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Ms Anne Cunningham
Chair, Development Assessment Panel
New Bridgewater Bridge Major Project
Tasmanian Planning Commission
Level 3, 144 Macquarie Street
Hobart TAS 7001

By email: tpc@planning.tas.gov.au

New Bridgewater Bridge Major Project – Response to Representations

Dear Ms Cunningham,

Thank you for the Development Assessment Panel's invitation to make a written submission in relation to the representations received from other parties on the Initial Assessment Report (IAR) for the New Bridgewater Bridge Major Project (the Project).

Please find below the response from the Proponent for consideration by the Development Assessment Panel, as follows:

- Table 1 – Comments on private representations (excluding those addressed in Table 2)
- Table 2 – Comment on representation from Geoff Lucas
- Table 3 – Comment on representation from Brighton Council
- Table 4 – Comment on representation from Glenorchy Council
- Table 5 – Comment on representation from Derwent Valley Council
- Table 6 – Comment on representation from Department of Natural Resources and Environment
- Table 7 – Comment on representation from State Emergency Service
- Table 8 – Comment on representation from Tasmanian Active Living Coalition
- Attachment A – Summary of Boat Ramp Usage

Thank you for the opportunity to provide comment on these representations. The Proponent values your consideration of this response and trusts that it will assist the Panel and regulators' review of the project.

We look forward to participating in the upcoming hearings and to engage with the Panel and other Representors on these matters.

The project welcomes any queries from the Commission or the Panel in order to clarify the above matters and would be glad to meet and discuss further. If you wish to discuss our response, please contact Mia Potter, Manager Approvals, New Bridgewater Bridge Project at Mia.Potter@stategrowth.tas.gov.au or on 03 6166 4860.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'B. Moloney'.

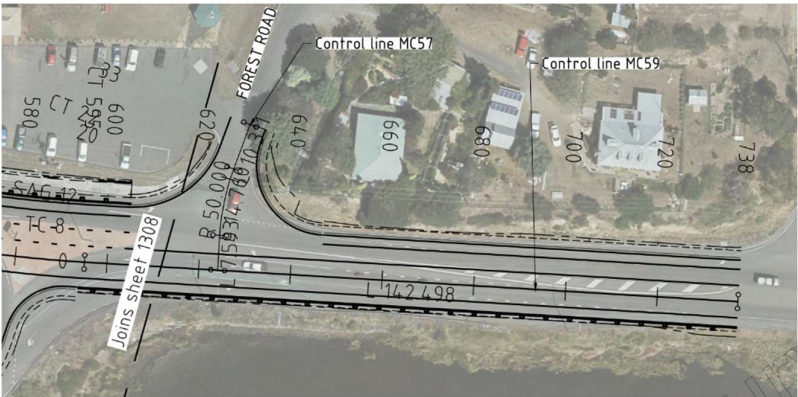
Ben Moloney


Project Director, New Bridgewater Bridge Project, Department of State Growth

10 March 2022

Table I – Comments on private representations

ID	Representor	Matter Raised	Proponents Response
P1	Sally Roberts	Query as to where construction workers will be parking, noting that Nielsen Esplanade is narrow and there is limited parking space	<p>The Proponent understands the concerns raised by residents living in close proximity to a planned construction area and we are taking this into account as we plan for, and later establish the construction area in this location.</p> <p>Residents will be notified in advance of site establishment, which will include the site boundary and other details.</p> <p>The Proponent will maintain residents' access to Nielsen Esplanade and all of the individual properties at all times.</p> <p>Project vehicles will not be permitted to park outside of the temporary fencing surrounding the proposed construction area. All new workers coming onto the Project will be advised of parking arrangements during the detailed induction process, and will be regularly reminded of these at daily pre-start meetings during the course of the project.</p> <p>The McConnell Dowell Stakeholder Engagement & Communications Manager (SECM) will soon contact the Nielsen Esplanade residents to identify any other concerns they may have, to better inform the planning for this construction area, and so that issues can be managed appropriately during the construction phase.</p> <p>The SECM will also take that opportunity to provide the residents with 24/7 project contact details to provide further reassurance that their feedback will be taken seriously and be managed in a timely manner.</p>
P2	Sally Roberts	Query as to whether the removal of the palm trees in the vicinity of Nielsen Esplanade is necessary	<p>The removal of all of the large palm trees is necessary to allow adequate space for the construction of the New Bridgewater Bridge, in order to ensure the safety of the community and our workers.</p> <p>This construction area will be temporarily fenced with lockable gates during the construction phase, and could include a materials laydown area, some temporary buildings, and provide for project vehicle parking.</p> <p>The Project Team will soon carry out further discussions with local community stakeholders to identify opportunities to facilitate the relocation of the trees.</p>
P3	Mark and Maria Datlen	Request that provision be made under the Project to stop erosion at the northern side of the boundary at 4 Forest Road, Granton (Commandant's Cottage)	<p>The Proponent acknowledges that the bank in question (shown below) is within the Project Land. As the design is developed, an evaluation of the required bank treatment in this location will be determined. If no works are required on this bank under this project, the Proponent will refer the matter</p>

ID	Representor	Matter Raised	Proponents Response
			<p>to the Asset Management team in State Roads, to assess this bank as part of their bank stabilisation program.</p> 
P4	Derek Wojcik	<p>Concern that slip lane to Black Snake Road / New Norfolk in chosen design will require the removal of trees on 37 Black Snake Road. The trees create a natural barrier to all the highway noise. The removal of these trees will allow all highway noise to be projected onto residents of Dickenson Drive. Concern that the chosen design will move the volume of traffic closer to residents of Black Snake Road and Dickenson Drive. Suggestion that some sort of noise barriers are put in place to replace the lost 'natural' barrier.</p>	<p>The provision of noise walls, barriers and other mitigation techniques will be determined through noise modelling of the design. Where noise levels are predicted to increase beyond the established limits, mitigations will be implemented. These mitigations can include changes to road wearing surface, noise walls or other measures.</p> <p>Vegetation will be placed as part of attenuating visual impacts and where it forms part of the landscape and urban design plans. Vegetation is not considered in modelling for noise or as a mitigation to be applied for noise impacts.</p>
P5	Deborah Norris	<p>Representor runs horse on land next to 1 Wallace Street, Bridgewater. Query as to whether there is a Utility Easement on the land that prevents it being built upon. Representor requests that the land can remain undeveloped so that they can continue to run horse on land.</p>	<p>This land is not proposed to be built on as part of the Major Project, which is understood to be the land as shown in the screenshot below.</p> <p>The Proponent confirms that the land referred to, as noted in the image below, contains rights of drainage (easements), however they would not constrain development of the land.</p> <p>The Proponent also confirms the land is a Public Reserve, and is Crown Land under the authority of the Department of State Growth. If the representor</p>

ID	Representor	Matter Raised	Proponents Response
			<p>would like to formalise their use of the land to run horses, they should seek out a lease or license agreement for the land with the Property Assets team at the Department of State Growth. An application for such an agreement can be made via an online portal.</p> 
P6	Keryn Madsen, Garth Madsen	Bridge should have capacity for light rail, noted that if the bridge is built without rail then a separate rail bridge may need to be constructed further down the track	<p>While providing for rail infrastructure is not part of the project, the Proponent will ensure that the future use of the rail corridor is not prevented.</p> <p>Including rail as part of the Project is not as simple as attaching train lines onto the side of the new bridge. Trains need alignments with shallower slopes, wider curves and different load capacities than roads that are built for cars and trucks.</p>
P7	Keryn Madsen	Lack of sound barriers near residence (29 Hayton Place). Noted that whilst planting vegetation is important and positive, it is not enough. Concern that contractor will only need to care for these trees for three years and what will happen afterwards. Request that	When considering the need for noise mitigation, the Department of State Growth generally adopts LA10 (18 hour) 63 dB(A) as the design external noise

ID	Representor	Matter Raised	Proponents Response
		<p>State Growth put effective and attractive sound barriers along the highway and access roads in vicinity of Hayton Place.</p>	<p>level and LA10 (18 hour) 68 dB(A) as the operational upper limit, both to be measured at the building façade most exposed to traffic noise.</p> <p>Preliminary noise modelling indicates that the residence at 29 Hayton Place will not experience traffic noise of this magnitude.</p> <p>Residences located closer to the highway have a higher potential to experience traffic noise in excess for the design external noise level.</p> <p>The final provision of noise walls or barriers will be determined through noise modelling of the design, once finalised. Where noise levels are predicted to increase beyond the established limits, mitigations will be implemented. These mitigations can include changes to road wearing surface, noise walls or other measures. For example, in cases of isolated groupings of receivers and/or wide spacing between receivers, noise walls may not be a cost-effective mitigation measure and bespoke at building mitigation (e.g. double or triple glazing windows may be added to impacted façades).</p> <p>The trees that are shown on the indicative landscaping plans in the MPIS on the eastern side of the new bridge are proposed to filter / screen views to the road and to improve visual amenity.</p> <p>As is standard in the case of other road projects throughout the State, the ongoing maintenance of trees and other vegetation in the vicinity of the Project will either be the Department of State Growth's responsibility or Council's responsibility, based upon the maintenance boundaries agreed upon by the Crown and the Council.</p>
P8	Garth Madsen	<p>Lack of indication on plans as to the level of the highway and bridge in relation to 29 Hayton Place. Query as to who will look after trees after contractor is gone. Request for a more permanent sound barrier to be provided (not just trees)</p>	<p>The Proponent has made a submission including details of the chosen design and its relationship to the adjacent land in respect to height. This provides further information in regard to the query at 29 Hayton Place, which is considered outside the zone of impact of the bridge in terms of height from this analysis.</p> <p>As discussed in P7 above, the final provision of noise walls or barriers will be determined through noise modelling of the developed design, once finalised. Where noise levels are predicted to increase beyond the established limits,</p>

ID	Representor	Matter Raised	Proponents Response
			<p>mitigations will be implemented. These mitigations can include changes to road wearing surface, noise walls or other measures.</p> <p>The trees that are shown on the indicative landscaping plans in the MPIS on the eastern side of the new bridge are proposed to filter / screen views to the road and to improve visual amenity.</p> <p>As is standard in the case of other road projects throughout the State, the ongoing maintenance of trees and other vegetation in the vicinity of the Project will either be the Department of State Growth's responsibility or Council's responsibility, based upon the maintenance boundaries agreed upon by the Crown and the Council.</p>
P9	Garth Madsen	<p>Clarification sought as to whether existing bridge is to be demolished or relocated to a nearby park. Clarification sought as to which parts of the bridge are to be retained at the current site. Representor requests that bridge is retained without the moving section. Concern that any section of the bridge working at a nearby park would raise safety and vandalism concerns. Suggestion that the bridge is relocated further up river to become another crossing without the existing elevation function being used.</p>	<p>The Proponent has applied for the demolition of the existing bridge and, based upon the assessment criteria and heritage consultant advice, has proposed a commitment to retain representative samples of the bridge for appropriate re-use and / or interpretation in an appropriate publicly accessible place. The drafted conditions of the permit have required that the lift span or other representative samples be retained.</p> <p>The Proponent will engage consultants to undertake an analysis of which parts of the bridge should be retained as representative samples and will work with heritage interpretation specialists, local councils and other stakeholders to determine the parts to be retained and their final location and use. The Proponent acknowledges the representor's concerns about retaining certain sections of the bridge in a nearby park in regards to safety and vandalism.</p>
P10	Keryn Madsen, Garth Madsen	<p>Removal of boat ramp for three years is not reasonable and another boat ramp needs to be supplied. Suggested that park down the river would allow a boat ramp to be constructed. The population of Bridgewater use this ramp for their fishing and canoeing trips. Total removal for years is not fair or reasonable.</p>	<p>The Proponent's position is that given other boat launching facilities along the river, the limited use of the Bridgewater boat ramp would not justify the expenditure of public money on the provision of a temporary boat ramp nearby for the duration of major works for the Development.</p> <p>Recreational boat and watercraft users are able to access existing boat ramps located at Old Beach (northern shore of Brighton Municipality, ~ 7kms distance to south), Austins Ferry (southern shore of the City of Glenorchy, ~ 7 kms to the south) or Millbrook Rise (southern shore of the Derwent River Valley Municipality, ~ 17kms to the west). Some watercraft (e.g., kayaks,</p>

ID	Representor	Matter Raised	Proponents Response
			<p>paddle boards) may be able to be launched from the foreshore in various locations without the need for a boat ramp.</p> <p>Furthermore, additional investigative work and cost analysis would be required (plus separate planning and PWS approval) prior to the development of an additional boat ramp in Bridgewater as there is no waterside location within the Project Land that would be suitable for a temporary ramp.</p> <p>The Project has provided with this written submission the 'Summary of Usage at Bridgewater Boat Ramp' memo prepared in February 2021 that demonstrates that the existing boat ramp usage is minimal. Whilst there is generally daily usage of the boat ramp (an average of approximately one user per day), this appears to be associated with regular individual users, presumably due to the proximity of the ramp to their residential address. It is expected such users could reasonably travel to an alternative boat ramp with limited inconvenience.</p>
PII	David Kernke	<p>The new Bridgewater Bridge project must respect the heritage values of the historic Black Snake Inn and its surrounds.</p> <p>The convict constructed causeway should be skillfully modified to allow the flow of water via several covered causeways to re-establish the flow of water through this area. This will alleviate the silt build up problem in this area and improve the quality of water in what has become a backwater.</p>	<p>The Proponent acknowledges the significance, both architectural and heritage, of the Black Snake Inn and appreciates the rich history of the building. To enable the delivering of the New Bridgewater Bridge Project, the Tasmanian Government recently purchased the property. The project team plans to amend the boundaries of the property to remove the areas required for permanent project works, with the balance of the land, including the Black Snake Inn and adjoining land, to be returned to the open market.</p> <p>The Black Snake Inn will be integrated into the project wide interpretation program, with consideration given to the inclusion of the retaining wall to the west and the path network being surfaces for interpretation measures.</p> <p>In regard to the causeway, any change to the causeway is outside the scope of this project, and in fact retention of the causeway in its current form is a key aspect to retaining the heritage value of this structure.</p> <p>In addition, the Proponent questions if a significant change to River Hydrodynamics would bring about a net benefit after the establishment of habitat for several species in this location.</p>

ID	Representor	Matter Raised	Proponents Response
P12	Alan Seath	Broad submission regarding the interchange layouts	<p>Planning for the New Bridgewater Bridge has been ongoing for over 20 years, and a significant number of options have been considered. The State has consulted the community on many occasions during that time and appreciates the contributions that have been provided by members of those local communities.</p> <p>Each study has found that a compromise between the many competing factors must be considered, with no 'perfect solution' being identified that would fully meet every stakeholder's objectives.</p> <p>Returning to consider other alternative proposals again would further delay the project. Every delay would extend the gradually decreasing level of service of the existing network and cause more extensive traffic delays, as outlined in the TIA. Every delay would also further increase the delivery cost significantly due to the expected escalation of construction costs.</p> <p>A chosen design has been developed, based on over 18 months of development by the chosen contractor. Their design proposal has considered how the design would be built, and how environmental impacts would be minimised. Their design proposal is priced and ready to proceed, and the planning approval process is well advanced.</p> <p>Any alternative concept designs would need to consider:</p> <ul style="list-style-type: none"> - the complex 3-D geometry of the roadworks and bridgeworks for the permanent design, - the associated additional construction costs that would not be affordable within the approved budget, and - the constructability and environmental impacts. <p>This process would mean at least a further 2-year delay, with consequential escalation of construction costs and traffic impacts.</p>

Table 2 – Comment on representation from Geoff Lucas

ID	Matter Raised	Proponents Response
GL1	Claims regarding the project/design not meeting planning scheme requirements.	<p>The basis of these comments are that the Midson Traffic report demonstrates that the requirements of the planning scheme are not achieved.</p> <p>The general requirements within the planning schemes relate to land use development and its impact on the road network.</p> <p>As the Panel would be well aware, achievement of the relevant scheme provisions is accomplished either through meeting an acceptable solution or by demonstrating performance.</p> <p>As would be expected for a project of this scale and complexity, meeting the acceptable solutions is unlikely and thus performance-based assessment is expected.</p> <p>Particular care has been made to ensure that the design meets the relevant design requirements and traffic modelling has been undertaken to ensure that delays and queues have been minimised as much as practicable.</p> <p>In this regard, it is considered that the design meets the objectives contained within the planning schemes in relation to the relevant Traffic and Access Codes.</p>
GL2	Traffic from New Norfolk going across the bridge, and also from the bridge turning right to New Norfolk are not shown in this report (That I can find).	<p>All Lyell Highway movements are catered for within the design.</p> <p>Traffic travelling from New Norfolk to the Bridge will utilise the southern interchange: through movement towards Black Snake Road then use the on-ramp to bridge.</p> <p>Traffic turning right from the bridge will utilise the southbound off-ramp at the southern interchange, travel beneath the interchange and access the Lyell Highway access lane.</p>
GL3	Blacksnake Lane is a dead-end street. There is only one way in and out - that is, through this convoluted interchange. Approximately 9,800 additional vehicles will pass the exit from Blacksnake Lane every day - getting in and out will be really difficult, particularly in peak hour when we are trying to get kids to school and get to work. But the real problem may well be the affect of a traffic incident anywhere in the interchange - as there is no escape route for	<p>The proponent notes that a revised TIA was provided to the Panel to reflect the chosen design. Traffic modelling indicates that the intersection will perform at an acceptable level of service based on forecast traffic growth.</p> <p>In relation to the specific concerns regarding work bound and school drop-off journeys for residents exiting Black Snake Road in the morning, it is noted that most</p>

ID	Matter Raised	Proponents Response
	Blacksnake Lane residents, we may be trapped in or out of our homes - not able to pick up kids etc. It a possibility that traffic lights will be needed here, if this design goes ahead.	<p>highway traffic at that time will be traveling towards, rather than away from, Hobart and hence will not be using the Brooker Highway to Lyell Highway off-ramp.</p> <p>Concern is raised that the southern interchange would be susceptible to a traffic incident with no escape route for Black Snake Lane residents. It is noted this is the current situation (i.e. an incident on Black Snake Lane).</p> <p>The entire road network is not designed to provide redundancy for localised traffic incidents and this interchange would not warrant being any different. Tasmania Police would manage any such incidents and ensure safe passage of vehicles until the incident is cleared. The Department of State Growth and the Contractor are required to comply with Tasmania Police directions during such incidents.</p>
GL4	Page 37 and 38 of the Midson report have some commentary on the Southern intersection where all this Lyell Highway traffic will be going, but it doesn't make any sense - or show numbers that are anywhere near the reality.	<p>The TIA being referred to was completed on the Reference Design. The Reference Design originally included a roundabout at the Black Snake Road component of the interchange. This intersection is now a T-Junction. The volumes provided in Table 14 also relate to the Reference Design.</p> <p>The proponent notes that a revised TIA was provided to the Panel to reflect the chosen design.</p>
GL5	There is no risk-assessment or any scenarios of what will happen if there is a prang somewhere in the interchange. There are at least 4 potential danger spots in the Blacksnake Lane interchange, and at least the same number again that will slow and impede all Lyell Highway, Main Road and Blacksnake Lane traffic - all day every day.	<p>The design is in accordance with Austroads design guidelines. An independent road safety audit has been undertaken on the design. No serious issues were noted in the audit report.</p> <p>It is further noted that the design will remove significant traffic delays from the network. This will reduce crash risks during peak periods, thus improving road safety of the overall network.</p>
GL6	Because "grade separation at Blacksnake Lane" has been a design criteria for the last decade, no effort has been put into properly evaluating the cost/benefit of the interchange - as it has simply been a given that it will be built.	<p>The Proponent strongly disagrees that the design requirement of 'grade separation at Black Snake Lane' controls the overall interchange design.</p> <p>The interchange considers a wide range of criteria including site constraints and design guidelines. The design requirement of grade separation is to ensure that traffic from/to Black Snake Lane is not required to cross the main highway, which would be a significant safety risk.</p>

ID	Matter Raised	Proponents Response
		Failure to provide grade separation at Black Snake Road would result in drastic inefficiencies in the network overall.
GL7	<p><i>“There is a relatively low incidence of historic injury crashes within the study area” - quoting the Midson report, page 48.</i></p> <p>The chart on page 49 shows a five year average of 14 accidents in the study area. 5 of these are in the bridge corridor (most probably the roundabouts at either end) and the other significant location is the Blacksnake Lane interchange (3 per year). This doesn't sound many, but with relatively much fewer traffic volumes, it's significant.</p>	The comment relates to injury crashes. The statement quoted from the Midson report is correct in the context of the traffic volumes of the network.
GL8	In the chart, the projections show no change in crashes. This will not be correct. The Blacksnake Lane interchange will have all of the Lyell Highway Traffic added to it. Approximately 12,000 extra vehicles per day will be navigating this interchange...	Road safety assessment was conducted on the interchanges of the design in accordance with Austroads requirements. The design modifies the traffic flows in the network, but in doing so greatly reduces the traffic delays and queues associated with the existing infrastructure. This will have road safety benefits that have been evaluated.
GL9	All of the fully-laden 25 metre log trucks going to Boyer - they can't use Boyer Road as they exceed the load rating for that road. These trucks will come down off the bridge into the roundabout, navigate safely around it, climb up an incline under the highway from (almost) a standing start, stop and give way when they intersect with northbound Lyell Highway traffic, then restart when they find a gap. Aside from the trucks themselves, any traffic behind them will be held up. When you consider that at present they come across the causeway to the roundabout and turn right on to the Lyell Highway and off to New Norfolk, this is a good example of how this bridge design has decimated the Lyell Highway/Bridgewater Bridge intersection for users of the Lyell Highway.	<p>The issue of a steep incline is inherent to the grade of the Brooker Highway and is an existing issue.</p> <p>The comment indicates that the trip between New Norfolk and Hobart is largely unimpeded, which is incorrect. The Lyell Highway consists of one lane most of the way, except the limited overtaking lanes, and is subject to the same problem of delays behind slow vehicles for that whole 15km length.</p>
GL10	Alternative design layouts	<p>Possible alternative design layout based on the Tasman Bridge western approach junction are presented.</p> <p>While the Tasman Bridge layout is an effective layout for those site constraints and has worked well, it is not 'stock-standard, simple configuration' and is considered to be a complex bridge design layout from both design and construction perspectives and was put in place to address traffic demands approximately three times greater than experienced at the Bridgewater Bridge.</p>

ID	Matter Raised	Proponents Response
		<p>Mr Lucas proposed the alternative designs previously and the Department of State Growth issued these to the ECI Tenderers for consideration in developing their designs. No commentary was provided by DSG other than Mr Lucas' submission. The tenderers did not pursue this alternative.</p> <p>Specific issues that are observed with the alternative design may include:</p> <ul style="list-style-type: none"> - Ramps would need to have ~6m clearance (note clearance at each Tasman Bridge underpass is only around 4.3m, i.e. only around 9m combined and noting that each ramp is grading separately). - Brooker Highway would therefore need to be ~13m above Lyell Highway, which would require very steep ramps to join from Lyell Highway on to the bridge. This is unlikely to be achievable. - Construction at the proposed location would not be possible as current traffic needs to continue to use the RAB and causeway. - The bridge would need to be founded through the causeway for its full length, which raises concern over the structural capacity of the material below the causeway and the inherent heritage value of the convict-built causeway. <p>The second alternative addresses some of these concerns but includes more structures over water, which increases cost and environmental impacts, and may clash with the rail corridor. Without an underpass, this would mean that Black Snake Lane traffic goes north through interchange to turn and head south.</p> <p>Shared path arrangements would be more complex, if not impossible, with the presence of the additional ramps.</p> <p>As discussed in PI2, any alternative concept designs would need to consider:</p> <ul style="list-style-type: none"> - the complex 3-D geometry of the roadworks and bridgeworks for the permanent design, - the associated additional construction costs that would not be affordable within the approved budget, and - the constructability and environmental impacts.

ID	Matter Raised	Proponents Response
		This process would mean at least a further 2-year delay, with consequential escalation of construction costs and traffic impacts.
GL11	Bridge Clearances for Yachts	<p>This clearance requirement was determined by the government as being a necessary design requirement. This is supported by several stakeholder groups, including Derwent Valley Council and boating community representative bodies.</p> <p>The reduction in river traffic noted is likely due to the current unreliability of getting the lift span opened. The new bridge will address this restriction and thus an increase in river traffic would be expected after completion.</p>

Table 3 – Comment on representation from Brighton Council

ID	Matter Raised	Proponents Response
BC1	Council submits that to “Provide for the fair, orderly and sustainable use and development of air, land and water” that within six months of the project completion that all the cadastre in the area is tidied up so that it is orderly and aligns with the new road corridor and there are not multiple small titles left in the area. The realignment of cadastre should also consider land to be set aside as foreshore reserve and private property boundaries.	<p>The Proponent is willing to arrange for the new road corridor for the New Bridgewater Bridge to have its own cadastral parcel.</p> <p>However, the Proponent would not be willing to commit to tidying up ‘all the cadastre in the area’ or be responsible for land use planning matters such as which land should be set aside for foreshore reserve or private property, especially as a condition of a planning permit.</p> <p>The Proponent requests that if a condition is included that requires cadastral parcels to be amended to ensure the new road corridor has its own cadastre, that this be required to occur within 12 months of project completion, to allow for complexities that may be met along the way.</p>
BC2	Footpaths should be provided on both sides of the Gunn Street extension by the developer as part of the Major Project to provide greater connectivity and to avoid pedestrians to have to cross the road twice if they are to access the other side of Gunn St and/or the new connector path parallel to the highway.	The Proponent welcomes a discussion with Brighton Council on this matter and supports the consideration of active transport for local residents. However, it has not yet been determined whether there is room in this location for a footpath on both sides of the road and there may be issues in regard to matters such as sight distances. Therefore, this matter should not be reflected in a planning permit condition.
BC3	Three pedestrian refuges should be constructed by the developer as part of this Major Project and located along Gunn St where new pedestrian crossing points will be located.	The Proponent welcomes a discussion with Brighton Council on this matter and supports the consideration of active transport for local residents. However, it has not yet been determined whether there is room in this location for the three pedestrian refuges and what the design implications would be. Therefore, this matter should not be reflected in a planning permit condition.
BC4	The 2.4m wide shared user path should be extended along the northern side of Gunn St and Old Main Road to join up with the crossing at Weilly Park Road and constructed by the Developer as part of this Major Project. This will provide for a continuous shared bike paths to the Brighton Industrial Estate. Brighton Council plan to continue this through to Brighton township in the next couple of years to support residential growth.	The Proponent notes that this is not a part of the scope of this project. None of the works proposed would prevent this work from occurring in the future by Brighton Council.
BC5	New bus stops must be provided in the vicinity of Old Main Road to replace the existing bus stops located opposite McDonalds on the Midland Highway.	The existing bus stop outside McDonalds on the Midland Highway will be replaced with a new bus stop. Consultation with the Passenger Transport team within the Department of State Growth has advised that a location on the side of the highway is

ID	Matter Raised	Proponents Response
	Consideration must be given to how the bus can exit off the highway and have adequate area to turn to continue along the highway.	not suitable due to the proposed speed limit (80km/h). The location of the replacement bus stop should not be a planning permit condition as it will be determined through further design work and consultation with relevant stakeholders.
BC6	Park and ride facilities should be provided to the east of McDonalds and constructed by the developer as part of the Major Project.	<p>The Proponent notes that this is not within the scope of this project.</p> <p>Additionally, the provision and location of Park and Ride facilities throughout Greater Hobart by the Department of State Growth is a strategic matter that involves detailed assessment as to the most beneficial location for investment in such facilities.</p> <p>In 2019, the Department commissioned the Greater Hobart Park and Ride Investigation – Strategic Corridor Assessment, which can be accessed publicly online and is available for Council to access and review.</p> <p>The Department of State Growth would not determine the final location of a Park and Ride facility without a detailed analysis into the location to ensure it provides the best strategic outcome in regards to catchment size.</p> <p>It is also noted that Park and Ride facilities create traffic demand and would therefore likely need a separate DA that may need to be supported by a TIA.</p> <p>It is noted that local councils do construct and maintain their own Park and Ride facilities in the Greater Hobart area and the Proponent acknowledges that there may be locations in and around the Project land that would be suitable for the Council to look into such opportunities.</p>
BC7	<p>A traffic impact assessment (TIA) must be undertaken based on proposed traffic volumes to consider:</p> <ul style="list-style-type: none"> - The most appropriate treatment of the Boyer Road/Old Main Road/Gunn Street Intersection. - The need to upgrade Old Main Road. <p>Any recommendations of the TIA must be implemented by the developed as part of the Major Project to the satisfaction of Brighton Council and the State Road Manager.</p>	<p>The proponent notes that modelling has been completed to determine the proposed intersection arrangement at Boyer Road / Old Main Road / Gunn Street.</p> <p>Upgrading of Old Main Road beyond what is proposed is not part of the scope of this project.</p>

ID	Matter Raised	Proponents Response
BC8	Prior to the completion of the Project ownership and management arrangements of the road and trail network must be clearly defined on a plan to the satisfaction of Council and the Crown.	The Proponent has no objection to this requirement.
BC9	Commitment 24 of the MPIS should be a condition of the permit and include that the new jetty must be built to modern standards and must be able to accommodate a future passenger ferry service as part of the Major Project.	<p>The Proponent notes that Commitment 24 was made, and thus has no objection to its inclusion in the Permit as it constitutes replacing an existing asset that will be demolished. It is noted, however, that requiring a facility capable of accommodating a ferry service is beyond the scope of this project and not suitable to include as a permit condition.</p> <p>Should Council wish to contribute funds, the Proponent would be willing to discuss how such activities could be integrated into the works. However, this should not form part of the Permit.</p> <p>It is anticipated that replacing a boat ramp and jetty with a ferry terminal would constitute a change of use and a level of development that would require detailed investigations that have not been undertaken for this Project and would be the subject of a separate development application.</p> <p>Further, inclusion of a 'future ferry service' now, without an identified service or vessel to design to, risks the creation of an asset that is unsuitable for the task.</p>
BC10	The MPIS provides for a range of opportunities for open space but lists no project commitments. There will be significant disturbance to the foreshore area and a large amount of public open space will be left over in the Project area. As such, Council submits that the "opportunities" listed in the MPIS should be included as permit conditions.	<p>The development of the Bridgewater foreshore and surrounds is outside the scope of the bridge replacement project and the Major Project as declared and therefore should not be the subject of permit conditions.</p> <p>It is noted that throughout the development of the project, the project team has sought to engage constructively with the broader community, including with local government regarding the future use of land surplus to the needs of the project, particularly in Bridgewater. It is intended that these discussions will continue throughout 2022.</p> <p>The Department has acquired a number of parcels of land in Bridgewater and Granton over the past decade in preparation for the construction of the new Bridgewater Bridge.</p>

ID	Matter Raised	Proponents Response
		At the completion of the project, it is expected that there will be areas of publicly owned land that are surplus to the road casement on both the northern and southern shores that will become available for development or as public open space.
BC11	Commitment 26 of the MPIS should be a condition of the permit and include that mature trees are to be planted so that they provide instant screening.	<p>The Proponent has no objections to Commitment 26 being included as a condition of the permit.</p> <p>This commitment notes that landscaping design would be undertaken with impacted property owners and so details regarding the types of trees to be chosen is not considered necessary as an addition to such a commitment.</p> <p>It is noted that planting only mature trees would provide for a shorter term visual barrier than landscaping with a mix of tube stock, juvenile and mature trees and that, dependent on species, mature trees are often less likely to thrive when planted.</p>
BC12	Any sheer blank walls should be treated to provide visual interest, which may include changes in materials, colours, textures or murals.	The Proponent is open to discussing the visual treatment of noise walls further with Council prior to their installation.
BC13	Landscape plans should be prepared as per response to clause 4.13.	The Proponent notes that the draft conditions for the permit requires a landscape plan to be prepared by a suitably qualified person to the satisfaction of the relevant decision maker and includes a number of requirements for this plan (draft condition 33). The Proponent has no concerns with this draft condition of the permit and does not believe it requires alteration.

Table 4 – Comment on representation from Glenorchy Council

ID	Matter Raised	Proponents Response
GC1	Council is keen to see the Tasmanian Government require all contractors and subcontractors to engage with the Glenorchy Jobs Hub and to mandate the percentage of local people that must be employed through this project. This will ensure the benefits of the projects flow to Glenorchy residents.	<p>The Proponent notes that the contractor selected for this project, MCD, has already been subject to the State Government's 'buy local' policy requirements and Economic and Social Benefits criteria as part of the procurement process.</p> <p>Any further changes or requirements imposed would not be possible, however the Development Assessment Panel can be assured that a comprehensive plan to benefit Tasmanian businesses forms part of their contractual requirements.</p> <p>Additionally, the Contractor and its sub-contractors must comply with the Tasmanian Government Building and Construction Training Policy.</p> <p>Finally, in any case this should not be a condition applied under a planning permit.</p>
GC2	It is requested that the final design plans (draft condition 5) be modified to include a requirement to show the rail corridor and ensure that the works do not compromise future opportunities for rail use.	As the Proponent has already stated that the development will not impede future use of the corridor, we accept that a plan can be provided to indicate this.
GC3	The Bridgewater Bridge provides the entrance to Greater Hobart from the North. Consideration should be given to installing public art and infrastructure that clearly identifies this as the gateway to Greater Hobart.	While the Proponent is considering the inclusion of public art, the provision of art should not be a condition applied under a planning permit.
GC4	Asset ownership (i.e. council or State Government) and maintenance responsibilities (i.e. shared or not shared) must be clearly defined and form part of the endorsed documentation.	<p>The Proponent agrees that ongoing asset ownership and maintenance boundaries are important to determine and has no objection to defining project ownership and management arrangements of the road and trail network on a plan to the satisfaction of Council and the Crown prior to Project completion.</p> <p>It is recommended that these are not finalised at the completion of design but instead, no later than six months prior to the completion of construction of the relevant section, to take into account changes that may occur during the construction program. Guidance for asset ownership and maintenance responsibilities should be taken from the <i>Roads and Jetties Act 1935</i>.</p>

ID	Matter Raised	Proponents Response
GC5	Any new or modified assets that the Department of State Growth (DSG) propose to hand over to Council, will be required to be designed and constructed to Council's satisfaction, and prior to the approval of the design, Council will need DSG to enter into a maintenance agreement, which outlines the asset ownership and maintenance responsibility.	<p>The Proponent acknowledges that new or modified assets that will be handed over to Council should be designed and constructed in accordance with Council requirements.</p> <p>As noted above, the Proponent agrees that clarity regarding ownership and maintenance responsibilities is important and has no objection to defining project ownership and management arrangements of the road and trail network on a plan to the satisfaction of Council and the Crown prior to Project completion.</p>
GC6	We would expect DSG to fund or co-fund the upgrades to existing infrastructure on local roads, including roads, lighting footpaths, stormwater and anything else if needed.	<p>The Proponent notes that any works within the scope of the project will be funded by the Project, be they works on local roads or state roads. Further, any works outside the project scope required by Council, including any additional upgrades to existing Council infrastructure, will be at Councils' cost.</p> <p>We also note that the wording of this comment is very broad, with respect to funding 'anything else if needed'.</p>
GC7	Safety in Design analysis needs to be undertaken to ensure assets can be maintained appropriately.	The Proponent notes this is an included aspect of the design process.
GC8	The maintenance responsibilities of the public open space need to be confirmed and an agreement reached between DSG and Council on what elements are to be maintained by each party.	The Proponent does not object to this statement. The Proponent advises that it intends to review and rationalise the areas of the Project Land that are not to be used for road corridors in consultation with councils to determine the ownership and maintenance responsibilities of the relevant land.
GC9	The detailed design will need to detail what stormwater infrastructure needs to be upgraded. It is also requested that stormwater assets that are to be handed over to Council at the end of the project are highlighted in the detailed design.	The Proponent notes this is an included aspect of the design process.
GC10	A condition requiring a maintenance plan to be provided for the Water Sensitive Urban Design elements is requested.	The Proponent has no objections to this statement, noting that to allow for changes during the construction program, this maintenance plan should be required to be provided to relevant Councils no later than six months prior to construction completion.
GC11	Draft condition 5 (b) (c) should reference and / or date the relevant 'previous road safety audit reports' to make the condition certain.	The Proponent notes and accepts this comment.

ID	Matter Raised	Proponents Response
GC12	<p>The TIA has examined the reference design in detail and not the chosen design which differs on several elements.</p> <p>It is therefore requested that the chosen design is assessed in response to the above matters.</p>	<p>The Proponent notes that a revised TIA was prepared at the request of the Development Assessment Panel, and was provided on 17 December 2021. This TIA included specific assessment of the Chosen Design.</p>
GC13	<p>Council officers support the conditions and restrictions expressed in clause 2.3, specifically:</p> <ul style="list-style-type: none"> - Draft conditions 4 and 5 requiring modification to the project design, the effect of which will ensure no development or works associated with the project will take place on land corresponding to Folio of Register 156256/20 (being the Title corresponding to locally listed heritage place GLE-C6.1.181, 'Cypress Gove' 37 Black Snake Road, Granton). - Draft condition 27 that further specifies that there is to be no demolition of buildings at 37 Black Snake Road. - Draft condition 61 in-so-far as it applies to those Historic Heritage Places located within the boundary of the City of Glenorchy local government area and the co-operative and consistent approach to publicly accessible interpretation involving all three local government areas and relevant Stage Government stakeholders. 	<p>The Proponent provided a detailed response to these conditions in its representation. In summary, road works on 37 Black Snake Road are necessary in association with the construction of the new bridge. The conditions are impracticable and cannot be accommodated without severe impact on the Project. 37 Black Snake Road has long been identified as necessary for the construction of the new Bridgewater bridge. The Department of State Growth acquired the land for this purpose and the existing and previous Glenorchy planning schemes anticipate that there will be demolition of heritage elements and roadworks associated with the new bridge on this site.</p> <p>A Heritage Impact Assessment including mitigation measures for 37 Black Snake Road has been prepared by Purcell on behalf of the Proponent to address the requirements of the relevant Assessment Criteria 4.11.</p>

Table 5 – Comment on representation from Derwent Valley Council

ID	Matter Raised	Proponents Response
DVC1	<p>Council would like to discuss how the shared pathway commencing prior to Rusts Road will require additional widening to allow for improved site distance and entry onto the Lyell Hwy.</p> <p>Residents' concerns regarding the site distance at this section of road has been noted at recent community forums.</p> <p>The sealing treatment of the entrance to Rusts Road should be to a minimum of LGAT Municipal Standard length into the Road casement.</p>	<p>The Proponent is not entirely sure of the query being put forward. However, the Proponent notes that it welcomes conversations with councils and residents regarding design details of elements such as shared pathways. Such matters should not be included as permit conditions as they cannot be committed to at this stage.</p>
DVC2	<p>The intersection of Rusts Road/Lyell Hwy has not been considered within the Traffic Impact Statement.</p> <p>While the traffic movement within this road is low, the entry and exit from the Lyell Highway is part of the study area.</p>	<p>The Proponent acknowledges that the intersection of Rusts Road / Lyell Hwy has not been discussed within the Traffic Impact Assessment. Traffic movement within this road is low, and movements into and out of Rusts Road have been considered in the proposed design.</p>
DVC3	<p>The MPIS has not identified or discussed the impact of changes to access to and from Rusts Road, Granton, as it appears that only left-hand turns will now be feasible to and from Rusts Road;</p>	<p>Whilst only left-hand turns will be feasible to and from Rusts Road, a P-turn has been provided in the design that allows for other movements. This is consistent with treatments elsewhere on the Midland Highway.</p>
DVC4	<p>Removal of existing roundabout at the Brooker Hwy/ Lyell Hwy/ Midland Hwy junction. This currently facilitates access to the parking area and public toilets.</p> <p>What is the plan for this area? Car park currently facilitates car sharing for Hobart commute. Noting the park and ride facilities considered at Forest Road.</p>	<p>The existing roundabout does not facilitate access to the parking area, playground and public toilets at the southern end of the existing causeway. The access to this area is via Forest Road and will be continued to be accessed via Forest Road in the proposed design.</p> <p>The ongoing use of this area is beyond the scope of this project.</p>
DVC5	<p>How peak traffic flows will be managed during construction?</p>	<p>The Proponent notes that an assessment of the various stages of the project has been considered and will be managed through measures to be outlined in the Traffic Management Plan.</p>
DVC6	<p>Current bus stops on Lyell highway north of roundabout require pedestrians to cross the Highway. Will these be relocated? How? Where?</p>	<p>Impacts on existing bus stops are to be minimised, with each of the existing bus stops needing to be relocated as part of the project to be replaced with bus stops in the most suitable alternative locations without significantly reducing existing pedestrian catchments. Consideration will also be given to the bus stop locations being able to be accessed safely. The specific locations of replacement bus stops</p>

ID	Matter Raised	Proponents Response
		should not be a planning permit condition as they will be determined through further design work and consultation with relevant stakeholders.
DVC7	Section 4.6 Pedestrian and Cyclist Impacts states that The Project will encourage cycling, walking and the use of public transport in accordance with the requirements of the Assessment Criteria. How will it encourage the use of Public Transport?	The Project will improve travel times and travel time reliability for users of public transport. The Project will also improve active transport infrastructure in the area, which in turn, would be expected to encourage the use of public transport.
DVC8	Public transport impacts – improvements only consider improved travel times. Where are the considerations to innovation opportunities e.g. park and ride, encouraging use of public transport?	<p>The consideration of park and ride facilities and innovative opportunities are outside the scope of the Project.</p> <p>The Proponent acknowledges that the Project may provide opportunities for local councils to further such projects and welcomes further discussion of these matters outside of the planning process.</p>
DVC9	Only one existing MetroTas bus stop is identified as being retained; and It is unclear what provision is made for pick up / drop off of public buses and coach services.	Impacts on existing bus stops are to be minimised, with each of the existing bus stops needing to be relocated as part of the project to be replaced with bus stops in the most suitable alternative locations without significantly reducing existing pedestrian catchments. The specific locations of replacement bus stops should not be a planning permit condition as they will be determined through further design work and consultation with relevant stakeholders.

Table 6 – Comment on representation from Department of Natural Resources and Environment

ID	Matter Raised	Proponents Response
NRE1	Amendment to Condition 62	<p>The Proponent has no objection to the suggested amendments.</p> <p>This Representation does not alter or nullify the matters raised in the Proponent's own Representation on this condition.</p>
NRE2	Amendment to Condition 63	<p>The Proponent has no objection to the suggested amendments.</p> <p>This Representation does not alter or nullify the matters raised in the Proponent's own Representation on this condition.</p>
NRE3	Amendment to Condition 64	<p>The Proponent has no objection to the suggested amendments.</p> <p>This Representation does not alter or nullify the matters raised in the Proponent's own Representation on this condition.</p>

Table 7 – Comment on representation from State Emergency Service

ID	Matter Raised	Proponents Response
SES1	The reports do not identify emergency management arrangements to manage a flood event that might occur during construction. SES recommends that the proponent prepare flood emergency management arrangements for use during the construction stages of the project.	The Proponent has no objection to this proposal and notes that this can be included in the Construction Management Plan to be prepared.

Table 8 – Comment on representation from Tasmanian Active Living Coalition

ID	Matter Raised	Proponents Response
TAL1	Clause 4.2.1 of the MPIS outlines how the development encourages cycling, walking and public transport, however, does not explicitly acknowledge the connection between the new bridge and health and wellbeing outcomes.	The Proponent agrees that health and wellbeing outcomes are an inherent benefit of the provision of better infrastructure for cycling, walking and public transport.
TAL2	The TALC would like to see reference to data on the current walkability/cyclability and projected demand in relation to the three LGAs to highlight gaps and opportunities in these communities. The TALC recognises the opportunity that the new Bridge presents to improve active living and health outcomes within these LGAs.	<p>The Proponent is not aware of any existing data that would be suitable for this purpose and has not been required to obtain such data in the submission of the MPIS.</p> <p>Nonetheless, we recognise that the creation of this infrastructure will create opportunities for each of the Councils to explore with regard to active living. The Project will improve walkability both across the River Derwent and at both adjacent</p>

ID	Matter Raised	Proponents Response
		shores, with the creation of the separated, shared path across the river and new footpaths at the locations of the new interchanges.
TAL3	<p>TALC recommends the application of active living principles in relation to planning including:</p> <ul style="list-style-type: none"> • Shared walking and cycleways connecting surrounding suburbs to improve recreation opportunities and connections (identify key linkages); • Quality and treatment of pedestrian and cycle ways including shade, water, green infrastructure, noise barriers and rest points to encourage use and connection for those that re generally less active in their travel choices; and • 'Destinations' on either side of the bridge to encourage active travel and activity (such as public open space activated with various activities). 	<p>The Proponent has submitted information on existing and future footpaths and shared paths within the MPIS.</p> <p>The Project will allow for the provision of a foreshore trail beneath the New Bridgewater Bridge and a key component of the project is the provision of a safe, separated shared path across the river where no such path currently exists.</p> <p>The Proponent welcomes the development of destinations on either side of the bridge, but notes this is outside the scope of the Project. The Proponent has been in discussion with groups including local councils and the Derwent Estuary Program in regard to activation opportunities that the new infrastructure may present and such matters will continue to be discussed outside of the planning process.</p>

Attachments

Attachment A – Summary of Boat Ramp Usage



To: Kevin Bourne

Cc: James Burbury, Andrew Murray

Date: 26th February 2021

Project: C3153 Bridgewater Bridge Scoping and Investigations

Job No. 2220-3153

From: Bryce Taplin

Subject: Summary of Usage at the Bridgewater Boat Ramp

Dear Kevin,

Please see below a summary of the usage of the Bridgewater Boat Ramp, located adjacent to the Bridgewater Bridge.

1. Introduction

The construction of the New Bridgewater Bridge will require a range of in-water construction techniques to facilitate construction of the sub-structure of the bridge over the River Derwent.

During scoping of the project, it was identified that access to the water will likely be a key requirement for the construction contractor and thus the Project Land was defined to include the existing Bridgewater Boat Ramp (owned by Brighton Council) as a potential interface between the land and water.

It is expected that the ramp would need to be adapted to suit the requirements for large equipment access and materials handling.

The usage of this ramp for construction access throughout the construction period would obviously restrict public usage of the ramp. Burbury Consulting were engaged to look at two aspects: the first being an alternative ramp location (refer Memo Temporary Bridgewater Boat Ramp Concept Design, 2020-3153-V23, 15 December 2020) and the second being to characterise the usage of the existing boat ramp.

In regard to the usage of the existing boat ramp, the intent was to understand the types and frequency of usage of the ramp to aid in decision making regarding the establishment of a new site.

It was noted through discussion with MAST that the existing ramp has not had any significant investment in recent years and that there was an additional Brighton Council owned boat ramp located at Old Beach, 5km south of the Bridgewater Boat Ramp.

Burbury Consulting engaged Coverall Security to install a CCTV surveillance site within the existing compound of the bridge maintenance contractor, including installation of a pole to mount the equipment.

1.1 Details of the Installation

The installation includes a pole with a lockable cabin mounted for storage of equipment that is located within the maintenance compound to the east of the northern bridge abutment.

Within the cabinet is a network video recorder (NVR) that stores footage recorded from two cameras located at the top of the pole. Recordings are kept only until the internal hard drives are full, and then the oldest data is overwritten. The NVR allows remote access to the footage for review and download. The cabinet also includes network and power gear to connect the site to the cloud, including a 4G modem.

At the top of the pole are two cameras, a 6MP Dome Camera (for counting objects) and a 4MP PTZ camera.



1.2 Limitations of the Installation

As with any camera system, object detection has limitations in terms of its accuracy. General objects need to be well separated for the counter to work accurately. If objects overlap, they will be combined into a single object, skewing the results.

Shadows, reflections, moving background like vegetation and light changes can decrease performance, as can the weather conditions.

2. Method of Analysis

To characterise the usage of the boat ramp, jetty and surrounding area a series of tasks were undertaken.

Firstly, an analysis of the 'counts' automatically generated by the camera placed on the pole on site was completed. This data shows a high-level overview of the usage in two categories, 'people' and 'vehicles'.

The data provides an indication only as it is impacted by a variety of factors, including:

- Conditions (light, weather) impacting on the quality of the image and thus the ability for the algorithm to detect an object;
- Early mornings – because of the location, sunrise impacts the quality of the image in the morning;
- Bugs during the evening trigger the counter with the InfraRed (IR) spotlight and sensor active (increases visibility);
- The fact that the system cannot identify 'unique' objects – once an object is detected, it can be re-detected again meaning a single person or vehicle could be counted multiple times;
- The broadness of the study area and the inability to differentiate between a vehicle parking on the ramp versus one using the ramp for its intended purpose.

Having said the above, the data provides an indication for trend and provides indication for further review (e.g. areas with higher than normal usage can be manually analysed).

Following this data capture and analysis, a manual review of recorded imagery across the period recorded was undertaken to generate the general observations outlined in Section 0.

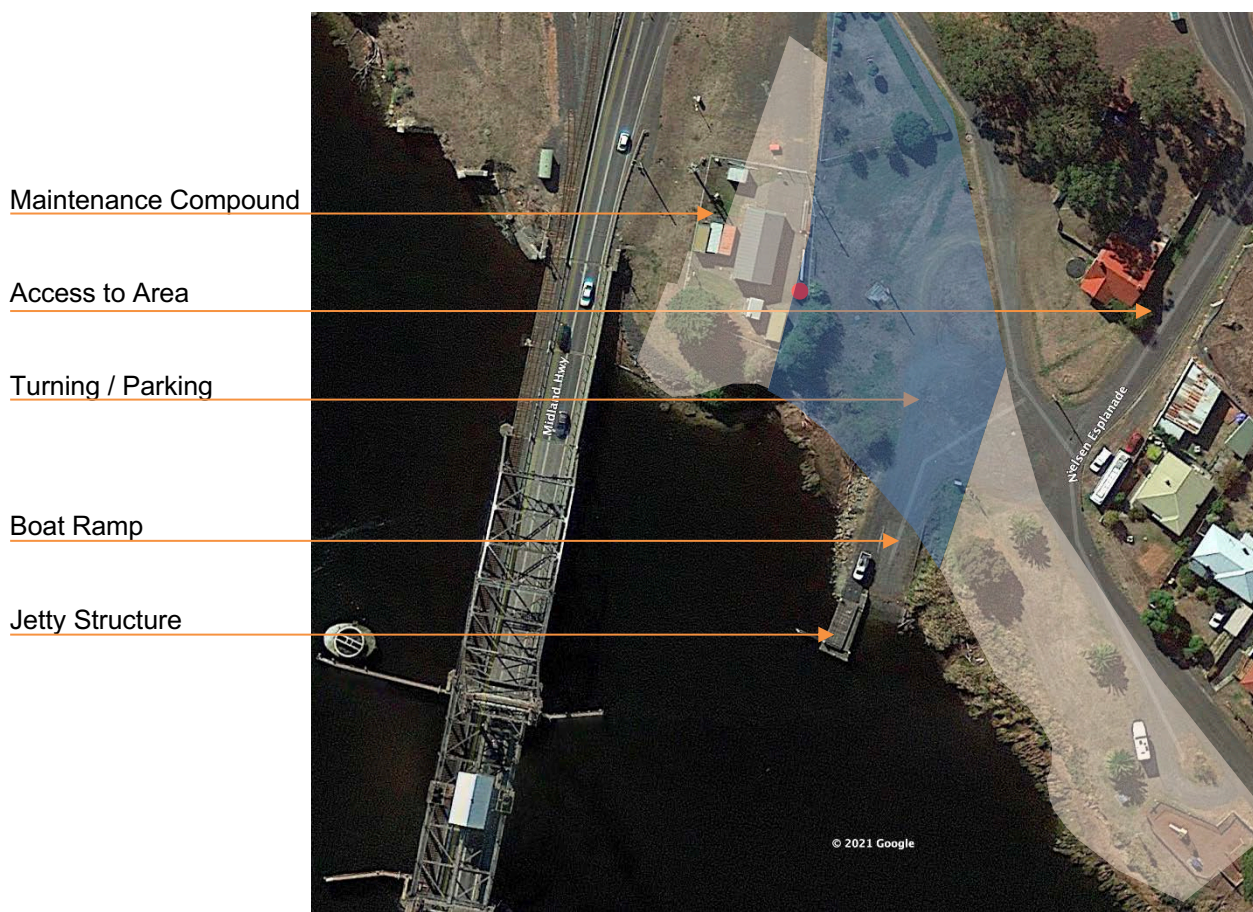
Following this, a detailed analysis was undertaken for the period 23 January to 14 February 21. This involved scanning the video footage in 6 to 9 minute intervals between the period ~6.30am to ~9pm (when light was favourable) to determine the accurate usage of the ramp.

A 6 to 9 minute interval was used as it was determined that most activity of interest occurred on the ramp in 10-15min blocks of time, meaning the likelihood of missing an activity was reduced using this interval while minimising the amount of time required to review the footage manually.

3. Observations

3.1 Description of the Area

The Bridgewater Boat Ramp is located downstream of the Bridgewater Bridge and is located immediately adjacent to the navigation channel and the lift span of the bridge, as identified below.



3.1.1 Location

The site in question is 3 Neilson Esplanade and is owned by the Brighton Council (blue shading). The boat ramp itself is technically located within the Nature Conservation Reserve as opposed to the Council owned land.

The waters adjacent (both upstream and downstream) are located in the River Derwent Marine Conservation Area which is administered by the Parks and Wildlife Service.

On land, the sites immediately to the east and west of the boat ramp are both Crown Land.

Back from the shore, the majority of the land is private freehold.



3.1.2 Access

Access to the area in question is provided via Nielson Esplanade, which is further access from Gunn St. Nielson Esplanade provides vehicular access to:

- The maintenance compound;
- Bridgewater Memorial Reserve;
- Four houses directly off Neilson Esplanade;
- Nielson Esplanade Park;
- A large block of undeveloped land; and
- 16 Neilson Esplanade.

As with most public land like this, there is no delineation between adjacent parcels and uses, so the Council and Crown own land is used interchangeable across this precinct.

3.1.3 Turning and Parking

A big part of the area in question is actually a large, informal parking and turning area.

There are no identified parking areas (via line markings) nor are there designated trailer parking areas that exist at many other boat ramps to control traffic around such sites.

Tyre marks on site indicate a variety of turning movements occur in the area to facilitate different uses.

3.1.4 Boat Ramp

The ramp is a single lane ramp with a small adjacent timber jetty.

The ramp provides all tide access for boat launching and retrieving via a structure made of permeable concrete segmented pavers, interspersed with gravel (and weeds).

The ramp appears not to have had any significant investment in capital or maintenance for some time.

3.1.5 Jetty Structure

The jetty structure adjacent to the ramp is of a timber construction on timber piles, with some steel sub-structure components visible.

The jetty consists of multiple levels but would appear to be too tall for most small craft using the jetty, particularly at lower tides.

As with the ramp, the jetty appears not to have had any significant investment in capital or maintenance for some time.

There are signs located near the parking/entrance to the jetty and at the jetty providing advice/warnings to water users.



3.2 General Usage Observations

General observations of the use of the site are:

- The site is a large public open space and services a variety of uses for the public. It is difficult to differentiate between uses across the various sites, given there is no formal delineation between them;
- Arguably, the majority of usage of the space is simply enjoying the public open space. This is presumably driven by the proximity to the water and the adjacent view field provided by the River Derwent and the existing Bridgewater Bridge.
- A large collection of seagulls are observed frequently at the site. This would presumably be driven by users of the ramp eating and disposing of food scraps/feeding the birds;
- Vehicles and Pedestrians would be observed at this location for the following uses:
 - o Parking to enjoy the view/location (while on a break, to eat, socialise, fill in time etc);
 - o Parking to use the public open space (e.g. the adjacent Park);
 - o To walk / exercise;
 - o To come to the jetty to fish;
 - o To utilise the boat ramp to launch a boat (trailer mounted);
 - o To utilise the boat ramp for access to the water (to launch a paddle board etc);

Given the relatively secluded location of the area, other uses have been observed/are expected including:

- Illegal dumping at the boat ramp; and
- Loitering and associated activities.

Generally, the majority of use observed is from dawn to dusk (roughly 7am to 8pm), however some activity has been observed later in the day presumably as a result of longer light during summer beyond sunset.

3.3 Specific Observations

The site has been recording data since mid-November 2020.

The initial month(s) of data in 2020 were used to calibrate the cameras and recording/analytical equipment.

3.3.1 Whole of Data Observations

Broad observations are provided below from 17 November 2020 to 22 February 2021.

A histogram of usage, by the hour, is provided, below. This graph indicates the period of time where the counters were triggered and show, as expected, that usage in daylight hours, between ~6am to ~8pm being the window with the higher usage being lunch time (11am to 1pm) with peaks at 3pm and 6pm for pedestrians.

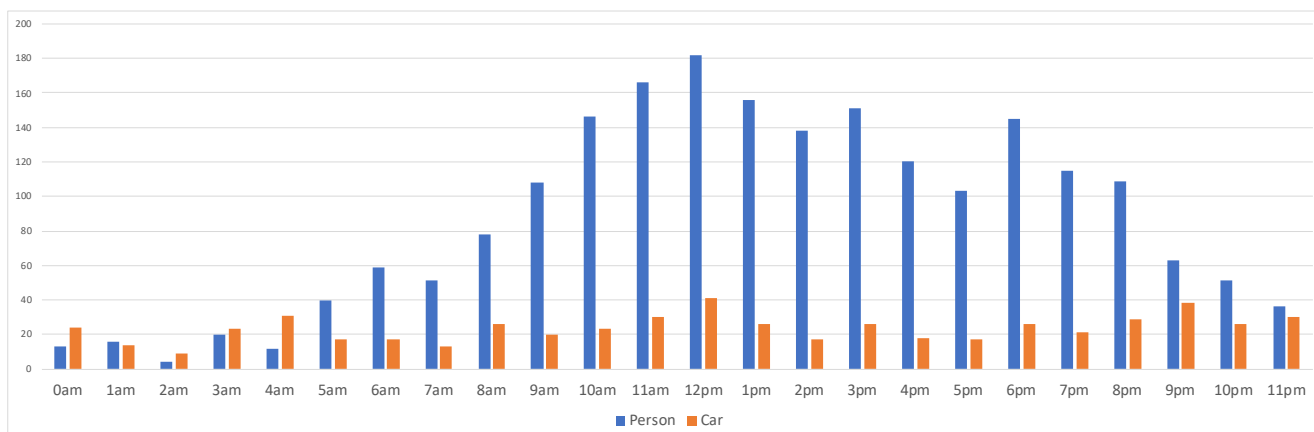


Figure 1 Bridgewater Boat Ramp Usage By Hour for 17 November 2020 to 22 February 2021

The next graph, below, shows the usage by day of the week.

Interestingly, the usage observed peaks on a Sunday for pedestrians and is generally consistent throughout the week.

Vehicles are lower on a weekend than mid-week, however from observations for a specific timeframe, it is expected that the make-up of those vehicles changes from more parked vehicles during the week to less parked vehicles and more using the ramp during the weekend.

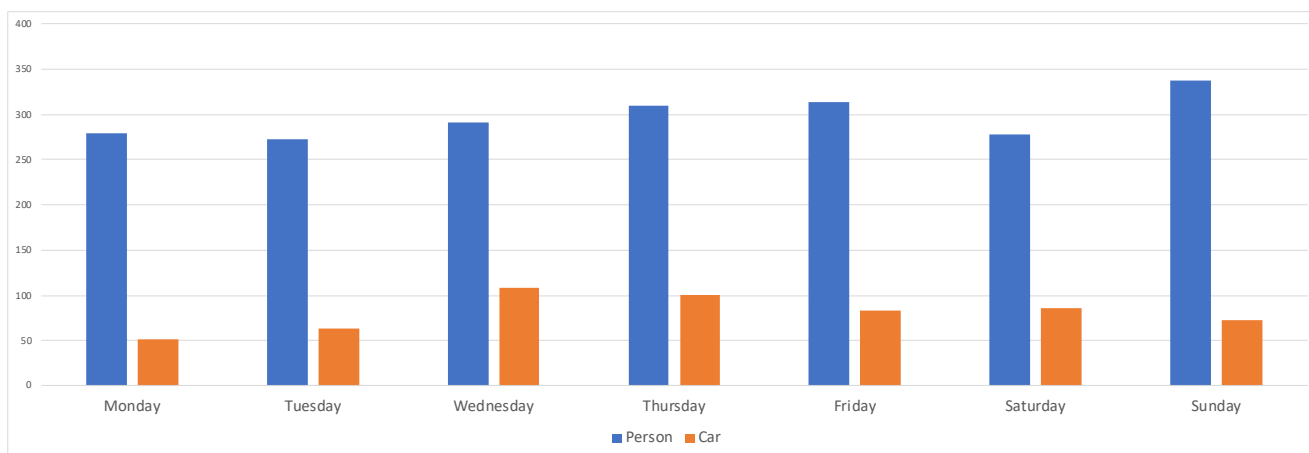


Figure 2 Bridgewater Boat Ramp Usage By Day for 17 November 2020 to 22 February 2021

3.3.2 January and February 2021 Observations

The period 19 January 2021 to 21 February 2021 was used to directly observe the usage of the boat ramp as described in Section 2.

The graph, below, shows the usage between the 19th of January 2021 to the 21 February 2021, by day, with the total usage observed across that day indicated.

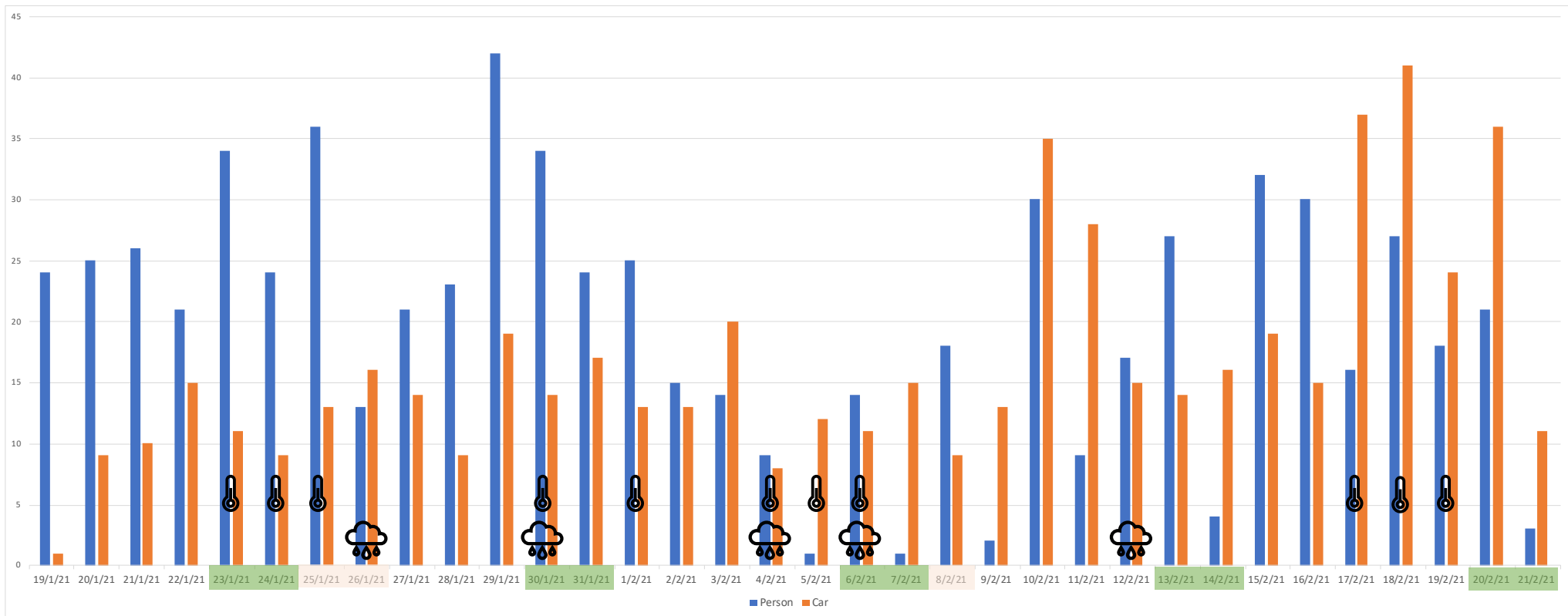


Figure 3 Bridgewater Boat Ramp Usage for 19 January to 20 February 2021

The graph, above, shows a range of usage levels across the month analysed, with some spikes correlated with long weekends (weekends shown in green, public holidays or long weekends in pink).

Rain (>1mm) was observed¹ in Hobart on the days that are marked, potentially another correlation with lower usage of the ramp than might be anticipated.

¹ From Bureau of Meteorology, Accessed 26th February 2021

http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=136&p_display_type=dailyDataFile&p_stn_num=094029&p_startYear=



Observed² maximum temperatures above 25°C are also marked although it is not clear if a direct correlation is apparent.

Further, the table, below, depicts the observed activity to occur specifically at the boat ramp between 23 January 2021 and 14 February 2021.

Date	Day	Observations at the Boat Ramp
23/1/20	Saturday	Boat launch – 11.46am and 11.54am Boat retrieval – 1.55pm
24/1/20	Sunday	Boat launch – 10.24am Boat retrieval – 1.12pm
25/1/20	Monday	Boat launch – 1.23pm Boat retrieval – N/A Illegal dumping at the boat ramp – 3.08pm
26/1/20	Tuesday	Jet ski retrieval – 3.00pm Windsurfers / paddle boarders – 8.00pm
27/1/20	Wednesday	Nil
28/1/20	Thursday	Nil
29/1/20	Friday	Nil
30/1/20	Saturday	Boat launch – 6.51am and 7.21am Boat retrieval – 5.40pm
31/1/20	Sunday	Boat launch – 3.17pm Boat retrieval – 3.30pm and 3.34pm Jet ski launch – 9.15am Jet ski retrieval – 10.30am and 2.15pm Fishing – 1.40pm
1/2/20	Monday	Nil
2/2/20	Tuesday	Fishing – 10.13am
3/2/20	Wednesday	Boat launch – 3.27pm Boat retrieval – 3.48pm
4/2/20	Thursday	Boat launch – 3.32pm Boat retrieval – 3.48pm Council clean-up ramp and bins – 12.20pm
5/2/20	Friday	Boat launch – 5.58pm Boat retrieval – 7.40pm
6/2/20	Saturday	Nil
7/2/20	Sunday	Boat launch – 1.42pm Boat retrieval – 2.39pm
8/2/20	Monday	Boat launch – 1.21pm and 1.29pm Boat retrieval – 4.24pm and 4.40pm Fishing – 10.43am
9/2/20	Tuesday	Nil
10/2/20	Wednesday	Nil
11/2/20	Thursday	Boat launch – 1.10pm Boat retrieval – 2.43pm

² From Bureau of Meteorology, Accessed 26th February 2021

http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=122&p_display_type=dailyDataFile&p_stn_num=094029&p_startYear=



Date	Day	Observations at the Boat Ramp
12/2/20	Friday	Nil
13/2/20	Saturday	Kayakers – 4.02pm Fishing – 5.04pm
14/2/20	Sunday	Boat launch – 1.08pm Boat retrieval – 3.11pm and 3.20pm Fishing – 8.08am

4. Conclusions

The following conclusions have been drawn from the analysis³:

- There is consistent usage of the Bridgewater Boat Ramp and the adjacent area;
- There is generally daily use of the boat ramp, but typically for a single launch and deployment only;
- Other uses of the ramp include launching non-powered watercraft (e.g. paddled boards, kayaks or windsurfers);
- The surrounding area would make up the majority of people and cars detected by the counters installed, with a variety of uses observed that do not relate to the boat ramp itself;
- Usage of the ramp appears to be higher on the weekend for boat launches, but they are observed throughout the week. Sunday appears to be the most popular day for activity at the ramp;
- Usage of the area during the day as a place to park a vehicle appears to be higher during the week than on the weekend;
- There do not appear to be any regular, organised events of large groups using the boat ramp or the immediate surrounds (e.g. for fitness classes);
- There do appear to be regular individual users of the boat ramp, presumably due to the proximity of the ramp to their place of residence.

If more detailed usage data of the ramp itself were required, or longer term trends through different seasons, a further step to take would be to install a physical counter on the ramp (pneumatic style to count wheels passing), however it is not clear what additional data that would provide other than longer-term monitoring and more data specific to the ramp itself.

The video system will remain on site and data will be collected until it is no longer required or the data plan expires (whichever occurs first). The video cameras can be used for monitoring of the site pre and during construction, if desired, including the development of a time-lapse video. The site may need to be dismantled/moved if it conflicts with the contractors compound or works areas.

We welcome any further comments or questions in relation to this memo.

Kind Regards,

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³ Based on the footage reviewed for the purpose of preparing this memo.

Appendix 1 – Sample Imagery



Figure 4 Typical Image Indicating Minimal Usage of the Area



Figure 5 Typical Image Depicting Usage Adjacent to the Boat Ramp



Figure 6 Typical Image Depicting Cars Parked and Drawing Seagulls to the Location



Figure 7 Typical Image Depicting Rain Impacting Image Quality



Figure 8 Typical Image Depicting a Car With Trailer Using the Boat Ramp



Figure 9 Typical Image Depicting Usage Adjacent to the Boat Ramp



Figure 10 Image Depicting a Variety of Vehicles and Users But No Boat Ramp Users



Figure 11 Typical Image Depicting Adjacent Usage