

PROJECT N841  
MODIFICATION REQUEST  
EXTENSION OF STANDARD WORKING  
HOURS  
BALLINA BYPASS  
PACIFIC HIGHWAY UPGRADE

DOCUMENT CONTROL

LEVEL	DETAILS	DATE	INITIAL
1.0	Draft	31/05/2010	LS
1.2	BBA Internal Review	2/06/2010	NF & PS
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# 01 Introduction

## 1.1 Background

The Ballina Bypass Upgrade of the Pacific Highway was detailed in an Environmental Impact Statement (EIS) prepared by Connell Wagner (1998) with approval of the project obtained in May 2003. The Environmental Planning and Assessment Act 1979 (EP&A Act) was amended in 2005 to incorporate a new Part 3A, which relates to major projects. Under Item 88(3) of Schedule 6 of the amended Act, the Minister for Planning's approval of the Ballina bypass is taken to be an approval under Part 3A (i.e. deemed), and as such modifications to that approval are subject to Part 3A of the EP&A Act.

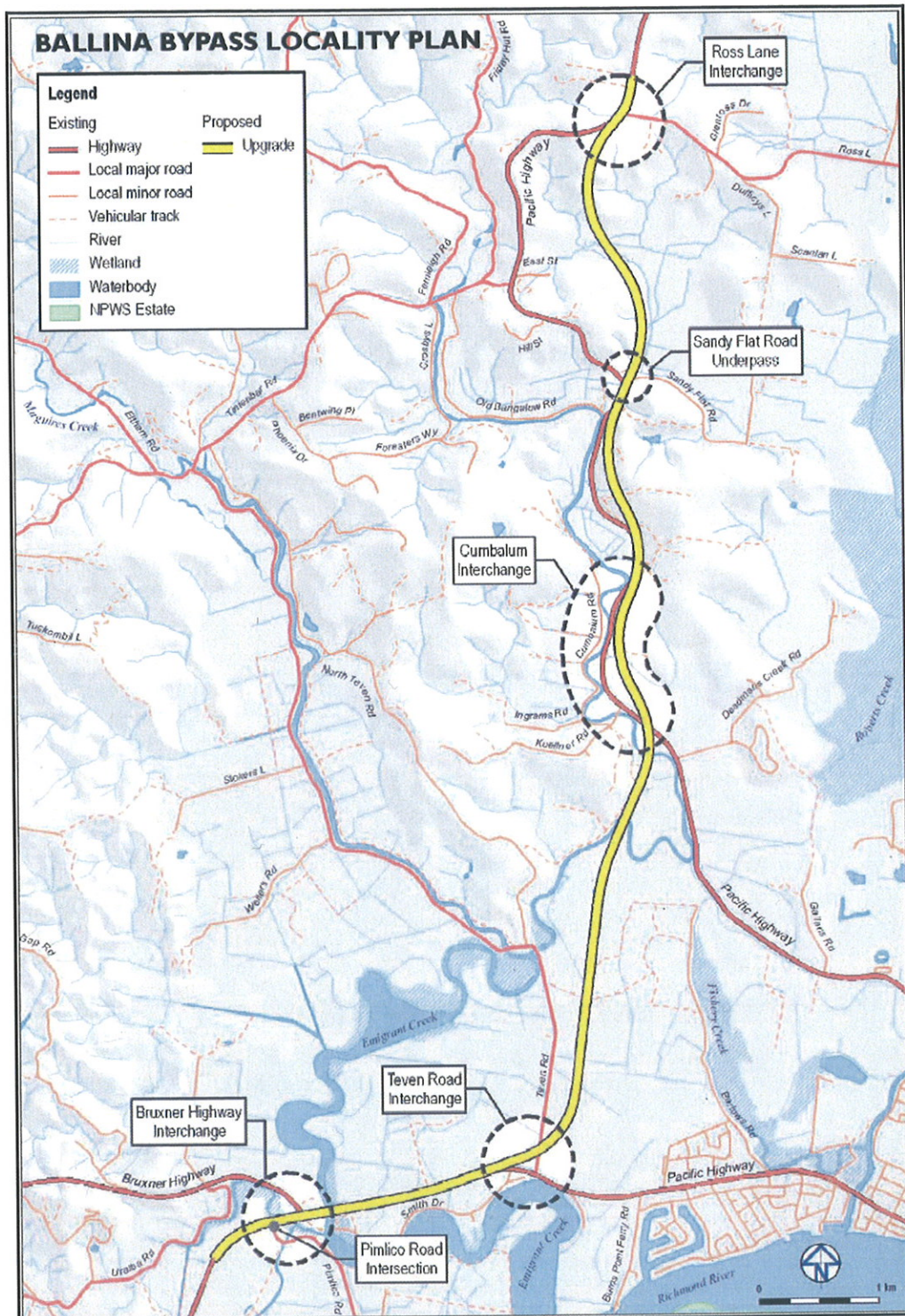
The RTA has entered into an alliance agreement with a consortium of contractors and consultants, referred to as the Ballina Bypass Alliance (BBA), to undertake the construction of the Ballina Bypass Upgrade. This modification request in relation to the extension of working hours applies to the northern section of the Ballina Bypass only, from the Cumbalum Interchange to the Ross Lane Interchange. This northern section of the bypass is referred to as 'SP1' (Separable Portion One) (Figure 1). Information request for the Northern Tie-In is addressed in a separate document '*Modification Request Extension of Standard Working Hours Northern Tie-In*'.

## 1.2 Proposed Change to working Hours

The Conditions of Approval for the Ballina Bypass project (CoA 43) nominate standard working hours of 7.00 am to 6.00 pm on weekdays (Monday to Friday) and 8.00 am to 1.00 pm on Saturdays.

The RTA and its alliance partners formally requested a modification to the approved project under Section 75W of the EP&A Act to extend the standard working hours on Saturdays from 7.00 am to 4.00 pm.





**Figure 1 - Ballina Bypass Locality Plan**  
 (SP1 is the northern section from the Cumbalum Interchange to the Ross Lane Interchange)

### 1.3 Location and Scope of Works

The extension of working hours on a Saturday would be used to undertake work along the length of the SP1 section of the Ballina Bypass, specifically from the Cumbalum Interchange to the Ross Lane Interchange (refer Appendix A - Sheets 1 to 3). The additional time would allow the continuation of the activities currently being undertaken in a particular section of SP1 to provide a productive day on Saturdays.

All works during the extended hours would utilise the Cumbalum site compound. This site has been selected due to the distance from nearby sensitive receptors and the location of the site compound to the works.

Similarly, the activities to be undertaken during the extended hours on a Saturday would be a continuation of the general construction activities being undertaken within the SP1 area. The types of construction activities that currently occur within the SP1 area and may be undertaken within the extended hours include:

- Haul road construction and maintenance
- Soft soil treatment
- Service relocation
- Earthworks
- Structures
- Drainage works
- Pavements
- Finishing works
- Installation and maintenance of sediment and erosion controls



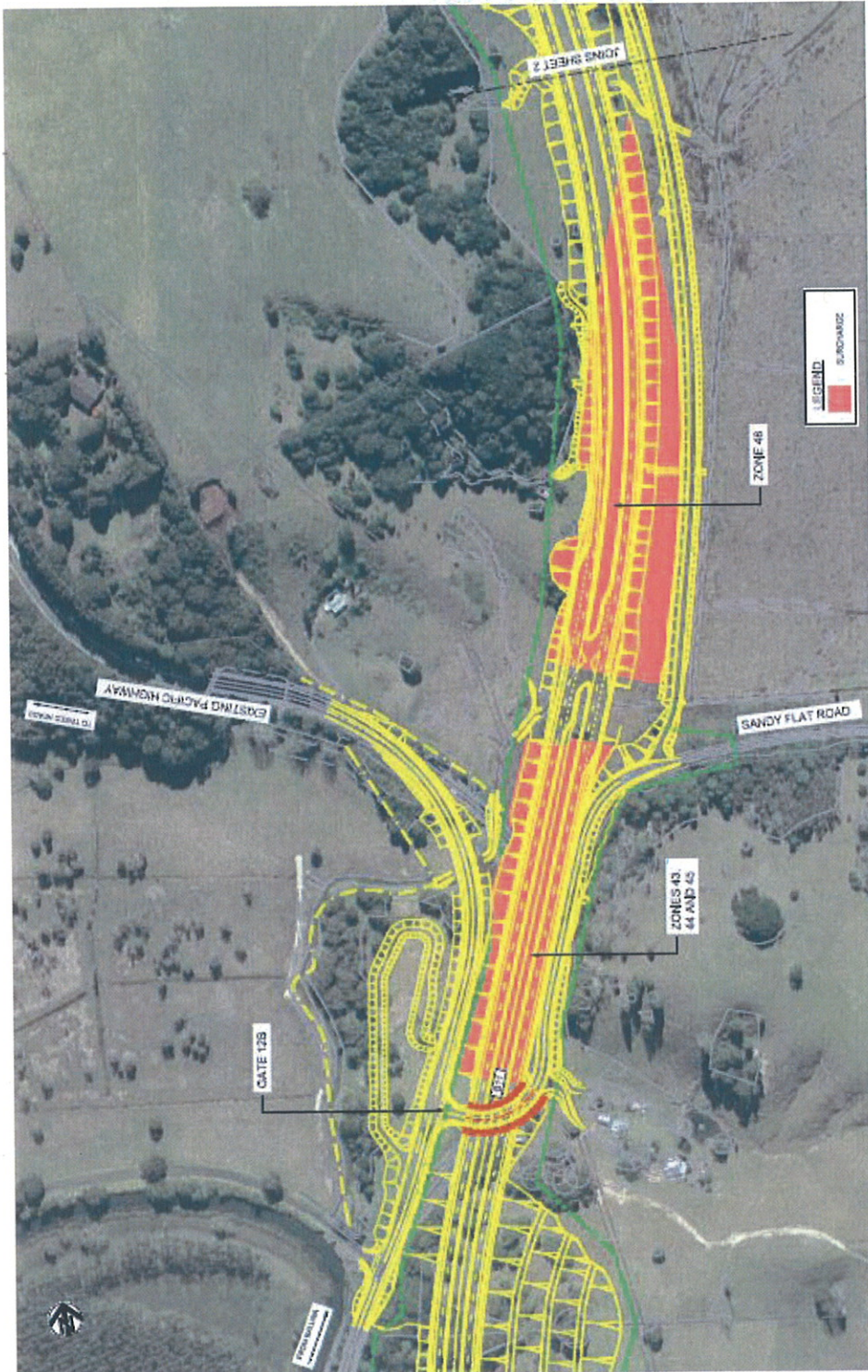
## 02 Justification for Proposed Change to Working Hours

The Ballina Bypass Alliance is seeking the modification to existing construction hours on Saturdays primarily for public safety and constructability issues associated with the management of "soft soils" and to ensure completion prior to the wet season (December to May). The soft soils area is illustrated in Drawings 100601-BBA-Design-SFU\_S1 and S2 (refer below). The type of construction activities that may be undertaken during the extended hours includes clearing and grubbing, service relocation, earthworks, haul roads, drainage, pavements and finishing works. No blasting or pile driving would be undertaken during the extended hours. The potential construction noise impacts associated with the extension of working hours on a Saturday are discussed in the Section 4.2.

There are multiple benefits associated with the extension of working hours. The key benefits include:

- **Improve public safety** – extended working hours will allow for the completion of the northern section of the Ballina Bypass prior to the peak holiday traffic period in December 2010 eliminating a known "black spot" on this section of the Pacific Highway
- **Assist the project programme** – the presence of soft soils affects settlement time and pavement durability and limits construction activities during the wet season. The extended work hours would allow BBA to treat the soft soils in the dry period of the year which will significantly increase the likelihood of completing the soft soil treatments before the high rainfall season commences in early summer and as a result will potentially reduce lengthy construction delays.
- **Reduce environmental impacts** – the completion of earthworks prior to the wet season will reduce the potential risk associated with erosion and sedimentation impacts to local waterways after significant rainfall events.
- **Minimal and manageable community impacts** – the benefits of the additional work hours can be achieved with minimal impact on the amenity of residents (refer to Section 2.4 of this report).
- **Increased productivity/cost effectiveness** – working a full day on Saturdays is considerably more efficient than a half day.

These benefits are discussed further below.



NOT FOR CONSTRUCTION  
**INFORMATION DOCUMENT**  
 100602-BBA-DESIGN-SFU\_S1\_1101

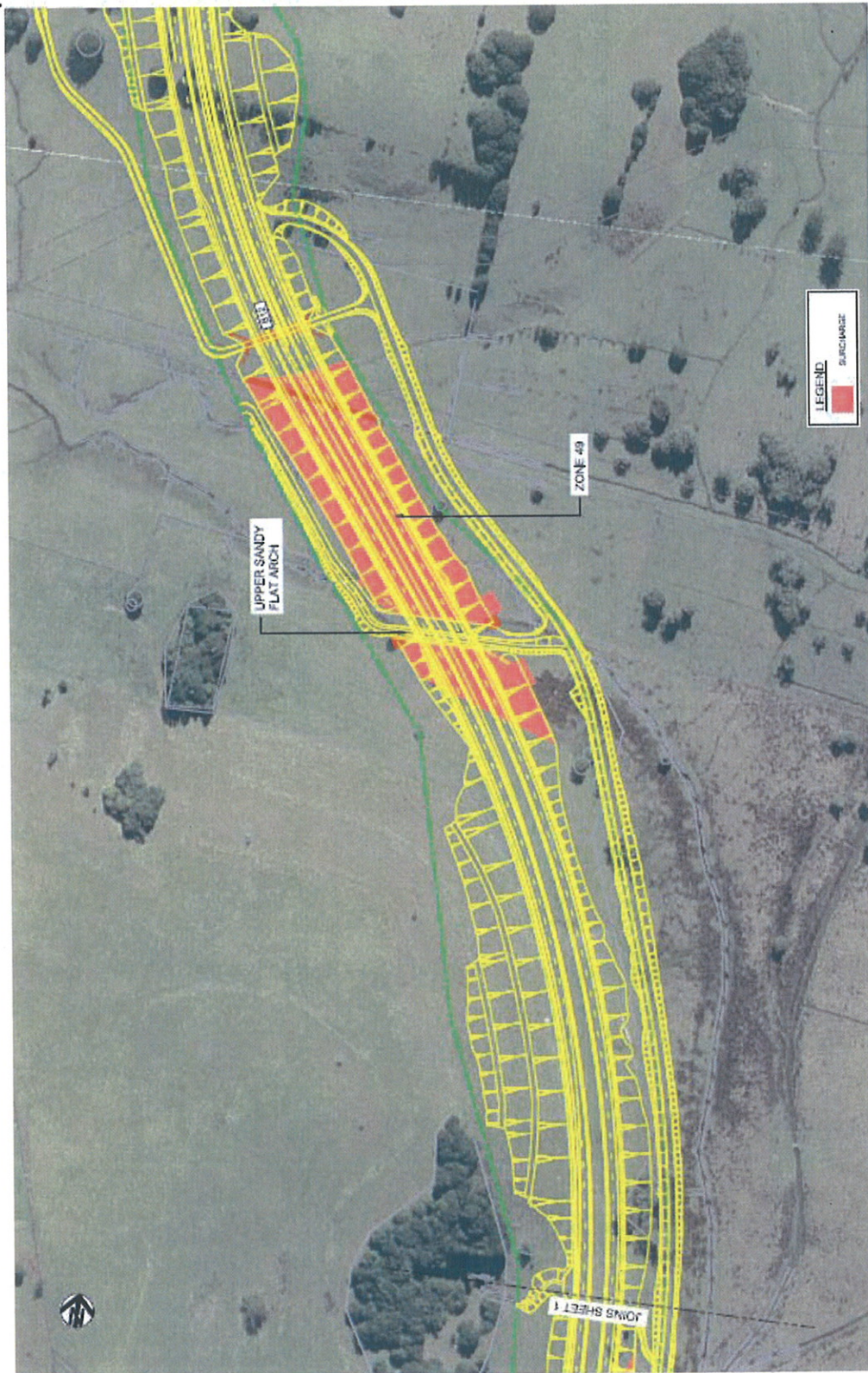
GENERAL PLAN - SURCHARGE REMOVAL  
 SHEET 1



Soft Soils Area # 1

Scale 1:1000  
 0 100 200 300 400 500 600 700 800 900 1000  
 Meters





LEGEND  
SURCHARGE

NOT FOR CONSTRUCTION  
**INFORMATION DOCUMENT**  
100602-BBA-DESIGN-SFU\_S2\_J01

GENERAL PLAN - SURCHARGE REMOVAL  
SHEET 2

Soft Soils Area # 2





## **2.1 Improve Public Safety**

There would be considerable benefits to the community (both local residents and commuters), RTA, and other stakeholders from the early completion of the SP1 section of the Ballina Bypass. Completion of SP1 by December 2010 would allow the peak holiday traffic to travel on the upgraded dual carriageway providing improved safety and conditions compared to the existing single lane undivided road through this section. This would reduce traffic numbers on the local road network providing improved conditions for local residents and commuters. Completion of SP1 would remove a significant amount of construction traffic from the local road network and also remove the need for traffic control operations further improving conditions and safety for local residents. Further this peak traffic time lies within the wet season months, which further add safety risks due to deterioration of driving conditions.

From January 2002 to the current day, there have been 123 motor vehicle accidents, including 7 fatalities and 45 crashes resulting in injury on the section of the Pacific Highway between Deadmans Creek Road and Ross Lane (Appendix B). This section of the existing Pacific Highway corresponds to the SP1 section of the Ballina Bypass.

During the peak Christmas holiday period traffic volumes of the section of the Pacific Highway around Ballina increase by up to 30%. The major delays over the Christmas period are on the approach to and through the Ballina Township. Traffic flows during this period will be improved by the completion of SP1 providing increased lane capacity on the northbound exit for vehicles exiting from Ballina and for travelling north.

## **2.2 Assist the Project Programme**

The technical requirement for an extension of construction working hours relates to settlement and pavement durability. To ensure BBA achieve optimum pavement quality over the soft soil areas, there is a need to allow for the maximum period of consolidation, which will reduce the amount of differential and post construction settlement. There are a number of uncertainties on how the soft soils will react during settlement and after the removal of surcharge, but allowing the embankment to consolidate for a longer period reduces the risk associated with this process and improves the final product quality. The approval of the out of hours work will allow BBA to leave the surcharge on for an extended period, with the certainty that there is sufficient time to remove the surcharge, critically assess the performance of the foundations and then construct the highest quality pavement.

During the wet season (December to May), general productivity reduces significantly due to wet weather down time and post event/flood cleanup delays. The substantial completion separable portion one prior to this time will assist in avoiding this inefficient period and substantial delays. In addition, the management of soft soils in the area is greatly impacted during this time as the increased precipitation increases groundwater recharge which further increases the time required to achieve adequate ground settlement in the soft soil zones.

### 2.2.1 Soft Soil Settlement and Construction Timing

The programmed surcharge periods are inherently influenced by numerous factors which can extend the design period. The surcharge areas are not released until geotechnical data results indicate that the settlement measurements remain constant. The Upper Sandy Flat areas have experienced extended settlement periods and are anticipated for release of surcharge at the start to middle of July 2010. These surcharge areas are on the critical path for the concrete paving runs, and will impact on the completion of the pavement and ultimately the opening of the Pacific Highway in December 2010. The extension of the approved working hours will provide suitable time for the surcharging and for remaining works to be completed expediently including surcharge removal. The benefit of having additional time has been calculated by the following –

- 13 days in total, if calculated at half a day extra per Saturday
- 20 days available to concrete paving due to half day paving operations not able to be completed

This calculated timeframe allows BBA to remove approximately 20,000m<sup>3</sup> of surcharge material over and above the normal production rates, utilise at least 12 additional days for concrete paving and meet the RTA expectation of opening the Pacific Highway by December 2010.

### 2.3 Reduce Environmental Impacts

Extremely heavy rainfall events generally occur within the Ballina region from December to May. These significant rainfall events increase the Project's erosion and sedimentation risk profile. During this time, the risk of erosion of soils and sedimentation impact on local waterways is increased. During this time sedimentation basins also have a higher risk of exceeding capacity during this period of high rainfall. In addition, other environmental controls are also put under increased pressure to accommodate the significantly higher rainfall events. The extended working hours would facilitate the progression of construction so that disturbed areas, particularly those with exposed soils, will continually be effectively stabilised before the onset of the rainy season and thus greatly minimise (or eliminate altogether) potential erosion and water quality issues.