ACT HEALTHY WATERWAYS Stage 2

Program Risk Register

Revision: 20/12/2021

Date:	25/10/2025		Project Name:	ACT Healthy Waterways		Pre-mitigation rating				Post-mitigation rating			Closure of Risk	
Ref. No.	**Risk Category**	**Risk Status**	**Risk Description**	**How can it happen (Cause)**	**What can happen (Effect)**	**Likelihood**	**Consequence**	**Rating**	**Action / Mitigation Plan**	**Likelihood**	**Consequence**	**Rating**	**Commentary (To be provided by Risk Owner)**	**Risk Owner (Org)**
	Occurring													
0.01		Occuring - to be treated	Project Funding	Treasury budget do not fund the ongoing $15m for construction	Project cancellation	Likely	Catastrophic	Extreme	Refer to Steering Committee	Likely	Catastrophic	Extreme	Project Contracts (PMCA & MC) end by Jun 22 2yr Maintenance contracts for Flaoting Wetlands to be transferred to ACT EPSDD	EPSDD
1.00	**Planning Phase**													
1.01		Open - Actioned	Program Delay	Iterative changes to TCCS Design Acceptance TCCS Non acceptance of the design	Design non compliant with MIS 08	Possible	Moderate	Medium	Engage TCCS in design development ID new MUSIC Model parameters	Possible	Moderate	Medium		EPSDD
1.02		Open - Actioned	Program delay to commencement of Delivery Phase	Delay to DA lodgement Delay to DA processing and approval by ACTPLA	Construction commencement delayed Escalation due to delay	Possible	Moderate	Medium	* DA process managed by EPSDD (supported by MC)	Unlikely	Moderate	Low		EPSDD
1.03		Open - Actioned	Program delay • Documentation and for construction drawings delayed	Underestimation of investigation works required, lack of consultation with services providers, lack of survey data	• Construction commencement delayed	Possible	Moderate	Medium	Devlop design program for TCCS Design Acceptance and ACTPLA DA approval for Mar 22 Continue design documentation until DA Approval Commence tendering now to select preffered sub contractor to review design constructability	Unlikely	Moderate	Low		MC
1.04		Open - Actioned	Loss/change of key project pers	• Key Project member is absent due to unexpected events (illness, leave, resignation etc)	• Loss of knowledge leads to time and cost for rework	Likely	Minor	Medium	• Identify back up members within each organisation • Implement effective knowledge management and IS systems for effective handover/takeover • Weekly Meetings and regular reporting to keep abreast of issues	Likely	Minor	Medium		All
1.05		Open - Actioned	Design	Impact of each Treatment Train on local watercourese	• Flooding, erosion	Likely	Moderate	High	Conduct Risk Assessmenbt by site to be reviewed at PSP and FSP conduct Safety in Design per TT Asset	Unlikely	Moderate	Low		MCC
1.06		Open - Actioned	Involvement of a large number of agencies, consultants and contractors.	The nature of the project means that there are several government agencies involved, as well as numerous consultants.	Loss of continuity, loss of knowledge, loss of efficiency, increased costs with multiple consultants (ref: North Weston Pond AG's Report)	Likely	Minor	Medium	* Establishment and mainteneance of the EPSDD PMO * Retain current MC Contracting system to manage design * Retain PMCA to streamline responsibilities and coordinate engagement * Retain Terms of References for PCG/SC * Review of Project Governance at end of planning phase	Unlikely	Minor	Low		EPSDD
1.07		Open - not Actioned	Adverse public relations	Adverse media coverage of incidents on site, mismanagement of public affairs and media	Negative media coverage of the project, loss of community support, loss of Commonwealth support	Likely	Major	High	* EPSDD's strategic comms plan as overarching plan * Dissemination of positive news stories through media * Project communication plan (PMCA and MC levels) to address communications protocols * Appointment of one central POC to liaise with media * Understand project key messages * Wargame of triggers for abandoning project	Unlikely	Major	Medium		EPSDD
						Possible	Major	High	* Site Management Plan (including Communications Mgmt) * Inductions to site * Site Security	Unlikely	Major	Medium		MC
2.00	**Early Works / Procurement**													
2.01		Open - not Actioned	Procurement of plants & filter media	Sourcing a large number of specific plants/materials at the required time	*Plants/materials are not ready for planting at the required time *Local market unable to supply plants/materials as required *Delays to the program and establishment period	Likely	Major	High	* Procurement for long lead items to be conducted early in the Planning Phase *Involvement with Key Stakeholders on plant and seed selection * Weekly update at the PMCA meeting	Unlikely	Major	Medium		MC
2.02		Open - not Actioned	Procurement of survey, geotech & services locations	Sourcing a large amount of Asset specific data for the design	* Sub-contractors are unable to complete the scope of works within the required timeframe * Delay to the completion of Design * Site information leads to changes to the design	Likely	Moderate	High	* MC to identify scope of works for the sub-contractors through the completion of the Feasibility Study (DM1) * MC to engage sub-contractors early to fill gaps with Design * Weekly update at the PMCA Weekly Meeting	Possible	Moderate	Medium		MC
2.03		Open - not Actioned	Lack of site supervision/management across multiple concurrent sites	Insufficient coordination and managmeent to support delivery across 10-15 concurrent assets due to poor staffing and poor staging of works	Compromise to project safety (WHS), Quality, environmental, program, control and reporting. Negative media and PR resulting from above.	Likely	Moderate	High	• MC tender to address resourcing across multiple locations * MC's Projects Plans • Planning phase to address detailed staging of works to minimise control issues *Additional site surveillance provided by GHD to ensure MC is delivinig IAW plans * ACT Active Certification process * Planning Phase Agreement	Possible	Moderate	Medium		MC

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3.00	**Delivery Phase**													
3.01		Open - not Actioned	Inefficient management of Contaminated sites	* Underestimation of costs associated with removal of contaminated material / unsuitable material off site. * Unclear methodology for the disposal of contaminated material/abandoning Asset	* Cost over runs and delay to the program due to removal activities that were not forecast * Reduction in number of Assets delivered	Likely	Major	High	* MC to determine likelihood of contamination during Planning Phase * Early Works to confirm likelihood of contamination * Greater involvement and consultation with the EPA/Access Canberra throughout the project * MC's EMP to address contamination procedures * War-game workshop to confirm triggers for abandoning Asset * Weekly update during PMCA Meetings	Possible	Major	High		MC
3.02		Open - not Actioned	Construction costs exceed budget target /Target Cost	• Competetive tendering not achieved due to market climate at the time • Cost Plans inaccurate due to complexity of costing civil works (as opposed to building works) * The detailed cost estimate for the construction exceeds budget	• Tender packages much high than expected • Cost saving through abandoning 1-2 priority projects * Scope reduction	Possible	Major	High	• Cost Estimates to be developed by MC during Planning phase to address Target Cost/Scope issues and contingency issues early * Reduce number of assets to keep project within budget (but compromise WQ outcome and PR) * Continuous monitoring/forecasting and reporting	Unlikely	Major	Medium		MC
									• Decision to abandon priority Asset or selection of reserve Asset rests with PMO * Wargame several scenarios to inform a plan on how and when to abandon projects (between DM1 & DM2)					GHD
3.03		Open - not Actioned	Weather impacts	Weather delay over and above that assumed time in tender program.	Project delay to critical path activities	Likely	major	High	*MC Program allowance for wet weath * requirement for project time extension to allow for float * MC's delivery methodology and programming * Tender evaluation to assess how MC will address this issue	Likely	Minor	Medium		MC
3.04		Open - not Actioned	Weather impacts on: - Environment - Health & Safety - Quality	* Wet weather events cause: - Sediment transport - Slips, trips falls and other safety risks - Damage to other Assets (from flooding and the like)	* Environmental incident * Health and safety incident * Quality issues with the Assets and surrounding Assets (non-Project)	Likely	major	High	* MC Management Plans to be prepared in accordance with Territory requirements / Stakeholder engagement * Sub-contractors to be aware of their requirements under the Contract * Adequate site supervision during Delivery Phase	Possible	major	High		MC
3.05		Open - not Actioned	Site Latent Conditions - Including Rock, Water, Poor Foundations Material or Hazardous Material and Contamination	Inadequate site investigation, underestimation or unidentified latent conditions that may pose delays to programme and cost over runs	* Delay to construction and significant cost overrun for that particular asset whilst remediating site * Triggers abandoning priority assets	Likely	Major	High	• MC to conduct adequate/detailed site investigatoins and survey during Planning phase including geotech and environmental assessments. • Cost overruns for an Asset to be balanced with savings from other Assets within the Project. * Early environmental site assessments, assessments to address extent of Asbestos Containing Material	Possible	Major	High		MC
									* Wargame of triggers for abandoning project - provide briefing to PCG with possible scenarios to manage expectations of when likely decision points will be reached	Possible	Major	High		GHD
3.06		Open - not Actioned	Additional environmental constraints on site including ecological, flora and fauna and heritage.	The existance of environmentally sensitive habitats and heritage values on site	Delay to construction programme, possible EPBC referal and potential increase in costs if action required to respond to constraints	Likely	Major	High	• MC to conduct adequate/detailed site investigations and survey during Planning phase. *DA approval • Cost overruns for an Asset to be balanced with savings from other Assets within the Project. • Abandon high environmental risk asset (base don cost and time) * EPD to advise on any EPBC requirements for the Project	Unlikely	Major	Medium		MC
3.07		Open - not Actioned	Noise, dust issues during construction	Non compliance with EMP, Inadequate consideration of noise, dust issues at site, and effects of this.	• Community complaints caused delays to program * Adverse media attention	Possible	Minor	Medium	*Noise and dust issues (and other environmental factors) to be adequately addressed in MC's EMP. *MCs comms plan	Unlikely	Minor	Low		MC
3.08		Open - not Actioned	Non-compliance with ACT standards and requirements.	Failure to address TCCS standards.	Not meeting standards requires additional work to be performed. Results in programme delays.	Possible	Moderate	Medium	*MC to be made aware of most relevant and up to date standards in RFT * MC's QA processes	Unlikely	Moderate	Low		MC
3.09		Open - not Actioned	Non-complaince with Asset Acceptance/ Assessment requirements	Failure to achieve asset acceptance across multiple sites.	Delays to project completion, rework required	Possible	Moderate	Medium	* TCCS to confirm design/construction standards/specifications for the Project * TCCS to review the design and advise on compliance * TCCS to attend user group meetings	Unlikely	Moderate	Low		TCCS
									* Regular and on-going consultation with TCCS throughout design development * MC QA Processes	Unlikely	Moderate	Low		MC
3.10		Open - not Actioned	Non-compliance with Environmental regulations	ECHMP not adequate, plans are not implemented or monitored adequately	* Adverse environmental impact * Impact on cost nad program * adverse media attention	Likely	Moderate	High	*PMCA to review the MC's EMP and EPA to approve * MC to report on Environmental issues * Site surveillance and Monitoring * MCs license *MC's QA Procedures	POssible	Moderate	Medium		MC

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3.11		Open - not Actioned	Construction Union action / Industrial relations risk.	Union action in the form of: - unsafe site - pay disputes - external industrial event impacting on site based unions	Delay to construction programme due to strike. Potential contract renegotiations if pay dispute occurs	Rare	Moderate	Low	• Project management group ensure compliance with Government construction and workplace safety policies and obligations • Recent history has increased focus of regulator • Contract requires WHS accreditation and track record • Industrial track record of developer considered as part of tender process * Local industry participation *Procurement plan	Rare	Moderate	Low		MC
3.12		Open - not Actioned	Delays or cost over runs due to subcontractor performance	subcontractor poor performance subcontractor insolvency	Re-tender, rework and/or redesign the subcontractor tender package	Unlikely	Moderate	Low	* Keep the trade packages to a realistic and manageable size * MC Trade package tender process to outline risk mitigation strategy * Applying pre-qual threshold for trade packages	Unlikely	Moderate	Low		MC
3.13		Open - not Actioned	Delay as a result of major construction defects rectification.	Quality standard is poor - major defects are identified post construction which require time and cost to address.	Delays to construction completion as a result of rectifying defects. Associated contract variations and cost overruns.	Unlikely	Moderate	Low	* MC QA Plan, monitoring and implementation • Site surveillance to provide quality advice throughgout delivery * Having key personnel involved for HP/WP	Unlikely	Moderate	Low		MC
3.14		Open - not Actioned	Workplace accident	Site not compliant with WHS rules and regulations, fatigue	* Fatality or Injury as a result of the accident * Reputational risk and programme delay proportional to magnitude of accident	Possible	Moderate	Medium	• WHS Act compliance. * MC WHS Plan • WHS Audits (ACT Active Certification, PMCA WHS inspections)	Unlikely	Moderate	Low		MC
3.15		Open - not Actioned	Site Security	Site is not secured adequately	*Vandalism (incld damage to works and theft) * Adverse media attention *Injury on site	Possible	Minor	Medium	*MC's SMP to address site security * MC and GHD's site surveillance to monitor security	possible	Minor	Medium		MC
3.16		Open - not Actioned	Building Code 2016	Change in requirements due to revision of the Building Code	* Non-compliance with legislation	Possible	Moderate	Medium	* Delivery Phase contract to include revised requirements * MC to communicate requirements in tender documents	Unlikely	Moderate	Low		MC
3.17		Open - not Actioned	Office of Federal Safety Commission	Additional requirements applicable to the Project	* Non-compliance with OFSC requirements	Possible	Moderate	Medium	* Delivery Phase contract to include revised requirements * MC to communicate requirements in tender documents	Unlikely	Moderate	Low		MC
4.00	**Operational**													
4.01		Open - not Actioned	Water Quality performance is lower than expected	* Assets are not maintained according to each individual asset requiremments/maintenance schedule	* Poor operation of assets	Likely	Moderate	High	* TCCs involvement throughout project * Correct asset assessment process followed	Unlikely	Moderate	Low		TCCS
4.02		Open - not Actioned	Resources with required skill sets and experience unavailable	• Limited or inadequate access to specialist skills • Contracted service providers are unable to provide skilled resources to meet demand expectation.	•Poor maintenance leading to damage or degradation of assets	Possible	Major	High	•Early planning on O&M requirements •Early engagement with delivery/design team •Engagement with MC on handover requirements	Unlikely	Major	Medium		TCCS
	Closed													

ACT HEALTHY WATERWAYS Stage 2

Program Risk Register

Revision: 20/12/2021

Date:	25/10/2025		Project Name:		
Ref. No.	**Risk Category**	**Risk Status**	**Risk Description**	**Risk Owner (Name)**	**Time frame**
	Occurring				
0.01		Occuring - to be treated	Project Funding	CG	Mar-22
1.00	**Planning Phase**				
1.01		Open - Actioned	Program Delay	RO	
1.02		Open - Actioned	Program delay to commencement of Delivery Phase	RO	
1.03		Open - Actioned	Program delay • Documentation and for construction drawings delayed	PW	
1.04		Open - Actioned	Loss/change of key project pers		
1.05		Open - Actioned	Design	PW	
1.06		Open - Actioned	Involvement of a large number of agencies, consultants and contractors.	RO	
1.07		Open - not Actioned	Adverse public relations	RO	
				PW	
2.00	**Early Works / Procurement**				
2.01		Open - not Actioned	Procurement of plants & filter media	PW	
2.02		Open - not Actioned	Procurement of survey, geotech & services locations	PW	
2.03		Open - not Actioned	Lack of site supervision/management across multiple concurrent sites	PW	

Ref. No.	Risk Category	Risk Status	Risk Description	Risk Owner (Name)	Time frame
3.00	**Delivery Phase**				
3.01		Open - not Actioned	Inefficient management of Contaminated sites	PW	
3.02		Open - not Actioned	Construction costs exceed budget target /Target Cost	PW	
				KE	
3.03		Open - not Actioned	Weather impacts	PW	
3.04		Open - not Actioned	Weather impacts on: - Environment - Health & Safety - Quality	PW	
3.05		Open - not Actioned	Site Latent Conditions - Including Rock, Water, Poor Foundations Material or Hazardous Material and Contamination	PW	
				KE	
3.06		Open - not Actioned	Additional environmental constraints on site including ecological, flora and fauna and heritage.	PW	
3.07		Open - not Actioned	Noise, dust issues during construction	PW	
3.08		Open - not Actioned	Non-compliance with ACT standards and requirements.	PW	
3.09		Open - not Actioned	Non-complaince with Asset Acceptance/ Assessment requirements		
				PW	
3.10		Open - not Actioned	Non-compliance with Environmental regulations	PW	

Ref. No.	Risk Category	Risk Status	Risk Description	Risk Owner (Name)	Time frame
3.11		Open - not Actioned	Construction Union action / Industrial relations risk.	PW	
3.12		Open - not Actioned	Delays or cost over runs due to subcontractor performance	PW	
3.13		Open - not Actioned	Delay as a result of major construction defects rectification.	PW	
3.14		Open - not Actioned	Workplace accident	PW	
3.15		Open - not Actioned	Site Security	PW	
3.16		Open - not Actioned	Building Code 2016	PW	
3.17		Open - not Actioned	Office of Federal Safety Commission	PW	
4.00	**Operational**				
4.01		Open - not Actioned	Water Quality performance is lower than expected		
4.02		Open - not Actioned	Resources with required skill sets and experience unavailable		
	Closed				

Risk constants and descriptors

Risk Categories

Category of Risk
General
Planning Phase
Design Approval
Construction
Operational
Uncategorised
Closed

Risk Likelihood

Likelihood	Weighting Percentages	Likelihood of risk (range)	
Rare	5%	0%	10%
Unlikely	18%	11%	25%
Possible	38%	26%	50%
Likely	63%	51%	75%
Almost certain	88%	76%	100%

Risk Likelihood Descriptors

Rating	Description	
Rare	May occur but only in exceptional circumstances	1 in 10,000 – 100,000
Unlikely	Could occur but doubtful	1 in 1,000 – 10,000
Possible	Might occur at some time in the future	1 in 100 – 1,000
Likely	Will probably occur	1 in 10 - 100
Almost Certain	Is expected to occur in most circumstances	>1 in 10

Risk Consequence

Consequence
Insignificant
Minor
Moderate
Major
Catastrophic

Risk Consequence Descriptors

	Insignificant	Minor	Moderate	Major	Catastrophic
Assets	Loss or destruction of assets up to $2,000	Loss or destruction of assets $2,000 to $10,000	Loss or destruction of assets $10,000 to $100,000	Loss or destruction of assets $100,000 to $5M	Loss or destruction of assets greater than $5M
Compliance/ regulation	Non-compliance with work policy and standard operating procedures which are not legislated or regulated	Numerous instances of non-compliance with work policy and standard operating procedures which are not legislated or regulated	Non-compliance with work policy and standard operating procedures which require self reporting to the appropriate regulator and immediate rectification.	Restriction of business operations by regulator due to non-compliance with relevant guidelines and / or significant non-compliance with policy and procedures which threaten business delivery.	Operations shut down by regulator for failing to comply with relevant guidelines and /or significant non-compliance with internal procedures could result in failure to provide business outcomes and service delivery.
People	sw	Minor injury or First Aid Treatment Case.	Serious injury causing hospitalisation or multiple medical treatment cases.	Life threatening injury or multiple serious injuries causing hospitalisation.	Death or multiple life threatening injuries.
Environment	Limited effect to something of low significance	Transient, minor effects	Moderate, short-term environmental harm	Significant, medium-term environmental harm	Long term environmental harm
Financial	1% of Budget or <$5K	2.5% of Budget or <$50K	> 5% of Budget or <$500K	> 10% of Budget or <$5M	>25% of Budget or >$5M
Products and Services	No disruption to services	Minor disruption to services for up to 1 month	Total cessation of service for up to 1 days and subsequent disruption of 1 to 2 months	Total cessation of service for up to 7 days and subsequent disruption of 2 to 3 months	Total cessation of service for more than 1 week and disruption over subsequent months involving a major facility
Technology	Interruption to electronic records and data access less than ½ day.	Interruption to electronic records and data access ½ to 1day	Significant interruption (but not permanent loss) to data and electronic records access, lasting 1 day to 1 week	Complete, permanent loss of some electronic records and/or data, or loss of access for more than one week	Complete, permanent loss of all electronic records and data
Reputation & Image	Internal Review	Scrutiny required by internal committees or internal audit to prevent escalation.	Scrutiny required by external committees or ACT Auditor General's Office, or inquest, etc.	Intense public, political and media scrutiny. E.g.: front page headlines, TV, etc.	Assembly inquiry or Commission of inquiry or adverse national media.
Cultural & Heritage	Low-level repairable damage to commonplace structures	Mostly repairable damage	Permanent damage to items of cultural significance	Significant damage to structures or items of cultural significance	Irreparable damage to highly valued items of cultural significance
Business Process & Systems	Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule.	Policy procedural rule occasionally not met or services do not fully meet needs.	One or more key accountability requirements not met. Inconvenient but not client welfare threatening.	Strategies not consistent with Government's agenda. Trends show service is degraded.	Critical system failure, bad policy advice or ongoing non-compliance. Business severely affected.
Business Process & Systems	Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule.	Policy procedural rule occasionally not met or services do not fully meet needs.	One or more key accountability requirements not met. Inconvenient but not client welfare threatening.	Strategies not consistent with Government's agenda. Trends show service is degraded.	Critical system failure, bad policy advice or ongoing non-compliance. Business severely affected.

Risk Matrix

		Rare	Unlikely	Possible	Likely	Almost certain
		1	2	3	4	5
Catastrophic	1	High	High	High	Extreme	Extreme
Major	2	Medium	Medium	High	High	Extreme
Moderate	3	Low	Low	Medium	High	High
Minor	4	Very Low	Low	Medium	Medium	Medium
Insignificant	5	Very Low	Very Low	Low	Low	Low

ACT HEALTHY WATERWAYS
Risk Analysis Matrix - Level of Risk

LIKELIHOOD		Consequences				
		1. Negligible	2. Minor	3. Moderate	4. Major	5. Severe
	A. Almost certain	Low	Medium	High	Extreme	Extreme
	B. Likely	Low	Medium	Medium	High	Extreme
	C. Possible	Low	Medium	Medium	High	High
	D. Unlikely	Very Low	Low	Low	Medium	High
	E. Rare	Very Low	Very Low	Low	Medium	High

Risk Descriptors

Recommended Actions for Risk Levels	
VL/L = Very Low/Low	To be noted – no action is needed unless grading increases over time.
M = Medium	Mitigation actions to reduce the likelihood and/or consequence to be identified and costed for possible action if funds permit.
H = High	Mitigation actions to reduce the likelihood and/or consequence to be identified and Implemented during the project implemented during project execution
E = Extreme	Mitigation actions to reduce the likelihood and/or consequence to be identified and Implemented as soon as the project commences.