Project / Long Bay	roject / Long Bay Goal New Company Name: Multiplex Constructions Revised I Kent Street, Sydney, 2000										
Scope of Works for this Job: This Environmental Risk Assessment forms part of the Environmental Management Plan for the construction of the Long Bay Goal. In particular, this Environmental Risk Assessment addresses the work method and responsibilities for establishing a site specific Environmental Management Plan and for the Plan's implementation.											
Work Activity or The activities conc actual and potentia	Tasks Co ducted on al activitie	the site version of the si	y this ERA: will include o eir environm	demolition, nental aspe	excavatio cts and im	n and construction of both pacts.	the Long Bay Goal and	the Fore	ensic Hospital. The Environmental Mana	agement Plan will address all	All Sections
Expected Start Expected Completion Person Responsible Prepare Date: TBA Date: TBA Position: Site Manager Person					ared by: on: Jo Drummond	Date: 6 th March 2006	nplete A				
Specify Regulations: Environmentally Hazardous Chemicals Act 1985 Brad Smith Brad Smith Protection of the Environment Administration Act and Regulations Brad Smith Ken Mc Neil Protection of the Environment Operations Act and Regulations Resource and Recovery Act 2001 Brad Smith Environmental Planning and Assessment Act 1979 Heritage Act 1997 Icocal Government Act 1993 Occupational Health and Safety Act Soil Conservation Act 1983 Icocal Government Act 1983						Date:	Must Co				
		Ri	sk Ranki	ing Table)			R	lisk = Probability x Conseque	nce	
			Probabilit	y		The Hazard Rating	Probability		Consequence		^
Consequence	Α	В	С	D	E	determine the degree			Environment		oul
1	1	2	4	7	11	of risk associated with a particular	A: Common or repeatin occurrence	ng	1. Long Term damage, catastrophe, to detrimental effect and huge financial	toxic release off site with loss, environmental disaster.	nation
2	3	5 9	8	12 17	16 20	environmental risk	B: Known to occur or has happened		2. Soil, water air adversely affected ir financial loss.	n long term, economic and	inforr
4	10	14	18	21	23	High Risk = $1 \text{ to } 5$ Med Risk = $6 \text{ to } 16$ Low Risk = $17 \text{ to } 25$	C: Could occur or hear	rd of it	3. Soil, water air adversely affected in	n short term	dance
5	15	19	22	24	25		D: Not likely to occur		4. Could affect environment but releat on site.	se contained and managed	Gui
							E: Practically impossib	le	5. No environment effects, no eco sy	stem harm, no contamination.	

No	Activity	Aspect	Impact	Actions / Control Measure	Risk Score	Action By
Break th Each sta logical s commen handove	the job down into stages. Suge should progress in a Suge equence starting from the Cement of the work to the Suger.	Identify and nominate the hazards associated with each step. Examine such areas as environmental, which could lead to an incident.		Specify what action/procedures undertaken to eliminate or minimize the hazards, the risk of injury / damage, and or potential severity factors. Including the measure to be taken to ensure the proposed controls are maintained.	Assess the risk score 1 – 25 with actions / control measures in place.	Specify person responsible.
1.0	Demolition: The forensic	Hospital will undergo on -site demolit	ion			
1.1	Demolition dust	Generation of dust.	Nuisance to nearby property owners, aesthetic impact visibility impact, air quality.	Conduct regular random checks. Spray earthworks, roads and other surfaces as required to reduce dust Complete weekly environmental checklist. Minimise dust generation in windy conditions Ensure all vehicles carrying dust-generating materials are covered. Modify operations under windy conditions	21 = Low Risk	Sub- contractor & Site Manager
1.2	Demolition noise	Noise nuisance	Annoyance to local community	All machinery will be in good operating order with standard noise mufflers fitted to ensure excessive noise is not generated. Work activities are to be within normal hours of 0700 to 1800 Monday to Saturday shall be staged to avoid compounding noise. Noise monitoring will be established in response to complaints	13 = Medium	Sub- contractor & Site Manager
1.3	Demolition waste	Generation and/or inappropriate disposal of wastes.	Waste to landfill, Health hazards Contamination of soil, groundwater, and surface water.	No liquid or solid waste to be buried onsite. Segregation and disposal of waste originating from the project. Engage licensed contractors to collect waste. Littering prohibitions. Waste minimization according to the site specific WMP and Enforce subcontractor's contractual agreements on disposal	21 = Low Risk	Sub contractor & Site Manager
1.4	Plant refueling	Discharge of hydrocarbons.	Contamination of soils, groundwater & water courses	Preparation of appropriately bunded storage area for refuelling authorised vehicles only onsite. To reduce the impact of a spill, minimum volumes of fuel will be kept onsite. Ensure sub-contractor label's waste oil and store in a bunded area on-site for collection by a licensed disposal contractor. Report all hydrocarbon spills greater than 20 litres to council.	13 = Medium	Sub contractor & Site Manager
1.5	Traffic movement	Erosion and Sediment control	Mud on roads Litter in storm water	Sweep Roads Cover storm water drains	14= Medium	Sub contractor & Site Manager

No	Activity	Aspect	Impact	Actions / Control Measure	Risk Score	Action By
2.0	Excavation: Both the For	rensic Hospital and the Long Bay Goal	sites will undergo the excavation of so	il.		
2.1	Movement of excavation traffic on and off site.	Construction traffic movements	Increased potential for crashes and delays and endangering community using adjacent roadways.	Detailed traffic management plan conforming to AS 1742.3	21 = Low Risk	Foreman & Sub- contractor
2.7	Plant refueling	Discharge of hydrocarbons.	Contamination of soils, groundwater, water courses	Preparation of appropriately bunded storage area for refuelling authorised vehicles only onsite. To reduce the impact of a spill, minimum volumes of fuel will be kept onsite. Ensure sub-contractor label's waste oil and store in a bunded area onsite for collection by a licensed disposal contractor. Report all hydrocarbon spills greater than 20 litres to council.	5=High Risk	Site Manager & Sub- contractor
2.3	Dewatering the site	Pumping turbid water into stormwater	Water pollution	Monitor water for turbidity and PH before pumping out, Record in site inspection report, Visually check pump out area for turbidity, Test water weekly through a certified laboratory	6= Medium Risk	Foreman & Sub- contractor
2.4	Excavation dust	Generation of dust.	Nuisance to nearby property owners, aesthetic impact visibility impact, air quality.,	Conduct random checks. Spray earthworks, roads and other surfaces as required to reduce dust Weekly environmental checklist. Ensure all vehicles carrying dust generating materials are covered. All construction plant and equipment with access to the site will be properly maintained. Mufflers, plant and machinery will be in good working order. Equipment emitting visible smoke while operational on site will be taken out of service and corrected to ensure smoke is no longer visible. Trucks transporting materials on behalf of Multiplex, such as sand, soil, landscape materials and gravel will have covered loads and tailgates secured. Cleaning of footpaths will be carried out regularly Keep road ways clean Gates to be fitted with shade cloth The site will be hosed down when necessary	21 = Low Risk	Site Manager & Sub- contractor
2.5	Excavation Noise	Noise nuisance	Annoyance to local community	All machinery will be in good operating order with standard noise mufflers fitted to ensure excessive noise is not generated. Work activities are to be within normal hours of 0700 to 1800 Monday to Saturday shall be staged to avoid compounding noise. Noise monitoring will be established in response to complaints	13 = Medium Risk	Site Manager & Sub- contractor
2.6	Storage of hazardous materials	An accidental spill.	Contamination of soils, groundwater, water courses	Reparation of appropriately bunded storage area for refuelling authorised vehicles only onsite. To reduce the impact of a spill, minimum volumes of fuel will be kept onsite. All waste oil will be labelled and stored in a bunded area onsite for collection by a licensed disposal contractor.	6= Medium Risk	Foreman & Sub- contractor

No	Activity	Aspect Impact Actions / Control Measure		Risk Score	Action By	
2.7	Excavation of soil	Contaminated soil	Removal of contaminated soil	Conduct an assessment of soil before removal, Undertake Statement of environmental audit where required by DA/BA to establish degree of contamination. All site assessment is to be in accordance with: ANZECC guidelines for Assessment and Management of Contaminated Sites (1992) or as specified by the EPA -NSW. Treatment and disposal of contaminated waste will be according to methods approved by the EPA. Waste transport certificates must be completed and submitted – All trucks will be checked to verify the appropriate documentation is provided with each load of contaminated material. Documentation should include details of what area material has been excavated from and where it is being transported. Establish a grid reference on site for this purpose. Workers involved with the excavation or transportation of Prescribed Waste will be informed of the risks posed by the material and appropriate handling techniques. In the event that acid sulphate materials are encountered during the works all works with the potential to disturb the materials are to cease and the authority is to be notified A satisfactory management plan will be required before recommencing works.	13 = Medium	Foreman& Sub- contractor
2.8	Removal of soil	Potential erosion and sediment into storm water	Contamination of turbid water to storm water	Install sediment fences around upper parts of the site boundary and other areas where sediment has the potential to move. Install sediment fences around the toe of stockpiles where material from the stockpile has the potential to move. Ensure stockpiles of materials are located away from areas where it could potentially move, otherwise surround sediment controls. Retain documentary evidence of disposal off site. Install rock weirs only on fast flowing areas to minimise the velocity of overland stormwater flow. Haul roads shall be installed with gravel / road base where required to minimise dust production. Install shaker bay at site entry or as required by local council. Sweep roads if mud is visible	14= Medium Risk	Foreman& Sub- contractor
2.9	Removal of soil	Potential for both ground water and rain water to pool on the site	Contamination of water to storm water	Where possible direct all surface waters to a central pond for treatment. Any seepage or rainwater collected on-site during construction shall not be pumped to the street stormwater system unless Council gives separate approval in writing Treat all ponded stormwater to reduce turbidity and allow settling Ensure the storm water's pH is between 6.5 and 8.5 and the turbidity is below 20NTU Provide and maintain silt traps / fences around the perimeter of the site.	14= Medium Risk	Foreman& Sub- contractor

No	Activity	Aspect Impact		Actions / Control Measure	Risk Score	Action By
2.10	Removal of soil from the site	Generation and /or inappropriate disposal of wastes.	Contamination of soil, groundwater, and surface water. Health hazards.	No liquid or solid waste to be buried onsite. All materials removed must have disposal dockets submitted	21 = Low Risk	Foreman& Sub- contractor
2.11	Removal of soil	Discovery of Cultural and Heritage Items	Damage to artifacts	Site environmental induction to address likelihood of discovery of archaeological/cultural artefacts. Areas where cultural values are identified shall be fenced off or marked to ensure the site is not disturbed. Excavation personnel to maintain watchful eye over ground penetration points. Where archaeological/cultural artefacts are discovered, personnel are to cease work in the subject area and effect practical protection measures. If any archaeological relics are uncovered during the course of the work then all works shall cease immediately in the area and the NSW Heritage Office shall be contacted/	18 = Low Risk	Site Manager & Sub- contractor
3	Construction: Construct	ion activities will include the building of	f a Forensic Hospital and an extension	n to Long Bay Goal		•
3.1	Steel Fixing	Wasting the secondary resource - metal	Secondary resource to landfill Noise from grinding	Separation of waste on site and send for reprocessing PPE and work to hours	14 = Low Risk	Site Manager & Sub- contractor
3.2	Formwork	Wasting the secondary resource - Timber	Secondary resource to landfill	Separation of waste on site and send for re-use or reprocessing	14 = Low Risk	Foreman & Sub- contractor
3.3	Concrete Pour	Concrete waste in storm water drains Wasting the secondary resource – Aggregate	Water pollution Secondary resource to landfill	Concrete trucks to have bunded area and the stromwater drains cover before commencement, No washing out of concrete truck on site	3= High Risk	Site Manager & Sub- contractor
3.4	Block Laying	Wasting the secondary resource – Aggregate	Secondary resource to landfill	Separation of waste on site and send for reprocessing	14 = Low Risk	Foreman & Sub- contractor
35	Wet Trades: Painting, Plastering, Grouting	Hazardous Chemical to sewer Liquid waste in storm water drains	Pollution to sewer system Pollution to stormwater system	Plastering and grouting contractors will use washout area on each level Paint contractors are to use their own triple rinse system. If unavailable use Multiplex three drum rinse system	9= Medium Risk	Foreman & Sub- contractor
3.6	Electrical	Waste generation	Secondary resource to landfill	Reuse secondary resources like copper wire Use stackable, re-useable returnable packaging	14 = Low Risk	Foreman & Sub- contractor
3.7	Carpentry	Waste generation Noise	Secondary resource to landfill Noise pollution	Order cut to size materials Separation of waste on site and send for re-use or reprocessing Work to hours, ensure equipment is noise tested	14 = Low Risk	Foreman & Sub- contractor
3.8	Plumbing	Potential erosion and sediment into storm water	Contamination of turbid water to storm water	During excavation for pipe works: Install sediment fences around upper parts of the site boundary and other areas where sediment has the potential to move. Install sediment fences around the toe of stockpiles where material from	13 = Medium	Foreman& Sub- contractor

		Waste generation	Generation of PVC off-cuts	the stockpile has the potential to move. Ensure stockpiles of materials are located away from areas where it could potentially move, otherwise surround sediment controls. Retain documentary evidence of disposal off site. Install rock weirs only on fast flowing areas to minimise the velocity of overland stormwater flow. Haul roads shall be installed with gravel / road base where required to minimise dust production. Install shaker bay at site entry or as required by local council. Sweep roads if mud is visible Use alternative to PVC where possible	continued	continued
3.9	Landscaping	Potential erosion and sediment into storm water	Contamination of turbid water to storm water	Install sediment fences around upper parts of the site boundary and other areas where sediment has the potential to move. Install sediment fences around the toe of stockpiles where material from the stockpile has the potential to move. Ensure stockpiles of materials are located away from areas where it could potentially move, otherwise surround sediment controls. Retain documentary evidence of disposal off site. Install rock weirs only on fast flowing areas to minimise the velocity of overland stormwater flow. Haul roads shall be installed with gravel / road base where required to minimise dust production. Install shaker bay at site entry or as required by local council. Sweep roads if mud is visible Waste diverted from landfill diverted for reuse or reprocessing	13 = Medium	Foreman& Sub- contractor

JSEA Consultation and Sign off in regard to acceptance of proposed work method and associated responsibilities								
Name Signature	Ι	Date	Name	Signature	Date			

Environmental Certification Certification:

Multiplex Constructions consider the ERA is compliant with the ISO 14,001 Environmental Accreditation which Multiplex Constructions has attained and also the Environmental

Review changes for next revision of ERA: