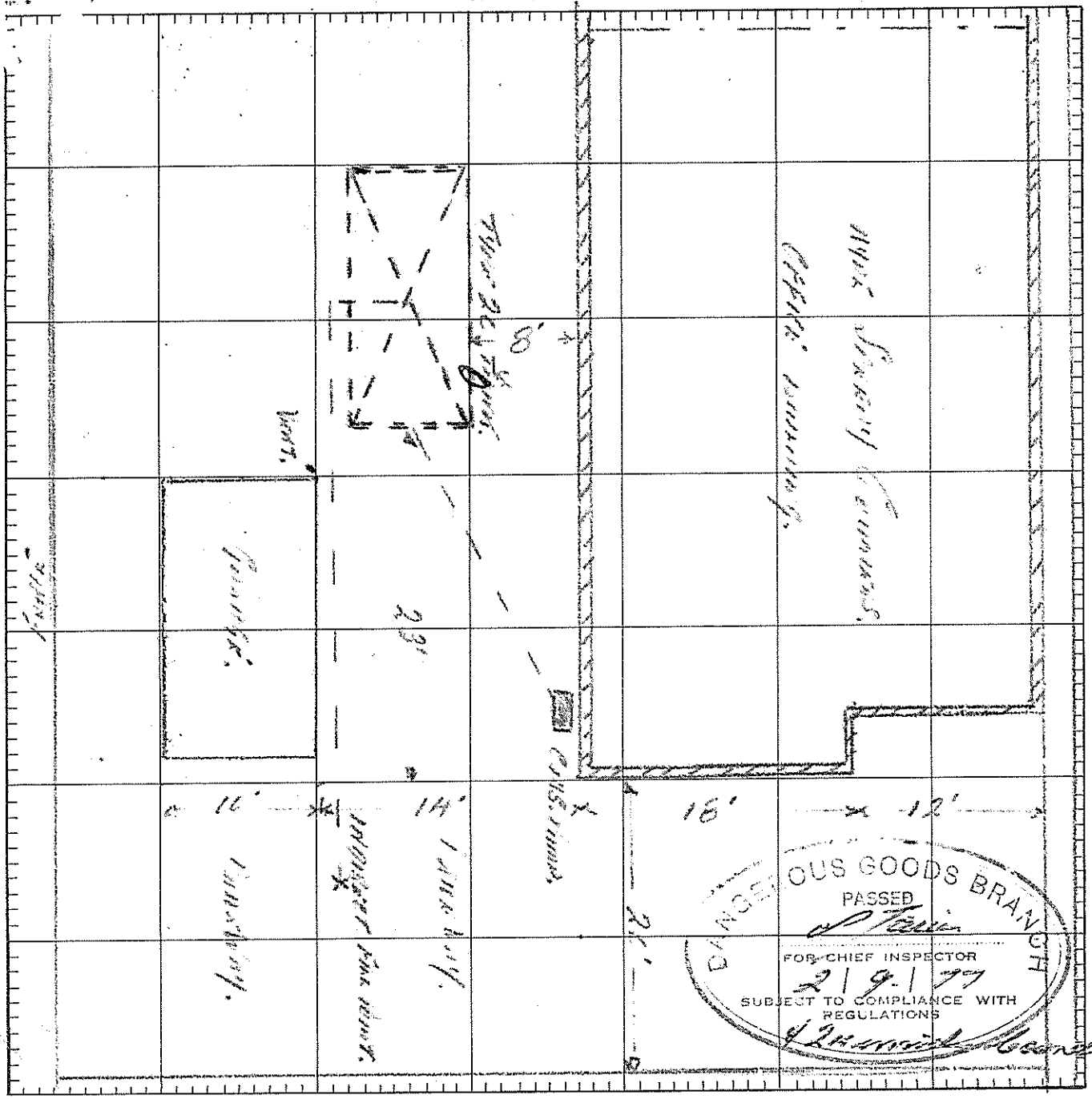
SKETCH PLAN



ON PLAN

Tear Off

Liquid Seal in accordance

THE NEW SOUTH WALES GOVERNMENT
Putting people first by managing better

PART A

SCIENTIFIC SERVICES BRANCH
25 JUN 93
DANGEROUS GOODS

WORKCOVER AUTHORITY

LICENCE TO KEEP DANGEROUS GOODS

(Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

1. Name of applicant: J.R DUMMETT & CO P/L — ACN: A.C.N. 002 542 949

2. Site to be licensed
   No: 11 — Street: ROTHESAY AVE
   Suburb/Town: MEADOWBANK. — Postcode: 2114

3. Previous licence number (if known): 35/010369

4. Nature of site: MOTOR VEHICLE SERVICES.

5. Emergency contact on site:
   Phone: 8092146 — Name: JAMES DUMMETT

6. Site staffing: Hours per day: 12 — Days per week: 5 to 6

7. Major supplier of dangerous goods: Shore Petroleum Group.

8. If new site or significant modification
   Plan stamped by: — Accredited consultant's name: — Date stamped

9. Number of dangerous goods depots at site:

10. Trading name or occupier's name: J.R. DUMMETT & Co P/L

11. Postal address of applicant: 15 SAIALA ROAD — Suburb/Town: KILLARA — Postcode: 2071

12. Contact for licence enquiries:
    Phone: 4981688 — Fax: 8094251 — Name: JAMES DUMMETT

I certify that the details contained in this application (or the accompanying computer disk) are true and correct

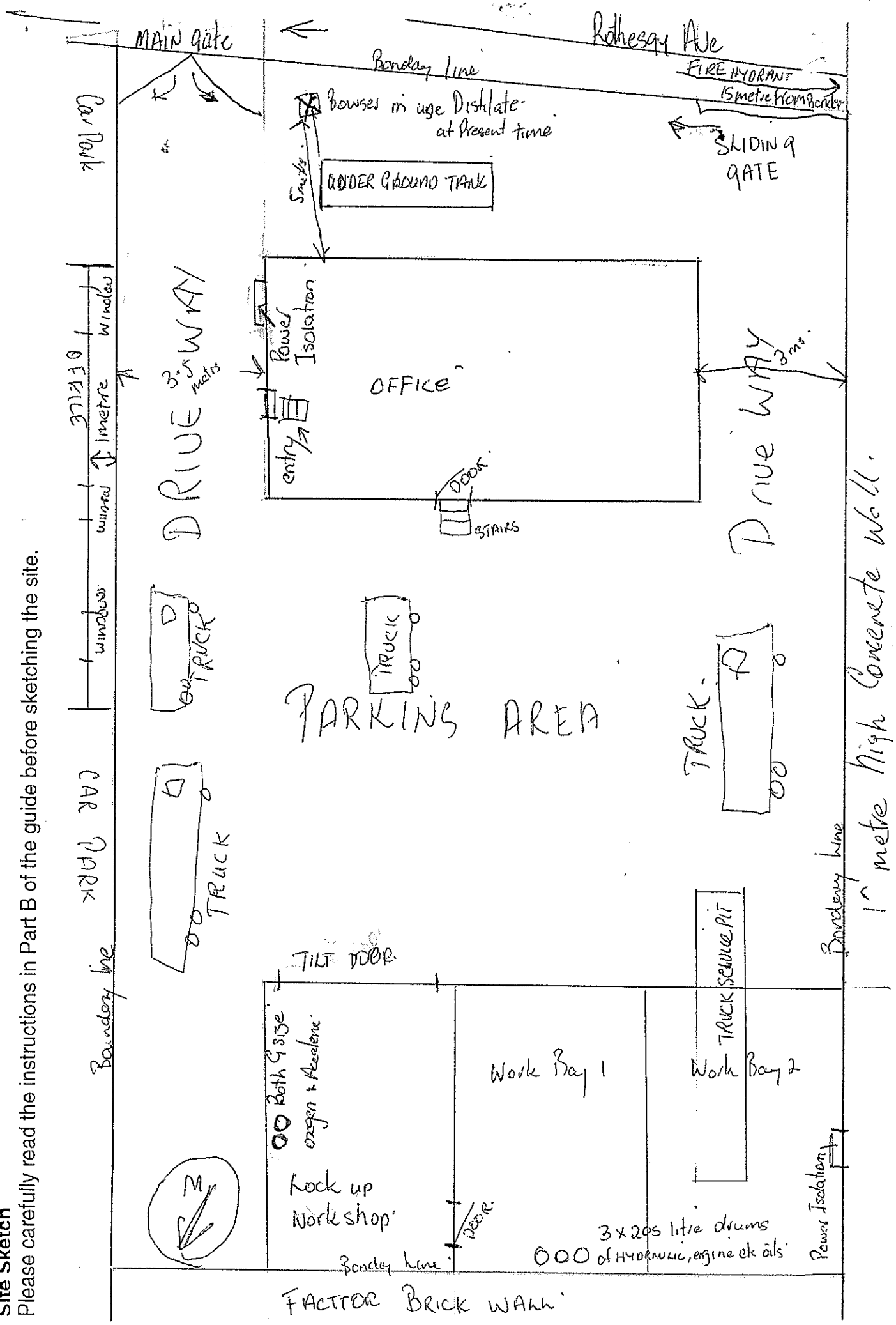
13. Signature of applicant: J. R. Dummett. — Date: 12/6/93

Please complete attached site sketch, depot listing and check sheet (if required) and return to WorkCover Authority in envelope provided.

Form DG1

PART B

Site Sketch
Please carefully read the instructions in Part B of the guide before sketching the site.



Complete 1 section per depot

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot number	Type of depot	Class	Licensed maximum storage capacity
1P	UNDERGROUND TANK	3.1	5,000 litres

UN number	Shipping name	Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1203	Super Petrol	3.1			Super Petrol	4,500	litres
Please Note that the underground tank ~~is~~ contains Distilate at this time & is marked Distilate							

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³

(*delete whichever is not required)

FEE: $10.00 per Depot

Name of Applicant in full (see over)	Surname Dummett Given Names James Richard & Andrew James Austi
Trading name or occupier's name (if any)	J.R. Dummett & Co.
Postal address	Postcode
Telephone number of applicant	STD Code Number 802146
Address of the premises in or on which the depot or depots are situated (including street number, if any)	11 Rothesay Ave. Ryde Postcode 2112
Nature of premises (see over)	Residence & W'Shop.

~~PLEASE ATTACH SITE PLAN~~

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods: Product being stored	Dangerous goods: C & C Office use only
1	Underground Tank	5000 litre	3.1. MS Petrol	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name of company supplying flammable liquid (if any) H.C.S.

Have premises previously been licensed? Yes

If known, state name of previous occupier J.R. Dummett Licence No. 10369

Signature of applicant X J.R. Dummett Date 29.11.79

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, William A. Mackon being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector Wl. Mackon

Date 29-11-79

ST 5181 D WEST. GOVERNMENT PRINTER

SEE PAGE 4 FOR DETAILS OF FEES PAYABLE AND DISTANCES FROM PROTECTED WORKS

DIRECTIONS

Total

1. Applications must be forwarded to the Chief Inspector of Inflammable Liquid, Explosives Department, Box R.216, Royal change Sydney, N.S.W. 2000 and must be accompanied by the prescribed fee.

Registration of Premises – For quantities not exceeding 300 gallons of mineral oil and 100 gallons of mineral spirit, if kept together; or 800 gallons of mineral oil and 100 gallons of mineral spirit, if kept in separate depots; or 500 gallons of mineral spirit, if kept in an underground tank depot; or 800 gallons of mineral oil and 500 gallons of mineral spirit, if mineral spirit is kept in an underground tank depot.

In addition to, or in lieu of the above, similar quantities of Dangerous Goods of Classes 1 and 2 may be kept under the like conditions; reading Dangerous Goods of Class 1 for the words Mineral Spirit and Dangerous Goods of Class 2 for the words Mineral Oil

Store Licence, Div. A – For quantities in excess of those stated above, but not exceeding 4,000 gallons mineral oil and/or mineral spirit, and/or Dangerous Goods of Classes 1, 2 and 9.

Store Licence, Div. B (Fee, See Regulation 7) – For quantities exceeding 4,000 gallons of mineral spirit, and/or Dangerous Goods of Classes 1 and 2, and/or Dangerous Goods of Class 3.

For the keeping of Dangerous Goods of Classes 3 and/or 4.

. Name of occupier including full christian names.	James Richard Dunnett
. Trading Name (if any)	J R Dunnett & Co
. Locality of the premises in which the depot or depots are situated	No. or Name Meadow Bank Street 11 Rathcoy Avenue Town Ryde
: Postal address	Postcode 2112
. Occupation	
. Nature of premises (dwelling, garage etc.)	

Particulars of construction of depots and maximum quantities of inflammable liquid and/or Dangerous Goods to be kept at any one time.

PLEASE ATTACH PLAN OF PREMISES

Depot No.	Construction of depots*			inflammable liquid		Dangerous goods						
	Walls	Roof	Floor	Mineral spirit gallons	Mineral oil gallons	Class 1 gallons	Class 2 gallons	Class 3 lb	Class 4 cu ft	Class 5A water gal	Class 5B water gal	Class 9 gallons
1	underground	tank		1800.								
2												
3												
4												
5												
6												
7												
8												
9												
10												

PUBLIC REVENUE A/c.
Chq $27.00
(Date) 19/7/73
Receipt No. 8729

*If product is kept in tanks describe depots as underground or aboveground tanks.

Signature of applicant J R Dunnett

e of appli cation_____, 19___

CERTIFICATE OF INSPECTION

Maurice Arthur Conroy being an Inspector under the Inflammable uid Act, 1915 (as amended), do hereby certify that the premises or store herein referred to and described is suite with regard to its situation and construction for the safe keeping of inflammable liquid and/or dangerous goods in ntity and nature specified.

ce Sydney
23.7.73.

Signature of Inspector M. Conroy

C/IC

Form DGI

Department of Industrial Relations & Employment

DANGEROUS GOODS ACT, 1975

LICENCE No. 35 - 0120245

APPLICATION FOR ~~LICENCE~~ (or AMENDMENT ~~or TRANSFER of LICENCE~~)* FOR THE KEEPING OF DANGEROUS GOODS

(* delete whichever is not required)

DG 8901 0001 90

FEE: $15.00 per Depot for new licence.
$15.00 for amendment or transfer.

Name of Applicant in full (see Item 1 - Explanatory notes - page 4)	HOOVER AUSTRALIA PTY LTD
Trading name or occupier's name (if any)	HOOVER AUSTRALIA PTY LTD 350120245 $15.00
Postal Address	P.O. BOX 101 WEST RYDE Postcode 2114
Address of the premises to be licensed. (Including Street No.)	41-45 BELMORE ST MEADOWBANK Postcode 2114
Nature of premises (See Item 2 - Explanatory notes - page 4)	MANUFACTURING PLANT
Telephone number of applicant	STD Code 02 Number 808 9800

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (See item 3 - Explanatory notes - page 4)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
				DD 004.022.0
1	ROOFED	20,000	FLAMMABLE LIQUID	6 020 24
2	ROOFED	10,000	FLAMMABLE LIQUID	6 02014
3	U/G TANK	5,000	FLAMMABLE LIQUID	2.02053
addition 4	FLAMMABLE LIQUID CUPBOARD	250 lit	SODIUM NITRATE CLASS5	6.002.32
5				
6				
7				
8				
9				
10				
11				
12				

DATA ENTERED
22 JUN 1989
OPERATOR ONE

WORKCOVER AUTHORITY OF N.S.W.
EASTWOOD
24 JAN 1991
W/E - C 00029/1

Has site plan been approved by the Dangerous Goods Branch? Yes / No — If yes, no plans required. If no, please attach site plan, or provide sketch plan overleaf.

Have premises previously been licensed? Yes / ~~No~~ — If yes, state name of previous occupier, and licence No. (if known). Lic No 35 0120245

Name of oil company supplying flammable liquid (if applicable). Various

Signature of applicant ..... Date 1st June 1989

For external explosives magazine(s), please fill in page 3.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector ..... Date .....

Application is hereby made for—*a licence (or amendment of the licence) for the keeping of dangerous goods on the premises described below.

*the transfer of the licence

(*delete whichever is not required)

FEE: $10.00 per Depot

Name of Applicant in full (see over)	Surname MILLARD Given Names ~~WARREN GEOFFREY~~ 2665 7/01/81 03A
Trading name or occupier's name (if any)	HOOVER (AUST) PTY LTD
Postal address	BELMORE ST MEADOW BANK Postcode 2114
Telephone number of applicant	STD Code 02 Number 80.0301
Address of the premises in or on which the depot or depots are situated (including street number, if any)	41-45 BELMORE ST., MEADOW BANK Postcode 2114
Nature of premises (see over)	

~~PLEASE ATTACH SITE PLAN~~

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods 003 0204 Product being stored	C & C Office use only
1	Roofed Package	18000	3.1 3.2 3.3	6020 24
2	" "	14000	3.1 3.2 3.3	6020 14
3	Underground	4500	3.1 Petrol	2020 53
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name of company supplying flammable liquid (if any) Caltex

Have premises previously been licensed? YES

If known, state name of previous occupier as above Licence No. 12024

Signature of applicant [signature] Date 15-12-80

~~For external explosives magazine(s), please fill in side 2~~

FOR OFFICE USE ONLY

LICENCE No.

CERTIFICATE OF INSPECTION

I, George L Brooks being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector [signature]

DIRECTIONS

1. Applications must be forwarded to the Chief Inspector of Inflammable Liquid, Explosives Department, Box R.216, Royal Exchange Sydney, N.S.W. 2000 and must be accompanied by the prescribed fee, as set out hereunder:

Registration of Premises (Fee $3.00 p.a.) – For quantities not exceeding 300 gallons of mineral oil and 100 gallons of mineral spirit, if kept together; or 800 gallons of mineral oil and 100 gallons of mineral spirit, if kept in separate depots; or 500 gallons of mineral spirit, if kept in an underground tank depot; or 800 gallons of mineral oil and 500 gallons of mineral spirit, if mineral spirit is kept in an underground tank depot.

In addition to, or in lieu of the above, similar quantities of Dangerous Goods of Classes 1 and 2 may be kept under the like conditions; reading Dangerous Goods of Class 1 for the words Mineral Spirit and Dangerous Goods of Class 2 for the words Mineral Oil.

Store License, Div. A (Fee, $6.50 p.a.) – For quantities in excess of those stated above, but not exceeding 4,000 gallons mineral oil and/or mineral spirit, and/or Dangerous Goods of Classes 1, 2 and 9.

Store License, Div. B (Fee, See Regulation 7) – For quantities exceeding 4,000 gallons of mineral spirit, and/or dangerous goods of Classes 1 and 2, and/or dangerous goods of Class 3.
For the keeping of Dangerous Goods of Classes 3 and/or 4. ($15.00 p.a.).

Fees for the keeping of inflammable liquid and dangerous goods in excess of the above stated quantities and also for Liquid Petroleum Gas storage are set out in Regulation 7.

1. Name of occupier including full christian names.	HOOVER (AUSTRALIA) PTY. LIMITED.
2. Trading Name (if any)	HOOVER (AUSTRALIA) PTY. LIMITED.
3. Locality of the premises in which the depot or depots are situated	No. or Name 41-45 Street BELMORE Town MEADOWBANK.
4. Postal address	Box 101, Post Office, WEST RYDE. Postcode 2114.
5. Occupation	DOMESTIC APPLIANCE MANUFACTURER.
6. Nature of premises (dwelling, garage etc.)	FACTORY.

7. Particulars of construction of depots and maximum quantities of inflammable liquid and/or Dangerous Goods to be kept at any one time.

PLEASE ATTACH PLAN OF PREMISES

Depot No.	Construction of depots*			Inflammable liquid		Dangerous goods					
	Walls	Roof	Floor	Mineral spirit gallons	Mineral oil gallons	Class 1 gallons	Class 2 gallons	Class 3 lb	Class 4 cu ft	Class 5A water gal	Class 9 gallons
1	FIBRO	IRON	CONCRETE		4000						
2	BRICK	CONCRETE	CONCRETE		2,000 X						
3	FIBRO	IRON	CONCRETE		3,000						
* 4	UNDERGROUND TANK			1,000							
5											
6											
7											
8											
9											
10											

PUBLIC REVENUE
EHQ | $ 2-00
14/7/71
(Date)
Receipt No. 4017.

*If product is kept in tanks describe depots as underground or aboveground tanks.

Signature of applicant [signature]
HOOVER (AUSTRALIA) PTY. LT

Date of application 8th July, 1971.

CERTIFICATE OF INSPECTION

I, Raymond G. Collins being an Inspector under the Inflammable Liquid Act, 1915 (as amended), do hereby certify that the premises or store herein referred to and described is suitable with regard to its situation and construction for the safe keeping of inflammable liquid and/or dangerous goods in quantity and nature specified.

Place Sydney

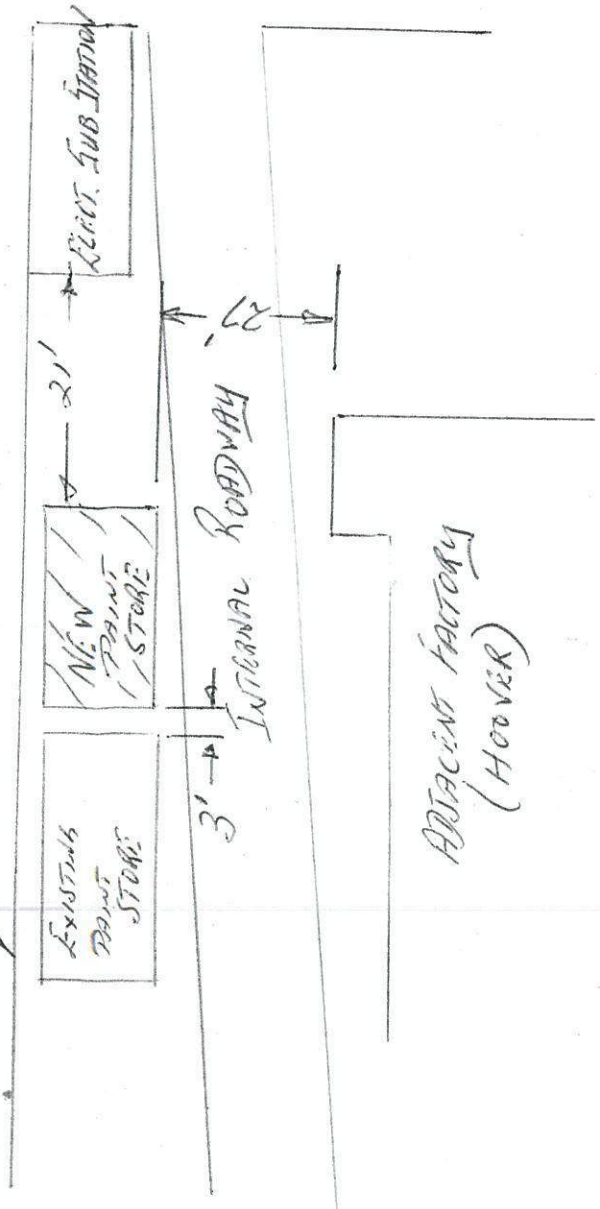
Signature of Inspector [signature]

Date 14/7/71

Make Rough Sketches showing:

Ground plans of premises showing position of depot or depots and adjacent buildings, also distances separating depots and buildings.

Sketch of depot or depots showing provision made for ventil[illegible]on, also inside dimensions (length, width, and depth) of [illegible]it or lower portion, designed to prevent outflow.



REFER ATTACHED PLAN.

EXPLANATORY

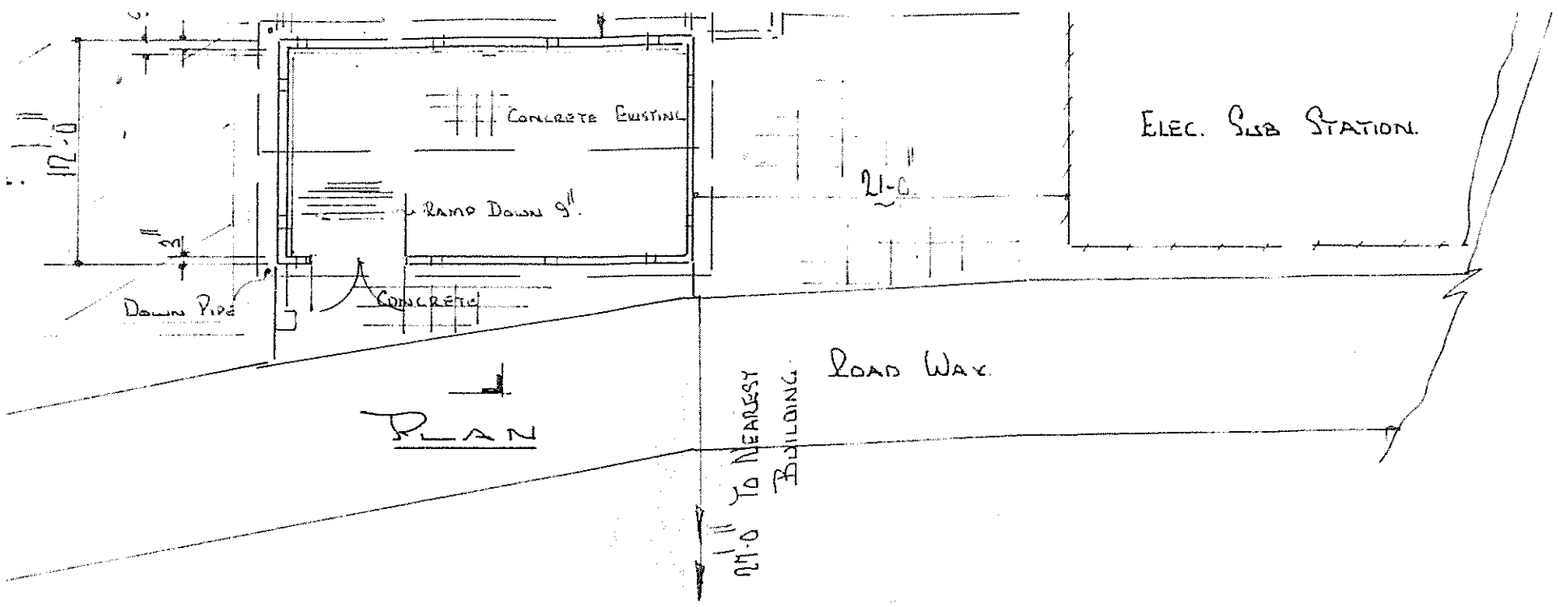
Inflammable Liquid –

Mineral Oil - includes kerosene, mineral turpentine and white spirit (for cleaning), and compositions containing same.
Mineral Spirit - includes petrol, benzene, benzolene, benzol and naphtha, and compositions containing same.

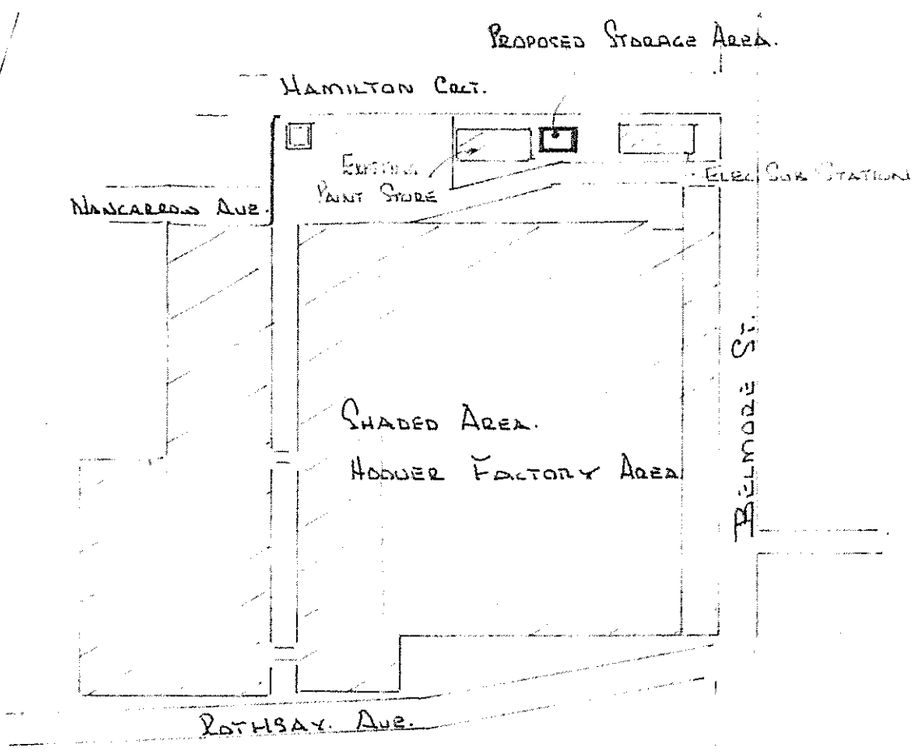
Dangerous Goods -

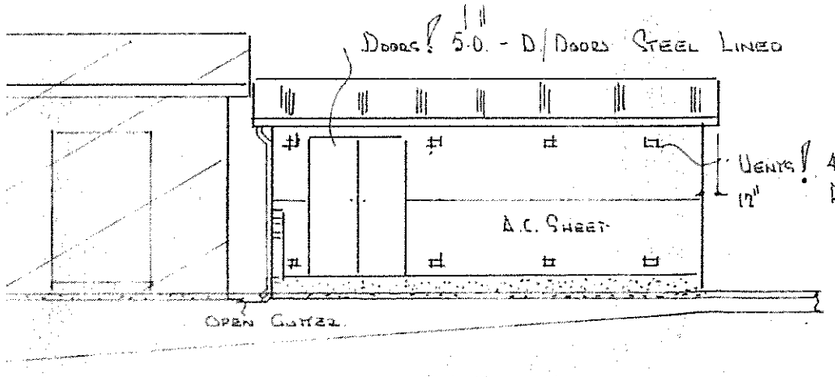
Class 1 - acetal, acetaldehyde, acetone, acrolein, amyl mercaptan, butyl acetate, butyl mercaptan, butyl propionate, crotonaldehyde, dichloro-ethylene, diethylketone, dioxane, diethylamine, dimethyl hydrozine, dipropylamine, divinyl ether, dipropyl ether, ethyl acetate, ethyl acrylate, ethyl chloride, ethyl ether, dichloroethane (ethylene dichloride), ethyl mercaptan, ethyl methacrylate, ethyl methyl ether, ethyl propyl ether, ethyl propionate, methyl propyl ketone, methyl acetate, methyl acrylate, methylal, methyl ethyl ether, methyl ethyl ketone, methyl methacrylate, methyl vinyl ketone, methyl vinyl acetate, piperidine, propanal, propyl acetate, propylamine, propylene oxide, pyridine, tetrahydrofuran, thiophene, triethylamine, valeraldehyde, vinyl acetate, vinyl allyl ether, vinyl butyl ether, vinyl butyrate, vinyl cyanide (acrylonitrile), vinylidene chloride, vinyl ethyl ether, vinyl propyl ether, vinyl propionate, any combination of substances of an inflammable character suitable for use as an industrial solvent and having a true flashing point of less than 73 degrees Fahrenheit, manufactured products, containing organic solvents, having a true flashing point of less than 73 degrees Fahrenheit.

Class 2 - acetic acid, acetyl acetone, acetic anhydride, allyl alcohol, amyl acetate, amyl alcohol, butyl alcohol, butyl methacrylate, chlorobenzene, cyclohexanone, dibutyl ether, dibutyl ketone, dipentene, epichlorohydrin, ethanol (ethyl alcohol), ethyl benzene, ethylene diamine, furfural, mesityl oxide, methyl alcohol, methyl amyl ketone, methyl butyl ketone, pine oil (having a flashing point below 150°F), propyl benzene, propanol, vegetable turpentine, vinyl benzene (styrene

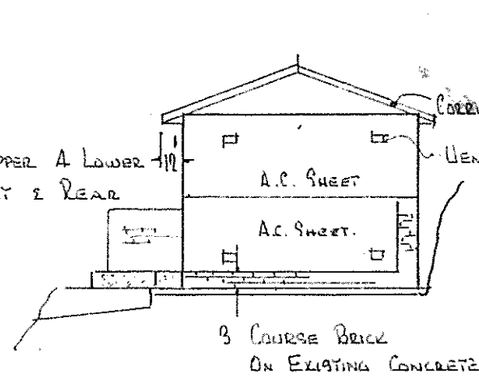


PLAN





FRONT ELEV.



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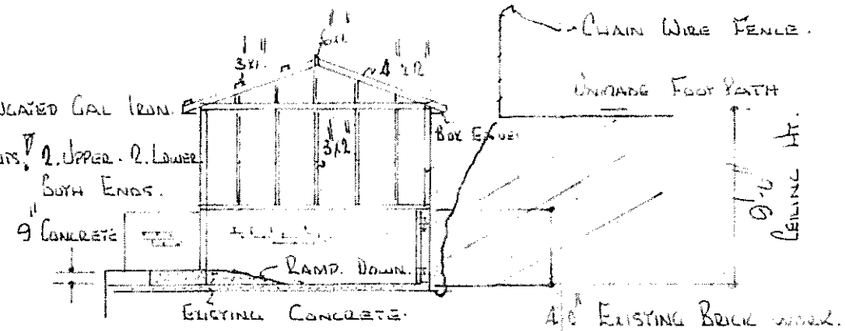


SECTION. ELEV.

IA PTY. LTD.

ELS, ETC.

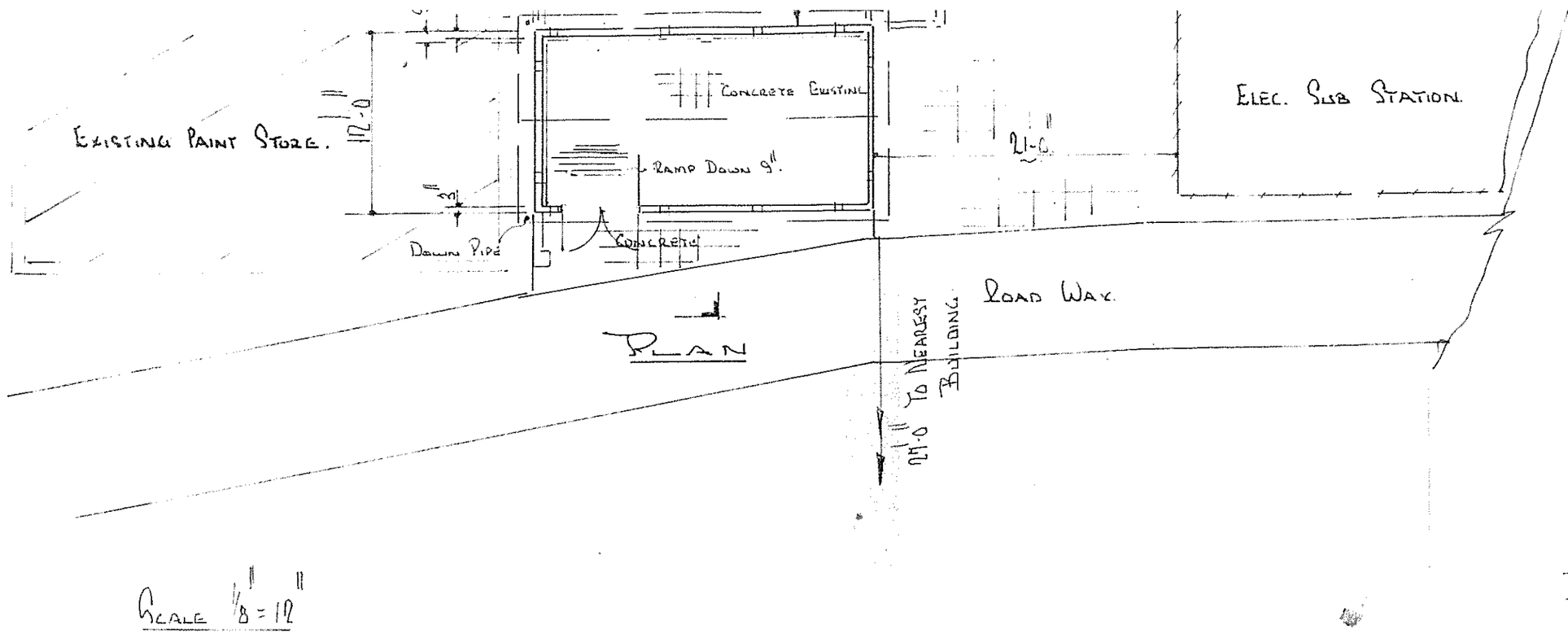
ORNERS

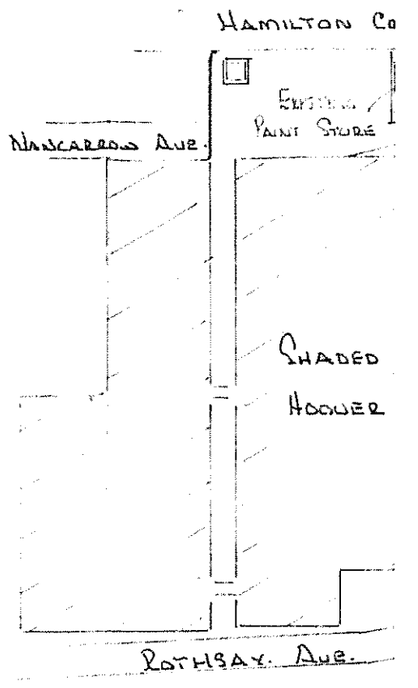
IATERIAL SPECIFICATION

P.E.D. JOB No.	TOOL CH. No.	PART CH. No.	D.S. No.	CHANGE	MADE	CH'D	DATE	SCRAP MOD USE

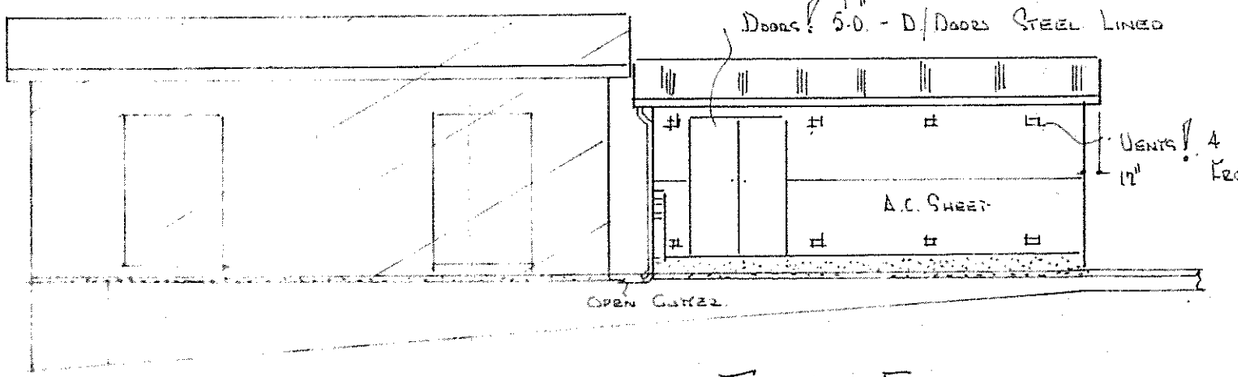
DET. No.	No. OFF	DESCRIPTION	FINISH
CONTRACT OR MODEL		M/C	M/C No.
CODE OR PART No.			
~~PART NAME~~ Address - 41-45 Belmore St. Meadowbank.			
OPERATION		DRAWN BY A.K.N. DATE 3-9-[illegible]	CH'D BY
TOOL DESCRIPTION Proposed Paint Store.		TOOL No.	B

SHEET OF

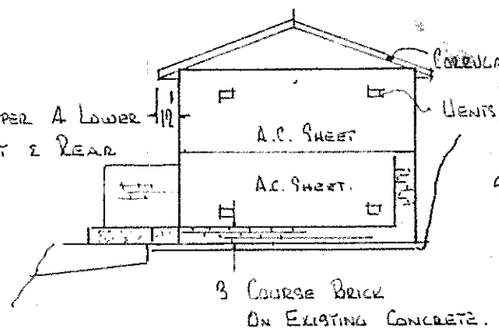




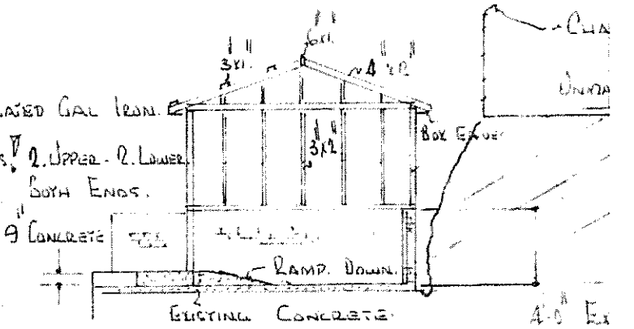
Scale 1/8 = 1'



Front Elev.

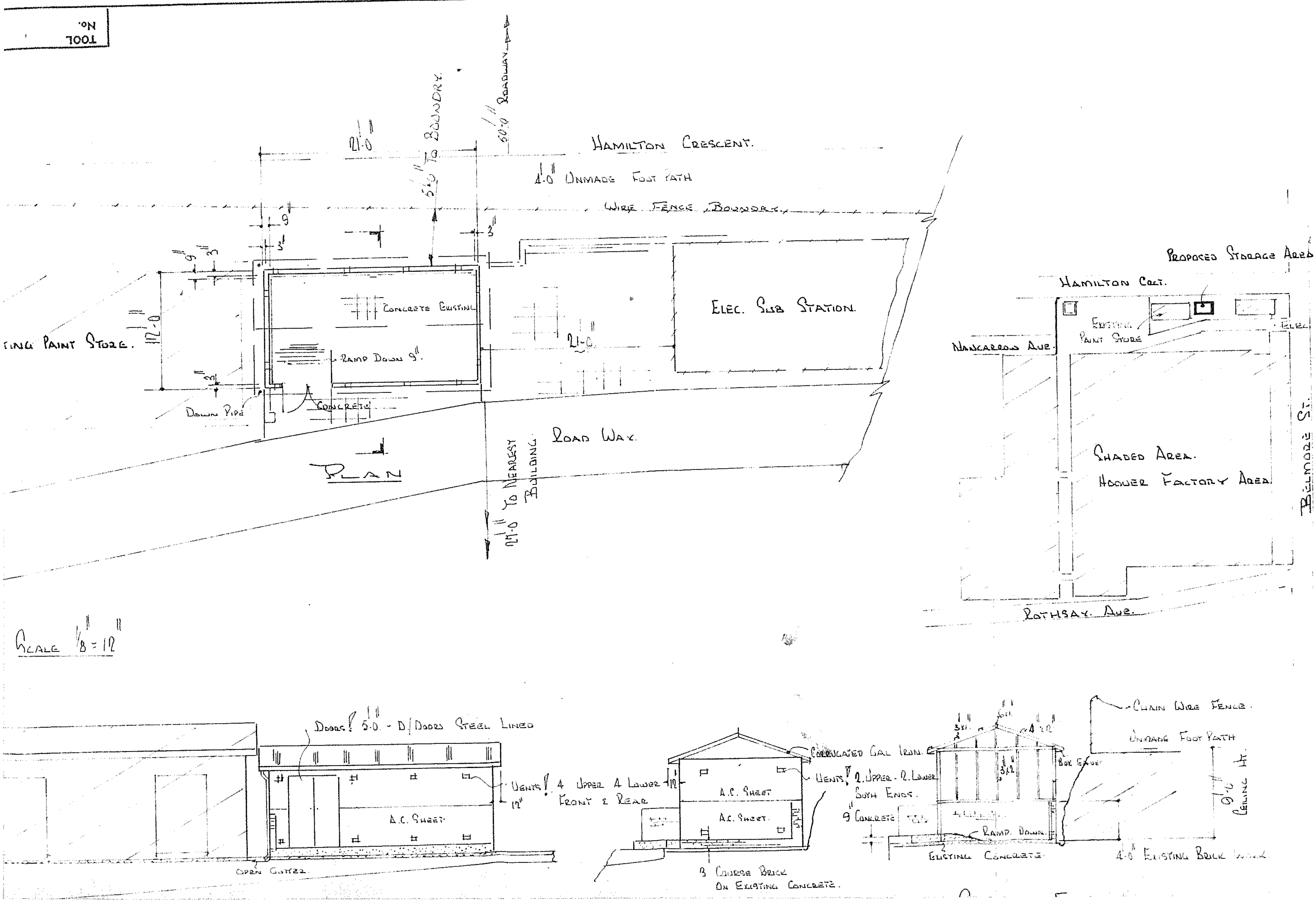


End Elev



Section. Elev.

HOOVER AUSTRALIA PTY. LTD.									DET. No. / No. OFF / DESCI
AMERICAN PROJECTION									CONTRACT OR MODEL
SCALE POSITION OF SCREWS & DOWELS, ETC. WHERE NOT DIMENSIONED									CODE OR PART No.
REMOVE ALL UNNECESSARY SHARP CORNERS									~~PART NAME~~. Address – 41-45 Be
ALL DETAILS TO BE STAMPED WITH MATERIAL SPECIFICATION									OPERATION
STAMPING TO BE VISIBLE AFTER FINAL MACHINING	P.E.D. JOB No.	TOOL CH. No.	PART CH. No.	D.S. No.	CHANGE	MADE	CH'D	DATE	SCRAP MOD USE	TOOL DESCRIPTION: Proposed Paint Store


TOOL No.
HAMILTON CRESCENT.
4'0" UNMADE FOOT PATH
WIRE FENCE BOUNDRY.
5'0" TO BOUNDRY.
60'0" ROADWAY
21'0"
9"
3"
CONCRETE EXISTING
RAMP DOWN 9".
12'0"
PAINT STORE.
DOWN PIPE
CONCRETE
ELEC. SUB STATION.
21'0"
ROAD WAY.
24'0" TO NEAREST BUILDING.
PLAN
PROPOSED STORAGE AREA
HAMILTON CRT.
EXISTING PAINT STORE
ELEC.
NANCARROW AVE.
SHADED AREA.
HOOVER FACTORY AREA.
BELMORE ST.
ROTHSAY. AVE.
SCALE 1/8" = 12"
DOORS! 5'0" - D/DOORS STEEL LINED
VENTS! 4 UPPER 4 LOWER 12" FRONT & REAR
A.C. SHEET
OPEN GUTTER
CORRUGATED GAL IRON.
VENTS! 2 UPPER - 2 LOWER BOTH ENDS.
A.C. SHEET
3 COURSE BRICK ON EXISTING CONCRETE.
9" CONCRETE
RAMP DOWN.
EXISTING CONCRETE
CHAIN WIRE FENCE.
UNMADE FOOT PATH
9'0" CEILING HT.
4'0" EXISTING BRICK WALL
BOX EAVES

Approx. 72' 0"

Appl

Embankment.

PAINT STORE
New position.

:d Turning
Area.

Roadway.

isting
INT STORE
be removed

POSED
ENSION.

EXISTING FACTORY.

BELMORE STREET.

ROTHESAY AVE.

SITE PLAN Scale: 1" = 40' 0"

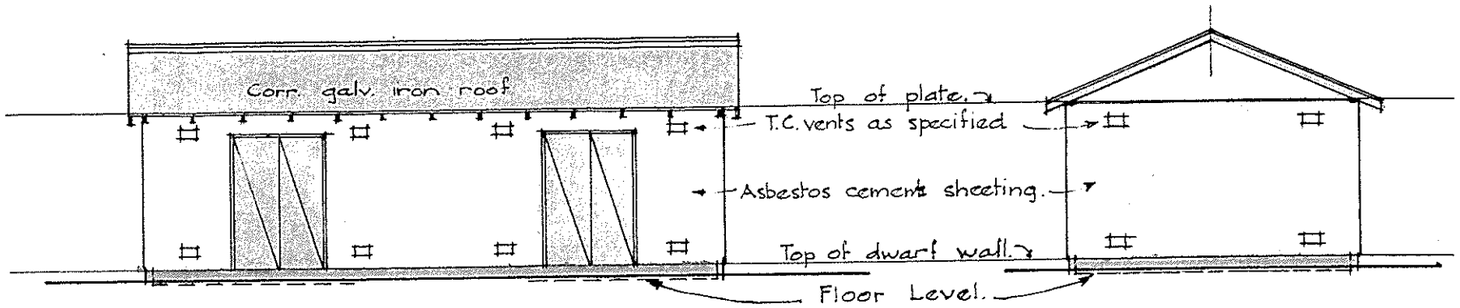
WINDOWS: To be steel frame - glazed with obscure wire cast glass.

VENTS: Hooded Terra cotta as shown - Fitted with 30 mesh copper gauze on inside.

ROOF: Timber framed - Rafters 4" x 2" at max 2' 6" c/s.
Ties - 3" x 2" to each pair of rafters
Ridge 7" x 1" - Barge boards 7" x 1"

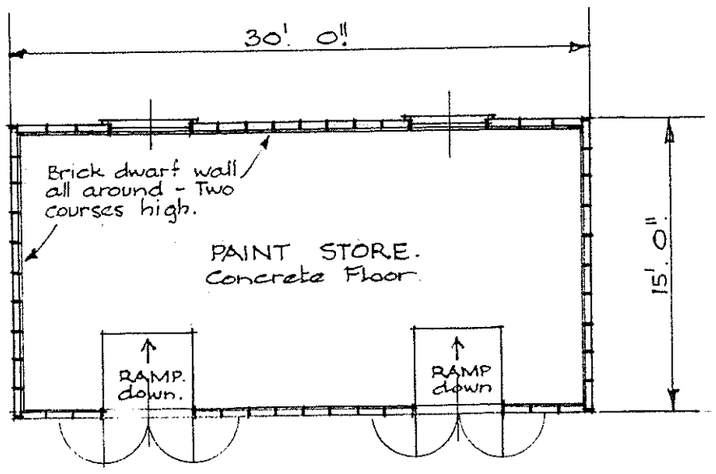
ROOFING: Corrugated galv. iron roofing on 3" x 1¼" battens.

PAINTING: Woodwork: Knot, stop, prime & paint 2 coats oil paint. all exposed woodwork.

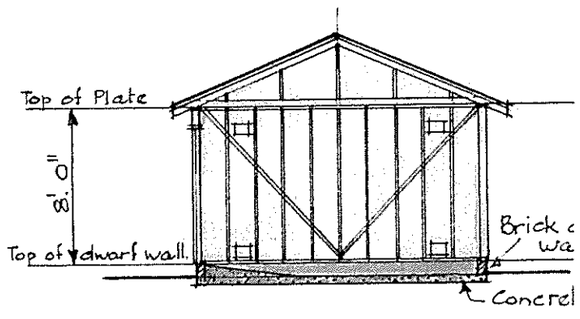


FRONT ELEVATION.

SIDE ELEVATION.



PLAN: Scale: ⅛" = 1' 0"



CROSS SECTION.

HOOVER INDUSTRIES PTY. LTD
MEADOWBANK N.S.W.

PROPOSED RELOCATION & EXTENS
OF EXISTING PAINT STORE.

T. FRY. A.R.A.I.A.
R.F. LEE. A.R.A.I.A.
ASSOCIATE ARCHITECTS
661 GEORGE ST., SYDNEY.

DRAWN:

DATE: 13.4.56

TEL. BA 4226.

NOTE: BUILDINGS EXISTING ON ADJOINING PROPERTIES ARE SET BEHIND THESE ALIGNMENTS.

HAMILTON CRESCENT.

Approx. 68'.0"

Approx. 72'.0"

Embankment.

PAINT STORE New position

AN CARROW AVE.

Paved Turning Area.

Roadway.

Existing PAINT STORE To be removed

PROPOSED EXTENSION.

EXISTING FACTORY.

DRAINAGE RESERVE.

BELMORE STREET.

SPECIFICATION.

FLOOR: Concrete 4" thick reinforced

DWARF WALL: Brick - two courses high - 6

WALLS: Timber - stud framing. - Stu
Plates - Top & bottom
Bracing - 2"x1" diag

WALL LINING: Flat asbestos cement sh

DOORS: Timber frame - Galvanised
Sill above brick dwarf

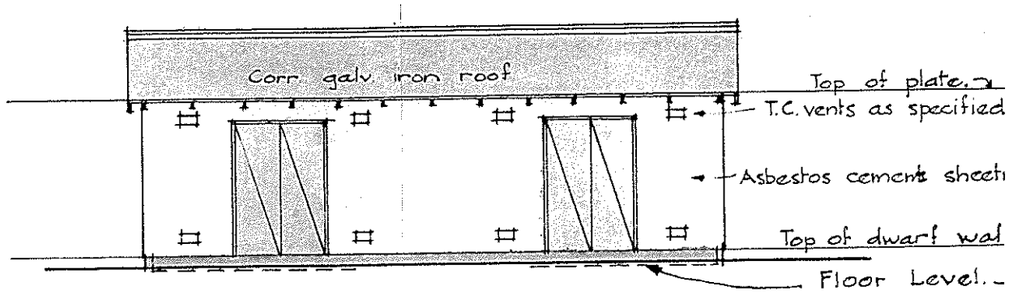
WINDOWS: To be steel frame - glaze
wire cast glass.

VENTS: Hooded Terra cotta as sh
30 mesh copper gauze on

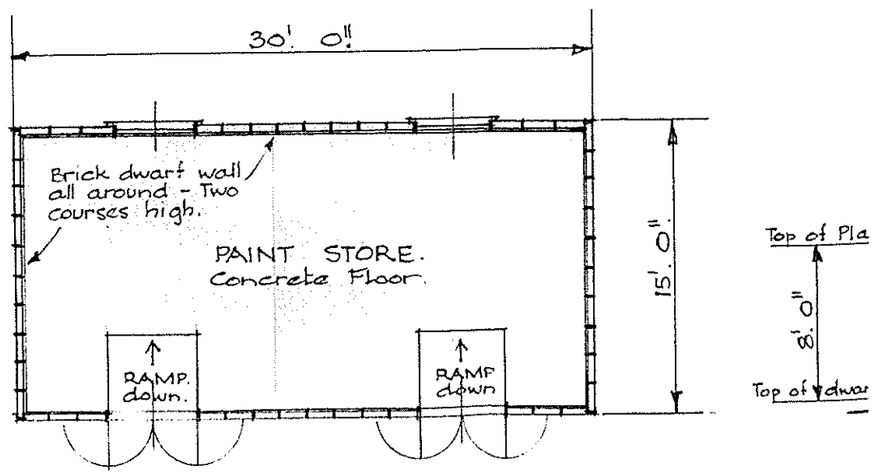
ROOF: Timber framed - Raft
Ties -
Ridg

ROOFING: Corrugated galv. iron roo

PAINTING: Woodwork: Knot, stop, prim
all exposed woodwork.



FRONT ELEVATION.



PLAN: Scale: 1/8" = 1'.0"

APPENDIX D

QUALITY ASSURANCE / QUALITY CONTROL

Table QC5 - QC Sample Data Acceptance Criteria

QC Sample Type	Method of Assessment	Acceptable Range
Field QC		
Blind Duplicates and Split Samples	The assessment of split duplicate is undertaken by calculating the Relative Percent Difference (RPD) of the duplicate concentration compared with the primary sample concentration. The RPD is defined as: $RPD = 100 \times \frac{\lvert X_1 - X_2 \rvert}{\text{mean}(X1, X2)}$ Where: X_1 and X_2 are the concentrations of the primary and duplicate samples.	The acceptable range depends upon the levels detected: - 0-150% RPD (when the average concentration is <5 times the LOR/PQL) - 0-75% RPD (when the average concentration is 5 to 10 times the LOR/PQL) - 0-50% RPD (when the average concentration is >10 times the LOR/PQL)
Rinsate & Trip Blanks	Each blank is analysed as per the original samples.	Analytical Result <LOR/PQL
Laboratory prepared Trip Spike	The Trip Spike is analysed after returning from the field and the % recovery of the known spike is calculated.	70 - 130%
Laboratory QC		
Laboratory Duplicates	Assessment of Lab Duplicate RPD as per Blind Duplicates and Split Samples.	Lab Duplicate RPD < 15% (Inorganics) Lab Duplicate RPD < 30% (Organics) for sample results > 10 LOR
Surrogates	Assessment is undertaken by determining the percent recovery of the known surrogate spike (SS) or addition to the sample.	at least 2 SS recoveries to be within 70-130% subject to matrix effects (Organics)
Matrix Spikes Laboratory Control Samples	$\%\ \text{Recovery} = 100 \times \frac{C - A}{B}$ Where: A = Concentration of analyte determined in the original sample; B = Added Concentration; and C = Calculated Concentration.	80-120% (Inorganics / Metals) 60-140% (Organics) 10-140% (SVOC and Speciated Phenols) If the result is outside the above ranges, the result must be <3x Standard Deviation of the Historical Mean (calculated over the past 12 months).
Sample Matrix Spike Duplicates	Recovery RPD	<30% (Inorganics & Organics)
Calibration Check Standards	Continuous Calibration Verification (CCV)	CCV must be within ±15% (inorganics) CCV must be within ±25% (inorganics)
Reagent, Method & Calibration Check Blanks	Each blank is analysed as per the original samples.	Analytical Result <LOR/PQL

Note: PQL - Laboratory Practical Quantitation Limit (PQL) or the minimum detection limit for a particular analyte.
LOR = Limit of Reporting

SGS Environmental Services is accredited by NATA for Chemical Testing (Reg.No.2562) and Quality System compliance to ISO/IEC 17025. The QC parameters contained within are designed to meet NEPM 1999 requirements.

Quality Control samples included in any analytical run are listed below.

Reagent/Analysis Blank (BLK) **Method Blank (MB)**	Sample free reagents carried through the preparation/extraction/digestion procedure and analysed at the beginning of every sample batch analysis. A reagent blank is prepared and analysed with every batch of samples plus with each new batch of solvent prior to use.
Sample Matrix Spike (MS) & Matrix Spike Duplicate (MSD)	Sample replicates spiked with identical concentrations of target analyte(s). The spiking occurs during the sample preparation and prior to the extraction/digestion procedure. They are used to document the precision and bias of a method in a given sample matrix. Where there is not enough sample available to prepare a spiked sample, another known soil/sand or water may be used. A duplicate spiked sample is analysed at least every 20 samples.
Surrogate Spike (SS)	At least one but up to three surrogate compounds are added to all samples requiring analysis for organics prior to extraction. Used to determine the extraction efficiency. They are organic compounds which are similar to the target analyte(s) in chemical composition and behaviour in the analytical process, but which are not normally found in environmental samples. Where possible they are surrogate compounds recommended by the USEPA.
Control Matrix Spike (CMS)	To ensure spike recoveries can be determined for every batch of samples a control matrix is spiked with identical concentrations of target analyte(s) and then analysed. These results allow recoveries to be determined in the event that the matrix spikes are unusable (eg. matrix spikes performed on heavily contaminated samples). These are analysed at least every 20 samples.
Internal Standard (IS)	Added to all samples requiring analysis for organics (where relevant) after the extraction process; the compounds serve to give a standard of retention time and response, which is invariant from run-to-run with the instruments. Where possible they are standard compounds recommended by the USEPA.
Lab Duplicates (D)	A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
Lab Control Standards/Samples (LCS)	Prepared from a source independent of the calibration standards. At least one control standard is included in each run to confirm calibration validity. Thereafter they are analysed at least every one in 20 samples plus at the end of each analytical run. This data is not reported.
Continuous Calibration Verification (CCV) or **Calibration Check Standard & Blank**	A calibration check standard or CCV and blank are run after every 20 samples of an instrumental analysis run to assess analytical drift. Calibration Standards are checked old versus new with a criteria of ±10%

Quality Assurance Programs are listed below:

Statistical analysis of Quality Control data (SQC)	Quality control data is plotted on control charts using the APHA procedure with warning and control limits at 2 and 3 standard deviations respectively. See also QMS Procedure "Statistical Quality Control".
Certified Reference Materials (CRM/SRM)	Certified Reference Materials and Standards are regularly analysed. These materials/standards have certified reference values for various parameters.
Proficiency Testing	Regular proficiency test samples are analysed by our laboratories. SGS Environmental participates in a number of programs. Results and proficiency status are compiled and sent to participating laboratory post data interpretation. Failure to comply with acceptable values result in further investigations.
Inter-laboratory & Intra-laboratory Testing	SGS Environmental Services has schedules in the Quality Systems to participate in Inter/Intra laboratory testing conducted internally and by other parties.
Data Acceptance Criteria Unless otherwise specified in the method or method manual the following general criteria apply to all inorganic tests. All recoveries are to be reported to 3 significant figures.	Failure to meet the internal acceptance criteria will result in sample batch repeats dependent upon investigation outcomes. For data to be accepted: <u>Inorganics (water samples)</u> • For all inorganic analytes the Reagent & Method Blanks must be less than the LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±15%. • Control Standards must be 80-120% of the accepted value. • The Calibration Check Blanks must be less than the LOR. • Lab Duplicates RPD to be <15%*. Note: If client <u>field</u> duplicates do not meet this criteria it may indicate heterogeneity and shall be noted on the data reports for QC samples. • Sample (and if applicable Control) Matrix Spike♬ Duplicate recovery RPD to be <30%. • Where CRMs are used, results to be within ± 2 standard deviations of the expected value. <u>Inorganics (soil samples)</u> • For all inorganic analytes the Reagent & Method Blanks must be less than the LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±15%. • Control Standards must be 80-120% of the accepted value. • The Calibration Check Blanks must be less than the LOR. • Lab duplicate RPD to be <30%* for sample results greater than 10 times LOR. • Sample Matrix Spike Duplicate (MS♬/MSD) recovery RPD to be <30%. In the event that the matrix spike has been applied to samples whose matrix or contamination is problematic to the method then these acceptance criteria apply to the Control Matrix Spike (CMS/D). • Where CRMs are used, results to be within ± 2 standard deviations of the expected value.

Data Acceptance Criteria Unless otherwise specified in the method or method manual the following general criteria apply to all organic tests. All recoveries are to be reported to 3 significant figures.	Organics • Volatile & extractable Reagent & Method Blanks must contain levels less than or equal to LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±25%. Some analytes may have specific criteria. • Control Standards (LCS/CMS) and Certified Reference Materials (CRM) recoveries are to be within established control limits or as a default 60-140% unless compound specific limits apply. • Retention times are to vary by no more than 0.2 min. • **At least two of three** routine level soil sample Surrogate Spike (SS) recoveries are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as acceptance criterion. Any recoveries outside these limits will have comment. • Water sample Surrogates Spike (SS) recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion. Any recoveries outside these limits will have comment. • Lab Duplicates (D) must have a RPD <30%*. • Sample Matrix Spike Duplicate (MS♬/MSD) recovery RPD to be <30%. In the event that the matrix spike has been applied to samples whose matrix or contamination is problematic to the method then these acceptance criteria apply to the Control Matrix Spike (CMS/D).

*Only if results are at least 10 times the LOR otherwise no acceptance criteria for RPD's apply. Application of more stringent criteria shall be applied for clean water sample from water boards and any other nominated client contracts. Nominal 10xLOR criteria are dropped to 5xLOR where specified.
♬Matrix do not readily equate to definitive recovery due to inherent matrix interferences and thus do not have recovery compliance values set. As a guide inorganic recoveries should be between 70-130% and for organics 60-130%

Batch Structure Summary

An analytical batch is nominally considered as 20 samples or smaller. As a standard template the following should be **used as a guide** according to the above Quality Control Types:

1	MB	16	UNK_DUP
2	STD1	17	MS
3	STD2	18	MS_DUP
4	STD3	19	UNK 11
5	LCS	20	UNK 12
6	BLK	21	UNK 13
7	UNK 1	22	UNK 14
8	UNK 2	23	UNK 15
9	UNK 3	24	UNK 16
10	UNK 4	25	UNK 17
11	UNK 5	26	UNK 18
12	UNK 6	27	UNK 19
13	UNK 7	28	UNK 20 (SS if applicable)
14	UNK 8	29	UNK_DUP
15	UNK 9	30	CCV
16	UNK 10 (SS if applicable)	31	CRM / SRM / CMS / LCS

APPENDIX E

BOREHOLE LOGS

Environmental Investigations Australia
Contamination | Remediation | Geotechnical
Suite 6.01,
55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH1

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: SF
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
		Fill	BH1-1	68	0
0.20		Light orange/brown sand, fine-medium grained, dry, no odour			
		Sandstone			
		Orange/brown, distinctly weathered, dry, no odour			
0.40					
			BH1-2		0
0.60					
0.80					
		Borehole ended at 0.93m			
1.00					
1.20					
1.40					

FCR = FIELD CONTAMINATION RANKING

0 = No visual signs of contamination and/or detectable odours
1 = Slight visual signs of contamination and/or odours
2 = Obvious visual signs of contamination and/or odour
3 = Strong visual signs of contamination and/or odour

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55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH2

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: SF
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Brown/dark brown sand, fine-medium grained, dry, no odour	BH2-1	32	0
0.40					
		Sandstone Orange/brown, distinctly weathered, dry, no odour			
0.60					
0.80		Borehole ended at 0.8m			
1.00					
1.20					
1.40					
1.60					
1.80					
2.00					
2.20					
2.40					
2.60					
2.80					
3.00					

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55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH3

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 15.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: SF
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown-dark brown clayey sand topsoil with organics (rootlets), fine-medium grained, dry-moist, no odour	BH3-1	1250	1
0.20		***Sandy Clay*** Brown/light brown, fine-medium grained, dry, no odour			
0.40					
			BH3-2	804	1
0.60					
0.80		***Sandstone*** Orange/brown with red mottling, extremely weathered, dry, no odour			
1.00			BH3-3	480	1
1.20					
		Borehole ended at 1.3m			
1.40					

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PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH4

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 20.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: SF
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown-dark brown sandy gravelly topsoil with organics (rootlets), fine-medium grained, dry, no odour	BH4-1	325	1
0.20					
0.40		***Sandstone*** Orange/brown, extremely weathered, dry, no odour			
			BH4-2	155	1
0.60					
0.80					
1.00					
1.20		Borehole ended at 1.2m			
1.40					

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3 = Strong visual signs of contamination and/or odour

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55 Miller Street
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Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH5

Project No: E2008 | Sheet: 1 of 1
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd | Hole size: 50mm
Drill Method: Track Mounted Geoprobe / Push Tube | Engineer: SF
Drill date: 15.11.2013 | Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Clayey Sand Brown-dark brown clayey sand topsoil with organics (rootlets), fine-medium grained, dry-moist, no odour	BH5-1	10.5	0
0.20					
0.40			BH5-2	7.5	0
0.60		***Sandy Clay*** Brown/orange, low-moderate plasticity, fine-medium grained sand, dry, no odour			
0.80					
		Borehole ended at 0.9m			
1.00					
1.20					
1.40					

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55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH201

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20					
0.40					
0.60					
0.80					
1.00		***Sandstone*** Orange/brown, distinctly weathered, dry, no odour	BH201-1		0
1.20		Borehole ended at 1.2m			
1.40					

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55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH202

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20					
0.40		***Fill*** Grey/brown silty gravel (Roadbase), dry, no odour	BH202-1		0
0.60					
		Sandstone Orange/brown, distinctly weathered, dry, no odour	BH202-2		0
0.80					
		Borehole ended at 0.9m			
1.00					
1.20					
1.40					

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55 Miller Street
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Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH203

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Grey/brown silty gravel (Roadbase), dry, no odour	BH203-1		0
0.40		***Sandstone*** Orange/brown, distinctly weathered, dry, no odour	BH203-2		0
		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH204

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20					
0.40					
		Sandstone Orange/brown, distinctly weathered, dry, no odour	BH204-1		0
0.60		Borehole ended at 0.6m			
0.80					
1.00					
1.20					
1.40					

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Suite 6.01,
55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH205

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Grey silty gravel (Roadbase), dry, no odour	BH205-1		0
0.20					
		Sandstone Orange/brown, distinctly weathered, dry, no odour	BH205-2		0
0.40					
0.60					
0.80		Borehole ended at 0.8m			
1.00					
1.20					
1.40					

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Contamination | Remediation | Geotechnical
Suite 6.01,
55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH206

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown silty topsoil with organics, dry, no odour	BH206-1		0
0.20		***Sandstone*** Orange/brown, distinctly weathered, dry, no odour			
0.40			BH206-2		0
		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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3 = Strong visual signs of contamination and/or odour

Environmental Investigations Australia
Contamination | Remediation | Geotechnical
Suite 6.01,
55 Miller Street
PYRMONT NSW 2009
Ph: (02) 9516-0722 Fax: (02) 9516-0744

Borehole: BH207

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Asphalt			
		Fill Brown silty gravel with brick fragements, dry, no odour	BH207-1		0
0.20					
		Sandstone Orange/brown-red/grey, extremely weathered, dry, no odour			
0.40			BH207-2		0
0.60					
0.80					
1.00		Borehole ended at 1m			
1.20					
1.40					

FCR = FIELD CONTAMINATION RANKING

0 = No visual signs of contamination and/or detectable odours
1 = Slight visual signs of contamination and/or odours
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3 = Strong visual signs of contamination and/or odour

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Borehole: BH208

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 21.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown silty topsoil with organics, moist, no odour	BH208-1		0
0.20					
0.40					
0.60					
0.80					
		Sandy Clay Light brown, moderate-high plasticity, moist, no odour	BH208-2		0
1.00					
1.20		Borehole ended at 1.2m			
1.40					

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Borehole: BH209

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 22.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
		Fill Dark grey silty gravel (Roadbase), dry, no odour			
0.20			BH209-1		0
		Sandy Clay Light orange/brown, moderate-high plasticity, moist, no odour			
0.40					
			BH209-2		0
0.60					
0.80					
1.00					
1.20					
1.40		Borehole ended at 1.4m			

FCR = FIELD CONTAMINATION RANKING

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Borehole: BH210

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 22.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Asphalt			
		Fill Grey silty gravel (Roadbase), dry, no odour	BH210-1		0
0.20		***Sandstone*** Orange/brown-red/grey, distinctly weathered, dry, no odour	BH210-2		0
0.40		Borehole ended at 0.4m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH211

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown/dark brown gravelly silt with organics, moist, no odour			
0.20			BH211-1		0
0.40					
		Sandstone Orange/brown-red/brown, distinctly weathered, dry, no odour			
0.60			BH211-2		0
		Borehole ended at 0.7m			
0.80					
1.00					
1.20					
1.40					

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Borehole: BH212

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Brown-grey/brown gravelly silty sand with organics, moist, no odour	BH212-1		0
0.20					
0.40		***Sandstone*** Orange/brown-brown, distinctly weathered, dry, no odour	BH212-2		0
0.60		Borehole ended at 0.6m			
0.80					
1.00					
1.20					
1.40					

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Borehole: BH213

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Dark brown silty sand with organics, moist, no odour	BH213-1		0
0.20					
0.40					
0.60		***Sandy Clay*** Orange/brown, moderate plasticity, moist, no odour	BH213-2		0
0.80					
		Borehole ended at 0.9m			
1.00					
1.20					
1.40					

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Borehole: BH214

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Light brown-grey/brown silty gravelly sand, moist, no odour	BH214-1		0
0.20					
0.40					
0.60		***Sandstone*** Orange/brown-brown, distinctly weathered, dry, no odour	BH214-2		0
0.80		Borehole ended at 0.8m			
1.00					
1.20					
1.40					

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Borehole: BH215

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Dark brown sandy silt with organics, moist, no odour	BH215-1		0
0.20					
0.40		***Sandy silt*** Light brown sandy silt, fine-medium grained, moist, no odour	BH215-2		0
0.60					
		Sandstone Light red with ironstone, distinctly weathered, dry, no odour			
0.80		Borehole ended at 0.8m			
1.00					
1.20					
1.40					

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Borehole: BH216

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Dark brown sandy silt with organics, moist, no odour	BH216-1		0
0.20					
0.40					
		Sandy silt Light brown, fine-medium grained, moist, no odour	BH216-2		0
0.60					
		Borehole ended at 0.7m			
0.80					
1.00					
1.20					
1.40					

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Borehole: BH217

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Boulders & brick rubble			
		Sandstone Light brown/orange, distinctly weathered, dry, no odour	BH217-1		0
0.40		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH218

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Boulders & brick rubble			
		Sandstone Light brown/orange, distinctly weathered, dry, no odour	BH218-1		0
0.40		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH219

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Boulders & brick rubble			
		Sandstone Light brown/orange, distinctly weathered, dry, no odour	BH219-1		0
0.40		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH220

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 26.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
0.20		***Fill*** Boulders & brick rubble			
		Sandstone Light brown/orange, distinctly weathered, dry, no odour	BH220-1		0
0.40		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH221

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 28.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
		Fill Dark brown silty sand, moist, no odour			
0.20			BH221-1		0
		Sandstone Orange/brown, distinctly weathered, dry, no odour			
0.40			BH221-2		0
		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH222

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 28.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Dark brown silty sand with organics, moist, no odour	BH222-1		0
0.20		***Sandstone*** Orange/brown, extremely weathered, dry, no odour	BH222-2		0
0.40					
		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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Borehole: BH223

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 28.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Fill Dark brown silty sand with organics, moist, hydrocarbon staining and odour	BH223-1		3
0.20					
0.40					
		Sandy Clay Orange/brown, moderate plasticity, moist, no odour	BH223-2		0
0.60					
0.80					
1.00		Borehole ended at 1m			
1.20					
1.40					

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Borehole: BH224

Project No: E2008
Site Address: Sheperds Bay Urban Stage 2-3, Meadowbank, NSW
Client: Holdmark Pty Ltd
Drill Method: Track Mounted Geoprobe / Push Tube
Drill date: 28.11.2013

Sheet: 1 of 1
Hole size: 50mm
Engineer: ES
Checked by: EG

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Sample ID	PID Concentration (ppm)	FCR
0.00		Ground Surface			
		Concrete			
		Fill Dark brown silty sand, dry, no odour	BH224-1		0
0.20		***Sandstone*** Orange/brown, distinctly weathered, dry, no odour	BH224-2		0
0.40					
		Borehole ended at 0.5m			
0.60					
0.80					
1.00					
1.20					
1.40					

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