20 December 2024

Darren Brewer
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Level 13, 1 William Street
BRISBANE QLD 4000

To: darren.brewer@dsdilgp.qld.gov.au
cc: brendan.mitchell@dsdilgp.qld.gov.au

Dear Darren,

Re: Thomson River Weir Raising Project – RIDA Further Requirement Notice Response

Background

On 1 February 2024, an application for a Regional Interests Development Approval (RIDA) was lodged to the Department Housing, Local Government, Planning and Public Works (DHLGPPW) (now the Department of State Development, Infrastructure and Planning [DSDIP]) by Precinct Urban Planning (PUP), on behalf of the Longreach Regional Council (LRC), for the Thomson River Weir Raising Project (the Project).

On 15 February 2024, Requirement Notice RPI24/030 was received from the DHLGPPW. A response to the Requirement Notice was provided on 4 July 2024.

In October 2024, the DHLGPPW issued a Further Requirement Notice for the Project (Attachment A). This Further Requirement Notice acknowledges that while the original RIDA application was made on the understanding that the Project constituted a regulated activity under the RPI Act (water storage dam under section 17[1]), a regulated activity is one that must *also* be likely to result in widespread and irreversible impacts on the area of regional interest. The area of regional interest for the Project is the Channel Country Strategic Environmental Area (SEA).

Given the refined understanding of what constitutes a regulated activity under the RPI Act, in addition to responding to the items of the Further Requirement Notice, this letter also seeks to describe why it is considered the Project will not result in widespread or irreversible impacts on the Channel Country SEA. This letter provides additional information and analysis to what has previously been provided to the DSDIP as part of the original RIDA application and response to Requirement Notice, in that this previous information should be considered in parallel as required.

DSDIP provided further correspondence on 2 December (Attachment B) requesting the following be provided in a response letter to the Further Requirement Notice:

- Description of why it is considered the Project will not result in widespread and irreversible impacts on the Channel Country SEA.

- Consideration of the three issues raised in the Further Requirement Notice,
- Further information to address issues raised in submissions received during the public notice period.

Based on the above, this letter is structured as follows:

- Section 1 – describes why it is considered the Project will not result in widespread and irreversible impacts.
- Section 2 – provides responses in consideration of the three issues raised in the Further Requirement Notice (Attachment A).
- Section 3 – provides further information to address issues raised in submissions (Attachment B).

1. No widespread and irreversible impacts

This assessment of whether the Project would have widespread and irreversible impacts on the Channel Country SEA is based around three main points:

- The Project full supply level (FSL) will be similar in extent to the existing FSL of the Town Storage, and primarily contained the main channel of the Thomson River;
- Potential direct and indirect impacts to riparian vegetation are not considered to be significant;
- The scale of the existing Town Storage and Project impacts relative to the broader Thomson River system are insignificant.

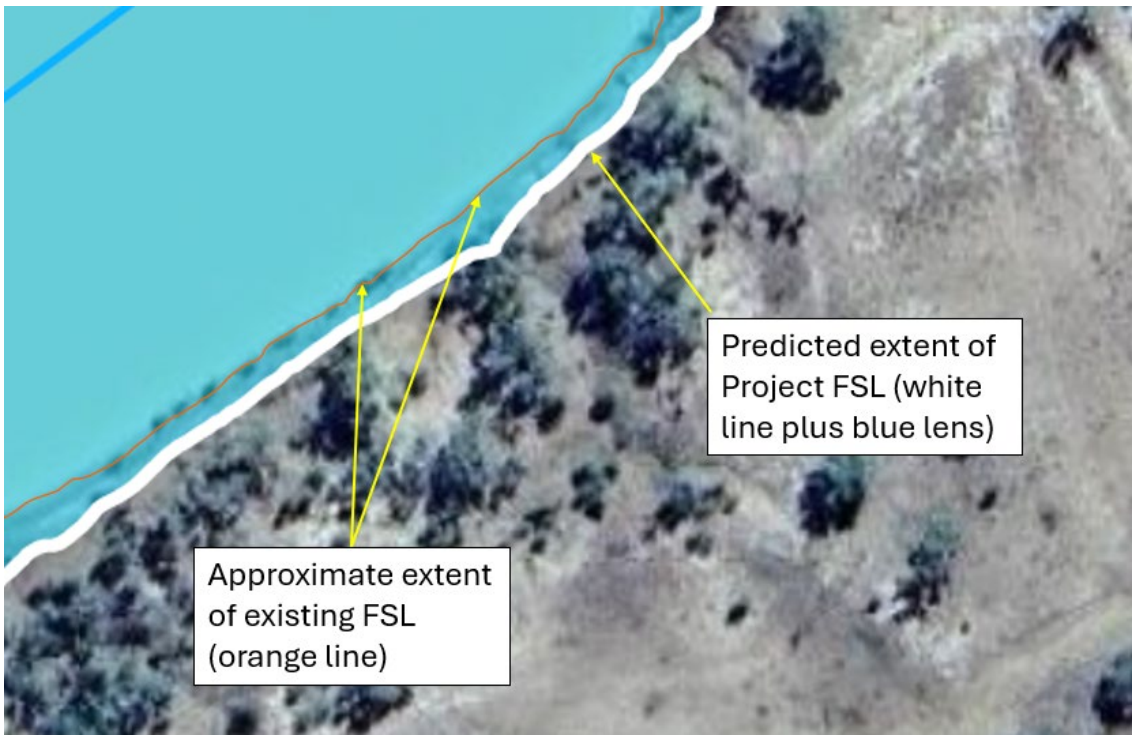
Further, this letter discusses the potential environmental benefits of the Project, such as increased access to groundwater for vegetation adjacent the Town Storage when it is at full capacity, and increased access to aquatic sheltering habitat within the Project FSL.

Project full supply level

Attachment C includes a map set showing, at a finer scale than presented in the original RIDA application, the Project FSL. The existing FSL of the Town Storage extends from the existing weirs, 10 km upstream to the Fairmont Weir, and is visible in this figure in the aerial imagery base (beneath the transparent blue lens of the Project FSL). Attachment C shows clearly that the Project FSL will be similar in extent to the existing FSL of the Town Storage, and primarily contained the main channel of the Thomson River, as per existing Town Storage conditions. For clarity, the Project FSL would also be constrained to the 10 km stretch between the weirs and the Fairmont Weir, and there would not be an increase to the upstream extent of the water storage in the main channel. For absolute clarity, the below image has been extracted from Attachment C to illustrate the existing FSL and Project FSL, and the minor increase in the extent of inundation.

The only significant change in the lateral extent of the FSL as a result of the Project will be in the anabranch to the north of the main channel (shown in Map 4 of Attachment C), where it is expected some smaller reaches of this anabranch will hold water when the storage is at full capacity. It is noted that this Anabranch is part of the Thomson River floodplain, and is mapped as a 'watercourse' under the *Water Act 2000,* and is an existing riparian area.

It is considered that in any interpretation of the Project FSL, when compared to the existing FSL, represents only a very minor, incremental increase in the inundation footprint associated with the weirs.



Note the Project FSL was interpolated using the available 2011 LiDAR data from the QSpatial database (1 m resolution) to a level of 179.6 metres Australian Height Datum (mAHD). The resolution of the FSL boundary is noted to therefore have some minor anomalies.

Riparian vegetation

The extent of riparian vegetation within the Project FSL is not extensive, with the majority of mature woody vegetation typically located higher up/at the top of the bank, outside of the FSL. Attachment D provides images of typical bank conditions within the Town Storage. As outlined in previous material provided to DSDIP, indirect impacts to riparian vegetation due to periodic increased inundation of roots are not expected to be significant, given the dominant species along the banks of the Town Storage is *Eucalyptus coolabah*, a commonly resilient riparian tree that is tolerant of periods of seasonal inundation and flooding. The existing riparian vegetation adjoining the Town Storage is also subject to existing inundation and raised groundwater levels, and any additional inundation due to the Project will be transient in nature (i.e. only when the storage is at full capacity).

Further, and without the Project, trees that fringe the Thomson River are naturally lost or damaged in any given year as a consequence of flooding and other high flow events. These events, which occur naturally, would not be worsened by the Project, as evidenced in the Flood Impact Study lodged with the RIDA Application.

Direct impacts to riparian vegetation will be due to clearing to facilitate construction of the raised weirs. The total disturbance footprint for the Project is 3.47 hectares of regional ecosystem (a large portion of which is within the existing FSL). Within the broader context of the Thomson River, which is 350 km long and has an extensive flood plain system (approximately 6.5 km wide at the point of the Town Storage), this amount of vegetation clearance is considered very insignificant and would not result in any impacts to the values of the Channel Country SEA.

Benefits

It is expected that the Project would also provide indirect environmental benefits (in addition to providing long term water security to a rural community).

Firstly, *Eucalyptus coolabah* is well known for its association with groundwater (Costelloe, 2016, Gillen 2017)[1]. Root depth of the groundwater-dependent Coolabah is unknown but thought to extend to at least 6 m (Costelloe, 2016), but probably much deeper. Assuming a hydrologic connection between the Town Storage and the surrounding groundwater table, it is expected the Project would periodically increase access to groundwater for coolabah species further from the storage during periods of full supply.

This could improve survivorship of juvenile species, which recruit during flood events (Cottesloe 2016). In the post-establishment phase of their life cycle, they are considered to be less reliant on floods than the other floodplain *Eucalyptus* species, with groundwater becoming increasingly important for growth and maintaining vigour in mature trees (Casanova, 2015)[2].

Another benefit is that given *coolabah* species often have their roots in the water column which provide shelter and habitat for fish, the Project would provide, when the storage is at full capacity, greater access to the root systems of the fringing coolabah fish in the Town Storage.

2 Further Requirement Notice responses

Attachment 1 of the Further Requirement Notice includes an information request comprising three parts. A response to each of these information requests is provided in Table 1 below.

[1] Costelloe J.F., Leeder J., Strang M. (2016) Drivers of the distribution of a dominant riparian tree species (Eucalyptus coolabah) on a dryland river system, Diamantina River, Australia. 11th ISE 2016, Melbourne, Australia
Gillen J.S. (2017) Coolibah (Eucalyptus coolabah Blakely & Jacobs) of the Diamantina and Warburton River systems in north-eastern South Australia. Report to the South Australian Arid Lands Natural Resources Management Board, Fenner School of Environment and Society, Australian National University.

[2] Casanova M.T., (2015) Review of Water Requirements for Key Floodplain Vegetation for the Northern Basin: literature review and expert knowledge assessment.

Table 1 RIDA Further Requirement Notice responses

<table>
<tr><th>DSDIP Information requirement</th><th>Response</th></tr>
<tr><td>1. Issue:
The application was submitted before the Channel Country SEA environmental attributes were amended under the RPI Regulation on 2 August 2024. Section 21(1) of the amended Regulation states that these new attributes apply to undecided applications that were lodged prior to the amendment's start date.
An updated assessment, based on the attributes as of 2 August 2024, is needed. This assessment, and associated mapping, must also reflect the current spatial extent of the Channel Country SEA mapping, as at 22 December 2023, available to view at Areas of regional interest | Planning and at https://qldglobe.information.qld.gov.au/.
Actions:
Provide an assessment of the proposed regulated activity in relation to the Channel Country SEA environmental attributes specified in the RPI Regulation as of 2 August 2024. Additionally, confirm whether the previous assessments included the current spatial extent of the SEA Channel Country mapping dated 22 December 2023. If not, update the application materials to reference the extent of the Channel Country SEA mapping as of 22 December 2023.</td><td>An assessment of the Project against each of the environmental attributes of the Channel Country SEA under the 2 August version of the RPI Regulation have been provided below.
The mapping included in the RIDA application (Precinct Urban Planning, 2024)[3] shows the Channel Country SEA mapping from December 2023.
<table>
<tr><td>(a) the natural hydrologic processes of the area characterised by—
(i) natural, unrestricted flows in and along watercourse channels and the channel network in the area; and</td><td>The Project involves raising the height of five <u>existing weirs</u> and accordingly, the natural flow regime along the Thomson River is already impacted and pre-dated the RPI Act. It is acknowledged that raising the height of the weirs will result in a minor change to the flow regime of the system, due to the increased storage capacity of the Town Storage, and intermittent inundation of more of the SEA area when storage is at full capacity. It is also noted that prior to the construction of the existing weirs, waterhole features were present within the extent of the Town Storage.
The response to issue 2 of the Requirement Notice, letter dated 1 July 2024, provided an analysis of the potential impacts to the flow regime of the Thomson River due to the Project, based on flow data from gauge 003202A. This analysis found that the Project would not have a discernible impact on the number of no-to-low flow days downstream on the Thomson River, which already experiences no-to-low flow 74% of the time.</td></tr>
<tr><td>(ii) overflow from watercourse channels and the channel network onto the flood plains of the area, or the other way; and</td><td>The Project will not impact the ability of water from the Thomson River to overflow from the channel network onto the floodplains, or the other way around. The weirs, as per the existing case, are small features that are orientated laterally to the flow of water down the Thomson River system. The Project would not include any infrastructure of modification of the banks of the Town Storage or wider river system that could potentially impede the movement of water onto the floodplain system, or back into the channels.</td></tr>
<tr><td>(iii) natural flow paths of water across flood plains connecting waterholes, lakes and wetlands in the area; and</td><td>The Project will not impact flow paths of water across the Thomson River floodplain, as the Project will not include any infrastructure outside of the footprint of the raised weirs, which are confined within the main channel of the Thomson River. Activities on the floodplain will be limited to equipment laydown during construction, which will be undertaken during the dry period.</td></tr>
</table></td></tr>
</table>

[3] Precinct Urban Planning (2024) *Regional Interests Development Application Thomson River Weir Project.* Supporting Information, January 2024.

DSDIP Information requirement	Response	
	(iv) groundwater sources, including the Great Artesian Basin and springs, that support waterhole persistence and ecosystems in the area;	As the Project wouldn't involve the extraction or interference with any groundwater sources, no potential groundwater impacts would occur as a result of the Project. As detailed at 1 (Benefits), assuming a hydrological connection between the Town Storage and the surrounding groundwater table, it is expected the Project would periodically increase access to groundwater for coolabah species further from the storage during periods of full supply.
	(b) the natural geomorphic processes of the area characterised by— *(i) natural erosion; and*	The Project involves raising the height of five *existing weirs* and accordingly, the natural erosion, transportation and deposition of sediment within the reach of the Town Storage is already impacted. The Project will not measurably impact on existing geomorphic processes of the wider system, as the Project FSL will primarily remain within the main channel. Further, the larger scale geomorphic processes occur during flood events across the Thomson River floodplain system, with more significant flows resulting in erosion and sedimentation processes down the larger system. The scale of the Town Storge, and the 1 m increase in height due to the Project, is considered insignificant in the context of the wider Thomson River system. Further, the Flood Impact Assessment prepared by Water Technology found that water depth and velocity changes across the Thomson River floodplain in the vicinity of the weirs would not significantly change. It can therefore be deduced the sediment mobilisation and deposition will not be impacted.
	(ii) the transport and deposit of sediment by water throughout the catchments and along the watercourse systems;	
	(c) the functioning riparian processes of the area characterised by native riparian vegetation associated with watercourses, lakes, flood plains and wetlands;	Responses to issues 4 (a), (c), (f) and (h) of the Requirement Notice, letter dated 1 July 2024, provided an analysis of the potential impacts to riparian vegetation due to the Project. In summary, it is expected the Project will not have a significant impact on riparian vegetation communities in vicinity of the Town Storage and associated processes. Section 1 also describes potential benefits to riparian vegetation due to the Project.
	(d) the functioning wildlife corridors of the area characterised by— *(i) natural habitat in the watercourse systems; and* *(ii) permanent waterholes and springs;*	The Project involves raising the height of five *existing weirs* and accordingly, the function of the waterway for fish and wildlife passage is already compromised. Additionally, it is noted that the river flows on a seasonal basis during summer monsoons, with the system resulting in a series of billabongs and waterholes (including the Town Storage) during the dry season, which provide consolidated refuge for various species. On this basis, it is considered that the retention of water within the Town Storage is consistent

DSDIP Information requirement	Response	
		with the existing characteristics of the river, with the Project providing additional storage capacity for this 'artificial' waterhole. The Project has also been designed to incorporate a fish ladder on the Town Weir to facilitate the movement of fish along the Thomson River main channel. This is an additional measure not currently incorporated into the existing weirs and as such is considered to result in an improved outcome for the system in this regard. As outlined in Section 1, a potential benefit of the Project is providing, when the storage is at full capacity, greater access to the root systems of the fringing *coolabah* for fish in the Town Storage, as coolabah species often have their roots in the water column which provide shelter and habitat for fish.
	(e) the natural water quality in the watercourse channels and aquifers and on flood plains in the area characterised by physical, chemical and biological attributes that support and maintain natural aquatic and terrestrial ecosystems;	The environmental assessment undertaken for the Project, presented in NGH (2024)[4] found the Project is unlikely to result in water quality impacts due to the uncontrolled release of contaminants during construction. The Project would not have any potential water quality impacts beyond construction given it represents an increase in the height of existing weirs. Response to issues 5 and 6 of the Requirement Notice, in the letter dated 1 July 2024, also provide additional information regarding water quality not presented in the original RIDA application documents. Project construction will be undertaken in accordance with a detailed Construction Environmental Management Plan (CEMP), to be prepared following detailed design and engagement of a construction contractor. The management measures will be designed to ensure the Project does not result in the worsening of water quality within the Thomson River.
	(f) the beneficial flooding of land that supports flood plain grazing and ecological processes in the area.	The Project will not affect the beneficial flooding processes that occur across the Thomson River floodplain. Specifically, Appendices C and D of the Flood Impact Assessment prepared by Water Technology illustrate the predicted water level and velocity changed due to the Project. These figures show that changes to level and velocity are not expected, with the exception of minor and inconsequential changes in the immediate vicinity of the weirs during more frequent, smaller flood events. The scale of these changes with respect to the wider Thomson River floodplain are insignificant. Accordingly, no impacts to floodplain grazing and ecological processes are expected.

[4] NGH (2024) *Ministerial Infrastructure Designation Proposal Thomson River Weir Raising Project.* Prepared for the Longreach Regional Council.

DSDIP Information requirement	Response
Issue: *The Requirement notice dated 15 February 2024 sought information on the extent of impacts on riparian vegetation due to increased inundation, however, the response indicated it was not possible to precisely determine the number and location of trees.* *In addition, the mapping indicates full supply level inundation but doesn't specify the additional flooding from the proposed one-metre upgrade to the five weirs. More details are required to assess the potential environmental impacts on the area and its riparian vegetation.* *Actions:* *a) Provide mapping at a suitable scale that clearly shows the differences in spatial extent of area affected (additional inundation and less inundation) to result from the one metre weir upgrades, compared to the current situation and spatial extent.*	Attachment C includes a map set showing, at a finer scale than presented in the original RIDA application, the Project FSL. The existing FSL of the Town Storage extends from the existing weirs, 10 km upstream to the Fairmont Weir, and is visible in this figure in the aerial imagery base (beneath the transparent blue lens of the Project FSL). Attachment C shows clearly that the Project FSL will be similar in extent to the existing FSL of the Town Storage, and primarily contained the main channel of the Thomson River, as per existing Town Storage conditions. For clarity, the Project FSL would also be constrained to the 10 km stretch between the weirs and the Fairmont Weir, and there would not be an increase to the upstream extent of the water storage in the main channel.
b) Provide details of the increased or decreased depth of inundation in the mapped areas in a) and period of time of the change in a typical year.	For the footprint of the existing Town Storage FSL, the Project would increase the depth of inundation by 1 m, commensurate with the 1 m raising of the weirs. Queensland Government LiDAR data indicates that the elevation of the Town Storage bank profile between the weirs and the upstream Fairmont Weir is consistent, in that there is limited elevation change between these two points. Therefore, the additional inundation at the upstream extent would be up to 1 m (water storages with a greater grade change, the depth of inundation decreases further upstream from the impoundment structure). The depth of inundation within the area of the Project FSL that is not currently inundated for the Town Storage will vary dependent upon the grade change of the adjacent bank. As shown in the figure set provided as Attachment C, the 'additional area of inundation' as a result of the Project is primarily laterally limited to the main channel, due to the 2-3 m bank height surrounding the Town Storage. Depth of inundation in these 'newly inundated areas' will start at 1 m, and decrease up the bank profile. Attachment D provides images of the bank within the Town Storage. The change in stored water volume is dynamic in nature given the distinct 'wet and dry' rainfall patterns in western Queensland. Attachment E provides water level and discharge measurements from the Thomson River station (003202A), for the period 1 December 2019 to 12 December 2024. The water level profile shows consistent annual patterns, with spikes during the wet season (December to March), with decreases in the water level during the dry season. The Project will provide an increase of 900 ML in the storage capacity of the Town Storage (from 3,300 ML). Assuming a 'dry season' period of 8 months/year where the Town Storage is not receiving any inflow and decreasing, it can be estimated that the 'additional inundation area' associated with the Project would be wet for 1-2 months (or approximately 20% of the time), with the storage level receding to current FSL and lower following this. This is highly

DSDIP Information requirement	Response
	variable and will dependent upon a number of factors year by year, including climate (evaporation and rainfall), water demand, and upstream inputs (i.e. rainfall up-catchment).
c) Quantify in hectares, and map, the spatial extent of mapped areas in b) where existing riparian or other vegetation is not likely to survive the change to inundation.	It is not considered possible to determine with any certainty which, if any, parts of the 'additional inundation area' will result in the likely death of riparian vegetation. The reasons for this were outlined in the letter dated 1 July 2024. Consideration of the stored water level dynamics outlined under b) above is also relevant. It should be noted that the Project is for a relatively minor 1 m raising of existing weirs in western Queensland, with inundation primarily limited to the existing main channel and Town Storage area. The Thomson River system is geomorphically, ecologically and hydrologically different from systems east of the great dividing range, with a substantial (>5 km wide) floodplain in most places, and is subject to seasonal flooding and inundation. As previously noted, coolabah species are tolerant to periodic inundation and flooding (as per existing conditions). This is in contrast to larger dam projects in eastern Queensland that are assessed by the DSDIP, where large areas of land and species typically not subject to seasonal flooding and inundation, are inundated by much greater depths of water on a more permanent basis, with quantifiable and more certain impacts to vegetation. The potential for some riparian vegetation to be affected was acknowledged qualitatively in the original RIDA and MID applications for completeness, and this level of assessment is still considered sufficient. It is considered that attempting to quantify, either by individual tree or area, impacts to riparian vegetation (if they occur), would not produce an accurate or meaningful result/information for assessment of the Project by the DSDIP. The figure set provided in Attachment C illustrates the minor change in the lateral extent of the FSL due to the Project. It is considered more reasonable to condition a requirement for the monitoring and rehabilitation of riparian areas, as per (3) below.
3. Issue: *The application material suggests measures like monitoring and planting to support riparian revegetation but doesn't specify the areas for these activities. More details are needed to show whether the proposed actions will counter or mitigate a likely irreversible impact on the environment.* *Actions:* *a) Provide detailed mapping at a suitable scale that clearly shows the areas to be monitored in relation to revegetation and rehabilitation of riparian zones following the completion of the works. This should include the proposed monitoring sites with their GPS coordinates.* *b) Quantify, in hectares, the likely total area where revegetation and rehabilitation is anticipated to counter an irreversible impact.*	The LRC commits to the preparation of a Vegetation Monitoring and Management Plan (VMMP) as part of conditions of approval for the MID (and/or the RIDA, if the DSDIP considers, after considering this letter, that the Project constitutes a regulated activity and therefore requires a RIDA). Vegetation surveys undertaken in November 2022 found that generally, the dominant species along the edges of the river were *Eucalyptus coolabah* with *Melaleuca trichostachya*, *Lysiphyllum gilvum* and *Acacia cambagei*. This conforms with RE 4.3.11b. As the vegetation community is consistent along the banks of the Town Storage, it is proposed the VMMP include up to six monitoring points, which is considered would provide a representative data set within the bounds of the Project FSL area. The sites will need to be determined by a detailed field inspection prior to the completion of construction. The VMMP will provide detailed methodology for the monitoring, and where required, revegetation to be undertaken. Similar to the response to issue 2 above, it is difficult to determine where revegetation and rehabilitation would be most suitable, and can only be determined once the extent of the Project FSL is identified, and any impacts identified. The VMMP can be provided to the DSDIP for review and approval, if required, prior to the completion of construction.

3 Consideration of submissions

Response to Submission Grounds

During the public consultation period for the RIDA and MID, two public submissions were received. The DSDIP provided the grounds of the submissions to the assessing agencies for the application for the RIDA to understand if the submissions raised further issues for consideration by the assessing agencies. Attachment B outlines these further considerations for which require a response. Responses to these are outlined in Table 2 below.

<table>
<tr><th>DSDIP Information requirement</th><th>Response</th></tr>
<tr><td>1. Consideration of alternative options (submissions particularly mentioned dredging),

Section 2.3 of the Ministerial Infrastructure Designation Proposal (NGH Pty Ltd Jan 2024) and previous studies (Cardno, 30 November 2017) have looked at various alternative options. The options have not considered dredging specifically. There would be a number of reasons why dredging would not be the preferred option, however it is considered prudent to query whether the applicant considered this option and why it may or may not be feasible?

Action:

Outline whether dredging was considered as an option and reasons why it may or may not be feasible.</td><td>Dredging of the Town Storage was not considered to be a viable option for consideration by previous studies. The following aspects make it an unsuitable option to increase the storage volume of the weirs:
• Not a permanent solution, as it would require ongoing practice of planned/required dredging and management of dredged materials.
• Environmental issues associated with the large scale, significant disturbance and mobilisation of sediments, such as in-situ and downstream water quality impacts.
• Uncertainties about how much sediment exists within the Town Storage before bed-rock is encountered, in that the volume gainable by dredging is unknown.
• There are a number of uncertainties, risk, and high costs associated with dredging (e.g. initial and ongoing Environmental Authority fees, costs to manage planning/compliance, costs to construct and manage transport/storage of dredged materials, etc).
Further to the above, part of the justification for the Project is that given their significant age, the structural integrity of the weirs is unknown and provides additional imperative for the LRC to undertake the Project, that is, to avoid a sudden loss of Longreach's water supply in the event of a weir failure. Dredging would not address this concern.</td></tr>
<tr><td>2. Concern over potential effects of souring and erosion of beds and banks near and downstream of the weir structures

The Flood Impact Assessment Report (Water Technology, 25 October 2023) notes:

Localised velocity increases are noted downstream of the weirs up to approximately 0.5 m/s. Where increases occur, the magnitude of the post raising velocity is generally less than 1 m/s, therefore the increase is unlikely to materially affect or worsen erosion potential and it does not exceed any notable threshold for causing additional scour. This is, however, dependent on local conditions and we recommend that the areas immediately adjacent to and downstream of the weirs are monitored for scour or erosion following overtopping</td><td>The pre-and-post maximum velocities at the weirs are provided in the table below, which have been extracted from the flood model prepared by Water Technology.
<table>
<tr><th></th><th>Main Town Weir</th><th>Anabranch 1</th><th>Anabranch 2</th><th>Anabranch 3</th><th>Anabranch 4</th></tr>
<tr><td></td><td colspan="5">Existing Maximum Velocity (m/s)</td></tr>
<tr><td>PMF</td><td>3.31</td><td>1.07</td><td>1.76</td><td>3.75</td><td>2.00</td></tr>
<tr><td>1% AEP</td><td>3.28</td><td>1.03</td><td>1.62</td><td>3.51</td><td>1.98</td></tr>
<tr><td>2% AEP</td><td>3.28</td><td>1.07</td><td>1.59</td><td>3.45</td><td>1.98</td></tr>
<tr><td>5% AEP</td><td>3.27</td><td>1.04</td><td>1.56</td><td>3.36</td><td>2.03</td></tr>
</table></td></tr>
</table>

DSDIP Information requirement	Response
events. *While it is somewhat difficult to identify on the velocity maps in the Flood Impact Assessment Report, it would appear that existing velocities are greater than 2.0m/s, (perhaps up to 5m/s) at some of the weirs themselves. It is noted that geotechnical investigations and the final design are yet to be undertaken. The detailed design will need to incorporate measures into the weir design and construction to dissipate energy and to protect the beds and banks from scouring in the localised areas around each of the weirs. It will be the detailed design that will be crucial for scouring protection.* *Action:* *Confirm the velocities, both existing and predicted, at the weirs and outline what measures will be utilised into the design and construction to prevent scouring of watercourse beds and banks in localised areas above, around, and below the weirs.*	

10% AEP	3.26	1.00	1.52	3.27	1.98
20% AEP	3.25	0.92	1.46	3.11	1.98
50% AEP	3.28	0.62	1.29	2.56	2.03
	Post Maximum Velocity (m/s)				
PMF	3.00	1.59	1.17	3.24	2.14
1% AEP	2.89	1.67	1.43	2.98	1.95
2% AEP	2.87	1.67	1.41	2.93	1.91
5% AEP	2.84	1.66	1.38	2.84	1.87
10% AEP	2.80	1.65	1.36	2.76	1.81
20% AEP	2.76	1.64	1.31	2.63	1.77
50% AEP	2.40	1.57	1.17	2.25	1.60

Table 6-4 of the MID Proposal lists the erosion and scour measures proposed for the Project:

- Areas immediately adjacent to and downstream of the weirs are monitored for scour or erosion following overtopping events
- Limit public access to the banks of the Thomson River around the weirs to reduce activities (e.g. four-wheel driving) that may exacerbate riverbank destabilisation
- Where scouring due to the Project is occurring and impacting fauna habitat, implement bank stability works.

Section 3.3 of the MID Proposal report (NGH, 2024) states that a rock apron will be placed downstream of the weirs, while the State code responses in Appendix J state that the purpose of these aprons is to minimise downstream scour during overtopping events. It is acknowledged that this link wasn't clear however, and is hence proposed as an additional erosion and scour measure.

As described in Section 6.2.3 of the MID Proposal, an Erosion and Sediment Control Plan will be prepared for the Project, following detailed design, as part of the detailed CEMP in accordance with the Best Practice Erosion and Sediment Control guideline (the White Book) (International Erosion Control Association Australasia [IECA], 2008). These plans, would include site-specific erosion and sedimentation controls, staging advice and stabilisation measures as well as technical notes to guide the installation, function and maintenance of ESC devices.

DSDIP Information requirement	Response
3. Provide further clarification about proposed monitoring and intervention if scouring or erosion issues are detected. *Further information is required with respect to aspects such as regular (post-flow event) surveys, with monitoring locations and transects identified (both cross and longitudinal), and actions that will be implemented should excessive scouring or erosion occur (such as options to reduce velocity and/or limit erosion).* *Action:* *Provide a description of proposed monitoring and intervention measures (described in sufficient detail) further to the above. (Note: this may be utilised as part of conditions).*	Visual inspections of the general vicinity around each of the weirs, including the bank sections within 50 m both upstream and downstream of the weirs, and the bed of the channels downstream. Where scouring and erosion issues are identified, an assessment of the most suitable stabilisation and remediation method will be undertaken. Solutions may include engineering stability work such as rock aprons, revegetation works, or a combination of both. Intervention measures will be designed and implemented to integrate with the surrounding landscape, including use of plant species consistent with the surrounding RE.

Response to Submissions

In addition to the above grounds raised by DSDIP (considered above), and for completeness, the following matters raised in the submission have also been considered. It is noted that the matters considered below do not include the grounds raised by DSDIP above.

Additional Submission Matters	Response
SUB001 *"Why wasn't the Town Weir and associated Anabranch Weirs raised to that height when the Fairmont weir was rebuilt? If it wasn't done then, would it be feasible now?"*	The Fairmont Weir project was a separate development and was not associated with increasing the capacity of the Town Storage. Accordingly, the Town Weir and associated anabranch weirs were not required to be upgraded in conjunction with the Fairmont Weir project, and therefore, this was not to do with the feasibility of the Town Weir upgrade. The LRC has undertaken several previous studies and business cases to identify the most appropriate upgrades/developments to provide additional water supply for the Longreach township. These studies confirmed that the proposed development was the most appropriate and cost-effective development and was feasible.
SUB002 – Matter 2 *"Have locals involved in the 2000 weir project been consulted? If so, where are your references to past research on previous weir projects? Can you please inform us of more details. For example, where are the rocks coming from? Assuming you are using rocks? … It seems external consultants may not have consulted with the wisdom and experience of existing local residents, former mayors, and council staff*	The LRC has undertaken significant consultation with Council officers, experienced consultants and the local community. The requirements for the design and construction of the weirs, in comparison to weirs constructed in the early 2000s has changed considerably. Accordingly, whilst the historical weir designs have been reviewed and considered, the designs are required to comply with more recent legislation and engineering requirements, which have informed the final designs.

Additional Submission Matters	Response
involved in the previous weir projects."	
SUB002 – Matter 4 *"Is this $18.6 million weir raising project a waste of money?"*	Refer to response to SUB001. The previous studies and business cases confirm that this project is cost-effective and feasible.
SUB002 – Matter 5 *"These improvements are expected to increase our water storage capacity by 900 megalitres and reduce water loss by 245 megalitres per year. Is it by the weir construction itself that reduces water loss? Or through the use of Smart Meters putting greater restrictions on people's use? Could you explain more about how those savings are calculated?"*	Separate to the Project, LRC will continue to provide upgrades to the Longreach water supply network. Smart Meters are used to allow Council and homeowners to track, in real-time, water usage, allowing leaks in Council and private infrastructure to be more quickly identified. This, in conjunction with the upgraded water supply network will assist in reducing water loss within the township. The water meters cannot be used to limit or restrict a resident's water consumption.
SUB002 – Matters 6-7 & 9 *"I would like to know whether decision makers are aware that Smart Meters have been shown to have negative effects on people's heart health and cardiovascular system?"* *"Because of this potential damage to health, are you going to ensure citizens can permanently opt out of Smart Meters beyond the proposed 2030 compulsory deadline?"* *"Will you be liable for any health issues which may arise as a result of smart meters emitting radiation to household residents?"*	The Project MID and RIDA applications is for the raising of the weirs to increase the capacity of the Town Storage. Whilst the water will be utilised by LRC to provide water supply to the township, this project does not involve any changes or upgrades to the water supply network, including water meters. Any future upgrades to the water supply network will be considered separately of the Project. Accordingly, the assessment of the Project is limited to the weir raising only and cannot consider other non-consequential matters which are not proposed as part of this development.
SUB002 – Matter 8 *"The nearby Over the Horizon Radar facility's transmitter and receiver emits radiation. How will decision makers test radiation levels from the added emissions by the proposed 5G tower and smart meters to ensure residents of the Longreach and surrounding region are protected?"*	The Longreach Over the Horizon Radar facility forms part of the Jindalee Operational Radar Network which is managed by the Australian Defence Force. The operation of this facility is managed by the Australian Commonwealth Government under Commonwealth legislation which is required to consider environmental impacts. The Project does not have any association with the Longreach Over the Horizon Radar facility and the LRC has no association with or input on the operation, maintenance or upgrade of this facility. Accordingly, this matter cannot be considered as part of the assessment of the Project.

Conclusion

As discussed above, it is considered that the Project would not have a widespread or irreversible impact on the Channel Country SEA, therefore is not a regulated activity, and hence a RIDA would not be required for the Project. This letter also provides responses to the Further Requirements notice and submissions for consideration by the DSDIP. It would be appreciated if the DSDIP could consider this letter at its earliest convenience.

If you have any questions, please contact me on the number below. I would be pleased to discuss any aspect of this letter with you further.

Yours sincerely,

Joe Flanagan
Qld Regional Lead -
Planning & Approvals
0456 914 854

James Williams
Senior Planner
Precinct Urban Planning
0481 127 412

Attachment A – DSDIP Further Requirement Notice

Our reference: D24/113123

Queensland Government

Department of
Housing, Local Government, Planning and Public Works

2 October 2024

Longreach Regional Council ABN 16834804112
C/- Mr James Williams
Senior Planner
Precinct Urban Planning
Email: james@precicntplan.com.au

Dear Mr Williams

FURTHER REQUIREMENT NOTICE

RPI24/030: Longreach Regional Council – Thompson River Weir Project

This notice is in relation to the Longreach Regional Council's 1 February 2024 application for a Regional Interests Development Approval (RIDA) for the Thompson River Weir Project, situated within the Channel Country strategic environmental area (SEA). It is the department's understanding that this RIDA submission was made on the basis that the project constituted a regulated activity under the *Regional Planning Interests Act 2014* (RPI Act).

As you know, to inform the department's assessment of the potential impacts of the project on the SEA's environmental attributes, a Requirement Notice was issued on 15 February 2024, and your response was submitted on 4 July 2024.

As per section 17 (1) of the RPI Act, a regulated activity within an area of regional interest is one that is likely expected to cause widespread and irreversible impacts on the area of regional interest and prescribed under a regulation for the area.

Section 11 of the Regional Planning Interests Regulation 2014 (RPI Regulation) identifies Water storage (dam) as a regulated activity for a SEA. Although the project fits the definition of Water storage (dam), it must also be likely to result in widespread and irreversible impacts to be considered a regulated activity.

Should the council provide information to show the project would not have widespread and irreversible impacts, it could be deemed the project is not a regulated activity and negate the need for a RIDA application. If a RIDA is required, the council is requested to address this further requirement notice.

GPO Box 690 Brisbane
Queensland 4001 Australia
Website www.housing.qld.gov.au

Application details

Applicant	Longreach Regional Council ABN 16834804112
Project	Thompson River Weir Project
Description	Raising of five weirs
Area of regional interest	Channel Country SEA (Designated precinct) (SEA)
Proposed disturbance area	1.64 ha

Site details

Real property description	Lot 2 SP123565 and Lot 4 SP232181
Local government area	Longreach Regional Council

Information Requirement

Pursuant to section 44 of the RPI Act, you are advised that further information is required to assist in the assessment of the application against the assessment criteria contained in the RPI Act and the RPI Regulation.

The further information required in detailed in **Attachment 1**.

The period in which the information must be provided is a maximum of three months from the date of this notice. An extension to this period may be requested if necessary.

Another requirement notice may be given if, for example, the response to this Further requirement notice does not provide sufficient information to assess and decide the application or in response to matters raised in a submission.

If you require any further information, please contact Morag Elliott, Manager, Planning Group, DHLGPPW on (07) 3452 7653 or by email at RPIAct@dsdilgp.qld.gov.au.

Yours sincerely

Phil Joyce
Director
Development Assessment Division
Planning Group

Encl Attachment 1

ATTACHMENT 1

Further additional information requested for assessment against the SEA assessment criteria - Schedule 2 Part 5 of the RPI Regulation

Item	Channel Country SEA
1.	**Issue:** The application was submitted before the Channel Country SEA environmental attributes were amended under the RPI Regulation on 2 August 2024. Section 21(1) of the amended Regulation states that these new attributes apply to undecided applications that were lodged prior to the amendment's start date. An updated assessment, based on the attributes as of 2 August 2024, is needed. This assessment, and associated mapping, must also reflect the current spatial extent of the Channel Country SEA mapping, as at 22 December 2023, available to view at Areas of regional interest | Planning and at https://qldglobe.information.qld.gov.au/. **Actions:** Provide an assessment of the proposed regulated activity in relation to the Channel Country SEA environmental attributes specified in the RPI Regulation as of 2 August 2024. Additionally, confirm whether the previous assessments included the current spatial extent of the SEA Channel Country mapping dated 22 December 2023. If not, update the application materials to reference the extent of the Channel Country SEA mapping as of 22 December 2023.
2.	**Issue:** The Requirement notice dated 15 February 2024 sought information on the extent of impacts on riparian vegetation due to increased inundation, however, the response indicated it was not possible to precisely determine the number and location of trees. In addition, the mapping indicates full supply level inundation but doesn't specify the additional flooding from the proposed one-metre upgrade to the five weirs. More details are required to assess the potential environmental impacts on the area and its riparian vegetation. **Actions:** a) Provide mapping at a suitable scale that clearly shows the differences in spatial extent of area affected (additional inundation and less inundation) to result from the one metre weir upgrades, compared to the current situation and spatial extent. b) Provide details of the increased or decreased depth of indundation in the mapped areas in a) and period of time of the change in a typical year. c) Quantify in hectares, and map, the spatial extent of mapped areas in b) where existing riparian or other vegetation is not likely to survive the change to inundation.
3.	**Issue:** The application material suggests measures like monitoring and planting to support riparian revegetation but doesn't specify the areas for these activities.

	More details are needed to show whether the proposed actions will counter or mitigate a likely irreversible impact on the environment. **<u>Actions:</u>** a) Provide detailed mapping at a suitable scale that clearly shows the areas to be monitored in relation to revegetation and rehabilitation of riparian zones following the completion of the works. This should include the proposed monitoring sites with their GPS coordinates. b) Quantify, in hectares, the likely total area where revegetation and rehabilitation is anticipated to counter an irreversible impact.

Attachment B – DSDIP Correspondence

From: Darren BREWER <Darren.Brewer@dsdilgp.qld.gov.au>
Sent: Monday, 2 December 2024 5:44 PM
To: James Williams <james@precinctplan.com.au>
Cc: Regional Planning Interests Act <RPIBill@dsdilgp.qld.gov.au>; Scott Clarke

<Scott@precinctplan.com.au>; Brendan Mitchell <Brendan.Mitchell@dsdilgp.qld.gov.au>
Subject: RPI24/030: Longreach Regional Council - Thompson River Weir Project

Hi James,

While you were on Leave, I liaised with Scott Clarke of your office regarding the application for the RIDA.

I have a couple of items to raise and seek responses regarding same.

A. **Response to further Requirement Notice**

The week before last, Scott explained to me that a draft response to the further Requirement Notice, dated 2 October 2024, had been prepared. Scott also mentioned that the applicant wanted to lodge the response soon, but that Precinct needed to have a meeting first and would then like to run through the response with the department before lodging. Is this still the case, as the department has not heard anything further from your office in this regard?

B. **The matters raised in the submissions received during the public notification process**

As you are aware, two submissions were received as a consequence of the public notification process. The department provided the grounds of the submissions to the assessing agencies for the application for the RIDA (being the former DESI and RDMW). The purpose of doing so was to understand if the grounds raised further issues for consideration by the assessing agencies.

The relevant matters subsequently raised by the assessing agencies are provided **below**. They can be responded to in concert with the response to the further Requirement Notice.

1. **Consideration of alternative options (submissions particularly mentioned dredging),**

Section 2.3 of the Ministerial Infrastructure Designation Proposal (NGH Pty Ltd Jan 2024) and previous studies (Cardno, 30 November 2017) have looked at various alternative options. The options have not considered dredging specifically. There would be a number of reasons why dredging would not be the preferred option, however it is considered prudent to query whether the applicant considered this option and why it may or may not be feasible?

Action:
Outline whether dredging was considered as an option and reasons why it may or may not be feasible.

2. **Concern over potential effects of souring and erosion of beds and banks near and downstream of the weir structures**

The Flood Impact Assessment Report (Water Technology, 25 October 2023) notes:

Localised velocity increases are noted downstream of the weirs up to approximately 0.5 m/s. Where increases occur, the magnitude of the post raising velocity is generally less than 1 m/s, therefore the increase is unlikely to materially affect or worsen erosion potential and it does not exceed any notable threshold for causing additional scour. This is, however, dependent on local conditions and we recommend that the areas immediately adjacent to and downstream of the weirs are monitored for scour or erosion following overtopping events.

While it is somewhat difficult to identify on the velocity maps in the Flood Impact Assessment Report, it would appear that existing velocities are greater than 2.0m/s, (perhaps up to 5m/s) at some of the weirs themselves. It is noted that geotechnical investigations and the final design are yet to be undertaken. The detailed design will need to incorporate measures into the weir design and construction to dissipate energy and to protect the beds and banks from scouring in the localised areas around each of the weirs. It will be the detailed design that will be crucial for scouring protection.

Action:
Confirm the velocities, both existing and predicted, at the weirs and outline what measures will be utilised into the design and construction to prevent scouring of watercourse beds and banks in localised areas above, around, and below the weirs.

3. **Provide further clarification about proposed monitoring and intervention if scouring or erosion issues are detected.**

Further information is required with respect to aspects such as regular (post-flow event) surveys, with monitoring locations and transects identified (both cross and longitudinal), and actions that will be implemented should excessive scouring or erosion occur (such as options to reduce velocity and/or limit erosion).

Action:
Provide a description of proposed monitoring and intervention measures (described in sufficient detail) further to the above. (Note: this may be utilised as part of conditions).

C. **<u>The applicant's determination regarding whether the proposal constitutes a regulated activity</u>**

Please confirm whether the applicant has made a determination regarding whether the proposal constitutes a regulated activity.

As always, I am happy to discuss via telephone.

Regards,

Queensland Government

Darren Brewer

Manager – Appeals and Regional Interests
Improvement and Assessment
Planning Group
Department of State Development, Infrastructure and Planning
Microsoft Teams – meet now

P (07) 3452 7472 | **M** 0438 425 063
Level 13, 1 William Street, Brisbane QLD 4000
PO Box 15009, City East QLD 4000
www.planning.qld.gov.au

Follow us

I acknowledge the traditional custodians of the lands and waters of Queensland.
I offer my respect to elders past, present and emerging as we work towards a just, equitable and reconciled Australia.

Attachment C – Project full supply level

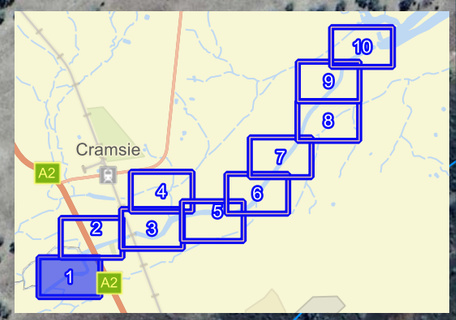
LEGEND
- Project Weir
- Watercourse
- Project full supply level

Thomson River

Anabranch Weir 2

Town Weir

Anabranch Weir 1



NGH

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 1 of 10

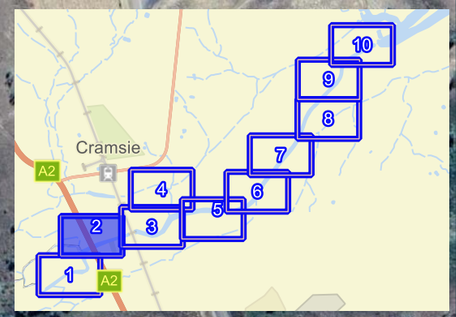
LEGEND

- Project Weir
- Watercourse
- Project full supply level

Anabranch Weir 4

Anabranch Weir 3

Thomson River



0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 2 of 10

LEGEND

- Watercourse
- Project full supply level

Thomson River

Cramsie

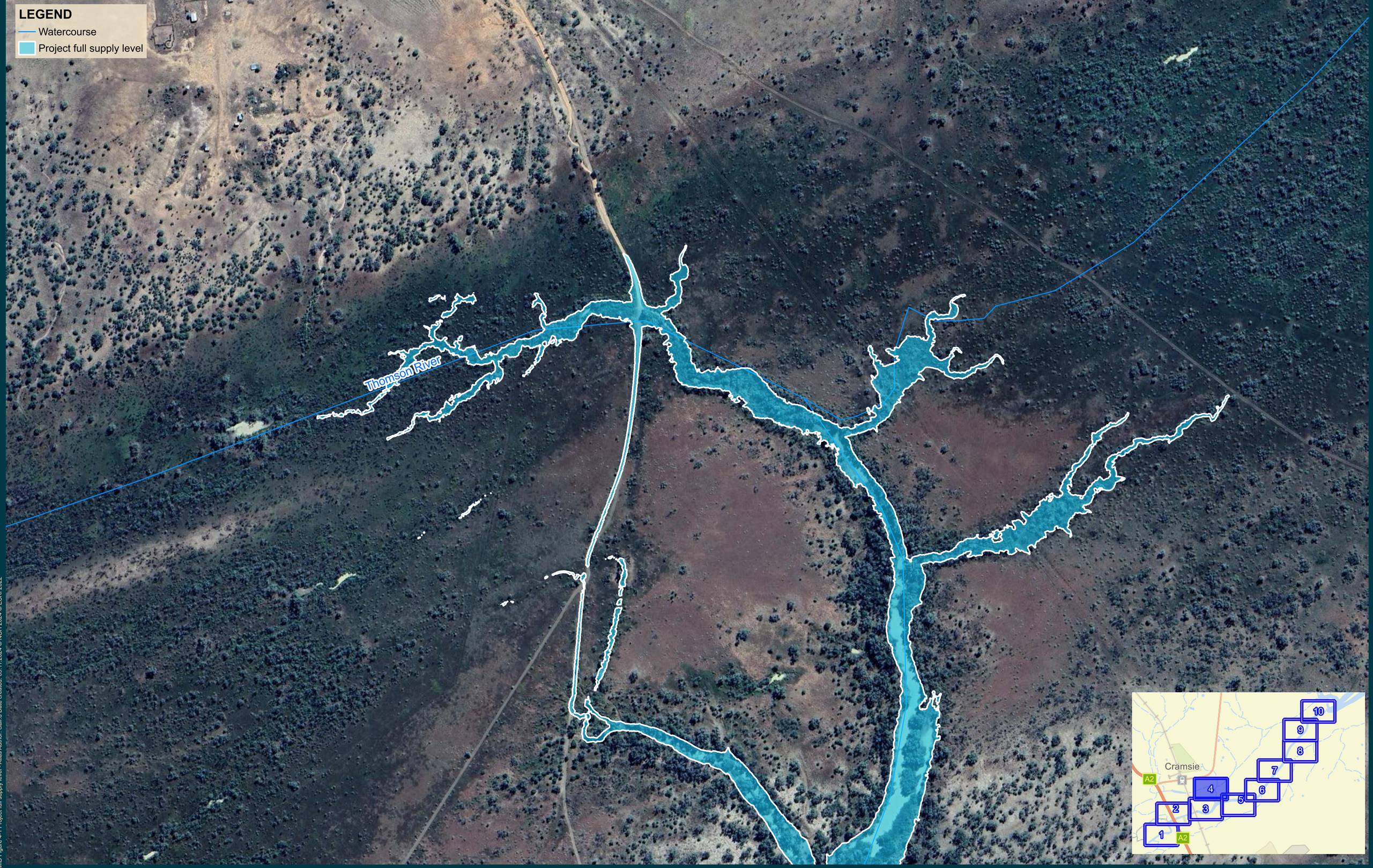
A2

1 2 3 4 5 6 7 8 9 10

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 3 of 10



NGH

0 100 200 m

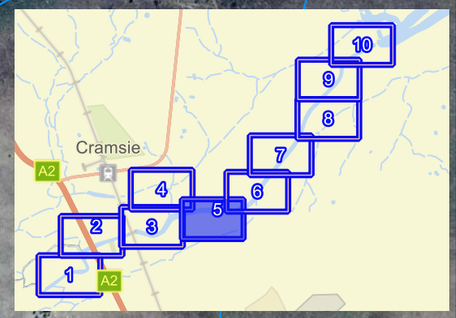
Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 4 of 10

LEGEND

- Watercourse
- Project full supply level

Thomson River



0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 5 of 10

LEGEND

- Watercourse
- Project full supply level

Thomson River

Cramsie

A2

1 2 3 4 5 6 7 8 9 10

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 6 of 10

LEGEND

- Watercourse
- Project full supply level

Thomson River

Cramsie

A2

1 2 3 4 5 6 7 8 9 10

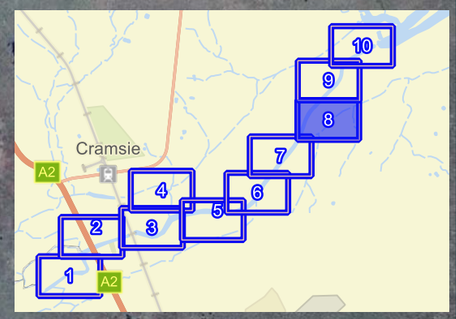
0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 7 of 10

LEGEND
Watercourse
Project full supply level

Thomson River



NGH

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 8 of 10

LEGEND
Watercourse
Project full supply level

Thomson River

Cramsie
A2
A2
1
2
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10

NGH

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 9 of 10

LEGEND

- Watercourse
- Project full supply level

Thomson River

Cramsie

A2

1 2 3 4 5 6 7 8 9 10

0 100 200 m

Thomson River Weir Raising Project

Figure 4-1 Project full supply level
Map 10 of 10

Attachment D – River bank images

Attachment E – River level graph

Queensland Government

HYPLOT V134 Output 20/12/2024

01/12/2020 to 01/12/2024

2020-24

Site 003202A Thomson River at Longreach