



LOCKYER VALLEY COMMUNITY CONSULTATIVE COMMITTEE MEETING

Lake Apex, Gatton

10 December 2019

AGENDA ITEMS

NO.	AGENDA	TOPIC LEADER
1	Introduction, welcome & Acknowledgement of Country: 6.00pm	Chair
2	Confirmation of previous minutes and actions: 6.10pm	Chair
3	Conflict of interest register: 6.20pm	All
4	CCC update for 2020: 6.25pm	S Delahunty
5	CCC member update – reflection of your role on the committee: 6.35pm	CCC members
6	Gowrie to Helidon project update: 7.00pm	M Nichols
7	Helidon to Calvert EIS update: 7.15pm	C Matthews
8	Noise modelling case studies: 7.30pm	S Harris
9	General business: 7.55pm	All
10	Meeting close 8.00pm	Chair

ACTIONS FROM PREVIOUS MEETINGS

PREVIOUS ACTIONS

NO.	ACTIONS	RAISED BY	DUE DATE
1	ARTC to provide formal answers to the questions raised in the Visualisation Workshop held in August 2019 Outcome: response provided to Kathy Brady on 29 October	CCC	10 December
2	ARTC to provide CCC presentation to committee members prior to the next meeting Outcome: completed	CCC	10 December



CCC UPDATE 2020

- Lockyer Valley CCC established December 2017 for two years as per the charter, to December 2019
- Review of the CCCs is in process and will be in line with the charter
- Advertisements calling for Lockyer Valley CCC members will commence ASAP
- All existing Lockyer Valley CCC members are welcome to re-apply
- Members may re-nominate through their organisations. Individuals may re-nominate themselves
- The term for CCC membership will continue until the H2C project receives EIS approval or, a 12 month term
- Once EIS is approved – Reference Groups (or similar) will be established by appointed principal contractor.





CCC MEMBERS – YOUR ROLE ON THE COMMITTEE

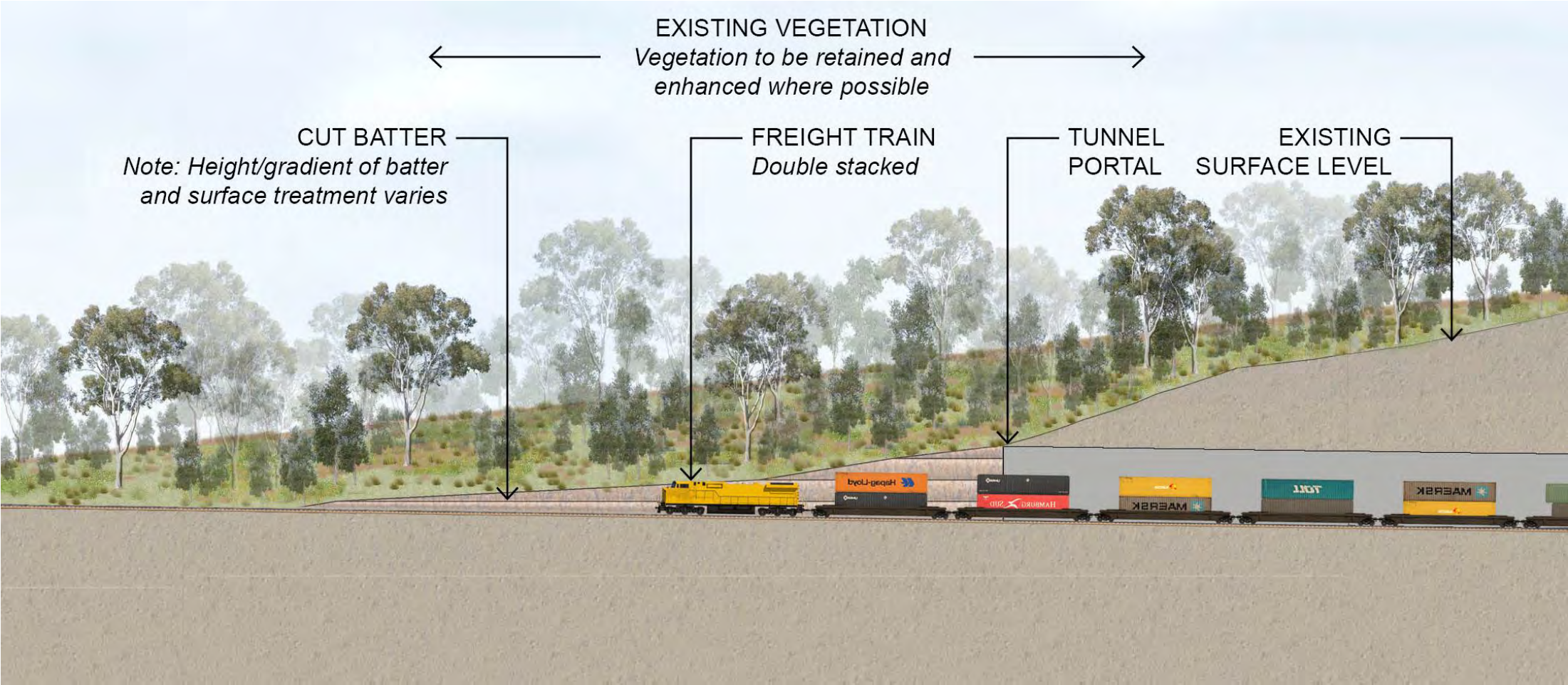
GOWRIE TO HELIDON (G2H) PROJECT UPDATE

Project Update

- ▶ Designs almost complete
- ▶ Awaiting;
 - Final traffic count data around Gowrie Junction area
 - QR corridor structures assessments
 - Final flooding and drainage mapping
 - Resolving final tunnel design details with QFES
 - Permanent access requirements
- ▶ Final documents due January 2020



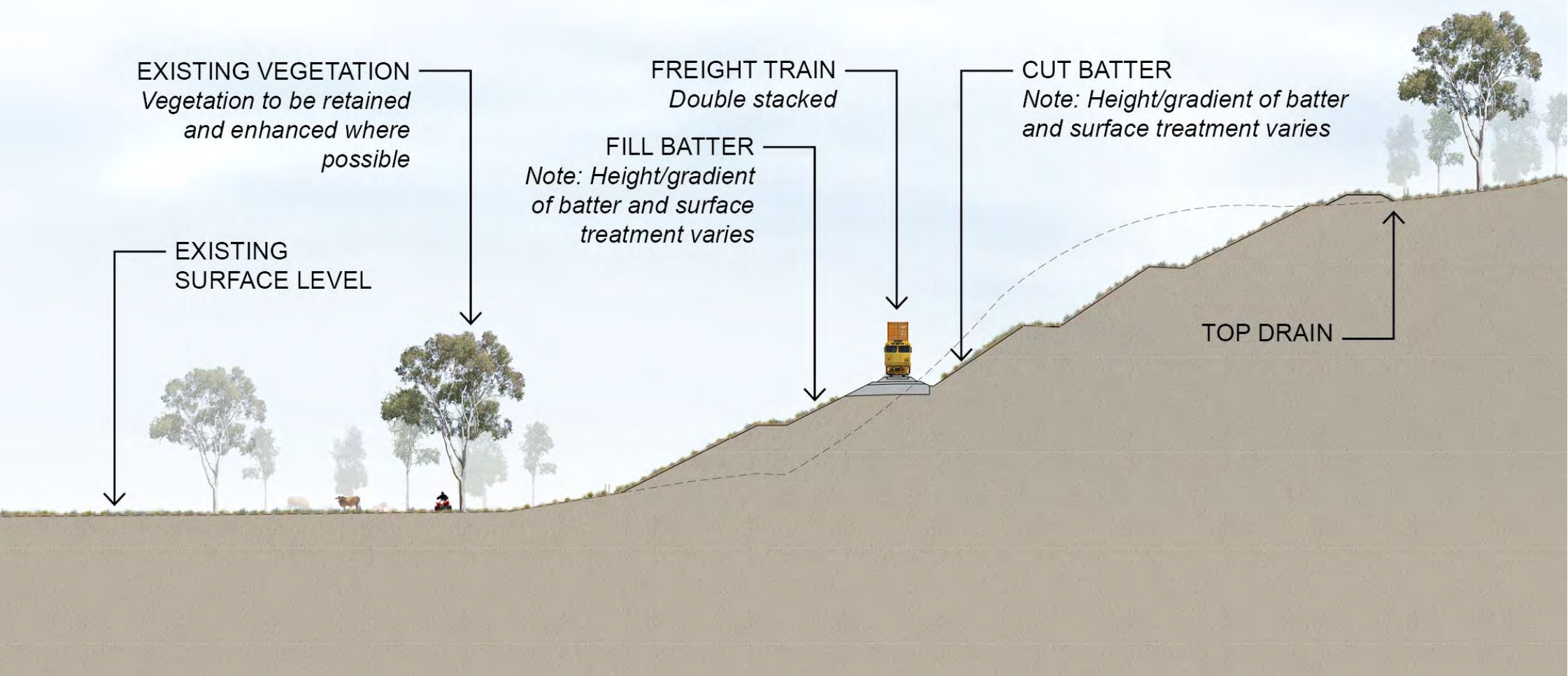
PROJECT UPDATE



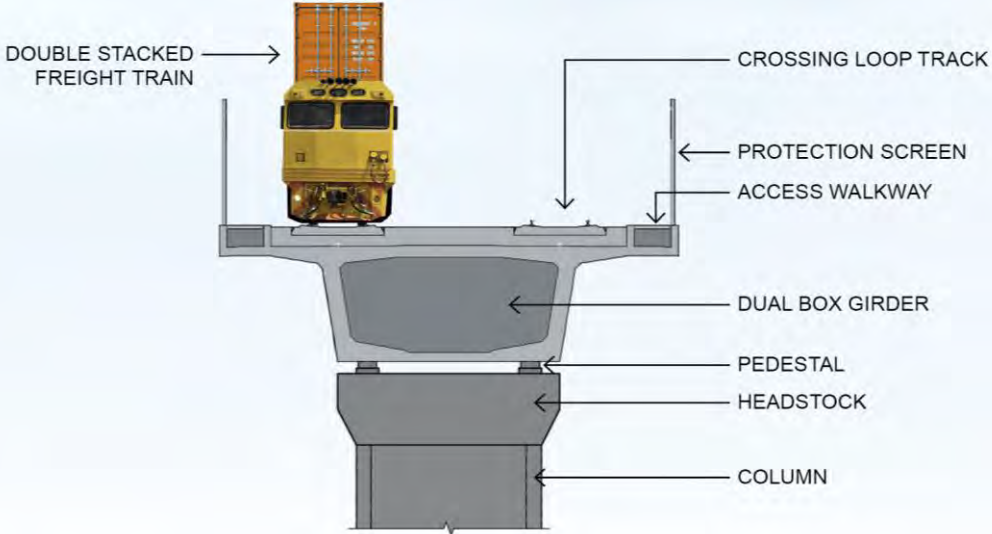
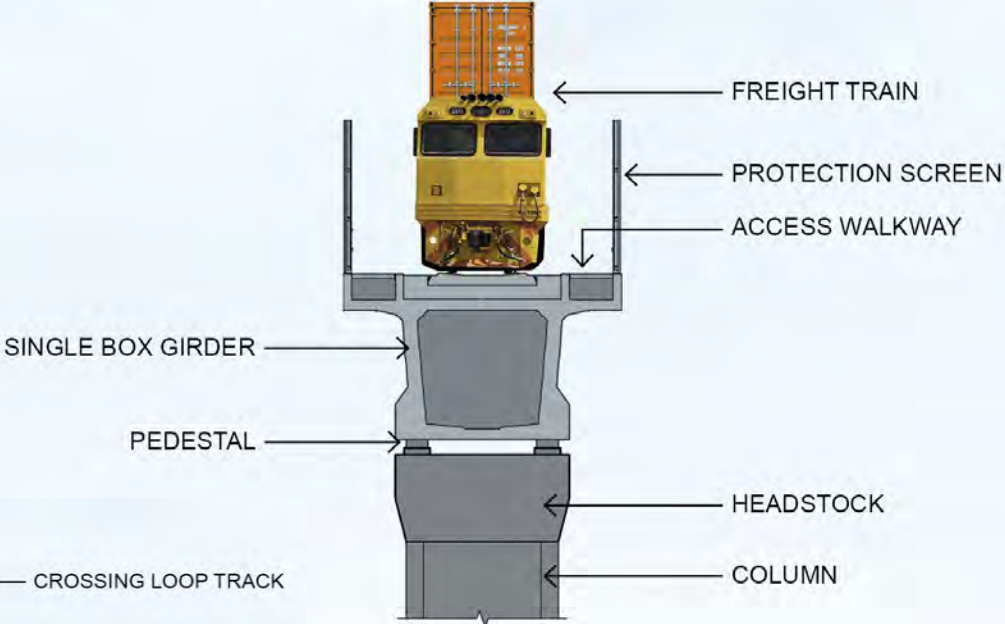
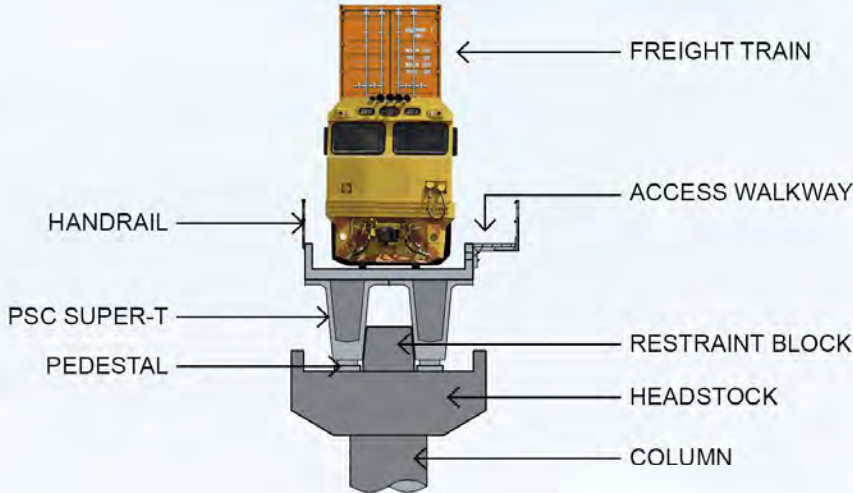
PROJECT UPDATE



PROJECT UPDATE



PROJECT UPDATE



EIS UPDATE

- ▶ Preliminary draft EIS submission:
February 2020
- ▶ Draft EIS submission:
June 2020
- ▶ Extension of lapse date:
1 December 2020



**Terms of reference for an
environmental impact statement:**

Inland Rail – Gowrie to Helidon project

August 2017



EIS UPDATE

What have we been doing?

- ▶ Preparing and reviewing the preliminary draft EIS
- ▶ Agency and stakeholder engagement on key outcomes of the EIS
- ▶ Incorporating comments on the C2K and H2C preliminary draft EIS during the adequacy review

Where to next?

- ▶ Finalise the draft EIS
- ▶ Submission of draft EIS (100%) for adequacy review, February 2020

**Terms of reference for an
environmental impact statement:**

Inland Rail – Gowrie to Helidon project

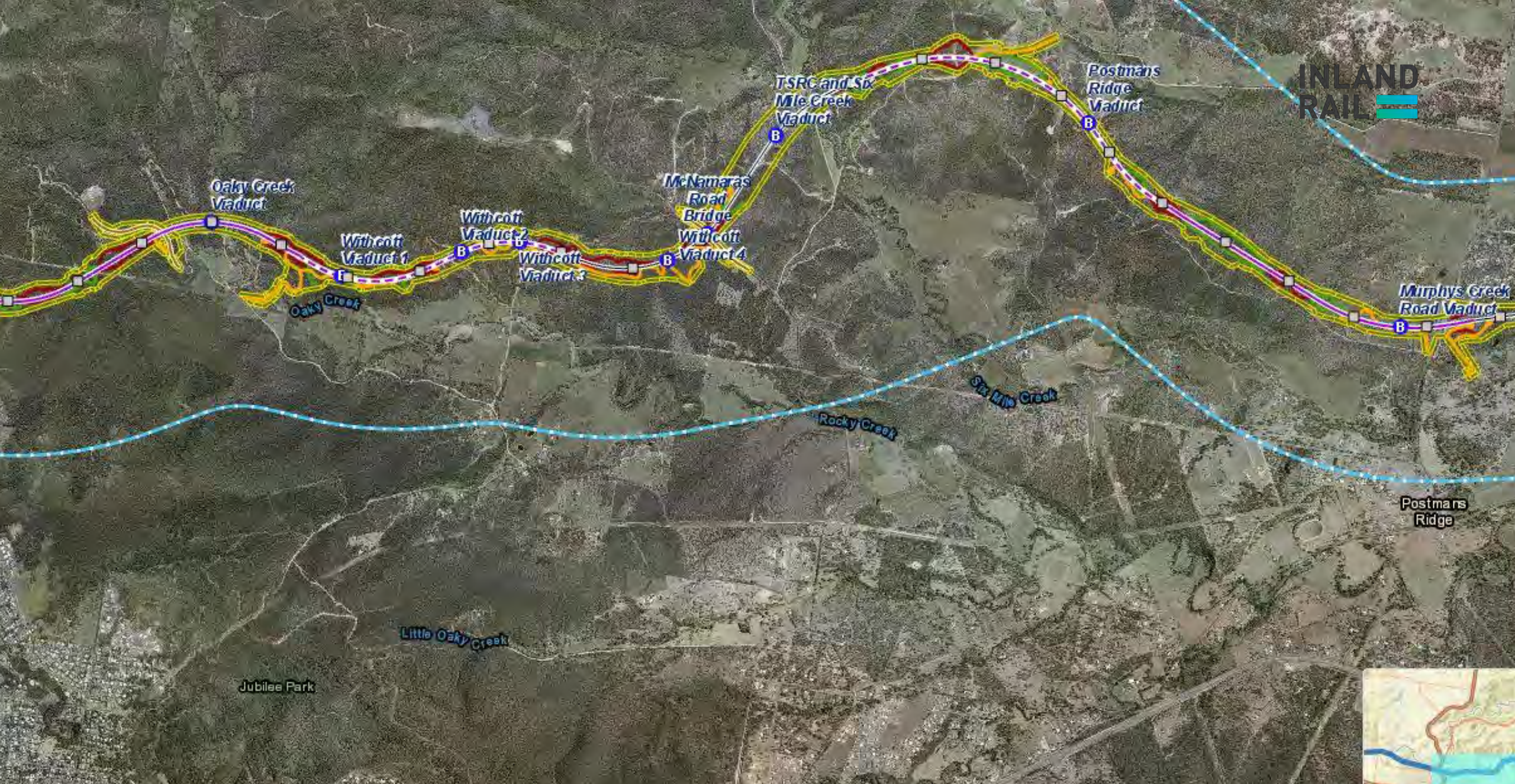
August 2017



Katoomba lookout - existing



Katoomba Lookout - montage



Overview – visualisations



Murphys Creek Road / TSRC bridge - existing



Murphys Creek Road / TSRC bridge - montage



Ashlands Drive - existing



Ashlands Drive - montage

COMMUNITY ENGAGEMENT

- Ongoing engagement with stakeholders, including landowners and local councils
- Continuing a range of investigations throughout the project study area, including geotechnical studies
- Community information sessions held in October and November:
 - preliminary environmental findings and engineering
 - concept visualisations of the design
 - approximately 60 people attended these sessions
- Updated project fly-through video
- Updated interactive map now available.

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INFORMATION SESSIONS

Key feedback from the sessions included:

- Noise, vibration, air quality
- Land resumption and severance
- Maintaining access to properties and businesses
- Road diversions and impacts to businesses
- Water impacts – registered bores
- Rail structures – technical information
- Geotech findings and ongoing Geotech works
- Land use during construction
- General property impacts including stock fencing
- Working with / for the project – supplier opportunities
- Cultural heritage



G2H FLY-THROUGH VIDEO



HELIDON TO CALVERT (H2C) EIS UPDATE

H2C – EIS UPDATE

- ▶ Preliminary Draft EIS submission:
27 September 2019
- ▶ Draft EIS submission:
1 May 2020 (pre)
- ▶ Extension of lapse date:
2 November 2020



**Terms of reference for an
environmental impact statement:**

Inland Rail - Helidon to Calvert project

October 2017



EIS UPDATE

EIS status

Comments have been received from agencies

Adequacy check process underway

What's next?

Amendments to the Preliminary Draft EIS in response to comments

Document production and graphics

Release of Draft EIS for public notification, as directed by the Coordinator-General – likely Q1/Q2 2020

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COMMUNITY ENGAGEMENT

- Ongoing engagement with stakeholders, including landowners, local councils, schools, churches and business owners and providing an update on the current design
- Discussions with stakeholders to better understand potential impacts along the alignment
- Engaging with successful applicants involved in Round 3 of the Sponsorships and Donations Program



NOISE MODELLING

- Noise modelling workshops / sessions held in late November and early December
- Managed as invitation-only for specific landowners where there will be a change in noise conditions when the rail line is operational
- Overview of Inland Rail's approach to noise including modelling outcomes, mitigation options and noise management
- Presented noise level predictions to individual stakeholders
- Noise barrier concepts and visuals
- At-property treatments (including window glazing, insulation, façade upgrades, property fencing)



NOISE MODELLING

Other than noise, other topics consisted of:

- Vibration and reverberation
- Noise barrier options and locations
- Embankment heights and cuttings
- Bridge specifications and locations
- Construction impacts (dust, traffic, noise)
- Acquisition and perceived devaluation of property
- Crossing loops (length of time train will idle)
- Train speed through brownfield and greenfield
- Future use of the existing West Moreton rail line
- Passenger train.



NOISE MODELLING – CASE STUDIES

NOISE – CASE STUDIES






- ▶ Scone:
2016
- ▶ Gunnedah:
2014-15
- ▶ Southern Sydney Freight Line (SSFL):
2014; 2015; 2018
- ▶ ARTC IR – QLD Validation:
2019

- ▶ Railway Noise
- ▶ Noise mitigation
- ▶ Noise management



OVERVIEW – NOISE TRIGGERS

- ▶ To limit the impact on the community

Development	TMR interim guidelines (March 2019)	Terms of Reference (October 2017)	ARTC's Approach (June 2017)		
New rail	L _{Aeq(24hour)} 60 dBA Max. 82 dBA	L _{Aeq(24hour)} 65 dBA Max. 87 dBA	Daytime (7am – 10pm)	L _{Aeq} 60 dBA Max. 80 dBA	
			Night time (10pm – 7am)	L _{Aeq} 55 dBA Max. 80 dBA	
Upgrade existing rail	L _{Aeq(24hour)} 65 dBA Max. 87 dBA	L _{Aeq(24hour)} 65 dBA Max. 87 dBA	Daytime (7am – 10pm)	L _{Aeq} 65 dBA Max. 85 dBA	
			Night time (10pm – 7am)	L _{Aeq} 60 dBA Max. 85 dBA	
Upgrade existing rail – allowable increase	L _{Aeq} ≤ 2 dBA Max. ≤ 3 dBA	L _{Aeq} no goal Max. no goal	All periods	L _{Aeq} ≤ 2 dBA Max. ≤ 3 dBA	

SCONE

► Reconfiguration, rail, turnouts (2016): L_{AMax}



- 1450m barrier:
550m @ 3m; 300m @ 4.2m; 600m @ 3m

Location	Predicted - unmitigated	Predicted - mitigated	Measured - mitigated	Difference
36G	98	83	79	-4
39E	95	92	86	-6
12B	97	86	93.5	+7.5



GUNNEDAH



▶ Rail Yard (2014-15): $L_{Aeq, period}$

▶ Four noise walls – CSR Hebel absorbent panels

Location	Height	Predicted - unmitigated		Predicted - mitigated		Measured - mitigated		Difference	
		Day	Night	Day	Night	Day	Night	Day	Night
-	-								
R028	3m	60	60	56	56	55	52	-1	-4
R045	3m	60	60	54	54	51	49	-3	-5
R052	3m	59	59	51	51	52	48	+1	-3
R055	2.1m (visual)	66	65	61	61	60	59	-1	-2
R063	3m	63	62	58	58	55	53	-3	-5

SSFL

► Year 1 (2014): $L_{Aeq, 24hr}$

Location	Predicted	Measured	Difference
1 – no barrier	68	65	-3
2 – 4.2m barrier	60	59	-1
3 – 4.2m barrier	64	60	-4
4 – no barrier	56	55	-1
6 – 4.2m barrier	56	58	+2
7 – 4.2m barrier	54	55	+1
8 – 4.2m barrier	59	55	-4
9 – 4.2m barrier	61	54	-7
10 – no barrier	63	60	-3
11 – no barrier	66	68	+2
12 – no barrier	68	64	-4
13 – no barrier	67	67	0



SSLF

► Year 2 (2015): $L_{Aeq, 24hr}$

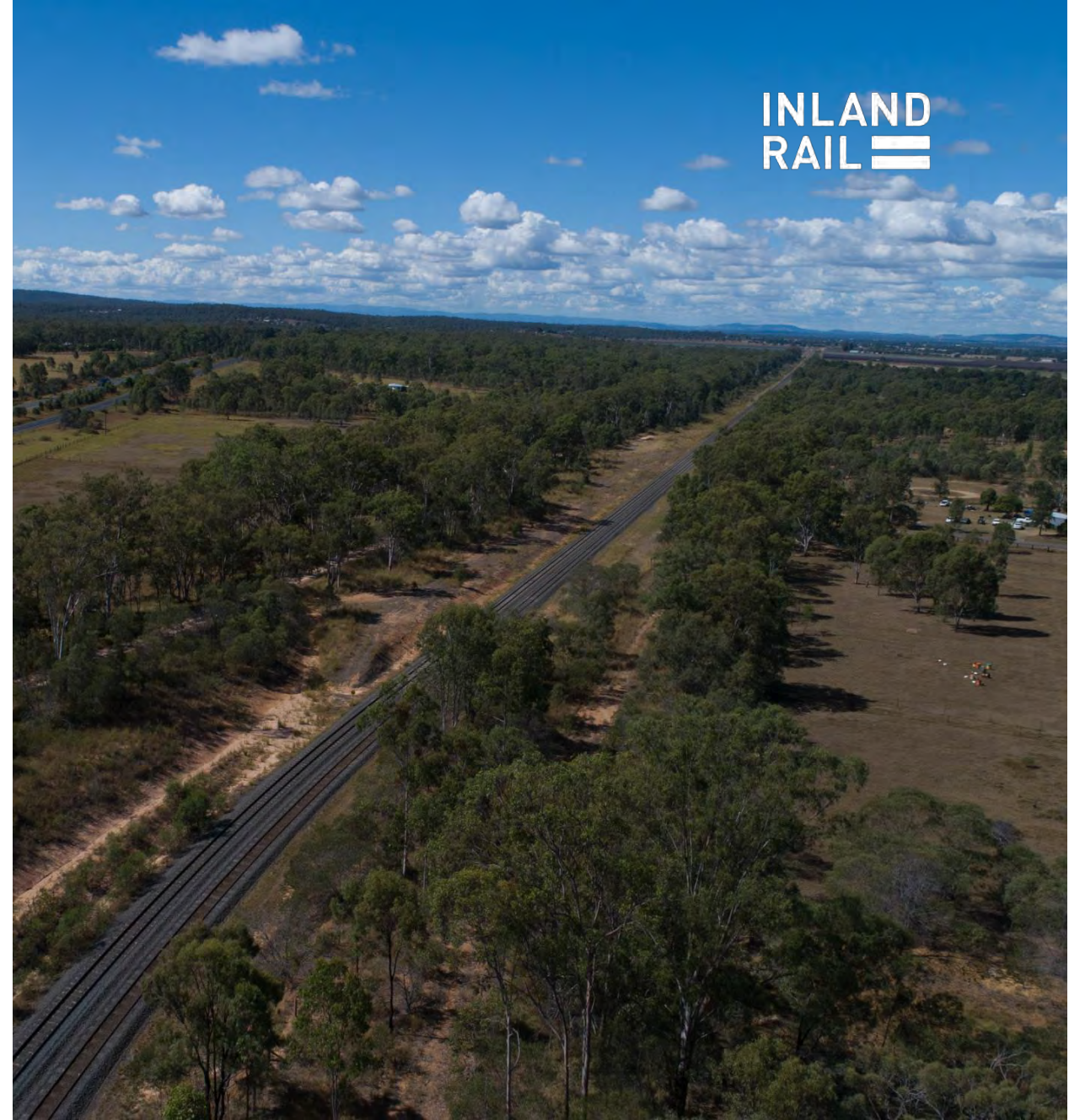
Location	2015 Goal	Ambient	All trains	ARTC trains
1 – no barrier	68	60	57	50
2 – 4.2m barrier	60	63	53	47
3 – 4.2m barrier	65	63	47	45
4 – no barrier	57	54	49	43
5 – no barrier	63	60	52	48
6 – 4.2m barrier	57	57	51	43
7 – 4.2m barrier	56	59	53	45
8 – 4.2m barrier	59	57	50	44
9 – 4.2m barrier	62	62	49	43
10 – no barrier	64	60	52	45
11 – no barrier	66	64	62	54
12 – no barrier	68	60	58	54
13 – no barrier	67	65	62	52



SSFL

► Year 2 (2015): L_{AMax}

Location	EIS Meas.	ONVMP Pred.	Upper Limit	ARTC 2015	Difference
1 – no barrier	-	-	80	80	0
2 – 4.2m barrier	88.0	-	90	76	-14
3 – 4.2m barrier	80.6	-	83	73	-10
4 – no barrier	65.7	-	80	71	-9
5 – no barrier	81.1	-	80	75	-5
6 – 4.2m barrier	-	85.3	85	72	-13
7 – 4.2m barrier	79.1	-	81	71	-10
8 – 4.2m barrier	78.8	-	81	78	-3
9 – 4.2m barrier	85.5	-	80	73	-7
10 – no barrier	81.4	-	83	74	-9
11 – no barrier	-	85.8	86	82	-4
12 – no barrier	-	85.8	86	83	-3
13 – no barrier	-	85.8	86	80	-6



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► Year 5 (2018): $L_{Aeq, 24hr}$

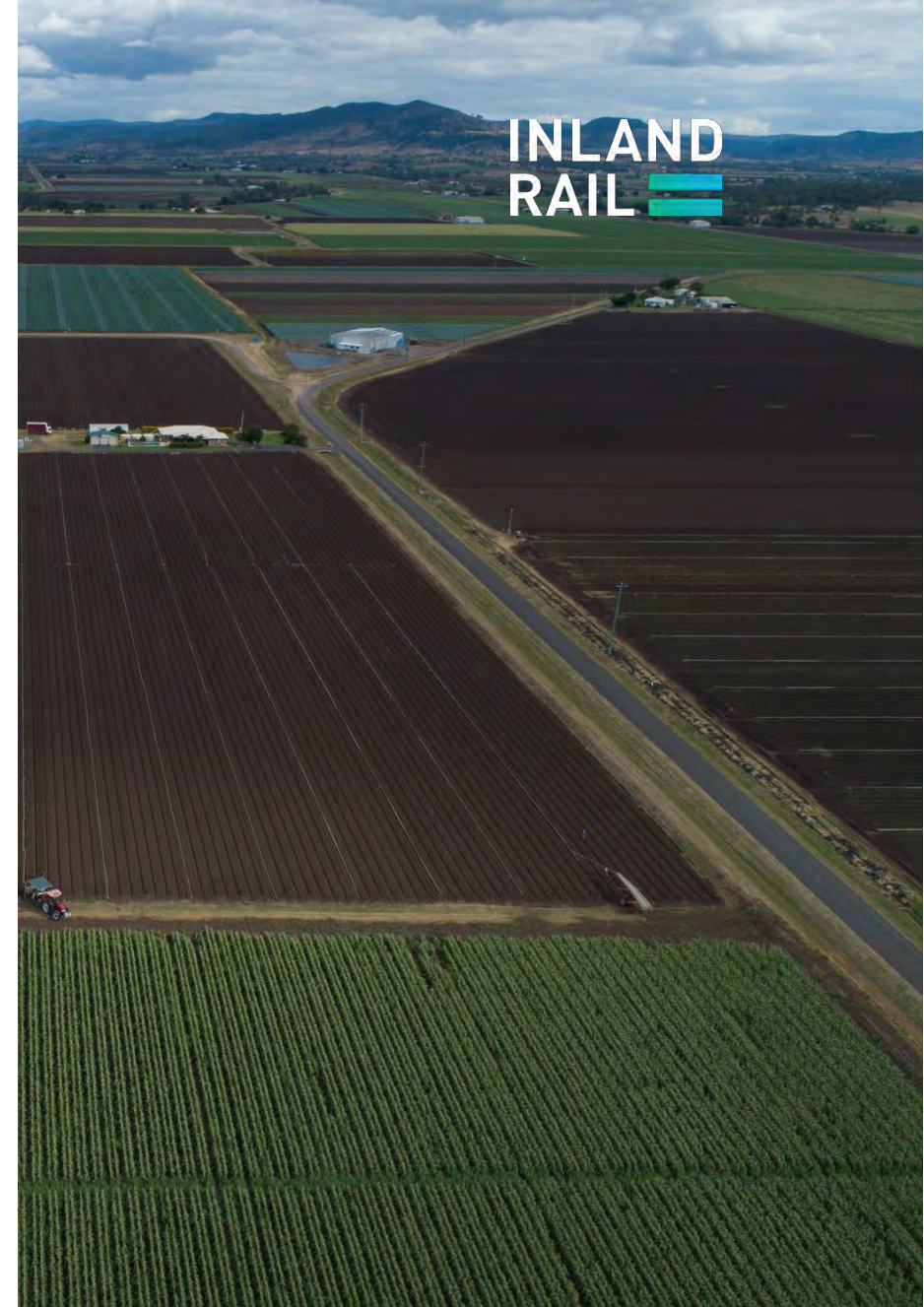
Location	2018 Goal	Ambient	All trains	ARTC trains
1 – no barrier	69	58	54	49
2 – 4.2m barrier	61	56	51	49
3 – 4.2m barrier	65	61	56	45
4 – no barrier	57	52	51	45
6 – 4.2m barrier	57	54	49	45
7 – 4.2m barrier	57	56	52	45
8 – 4.2m barrier	60	53	48	46
9 – 4.2m barrier	62	55	50	45
10 – no barrier	65	60	54	49
11 – no barrier	67	65	59	50
12 – no barrier	69	59	58	55
13 – no barrier	68	60	59	51



SSFL

► Year 5 (2018): L_{AMax}

Location	EIS Meas.	ONVMP Pred.	Upper Limit	ARTC 2018	Difference
1 – no barrier	-	-	80	78	-2
2 – 4.2m barrier	88.0	-	90	79	-11
3 – 4.2m barrier	80.6	-	83	75	-8
4 – no barrier	65.7	-	80	73	-7
6 – 4.2m barrier	-	85.3	85	75	-10
7 – 4.2m barrier	79.1	-	81	76	-5
8 – 4.2m barrier	78.8	-	81	77	-4
9 – 4.2m barrier	85.5	-	80	74	-6
10 – no barrier	81.4	-	83	80	-3
11 – no barrier	-	85.8	86	80	-6
12 – no barrier	-	85.8	86	85	-1
13 – no barrier	-	85.8	86	82	-4



ARTC IR – QLD VALIDATION

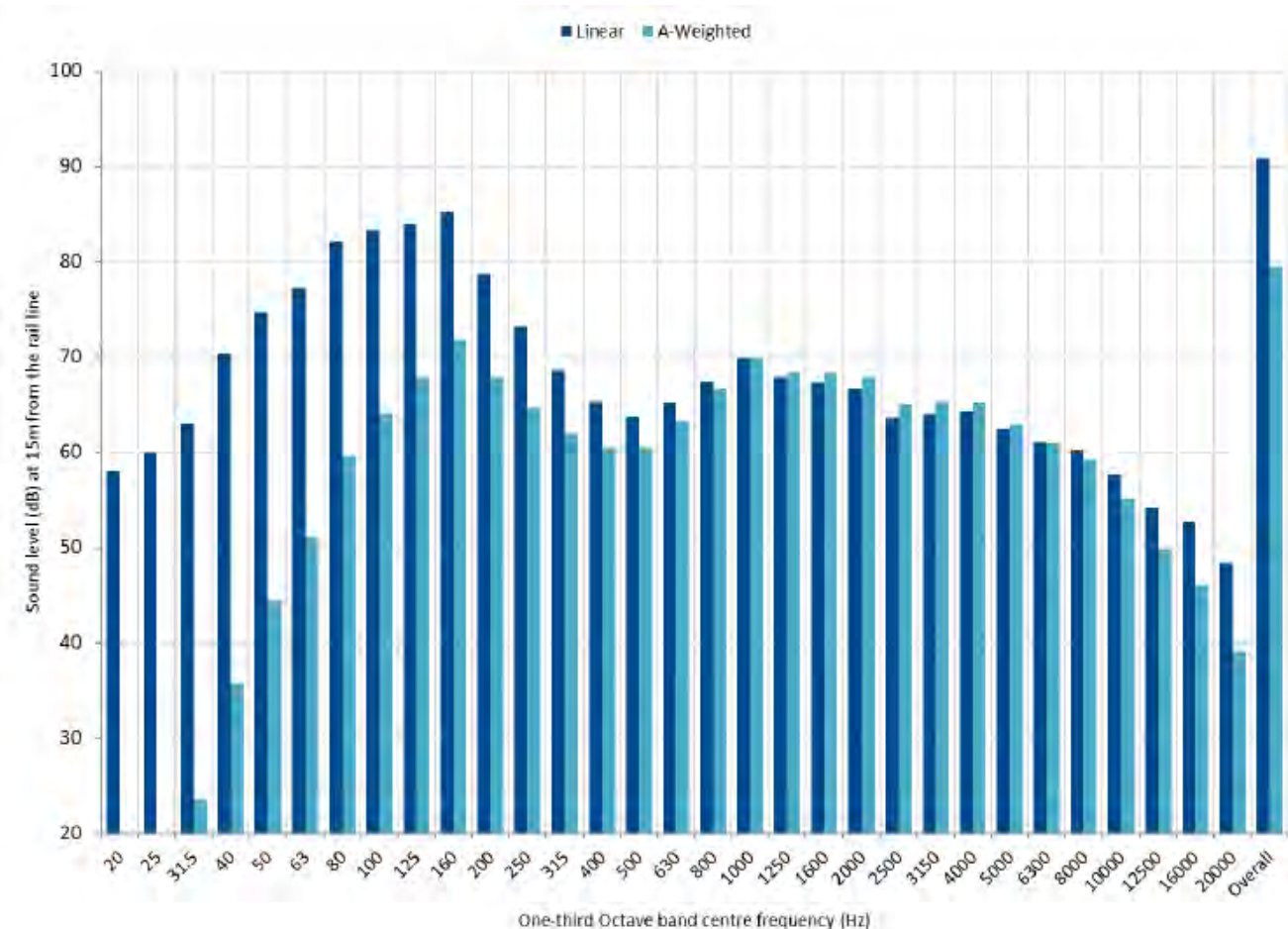
Location	Day (7am-10pm)	Night (10pm-7am)	Maximum (day)	Maximum (night)
ID 1 Gatton (Smithfield Rd, 40m)	1.4	0.8	-0.1	2.9
ID 2 Gatton (Chadwick Rd, 17m)	4.1	3.8	5.7	4.0
ID 3 Forest Hill (Railway St, 15m)	-0.3	2.0	3.1	3.1
ID 4 Forest Hill (Gordon St, 18m)	1.1	0.0	2.2	1.4
ID 5 Calvert (Newcastle St, 78m)	5.8	5.4	1.9	1.0
All locations	2.4	2.4	2.6	2.5
Locations 1 – 4	1.6	1.7	2.7	2.9

- ▶ Predicted compared to measured
- ▶ **Outcome:**
 - in close agreement
 - generally over predicting (conservative)



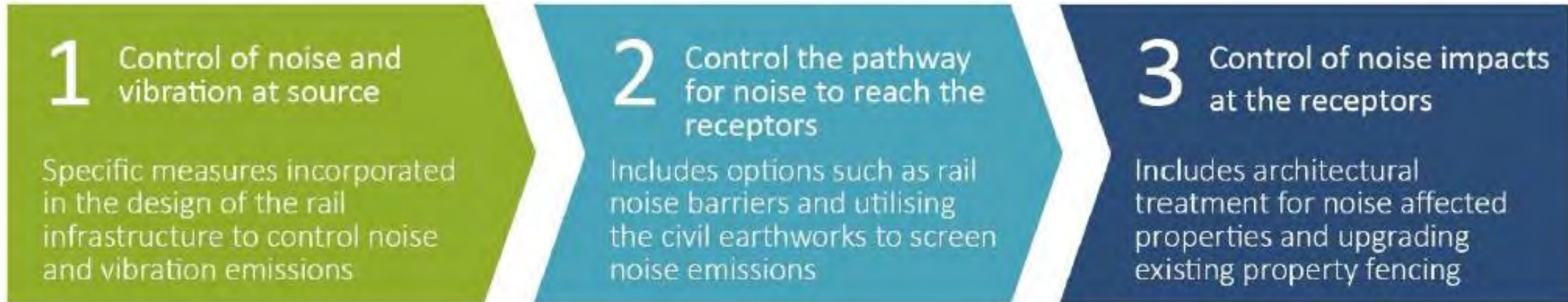
RAILWAY NOISE

- ▶ Characteristics – potential for:
 - low frequency (C/A weight difference)**
 - tonal (1/3 octave bands – linear weighted)
 - impulsive (rise time 35ms, decay of 1.5s)
- ▶ Noise spectrum – typical freight pass-by @ 15m
2019, Forest Hill
derived from 149 rail freight movements
- ▶ Specific to:
 - rolling stock; individual items;
 - site features; track condition;
 - individual perceptions**



NOISE MITIGATION

NOISE MITIGATION



- ▶ Strategy based on **reasonable and practicable** approach (DTMR, 2019)

Reasonable: community preferences; cost factors; benefits provided; existing/future levels

Practicable: conventional; readily available; tested technology; build/maintenance considerations (environmental, safety, engineering)

- ▶ Barriers generally considered for **groups of triggered receivers**
- ▶ For isolated triggered receivers, barriers are generally not considered (**for any infrastructure project**)

EFFECTIVE NOISE CONTROL

- ▶ Glenriding (near Singleton, NSW), 2013
 - 2.4m barrier, 284 metre long
- ▶ Noise reductions of up to **10 dB** – for **nine properties**
 - Included at property treatment
 - Compliance with recommended internal building levels



NOISE MANAGEMENT

NEXT STEPS

Works continue as part of assessing impact potential:

- ▶ Number of triggers (day; night; pass-by)
- ▶ Understanding ranges/margin (level above trigger)
- ▶ Consideration of land use(es)
- ▶ Account for structures
 - façade size
 - orientation
 - partition form
 - function



NEXT STEPS

Works continue during detailed design:

- ▶ Refinement of predictions
- ▶ Internal noise levels
- ▶ Agreement on options/measures/approach

Works continue beyond commissioning:

- ▶ Verification, validation and compliance
- ▶ Resolution of issues (current; emerging)
- ▶ Addressing problems; managing legacy



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GENERAL BUSINESS

THANK YOU

