RICHARD CROOKES CONSTRUCTIONS

Appendix 4 Environmental Risk Matrix

Planning & Design

RCC Objectives and Targets / KPIs:

<3 Environmental Notices issued by EPA or Local Council annually
Action community complaints within 24 hours, no repeat complaints for same issue
Investigate non effective operational controls / environmental incidents and report

Environmental Aspect - also consider if any legislation applies to activity or environmental aspect. See Intranet Legal and Other Requirements Table

Activity, Product or Service	Assessment of Significant Environmental Impact (no controls) Refer Form 21.5	1 dust	2 odour	3 greenhouse / thermal	4 stormwater	5 Adjoining waterways	6 sewer	7 land	8 resources /water	9 resources/ materials	10 resources/ energy	11 noise	12 vibration	13 community concerns/ occup. satisfaction	14 flora	15 fauna	16 waste / chemicals	17 landfilling	18 indoor air quality	19 traffic	20 aboriginal heritage	21 European heritage	Impact - No Controls. Refer to EMPs or Operational Controls Table Appendix 4 of PMP		
Green Star building - Four, five or six star ratings for design, construction & operation of commercial buildings	likelihood			a																			3. global warming	#N/A	#N/A
	consequence			4																			#N/A	#N/A	#N/A
	risk			1					#N/A	#N/A	#N/A			#N/A	#N/A	#N/A	#N/A		#N/A	#N/A			#N/A	#N/A	
	Signif y=yes, n=no			**Y**					**#N/A**	**#N/A**	**#N/A**			**#N/A**	**#N/A**	**#N/A**	**#N/A**		**#N/A**	**#N/A**			#N/A	#N/A	
Part J of BCA for commercial buildings (thermal - building fabric, ext.glazing, building sealing, air movement, light & power, hot water supply etc)	likelihood																						#N/A		
	consequence																						#N/A		
	risk			#N/A						#N/A	#N/A												#N/A		
	Signif y=yes, n=no			**#N/A**						**#N/A**	**#N/A**														
AGBR for office buildings (greenhouse emissions)	likelihood																						#N/A		
	consequence																								
	risk			#N/A																					
	Signif y=yes, n=no			**#N/A**																					
BASIX for all new dwellings (water & energy)	likelihood																						#N/A		
	consequence																						#N/A		
	risk			#N/A	#N/A				#N/A		#N/A												#N/A		
	Signif y=yes, n=no			**#N/A**	**#N/A**				**#N/A**		**#N/A**												#N/A		
Contaminated Land & Remediation Action Plan	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	
	risk	###	#N/A		#N/A	#N/A						###	#N/A	#N/A			#N/A	#N/A					#N/A	#N/A	
	Signif y=yes, n=no	**###**	**#N/A**		**#N/A**	**#N/A**						**###**	**#N/A**	**#N/A**			**#N/A**	**#N/A**					#N/A	#N/A	
Acid Sulphate Soils	likelihood																						#N/A	#N/A	
	consequence																						#N/A	#N/A	
	risk		#N/A		#N/A	#N/A						###	#N/A	#N/A			#N/A	#N/A					#N/A	#N/A	
	Signif y=yes, n=no		**#N/A**		**#N/A**	**#N/A**						**###**	**#N/A**	**#N/A**			**#N/A**	**#N/A**					#N/A		
Local Govt. Policy for Waste Minimisation in new developments	likelihood																						#N/A		#N/A
	consequence																						#N/A		
	risk																#N/A	#N/A							
	Signif y=yes, n=no																**#N/A**	**#N/A**						#N/A	
Any site specific DA conditions	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	#N/A
	risk	###			#N/A	#N/A						###	#N/A		#N/A	#N/A	#N/A			#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Signif y=yes, n=no	**###**			**#N/A**	**#N/A**						**###**	**#N/A**		**#N/A**	**#N/A**	**#N/A**			**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	

RICHARD CROOKES CONSTRUCTIONS

Appendix 1 Environmental Risk Matrix Construction

Project: Edmondson Par

Developed by:

RCC Objectives and Targets / KPIs:
<3 Environmental Notices issued by EPA or Local Council annually
Action community complaints within 24 hours, no repeat complaints for same issue
Investigate non effective operational controls / environmental incidents and report

RICHARD CROOKES CONSTRUCTIONS

Environmental Aspect - also consider if any legislation applies to activity or environmental aspect. See Intranet Legal and Other Requirements Table

Activity, Product or Service Strike out non relevant items	Assessment of Significant Environmental Impact (no controls)	1 dust	2 odour	3 greenhouse	4 stormwater	5 Adjoining waterways	6 sewer	7 land	8 resources/water	9 resources/materials	10 resources/energy	11 noise	12 vibration	13 community concerns	14 flora	15 fauna	16 waste / chemcials	17 landfilling	18 litter	19 traffic	20 aboriginal heritage	21 European heritage	Impact - No Controls. Refer to EMPs or Operational Controls Table Appendix 4 of PMP		
Site Set Up	likelihood	l					a																1. photochemical smog, visual amenity	#N/A	
	consequence						3																#N/A	#N/A	
	risk	1			#N/A	#N/A	1								###	#N/A				#N/A			#N/A	#N/A	
	Signif y=yes, n=no	**Y**			**#N/A**	**#N/A**	**Y**								**###**	**#N/A**				**#N/A**			6. pollution of aquatic ecosystem		
Demolition	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	#N/A
	risk	###			#N/A							#N/A	#N/A	#N/A			#N/A	#N/A	#N/A	#N/A		#N/A	#N/A	#N/A	
	Signif y=yes, n=no	**###**			**#N/A**							**###**	**#N/A**	**#N/A**			**#N/A**	**#N/A**	**###**	**#N/A**		**#N/A**	#N/A	#N/A	
Hazardous Materials Removal - Asbestos, Lead Paint, SMF	likelihood																						#N/A	#N/A	
	consequence																						#N/A	#N/A	
	risk	###			#N/A									#N/A			#N/A	#N/A	#N/A			#N/A	#N/A	#N/A	
	Signif y=yes, n=no	**###**			**#N/A**									**#N/A**			**#N/A**	**#N/A**	**###**			**#N/A**	#N/A	#N/A	
Site Stripping & Bulk Earthworks, Transport of spoil, Importation of fill	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	#N/A
	risk	###		#N/A	#N/A	#N/A					#N/A	#N/A	#N/A	#N/A	###	#N/A		#N/A		#N/A	#N/A		#N/A	#N/A	#N/A
	Signif y=yes, n=no	**###**		**#N/A**	**#N/A**	**#N/A**					**#N/A**	**###**	**#N/A**	**#N/A**	**###**	**#N/A**		**#N/A**		**#N/A**	**#N/A**		#N/A	#N/A	#N/A
Remediation	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	#N/A
	risk	###	#N/A	#N/A	#N/A	#N/A						#N/A	#N/A	#N/A			#N/A	#N/A		#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Signif y=yes, n=no	**###**	**###**	**#N/A**	**#N/A**	**#N/A**						**###**	**#N/A**	**#N/A**			**#N/A**	**#N/A**		**#N/A**	**#N/A**	**#N/A**	#N/A	#N/A	#N/A
Dewatering	likelihood																						#N/A	#N/A	
	consequence																						#N/A		
	risk	###			#N/A	#N/A	#N/A		#N/A														#N/A		
	Signif y=yes, n=no	**###**			**#N/A**	**#N/A**	**#N/A**		**#N/A**														#N/A		
Detailed excavation / In ground Services	likelihood																						#N/A	#N/A	
	consequence																						#N/A	#N/A	
	risk	###			#N/A	#N/A						#N/A					#N/A	#N/A					#N/A		
	Signif y=yes, n=no	**###**			**#N/A**	**#N/A**						**###**					**#N/A**	**#N/A**					#N/A		
Foundations - piering / anchors	likelihood																						#N/A	#N/A	
	consequence																						#N/A		
	risk	###			#N/A							#N/A	#N/A	#N/A									#N/A		
	Signif y=yes, n=no	**###**			**#N/A**							**###**	**#N/A**	**#N/A**									#N/A		
Foundations - piling	likelihood																						#N/A	#N/A	
	consequence																						#N/A	#N/A	
	risk	###			#N/A	#N/A						#N/A	#N/A	#N/A			#N/A	#N/A					#N/A	#N/A	
	Signif y=yes, n=no	**###**			**#N/A**	**#N/A**						**###**	**#N/A**	**#N/A**			**#N/A**	**#N/A**					#N/A	#N/A	

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Appendix 1 Environmental Risk Matrix

Construction

Project: Edmondson Par

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Structure - formwork, reinforcement, concrete & curing, post tensioning	likelihood																						#N/A	#N/A	
	consequence																						#N/A		
	risk				#N/A	#N/A						#N/A	#N/A				#N/A			#N/A			#N/A		
	Signif y=yes, n=no				**#N/A**	**#N/A**						**###**	**#N/A**				**#N/A**			**#N/A**			#N/A		
Wet trades: Blockwork, brickwork, render, waterproof membranes	likelihood																						#N/A		
	consequence																						#N/A		
	risk				#N/A					#N/A							#N/A					#N/A	#N/A		
	Signif y=yes, n=no				**#N/A**					**#N/A**							**#N/A**					**#N/A**	#N/A		
Services - hydraulic, electrical, mechanical, incl. cable chasing, concrete coring	likelihood																						#N/A	#N/A	
	consequence																						#N/A	#N/A	
	risk	###			#N/A							#N/A					#N/A		#N/A				#N/A	#N/A	
	Signif y=yes, n=no	**###**			**#N/A**							**###**					**#N/A**		**###**				#N/A		
Roofing	likelihood																						#N/A		
	consequence																						#N/A		
	risk									#N/A		#N/A					#N/A		#N/A				#N/A		
	Signif y=yes, n=no									**#N/A**		**###**					**#N/A**		**###**				#N/A		
Finishes - **Internal:** partitions, ceilings, joinery, door hanging **Wet trades:** Gyprocking, painting, tiling, floor finishes,	likelihood																						#N/A	#N/A	
	consequence																						#N/A		
	risk									#N/A		#N/A	#N/A				#N/A		#N/A				#N/A		
	Signif y=yes, n=no									**#N/A**		**###**	**#N/A**				**#N/A**		**###**				#N/A		
External works - pavements, landscaping, lighting	likelihood																						#N/A	#N/A	#N/A
	consequence																						#N/A	#N/A	#N/A
	risk	###			#N/A	#N/A			#N/A			#N/A	#N/A		###		#N/A	#N/A		#N/A		#N/A	#N/A	#N/A	#N/A
	Signif y=yes, n=no	**###**			**#N/A**	**#N/A**			**#N/A**			**###**	**#N/A**		**###**		**#N/A**	**#N/A**		**#N/A**		**#N/A**	#N/A		

	G	H	I
		aspect	significant = y = impact
	column G must be alphabetically sorted else result will be flawed !		
	ah	aboriginal heritage	20. loss of cultural artefacts
	aw	adjacent waterways	5. pollution of ecosystems
	co	community concern:	13. stakeholder interactions
	du	dust	1. photochemical smog, visual amenity
	eh	european heritage	21. loss of cultural artefacts, buildings, structures
	fa	fauna	15. loss of threatened species/protected species
	fl	flora	14. loss of habitat
	gr	greenhouse	3. global warming
	ieq	indoor air quality	18. occupiers amenity
	la	land	7. pollution/land degredation
	lan	landfilling	17. reduction in landfill space, loss of recyclables
	li	litter	18. visual amenity, pollution
	no	noise	11. community disturbance
	od	odour	2. community impacts
	ree	resources/energy	10. use of scare/non renewable resources
	rem	resources/materials	9. use of scare/non renewable resources
	rew	resources/water	8. use of scarce/non renewable resources
	se	sewer	6. pollution of aquatic ecosystem
	st	stormwater	4. pollution of aquatic ecosystem
	tr	traffic	19. community disturbance, mud tracking on public ro
	vi	vibration	12. human discomfort, damage to buildings
	wa	waste/chemicals	16. non efficent use of materials, chemical pollution

Likelihood		consequence	
almost certain	1	insignificant	
likely	2	minor	
moderate	3	moderate	
unlikely	4	major	
rare	5	catastrophic	

risk	consequence				
Likelihood	insignificant	Minor	Moderate	Major	Catastrophic
almost certain	a1	a2	a3	a4	a5
likely	l1	l2	l3	l4	l5
moderate	m1	m2	m3	m4	m5
unlikely	u1	u2	u3	u4	u5
rare	r1	r2	r3	r4	r5

risk	consequence				
Likelihood	insignificant	Minor	Moderate	Major	Catastrophic
almost certain	2	2	1	1	1
likely	2	2	2	1	1
moderate	3	2	2	1	1
unlikely	3	3	2	2	1
rare	3	3	2	2	2

Env risk score	1	significant
	2	significant
	3	not significant
OHS risk score	1	High
	2	Medium
	3	Low

r1	a1	2
	a2	2
3	a3	1
	a4	1
	a5	1
	l1	2
	l2	2
	l3	2
	l4	1
	l5	1
	m1	3
	m2	2
	m3	2
	m4	1
	m5	1
	r1	3
	r2	3
	r3	2
	r4	2
	r5	2
	u1	3
	u2	3
	u3	2
	u4	2
	u5	1

aca	aca	5
	ain	2
5	ama	5
	ami	2
	amo	4
	lca	5
	lin	1
	lma	5
	lmi	2
	lmo	3
	pca	5
	pin	1
	pma	4
	pmi	2
	pmo	3
	rca	3
	rin	1
	rma	2
	rmi	1
	rmo	1
	uca	4
	uin	1
	uma	3
	umi	1
	umo	2