Special Area Plan – Yellow chat habitat within the Stanwell-Gladstone Infrastructure Corridor State Development Area

Fitzroy to Gladstone Pipeline Project

Gladstone Area Water Board (GAWB)

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Document Control

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Rev A DRAFT – For client review	7/12/2022	Brandon Hourigan, Dr Craig Streatfeild	Philip Bradley
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Special Area Plan - Yellow chat habitat within the Stanwell-Gladstone Infrastructure Corridor State Development Area (SGIC SDA)

Special Area Plan Scope

This Special Area Plan (SAP) addresses and provides mitigation measures for construction activities of the Fitzroy to Gladstone Pipeline (FGP) project within yellow chat habitat.

The Coordinator-General's Evaluation Report (CGER) on the Environmental Impact Statement (EIS) delineates yellow chat habitat from the Port Alma Rail Line/North Coast Line to Horrigan Creek, while the FGP Baseline Terrestrial and Aquatic Ecology Assessment (GHD, 2022) report lists potential habitat for the species from Twelve Mile Creek to Raglan Creek. For completeness, this SAP encompasses the full extent (i.e. from the Port Alma Rail Line/North Coast Line (approximate chainage 54000) to Raglan Creek (approximate chainage 73000) inclusive, as shown on Figure 1.

This SAP has been prepared to address Condition 11 of the CGER and recognises that Condition 1 requires the Construction Environmental Management Plan (CEMP) to include the SAP as a subplan. Condition 11 states specific requirements that must be included in the SAP such as construction timing and area constraints at trenched waterways (refer to Figure 1 for the extent of the yellow chat habitat and Figure 2a-I for waterway locations).

For the extent of potential yellow chat habitat, the construction method for the FGP incorporates both trenchless and open cut trenching methods that traverse terrestrial and aquatic habitats (Figure 1 and Figure 2a-I).

This SAP addresses the extent of potential yellow chat habitat including the tunnelled waterway crossings Inkerman Creek, Twelve Mile Creek, Marble Creek. Horrigan Creek and Raglan Creek.

Trenchless construction methods for the above-mentioned creek crossings will be underground micro-tunnels. Micro-tunnelling requires launch and receival/reception pits that are excavated on both sides of the crossing. From the launch pit, an enveloper pipe is pushed from the launch pit to the receival/reception pit. The carrier pipe is laid inside the enveloper pipe. The area between the enveloper and carrier pipes is then grouted.

Open cut trenching involves excavation using a backhoe or similar with trench spoil to be stockpiled adjacent to the excavations within the Right of Way (ROW). Following excavation of the trench, bedding material will be laid to prepare the trench for pipe laying. Following placement of the bedding, the pipe will be lowered into the trench, backfilled with trench spoil and topsoil and rehabilitated. All disturbances will be within the ROW.

Potential impacts to Raglan Creek, and ornamental snake and brigalow habitat have been addressed in the SGIC waterway SAP and SGIC ornamental snake and brigalow SAP, respectively.

General mitigation measures for the FGP are outlined in the CEMP. This SAP specifically addresses potential yellow chat habitat and should also be read in conjunction with the CEMP.

Construction

Construction will be limited to May to September (inclusive) as outlined in CGER approval condition for the entire extent of potential yellow chat habitat. Construction activities at each trenched waterway will include a maximum ROW of 15 m and be completed and stabilised within one week in accordance with Condition 11.

Construction activities will be undertaken every day between 6:30 am and 6:30 pm or as per approval conditions. If work is required outside of these hours, approval will be required from GAWB, accompanied by engagement with affected landholders.

All personnel will be trained in the requirements of this SAP, the CEMP and other relevant environmental management plans.

Review and Updates

This SAP will be reviewed and updated as required and following identifying any new information, receipt of relevant approval conditions and continual improvement initiatives.

Erosion and Sediment Control

Responsibility

McConnell Dowell

BMD Joint Venture

(MBJV)

Control Activities - Construction activities will be undertaken in accordance with the CEMP Erosion and Sediment Control Plan and site specific implemented Erosion and Sediment Control Plans (ESCPs) that comply with the International Erosion Control Association (IECA) guideline and be certified by a registered professional engineer Queensland (RPEQ) or a Certified Professional in Erosion and Sediment Control (CPESC).

- All erosion and sediment control devices will be installed and maintained in accordance with the ESCPs and in place prior to the commencement of construction activities.
- Stormwater will be diverted around the ROW.
- The area and duration of exposed soil will be kept to the minimum during construction work and no longer than the allowed construction timeframe of between May to September. All works at trenched waterway crossings must be completed and stabilised within 1 week.
- To prevent disturbance to areas outside the construction footprint, the ROW and access routes will be clearly delineated and shown in the ESCPs.
- Excavated sediment from trenched waterway crossings will be stored in a designated disposal area and shown on the ESCPs.
- Water will be discharged from the trench in accordance with the CEMP to mitigate risks and potential impacts from erosion and sedimentation into waterways.

Contaminated Land Management

	Control Activities	Responsibility
_	Lot 101 on DS185 (approximate chainage 62000) is listed on the Environmental Management Register (EMR) for waste storage, treatment of disposal of regulated wastes (GHD Contaminated Land Report; 2021). Although not identified as contaminated land, the area between Horrigan Creek and Raglan Creek has the potential for contamination from	MBJV

- hydrocarbons and metals due to racecourse activity (GHD, 2021).
- A contaminated land assessment is being undertaken and construction activities will be undertaken in accordance with the CEMP Contaminated Land Control Plan.
- Unexpected finds will be managed in accordance with the CEMP Contaminated Land Control Plan for situations where contamination is found. If an area within the ROW is suspected of being potentially contaminated, works in that area will cease until a site investigation can be completed, and the contamination identified and appropriately managed.
- Any contaminated material will be reported and managed in accordance with relevant legislation/guidelines and the CEMP Contaminated Land Control Plan.

	Acid Sulfate Soils Management	t
	Control Activities	Responsibility
-	Raglan Creek is mapped as a high probability acid sulfate soil (ASS) area. All other creeks are in low to very low probability ASS areas.	MBJV
_	An ASS assessment will be undertaken and if encountered, an ASS Management Plan (ASS MP) will be developed and implemented that will meet the requirements outlined in Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines (State of Queensland, 2014).	
_	If ASS is identified, the ASS MP will clearly identity Actual and Potential ASS on figures and construction drawings, and present clear management and mitigation measures.	
_	ASS will be handled and treated in accordance with the ASS MP and relevant legislation/guidelines.	

Flora Management

All personnel will be made aware of the

requirements in the ASS MP.

	CONTROL ACTIVITIES	Responsibility
-	Construction activities will be undertaken in accordance with the CEMP Flora and Fauna Control Plans.	MBJV
-	Clear and grade operations will be restricted to the ROW and will be performed without infringing on adjacent areas.	
	For trenched waterway crossings (Figure 1), the ROW width will be limited to 15 m, with the disturbance boundaries to be demarcated with high visibility fencing.	

- Pre-disturbance inspections of the areas to be cleared and/or disturbed will be undertaken by GAWB and MBJV representatives to confirm the clearing limits are correct and clearly marked.
- Construction activities will be scheduled to minimise the time between clearing and rehabilitation with works completed and stabilised in one (1) week at all trenched waterway crossings and undertaken between May to September.
- During site inductions, all personnel will be briefed on yellow chat habitat values within the ROW including vegetation to be avoided and retained when trenching across waterways or elsewhere along the ROW.
- Safeguards such as high visibility fencing, will be put in place to ensure that there is no disturbance to yellow chat habitat at trenched waterways outside the 15 m clearing ROW.
- A suitably qualified person (such as a qualified ecologist and/or licensed fauna spotter/catcher) will be engaged to undertake a pre-clearance survey to inspect vegetation to be removed.
- A suitably qualified person (ecologist and/or fauna spotter/catcher) will be present during vegetation clearing.
- Localised topsoils will be stockpiled and replaced at the completion of works to enable endemic ground layer species to reestablish.
- When trenching across a waterway or wetland, topsoil will be stockpiled and replaced after works to enable ground layer species to re-establish.
- If protected flora species are encountered during construction in areas where a Clearing Permit has not been obtained, works will cease, GAWB notified, and a Clearing Permit / Flora Impact Management Plan obtained (refer to the Flora Survey Guidelines – Protected Plants).
- Trees and vegetation to be retained within the ROW will be clearly flagged to prevent accidental removal or damage.
- Where trees and vegetation cannot be preserved aboveground, stabilising root material will be undisturbed, wherever possible.
- Cleared, or trimmed vegetation will be stockpiled separately from topsoil. It will then be mulched and respread (outside of highest astronomical tide (HAT) areas on the ROW in accordance with the CEMP Rehabilitation and Revegetation Control Plan or disposed of offsite at an approved location.

Fauna Management





	Control Activities	Responsibility
_	Construction activities will be undertaken in accordance with the CEMP Flora and Fauna Control Plans and Species Management Program (SMP).	MBJV
-	All personnel will be made aware of the yellow chat, including species and habitat visual identification.	
-	Permanent maintenance roads outside of the ROW will not be built across creeks/waterways or wetlands.	
_	Prior to vegetation clearing (within 24 hours), a suitably qualified person (e.g., ecologist and/or fauna spotter/catcher) will inspect the construction areas to identify fauna habitat and breeding places. Clearing will not occur until the fauna spotter has confirmed the construction areas have been inspected.	
_	The suitably qualified person (e.g., ecologist and/or fauna spotter/catcher) will be present during all clearing and will ensure any clearing is undertaken as per the requirements of the approved SMP.	
_	Any displaced fauna will be relocated to more suitable similar habitat within the surrounding area, as far as reasonably practicable.	
-	A Damage Mitigation Permit will be required from the Department of Environmental and Science (DES) to interfere with wildlife.	
_	Logs and fallen vegetation will be used as a habitat feature post-construction upon approval by GAWB to provide protection and potential habitat for native fauna (in agreement with landholders as required).	
_	Cleared vegetation will be stockpiled within the ROW and positioned to not impede wildlife, surface drainage and to avoid damage to adjacent live vegetation.	
_	If required, directional lighting and shields will be installed to minimise light spill outside of the immediate work areas having consideration for health and safety requirements.	
	Biosecurity	
	Control Activities	Responsibility
_	Construction activities will be undertaken in accordance with the CEMP Biosecurity Control Plans that includes biosecurity management measures.	MBJV
-	Prior to commencement of construction,	

pre-clearance surveys will be undertaken to assess the presence of weeds and fauna pest species. These will be identified in the CEMP Flora and Fauna Control Plans and the CEMP

All food wastes or waste that could attract

containers/bins that do not allow the access

of animals. All personnel will be trained with

Biosecurity training will be included as part

animals, will be kept in designated

respect to weeds (e.g. colour photos,

precautions, procedures, fact sheets).

Biosecurity Control Plans.

	of the environmental induction to be completed by all personnel prior to commencement of work on the site.	
-	Access roads will be identified in the CEMP and adhered to during construction to prevent transport of weeds from or to other areas.	
_	Vehicles and machinery will be subject to weed free certification and/or brush / washdown prior to entering site in accordance with the CEMP Biosecurity Control Plans and associated documentation. Proof of washdown (e.g. washdown certificates) will kept in the vehicle once it has been washed down and certified.	
	Water Quality	
	Control Activities	Responsibility
-	Construction activities will be undertaken in accordance with the CEMP Water Resources and Water Quality Control Plan.	MBJV
_	Water quality will be managed and monitored in accordance with the CEMP Water Resources and Water Quality Control Plan and ESCPs including water quality requirements outlined in IECA, 2008.	
_	Creek water levels will be monitored during waterway crossing construction to allow early identification of changed water levels that may affect yellow chat habitat and appropriate corrective action to be undertaken.	
-	Water from the coffer dams will be pumped downstream so that downstream flows are not reduced.	
_	Where reasonably practicable, trenched waterway crossings will be undertaken during low or no flow periods.	
-	Stormwater will be diverted around the construction areas and site in accordance with the CEMP Water Resources and Water Quality Control Plan.	
_	Where fuels and chemicals are required, storage will be in accordance with AS1940. Measures will be implemented for managing fuel and chemical handling, storage, distribution and spill response during construction.	
_	Daily visual inspections for obvious signs of fuel and/or oil slicks will be undertaken in areas of standing water and/or the minor waterways downstream of the works areas. If identified, the environment manager will be notified, and appropriate actions implemented as per the water quality monitoring requirements of the CEMP Water Resources and Water Quality Control Plan.	
_	implemented as per the water quality monitoring requirements of the CEMP Water Resources and Water Quality Control	

monitored for water levels and water quality

extraction will cease if unacceptable impacts

Exemption requirements for constructing

authorities for the take of water without a

are identified. The OSW/2020/5467

	water entitlement (DRDMW, 2021) will be met.	
-	Pre- and post-construction work surveys including vertical soil profiles, will be undertaken at waterway crossings to ensure creek profiles are restored, where disturbance has occurred.	
	Air Environment	
	Control Activities	Respon
-	Air quality will be managed in accordance with the CEMP Air Environment Control Plan.	MBJV
-	Trench spoil and topsoil will not be stockpiled to heights greater than 3 m and long-term stockpiles will be stabilised or vegetated to reduce dust generation.	
-	Nearby landowners will be informed of potential temporary dust generation prior to the commencement of activities with the potential to generate dust.	
-	Dust and particulate matter emissions and monitoring will be in accordance with approval condition requirements.	
-	Construction vehicles will be confined to designated access tracks in the construction areas, as far as reasonably practicable.	
-	Dust suppression will be undertaken as needed along access roads, tracks and exposed soils to minimise dust.	
-	Where required and practicable, rumble strips or similar method will be used at the entrance/exit of construction areas to reduce the amount of mud or soil that is transported onto hard-surfaced roads. This will be shown on the ESCP.	
_	Exposed ground surfaces once stabilised (within (1) week at trenched waterway crossings) will be mulched (outside of HAT areas) or revegetated as soon as reasonably practicable following construction activity and as per the ESCP requirements and the CEMP Rehabilitation and Revegetation Control Plan.	

	Waste Management	
	Control Activities	Responsibility
-	Waste will be managed in accordance with the CEMP Waste Management Control Plan.	MBJV
-	Wastewater will be managed in accordance with CEMP Water Resources and Water Quality Control Plan and includes the management of wastewater and/or slurry from the trenches and tunnel crossings.	
-	Trench water will be disposed downstream of yellow chat habitat.	
_	All waste receptacles will be coloured for waste streams and covered to prevent vermin being attached, water infiltration and wind from causing litter.	
-	Sorting and storage recyclable wastes (such as oils, timber, steel and plastic) will occur and transported by a licensed contractor to a licensed waste management facility.	

- Regulated wastes will be transported by a licensed contractor to a licensed waste management facility able to accept the waste.
- Sewage waste from portable toilets will be managed through the use of mobile chemical treatment systems, approved septic systems or via connection with the municipal waste sewage infrastructure, depending on location of the site.
- Hazardous and regulated wastes will be managed as per local government or legislative requirements, stored in bunded containers / areas in accordance with AS1940 and transported and disposed of by an appropriately licensed contractor.
- Depending on the quality of the material excavated, it may be practical to utilise excess material within the ROW. Excess spoil that cannot be reused within the construction areas will be disposed of at the nearest approved locations and generally by agreement with landowners or local council.
- All wastes will be removed and disposed of at a licensed waste management facility regularly during construction and when construction has been completed.

	Hydrotesting and Commissioning		
	Control Activities	Responsibility	
_	Hydrotesting will be undertaken in accordance with CEMP Hydrotest and Commissioning Control Plan for discharge of water from pipelines in relation to hydrotesting.	MBJV	
-	Any pipeline leaks identified during the commissioning process will be contained and cleaned up as soon as practical.		
_	Test water will not be disposed of upstream of any waterway crossing locations shown in Figure 2a-l.		

Noise and Vibration Management		
	Control Activities	Responsibility
_	Noise management will be implemented in accordance with the CEMP Noise and Vibration Control Plan to reduce the potential for adverse noise impacts that may affect yellow chat behaviour.	MBJV
_	For access along the ROW (approximate FGP chainage 54000 to 73000) during October to April inclusive will be undertaken to minimise noise impacts such as reduced speeds in sensitive areas.	
-	All equipment and plant will be regularly maintained to manufacturers' specifications.	
-	Horns and reversing alarms will be at the minimum volume level as far as practicable without compromising safety requirements.	
_	A 24 hour contact number for the Project will be implemented for the construction phase so that landholders have an immediate point of contact when they have questions or concerns.	





- All complaints received will be handled in accordance with a complaints / incidents procedure addressed in the CEMP.
- If required, noise and vibration monitoring will be undertaken in accordance with approval conditions.

All site personnel will be made aware of

along roads and access tracks.

yellow chat habitat and the potential for individuals to be encountered when driving

Control Activities

obligations under the CHMP and the

measures to be taken in the event of a

historic or Aboriginal Cultural Heritage find.

Transport and Access

	Control Activities	Responsibility
-	Traffic Management Plans (TMPs) will be developed prior to construction activities and will address site access, signage and traffic control during construction and any temporary traffic control measures.	MBJV
-	Access to and from the construction areas will be via designated routes prescribed in the TMP and displayed in the CEMP.	
-	Outside of the ROW, no construction roads/access tracks are permitted to be constructed across yellow chat waterway habitat included in this SAP.	

Cultural Heritage

Responsibility

_	Construction activities will be undertaken in accordance with the approved Cultural Heritage Management Plan (CHMP) and the requirements of the CEMP Cultural Heritage Management Control Plan.	MBJV
_	A Cultural Heritage survey of the construction areas will be undertaken in accordance with the requirements of the approved CHMP and the status of the survey shown on the SAP figure using a traffic light approach (e.g. red = not surveyed, amber = surveyed but not yet cleared and green = surveyed and cleared). The environmental induction will include a basic level of training for all personnel with regard to their	

Dangerous and Hazardous Goods

	Control Activities	Responsibility
-	Dangerous and hazardous material will be managed in accordance with the CEMP Handling and Storage of Dangerous and Hazardous Goods Control Plan.	MBJV
-	Hazardous wastes will be controlled as per local government or legislative requirements, emergency use of a spill kit, bunded and/or contained to avoid release and transported and disposed of by an appropriately licensed contractor.	
-	Any spills will be managed and cleaned up as soon as possible.	
_	Appropriately stocked spill kits will be located in each construction area. All site	

- personnel will receive an induction prior to commencing work in the handling and storage of dangerous goods and in spill containment procedures.
- A hazard identification and risk assessment process will be undertaken for the storage of dangerous goods in the ROW.
- The Safety Data Sheets (SDS) for all dangerous goods and hazardous materials will be kept on site.
- Where practicable, any refuelling undertaken at site will be undertaken in a designated refuelling area to reduce the risk of contamination to the environment and outside of yellow chat habitat.
- Where practicable, no hazardous materials will be stored within yellow chat habitat.
- Regulated wastes will be recorded and transported by a licensed contractor to a licensed waste management facility able to accept the waste.

Landscape and Visual Amenity

	Control Activities	Responsibilit
_	Landscape and visual amenity will be managed in accordance with the CEMP Landscape and Visual Amenity Control Plan Control Plan.	MBJV
_	Vegetation clearance at the trenched waterways will not exceed 15 m in width.	
_	Upon completion of construction, all construction materials will be removed and transported to a suitable location.	
_	Appearance of other features such as signs and fencing for safety are considered as having minimal visual amenity impacts and will be removed following construction.	
_	Rehabilitation will be undertaken within yellow chat habitat in accordance with the CEMP Rehabilitation and Revegetation Control Plan.	
_	Works at all trenched waterway crossings will be scheduled to minimise the time between clearing and rehabilitation with works completed and stabilised within one (1) week.	

General Rehabilitation and Remediation

	Control Activities	Responsibility
_	Remediation activities at the construction zones will be undertaken in the accordance with the CEMP Rehabilitation and Revegetation Control Plan.	MBJV
_	The extent and species mix of vegetation and/or fauna habitat, will be determined during pre-clearance surveys. These details will be included in the CEMP Rehabilitation and Revegetation Control Plan following the pre-clearance surveys.	
-	Rehabilitation methods will include:	
	 Reinstatement, which is the process of bringing the landscape back to the original profile of the surrounding 	

- environment, including site stabilisation and riparian revegetation.
- Rehabilitation which is the process of establishing vegetation back onto the site following reinstatement.
- Ongoing management of rehabilitation areas to control pest species, minimise threats to rehabilitation success and rectify erosion and landform stability issues identified during monitoring.
- Prior to clearing activities and where possible, marine plants will be removed and relocated to a suitable area within the ROW or a suitable nursery with plant health monitored during daily inspections.
- Following construction activities, surviving marine plants will be relocated back to the area they were removed from.
- Topsoil will be stripped, stockpiled away from waterways and separately to other cleared material and managed in accordance with the CEMP Rehabilitation and Revegetation Control Plan.
- Reinstatement will commence as soon as practicable after construction activities and no later than one month after completion of works impacting marine plants.
- During reinstatement of impacted areas, soils will be replaced so that the topsoil depth is consistent with pre-clearance depths and profiles.
- Ground cover then be established at disturbed sites following respreading of topsoil. Ground cover can include organic material, leaf litter, mulch, hydromulch, living or dead plant material, rocks, logs, other woody materials or erosion control materials.
- Disturbed areas may also be sown with a cover crop immediately following topsoil respreading in areas with high erosion potential.
- Rehabilitation will primarily rely on natural regeneration from the soil seed bank and reproductive plant material delivered by the tides as well as relocating the salvaged and surviving plants back to where they were removed from.
- Where either natural regeneration or reinstatement of the relocated plants fails to meet the performance criteria outlined in the CEMP Rehabilitation and Revegetation Control Plan, assisted revegetation and direct planting will be undertaken in accordance with the Control Plan and with a species mix and density that is consistent with the pre-clearance conditions.

Contact Details MBJV

Refer to the CEMP for contact details.























































