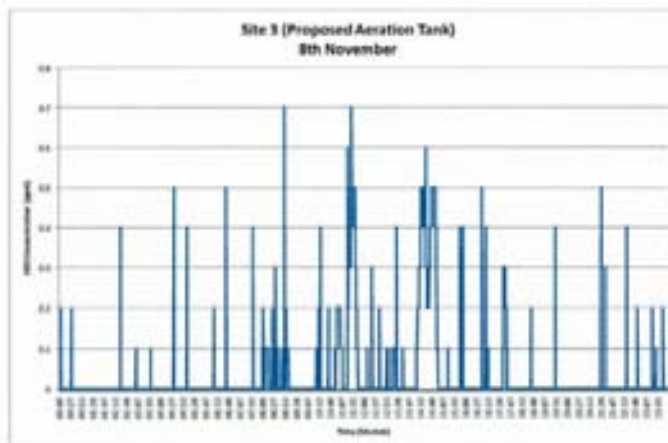
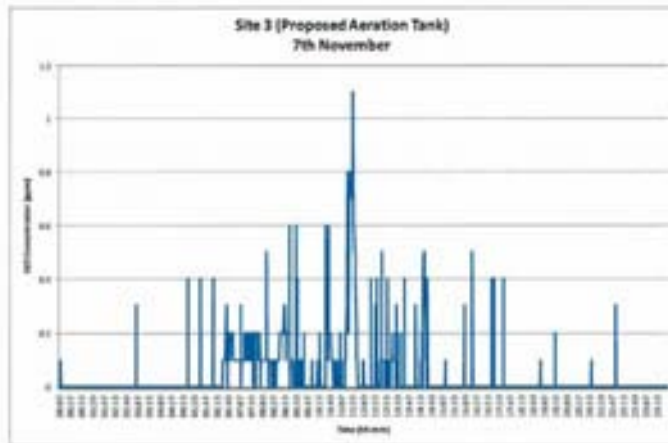


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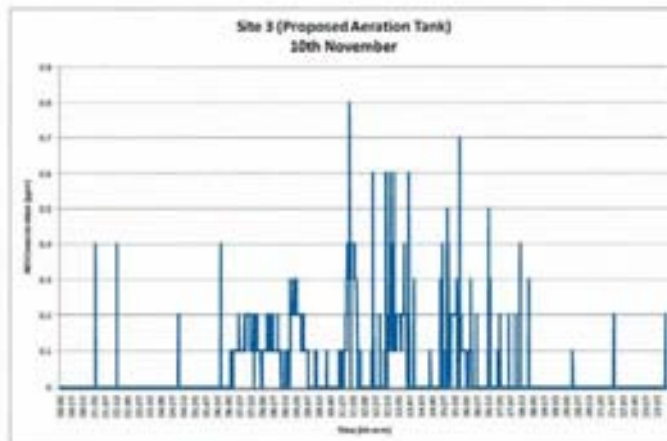
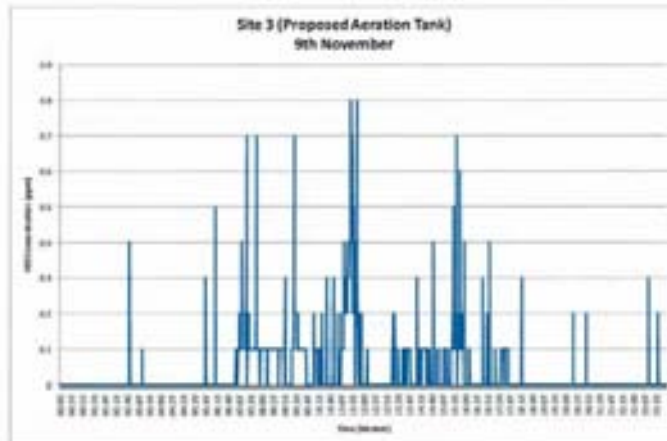
A.3 Aeration Tank No.3



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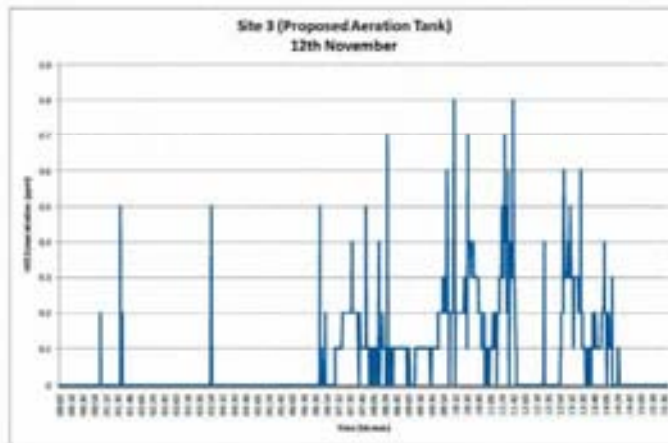
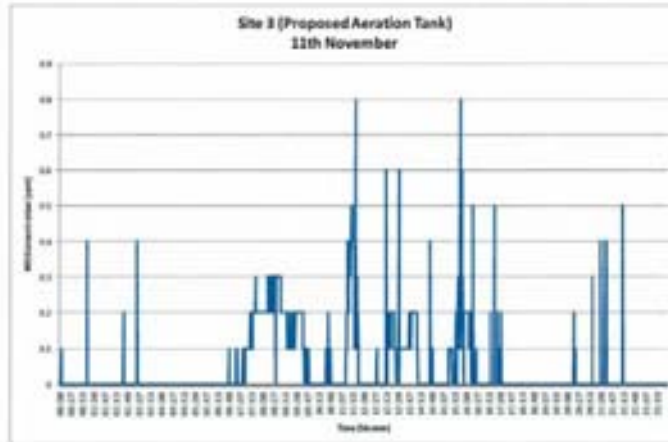
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Odour Assessment

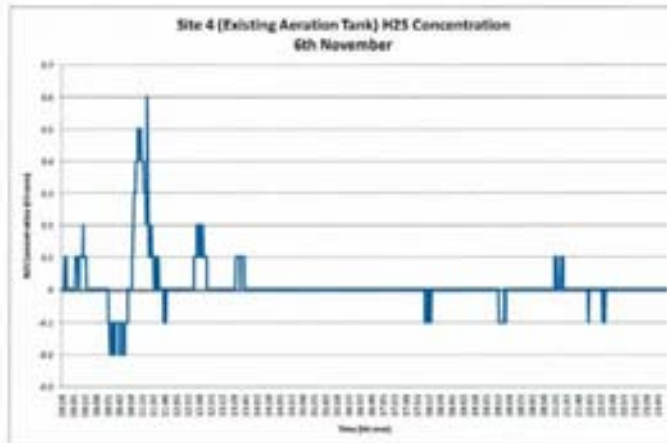


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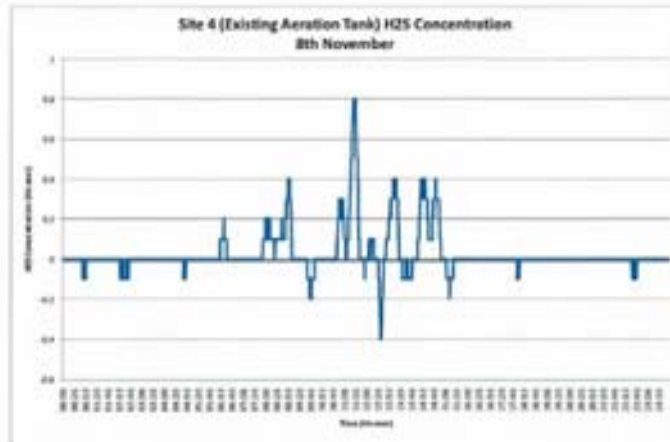


A.4 Aeration Tank No. 1



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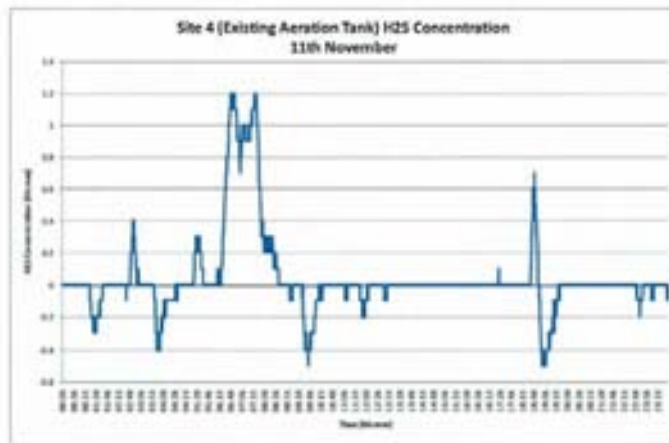
Odour Assessment



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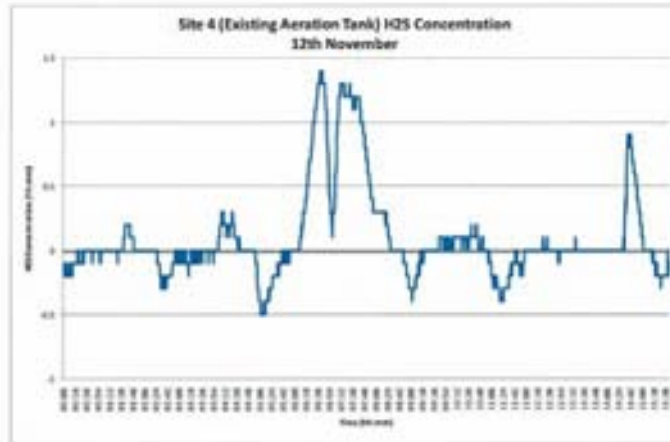
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Odour Assessment



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Odour Assessment



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Odour Assessment



## Appendix B SEMA Odour Measurement Report

### B.1 Olfactometry Report

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Odour Assessment

**B.2 VOC Measurement Results vs Criteria**

Compound	Source										Criteria (DEC 2005)	Averaging Period	Comment
	Sludge Lagoon		Sludge Dewatering		Dry weather Pond		Sludge Dewatering		Dry weather Pond				
	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3			
Hydrogen Sulphide	0.012	0.0168	0.003	0.0042	0.003	0.0042	0.003	0.0042	0.003	0.0042	0.05138	1 hour	For urban areas
Carbonyl Sulphide	0.014	0.0345	0.003	0.0074	0.006	0.0148	0.006	0.0148	0.006	0.0148	-	-	
Sulphur Dioxide	0.002	0.00528	0.003	0.00789	0.003	0.00789	0.006	0.0158	0.006	0.0158	0.712	10 minutes	
											0.57	1 hour	
											0.228	24 hours	
											0.06	Annual	
Methyl mercaptan	<0.0002	<0.000395	<0.0032	<0.000395	<0.0002	<0.000395	<0.0002	<0.000395	<0.0002	<0.000395	0.00046	1 hour	
Ethyl mercaptan	0.002	0.0051	0.006	0.0153	0.006	0.0153	<0.0006	<0.00153	<0.0006	<0.00153	-	-	
Dimethyl Sulphide	0.004	0.0102	<0.0033	<0.000765	<0.0033	<0.000765	<0.0003	<0.000765	<0.0003	<0.000765	-	-	
Dimethyl disulphide	0.009	0.0348	0.005	0.0183	0.005	0.0183	0.005	0.0183	0.005	0.0183	-	-	
Carbon disulphide	<0.0003	<0.000938	<0.0033	<0.000938	<0.0033	<0.000938	<0.0003	<0.000938	<0.0003	<0.000938	0.07	1 hour	
i-propyl mercaptan	<0.0007	<0.00219	<0.0037	<0.00219	<0.0037	<0.00219	<0.0007	<0.00219	<0.0007	<0.00219	-	-	
n-propyl mercaptan	<0.0005	<0.00158	<0.0025	<0.00158	<0.0025	<0.00158	<0.0005	<0.00158	<0.0005	<0.00158	-	-	
ethyl mercaptan	<0.0001	<0.000304	<0.0031	<0.000304	<0.0031	<0.000304	<0.0001	<0.000304	<0.0001	<0.000304	-	-	
thiophene	<0.0001	<0.000345	<0.0021	<0.000345	<0.0021	<0.000345	<0.0001	<0.000345	<0.0001	<0.000345	-	-	
1-methylthiophene	<0.0001	<0.000402	<0.0021	<0.000402	<0.0021	<0.000402	<0.0001	<0.000402	<0.0001	<0.000402	-	-	
2-methylthiophene	<0.0001	<0.000402	<0.0021	<0.000402	<0.0021	<0.000402	<0.0001	<0.000402	<0.0001	<0.000402	-	-	
acetaldehyde	<0.0009	<0.00183	<0.0029	<0.00183	<0.0029	<0.00183	<0.0009	<0.00183	<0.0009	<0.00183	0.042	1 hour	
2-propenal	<0.0004	<0.000921	<0.0034	<0.000921	<0.0034	<0.000921	<0.0004	<0.000921	<0.0004	<0.000921	-	-	

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Compound	Source						Criteria (DEC 2005)	Averaging Period	Comment
	Sludge Lagoon		Sludge Dewatering		Dry weather Pond				
	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3			
propanal	<0.0004	<0.000654	<0.0004	<0.000654	<0.0004	<0.000654	-	-	
2-methylpropanal	<0.0004	<0.00118	<0.0004	<0.00118	<0.0004	<0.00118	-	-	
2-methyl-propanal	<0.0002	<0.000576	<0.0002	<0.000576	<0.0002	<0.000576	-	-	
butanal	<0.001	<0.00296	<0.001	<0.00296	<0.001	<0.00296	-	-	
3-methylbutanal	<0.0003	<0.00106	<0.0003	<0.00106	<0.0003	<0.00106	-	-	
acetone	0.0163	0.0389	0.0077	0.0184	0.0128	0.0305	22	1 hour	
2,3-butanedione	0.001	0.00353	0.002	0.00707	0.003	0.0106	-	-	
methylacetone	<0.0003	<0.000888	<0.0003	<0.000888	<0.0003	<0.000888	3.2	1 hour	
methylisobutylketone	<0.0003	<0.00123	<0.0003	<0.00123	<0.0003	<0.00123	0.23	1 hour	
ethylacetate	0.054	0.195	0.01	0.0362	0.01	0.0362	12.1	1 hour	
methanol	<0.0008	<0.00105	<0.0008	<0.00105	<0.0008	<0.00105	3	1 hour	
ethanol	<0.0001	<0.000189	<0.0001	<0.000189	<0.0001	<0.000189	2.1	1 hour	
i-propanol	0.0102	0.0252	0.0065	0.016	0.0114	0.0281	-	-	
propanol	<0.00084	<0.00207	<0.00084	<0.00207	<0.00084	<0.00207	0.041	1 hour (i-propanol)	
2-butanol	<0.0005	<0.00152	<0.0005	<0.00152	<0.0005	<0.00152	-	-	
1-butanol	<0.0003	<0.000913	<0.0003	<0.000913	<0.0003	<0.000913	0.5	1 hour for n-butanol	
butanol	<0.0008	<0.00287	<0.0008	<0.00287	<0.0008	<0.00287	-	-	
2-methylbutane	<0.0002	<0.000592	<0.0002	<0.000592	<0.0002	<0.000592	-	-	
pentane	<0.0002	<0.000592	<0.0002	<0.000592	<0.0002	<0.000592	-	-	
2-methylpentane	<0.0001	<0.000354	<0.0001	<0.000354	<0.0001	<0.000354	-	-	

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Odour Assessment

Compound	Source						Criteria (DEC 2005)	Averaging Period	Comment
	Sludge Lagoon		Sludge Dewatering		Dry weather Pond				
	ppm	mg/m3	ppm	mg/m3	ppm	mg/m3			
3-methylpentane	<0.0002	<0.000708	0.0002	<0.000708	<0.0002	<0.000708	-	-	
hexane	0.001	0.00354	0.001	0.00354	0.001	0.00354	-	-	
methylcyclopentane	<0.0002	<0.000691	<0.0002	<0.000691	<0.0002	<0.000691	-	-	
cyclohexane	<0.0002	<0.00069	<0.0002	<0.00069	<0.0002	<0.00069	0.26	0.07	
3-methylheptane	0.0004	0.00165	<0.0001	<0.000411	0.0005	0.00206	-	-	
heptane	0.0056	0.023	0.0025	0.00296	0.001	0.00411	-	-	
methylcyclohexane	<0.0003	<0.00121	<0.0003	<0.00121	<0.0003	<0.00121	-	-	
octane	<0.0002	<0.000938	<0.0002	<0.000938	<0.0002	<0.000938	-	-	
nonane	<0.0002	<0.00105	<0.0002	<0.00105	<0.0002	<0.00105	-	-	
decane	<0.0002	<0.00117	<0.0002	<0.00117	<0.0002	<0.00117	-	-	
undecane	<0.0002	<0.00128	<0.0002	<0.00128	<0.0002	<0.00128	-	-	
alpha pinene	0.0002	0.00112	<0.0001	<0.000559	0.0007	0.00362	-	-	
limonene	<0.0002	<0.00112	<0.0002	<0.00112	<0.0002	<0.00112	-	-	
Benzene	0.0024	0.0077	0.00201	0.00644	0.00229	0.00734	0.029	1 hour	
Toluene	0.04691	0.177	0.01239	0.0469	0.01635	0.0619	0.36	1 hour	
Ethyl Benzene	0.00225	0.00681	0.00143	0.00623	0.00228	0.00694	0.19	1 hour	
m-p-Xylenes	0.00516	0.0269	0.00495	0.0176	0.00527	0.0229	0.19	1 hour	
o-Xylene	0.004	0.0174	0.00216	0.0054	0.00327	0.0142	0.12	1 hour	
styrene	0.00316	0.0136	0.00222	0.00649	0.00668	0.0414	0.12	1 hour	
1,3,5-trimethylbenzene	0.00631	0.0311	0.00237	0.0117	0.00761	0.0376	2.2	1 hour	

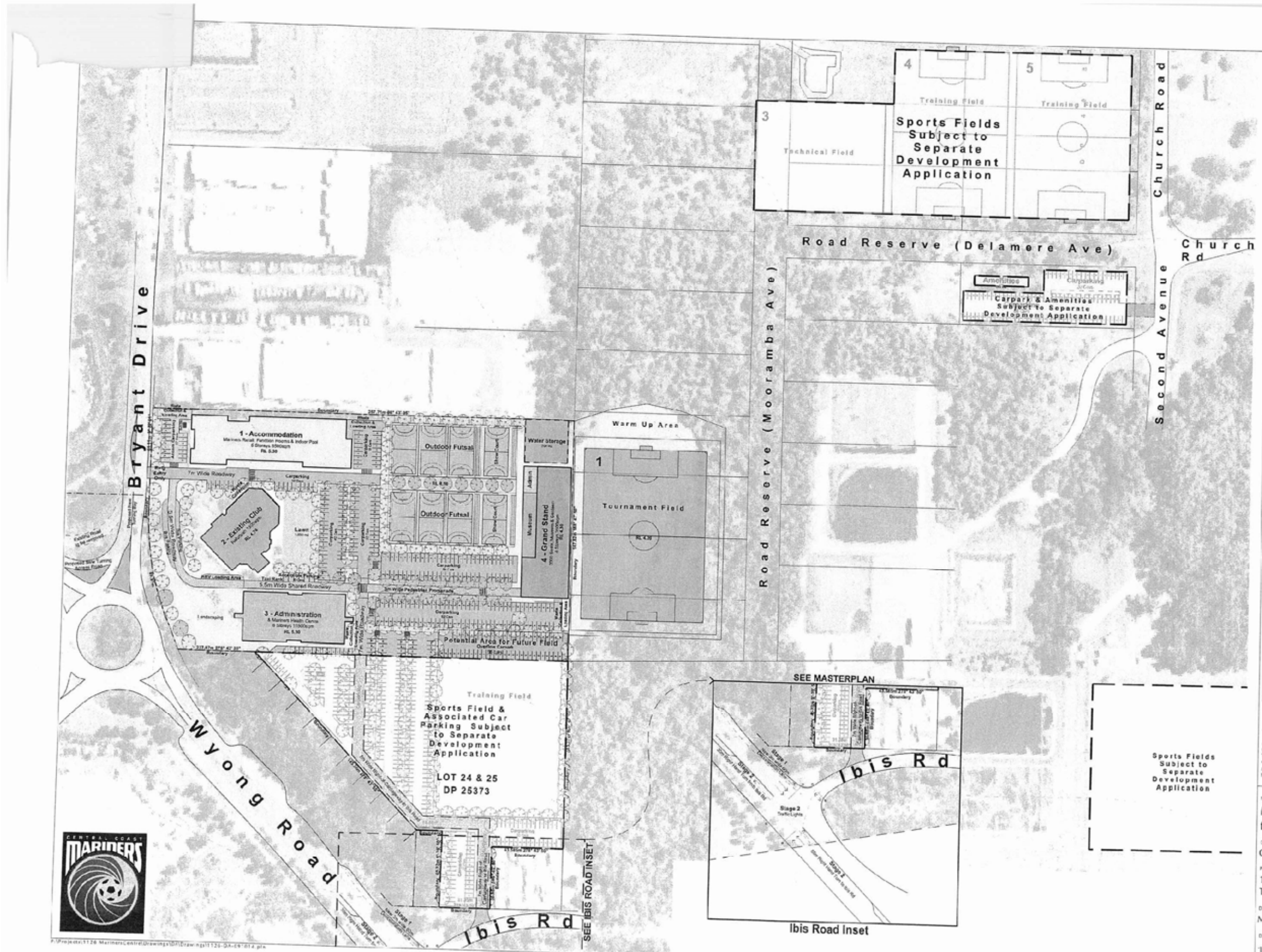
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Odour Assessment

Compound	Source						Criteria (DEC 2005)	Averaging Period	Comment
	Sludge Lagoon		Sludge Dewatering		Dry weather Pond				
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>			
1,2,3-trimethylbenzene	0.00776	0.0383	0.00315	0.0155	0.00848	0.0418			
dichloromethane	0.00028	0.000976	0.00033	0.00115	0.00029	0.00101	3.19	1 hour	
chloroform	0.00033	0.00162	0.00012	0.000568	0.00011	0.000539	0.9	1 hour	
carbon tetrachloride	<0.00011	<0.000695	<0.00011	<0.000695	<0.00011	<0.000695	0.012	1 hour	
trichloroethylene	0.00008	0.000432	0.00007	0.000378	0.00078	0.00421	0.5	1 hour	
tetrachloroethylene	0.0001	0.000662	0.00005	0.000341	0.00015	0.00102	3.5	1 hour	
1,4-dichlorobenzene	0.00047	0.00284	0.00019	0.00115	0.00023	0.00139	*	*	
bromodichloromethane	<0.00005	<0.000335	<0.00005	<0.000335	<0.00005	<0.000335	*	*	
diisomochloromethane	<0.00005	<0.000427	<0.00005	<0.000427	<0.00005	<0.000427	*	*	
bromoform	<0.00005	<0.000519	<0.00005	<0.000519	<0.00005	<0.000519	0.09	1 hour	
Phenol	<0.0003	<0.00116	<0.0003	<0.00116	<0.0003	<0.00116	0.02	1 hour	
1,1-dimethyl benzylalcohol	0.0125	0.0698	<0.0002	<0.00112	<0.0002	<0.00112	*	*	
benzothiazole	0.0161	0.0892	0.0006	0.00333	<0.0001	<0.000554	*	*	
tetramethylthiourea	0.02	0.108	<0.0002	<0.00108	<0.0002	<0.00108	*	*	
methyl-chlorophenol	0.0167	0.0974	<0.0001	<0.000583	<0.0001	<0.000583	*	*	
isothiocyanato-cyclohexane	0.0581	0.336	0.0034	0.0197	0.006	0.0347	*	*	
t-butylphenol	0.0051	0.0314	<0.0002	<0.00123	<0.0002	<0.00123	*	*	
methylcarbonimidic acid (dimethyl ester)	0.0253	0.14	<0.0005	<0.00443	<0.0005	<0.00443	*	*	

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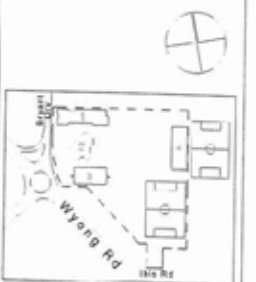




Contractors are to check and verify all dimensions on site before commencement of any work. Figured dimensions are to take precedence in resolving discrepancies.

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Rev. No.	Revision Description	Date
A	Preparation DA Issue	09/03/20
B	Preparation DA Issue for Discussion	17/03/20
C	Development Application Issue	17/03/20
D	Lot 24 DP 25373 removed from application. Right of Way noted and facilities relocated.	20/03/20
E	Access from road above amended. See Road inset showing acceleration & deceleration lines along Wyong Road.	02/04/20
F	Access from north/south driveway access to existing driveway added. See Road inset Stage 1 & 2 added. Warm-up area moved. Futsal court relocated. Futsal location deleted. Futsal Administration relocated. Loading & Waste Collection area added.	15/04/20
G	Access road from Stage One and internal 3.5m wide access road amended.	20/04/20



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 MSK Group Pty Limited • ABN 15 003 508 117  
 Nominated Architect Reg No.: Greg Smith 1174

Project Name:  
**Mariners Centre for Excellence**  
 Client Name:  
 Central Coast Mariners FC  
 Project Address:  
 1 Bryant Drive  
 Tuggerah NSW  
 Drawing Name:  
 Masterplan  
 Drawing Number:  
**1126 DA 02 G**  
 Scale: 1:1000 @ A1 Date: 28/10/2020



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