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# Review of Environmental Factors (REF)

Assessment under Part 5 of the Environmental  
Planning and Assessment Act, 1979

Reviewed September 2022

**Wideview Road, Berowra Heights**

23 April 2024

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# Introduction

The Environmental Planning and Assessment Act, 1979, requires that an environmental assessment is carried out prior to the commencement of any development, work or activity. The assessment is usually in the form of a development application which is required for land uses that require development consent (Part 4 of the Act).

Part 5 of the Act requires an environmental assessment (or review of environmental factors) to occur for any work or activity that does not require development consent. Appendix A includes extracts from Part 5 of the Act.

A Review of Environmental Factors (REF) is a document which identifies and evaluates the impacts of an activity to decide if the impacts are likely to significantly affect the environment. A REF is designed to provide enough information to make an informed decision as to the likely significance of the impact of the activity on the environmental, social and economic aspects (including critical habitat or threatened species, populations or ecological communities, or their habitats). If the impacts are considered to be significant, then an Environmental Impact Statement (EIS) must be prepared and considered prior to a determining authority deciding if an activity is likely to proceed. REFs that relate to an issue that is controversial or will significantly affect the public may be placed on public exhibition. The proponent of the activity (e.g. Council) is responsible for completing the REF.

This template has been prepared to assist Council officers in assessing the potential impacts of activities and works and thereby fulfilling Council's responsibilities under the Environmental Planning and Assessment Act, 1979.

The steps in the process are:

- 1 Prepare a description of the proposed project including a discussion on alternative proposals considered.
- 2 Determine whether the proposal can be assessed under Part 5 of the Act (an REF) or requires the preparation of a Development Application and determine key planning issues by identifying what SEPPs/HLEP/HDCP parts and clauses are relevant to the permissibility and assessment of the proposal.
- 3 Have the Planning Issues section of this REF "signed off" by the Manager, Assessments.
- 4 Prepare the REF in consultation with relevant public authorities, other Branches of Council and consultants, if required.
- 5 Have the REF approved by their Branch Manager.
- 6 Commence the activity and ensure that any environmental safeguards are installed and maintained for the duration of the job in accordance with this REF and approval plans.

Some examples of environmental law to be considered through this process would include;

- Environmental Planning and Assessment Act (1979).
- Fisheries Management Act 1994
- Forestry Act 1916
- Heritage Act 1977
- Mine Subsidence Compensation Act 1961
- National Parks and Wildlife Act 1974
- Protection of the Environment Operations Act 1997
- Roads Act 1993
- Rural Fires Act 1997
- Threatened Species Conservation Act 1995
- Water Management Act 2000
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

### Can the proposal be assessed under Part 5?

The first step is to determine whether the proposal can be assessed under Part 5, through an REF, or is a development application and assessment under Part 4 of the Act required. There are a number of environmental planning instruments that may need to be reviewed to determine this, including:

- State Environmental Planning Policy (Transport and Infrastructure) 2021;
- State Environmental Planning Policy (Resilience and Hazards) 2021;
- State Environmental Planning Policy (Biodiversity and Conservation) 2021; and
- Hornsby Local Environmental Plan 2013.

### Hornsby Local Environmental Plan 2013

The Hornsby Local Environmental Plan (HLEP) 2013 is the principal governing environmental planning instrument that guides whether proposals can be assessed under Part 4 or 5. The Land Use Zones under Part 2 of the Plan specify development that is “permitted without consent” (i.e. activities), “permitted with consent” and “prohibited.” Development “permitted without consent” requires an REF.

### State Environmental Planning Policy (Transport and Infrastructure) 2021 (ISEPP)

ISEPP must also be reviewed to determine if the development or work under Part 2, Division 12 is classified as development “permitted without consent.”

Development “permitted without consent” requires an REF. The Divisions of the ISEPP are listed below.

Any of the following development may be carried out by or on behalf of a council without consent on a public reserve under the control of or vested in the council:

- Development for any of the following purposes:
  - Roads, pedestrian pathways, cycleways, single storey car parks, ticketing facilities, viewing platforms and pedestrian bridges,
    - Recreation areas and recreation facilities (outdoor), but not including grandstands,
    - Visitor information centres, information boards and other information facilities,
    - Lighting, if light spill and artificial sky glow is minimised in accordance with the Lighting for Roads and Public Spaces Standard,
    - Landscaping, including landscape structures or features (such as artwork) and irrigation systems,
    - Amenities for people using the reserve, including toilets and change rooms,
    - Food preparation and related facilities for people using the reserve,
    - Maintenance depots,
    - Portable lifeguard towers,
  - Environmental management works,
  - Demolition of buildings (other than any building that is, or is part of, a State or local heritage item or is within a heritage conservation area).



### **Other Relevant State Environmental Planning Policies**

Other listed SEPPs may also need to be reviewed (where relevant) to determine if the development or work is classified as development “permitted without consent”, thereby requiring an REF.

### **Preparation of REF/Assessment**

The REF should address the key issues as fully as practicable. However, the level of analysis should reflect the level of significance of the impacts and their importance for the proposal. Lesser attention should be given to those issues which have a lesser significance. Some issues may not be applicable and do not need to be addressed.

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# Section 1 Proposed Project

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## 1. Title of Proposal

Road reconstruction and drainage upgrade, Wideview Road, Berowra Heights

## 2. Planning

2.1. Location (Lot and DP and/or GIS Coordinates), Name of Reserve (if appropriate)

Wideview Road, Berowra Heights.

2.2. Description of proposal

Road reconstruction

## 3. The Activity

3.1. Description of the activity/methods of construction

This project involve the construction of kerb & gutter, drainage upgrade, pavement construction & tree planting in between Evelyn Crescent and Cliffview Road.

3.2. Objectives of the activity and justification

To improve drainage, road/traffic safety, reduce maintenance costs and pavement deterioration.

3.3. Major elements

There will be minor noise generation and disruption to vehicle traffic during the construction period, but this is not considered significant. Activities will be restricted to the hours between 7.00 am to 5.00 pm Monday to Saturday. Soil and water management procedures will be in place during the construction process

3.4. Other developments associated with the activity e.g. infrastructure, services

None.

3.5. Time frame/hours of operation

The project will be scheduled to commence in the 2024/2025 financial year and approximately take 16 weeks weather permitting. Hours of operation will be 7.00 am to 5.00 pm Monday to Saturday with no work on Sundays or Public Holidays unless approved by council.

## 4. Alternative Proposals

Alternative proposals considered/assessment of alternative proposals e.g. alternative locations, alternative technologies

Due to the existing site conditions the proposed design is the only one considered viable.

4.1. Justification of preferred option

Prevent the advent of serious downstream drainage problems, improve pavement quality and longevity.

4.2. Consequences of not carrying out the activity

Further degradation of pavement and nature strip by major storm conditions and continued vehicle use. Flooding in downstream properties.

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## Section 2 Planning Issues

This section is to be completed by a Team Leader or Manager, Assessments and referred back to the Project Officer.

1. Consideration of relevant State Plans and policies

State Environmental Planning Policies

Are any of the following SEPPs relevant to the activity? If yes, what is the relevant clause(s) that the REF needs to evaluate?

- [State Environmental Planning Policy \(Transport and Infrastructure\) 2021](#)
- [State Environmental Planning Policy \(Biodiversity and Conservation\) 2021 - Chapters 2 and 6](#)

2. Consideration of Hornsby Shire Council Plans and Policies

2.1. Hornsby Local Environmental Plan 2013

Are there any of the following parts of the HLEP 2013 relevant to the activity? If yes, what is the relevant clause(s) that the REF needs to evaluate?

The REF needs to evaluate the following Clauses of the HLEP:

[Clause 1.2\(2\)\(a\),\(h\) and \(i\)](#)

[Clause 1.9](#)

2.2. Hornsby Development Control Plan 2013

Are any of the following parts of the HDCP 2013 relevant to the activity? If yes, what is the relevant clause(s) that the REF needs to evaluate?

The REF needs to consider the following sections of the HDCP:

[Part 1B.6 Tree and Vegetation Preservation](#)

[Part 1 General - Clause 1C.1 and Clause 1C.1.1](#)

3. The following comments are made regarding the permissibility of the activity described in this REF.

The proposed development is “permitted without consent” under State Environmental Planning Policy (Transport and Infrastructure) 2021 and therefore an assessment under Part 5 of the Environment Planning and Assessment Act, 1979 is required.

The proposed development is 'permitted without consent' under Section 2.109 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 and therefore an assesment under Part 5 of the Environmental Planning and Assessment Act 1979 is required.

4. The following comments are made regarding the parts of the relevant legislation and Council Policies that the REF needs to evaluate.

The REF needs to evaluate in detail Part 1B.6 Tree and Vegetation Preservation of the HDCP if trees within the nature strip are to be removed.

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Caroline Maeshian

26/04/2024

\_\_\_\_\_  
**Assessment Planner Name**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

The signed off section of the REF should be forwarded to the Project Officer responsible for the activity and placed (TRIMmed) on the appropriate file in accordance with Council's policies and procedures.

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## Section 3 Assessment

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This section is to be completed by the Project Officer and is to be signed off by their Branch Manager.

The following headings are a guide to what should be addressed in a REF. Any other relevant information may be added.

Select Yes or No from the drop-down menu. If you select yes and the section does apply to the proposed activity fill out the field provided in as much detail as possible.

### 1. Permissibility/Compliance

#### 1.1. Zoning of land under the HLEP 2013

R2 Low Density Residential.

#### 1.2. Permissibility

Council's Team Manager Assessments has made the following comments regarding permissibility of the activity with relevant legislation. The use/activity can be described as "minor improvement" which does not require development consent by virtue of being development "permitted without consent" under the "Clause 94" zone of the HLEP 2013/ "minor Council works" Division of the ISEPP and therefore an assessment under Part 5 of the Environmental Planning and Assessment Act, 1979 is required.

#### 1.3. Compliance

Council's Team Manager Assessments has made the following comments regarding the parts of relevant legislation and Council Policies that the REF needs to evaluate.

### 2. The Existing Environment

Describe the existing environment prior to the proposed activity occurring  
Residential road

#### 2.1. Site description/current land use

This site is public road.

#### 2.2. National/State/Regional/Local Conservation significance

No

Does the site have conservation significance or impact on an area of conservation significance?

If yes, what are the mitigation measures?

2.3. The Natural Environment

2.3.1. Geology, geomorphology and geological sites No

Are there any other significant geological features on the site?

If yes, list them.

.

2.3.2. Soil type(s) No

What is the soil type? Is it a significant factor in the activity?

List the soil type.

Residual, Lucas Heights. broken up asphalt and loose recycled road base.

Is the site affected by acid sulphate soils? (See HLEP 2013 – Acid Sulphate Soils Map.) No

If yes, how are the acid sulphate soils being dealt with?

.

2.3.3. Plants (including presence of threatened species/ populations communities/ habitats. Will the proposal disturb vegetation? See also sections 6.5 to 6.8.) No

What is the vegetation present?

1 tree will be removed & trimming branches required as a result of proposed work. Approval from Tree Management Coordinator has been received. (Trim Document No.D08860569)

Are there any threatened species / populations / communities / critical habitats / ROTAP species or species / vegetation communities of National, State and regional significance? (See HLEP 2013 - Terrestrial Biodiversity Map.) No

All removal of trees & trimming branches complies with Part 1B.6 of Council's Tree and Vegetation Preservation of the HDCP.

Are there any significant wetland areas? (See SREP 20 Wetland Area Maps.) No

If yes, what are the mitigation measures applied to protect them?

.

2.3.4. Animals (including presence of threatened species / populations / communities / habitats).

What are the fauna species present and will the proposal disturb fauna habitat? No

If yes, what the mitigation measures?

There is no sign of fauna use.

- Are there any threatened fauna species / populations / communities / critical habitats or fauna species of conservation significance? **No**
- If yes, what are the mitigation measures?
- .
- Are there any priority oyster area leases? (See SEPP 62 Priority Oyster Area Maps.) **No**
- If yes, what are the mitigation measures?
- .
- 2.3.5. Water Catchments/Water Quality **No**
- Are there any water quality or catchment issues to consider on the site? (See SREP 20 and SREP 54 Catchment Maps and provisions.)
- If yes, what are the mitigation measures?
- Erosion and sediment control measures are to be installed in accordance with the Landcom publication "Managing urban soils and construction" Vol 1, 4th Edition prior to construction.
- Is the site within a coastal zone identified by State Environmental Planning Policy No. 71 – Coastal Protection? (See SEPP 71 Coastal Zone Maps and Provisions.) **No**
- If yes, supply the name of the coastal zone.
- .
- 2.3.6. Exotic Species – presence and extent **No**
- Are there any weeds or feral animals on the site? If so what?
- .
- 2.3.7. Fire – history hazards **No**
- Is there any fire history or hazards applicable for the site? (See Bushfire Prone Land Map.)
- If yes, what are the mitigation measures?
- .
- 2.3.8. Flood – history hazards **No**
- Is there any flood history or hazards applicable for the site? (See Flood Control Lot Maps.)
- If yes, what are the mitigation measures?
- .



- 2.3.9. Areas sensitive because of physical / biological factors No  
Are there any sensitive features of the site which require consideration?  
If yes, what are the mitigation measures?  
.
- 2.3.10. Land Contamination No  
Is the site affected by land contamination?  
If yes, what are the mitigation measures?  
.
- 2.3.11. Other (specify any other environmental factors)  
.
- 2.4. The Built Environment
- 2.4.1. Description of land use strategy No  
What is the land use zoning / are there any considerations necessary? (See HLEP 2013 Land Zoning & Additional Permit Uses Maps and Provisions.)  
.
- 2.5. The Cultural Environment
- Are there any known or potential Aboriginal sites / places of cultural significance to the Aboriginal community? Check with [AHIMS](#). Basic searches are free. No  
If yes, what are the mitigation measures?  
[No aboriginal site are recorded in or near Low Street through AHIMS search. \(Trim Document No. D08831003\)](#)
- 2.5.1. Are there any Aboriginal heritage considerations? No  
(The Heritage Planner can be consulted with regard to known Aboriginal sites and the procedures for archaeological surveys and consulting the Metropolitan Land Council.)  
If yes, what are they?  
.



- 2.5.2. Known and potential historic places or relics. No  
Are there any European heritage considerations?  
(Heritage items and Heritage Conservation Areas are listed in Schedule 5 – Environmental Heritage of the HLEP 2013 and identified on the HLEP 2013 – Heritage Map. Details of the significance of the item or area are contained on the Heritage Register located on Council’s Intranet. Consultation should occur with the Heritage Planner if the proposal may affect a heritage item or is within a heritage conservation area.)  
If yes, what are they?  
.
- 2.5.3. Collective values of landscape No  
Are there any cultural or historic features of the landscape?  
.
- 2.5.4. Description of built environment No  
What is the built environment/are there any considerations necessary?  
.
- 2.5.5. Other (please specify any other cultural factors)  
.  
Describe, if any, the mitigation measures to be applied.  
.
- 2.6. The Social Environment – current usage and impacts
- 2.6.1. Recreation No  
Are there currently recreational aspects to consider?  
If yes, what are they?  
.
- 2.6.2. Scenic/Visual No  
Are there currently scenic/visual aspects to consider?  
(See SREP 20 Scenic Significance Maps.)  
If yes, what are they?  
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- |        |  |    |
|--------|--|----|
| 2.6.3. | Education  | No |
|        | Are there any current educational uses to consider?  |    |
|        | If yes, what are they?   |    |
|        | .  |    |
| 2.6.4. | Scientific Sites   | No |
|        | Are there currently scientific uses on the site to consider?   |    |
|        | If yes, what are they?   |    |
|        | .  |    |
| 2.6.5. | Other (please specify any other social uses on the site)   |    |
|        | During construction Temporary site shed, amenities & storage areas are indicated on attached site control plan.(SCP) - Refer Appendix C  |    |
|        | Describe, if any, the mitigation measures to be applied.   |    |
|        | Secured work compound area for safe storage of construction equipment & materials also Including first aid, chemical spill kit & fire extinguishers. Upon completion of work area will be reinstated to equal or better condition. |    |

**3. Environmental Impacts of the Proposed Activity**

Answer Yes or No indicating if the proposed activity will have an impact on the environment. If the answer is yes, qualify the level of impact and add information on the type and extent of the impact. Indicate if the impact will be beneficial or harmful to the environment. Include whether the impact will be temporary, long term, or cumulative in nature.

**Physical or Pollution Impacts**

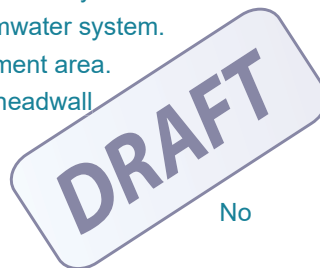
3.1. Air Impacts

- |        |  |     |     |
|--------|--|-----|-----|
| 3.1.1. | Air Quality  | Yes | Low |
|        | If yes, will that impact be high, medium or low?                           |     |     |
|        | If yes, what are the mitigation measures?                                  |     |     |
|        | Some air pollution will be emitted by machinery during construction phase. |     |     |
| 3.1.2. | Greenhouse or ozone considerations   | No  | N/A |
|        | If yes, will that impact be high, medium or low?                           |     |     |
|        | If yes, what are the mitigation measures?                                  |     |     |
|        | .  |     |     |





3.1.3.	<p>Any other air impacts</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.2.	<u>Water Impacts</u>		
3.2.1.	<p>Impacts from changes in surface or groundwater quality.</p> <p>If yes, will that be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.2.2.	<p>Impacts from use of water</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.2.3.	<p>Impacts from changes to natural water bodies, wetlands or runoff patterns.</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>Stormwater runoff will either flow across the roadway into the adjoining roadside vegetation area or will be channelled by new pits &amp; pipes, &amp; kerb &amp; gutter into the existing stormwater system. All stormwater will remain in the stormwater catchment area. Potential future gross pollutant trap at the existing headwall adjacent to No. 32-34X.</p>	Yes	Low
3.2.4.	<p>Impacts from changes to flooding or tidal regimes.</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A



3.2.5.	<p>Impacts from changes in water quality with economic, ecosystem health or amenity considerations e.g. salinity, colour, odour, turbidity, temperature, dissolved oxygen, nutrients, pH factors or pollutants (intentional or unintentional releases of oil, fuels, toxins – including heavy metals and anti-foulants, spoil, sewage or other waste).</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.2.6.	<p>Impacts from waste water generation and sewage services.</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.2.7.	<p>Other</p> <p>Are there any other possible impacts to water as a result of the activity?</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.3. <u>Soil and stability impacts</u>			
3.3.1.	<p>Degradation of soil quality including contamination (intentional or unintentional).</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.3.2.	<p>Salinisation of acidification impacts.</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A
3.3.3.	<p>Loss of soil from wind or water erosion.</p> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>	No	N/A



3.3.4.	Loss of structural integrity of the soil. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.3.5.	Increased land instability with risks from landslides or subsidence. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.3.6.	Impacts from on-site waste water disposal. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.3.7.	Other soil issues. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.4.	<u>Noise and vibration impacts</u>		
3.4.1.	Results in increased noise or vibrations to unacceptable levels for the surrounding communities. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? There will be minor noise generation during the construction phase but this is not considered significant.	Yes	Low
3.4.2.	Affects sensitive properties (educational, hospitals, residential heritage). If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.4.3.	Other noise issues. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A



**Biological Impacts**

3.5. Fauna Impacts

3.5.1. Any impacts upon or displacement of fauna species (including mammals, birds, frogs, reptiles, insects, fish or crustaceans.) **No** **N/A**

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.

3.5.2. Any reduction of/or critical habitat of any unique, threatened or endangered fauna (within the meaning of the NP&W Act 1974). **No** **N/A**

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.

3.5.3. Impacts which create significant barriers to fauna movement. **No** **N/A**

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.

3.5.4. Any other impacts **No** **N/A**

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.



3.6. Flora Impacts

3.6.1. Any impact on flora species (including trees, shrubs, grasses, herbs or aquatic plants.) **Yes** **Low**

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

1 tree will be removed as part of these works. 16 trees will be planted as per tree planting schedule. These works have been approved by Council's Tree Management Team. (Trim Document No.D08860569)

3.6.2.	Impacts from the clearing or modifying of extensive areas of relatively undisturbed native vegetation or wetlands.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.6.3.	Any other impacts.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.7. <u>Ecological Impacts</u>			
3.7.1.	Any threat to the biological diversity or ecological integrity of species or communities.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.7.2.	Any barrier to the normal replenishment or revegetation of existing species following disturbance.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.7.3.	Impacts from the introduction of noxious weeds, vermin, feral species or diseases or releases of genetically modified organisms.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.7.4.	Impacts from the uses of pesticides, herbicides, fertilisers or other chemicals which may build up residues in the environment.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A



3.7.5.	Bushfire risk impacts	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		
3.7.6.	Any other impacts to ecological systems.	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		

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### 3.8. Threatened Species Considerations

- 3.8.1. Is the activity likely to affect any threatened species, populations or ecological communities, or their habitats? If so the following Assessment of Significance under Section 5A of the EP&A act is required. No

Section 5A subsection 1 states that each of the factors in subsection 2 must be taken into account in deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats, and any assessment guidelines. Threatened species assessment guidelines – the assessment of significance, can be found at <http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf>

If 'YES' and threatened species are likely to occur on the site: Consult the Natural Resources Branch for advice and a list of appropriate flora and fauna consultants.

(Note: A Species Impact Statement (SIS) is required if an activity is on land that is, or is part of critical habitat; or there is likely to be a significant effect as determined under s.5A of the EP&A Act, the seven part assessment of significance.)

Critical habitat: the whole or any part or parts of the area or areas of land comprising the habitat of an endangered species, population or ecological community that is critical to the survival of the species, population or ecological community.

Significant impact: if the Assessment of Significance determines that there will be a significant effect on threatened species, populations or ecological communities, or their habitats, an SIS will be required.

*Assessment guidelines means assessment guidelines issued and in force under section 94A of the Threatened Species Conservation Act 1995 or, subject to section 5C, section 220ZZA of the Fisheries Management Act 1994.*

*Key threatening process means a threatening process specified in Schedule 3 of the Threatened Species Conservation Act 1995 or, subject to section 5C, Part 7A of the Fisheries Management Act 1994.*

If yes, what are the mitigation measures?

- 3.8.2. Section 5A EP&A Act – Assessment of Significance Subsection 2 No
- a) In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,
  - b) In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,
  - c) In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed;
    - i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or,
    - ii. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction?

If yes, what are the mitigation measures?



**Resource Use Impacts**

3.9. Community Resources

- 3.9.1. Any significant increase in the demand for services and infrastructure resources including roads, power, water supply and drainage, waste (including sewage) management, education, medical and social services. No N/A
- If yes, will that impact be high, medium or low?
- If yes, what are the mitigation measures?
- 3.9.2. Any significant resource recycling or reuse schemes to reduce resource usage. Yes Low
- If yes, will that impact be high, medium or low?
- If yes, what are the mitigation measures?
- Any spoil removed from the site will be taken to an approved recycling or landfill site.



3.9.3.	Any diversion of resources to the detriment of other communities or natural systems. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.9.4.	Any degradation of infrastructure such as roads or bridges. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.9.5.	Any other impacts on community resources If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.10.	<u>Natural Resources</u>		
3.10.1.	Any disruption or destruction of natural resources (e.g. fish habitat or fish species) with impacts on industries based on these resources. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.10.2.	Any disruption of existing activities (or reduction of future options) because of the natural resource demands of the proposal. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A
3.10.3.	Any use which results in the wasteful use of large amounts of natural resources. If yes, will that impact be high, medium or low? If yes, what are the mitigation measures? .	No	N/A

- |         |  |    |     |
|---------|--|----|-----|
| 3.10.4. | Any use which results in the substantial depletion of natural resources.<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>.                 | No | N/A |
| 3.10.5. | Any use which results in the degradation of any area reserved for conservation purposes.<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>. | No | N/A |
| 3.10.6. | Any other impacts on natural resources.<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>.  | No | N/A |

**Community Impacts**

3.11. Social Factors.

- |         |  |    |     |
|---------|--|----|-----|
| 3.11.1. | Any impacts which result in a change in the community's demographic structure.<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>.   | No | N/A |
| 3.11.2. | Any environmental impacts that may cause substantial change or disruption to the community (loss of neighbour cohesion, access to facilities, links to other communities, community identity or cultural character).<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>. | No | N/A |
| 3.11.3. | Any impacts which result in some individuals or communities being significantly disadvantaged.<br>If yes, will that impact be high, medium or low?<br>If yes, what are the mitigation measures?<br>.   | No | N/A |

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3.11.4.	Any impacts on the health, safety, security, privacy, or welfare of individuals or communities because of factors such as:	No	N/A
	<ul style="list-style-type: none"> <li>• Air pollution or odour.</li> <li>• Noise, vibration, blasting, electromagnetic fields or radiation.</li> <li>• Release of disease or genetically modified organisms.</li> <li>• Lighting, overshadowing or visual impacts.</li> </ul> <p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		
3.11.5.	Any impacts that result in a change in the level of demand for community resources (e.g. facilities, services and labour force).	No	N/A
	<p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		
3.11.6.	Any other social impacts.	No	N/A
	<p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		
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3.12. <u>Economic Factors</u>			
3.12.1.	Any impacts which result in a decrease to net economic welfare.	No	N/A
	<p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		
3.12.2.	Any impacts that result in a direct cost to the community or individuals.	No	N/A
	<p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		
3.12.3.	Any impacts that result in a decrease in the community's economic stability.	No	N/A
	<p>If yes, will that impact be high, medium or low?</p> <p>If yes, what are the mitigation measures?</p> <p>.</p>		

3.12.4.	Any impacts which result in a change to the public sector revenue or expenditure base.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.12.5.	Any other economic impacts.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
<b>3.13. <u>Heritage, Aesthetic, Cultural Impacts</u></b>			
3.13.1.	Any impacts on locality, place, building or natural landmark having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, recreational, scenic or social significance or other special value for present or future generations.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.13.2.	Any impacts from new lighting, glare or shadows.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
3.13.3.	Any other heritage, aesthetic or cultural impacts.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A
<b>3.14. <u>Land Use Impacts.</u></b>			
3.14.1.	Any major changes in land use.  If yes, will that impact be high, medium or low?  If yes, what are the mitigation measures?  .	No	N/A



3.14.2.	Any curtailment of other beneficial issues.	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		
3.14.3.	Any property value impacts with land use implications.	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		
3.14.4.	Any other land use impacts?	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		
3.15. <u>Transportation Impacts (during construction and operation.)</u>			
3.15.1.	Substantial impacts on existing transportation systems (rail, water, road, air or pedestrian – both public and private), altering present patterns of circulation, modal split or movement of people and/or goods.	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		
3.15.2.	Directly or indirectly encourages additional traffic.		
	a) During construction.	Yes	Low
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	There will be some disruption to vehicular and pedestrian traffic flow during the construction phase, but this will be controlled by appropriate traffic management procedures		
	b) During operation.	No	N/A
	If yes, will that impact be high, medium or low?		
	If yes, what are the mitigation measures?		
	.		



3.15.3. Increases demand for parking (off and on street including residential areas.) No N/A

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.

3.15.4. Any other impacts on transport or traffic. No N/A

If yes, will that impact be high, medium or low?

If yes, what are the mitigation measures?

.

#### 4. Cumulative Impacts

4.1. Any maintenance impacts through time. No N/A

If yes, will that impact be high, medium or low?

If yes, what mitigation measures will be applied?

.

4.1.1. Any cumulative impacts through time. No N/A

E.g. Undertaking the project again and again

i.e. reclaiming the estuary to develop a car park – eventually there isn't any estuary left as it will be all car park?

i.e. Irrigating an oval with treated effluent, eventually the salt levels might accumulate in the soil and kill the grass.

If yes, will that impact be high, medium or low?

If yes, what mitigation measures will be applied?

.

#### 5. Proposed Environmental Safeguards – Plans and Strategies.

Describe measures to ameliorate impacts (e.g. Erosion and Sediment Control Plan (ESCP) or Soils and Waste Management Plan (SWMP), and measures to protect flora and fauna.

Include maps, diagrams, photographs, plans and supporting information.

A plan of the land to which the application relates must accompany the REF indicating the following, on or adjacent to the land:

- The location and design of the proposal.
- A vegetation map (if applicable.)
- Any areas of conservation significance.
- The location of any easements.
- The location and use of any existing buildings and infrastructure, and
- Any other relevant information.

Copies of Plan No. 390.8 (Sheets 1-18) & Site Control plan are attached.

## 6. Disposal of Waste and Surplus Material.

### 6.1. Description of material and quantities.

Approximately 1644 tonnes of spoil will be removed from site during construction

### 6.2. Destination approved for all waste and surplus materials.

This material will be taken to an approved materials handling facility for sorting and hard fill recycling.  
Any material unsuitable for recycling will be taken to an approved land fill site.

## 7. Monitoring

On completion of works the site will be managed by Asset Maintenance Services for routine inspection and maintenance as required.

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## 8. Public Safety Factors.

All OH&S guidelines will be observed during construction & maintenance.

## 9. Views/opinions/approvals of other authorities if required.

NA

## 10. Funding

Please identify the funding source for the works. (Special rates, grants, revenue, donations, in-kind, developer, contributions.)

The works will be funded from Council's 2024/2025 Local Roads Improvements program

## 11. References

NA

## 12. Consultation

Does the project require consultation with any of the following authorities or Council staff?

Authority	Consultation Required	Consultation Occurred
Agriculture NSW	No	No
Greater Sydney Local Land Services	No	No
NSW Planning & Environment	No	No
Roads and Maritime Services	No	No
Regional Development Advisory Committee	No	No
NSW Health	No	No
Fire & Rescue NSW	No	No
NSW Rural Fire Service	No	No
WorkCover NSW	No	No
Electricity Supply Authority (TansGrid, Augrid, Energy Australia, Integral Energy)	No	No
Transport for NSW	No	No
Office of Environment and Heritage	No	No
NSW Forestry Corporation	No	No
NSW Police Force	No	No
NSW Office of Finance and Services	No	No
NSW Trade and Investment	No	No
Sydney Water	No	No
Community organisations / committees	No	No
Members of Parliament	No	No
Other	No	No
<b>Internal Referrals</b>	<b>Consultation Required</b>	<b>Consultation Occurred</b>
Traffic & Road Safety Branch	Yes	Yes
Environmental Health & Building Surveyor	No	No
Development Engineer	No	No
Planning Branch	No	No
Landscape Team	No	No
Compliance & Certification Branch	No	No
Waste Management Branch	No	No
Natural Resources Branch	No	No
Fire Control	No	No
Other	No	No

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See also Appendix B.

## 13. This REF/Part V Assessment was prepared by:

[Bala Rajakaruna / Engineer Design](#)

\_\_\_\_\_  
Name and title/project officer



*[Handwritten signature]*

23/04/2024

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Signature Date

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**14. Conclusions and recommendations**

(Select)

<input checked="" type="checkbox"/>	The proposal will not have any significant impact on the environment and should proceed;
<input type="checkbox"/>	The proposal will include mitigation measures and methods to avoid a significant impact on the environment and should proceed;
<input type="checkbox"/>	The proposal will have a significant impact on the environment and an environment impact statement is required;
<input type="checkbox"/>	The proposal is on land that is, or is part of, critical habitat or is likely to have a significant impact on threatened species, populations or ecological communities, or their habitats, and a species impact statement is required; or
<input type="checkbox"/>	The proposal will have a significant impact on the environment and should not proceed.

**15. This REF/Part V Assessment is endorsed and approved by:**

\_\_\_\_\_

**Branch Manager Name**

  
\_\_\_\_\_  
**Signature**

\_\_\_\_\_

**Date**

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# Appendix A

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## 1. Extracts from the Environmental Planning and Assessment Act 1979 and Regulations.

### 1.1. Part 5 - Duty to consider environmental impact

#### 110 Definitions

(1) In this Part:

#### Activity means:

- (a) the use of land, and
- (b) the subdivision of land, and
- (c) the erection of a building, and
- (d) the carrying out of a work, and
- (e) the demolition of a building or work, and
- (f) any other act, matter or thing referred to in section 26 that is prescribed by the regulations for the purposes of this definition, but does not include:
- (g) any act, matter or thing for which development consent under Part 4 is required or has been obtained, or
- (h) any act matter or thing that is prohibited under an environmental planning instrument, or
- (i) exempt development, or
- (j) development carried out in compliance with an order under Division 2A of Part 6, or
- (k) any development of a class or description that is prescribed by the regulations for the purposes of this definition.

#### Approval includes:

- (a) a consent, licence or permission or any form of authorisation, and
- (b) a provision of financial accommodation by a determining authority to another person, not being a provision of such financial accommodation, or financial accommodation of such class or description, as may be prescribed for the purposes of this definition by a determining authority so prescribed.

**Determining authority** means a Minister or public authority and, in relation to any activity, means the Minister or public authority by or on whose behalf the activity is or is to be carried out or any Minister or public authority whose approval is required in order to enable the activity to be carried out.

**Nominated determining authority**, in relation to an activity, means the determining authority nominated by the Minister in accordance with [section 110A](#) in relation to the activity.

**Proponent**, in relation to an activity, means the person proposing to carry out the activity, and includes any person taken to be the proponent of the activity by virtue of [section 110B](#).

### **Section 111 - Duty to consider environmental impact**

(1) For the purpose of attaining the objects of [this Act](#) relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of [this Act](#) or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

(2) Without limiting subsection (1), a determining authority shall consider the effect of an activity on:

- (a) any conservation agreement entered into under the [National Parks and Wildlife Act 1974](#) and applying to the whole or part of the land to which the activity relates, and
- (b) any plan of management adopted under that Act for the conservation area to which the agreement relates, and
- (c) any joint management agreement entered into under the [Threatened Species Conservation Act 1995](#).

(3) Without limiting subsection (1), a determining authority shall consider the effect of an activity on any wilderness area (within the meaning of the [Wilderness Act 1987](#)) in the locality in which the activity is intended to be carried on.

(4) Without limiting subsection (1), a determining authority must consider the effect of an activity on:

- (a) critical habitat, and
- (b) in the case of threatened species, populations and ecological communities, and their habitats, whether there is likely to be a significant effect on those species, populations or ecological communities, or those habitats, and
- (c) any other protected fauna or protected native plants within the meaning of the [National Parks and Wildlife Act 1974](#).



## 2. Environmental Planning and Assessment Regulations, 1994

### 82 What factors must be taken into account concerning the impact of an activity on the environment?

- (1) For the purposes of Part 5 of the Act, the factors to be taken into account when consideration is being given to the likely impact of an activity on the environment include:
- (a) for activities of a kind for which specific guidelines are in force under this clause, the factors referred to in those guidelines, or
  - (b) for any other kind of activity:
    - (i) the factors referred to in the general guidelines in force under this clause, or
    - (ii) if no such guidelines are in force, the factors referred to subclause (2).
- (2) The factors referred to in subclause (1) (b) (ii) are as follows:
- (a) any environmental impact on a community,
  - (b) any transformation of a locality,
  - (c) any environmental impact on the ecosystems of the locality,
  - (d) any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,
  - (e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations,
  - (f) any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974),
  - (g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air,
  - (h) any long-term effects on the environment,
  - (i) any degradation of the quality of the environment,
  - (j) any risk to the safety of the environment,
  - (k) any reduction in the range of beneficial uses of the environment,
  - (l) any pollution of the environment,
  - (m) any environmental problems associated with the disposal of waste,
  - (n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply,
  - (o) any cumulative environmental effect with other existing or likely future activities.
  - (p) any impact on coastal processes and coastal hazards, including those under projected climate change conditions.

- (3) For the purposes of this clause, the Director may establish guidelines for the factors to be taken into account when consideration is being given to the likely impact of an activity on the environment, in relation to activities generally or in relation to any particular kind of activity.
- (4) The Director may vary or revoke any guidelines in force under this clause.

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# Appendix B

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## 1. Consultation

### 1.1. Exhibition/Notification

Part 2, Division 1, Clauses 13 to 17 of the ISEPP identifies consultation that is required to be undertaken with relevant public authorities and other branches of Council. In summary, there are consultation requirements regarding development with impacts on Council related infrastructure or services, local heritage, and flood liable land. There are also consultation requirements with public authorities (other than councils) and exceptions to the requirements to consult.

The following extract from ISEPP contains the details of the consultation requirements.

### Division 1 Consultation

#### 13 Consultation with councils—development with impacts on council-related infrastructure or services

- (1) This clause applies to development carried out by or on behalf of a public authority that this Policy provides may be carried out without consent if, in the opinion of the public authority, the development:
  - (a) will have a substantial impact on stormwater management services provided by a council, or
  - (b) is likely to generate traffic to an extent that will strain the capacity of the road system in a local government area, or
  - (c) involves connection to, and a substantial impact on the capacity of, any part of a sewerage system owned by a council, or
  - (d) involves connection to, and use of a substantial volume of water from, any part of a water supply system owned by a council, or
  - (e) involves the installation of a temporary structure on, or the enclosing of, a public place that is under a council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential, or
  - (f) involves excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which a council is the roads authority under the Roads Act 1993 (if the public authority that is carrying out the development, or on whose behalf it is being carried out, is not responsible for the maintenance of the road or footpath).
- (2) A public authority, or a person acting on behalf of a public authority, must not carry out development to which this clause applies unless the authority or the person has:
  - (a) given written notice of the intention to carry out the development to the council for the area in which the land is located, and
  - (b) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.



#### 14 Consultation with councils—development with impacts on local heritage

- (1) This clause applies to development carried out by or on behalf of a public authority if the development:
  - (a) is likely to have an impact that is not minor or inconsequential on a local heritage item (other than a local heritage item that is also a State heritage item) or a heritage conservation area, and
  - (b) is development that this Policy provides may be carried out without consent.
- (2) A public authority, or a person acting on behalf of a public authority, must not carry out development to which this clause applies unless the authority or the person has:
  - (a) had an assessment of the impact prepared, and
  - (b) given written notice of the intention to carry out the development, with a copy of the assessment, to the council for the area in which the heritage item or heritage conservation area (or the relevant part of such an area) is located, and
  - (c) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.

#### 15 Consultation with councils—development with impacts on flood liable land

- (1) In this clause, **flood liable land** means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled *Floodplain Development Manual: the management of flood liable land* published by the New South Wales Government and as in force from time to time.
- (2) A public authority, or a person acting on behalf of a public authority, must not carry out, on flood liable land, development that this Policy provides may be carried out without consent and that will change flood patterns other than to a minor extent unless the authority or person has:
  - (a) given written notice of the intention to carry out the development to the council for the area in which the land is located, and
  - (b) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.

#### 16 Consultation with public authorities other than councils

- (1) A public authority, or a **person** acting on behalf of a public authority, must not carry out specified development that this Policy provides may be carried out without consent unless the authority or person has:
  - (a) given written notice of the intention to carry out the development to the specified authority in relation to the development, and
  - (b) taken into consideration any response to the notice that is received from that authority within 21 days after the notice is given.
- (2) For the purposes of subclause (1), the following development is **specified development** and the following authorities are **specified authorities** in relation to that development:
  - (a) development adjacent to land reserved under the National Parks and Wildlife Act 1974—the Department of Environment and Climate Change,



- (b) development adjacent to a marine park declared under the Marine Parks Act 1997—the Marine Parks Authority,
- (c) development adjacent to an aquatic reserve declared under the Fisheries Management Act 1994—the Department of Environment and Climate Change,
- (d) development in the foreshore area within the meaning of the Sydney Harbour Foreshore Authority Act 1998—the Sydney Harbour Foreshore Authority,
- (e) development comprising a fixed or floating structure in or over navigable waters—the Maritime Authority of NSW,
- (f) development for the purposes of an educational establishment, health services facility, correctional centre or group home, or for residential purposes, in an area that is bush fire prone land (as defined by the Act)—the NSW Rural Fire Service.

**Note.** The Act defines **bush fire prone land**, in relation to an area, as land recorded for the time being as bush fire prone land on a map certified as referred to in section 146 (2) of the Act.

**Note.** When carrying out development of a kind referred to in paragraph (f), consideration should be given to the publication of the NSW Rural Fire Service *Planning for Bush Fire Protection 2006*.

- (g) (Repealed)

**Note.** Clause 18A (2) of State Environmental Planning Policy (Sydney Region Growth Centres) 2006 requires public authorities (or persons acting on their behalf) to consult with the Department of Planning and Infrastructure before carrying out any development comprising the clearing of native vegetation on certain land within a growth centre (within the meaning of that Policy). The land concerned is land other than the subject land (within the meaning of Part 7 of Schedule 7 to the Threatened Species Conservation Act 1995). The subject land is generally land to which precinct plans apply under that Policy.

## 17 Exceptions

- 1 Clauses 13–16 do not apply with respect to development to the extent that:
  - (a) they would require notice of the intention to carry out the development to be given to a council or public authority from whom an approval is required in order for the development to be carried out lawfully, or
  - (b) they would require notice to be given to a council or public authority with whom the public authority that is carrying out the development, or on whose behalf it is being carried out, has an agreed consultation protocol that applies to the development, or
  - (c) they would require notice to be given to a council or public authority that is carrying out the development or on whose behalf it is being carried out, or
  - (d) the development is exempt development or complying development under any environmental planning instrument (including this Policy), or
  - (e) the development comprises emergency works, or
  - (f) the development is carried out in accordance with a code of practice approved by the Minister for the purposes of this clause and published in the Gazette.

2 In this clause:

**approval** means any licence, permission or any form of authorisation, other than development consent, under any other law.

**consultation protocol** means an arrangement that:

- (a) is about when and how the parties to the arrangement will consult one another about proposed development, and
- (b) is recorded in writing, and
- (c) is approved in writing on behalf of any public authority that is a party to the arrangement by a person who is authorised to do so.

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# Appendix C

## 16. Attachments relevant to this REF.

### WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION EVELYN CRESCENT TO CLIFFVIEW ROAD

#### LEGEND

- EXISTING LOR & GUTTER
- EXISTING KERB
- EXISTING CONCRETE PATH EDGE
- EXISTING TOP/BOTTOM OF BLANK
- EXISTING FLAGGED KDS
- EXISTING STORM WATER PIPE
- EXISTING STORM WATER VALVE
- EXISTING MANHOLE
- EXISTING TREE
- PROPOSED TREE
- SUPPLY TRANSFORMER STATION
- STATE SURVEY MARK
- UTILITY REFERENCE MARK - BELLHOLE & RING ENCLOSED BOX PIPE
- EXISTING SEWER MANHOLE
- EXISTING SEWER INVERT
- EXISTING VALVE STOP VALVE
- EXISTING SEWER MANHOLE
- EXISTING ELECTRICAL CABLES
- EXISTING GAS METER VALVE
- EXISTING GAS CABLES
- PROPOSED GAS & WATER PIPES
- PROPOSED STORMWATER VALVE
- STORMWATER INLET (UBS, UBSw, MIT No.)
- KERB & GUTTER SECTION
- PAVEMENT SECTION
- PAVEMENT SECTION WITH EXISTING IP
- PAVEMENT SECTION WITH PROPOSED IP
- PAVEMENT SECTION WITH PROPOSED IP AND STORMWATER INLET
- PAVEMENT SECTION WITH PROPOSED IP AND STORMWATER VALVE

SHEET NO.	TITLE	ISSUE
1	DRAWING TITLE, LEGEND & LOCALITY PLAN	
2	PROJECT NOTES	
3	TYPICAL SECTIONS & ROAD PAVEMENT DETAILS	
4	OVERALL LAYOUT PLAN	
5	CENTRAL LINE 'TIEOUT' DETAILS	
6	GENERAL ARRANGEMENTS PLAN - SHEET 1 OF 2	
7	GENERAL ARRANGEMENTS PLAN - SHEET 2 OF 2	
8	UTILITY CROSS SECTIONS - OVERLAP TO EXISTING	
9	UTILITY CROSS SECTIONS - OVERLAP TO PROPOSED	
10	DRIVEWAY MARKING - OVERLAP TO EXISTING	
11	DRIVEWAY MARKING - OVERLAP TO PROPOSED	
12	500MM WATER MAINS (GARDEN) PLAN - SHEET 1 OF 2	
13	500MM WATER MAINS (GARDEN) PLAN - SHEET 2 OF 2	
14	DETAILED SECTION - LRS 1 & 2	
15	DETAILED SECTION - LRS 1 & 2	
16	DETAILED SECTION - LRS 1 & 2	
17	LANDSCAPING PLAN - SHEET 1 OF 2	
18	LANDSCAPING PLAN - SHEET 2 OF 2	

**DRAWING SCHEDULE**

**LOCALITY PLAN**

NOT TO SCALE

ROAD CLASSIFICATION: 2 LANE URBAN  
DESIGN SPEED: 50km/h

SITE OF WORKS

**NOT FOR CONSTRUCTION**

CHECK PLANNING

<b>ASSET MANAGEMENT &amp; MAINTENANCE</b>		<b>101113</b>
DATE	BY	REV
1	18	1
		390.8

**Hornsby Shire Council**  
**Design & Construction Branch**

10/10/2023

**GENERAL NOTES:**

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS & SPECIFICATIONS OF HORNSBY SHIRE COUNCIL.
- LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS & NOT FROM SURVEY FEES.
- PROVIDE TRAFFIC MANAGEMENT LINESHAPING & SIGNAGE IN ACCORDANCE WITH THE TRFVSM (TRAFFIC CONTROL AT WORK SITES - TECHNICAL MANUAL & AS1742.5 REQUIREMENTS).
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED FROM THE UTILITY SERVICES PROVIDER. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL SERVICES SHOWN ON THESE PLANS HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DISCREPANCY INFORMATION PROVIDED BY SERVICE AUTHORITIES & FIELD INVESTIGATIONS & ARE TO BE VERIFIED PRIOR TO CONSTRUCTION.
- EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE LANDOWNER PUBLICATION "MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION" (MAY 1, 4TH EDITION).
- ALL DISTURBED AREAS OF THE SITE ARE TO BE RESTORED WITH EXISTING OR MATCHING MATERIALS UNLESS NOTED OTHERWISE AT THE COMPLETION OF THE WORKS.
- APRANGE SET-OUT BY HORNSBY SHIRE COUNCIL DESIGN & CONSTRUCTION BRANCH SURVEYOR. NOTIFY ENGINEERING SURVEYOR A MINIMUM OF 24 HOURS IN ADVANCE.
- WHERE PAVE/MENT RESURFACING IS UNDERTAKEN, ENSURE ALL BLUE HYDRANT MARKER PRISMS ARE BENT AT THE COMPLETION OF WORKS.
- COUNCIL'S PAVE/MENT ENGINEER HAS REQUESTED HE BE CONTACTED AT LEAST ONE (1) MONTH PRIOR TO UNDERTAKING ANY WORKS TO IDENTIFY & CONFIRM AREAS OF EXISTING PAVE/MENT REQUIRING RESTORATION WORKS.
- WHERE WORKS ARE ADJACENT TO EXISTING STRUCTURES, UNDERTAKE A DILIGENT SURVEY OF EXISTING ADJACENT STRUCTURES BEFORE COMMENCEMENT OF ANY WORKS.
- UTILITY SERVICES INVESTIGATION HAS BEEN DONE BY UTILITY MAPPING (ART) PTY LTD. DATE OF LOCATING SERVICES - 17 FEBRUARY 2024. TRM DOCUMENT # D018433102.

**SUBSOIL DRAINAGE NOTES:**

- SUBSOIL DRAINAGE TO BE INSTALLED AS DIRECTED BY SUPERVISING CONSTRUCTION ENGINEER.

**ACCESS & SAFETY NOTES:**

- THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY & INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
- THE CONTRACTOR SHALL PROVIDE TRAFFIC MANAGEMENT PLANS FOR THE PROPOSED WORKS COMPLETED BY A SUITABLY QUALIFIED PERSON & APPROVED BY COUNCIL REGULATORY AUTHORITY. WORK IS NOT TO COMMENCE ON SITE PRIOR TO APPROVAL OF TRAFFIC MANAGEMENT SCHEME.
- THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO BUILDINGS/RESIDENCES ADJACENT TO THE WORKS IS NOT INTERRUPTED.
- WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGHOUT BY THE SITE.
- THE CONTRACTOR SHALL ENSURE PUBLIC ACCESS EXTERNAL TO THE SITE IS IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

**ABORIGINAL ARTIFACT & HERITAGE NOTES:**

- AN ARHS WEB SEARCH HAS BEEN UNDERTAKEN FOR THE PROJECT REEF, WIDEVIEW ROAD, ALTHOUGH UNCOVERED ITEMS ARE NOT TO BE RECOVERED FROM THE SITE & SHALL BE IMMEDIATELY REPORTED TO COUNCIL'S PROJECT MANAGER. TRM DOCUMENT # D018433102.

**GEO-TECHNICAL & PAVEMENT NOTES:**

- A PAVEMENT INVESTIGATION HAS BEEN UNDERTAKEN AT THIS PROJECT SITE BY STS GEOTECHNICS PTY LTD REPORT #023276681. THE REPORT IS MORE INFORMATION CAN BE FOUND IN COUNCIL'S DOCUMENT MANAGEMENT SYSTEM AS DOCUMENT # D0178745.
- PAVEMENT DESIGN & EXTENT OF PAVEMENT REPAIR WORKS HAVE BEEN DONE BY COUNCIL'S TEAM LEADER PAVEMENT MANAGEMENT & FORESHORES. THE REPORT & MORE INFORMATION CAN BE FOUND IN COUNCIL'S DOCUMENT MANAGEMENT SYSTEM AS DOCUMENT # D018433102. REFER SHEET NO.3 FOR PAVEMENT DETAILS.
- SEE CONTACT DETAILS: CONTACT NAME: Lawrence Walsh PH: 02 95 56 7168 CONTACT NAME: Alan Boyd PH: 02 9617 6677
- COUNCIL'S TEAM LEADER PAVEMENT MANAGEMENT & FORESHORES CONTACT DETAILS: CONTACT NAME: Alan Boyd PH: 02 9617 6677

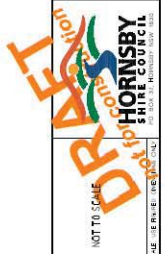
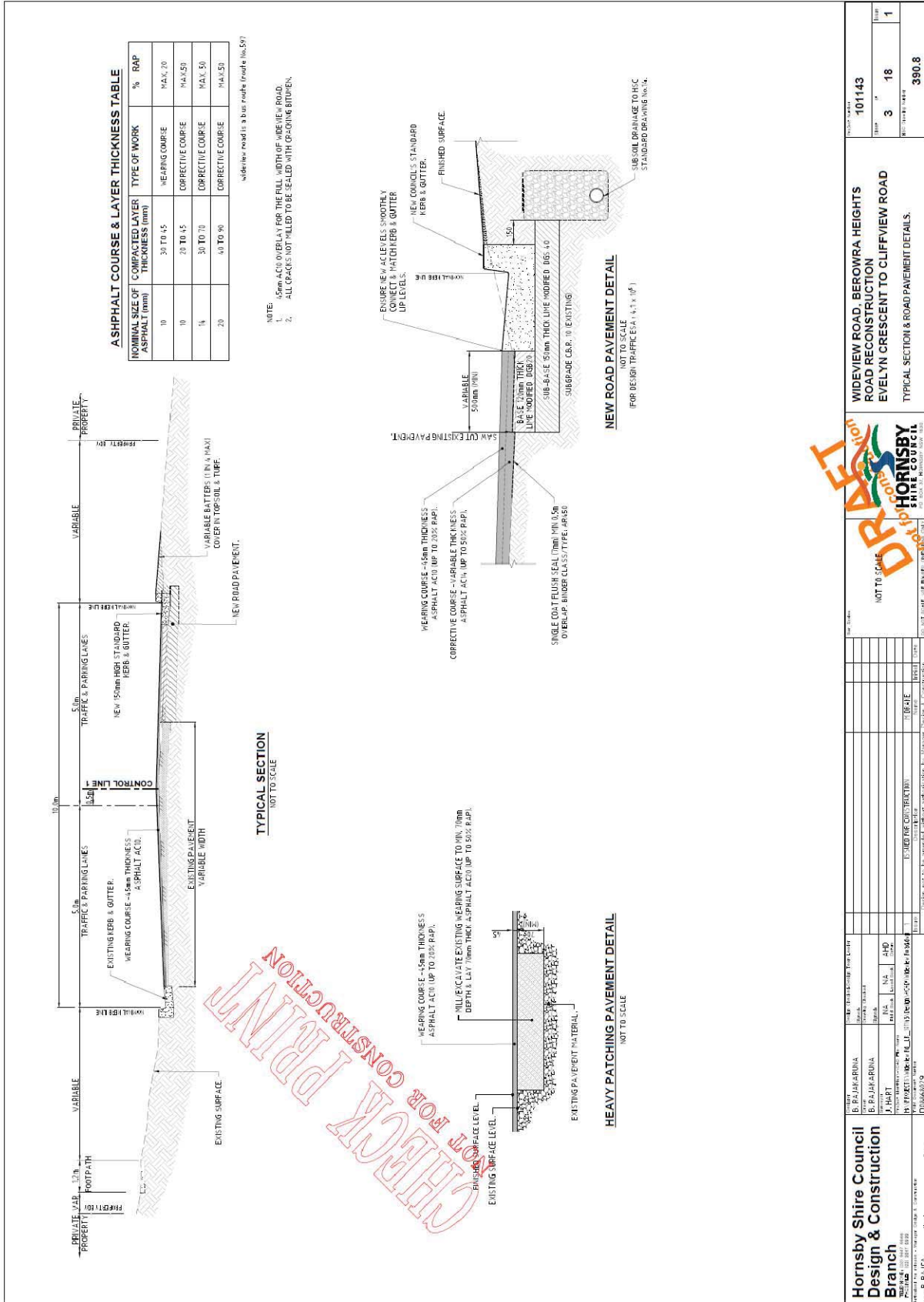
**TREE PROTECTION MEASURES:**

- ALL WORKS WITHIN THE TREE ROOT ZONE OF ANY TREE/S TO BE RETAINED SHOULD NOT REDUCE THE USEFUL LIFE EXPECTANCY OF THE TREE/S & BE CARRIED OUT UNDER THE SUPERVISION OF AN ADF LEVEL 5 ARBORIST.
- SOIL LEVELS WITHIN THE TREE ROOT ZONE OF TREES TO BE RETAINED SHOULD REMAIN AT EXISTING GRADE & UNDISTURBED.
- EXCAVATION WITHIN THE TREE ROOT ZONE OF TREES TO BE RETAINED SHOULD BE CARRIED OUT BY HAND EXCAVATION ONLY. HAND EXCAVATION SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF A QUALIFIED ARBORIST IN SUCH A MANNER THAT IS NON-DAUNTING TO ANY ROOTS REVEALED.
- NO TREE ROOT GREATER THAN 30mm DIAMETER LOCATED WITHIN THE TPZ OF ANY TREE TO BE RETAINED SHOULD BE SEVERED OR INJURED IN THE PROCESS OF ANY WORKS.
- TREE ROOTS LESS THAN 10mm IN DIAMETER REQUIRED TO BE SEVERED SHALL BE CUT CLEANLY BY HAND BY A QUALIFIED & EXPERIENCED ARBORIST OR HORTICULTURIST WITH MINIMUM QUALIFICATIONS OF HORTICULTURAL CERTIFICATE OF TREE SURGERY CERTIFICATE (AOF 3).
- ALL PRUNING SHALL BE UNDERTAKEN AS SPECIFIED IN THE AUSTRALIAN STANDARD PRUNING OF ARBURY TREES (AS 4373-2009).
- THE BULKING OR STOCKING OF BRUSHING MATERIALS, BRANES OF BRUSHES OR PLANT, THE USE OF MACHINERY OTHER THAN HAND HELD DISPOSAL OF EXCESS SLURRY WASTE WATER OR OTHER CONTAMINANTS MUST REMAIN OUTSIDE THE TREE ROOT ZONE OF ANY TREE TO BE RETAINED.
- ANY MECHANICAL DAMAGE TO TREES OR CHEMICAL SPILLS WITHIN THE TPZ MUST BE REPORTED TO THE PROJECT SUPERVISOR/MANAGER.
- TREE TRUNK PROTECTION MEASURES ARE REQUIRED AND MUST BE INSTALLED BY THE ADF'S PROJECT ARBORIST.
- THE CIRCUMFERENCE OF THE TRUNKS MUST BE WRAPPED IN FES-SIAN MATERIAL TO PROVIDE CUSHIONING FOR THE INSTALLATION OF TRUNK PLANKS.
- TRUNK PLANKS DO NOTION MUST BE SPACED AT 100MM INTERVALS AND MUST BE ATTACHED USING ADJUSTABLE RATCHET STRAPS.
- WHERE WOOD-CHIP MULCH IS PERMITTED BY COUNCIL INSTEAD OF TREE PROTECTION FENCING WITHIN THE TREE PROTECTION ZONES, THE WOOD-CHIP MUST BE COVERED WITH A LAYER OF GEOTEXTILE FABRIC AND RIPPABLE BOARDS.
- APPROVAL FROM TREE MANAGEMENT OFFICER HAS BEEN RECEIVED. TRM DOCUMENT # D018433102.
- FOR ARBORIST ADVICE CONSULT WITH COUNCIL'S TREE MANAGEMENT OFFICER CONTACT DETAILS: Name: Gareth Handberg's PH: 9617 6677

CHECK PLAN NOT FOR CONSTRUCTION

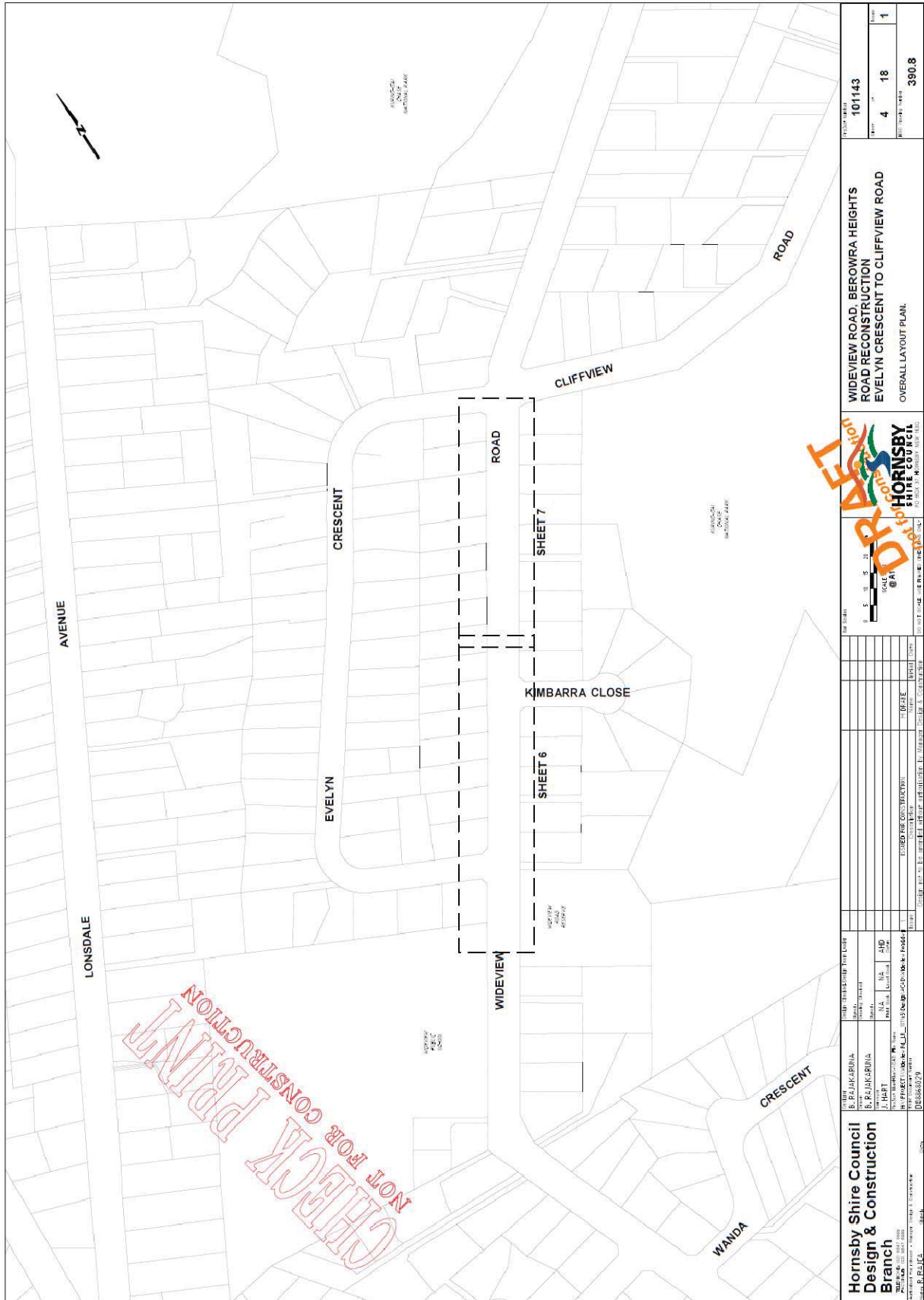


<b>Hornsby Shire Council Design &amp; Construction Branch</b>		<b>PROJECT INFORMATION</b>	
PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]	SHEET NO: 2 SHEET TOTAL: 18	DATE: 18/02/2024 TIME: 1:00 PM	PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]
PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]		PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]	
PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]		PROJECT NO: 2024-001 PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION PROJECT MANAGER: [Name]	



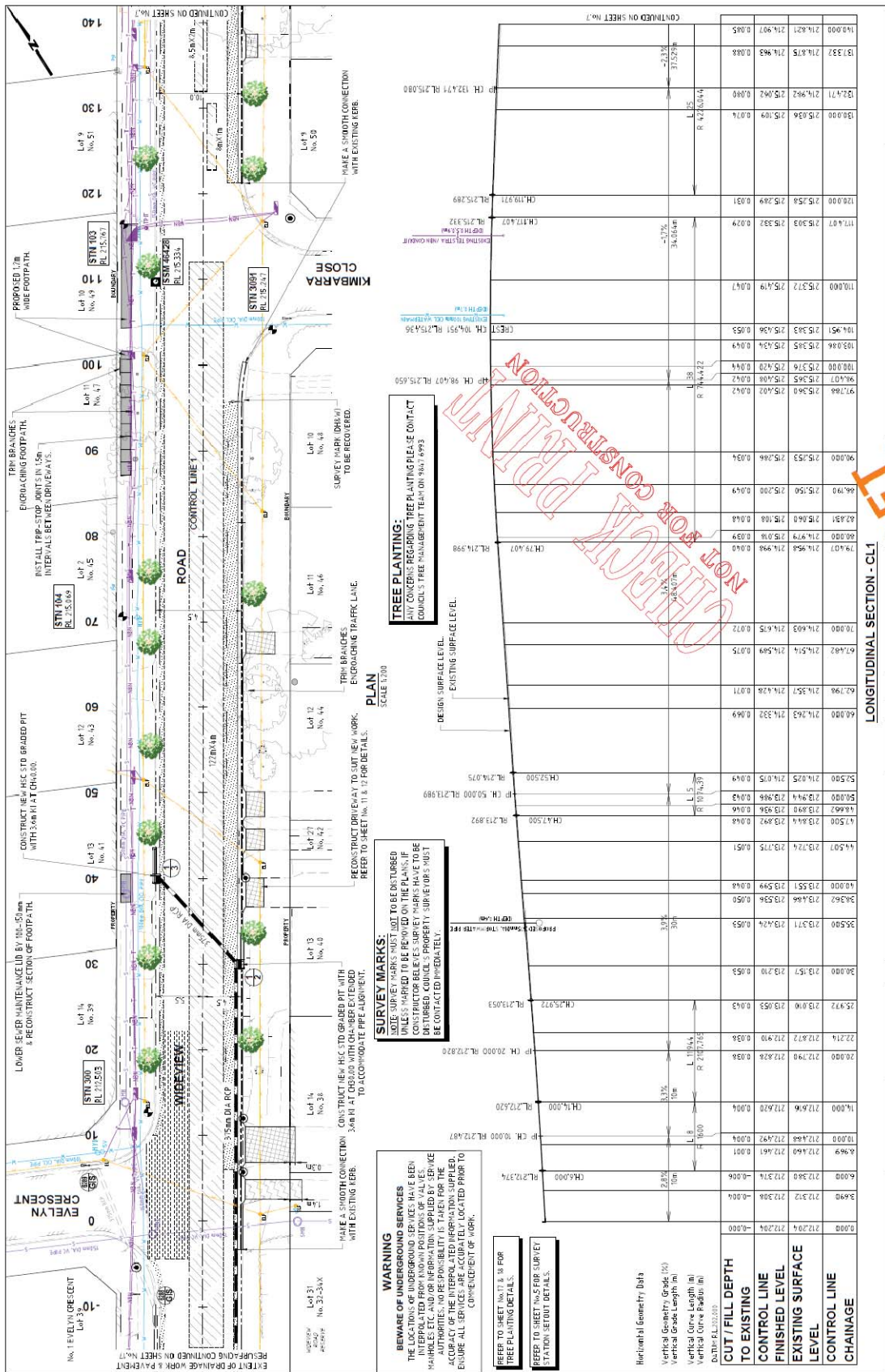
CHECK PRINT NOT FOR CONSTRUCTION





<b>Hornsbys Shire Council</b> <b>Design &amp; Construction</b> <b>Branch</b>		PROJECT NO: 101143 SHEET NO: 4 OF 18 SHEET AREA: 390.8	
PROJECT TITLE: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION EVELYN CRESCENT TO CLIFFVIEW ROAD OVERALL LAYOUT PLAN.		SCALE: 1:500 DATE: 10/10/2019	
DRAWN BY: B. PZAK-GRINA CHECKED BY: B. PZAK-GRINA DATE: 10/10/2019		PROJECT NO: 101143 SHEET NO: 4 OF 18 SHEET AREA: 390.8	
PROJECT NO: 101143 SHEET NO: 4 OF 18 SHEET AREA: 390.8		PROJECT NO: 101143 SHEET NO: 4 OF 18 SHEET AREA: 390.8	





**LONGITUDINAL SECTION - CL1**

STATION	EXISTING SURFACE LEVEL	DESIGN SURFACE LEVEL	CUT / FILL DEPTH TO EXISTING	CONTROL LINE FINISHED LEVEL	EXISTING SURFACE LEVEL	CONTROL LINE CHAINAGE
10+00	212.294	212.294	-0.000	212.312	212.306	-0.004
10+10	212.640	212.641	-0.001	212.658	212.652	-0.006
10+20	212.790	212.826	0.036	212.808	212.802	-0.006
10+30	212.872	212.908	0.036	212.890	212.884	-0.006
10+40	212.954	212.990	0.036	212.972	212.966	-0.006
10+50	213.036	213.072	0.036	213.058	213.052	-0.006
10+60	213.118	213.154	0.036	213.140	213.134	-0.006
10+70	213.200	213.236	0.036	213.222	213.216	-0.006
10+80	213.282	213.318	0.036	213.304	213.298	-0.006
10+90	213.364	213.400	0.036	213.386	213.380	-0.006
11+00	213.446	213.482	0.036	213.468	213.462	-0.006
11+10	213.528	213.564	0.036	213.550	213.544	-0.006
11+20	213.610	213.646	0.036	213.632	213.626	-0.006
11+30	213.692	213.728	0.036	213.714	213.708	-0.006
11+40	213.774	213.810	0.036	213.796	213.790	-0.006
11+50	213.856	213.892	0.036	213.878	213.872	-0.006
11+60	213.938	213.974	0.036	213.960	213.954	-0.006
11+70	214.020	214.056	0.036	214.042	214.036	-0.006
11+80	214.102	214.138	0.036	214.124	214.118	-0.006
11+90	214.184	214.220	0.036	214.206	214.200	-0.006
12+00	214.266	214.302	0.036	214.288	214.282	-0.006
12+10	214.348	214.384	0.036	214.370	214.364	-0.006
12+20	214.430	214.466	0.036	214.452	214.446	-0.006
12+30	214.512	214.548	0.036	214.534	214.528	-0.006
12+40	214.594	214.630	0.036	214.616	214.610	-0.006
12+50	214.676	214.712	0.036	214.698	214.692	-0.006
12+60	214.758	214.794	0.036	214.780	214.774	-0.006
12+70	214.840	214.876	0.036	214.862	214.856	-0.006
12+80	214.922	214.958	0.036	214.944	214.938	-0.006
12+90	215.004	215.040	0.036	215.026	215.020	-0.006
13+00	215.086	215.122	0.036	215.108	215.102	-0.006
13+10	215.168	215.204	0.036	215.190	215.184	-0.006
13+20	215.250	215.286	0.036	215.272	215.266	-0.006
13+30	215.332	215.368	0.036	215.354	215.348	-0.006
13+40	215.414	215.450	0.036	215.436	215.430	-0.006
13+50	215.496	215.532	0.036	215.518	215.512	-0.006
13+60	215.578	215.614	0.036	215.600	215.594	-0.006
13+70	215.660	215.696	0.036	215.682	215.676	-0.006
13+80	215.742	215.778	0.036	215.764	215.758	-0.006
13+90	215.824	215.860	0.036	215.846	215.840	-0.006
14+00	215.906	215.942	0.036	215.928	215.922	-0.006

**Hornsby Shire Council Design & Construction Branch**

PROJECT: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION, EVELYN CRESCENT TO CLIFFVIEW ROAD

GENERAL WORKS & SERVICES PLAN SHEET 1 OF 2

390.8

DATE: 10/11/2010

SCALE: 1:100

NOT FOR CONSTRUCTION







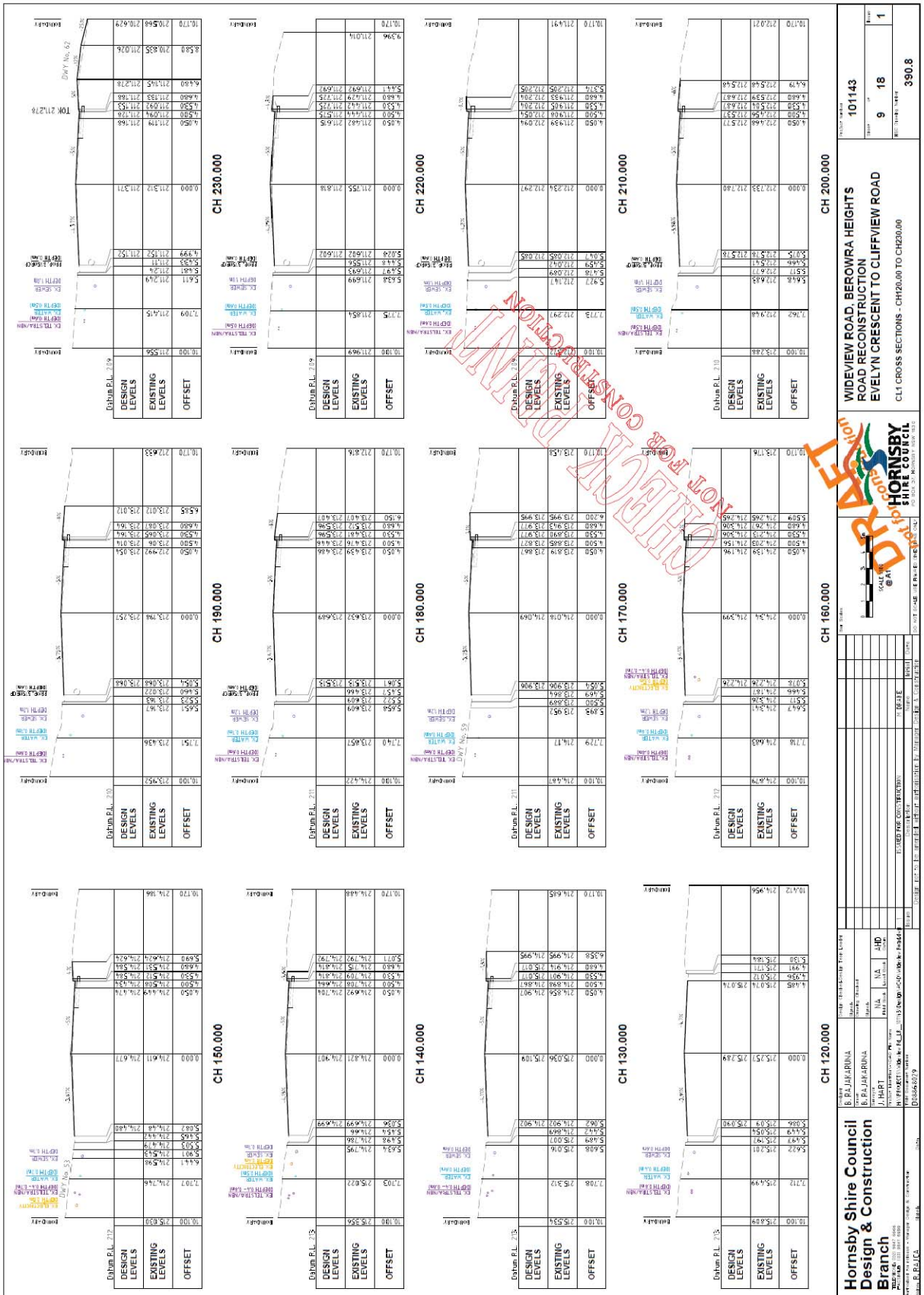
**Hornsby Shire Council Design & Construction Branch**

PROJECT: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION  
 EVELYN CRESCENT TO CLIFFVIEW ROAD  
 CL1 CROSS SECTIONS - CH0.00 TO CH110.00

DATE: 10/11/2017  
 DRAWN: J. HART  
 CHECKED: J. HART  
 SCALE: 1:50

101143  
 SHEET: 8 OF 18  
 TOTAL SHEETS: 18

390.8



**WIDEVIEW ROAD, BEROWRA HEIGHTS  
ROAD RECONSTRUCTION  
EVELYN CRESCENT TO CLIFFVIEW ROAD**

CL1 CROSS SECTIONS - CH120.00 TO CH230.00

101143

9 18 1

390.8

**Hornsby Shire Council**

Design & Construction Branch

Project: 101143

Scale: 1:50

Author: J. HART

Check: A.H.D.

Date: 10/10/17

Project No: 101143

Drawn: J. HART

Checked: A.H.D.

Scale: 1:50

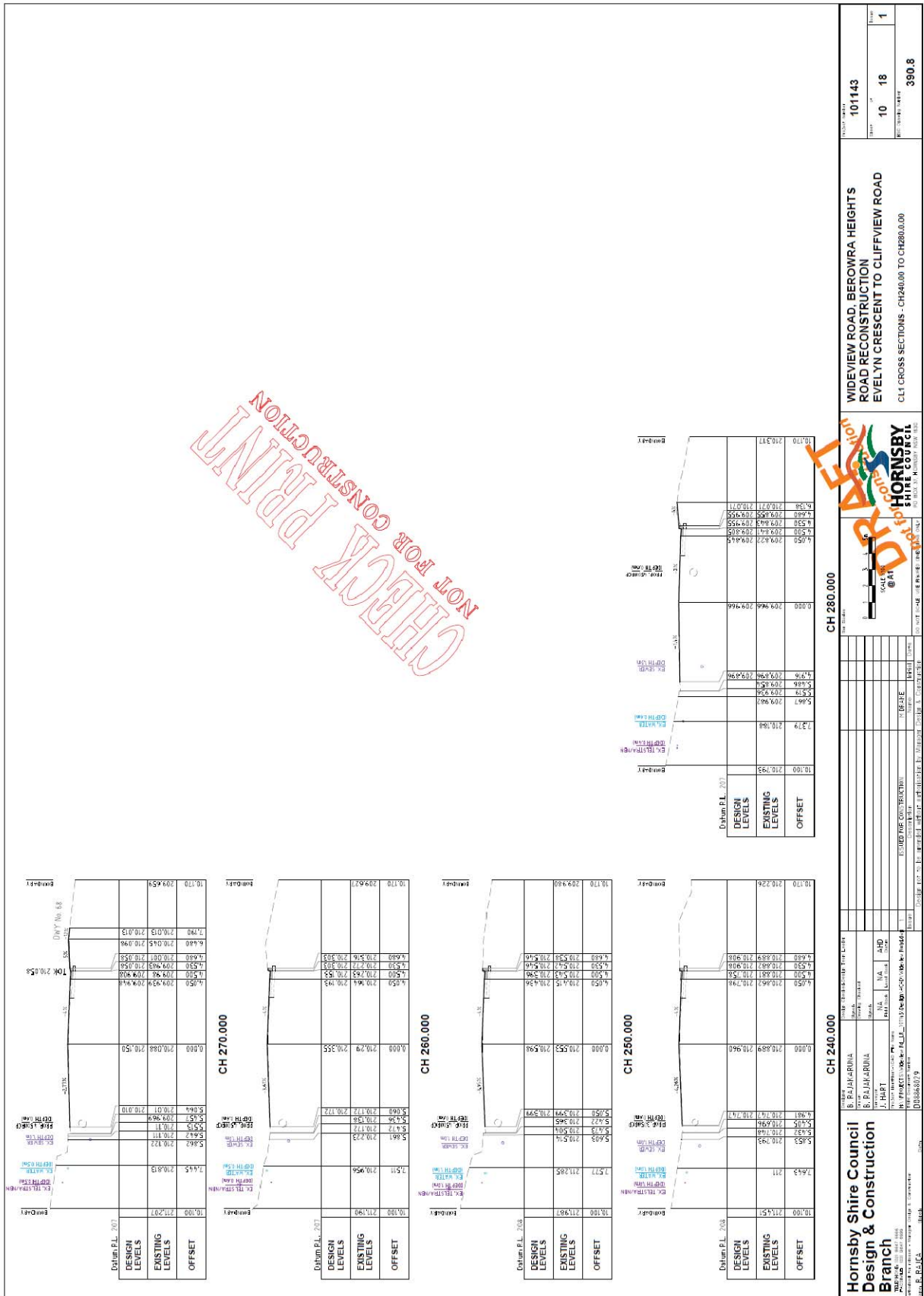
Project: 101143

Drawn: J. HART

Checked: A.H.D.

Scale: 1:50









**Hornsby Shire Council Design & Construction Branch**

Project Name: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION EVELYN CRESCENT TO CLIFFVIEW ROAD DRIVEWAY PROFILES - CH156.655 TO CH278.124

Scale: 1:100

Sheet No: 12 of 18

390.8

DATE: 10/11/2010

BY: B.PAJARADIA

CHECKED: J.HART

APPROVED: B.PAJARADIA

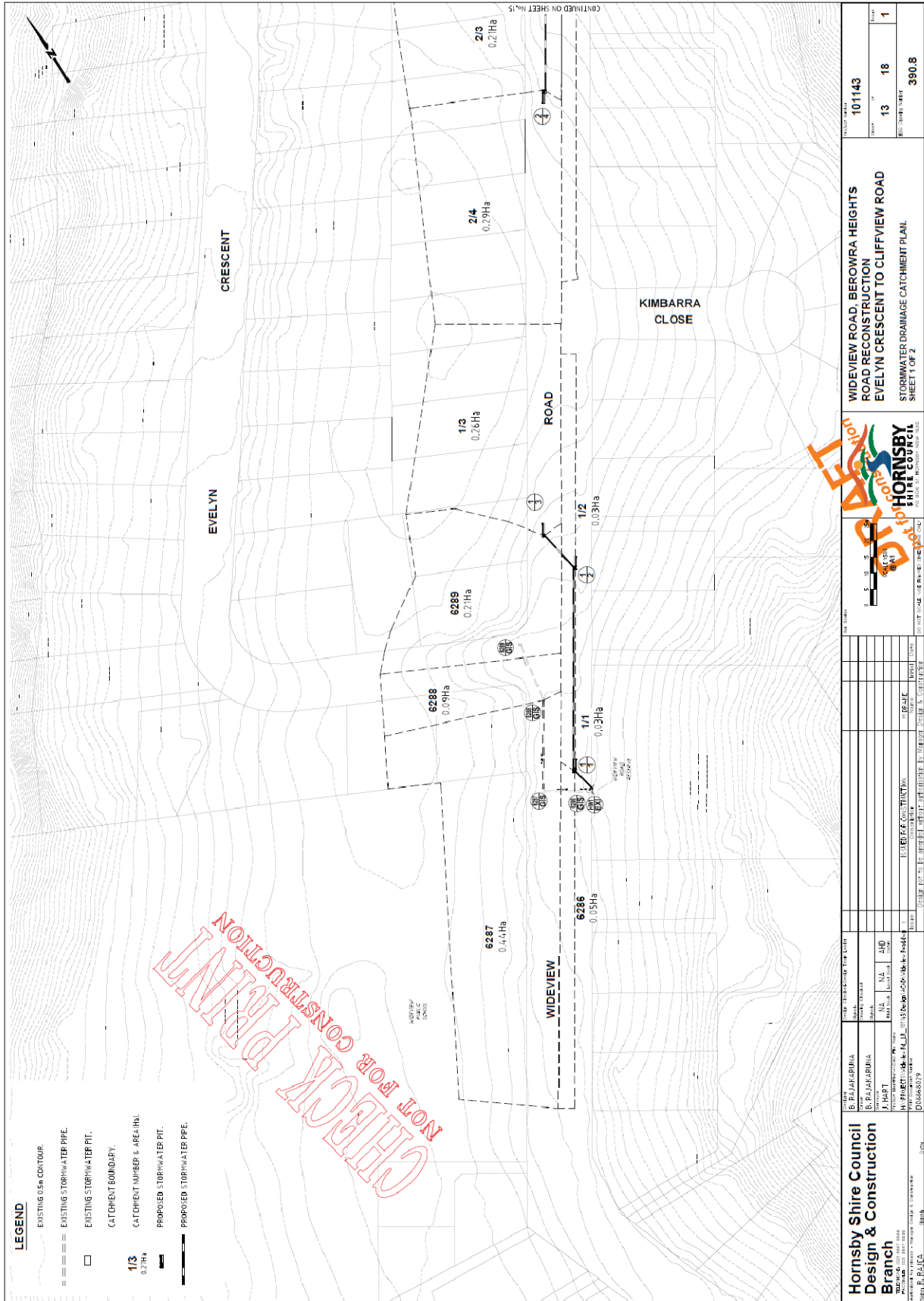
PROJECT NO: CH156.655 TO CH278.124

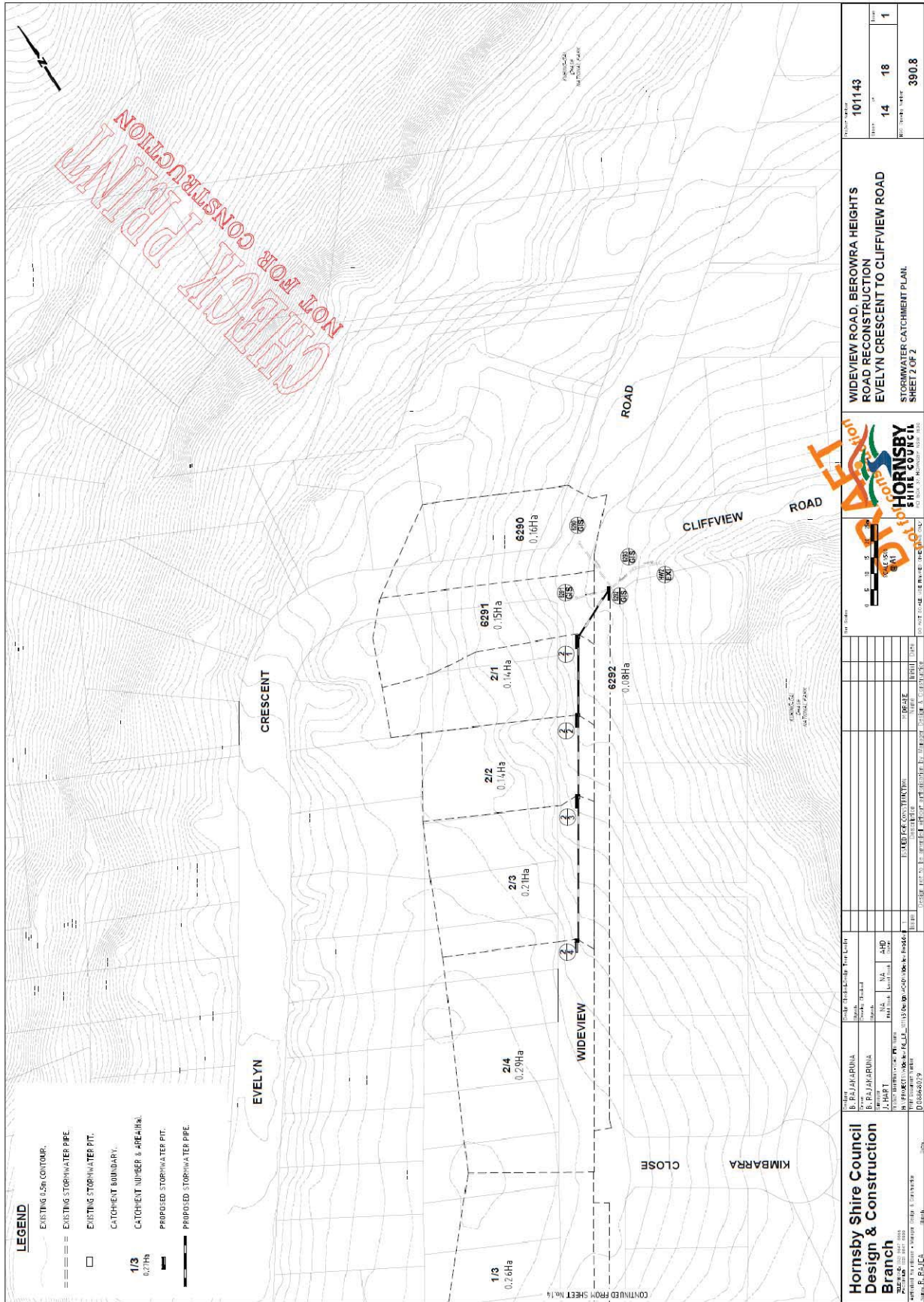
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PROJECT NO: CH156.655 TO CH278.124

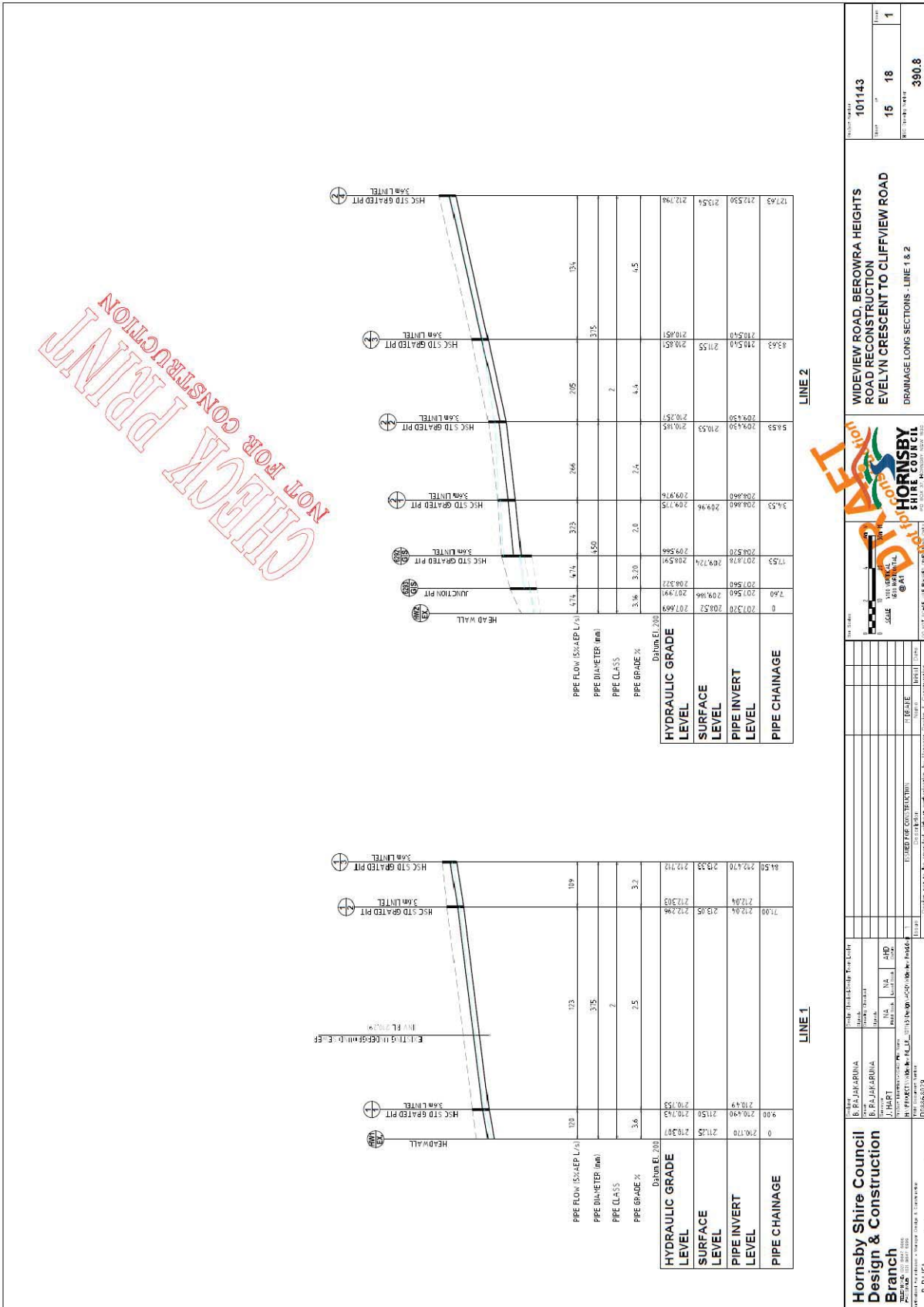
PROJECT NAME: WIDEVIEW ROAD, BEROWRA HEIGHTS ROAD RECONSTRUCTION EVELYN CRESCENT TO CLIFFVIEW ROAD DRIVEWAY PROFILES - CH156.655 TO CH278.124













5% AEP (ANNUAL EXCEEDANCE PROBABILITY) HYDRAULIC DATA & RESULTS FROM DRAINS MODEL

PIPE NAME	U/S NODE NAME	D/S NODE NAME	CONDUIT SHAPE	NUMBERS OF BARRELS	TOTAL LENGTH (m)	COLBROOK WHITE (%)	PIPE MANNINGS "N"	DIAMETER OR HEIGHT (mm)	PIPE CLASS	U/S PIPE INVERT LEVEL (m)		D/S PIPE INVERT LEVEL (m)		CONDUIT GRADE (%)	U/S HGL (m)	D/S HGL (m)	FLOW (cu.m)	VELOCITY (m/s)	REMARKS
										1	2	1	2						
<b>LINE 1</b>																			
PIPE 13	PIT 13	PIT 12	CIRCULAR	1	13.5	0.6	0.013	375	2	212.00	212.00	212.353	212.353	0.109	1.450	1.450	0.109	1.450	PROPOSED
PIPE 12	PIT 12	PIT 11	CIRCULAR	1	0.9	0.6	0.013	375	2	212.00	210.460	212.296	212.753	0.123	1.430	1.430	0.123	1.430	PROPOSED
PIPE 11	PIT 11	PIT 1	CIRCULAR	1	9	0.0	1.001	375	2	210.660	210.070	210.161	210.287	0.150	1.240	1.240	0.150	1.240	PROPOSED
<b>LINE 2</b>																			
PIPE 20	PIT 20	PIT 21	CIRCULAR	1	24	0.6	0.013	450	2	210.640	209.430	210.851	210.257	0.205	2.100	2.100	0.205	2.100	PROPOSED
PIPE 21	PIT 21	PIT 22	CIRCULAR	1	24	0.6	0.013	450	2	209.430	208.800	210.185	208.916	0.205	1.97	1.97	0.205	1.97	PROPOSED
PIPE 22	PIT 22	PIT 23	CIRCULAR	1	24	0.6	0.013	450	2	208.800	208.300	210.185	209.775	0.205	1.97	1.97	0.205	1.97	PROPOSED
PIPE 23	PIT 23	PIT 24	CIRCULAR	1	24	0.6	0.013	450	2	208.300	207.900	210.185	210.257	0.205	2.100	2.100	0.205	2.100	PROPOSED
PIPE 24	PIT 24	PIT 25	CIRCULAR	1	24	0.6	0.013	450	2	207.900	207.300	210.185	210.257	0.205	2.100	2.100	0.205	2.100	PROPOSED
PIPE 25	PIT 25	PIT 26	CIRCULAR	1	24	0.6	0.013	450	2	207.300	207.300	210.185	210.257	0.205	2.100	2.100	0.205	2.100	EXISTING

5% AEP (ANNUAL EXCEEDANCE PROBABILITY) HYDROLOGY DATA & RESULTS FROM DRAINS MODEL

PIT NAME	SUB CATCHMENT AREA		PERCENTAGE		TOTAL TIME (s)		PERCENTAGE		TOTAL TIME (s)		PERCENTAGE		TOTAL TIME (s)		PERCENTAGE		REMARKS
	HA	HA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA		
PIT 13	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 12	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 11	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
<b>LINE 2</b>																	
PIT 20	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 21	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 22	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 23	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 24	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 25	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	PROPOSED
PIT 26	0.260	0.260	100	100	5	5	100	100	5	5	100	100	5	5	100	100	EXISTING

