance with the relevant regulations</li> <li>• All loads of rubbish will be covered during removal and transportation</li> <li>• No waste is to be burnt onsite</li> <li>• Skip bins will be provided for construction waste</li> </ul> <p><b>Operational Phase</b></p> <ul style="list-style-type: none"> <li>• Individual recycling and general waste bins are to be provided for each dwelling, with the occupants to be responsible for getting the bin to the kerb on collection day</li> <li>• Waste management will be in accordance with Tweed Shire Council waste management practices</li> </ul>
<b>Corrective Action</b>	<p>In the event that the operational objectives or performance criteria are not being met, consideration must then be given to why the relevant mitigating action has not been successful. Corrective actions will then need to be developed for the specific problem.</p> <p>If ongoing complaints are being received a suitably qualified consultant may need to be employed to help resolve the issue.</p>
<b>Monitoring</b>	<p>Daily inspections of the building site are to be undertaken to ensure that the site remains free from litter and bins are not overflowing.</p>
<b>Responsible Party</b>	<p>The implementation of this CMP is the responsibility of the site manager and/or site manager's representative.</p>

## 8.0 PUBLIC COMPLAINT PROCEDURE

In the event that a member of the public should have a complaint to make in regard to construction works at the site, their complaint is required to be documented along with the actions taken to resolve the issue. All complaints received by the head contractor or their sub-contractors are to be kept in a complaints register and made available for inspection at all times.

### 8.1 Public Complaint Form

Initial Communication (to be completed by the complaint recipient)

<b>Date and Time of complaint</b>	
<b>Nature of complaint</b>	
<b>Contact details of complainant</b>	
<b>Method of communication (e.g phone call, personal visit)</b>	
<b>Complaint received by: (name and signature)</b>	



## 8.2 Complaint Response Form

Response to Complaint (to be completed by the head contractor or their representative)

<b>Action taken to address the complaint</b>	
<b>Has the complainant been notified of action to address the complaint?</b>	
<b>Recommended further action</b>	
<b>Remarks</b>	
<b>Form completed by: (name and signature)</b>	

## 9.0 CONCLUSION

Implementation of this CMP is required in order to mitigate against any adverse effects to visual amenity, the environment and nearby residents incurred as a result of construction activities.

Should you require any further information or clarification please do not hesitate to contact the undersigned at this office.

Yours faithfully  
For and on behalf of  
**BORDER - TECH**



**Nathan Piper** B.SC (Env)  
Environmental Scientist