

# Harvey Blue, Architect

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Tel. 02 44641880

The Director - Infrastructure Projects,  
Department of Planning and Infrastructure,  
GPO Box 39, Sydney NSW 2001.  
17<sup>th</sup> December 2012.

Dear Sir,

**Re : Foxground and Berry Bypass, Princes Highway upgrade, Environmental Assessment.**

I am the co-ordinator of the Tindalls Lane Landcare Site for the Berry Landcare. Tindalls Lane is in the project area of the above project. I am concerned with the impact of the work for the new alignment of the highway will have on the local environment.

I wish to submit the following comments on the Environmental Assessment Report prepared by the Department of Roads and Maritime Services for the project.

**Biodiversity.(Section 7.3)**

The EA Report considers Biodiversity under the following categories

Geology and Soils.

Plant Communities.

Flora and Fauna Habitats.

Flora Species.

Fauna Species.

Endangered Species.

Critical Habitat

Corridors.

These have been considered separately. Where it is believed there is an inadequate reported or inconsistent issue in the EA Report they will be reviewed and action requested listed in *red italics*.

**Geology and Soils:**

**8.1.1 Existing environment.**

**Acid Sulphate Soils (ASS).**

"Following further consideration of the known geological information for the project area, an additional area where there is a low risk of PASS being encountered has been identified. This corresponds with areas with alluvial floodplain soils at the Broughton Creek floodplain, and at the bypass of Berry.

These areas are shown on Figure 8-3." (EA Report Page 472)

"Any exposure of PASS to air or the lowering of the water table due to excavation would lead to the development of actual ASS." (EA Report Page 479).

**4.4.7 Ancillary facilities.**

"A number of potential ancillary facility site locations have been selected, as illustrated in Figure 4-20 based on the criteria listed in Table 4-10." (EA Report Page 105)

Table 4-10 Selection criteria for ancillary facility sites.

"Wherever possible, sites are to be located above the 1 in 100 year flood level. If sites cannot be located above the 1 in 100 year flood level, they could be located above the 1 in 20 year flood level subject to the implementation of appropriate mitigation measures to reduce flood risk and impacts on the surrounding environment" (EA Report Page 106)

Ancillary Site J at Woodhill Mountain Road is shown in Table 4-10 Selection criteria for ancillary facility sites as in the 1 in 100 year floor zone. Ancillary Site J is on land shown as PASS in Figure 8-3.

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## **Alternative Environmental Assessment recommended:**

*Ancillary Site J should be excluded from Figure 8-3.*

### **Flora and Fauna Habitats:**

#### **Existing Environment, Terrestrial Flora.**

The following is a quote from a paper from University of Wollongong, Research on Line: "The Illawarra supports the remnants of one of the five major areas of New South Wales rainforest growing at the time of European settlement and forms the southern distribution limit of many species of rainforest endemic flora. Today, remaining rainforest associations are in little danger of further clearing for most occur in sites unsuitable for agriculture. Nevertheless, they are still subject to alteration by man, mainly by indiscriminate burning of bushland as a bushfire prevention, but also by road construction, which opens closed rainforest environments thereby exposing them to desiccation causing dieback of rainforest flora and weed invasion. Ref 'Rainforests of the Illawarra' J. Bywater University of Wollongong, 1980."

The remaining Rainforest is the Southern limit for of the Subtropical Rainforest species of the East coast of Australia. This is a very sensitive forest area.

#### **Plant Communities:**

The Alignment of the proposed work is bounded by vegetation communities at a number of places. Most of these are fragmentary. The only community of any size and consistency is Illawarra Gully Wet Forest to the East of Tindalls Lane (CH13200 – CH13950). See Section 7.6, Fig 7-8 Vegetation Communities within the Study Areas. (EA Report Page 246)

Other Communities bounding the alignment are:

Warm Temperate Layered Forest at: Toolijooa Ridge (CH8450 – CH8700); Austral Park CH11650 – CH11800.

River Bank Forest at: all major creek crossings.

Illawarra Gully Wet Forest at: Mark Radium Park; Hitchcocks Lane; Schofields Lane. The Forest at Schofields Lane forms an important part of the visual landscape of the Western entry to Berry.

Table 7-49 Areas of each plant community potentially impacted by the project identifies 15.4 hectares of Illawarra Gully Wet Forest as highly impacted within the roadway and ancillary spaces and 10.05 hectares as impacted due to edge effects. This is by far the largest disturbance of forest communities. (EA Report Page 259)

The EA Report makes no mention of mitigation measures to be taken concerning the disturbance of Illawarra Gully Wet Forest communities.

## **Alternative Environmental Assessment recommended:**

### **7.3.4 Environmental management measures**

**Fragmentation of habitat and loss of connectivity. - Mitigation and management measures.**

**Berry Corridor Mitigation.**

*Extensive replanting of Illawarra Gully wet Forest including large forest trees as well as under story species to match local native plants within the alignment and areas impacted due to edge effects . Local species are not common nursery stock. Their propagation in numbers adequate for the mass planting required at the planting out phase of the work will require preplanning of at least two or three years.*

See notes on Corridors for definition of Berry Corridor.

### **Endangered Populations:**



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## Western Forest Portal Entry to Berry.

Vegetation Mapping (Appendix F - Figure 3.1.3 Map3.) This map shows an area of Illawarra Gully Wet Forest opposite to Graham Park at Schofields Lane (CH18950.) Motorists approaching Berry from the West view this grove of mature Eucalyptus trees together with another matching belt on the other side of the Princes Highway. The grove on the Grahame Park side although just as important as those opposite has not been mapped. These trees are a significant feature of the entry into Berry and form a recognisable Portal Entry to the Town. It is noted that the unmapped grove partially sits in an Ancillary Area. This is a high Sensitive landscape feature.

### **Alternative Environmental Assessment recommended:**

*The Ancillary Area should be in a High Impact category.*

## Assessment of Potential Impacts.

### **Alternative Environmental Assessment recommended:**

*Correction of this discrepancy in the EA Report requires a redefinition of the boundary of the Schofield Lane Ancillary Area so as not to include the area necessary to protect the trees.*

*The classification of the Northern Grove as Mapped Illawarra Gully Wet Forest.*

*Mitigation: The existing trees should be enhanced by planting of new Eucalyptus trees with in the alignment above the cutting at the ridge.*

*The grove to the South side of the Highway that could be effected if a cutting is required for a driveway to the residence adjacent to CH19000 should be protected.*

## **Corridors:**

### The Office of Environment and Heritage (OEH).

The Department of the Environment's web site <planning.nsw.gov.au/south-coast> "South Coast Regional Strategy" Map9 "Biodiversity and Coastal assets" shows the Berry Wildlife Corridor crosses the highway alignment between CH12200 (Austral Park) – CH13300 (Glenview).

### Catchment Management Authority Southern Rivers (CMASR).

The Southern Rivers CMA Corridors identify the corridor as crossing the alignment from CH11100 to CH13300.

The draft Southern Rivers Catchment Action Plan (CAP 2023) is available for public comment.

Figure 25. Connectivity priority map in CAP 2023 shows a detailed map of the Berry Area. This classifies the area of the Berry Corridor at the new alignment as "Native Vegetation Corridor Actions – Revegetate", (CAP 2023 Page 37).

These Government Agencies' validation of the Wild Life Corridor has not been included in the "Wildlife Corridors within the Study Area" Figure 7.9 of the 7.3 Biodiversity portion of the report. (EA Report Page 250)

Figure 7.9 shows an unofficial corridor area linking Broughton Creek to Tindalls Lane at CH13950 – CH14250. This however does not coincide with existing forest, (see Appendix F Part 2b, Figure 3.1.9).

### **Alternative Environmental Assessment recommended:**

*The area of forest from Austral Park to Tindalls Lane should be considered as a separate Landscape Character sub Unit (Berry Corridor) and the remainder from Tindalls Lane to Broughton Mill Creek as Broughton Ridge sub unit (Broughton Ridge).*

(RP 6.5) Berry Corridor Impact Assessment. *Sensitivity (High) Impact (High to Medium)= Impact (High).*

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(RP 7) Berry Corridor Mitigation. *Extensive replanting of Illawarra Gully wet Forest including large forest trees as well as under story species to match local native plants within the alignment.*

## **Flooding (Section 7.5)**

The E.A. Report considers the issue of Flooding (Page 306)

The area of 1 in100 flooding is shown in Figure 7.15 - 100 year floor extent. (Page 308). This also shows the ancillary areas. Sites D,E,J and L coincide with areas identified as 1 in 100 floor prone.

### **Ancillary facilities.**

The E.A. Report considers the issue of Ancillary facilities (Page 105). "A number of potential ancillary facility site locations have been selected, as illustrated in Figure 4-20 based on the criteria listed in Table 4-10." (EA Report Page 105).

Table 4-10 Selection criteria for ancillary facility sites. These sites are identified 'A to L.

The site identified on Figure 8.3 as E is an area identified in Figure 7-18 Broughton Creek over bank flow paths within the project as subject to Flow path 5 year flood event and above.

This is not in concurrence with the requirements for Ancillary Facilities. "Wherever possible, sites are to be located above the 1 in 100 year flood level. If sites cannot be located above the 1 in 100 year flood level, they could be located above the 1 in 20 year flood level subject to the implementation of appropriate mitigation measures to reduce flood risk and impacts on the surrounding environment" (EA Report Page 106)

*Alternate Environmental Assessment recommended:*

*Site E should not be classified as an Ancillary Facility.*

## **Landscape character and visual amenity. (Section 7.6)**

### **1 Cultural Landscape Context:**

The following were acknowledged as the Government Agencies authorising the defined Cultural Landscapes.

(Appendix I - Table 5.1 Page 36)

Berry-Bolong – Pastoral Landscape: Shoalhaven City Council Heritage Study.

Berry District Landscape Conservation Area: National Trust of N.S.W.

Berry Township Urban Conservation Area (BTUCA): Shoalhaven City Council Heritage Study and National Trust Register 2011.

The importance of the Coastal Landscape in the culture of Berry and its surrounds is confirmed by these Classifications. This increases the sensitivity of impact on all Landscape issues.

### **2 Landscape Character Units:**

The EA Report is organised as follows:

1. Toolijooa Ridge
2. Broughton Creek
3. North Berry
4. Berry
  - 4.1 Bridge
  - 4.2 North Street



4.3 Kangaroo Valley Interchange (including Mark Radium Park and the Highway to Schofields Lane.)

(Appendix I – Part 5.5 – Figure 5.9 and 5.10 Page 40)

### **3 Landscape Sensitive and Visual Impact assessment:**

**Toolijooa Ridge** (Appendix I – Part 6.3 Page 46).

View studies. The two view studies done are - 1- From North on Princes Highway to South - 2-From South on Broughton Creek to North. The Report does not give sufficient credence to view of cutting from East. This should be considered from: 1- As a passenger on the Train. 2 - A motorist on Tourist Road between Gerringong and Gerroa. These are famous views of the highly rated Illawarra Coastal Plain and Foothills an important Tourist attraction to the South Coast.

Toolijooa Ridge Impact Assessment. This affects the nominated Impact Assessment. The sensitivity should be increased from moderate to High Impact.

1. E A Report: - Sensitivity (Moderate) - Impact (Moderate) = Moderate.

2. ***Recommended : - Sensitivity (High to Mod.) - Impact (High) = High Impact.***

Toolijooa Ridge Mitigation. Views from railway line and Tourist Road reveal a large 25 metre deep cutting in the Toolijooa Ridge line in front of the Illawarra escarpment. ***This needs to be screened with large tree planting. This is possible with in the alignment on the embankment to south at CH7700-CH7950. Additional Screen planting is necessary. These should be large trees in natural grade land above the cutting to South at CH7950 to ridge line CH8800. Also on the shelf to cutting to North West at CH6800 –CH8900. This mature canopy will re-establish the profile of the Toolijooa Ridge.***

**North Berry.** (Appendix I – Part 6.5 Page 50).

Berry Wildlife Corridor.

The Department of the Environment and Planning's <planning.nsw.gov.au/south-coast> "South Coast Regional Strategy" Map9 "Biodiversity and Coastal assets" shows the Berry Wildlife Corridor crosses the highway alignment between CH12200 (Austral Park) – CH13300 (Glenview).

The Southern Rivers CMA Corridors identify the corridor as crossing the alignment from CH11100 to CH13300.

These Agencies' validation of the Wild Life Corridor has not been included in the "Wildlife Corridors within the Study Area" (Chapter 7 - Section 7.3 - Biodiversity - Wildlife corridors -Figure 7.9 - Page250).

Figure 7.9 shows an unofficial area linking Broughton Creek to Tindalls Lane at CH13950 – CH14250. This however does not coincide with existing forest, (see Appendix F Part 2b - Terrestrial Flora and Fauna - Fig3.1.9). This is a serious omission of a significant environmental classification of the Landscape in the area of the Alignment.

North Berry Landscape sub - character units.

This section of the alignment would be better identified as 2 separately identified Landscape Character Units. Vegetation Mapping in Flora and Fauna (Appendix F part 2b Map 9 - Figure 3.1.9) shows extensive Illawarra Gully Wet Forest in the middle section of the alignment CH13000 (Glenview) – CH 13950 (Tindalls Lane). This is the only forest area on the entire alignment.

The area of forest from Austral Park to Tindalls Lane needs to be considered as a separate Landscape Character sub Unit (Berry Corridor) and the remainder from Tindalls Lane to Broughton Mill Creek as Broughton Ridge Landscape sub - character unit.

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Visual impact assessment North Berry

**Berry Corridor Impact. Recommended Assessment: Sensitivity (High) Impact (High to Medium)= Impact (High).**

Berry Corridor. **Recommended Mitigation: Extensive replanting of Illawarra Gully Wet Forest including large forest trees as well as under story species to match local native plants within the alignment.**

Broughton Ridge Impact.: **Recommended Assessment: Sensitivity and Impact remain as per EA Report (High to Moderate Impact).**

Project Components: **This list should include the Permanent Ancillary Site at CH14300 – CH14550.**

Broughton Ridge Mitigation: **Flora screening to border adjacent to Permanent Ancillary Site in Local Native plants to highway and Tindalls Lane off ramp road.**

Project Component Berry - Memorial Sculpture (Not in EA Report- See video.)

**Alternative Environmental Assessment recommended:**

**The repositioned Alexander and David Berry Memorial Sculpture should be listed as a Project Component. The position as shown does not reveal the art work as intended and has been realised at the existing location. The repositioning of this Memorial should be the subject of consultation between the Artist, Shoalhaven Council, the interested parties in the Berry community and the RMS.**

**Berry (North Street):**

Noise Attenuation Barrier Options. (Appendix I Part 3b – 5.9 Urban Design Elements Page 51).

The Visual Impact of the Sound Attenuation Wall must be assessed in terms of its impact to the Berry community as well as the road users on the highway. The visual impact of the wall from the highway will be a defining feature of Berry for motorists passing by the town. There are many examples of sound attenuating walls in NSW built by the RMS. Many suffer from over design and others are just monolithic slabs lacking the appropriate scale and interest. The alternate solutions shown in the EA Report have been shown in section only, suggesting no change in profile for the full length (CH16300 to CH17600.) While the underlying ideas behind the options (softening of visual impact with planting and mounding) are somewhat successful they fail to address the straight line form of the wall in the natural Landscape. The human eye will seek out the straight line of the continuity of the top of the wall in spite of planting and mounding. The wall must fulfil its sound attenuation function but it must not be a dominant element from either side. Some breakup of the form is necessary.

**Alternative Environmental Assessment recommended:**

**Professional Landscape Designers have fulfilled this brief for many sound barriers beside the highways of NSW. A skilled professional Designer should be commissioned for this work.**

Town Creek Park. (Appendix I Part 3b – 5.10 3 –Town Creek Park and Queen Street Link Page 59).

This new open space incorporates the remnant of the Town Creek which has been diverted on the Northern side of the alignment. The creek bed will consequently become dry. The planting in the existing bed in the area of the park is mainly weed species. The planting proposed in the EA Report for the park include Swamp Mahogany, Sandpaper fig and Broadleaf Paperbark trees. All of these are suitable for wet area planting. The flora and fauna from Town Creek Park down the full length of the creek to its junction with Broughton Mill Creek will be gravely affected. There will be high impact consequences.

**Alternative Environmental Assessment recommended:**



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*Mitigation will require the introduction of water to the creek as high as possible in the course. This could be implemented by the introduction of an artificial water feature to Town Creek Park such as a fountain or a waterfall on the embankment to the South at CH17425.*

Huntington Park Sound Attenuating Wall. (Appendix E, Sub Appendix L –Noise Protection Barrier Locations).

The wall at Huntington Park is on the North side of the alignment at approximate CH17750 – CH17950. The wall is 4 metres high and is free standing. As for the North Street Sound attenuation Wall the Huntington Park Wall is a defining feature of the Berry Area for motorists passing by Berry. It is not set against the surrounding landscape and is viewed mainly from the highway. There is no need to design this wall to blend in with the background which is another existing wall. It will still require tasteful design standards. Both of the two Noise attenuation walls will influence the motorists as to whether they visit Berry. Exit ramps to Berry are immediately after them. They are highly sensitive Components of the design.

**Alternative Environmental Assessment recommended:**

*A skilled professional Designer should be commissioned for this work.*

Mark Radium Park Duck Pond.

The construction of the new alignment leaves a very small catchment area for this well used landscape feature in the Park. This results from the closure of the small feeder creek by the construction of the new alignment. The rain water that falls in the catchment area will now require treatment via the settlement ponds for removal of the pollutants it has picked up from the road. These are below the pond and some distance away. The Impact Assessment will be high as the reduced water input to the duck pond could result in the destruction of its flora and fauna.

**Alternative Environmental Assessment recommended:**

*This could be mitigated by the introduction of a water feature such as a water spout to top up the pond and keep it aerated.*

Western Forest Portal Entry to Berry.

Vegetation Mapping (Appendix F - Figure 3.1.3 Map3.) This map shows an area of Illawarra Gully Wet Forest opposite to Graham Park at Schofields Lane (CH18950.) Motorists approaching Berry from the West view this grove of mature Eucalyptus trees together with another matching belt on the other side of the Princes Highway. The grove on the Grahame Park side although just as important as those opposite has not been mapped. These trees are a significant feature of the entry into Berry and form a recognisable Portal Entry to the Town. It is noted that the unmapped grove partially sits in an Ancillary Area. This is a high Sensitive landscape feature. The Ancillary Area results in a High Impact category. The grove to the South side of the Highway could be effected by the cutting required for the driveway to the residence adjacent to CH19000.

**Alternative Environmental Assessment recommended:**

*Mitigation for this discrepancy in the EA Report requires a redefinition of the boundary of the Schofield Lane Ancillary area so as not to include the trees and the classification of the Northern Grove as Significant. The existing trees should be added to by planting of new Eucalyptus trees with in the alignment above the cutting at the ridge.*

## **Land use and Property (Section 7.9)**

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Appendix L of the EA Report lists properties adjacent to the alignment affected by the project. Some of these properties have sections isolated from their major part that are left as remnant isolated segments. These in some cases are not viable as useable land. Some are cut off by the works or they are so small as to not be viable pastoral properties. They are large enough to be a source of weed growth with the risk of being seed sources to the surrounding area. Most have been acquired by RMS but will possibly not remain in that Departments ownership after commissioning. Strategies listed in Table L1 concern the division of the properties but not the small isolated segments. The following property shown as Lot Numbers in Appendix L Table L-1 and Figures L-1 and L2 are considered to be affected.

**Lot 7** - CH9700 – CH 9900. North West corner - The bridge abutment meets the Princes Highway and isolates a triangle of land from the rest of the Lot. This is assessable from the Princes Highway but is too small to be viable.

**Lot 11** - CH11500 – CH11650. Segment between existing Princes Highway and South Bound Austral Park on ramp is completely isolated.

**Lots 14-15** - CH11550 – CH12200. Segment between new alignment and Austral Park South bound on ramp is completely isolated.

**Lot 22** - CH13850 – CH14250. Segment between the new alignment and Tindalls Lane off – on ramp is completely isolated

**Lots 31 and 38** - CH15550 – CH15700. Segment between alignment and North bound on ramp to the bridge abutment is completely isolated.

**Lot 38** - CH15700. Segment between junction of on – off ramps is completely isolated.

**Lots 40, 42, 43 and 49** – CH16500 – CH17200. Segments between new alignment and North Street have been isolated from the original farms. This isolation means that a reasonable sized area of viable pastoral land is now included in the urban area of Berry. This has special significance to the residence of North Street.

**Lot 54** – CH17350 – CH17550. Segment between the new alignment and George Street. This Triangle of rural land with Town Creek water course is now isolated from any rural connection. This has special significance to the local residence.

**Lot 76** – CH17700 – CH17800. Segment between new alignment and Huntingdale Park Road is isolated.

Most of these areas are owned by the RMS and will be revegetated with endemic flora species. The areas in the Berry urban area are not guaranteed to become Council Land. Those out of the Berry urban area will require continuing maintenance. The RMS has indicated that no long term maintenance will be undertaken for these Lots. They will become weed infested and the source of infestation to local rural areas.

*Alternate Environmental Assessment recommended:*

*Identify the properties where remnant isolated pockets result from the work. State strategies for the on-going maintenance of all affected lots along the alignment that are not able to be sold or assigned.*

Harvey Blue.