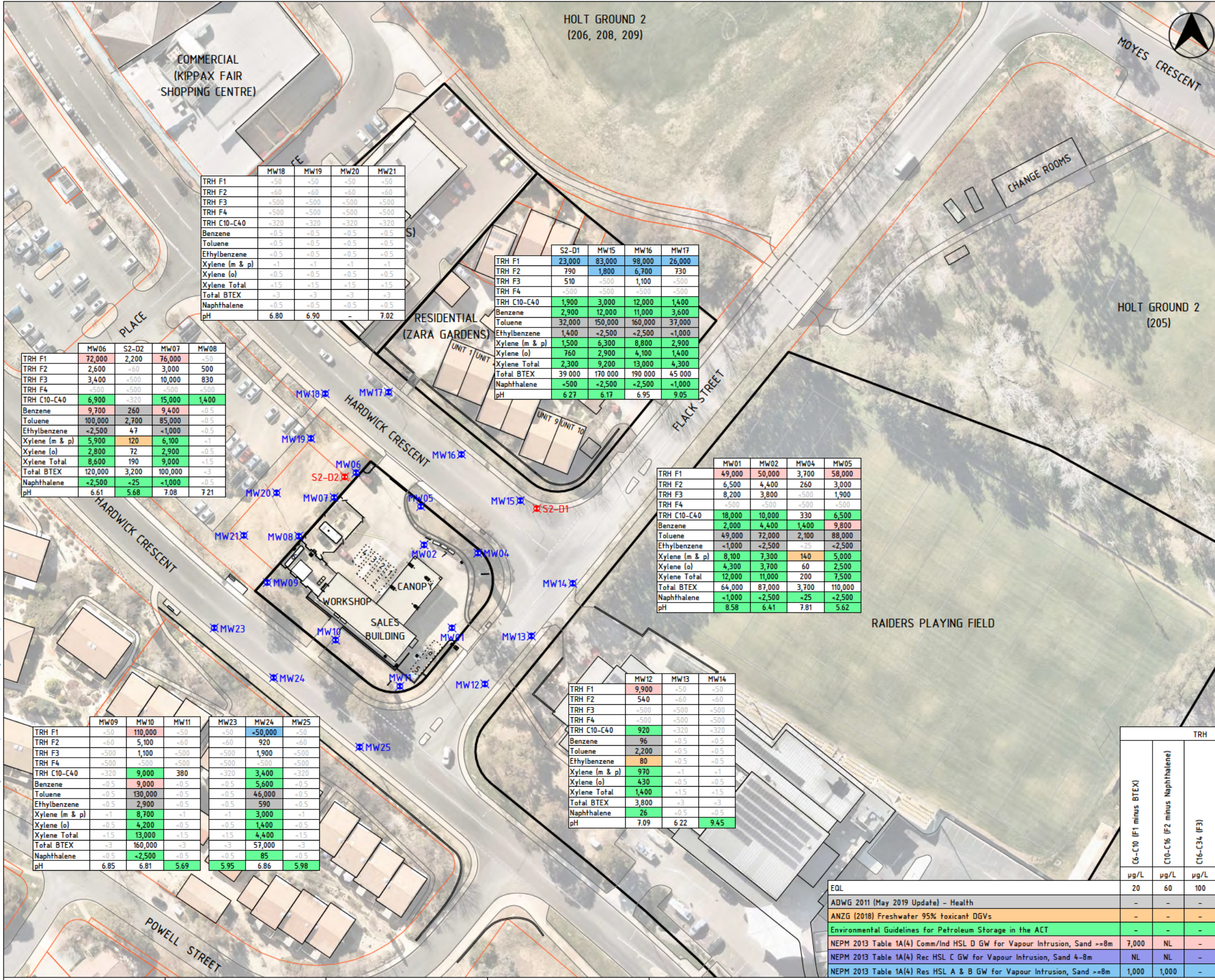


aerial image nearmap august 2020
 block & section data from http://www.actmap.act.gov.au
 drawn by laurie white at www.reumad.com.au
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LEGEND

- PROPERTY BOUNDARY
- BLOCK / SECTION BOUNDARY
- GROUNDWATER MONITORING WELL
- CORED BOREHOLE
- CONCENTRATION EXCEEDING ADWG 2011 (MAY 2019 UPDATE) - HEALTH
- CONCENTRATION EXCEEDING ANZG (2018) FRESHWATER 95% TOXICANT DGVs
- CONCENTRATION EXCEEDING ENVIRONMENT GUIDELINES FOR PETROLEUM STORAGE IN THE ACT
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMM/IND HSL D GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL C GW FOR VAPOUR INTRUSION, SAND 4-8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL A & B GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- EQL ESTIMATED QUANTITATION LIMIT
- NL NON LIMITING
- NO CRITERIA AVAILABLE

NOTE

GROUNDWATER SAMPLED FEBRUARY 2021.

0 25m

1:050 AT A3 APPROXIMATE

REFERENCE: CALTEX 'DANGEROUS GOODS PLAN' DRAWING NO. 22546-DG REV. B DATED 25/11/2011 AND VERIS SURVEY 217267.01 DATED 02/10/2020 SUPPLIED BY CLIENT.

	MW18	MW19	MW20	MW21
TRH F1	<-50	<-50	<-50	<-50
TRH F2	<-60	<-60	<-60	<-60
TRH F3	<-500	<-500	<-500	<-500
TRH F4	<-500	<-500	<-500	<-500
TRH C10-C40	<-320	<-320	<-320	<-320
Benzene	<-0.5	<-0.5	<-0.5	<-0.5
Toluene	<-0.5	<-0.5	<-0.5	<-0.5
Ethylbenzene	<-0.5	<-0.5	<-0.5	<-0.5
Xylene (m & p)	<-1	<-1	<-1	<-1
Xylene (o)	<-0.5	<-0.5	<-0.5	<-0.5
Xylene Total	<-1.5	<-1.5	<-1.5	<-1.5
Total BTEX	<-3	<-3	<-3	<-3
Naphthalene	<-0.5	<-0.5	<-0.5	<-0.5
pH	6.80	6.90	-	7.02

	S2-D1	MW15	MW16	MW17
TRH F1	23,000	83,000	98,000	26,000
TRH F2	790	1,800	6,700	730
TRH F3	510	<-500	1,100	<-500
TRH F4	<-500	<-500	<-500	<-500
TRH C10-C40	1,900	3,000	12,000	1,400
Benzene	2,900	12,000	11,000	3,600
Toluene	32,000	150,000	160,000	37,000
Ethylbenzene	1,400	<-2,500	<-2,500	<-1,000
Xylene (m & p)	1,500	6,300	8,800	2,900
Xylene (o)	760	2,900	4,100	1,400
Xylene Total	2,300	9,200	13,000	4,300
Total BTEX	39,000	170,000	190,000	45,000
Naphthalene	<-500	<-2,500	<-2,500	<-1,000
pH	6.27	6.17	6.95	9.05

	MW06	S2-D2	MW07	MW08
TRH F1	72,000	2,200	76,000	<-50
TRH F2	2,600	<+80	3,000	500
TRH F3	3,400	<-500	10,000	830
TRH F4	<-500	<-500	<-500	<-500
TRH C10-C40	6,900	<-320	15,000	1,400
Benzene	9,700	260	9,400	<-0.5
Toluene	100,000	2,700	85,000	<-0.5
Ethylbenzene	<-2,500	47	<-1,000	<-0.5
Xylene (m & p)	5,900	120	6,100	<-1
Xylene (o)	2,800	72	2,900	<-0.5
Xylene Total	8,600	190	9,000	<-1.5
Total BTEX	120,000	3,200	100,000	<-3
Naphthalene	<-2,500	<-25	<-1,000	<-0.5
pH	6.61	5.68	7.08	7.21

	MW01	MW02	MW04	MW05
TRH F1	49,000	50,000	3,700	58,000
TRH F2	6,500	4,400	260	3,000
TRH F3	8,200	3,800	<-500	1,900
TRH F4	<-500	<-500	<-500	<-500
TRH C10-C40	18,000	10,000	330	6,500
Benzene	2,000	4,400	1,400	9,800
Toluene	49,000	72,000	2,100	88,000
Ethylbenzene	<-1,000	<-2,500	<-25	<-2,500
Xylene (m & p)	8,100	7,300	140	5,000
Xylene (o)	4,300	3,700	60	2,500
Xylene Total	12,000	11,000	200	7,500
Total BTEX	64,000	87,000	3,700	110,000
Naphthalene	<-1,000	<-2,500	<-25	<-2,500
pH	8.58	6.41	7.81	5.62

	MW12	MW13	MW14
TRH F1	9,900	<-50	<-50
TRH F2	540	<-60	<-60
TRH F3	<-500	<-500	<-500
TRH F4	<-500	<-500	<-500
TRH C10-C40	920	<-320	<-320
Benzene	96	<-0.5	<-0.5
Toluene	2,200	<-0.5	<-0.5
Ethylbenzene	80	<-0.5	<-0.5
Xylene (m & p)	970	<-1	<-1
Xylene (o)	430	<-0.5	<-0.5
Xylene Total	1,400	<-1.5	<-1.5
Total BTEX	3,800	<-3	<-3
Naphthalene	26	<-0.5	<-0.5
pH	7.09	6.22	9.45

	MW09	MW10	MW11	MW23	MW24	MW25
TRH F1	<-50	110,000	<-50	<-50	<-50,000	<-50
TRH F2	<-60	5,100	<-60	<-60	920	<-60
TRH F3	<-500	1,100	<-500	<-500	1,900	<-500
TRH F4	<-500	<-500	<-500	<-500	<-500	<-500
TRH C10-C40	<-320	9,000	380	<-320	3,400	<-320
Benzene	<-0.5	9,900	<-0.5	<-0.5	5,600	<-0.5
Toluene	<-0.5	130,000	<-0.5	<-0.5	46,000	<-0.5
Ethylbenzene	<-0.5	2,900	<-0.5	<-0.5	590	<-0.5
Xylene (m & p)	<-1	8,700	<-1	<-1	3,000	<-1
Xylene (o)	<-0.5	4,200	<-0.5	<-0.5	1,400	<-0.5
Xylene Total	<-1.5	13,000	<-1.5	<-1.5	4,400	<-1.5
Total BTEX	<-3	160,000	<-3	<-3	57,000	<-3
Naphthalene	<-0.5	<-2,500	<-0.5	<-0.5	85	<-0.5
pH	6.85	6.81	5.69	5.95	6.86	5.98

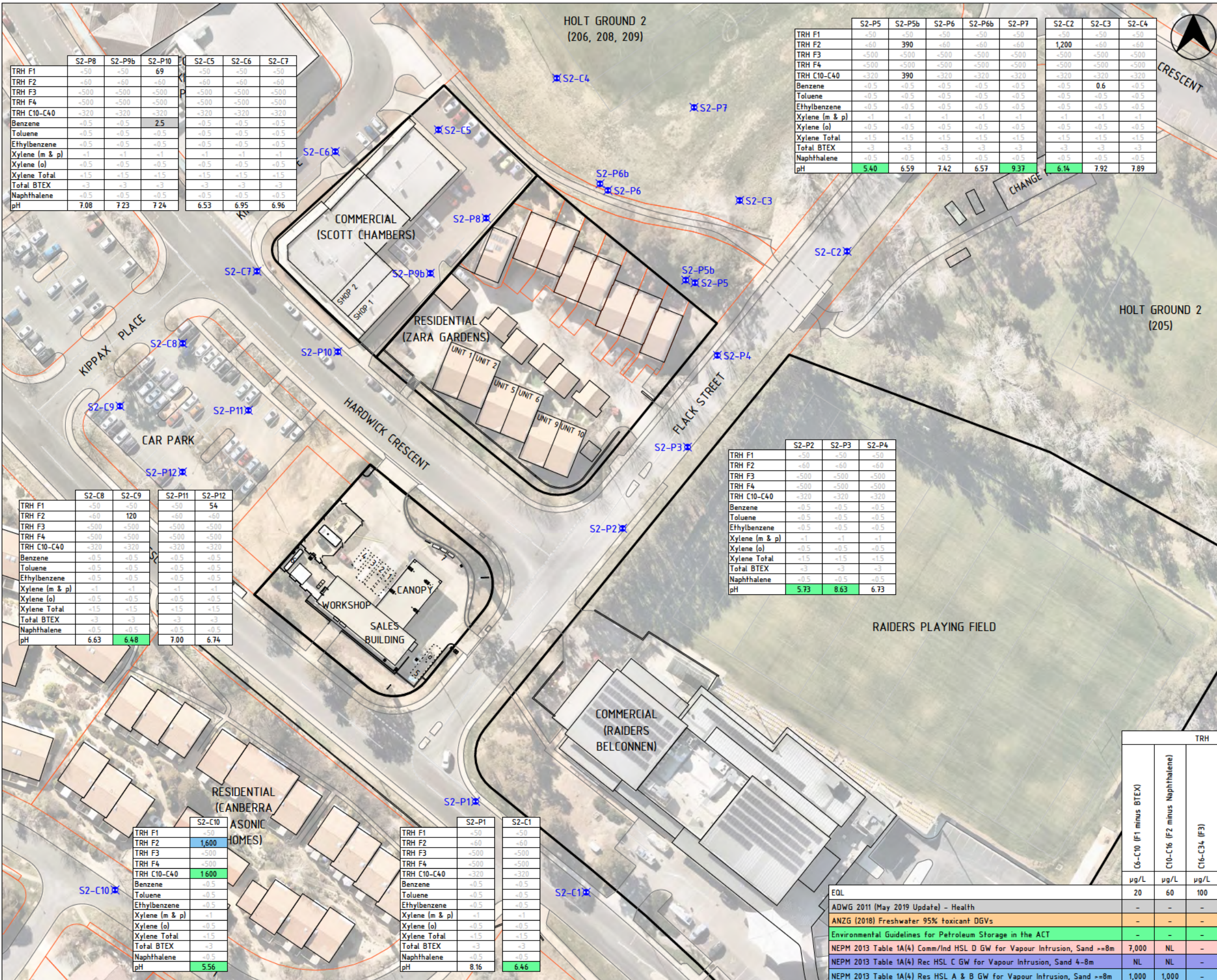
	TRH					BTEX					PAH		pH	
	C6-C10 (F1 minus BTEX)	C10-C16 (F2 minus Naphthalene)	C16-C34 (F3)	C34-C40 (F4)	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX		Naphthalene
EQL	20	60	100	100	100	0.5	0.5	0.5	1	0.5	1.5	1	0.5	
ADWG 2011 (May 2019 Update) - Health	-	-	-	-	-	1	800	300	-	-	600	-	-	
ANZG (2018) Freshwater 95% toxicant DGVs	-	-	-	-	-	950	180	80	75	350	-	-	16	
Environmental Guidelines for Petroleum Storage in the ACT	-	-	-	-	600	950	300	140	-	350	600	-	16	6.5-8.5
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand ≥8m	7,000	NL	-	-	-	5,000	NL	NL	-	-	NL	-	NL	
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand 4-8m	NL	NL	-	-	-	NL	NL	NL	-	-	NL	-	NL	
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand ≥8m	1,000	1,000	-	-	-	900	NL	NL	-	-	NL	-	NL	



CALTEX HOLT SERVICE STATION
 1 HARDWICK CRESCENT
 HOLT ACT

FIGURE 3a
 GROUNDWATER CONTAMINANT IMPACT PLAN
 MW & S2-D WELLS - FEBRUARY 2021

aerial image nearmap august 2020
 block & section data from http://www.actmap.act.gov.au
 drawn by laurie white at www.reumad.com.au
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LEGEND

- PROPERTY BOUNDARY
- BLOCK / SECTION BOUNDARY
- ### X GROUNDWATER MONITORING WELL
- CONCENTRATION EXCEEDING ADWG 2011 (MAY 2019 UPDATE) - HEALTH
- CONCENTRATION EXCEEDING ANZG (2018) FRESHWATER 95% TOXICANT DGVs
- CONCENTRATION EXCEEDING ENVIRONMENT GUIDELINES FOR PETROLEUM STORAGE IN THE ACT
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMM/IND HSL D GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL C GW FOR VAPOUR INTRUSION, SAND 4-8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL A & B GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- EQL ESTIMATED QUANTITATION LIMIT
- NL NON LIMITING
- NO CRITERIA AVAILABLE

NOTE

GROUNDWATER SAMPLED FEBRUARY 2021.

0 25m

1:050 AT A3 APPROXIMATE

REFERENCE: CALTEX 'DANGEROUS GOODS PLAN' DRAWING NO. 22546-DG REV. B DATED 25/11/2011 AND VERIS SURVEY 217267.01 DATED 02/10/2020 SUPPLIED BY CLIENT.

	S2-P2	S2-P3	S2-P4
TRH F1	<50	<50	<50
TRH F2	<60	<60	<60
TRH F3	<500	<500	<500
TRH F4	<500	<500	<500
TRH C10-C40	<320	<320	<320
Benzene	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5
Xylene (m & p)	<1	<1	<1
Xylene (o)	<0.5	<0.5	<0.5
Xylene Total	<1.5	<1.5	<1.5
Total BTEX	<3	<3	<3
Naphthalene	<0.5	<0.5	<0.5
pH	5.73	8.63	6.73





	S2-P8	S2-P9b	S2-P10	S2-C5	S2-C6	S2-C7
TRH F1	<50	<50	69	<50	<50	<50
TRH F2	<60	<60	<60	<60	<60	<60
TRH F3	<500	<500	<500	<500	<500	<500
TRH F4	<500	<500	<500	<500	<500	<500
TRH C10-C40	<320	<320	<320	<320	<320	<320
Benzene	<0.5	<0.5	2.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	<1	<1	<1	<1	<1	<1
Xylene (o)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene Total	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	<3	<3	<3	<3	<3	<3
Naphthalene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
pH	7.08	7.23	7.24	6.53	6.95	6.96

	S2-C8	S2-C9	S2-P11	S2-P12
TRH F1	<50	<50	<50	54
TRH F2	<60	120	<60	<60
TRH F3	<500	<500	<500	<500
TRH F4	<500	<500	<500	<500
TRH C10-C40	<320	<320	<320	<320
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	<1	<1	<1	<1
Xylene (o)	<0.5	<0.5	<0.5	<0.5
Xylene Total	<1.5	<1.5	<1.5	<1.5
Total BTEX	<3	<3	<3	<3
Naphthalene	<0.5	<0.5	<0.5	<0.5
pH	6.63	6.48	7.00	6.74

	S2-C10
TRH F1	<50
TRH F2	1,600
TRH F3	<500
TRH F4	<500
TRH C10-C40	1,600
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylene (m & p)	<1
Xylene (o)	<0.5
Xylene Total	<1.5
Total BTEX	<3
Naphthalene	<0.5
pH	5.56

	S2-P1	S2-C1
TRH F1	<50	<50
TRH F2	<60	<60
TRH F3	<500	<500
TRH F4	<500	<500
TRH C10-C40	<320	<320
Benzene	<0.5	<0.5
Toluene	<0.5	<0.5
Ethylbenzene	<0.5	<0.5
Xylene (m & p)	<1	<1
Xylene (o)	<0.5	<0.5
Xylene Total	<1.5	<1.5
Total BTEX	<3	<3
Naphthalene	<0.5	<0.5
pH	8.16	6.46

	TRH					BTEX					PAH		pH
	C6-C10 (F1 minus BTEX)	C10-C16 (F2 minus Naphthalene)	C16-C34 (F3)	C34-C40 (F4)	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	
μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
EQL	20	60	100	100	100	0.5	0.5	0.5	1	0.5	1.5	1	0.5
ADWG 2011 (May 2019 Update) - Health	-	-	-	-	-	1	800	300	-	-	600	-	-
ANZG (2018) Freshwater 95% toxicant DGVs	-	-	-	-	-	950	180	80	75	350	-	-	16
Environmental Guidelines for Petroleum Storage in the ACT	-	-	-	-	600	950	300	140	-	350	600	-	16
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand ≥8m	7,000	NL	-	-	-	5,000	NL	NL	-	NL	-	NL	NL
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand 4-8m	NL	NL	-	-	-	NL	NL	NL	-	NL	-	NL	NL
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand ≥8m	1,000	1,000	-	-	-	900	NL	NL	-	NL	-	NL	NL

CALTEX HOLT SERVICE STATION
 1 HARDWICK CRESCENT
 HOLT ACT

FIGURE 3b
GROUNDWATER CONTAMINANT IMPACT PLAN
S2-P & S2-C WELLS - FEBRUARY 2021

Figure prepared for WSP by InSite Remediation Services Pty Ltd

aerial image nearmap august 2020
 block & section data from http://www.actmagp.act.gov.au
 drawn by laurie white at www.reumad.com.au
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HOLT GROUND 2
(206, 208, 209)

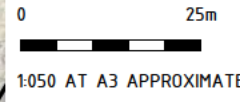


LEGEND

- PROPERTY BOUNDARY
- BLOCK / SECTION BOUNDARY
- #### GROUNDWATER MONITORING WELL
- PEW## EXTRACTION WELL
- IW## INJECTION WELL
- RW## RECOVERY WELL
- CONCENTRATION EXCEEDING ADWG 2011 (MAY 2019 UPDATE) - HEALTH
- CONCENTRATION EXCEEDING ANZG (2018) FRESHWATER 95% TOXICANT DGVs
- CONCENTRATION EXCEEDING ENVIRONMENT GUIDELINES FOR PETROLEUM STORAGE IN THE ACT
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMM/IND HSL D GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL C GW FOR VAPOUR INTRUSION, SAND 4-8 METRES
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RES HSL A & B GW FOR VAPOUR INTRUSION, SAND ≥8 METRES
- EQL ESTIMATED QUANTITATION LIMIT
- NL NON LIMITING
- NO CRITERIA AVAILABLE

NOTE

GROUNDWATER SAMPLED FEBRUARY 2021.



REFERENCE: CALTEX 'DANGEROUS GOODS PLAN' DRAWING NO. 22546-DG REV. B DATED 25/11/2011 AND VERIS SURVEY 217267.01 DATED 02/10/2020 SUPPLIED BY CLIENT.

	IW1	EW01	EW02	RW01
TRH F1	69,000	63,000	74,000	94,000
TRH F2	24,000	1,700	910	2,600
TRH F3	4,800	3,150	-500	-500
TRH F4	-500	-500	-500	-500
TRH C10-C40	32,000	5,900	1,700	4,000
Benzene	4,600	10,000	5,300	14,000
Toluene	71,000	100,000	39,000	170,000
Ethylbenzene	1,900	-2,500	560	3,000
Xylene (m & p)	5,800	5,500	2,400	8,300
Xylene (o)	2,600	2,600	1,200	4,200
Xylene Total	8,400	8,100	3,700	13,000
Total BTEX	86,000	120,000	48,000	200,000
Naphthalene	-1,000	-2,500	-500	-2,500
pH	-	9.23	6.80	6.43

	PMW1	PMW2	PMW3	PMW4	PEW1
TRH F1	93,000	73,000	76,000	69,000	80,000
TRH F2	1,900	2,030	910	970	2,500
TRH F3	500	550	-500	790	-500
TRH F4	-500	-500	-500	-500	-500
TRH C10-C40	4,400	3,700	2,300	3,300	5,100
Benzene	11,000	13,000	9,300	6,500	9,000
Toluene	130,000	92,000	92,000	77,000	92,000
Ethylbenzene	2,900	1,990	1,100	1,800	-2,500
Xylene (m & p)	7,300	5,690	4,800	5,600	5,700
Xylene (o)	3,400	2,600	2,300	2,600	3,000
Xylene Total	11,000	8,260	7,000	8,200	8,600
Total BTEX	160,000	120,000	110,000	94,000	110,000
Naphthalene	-2,500	-2,500	-1,000	-1,000	-2,500
pH	7.15	6.96	7.01	6.76	6.75

	EW03	IW2	IW3
TRH F1	-50	18,000	8,700
TRH F2	-60	1,200	11,000
TRH F3	-500	-500	4,500
TRH F4	-500	-500	-500
TRH C10-C40	-320	2,400	16,000
Benzene	-0.5	88	1,900
Toluene	-0.5	3,100	5,100
Ethylbenzene	-0.5	370	120
Xylene (m & p)	-1	1,300	-200
Xylene (o)	-0.5	550	110
Xylene Total	-1.5	1,900	270
Total BTEX	-3	5,500	7,400
Naphthalene	-0.5	-50	-100
pH	6.84	6.61	3.25

	TRH					BTEX					PAH		pH
	C6-C10 (F1 minus BTEX)	C10-C16 (F2 minus Naphthalene)	C16-C34 (F3)	C34-C40 (F4)	C10-C40 (Sum of total)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	
EQL	20	60	100	100	100	0.5	0.5	0.5	1	0.5	1.5	1	0.5
ADWG 2011 (May 2019 Update) - Health	-	-	-	-	-	1	800	300	-	-	600	-	-
ANZG (2018) Freshwater 95% toxicant DGVs	-	-	-	-	-	950	180	80	75	350	-	-	16
Environmental Guidelines for Petroleum Storage in the ACT	-	-	-	-	600	950	300	140	-	350	600	-	16
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Sand ≥8m	7,000	NL	-	-	-	5,000	NL	NL	-	-	NL	-	NL
NEPM 2013 Table 1A(4) Rec HSL C GW for Vapour Intrusion, Sand 4-8m	NL	NL	-	-	-	NL	NL	NL	-	-	NL	-	NL
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Sand ≥8m	1,000	1,000	-	-	-	900	NL	NL	-	-	NL	-	NL

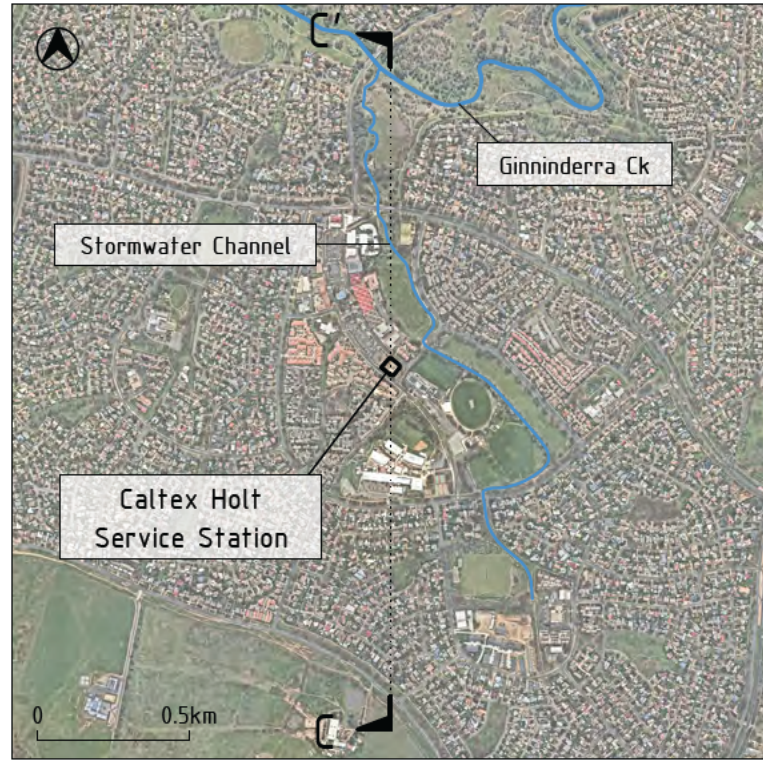


Figure prepared for WSP by
InSite Remediation Services Pty Ltd

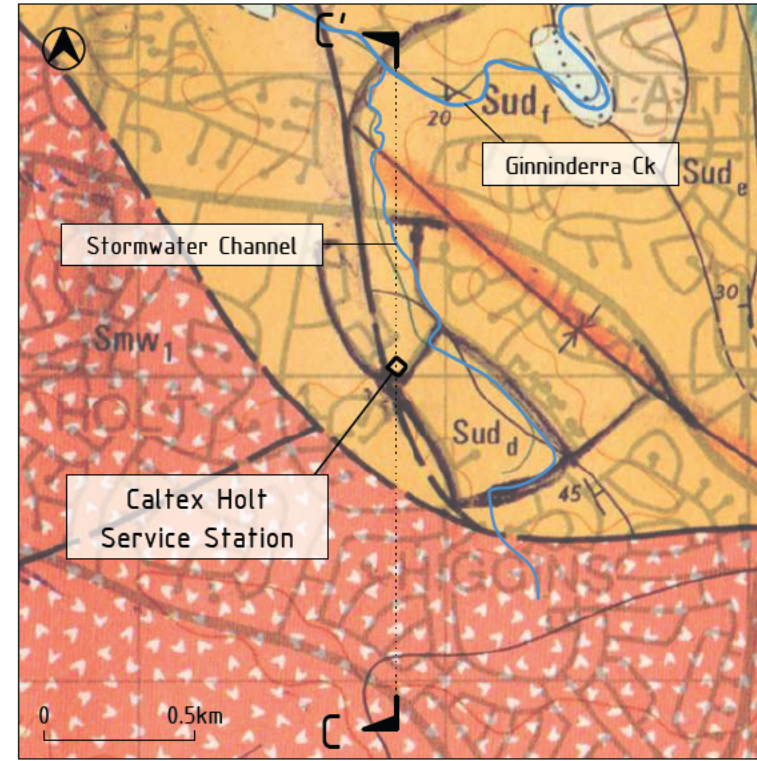


CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

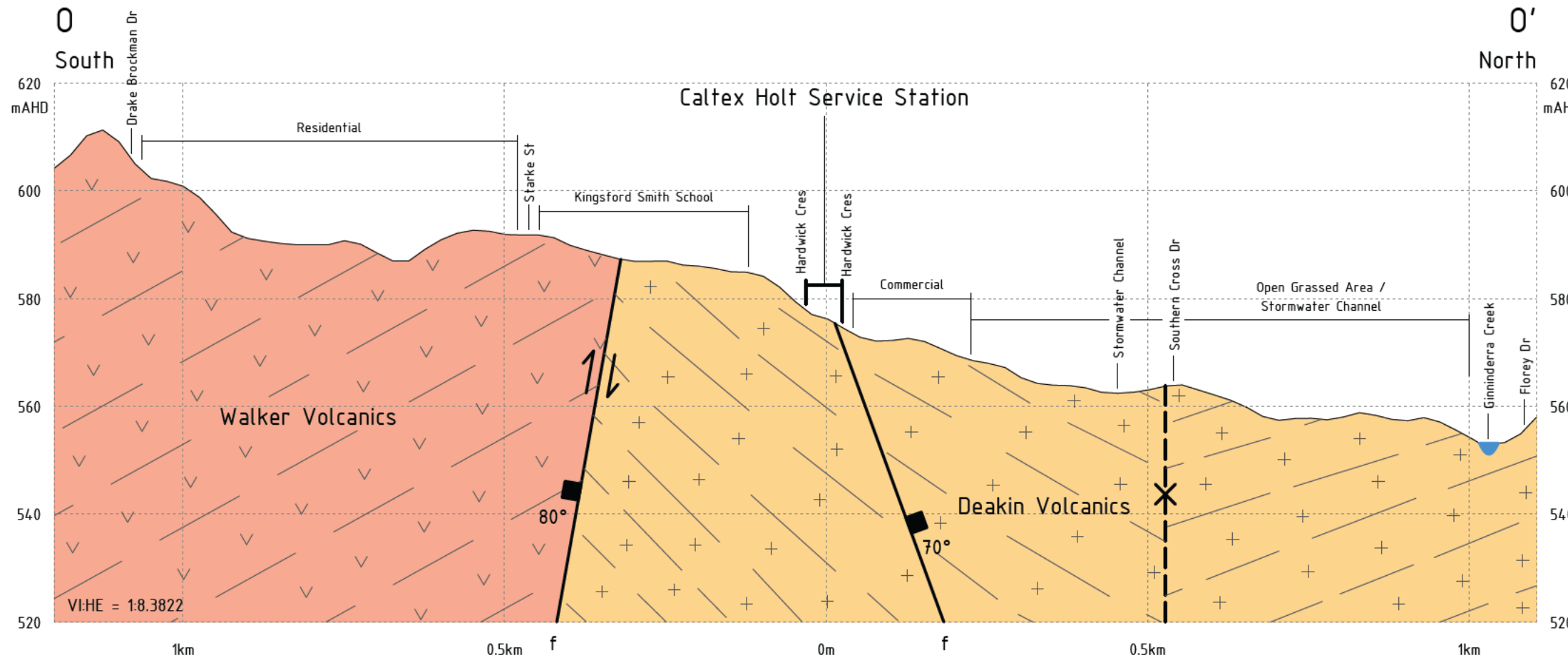
FIGURE 3c
GROUNDWATER CONTAMINANT IMPACT PLAN
RW & REMEDIATION WELLS - FEBRUARY 2021



CROSS SECTION LOCATION - AERIAL



CROSS SECTION LOCATION - GEOLOGICAL MAP



LEGEND

- DACITE - WALKER VOLCANICS
- TUFF - DEAKIN VOLCANICS
- TRACE BEDDING / FLOW ANGLE
- FAULT WITH DIP DIRECTION & ANGLE
- DISPLACEMENT & DIRECTION
- SYNCLINE

NOTE
SURFACE PROFILE HEIGHT DATA EXTRACTED FROM GOOGLE EARTH.

**CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT**

**FIGURE 4a
GEOLOGICAL & TOPOGRAPHIC FEATURES
CROSS SECTION 0-0'**