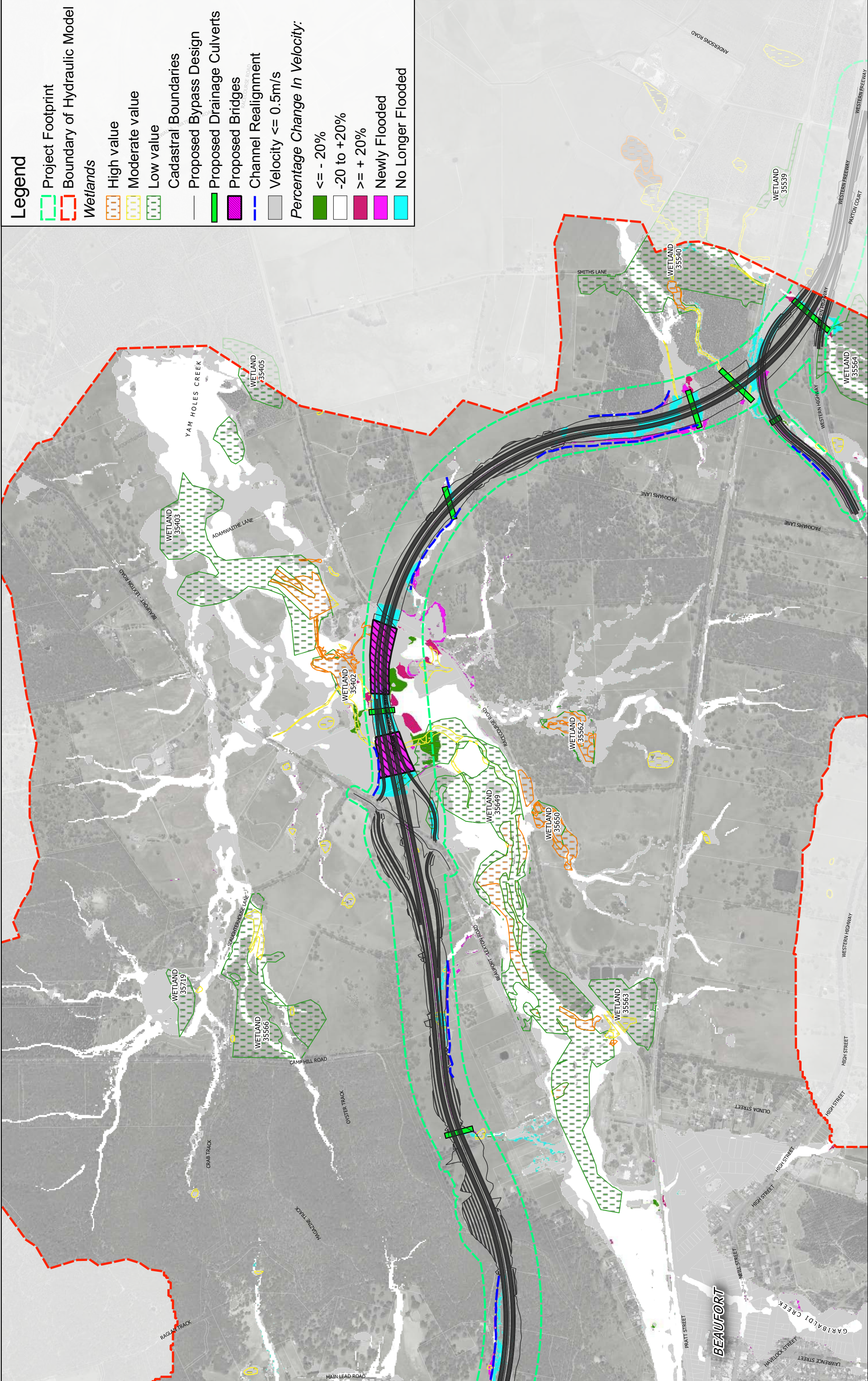




Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Velocity $\leq 0.5\text{m/s}$
- Percentage Change In Velocity:
 - $\leq -20\%$
 - -20 to $+20\%$
 - $> +20\%$
 - Newly Flooded
 - No Longer Flooded

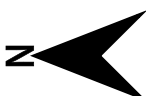
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m
Scale: 1:15000

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1% AEP Climate Change
Sheet 2
Map ID: DES_CHVEL_1AEPCC_2





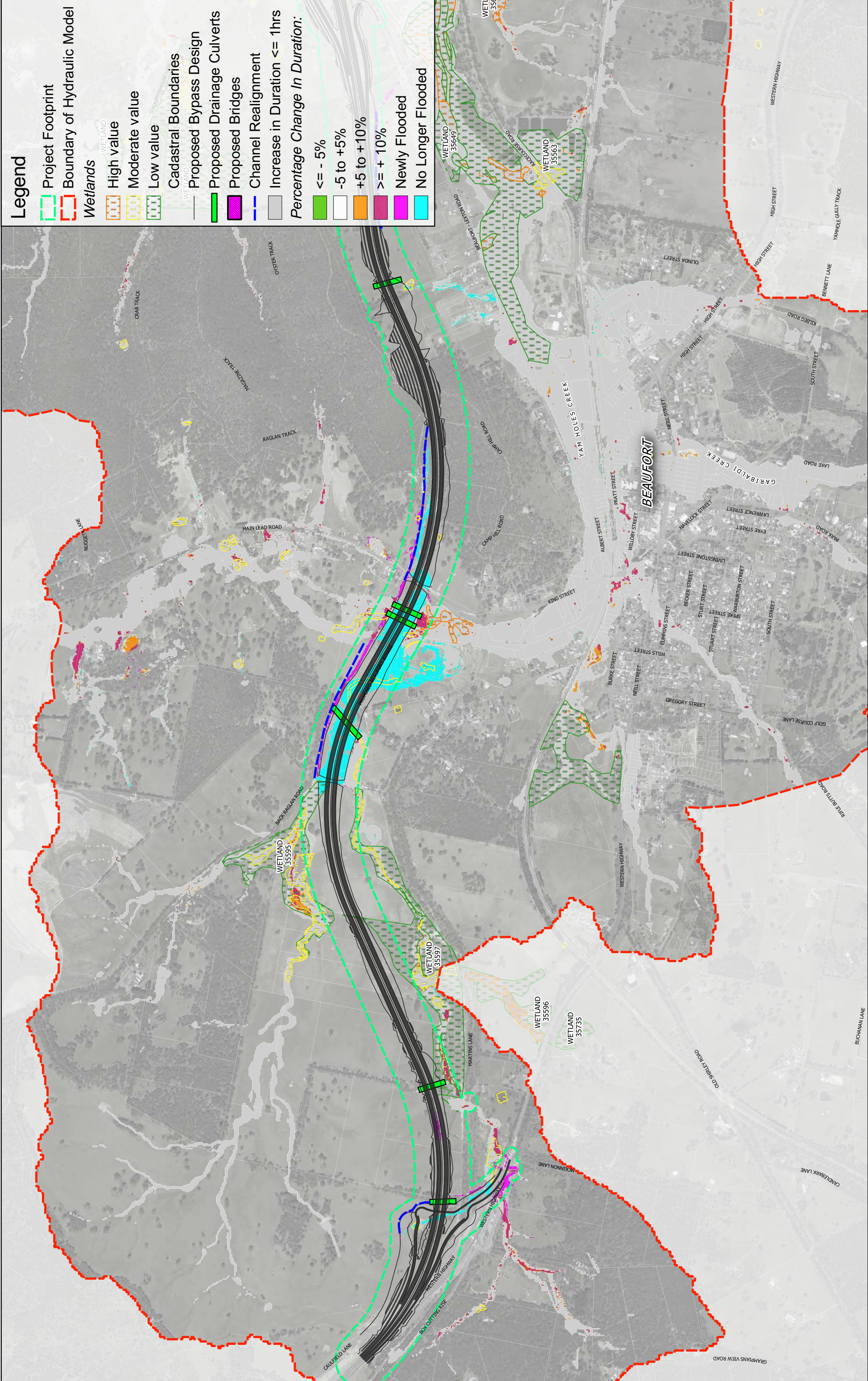
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

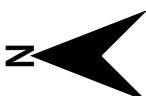


Beaufort Bypass
Peak Flood Change In Duration - Proposed Design Scenario
Event: 1 EY
Sheet 2
Map ID: DES_CHDUR_1EY_2



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Increase in Duration <= 1hrs
- Percentage Change In Duration:
 - <= - 5%
 - 5 to +5%
 - +5 to +10%
 - >= + 10%
 - Newly Flooded
 - No Longer Flooded



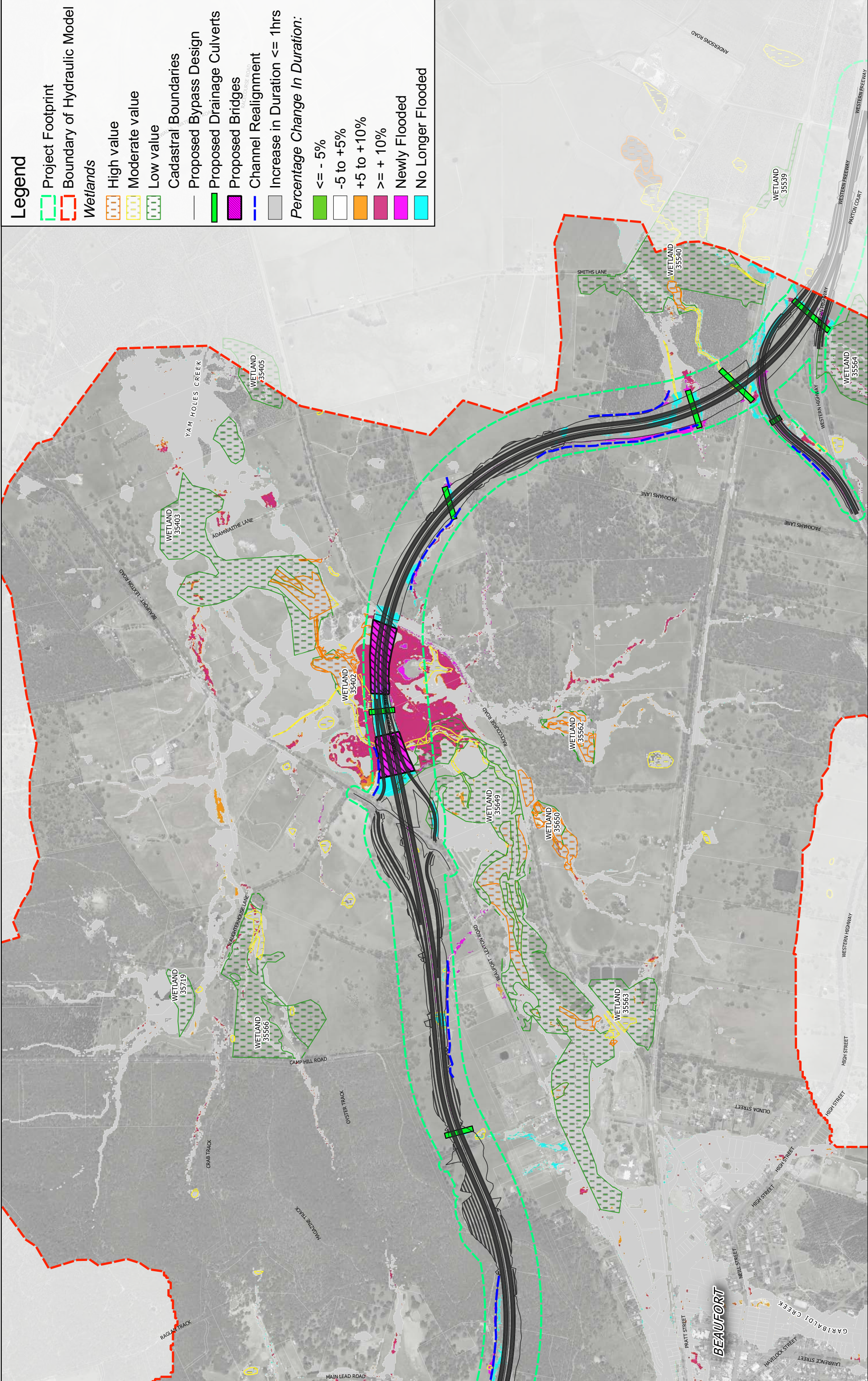
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

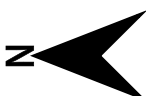


Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021



Beaufort Bypass
Peak Flood Change In Duration - Proposed Design Scenario
Event: 10% AEP
Sheet 1
Map ID: DES_CHDUR_10AEP_1





Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021



Scale: 1:15000

0 200 400 600 800 m

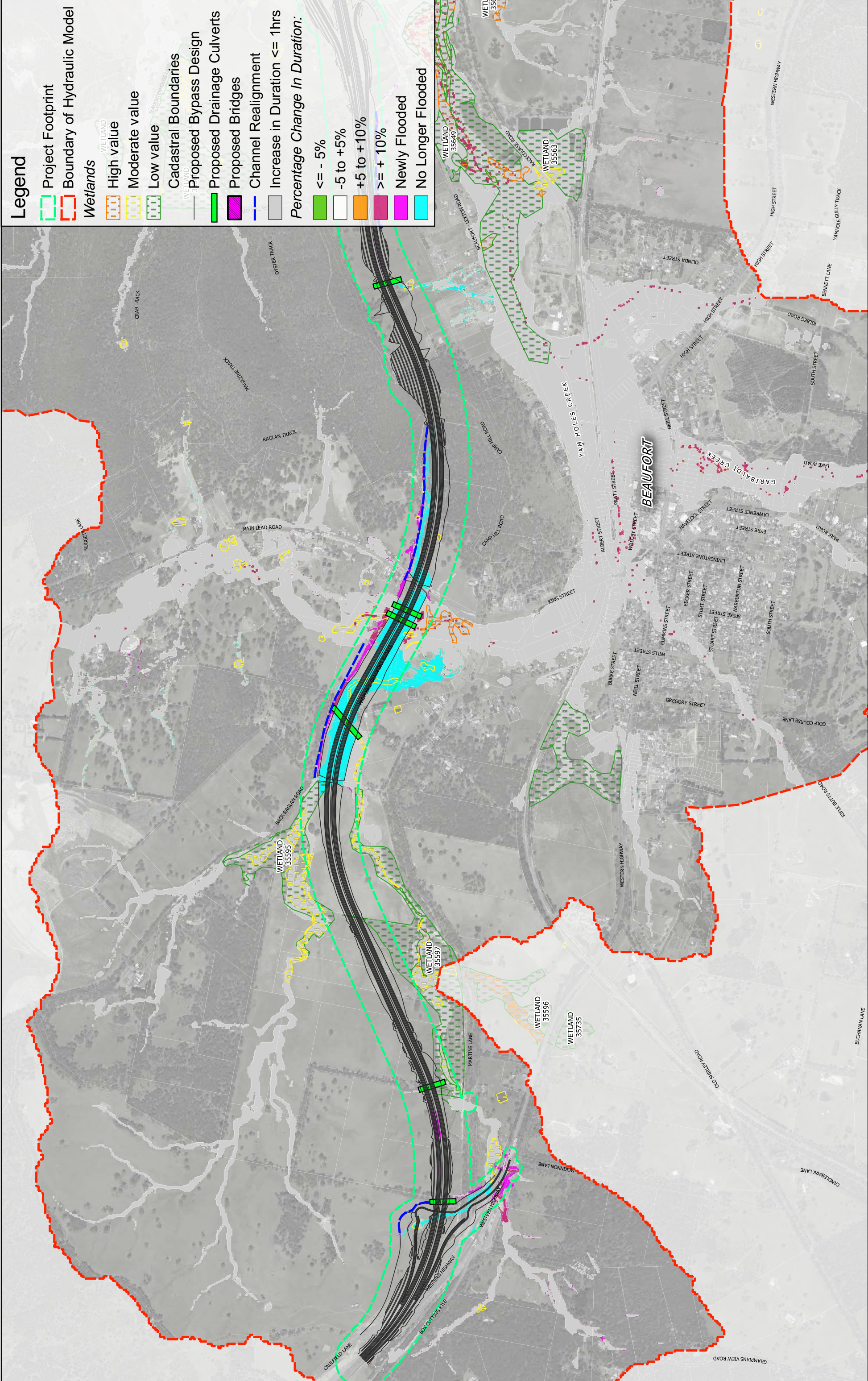
Beaufort Bypass

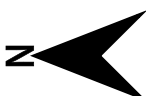
Peak Flood Change In Duration - Proposed Design Scenario

Event: 10% AEP

Sheet 2

Map ID: DES_CHDUR_10AEP_2





Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m

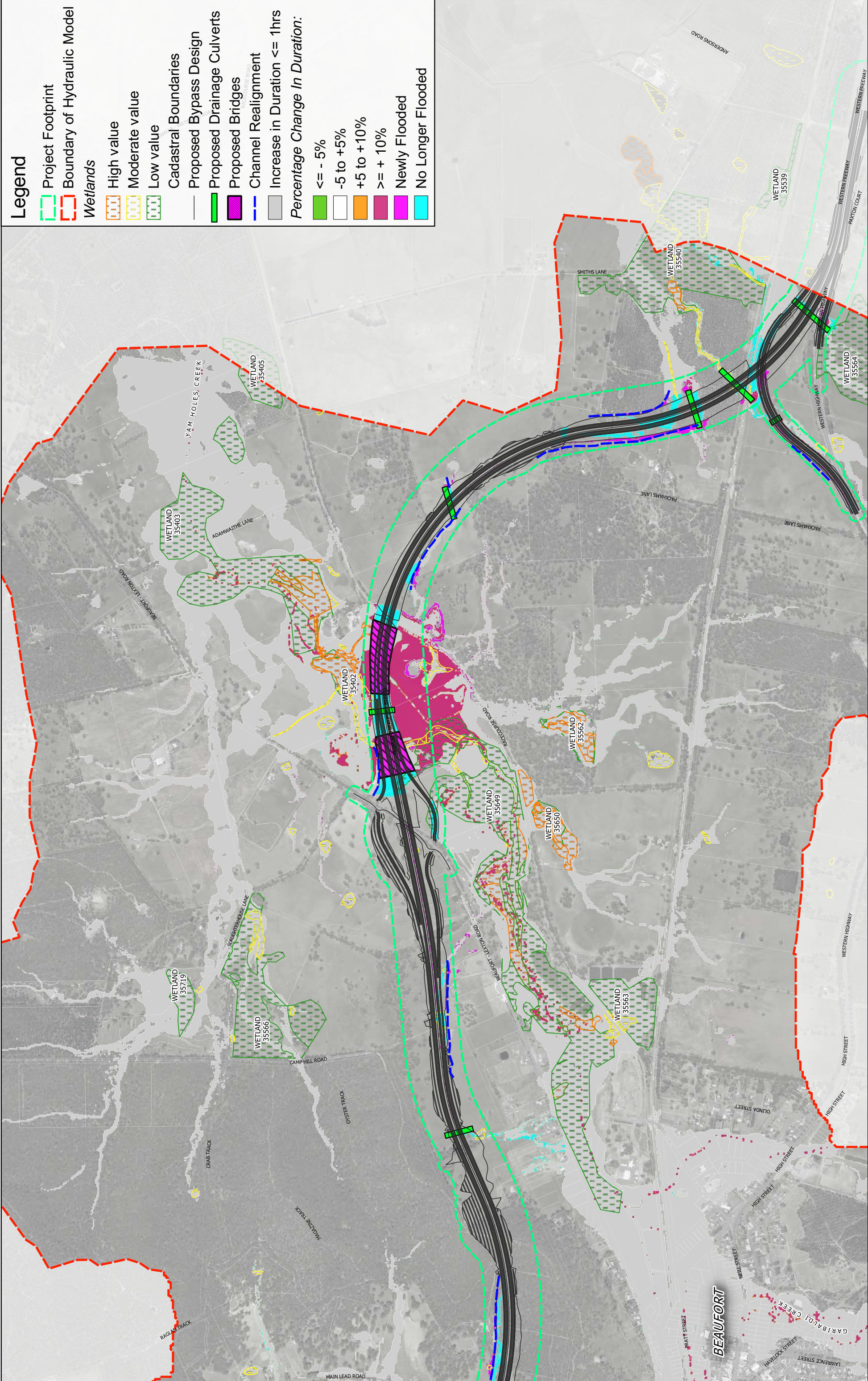
Scale: 1:15000



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

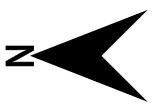


Beaufort Bypass
Peak Flood Change In Duration - Proposed Design Scenario
Event: 1% AEP
Sheet 1
Map ID: DES_CHDUR_1AEP_1



Legend

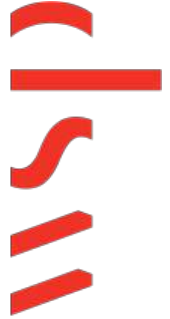
- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Increase in Duration <= 1hrs
- Percentage Change In Duration:
 - <= - 5%
 - 5 to +5%
 - +5 to +10%
 - >= + 10%
- Newly Flooded
- No Longer Flooded



Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m

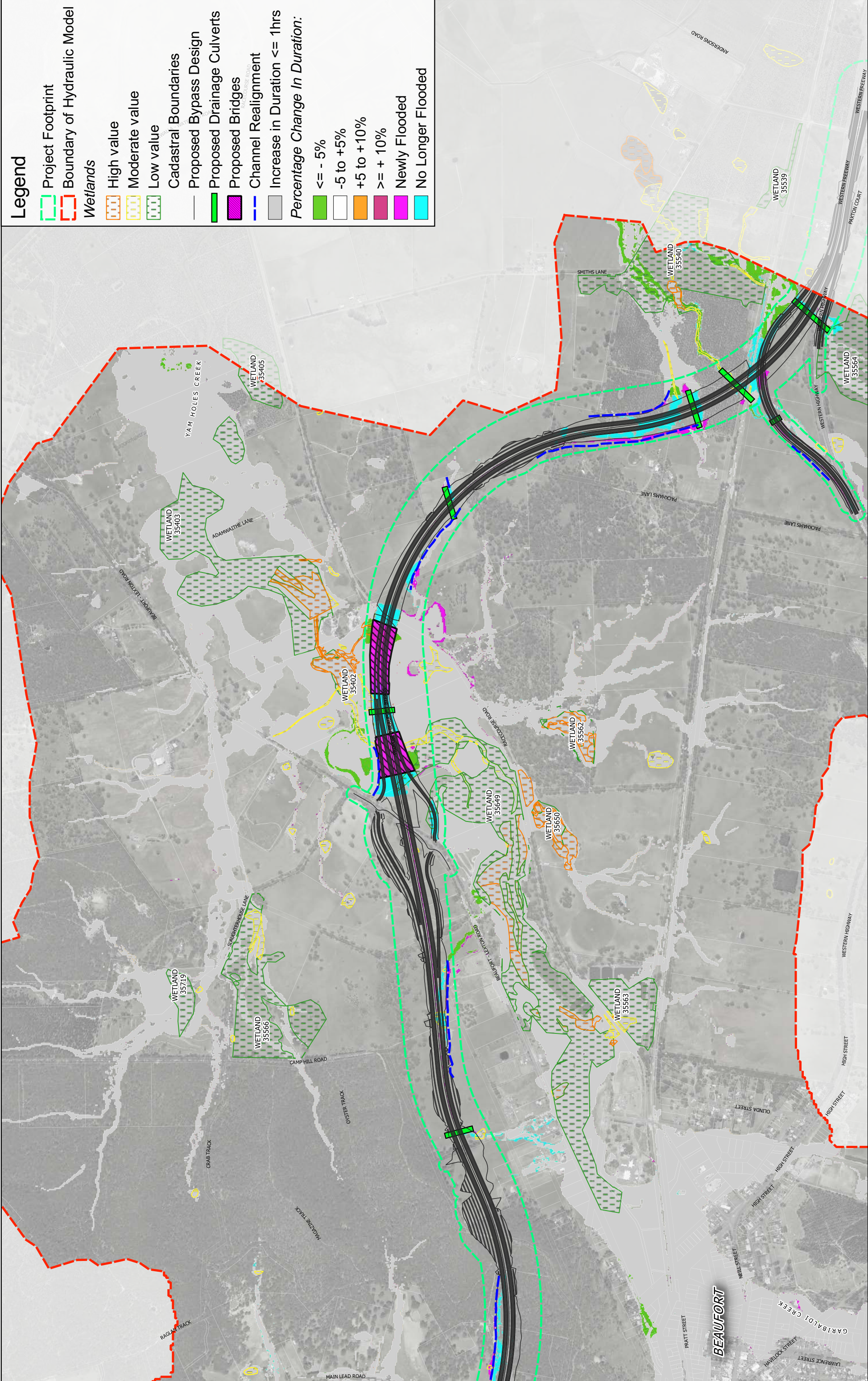
Scale: 1:15000



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

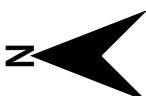


Beaufort Bypass
Peak Flood Change In Duration - Proposed Design Scenario
Event: 1% AEP
Sheet 2
Map ID: DES_CHDUR_1AEP_2



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
 - High value
 - Moderate value
 - Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Increase in Duration <= 1hrs
- Percentage Change In Duration:
 - <= - 5%
 - 5 to +5%
 - +5 to +10%
 - >= + 10%
- Newly Flooded
- No Longer Flooded



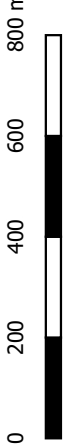
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



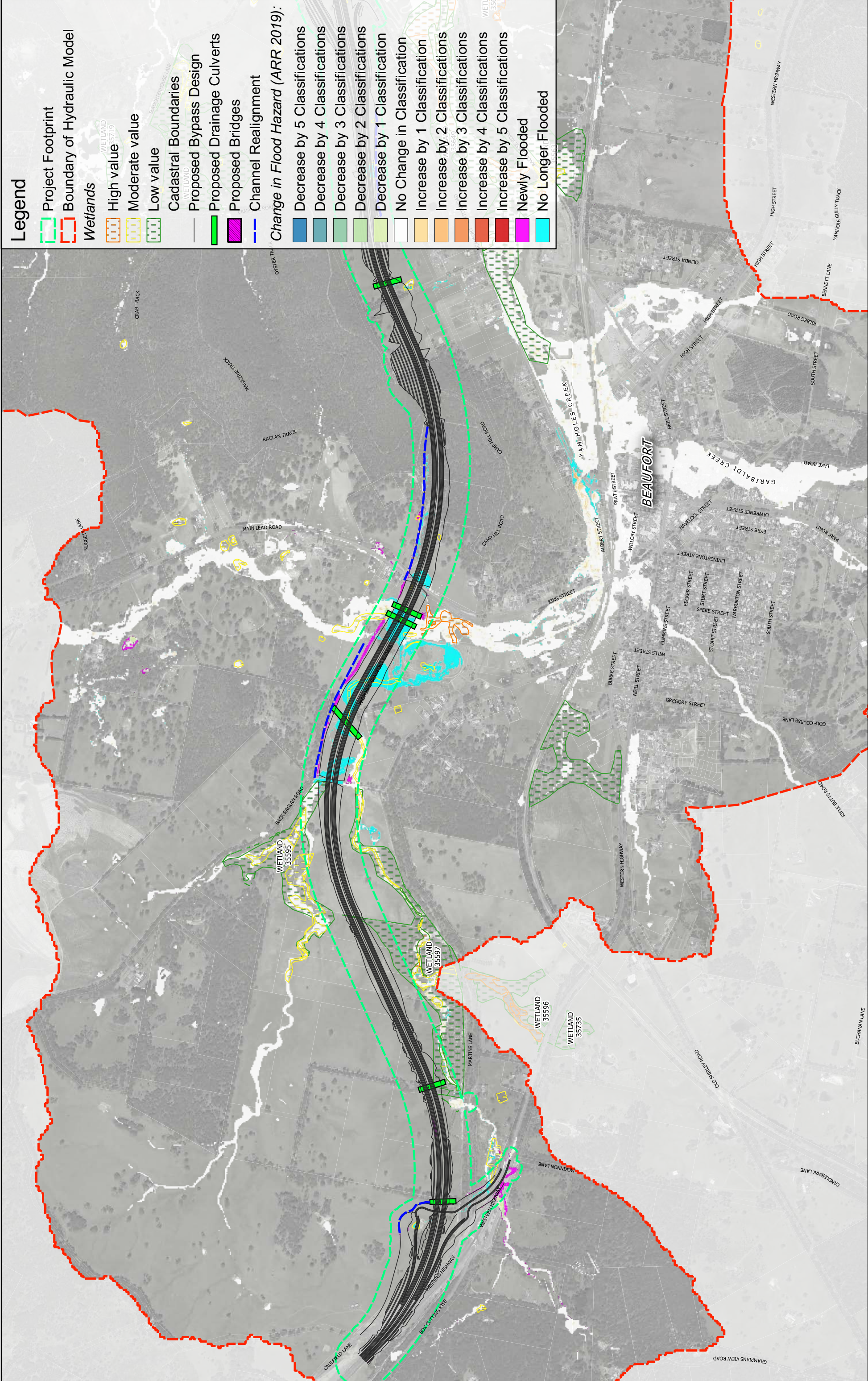
Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021



Beaufort Bypass
Peak Flood Change In Duration - Proposed Design Scenario
Event: 1% AEP Climate Change
Sheet 2
Map ID: DES_CHDUR_1AEPCC_2



Scale: 1:15000



Legend

Project Footprint

Boundary of Hydraulic Model

Wetlands

High value

Moderate value

Low value

Cadastral Boundaries

Proposed Bypass Design

Proposed Drainage Culverts

Proposed Bridges

Channel Realignment

Change in Flood Hazard (ARR 2019):

Decrease by 5 Classifications

Decrease by 4 Classifications

Decrease by 3 Classifications

Decrease by 2 Classifications

Decrease by 1 Classification

No Change in Classification

Increase by 1 Classification

Increase by 2 Classifications

Increase by 3 Classifications

Increase by 4 Classifications

Increase by 5 Classifications

Newly Flooded

No Longer Flooded

Prepared for: Regional Roads Victoria

Coordinate system: GDA 1994 MGA Zone 54

Aerial Source: NSW Six Maps

Scale ratio correct when printed at A3

0

200

400

600

800 m

Scale: 1:15000

WSP

Stage: EIS

Version: D

Author: KS

Approved by: RL

Date: 26/05/2021

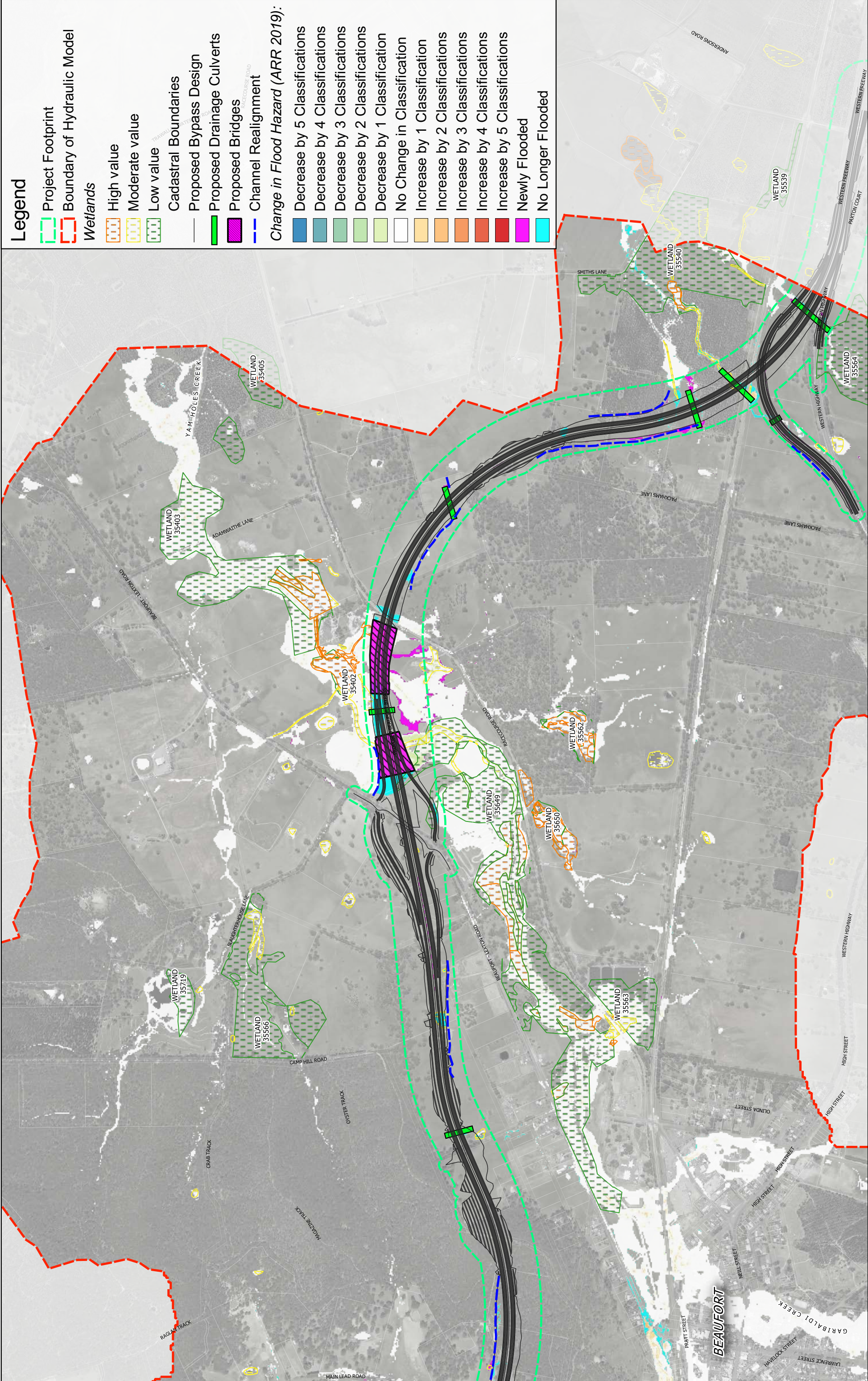
Beaufort Bypass

Peak Flood Change In Velocity - Proposed Design Scenario

Event: 1 EY

Sheet 1

Map ID: DES_CHHAZ_1EY_1



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Change in Flood Hazard (ARR 2019):
 - Decrease by 5 Classifications
 - Decrease by 4 Classifications
 - Decrease by 3 Classifications
 - Decrease by 2 Classifications
 - Decrease by 1 Classification
 - No Change in Classification
 - Increase by 1 Classification
 - Increase by 2 Classifications
 - Increase by 3 Classifications
 - Increase by 4 Classifications
 - Increase by 5 Classifications
 - Newly Flooded
 - No Longer Flooded

Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

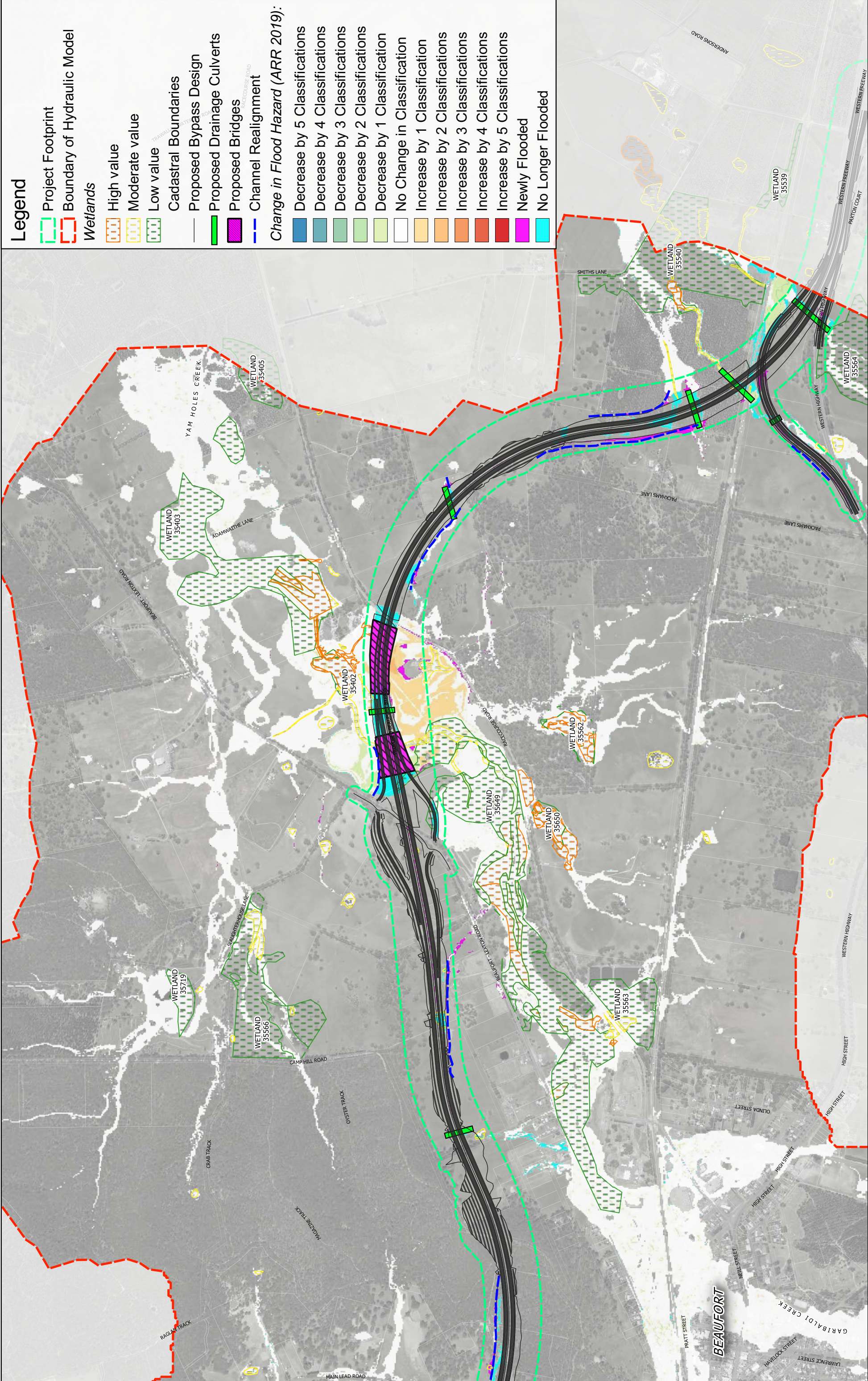
0 200 400 600 800 m

Scale: 1:15000

WSP

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1 EY
Sheet 2
Map ID: DES_CHHAZ_1EY_2



Legend

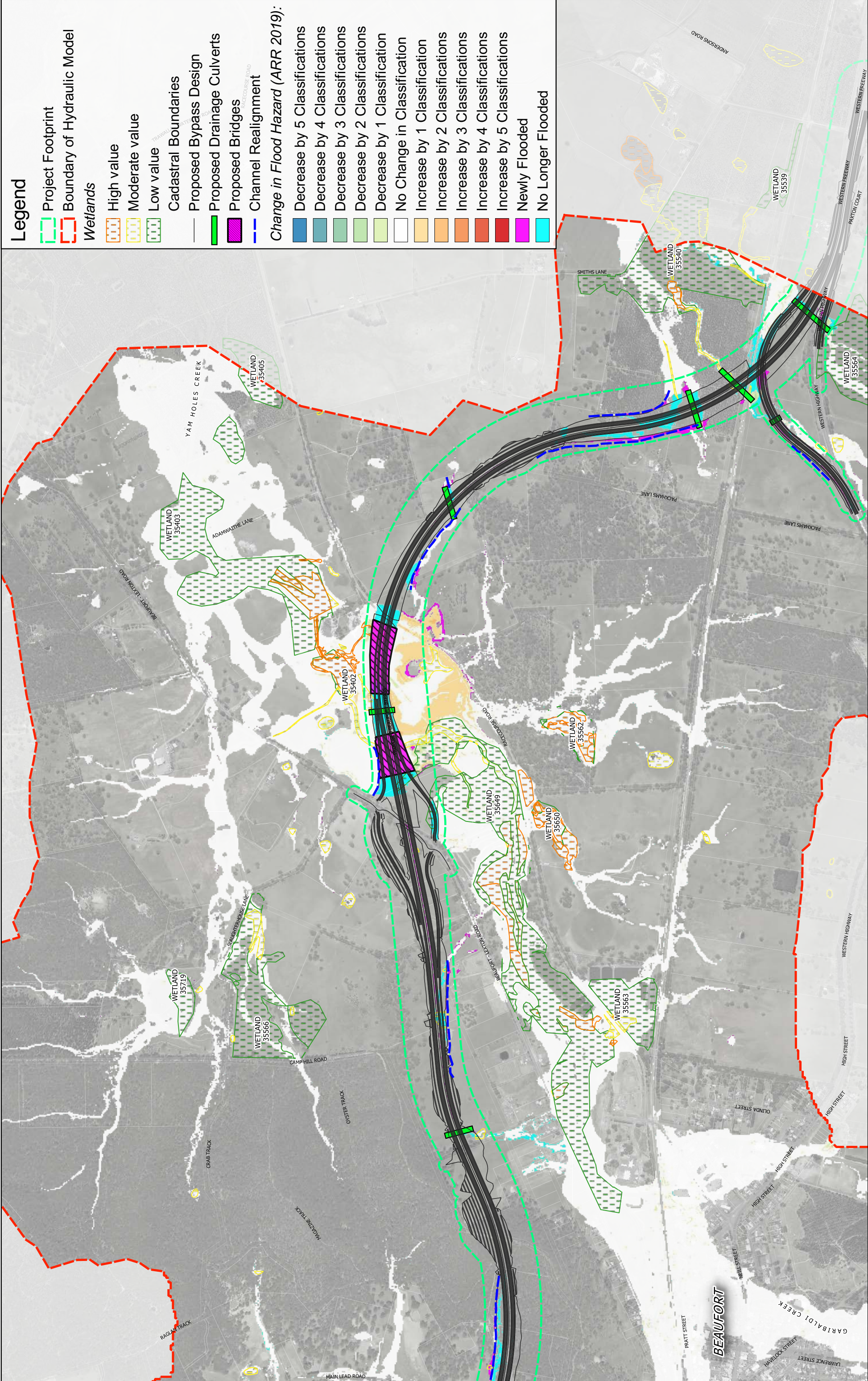
- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Change in Flood Hazard (ARR 2019):
 - Decrease by 5 Classifications
 - Decrease by 4 Classifications
 - Decrease by 3 Classifications
 - Decrease by 2 Classifications
 - Decrease by 1 Classification
 - No Change in Classification
 - Increase by 1 Classification
 - Increase by 2 Classifications
 - Increase by 3 Classifications
 - Increase by 4 Classifications
 - Increase by 5 Classifications
 - Newly Flooded
 - No Longer Flooded

Prepared for: Regional Roads Victoria
Coordinate system: GDA 1984 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m
Scale: 1:15000

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 10% AEP
Sheet 2
Map ID: DES_CHHAZ_10AEP_2



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Change in Flood Hazard (ARR 2019):
 - Decrease by 5 Classifications
 - Decrease by 4 Classifications
 - Decrease by 3 Classifications
 - Decrease by 2 Classifications
 - Decrease by 1 Classification
 - No Change in Classification
 - Increase by 1 Classification
 - Increase by 2 Classifications
 - Increase by 3 Classifications
 - Increase by 4 Classifications
 - Increase by 5 Classifications
 - Newly Flooded
 - No Longer Flooded

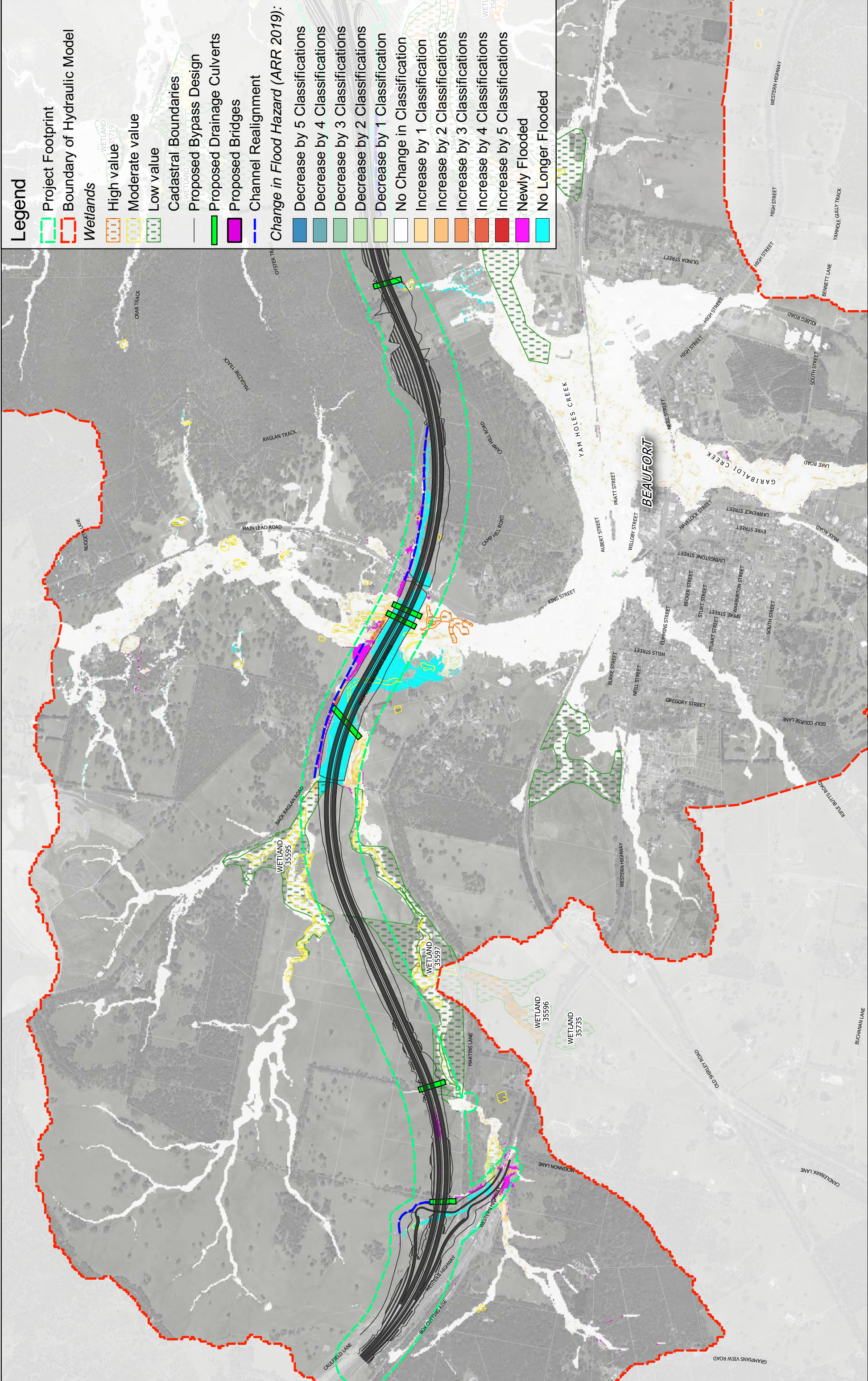
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1984 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m

Scale: 1:15000

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1% AEP
Sheet 2
Map ID: DES_CHHAZ_1AEP_2



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
 - High value
 - Moderate value
 - Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment

Change in Flood Hazard (ARR 2019):

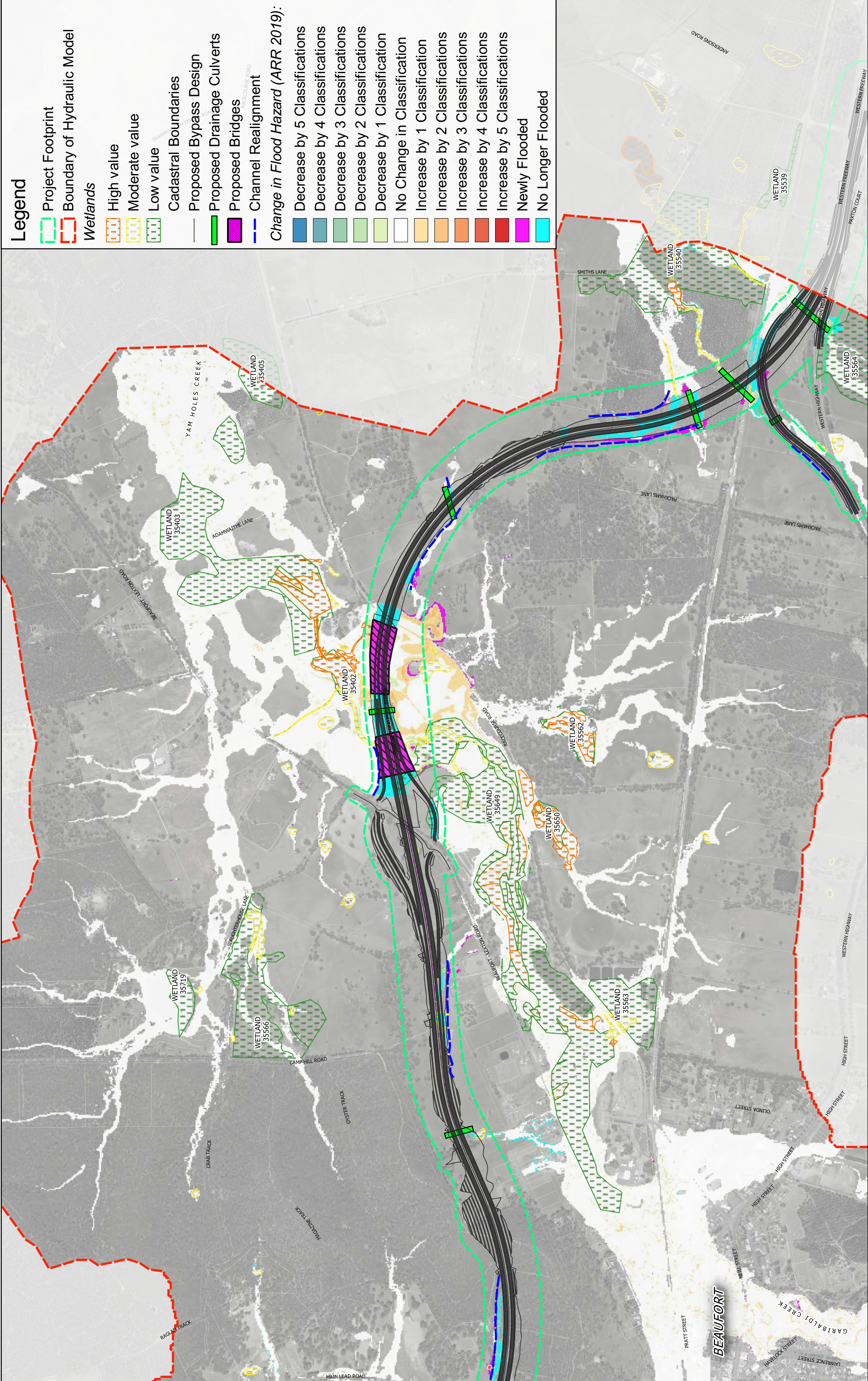
- Decrease by 5 Classifications
- Decrease by 4 Classifications
- Decrease by 3 Classifications
- Decrease by 2 Classifications
- Decrease by 1 Classification
- No Change in Classification
- Increase by 1 Classification
- Increase by 2 Classifications
- Increase by 3 Classifications
- Increase by 4 Classifications
- Increase by 5 Classifications
- Newly Flooded
- No Longer Flooded

Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m
Scale: 1:15000

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1% AEP Climate Change
Sheet 1
Map ID: DES_CHHAZ_1AEPCC_1



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Change in Flood Hazard (ARR 2019):
 - Decrease by 5 Classifications
 - Decrease by 4 Classifications
 - Decrease by 3 Classifications
 - Decrease by 2 Classifications
 - Decrease by 1 Classification
 - No Change in Classification
 - Increase by 1 Classification
 - Increase by 2 Classifications
 - Increase by 3 Classifications
 - Increase by 4 Classifications
 - Increase by 5 Classifications
 - Newly Flooded
 - No Longer Flooded

Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 200 400 600 800 m

Scale: 1:15000

WSP

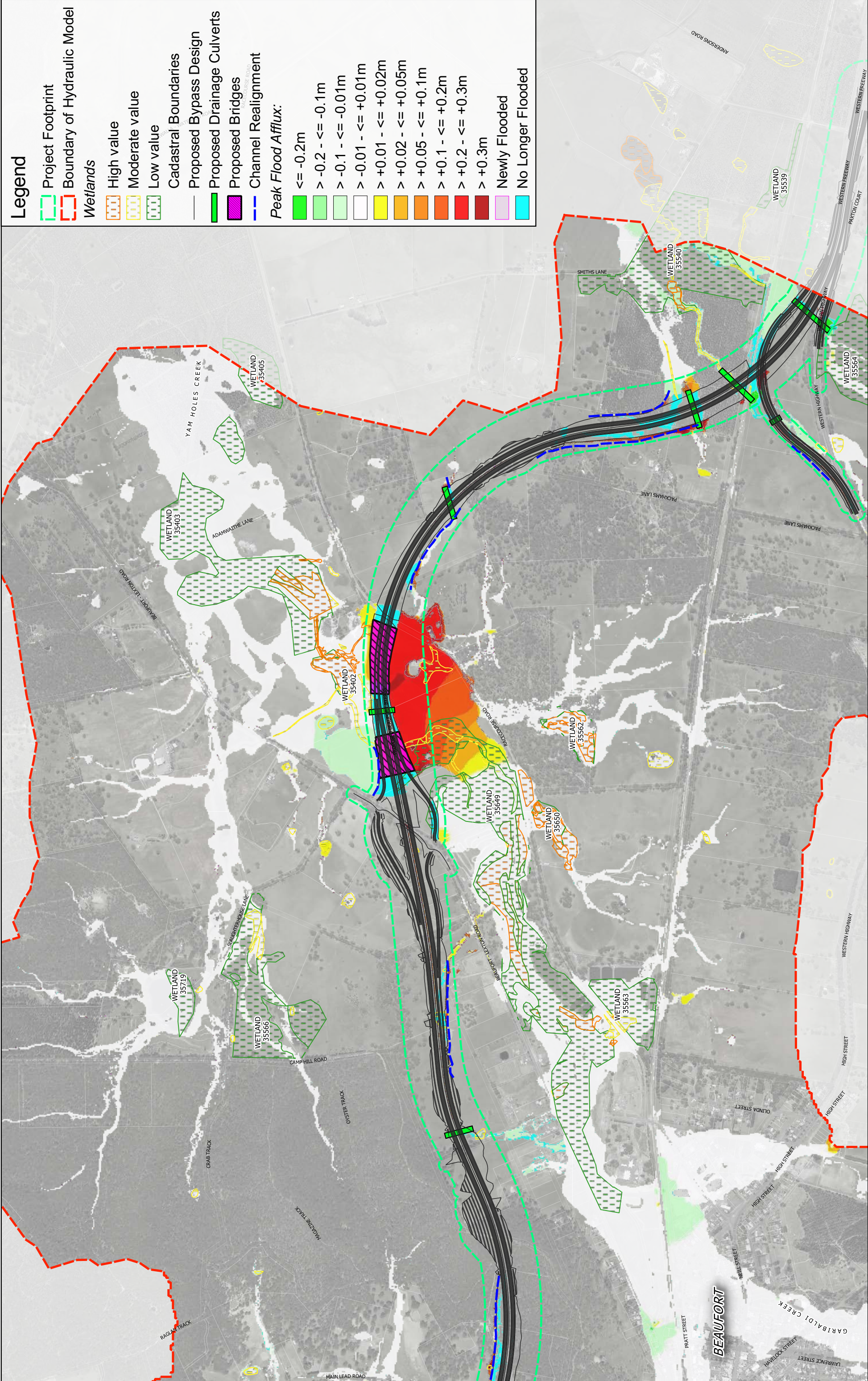
Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1% AEP Climate Change
Sheet 2
Map ID: DES_CHHAZ_1AEPCC_2

APPENDIX G

FLOOD IMPACT MAPS FOR HIGH
CULVERT BLOCKAGE SCENARIO





Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
- High value
- Moderate value
- Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Peak Flood Afflux:
 - $\leq -0.2\text{m}$
 - $> -0.2 - \leq -0.1\text{m}$
 - $> -0.1 - \leq -0.01\text{m}$
 - $> -0.01 - \leq +0.01\text{m}$
 - $> +0.01 - \leq +0.02\text{m}$
 - $> +0.02 - \leq +0.05\text{m}$
 - $> +0.05 - \leq +0.1\text{m}$
 - $> +0.1 - \leq +0.2\text{m}$
 - $> +0.2 - \leq +0.3\text{m}$
 - $> +0.3\text{m}$
- Newly Flooded
- No Longer Flooded

Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

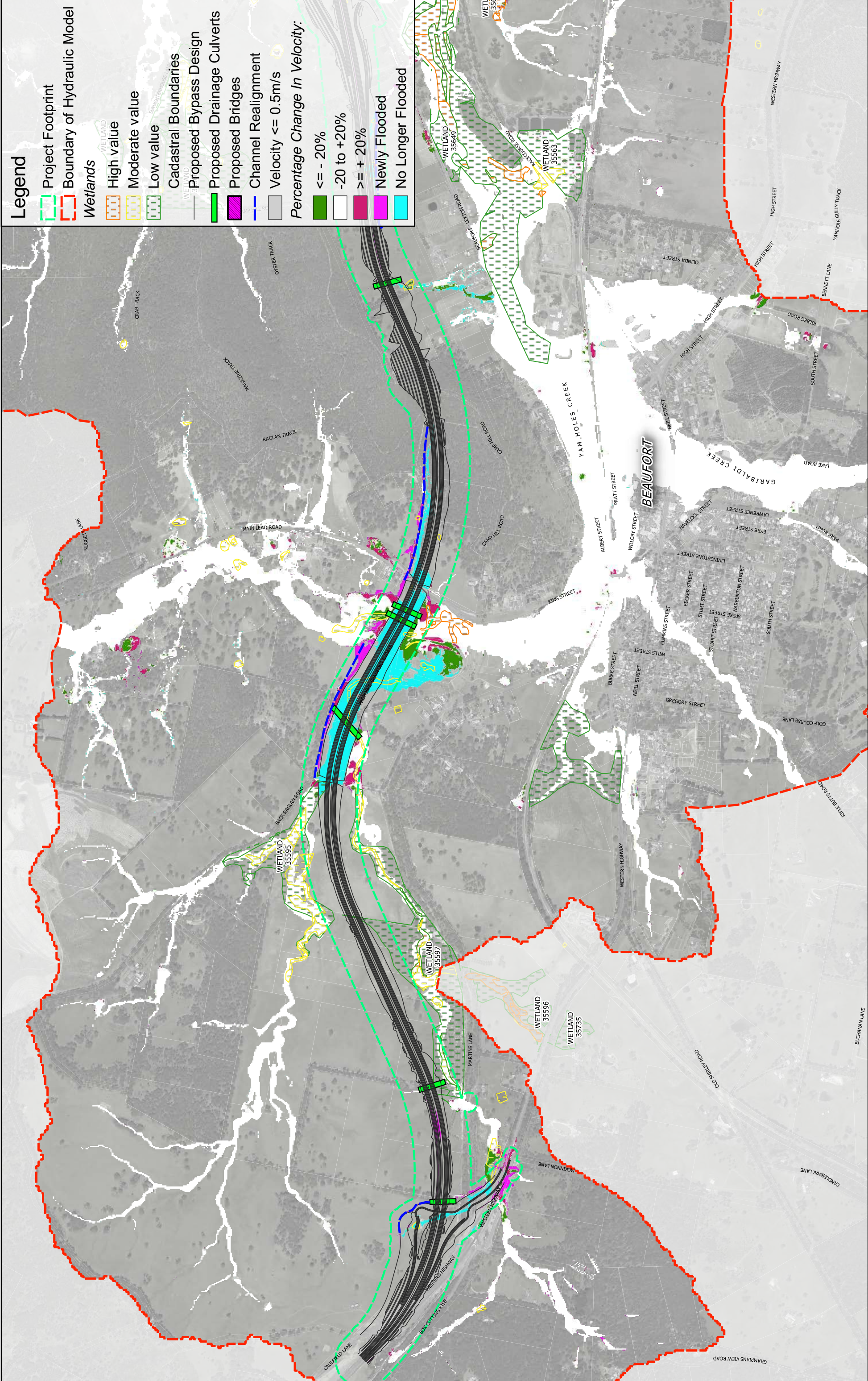
0200400600800 m

Scale: 1:15000

Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

Beaufort Bypass
Peak Flood Afflux - Proposed Design Scenario - 50% Culvert Blockage
Event: 1% AEP
Sheet 2

Map ID: DES_BL_AFF_1AEP_2



Legend

Project Footprint

Boundary of Hydraulic Model

Wetlands

High value

Moderate value

Low value

Cadastral Boundaries

Proposed Bypass Design

Proposed Drainage Culverts

Proposed Bridges

Channel Realignment

Velocity <= 0.5m/s

Percentage Change In Velocity:

<= - 20%

-20 to +20%

>= + 20%

Newly Flooded

No Longer Flooded

Prepared for: Regional Roads Victoria

Coordinate system: GDA 1994 MGA Zone 54

Aerial Source: NSW Six Maps

Scale ratio correct when printed at A3

0200400600800 m

Scale: 1:15000

N

WSP

Stage: EIS

Version: D

Author: KS

Approved by: RL

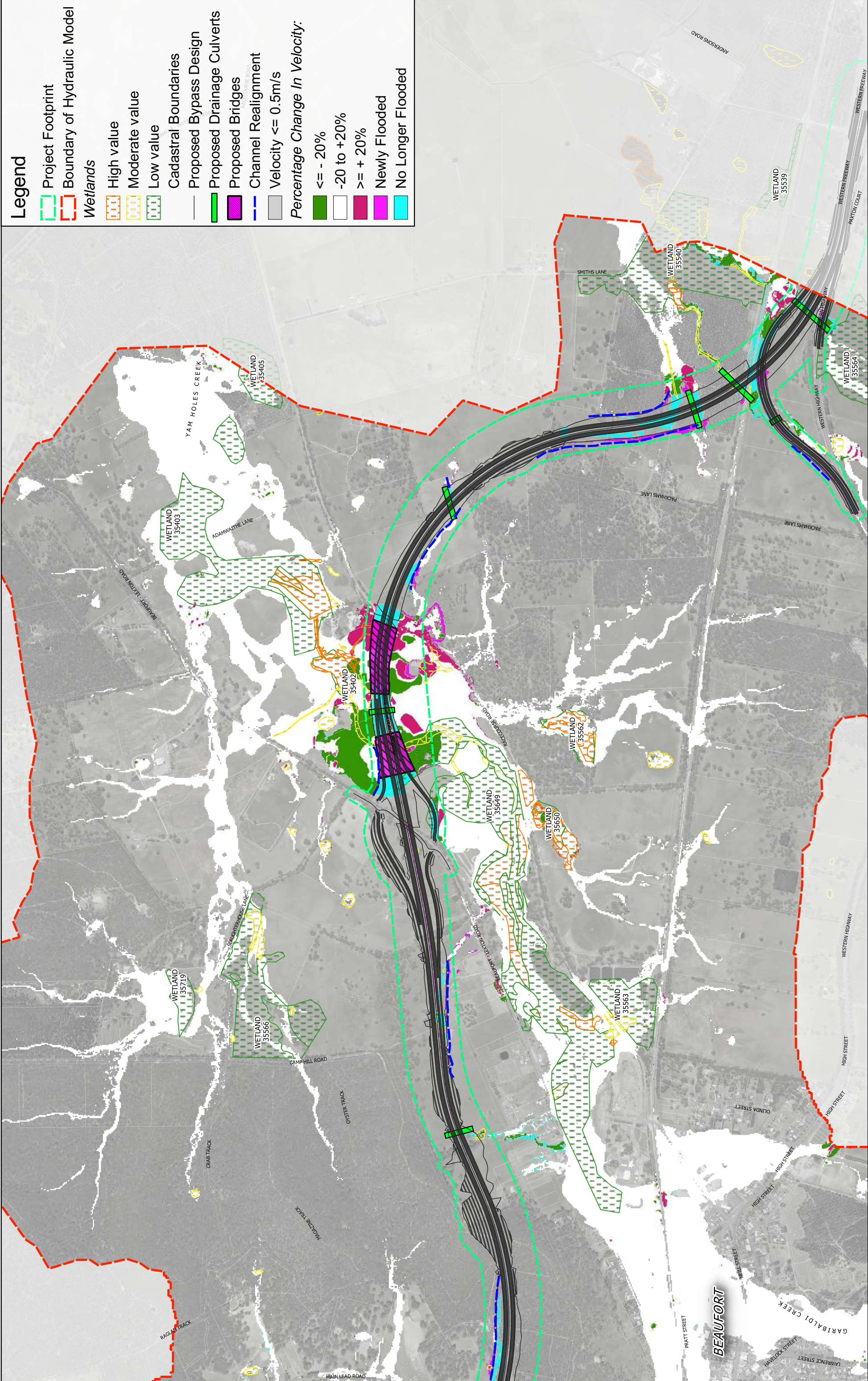
Date: 26/05/2021

Change In Velocity - Proposed Design Scenario - 50% Culvert Blockage

Event: 1% AEP

Sheet 1

Map ID: DES_BL_CHVEL_1AEP_1



- Legend
- Project Footprint

Boundary of Hydraulic Model

Wetlands

High value

Moderate value

Low value

Cadastral Boundaries

Proposed Bypass Design

Proposed Drainage Culverts

Proposed Bridges

Channel Realignment

Velocity <= 0.5m/s

Percentage Change In Velocity:

<= - 20%

-20 to +20%

>= + 20%

Newly Flooded

No Longer Flooded

WSP

Prepared for: Regional Roads Victoria

Coordinate system: GDA 1994 MGA Zone 54

Aerial Source: NSW Six Maps

Scale ratio correct when printed at A3

0

200

400

600

800 m

Scale: 1:15000

North Arrow

Stage: EIS

Version: D

Author: KS

Approved by: RL

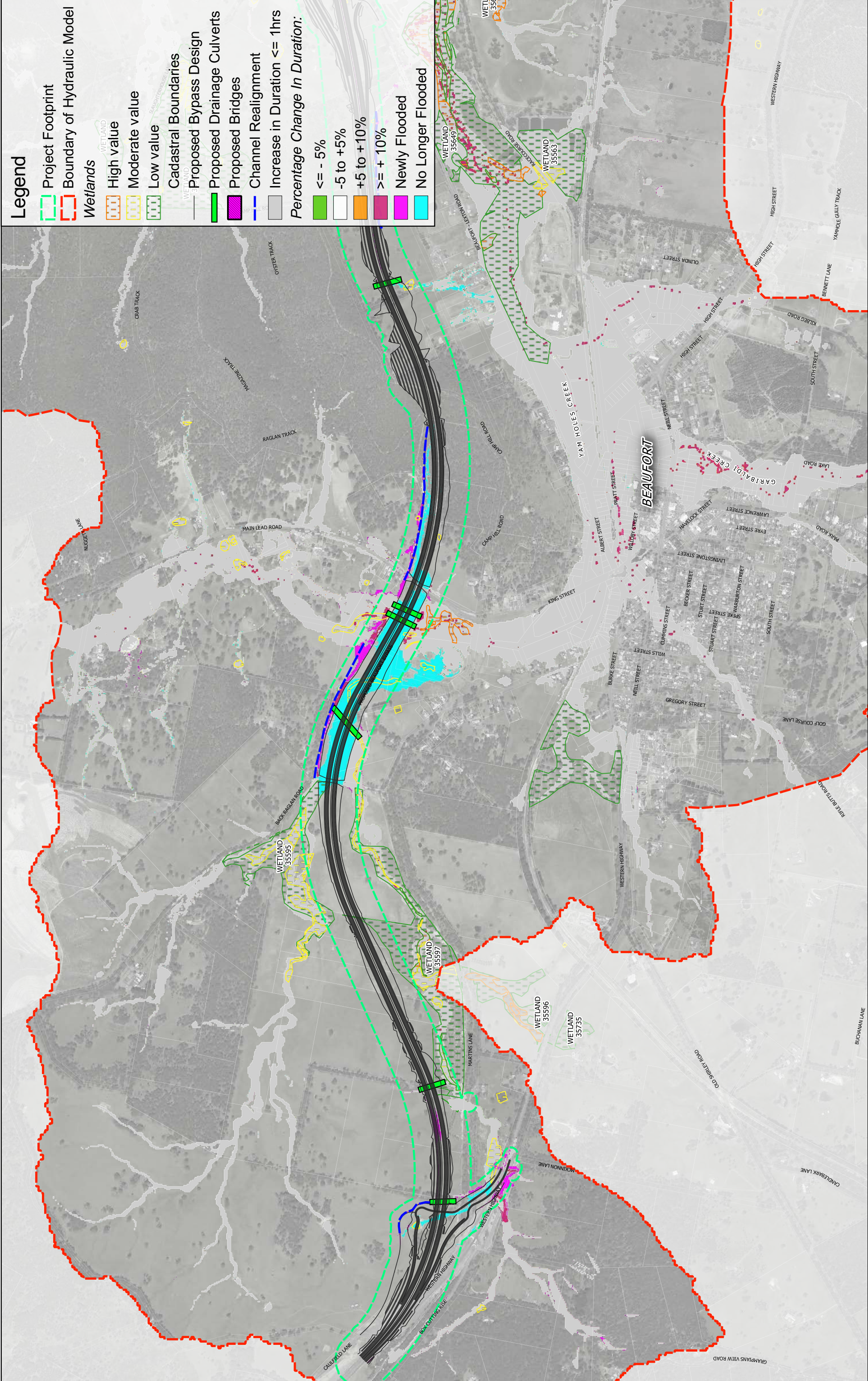
Date: 26/05/2021

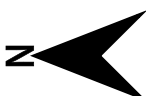
Change In Velocity - Proposed Design Scenario - 50% Culvert Blockage

Event: 1% AEP

Sheet 2

Map ID: DES_BL_CHVEL_1AEP_2





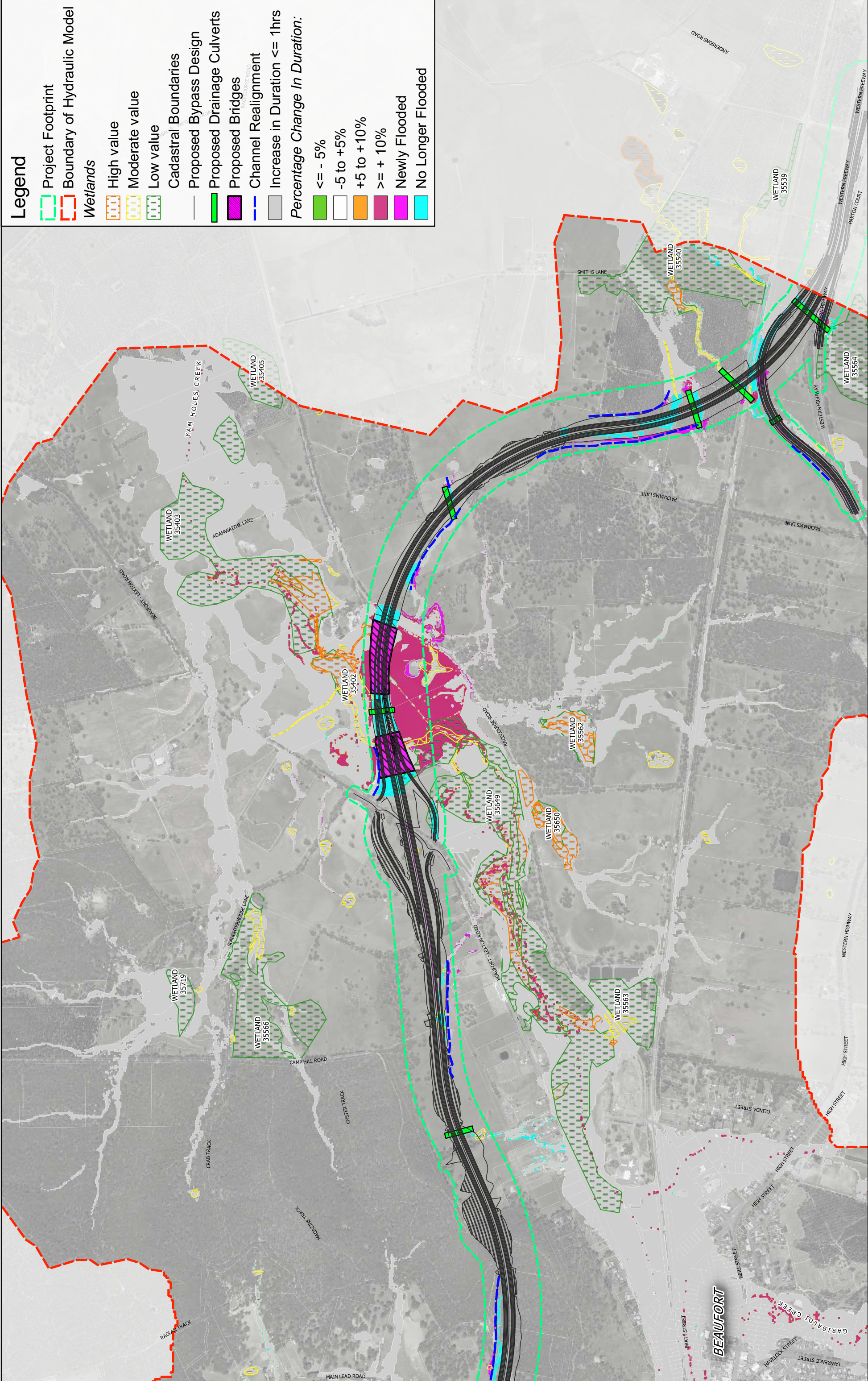
Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021

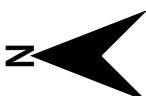


Peak Flood Change In Duration - Proposed Design Scenario - 50% Culvert Blockage
Event: 1% AEP
Sheet 1
Map ID: DES_BL_CHDUR_1AEP_1



Legend

- Project Footprint
- Boundary of Hydraulic Model
- Wetlands
 - High value
 - Moderate value
 - Low value
- Cadastral Boundaries
- Proposed Bypass Design
- Proposed Drainage Culverts
- Proposed Bridges
- Channel Realignment
- Increase in Duration <= 1hrs
- Percentage Change In Duration:
 - <= - 5%
 - 5 to +5%
 - +5 to +10%
 - >= + 10%
- Newly Flooded
- No Longer Flooded



Prepared for: Regional Roads Victoria
Coordinate system: GDA 1994 MGA Zone 54
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



Stage: EIS
Version: D
Author: KS
Approved by: RL
Date: 26/05/2021



Peak Flood Change In Duration - Proposed Design Scenario - 50% Culvert Blockage
Event: 1% AEP
Sheet 2

Map ID: DES_BL_CHDUR_1AEP_2

0 200 400 600 800 m

Scale: 1:15000

APPENDIX H

FLOOD IMPACTS TO PRIVATE LAND



Memo

To: Will Parker
From: Joel Sercombe
Subject: Beaufort Bypass flood impacts to private land
Our ref: MEM-BEA01-DurationImpacts
Date: 3 February 2022

1. Introduction

This memo has been prepared to provide supplementary information regarding the flood duration impacts identified in Table 9.5 of the Surface Water Impact Assessment (June 2021). The following supplementary information covers the flood duration impact and changes in flood extent on specific properties in areas of high impact.

The impacts in this memo relate to key significant impacts on private land outside the project boundary.

2. Flood duration impact on properties within affected areas

In the 1 Exceedances per year flood event (1EY), increased duration impacts primarily exist upstream and downstream of Yam Holes Creek western bridge, extending approximately 200 m downstream and 130m upstream (refer to Figure 2.1). No buildings or local roads are affected by any significant increased duration of flooding.

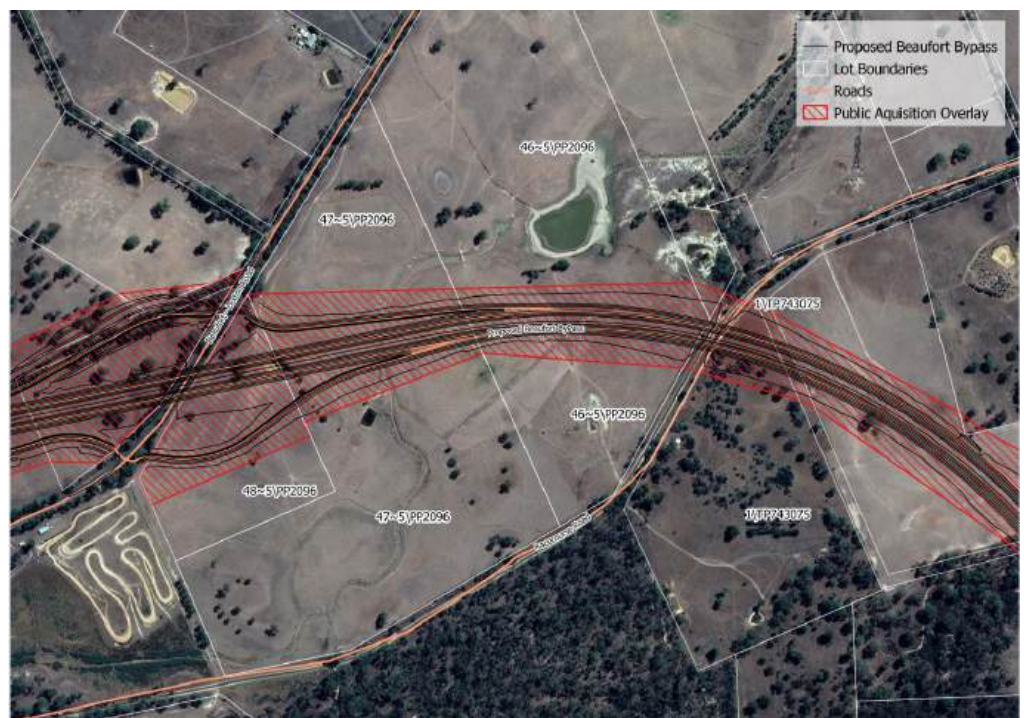


Figure 2.1 Private properties impacted by flooding

The property immediately surrounding the bridge (47~5\PP2096) is primarily affected in this event, exhibiting between 12-30% increases in flood duration generally across the areas and localised increases of up to 40% duration. Refer to Table 1 for representative flood duration impacts on individual properties upstream of the Yam Holes Creek bridges.

Table 1 - Flood Duration Impact In 1EY Flood Event

Lot/DP No:	1EY Design Duration	1EY Existing Duration	1EY Change In Duration)	1EY Change in Duration
	<i>Hours</i>	<i>Hours</i>	<i>Hours</i>	<i>% Change</i>
48~5\PP2096	25.671	25.525	0.146	0.5%
47~5\PP2096	14.374	10.259	4.115	40.1%
46~5\PP2096	25.362	25.27	0.092	0.4%
1\TP743075	4.239	4.015	0.828	5.58%

In the 10% Annual Exceedance Probability (AEP) flood event, increased duration impacts exist both upstream and downstream of Yam Holes Creek western bridge, extending approximately 200 m upstream and 400 m downstream. Increased flood duration affects Racecourse Road just upstream of Yam Holes Creek eastern bridge.

The properties immediately upstream of Yam Holes Creek western and eastern bridges (47~5\PP2096 and 46~5\PP2096) both show significant increases in flood duration in the 10% AEP flood event. The increase in duration change generally ranges between 20-35% with localised increases of up to 40% and beyond.

Lesser and highly localised duration impacts exist within the property to the east of Racecourse Road (1\TP743075) of up to 15% increased duration. These impacts are small, as such most of the property exhibits little to no significant duration impacts.

Refer to Table 2 for representative flood duration impacts on individual properties upstream of the Yam Holes Creek bridges for the 10% flood event.

Increases in flood duration on Racecourse Road upstream of Yam Holes Creek eastern bridge generally range between 10 to 15% increase due to an increase in flood duration within the property directly to the east (46~5\PP2096).

Table 2 Flood Duration Impact in 10% AEP Flood Event

Lot/DP No:	10% AEP Design Duration	10% AEP Existing Duration	10% Change In Duration	10% AEP Change in Duration
	<i>Hours</i>	<i>Hours</i>	<i>Hours</i>	<i>% Change</i>
48~5\PP2096	29.597	29.431	0.166	0.56%
47~5\PP2096	15.137	9.075	6.062	40.10%
46~5\PP2096	11.838	8.911	2.927	32.85%
1\TP743075	6.05	5.222	0.828	15.86%

In the 1% AEP flood event, increased duration impacts primarily exist upstream and downstream of Yam Holes Creek western bridge, extending approximately 400 m downstream and 20 0m upstream. Increased flood duration affects Racecourse Road just upstream of Yam Holes Creek eastern bridge.

The properties immediately upstream of Yam Holes Creek western and eastern bridges (47~5\PP2096 and 46~5\PP2096) both show significant increases in flood duration in the 10% AEP flood event. The increase in duration change generally ranges between 15-35% with localised increases of up to 50% and beyond. Lesser duration impacts exist within the property to the east of Racecourse Road (1\TP743075) of up to 20% increased duration within the property on existing flood affected areas.

Refer to Table 3 for representative flood duration impacts on individual properties upstream of the Yam Holes Creek bridges for the 1% flood event.

Increases in flood duration on Racecourse Road upstream of Yam Holes Creek eastern bridge generally range between 10 to 30%.

Table 3 Flood Duration Impact in 1% AEP Flood Event

Lot/DP No:	1% AEP Design Duration	1% AEP Existing Duration	1% AEP Change In Duration	1% AEP Change in Duration
	<i>Hours</i>	<i>Hours</i>	<i>Hours</i>	<i>% Change</i>
48~5\PP2096	24.889	24.843	0.046	1.8%
47~5\PP2096	14.763	8.733	6.03	51.9%
46~5\PP2096	11.766	9.064	2.702	29.8%
1\TP743075	5.428	4.559	0.869	19.06%

3. Changes to flooding extent

The properties in the immediate vicinity of the increased duration impacts exhibit both a significant increase in newly flooded land and no longer flooded land due to the proposed works. Refer to Table 4 for the net area of newly inundated land and to Table 5 for net area of no longer inundated land within properties surrounding the Yam Holes Creek eastern and western bridges. The impacts reported in the below tables refer only to private land outside the project footprint.

Racecourse Road upstream of the West Yam Creek eastern bridge is affected by newly inundated land to a moderate extent, in particular to the south of lot 46~5\PP2096.

Table 4 Net Area of Newly Flooded Land

Lot/DP No:	1EY New Inundated Area	10% AEP New Inundated Area	1% AEP New Inundated Area
	<i>m²</i>	<i>m²</i>	<i>m²</i>
48~5\PP2096	0	0	25
47~5\PP2096	6900	1387.5	1662.5
46~5\PP2096	6662.5	3775	1656.25
1\TP743075	600	1750	6387.5

*Table 5 Net Area of No Longer Flooded Land**

Lot/DP No:	1EY No Longer Inundated Area*	10% AEP No Longer Inundated Area*	1% AEP No Longer Inundated Area*
	<i>m²</i>	<i>m²</i>	<i>m²</i>
48~5\PP2096	0	0	0
47~5\PP2096	250	831.25	493.75
46~5\PP2096	200	218.75	331.25
1\TP743075	0	1287.5	218.75

ABOUT US

WSP is one of the world's leading engineering professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, planners, surveyors, environmental specialists, as well as other design, program and construction management professionals. We design lasting Property & Buildings, Transportation & Infrastructure, Resources (including Mining and Industry), Water, Power and Environmental solutions, as well as provide project delivery and strategic consulting services. With approximately 50,000 talented people globally, we engineer projects that will help societies grow for lifetimes to come.

