



DEPOT	PRODUCT TYPE	VOLUME (L)	STATUS
1	V95	27,400	
2	Diesel	27,400	
3	E10	27,400	
4	V98	20,000	Out of service from 14 February 2020.
5	E10	59,400	
6	LPG	7,500	Decommissioned

Legend

- Site boundary
- Underground Storage Tanks
- Decommissioned LPG Tank
- Bowsers
- ⊗ Fill points
- ⊗ Monitoring well
- Planned excavation extent

Base map source: Near Maps (2020)

Figure 2 – Excavation extent

Ampol Holt

1 Hardwick Crescent, Holt, Australian Capital Territory (ACT)





DEPOT	PRODUCT TYPE	VOLUME (L)	STATUS
1	V95	27,400	
2	Diesel	27,400	
3	E10	27,400	
4	V98	20,000	Out of service from 14 February 2020.
5	E10	59,400	
6	LPG	7,500	Decommissioned

Legend

- Site boundary
- Underground Storage Tanks
- Decommissioned LPG Tank
- Bowzers
- Fill points
- Monitoring well
- Planned excavation extent
- Validation sample location

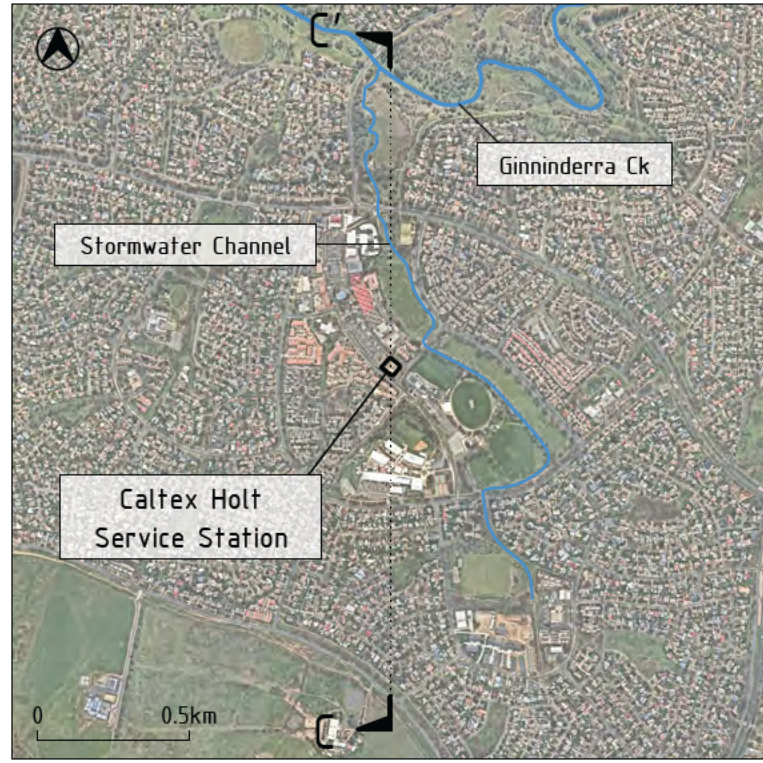
Base map source: Near Maps (2020)

Figure 3 – Validation and sampling plan

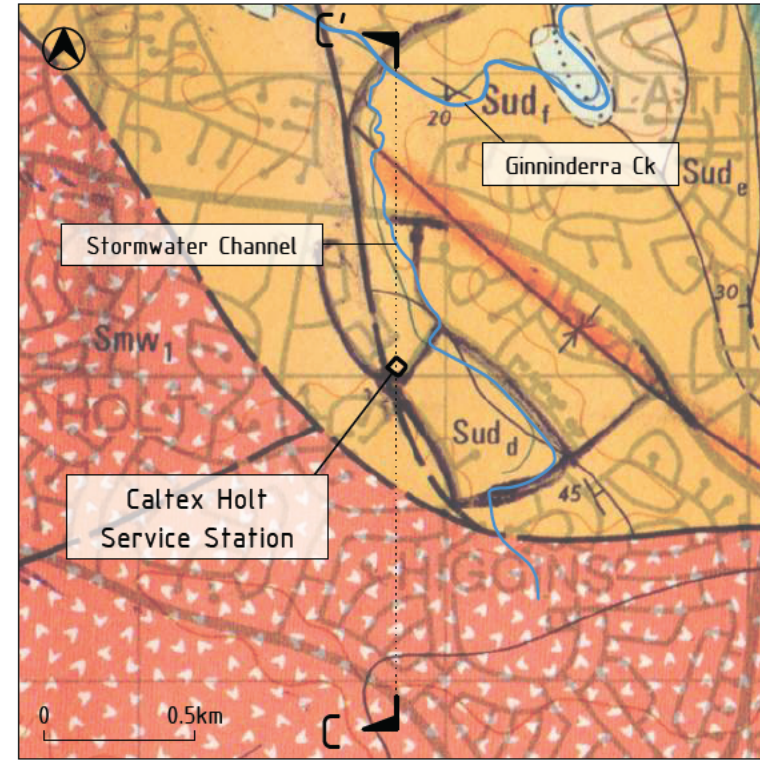
Ampol Holt

1 Hardwick Crescent, Holt, Australian Capital Territory (ACT)

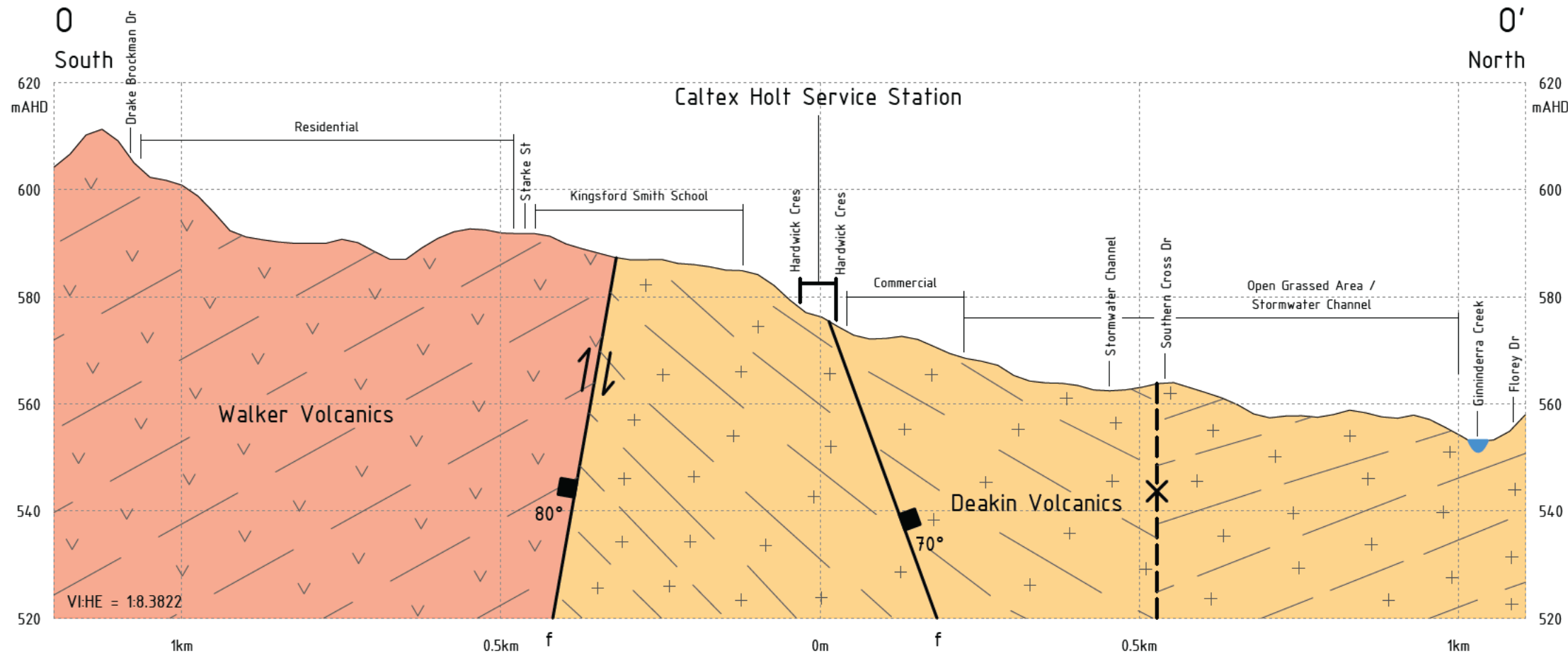




CROSS SECTION LOCATION - AERIAL



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

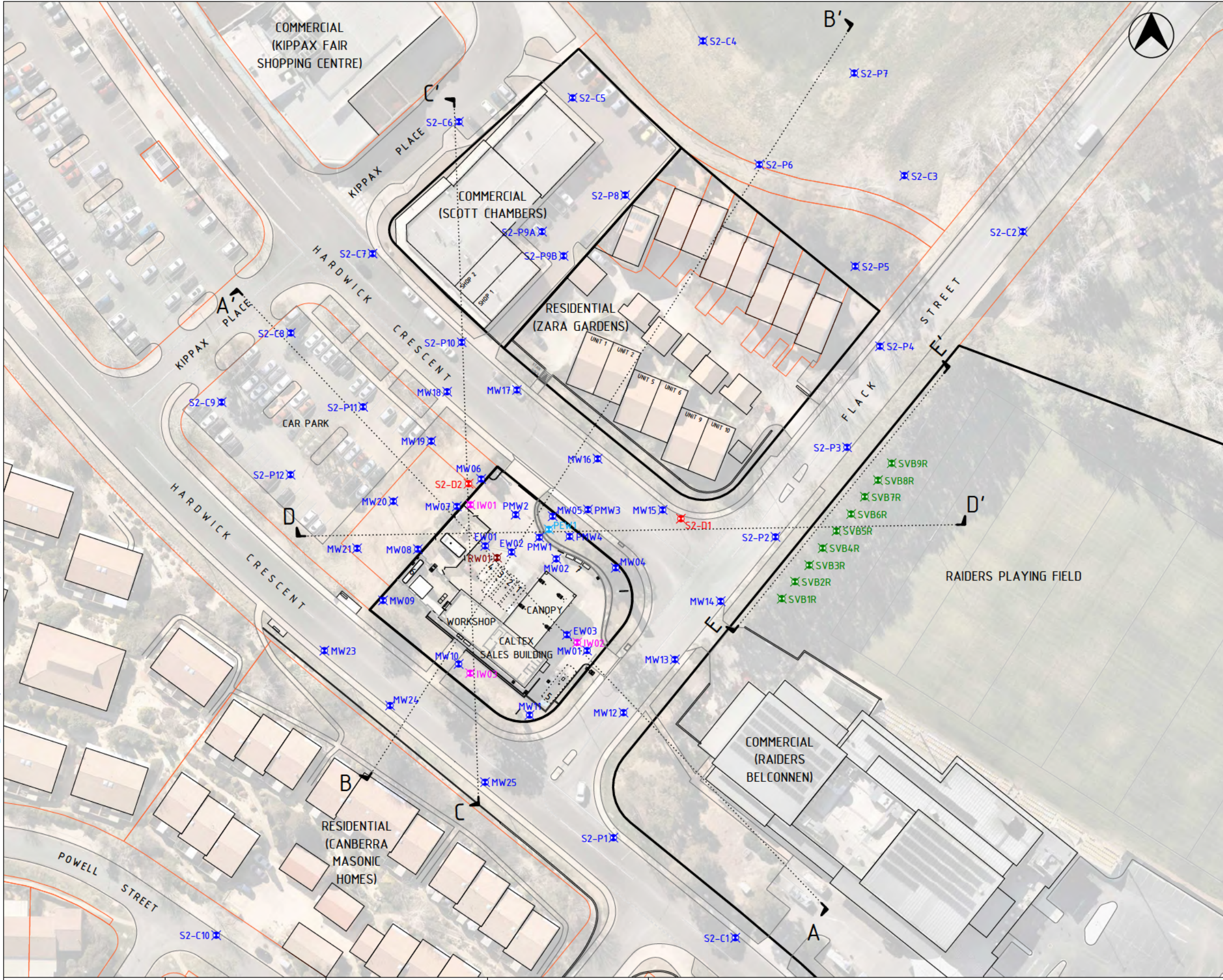
SURFACE PROFILE HEIGHT DATA EXTRACTED FROM GOOGLE EARTH.



CALTEX HOLT SERVICE STATION
 1 HARDWICK CRESCENT
 HOLT ACT

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

aerial image nearmap august 2020
 block & section data from http://www.actmap.act.gov.au
 Wed, 28 Oct 2020 2:18:36 PM | drawn by laurie white at www.reumad.com.au
 D:\Google Drive\InSite Remediation\Holt\FIGURES\FIGURES STAGE 2 ESA\F08_V3.vwk | Wed, 28 Oct 2020 2:18:36 PM | drawn by laurie white at www.reumad.com.au



LEGEND

	PROPERTY BOUNDARY
	BLOCK / SECTION BOUNDARY
	SECTION LOCATION & ID
	GROUNDWATER MONITORING WELL
	EXTRACTION WELL
	INJECTION WELL
	RECOVERY WELL
	SOIL VAPOUR BORE
	CORED BOREHOLE

0 25m
 1:950 AT A3 APPROXIMATE

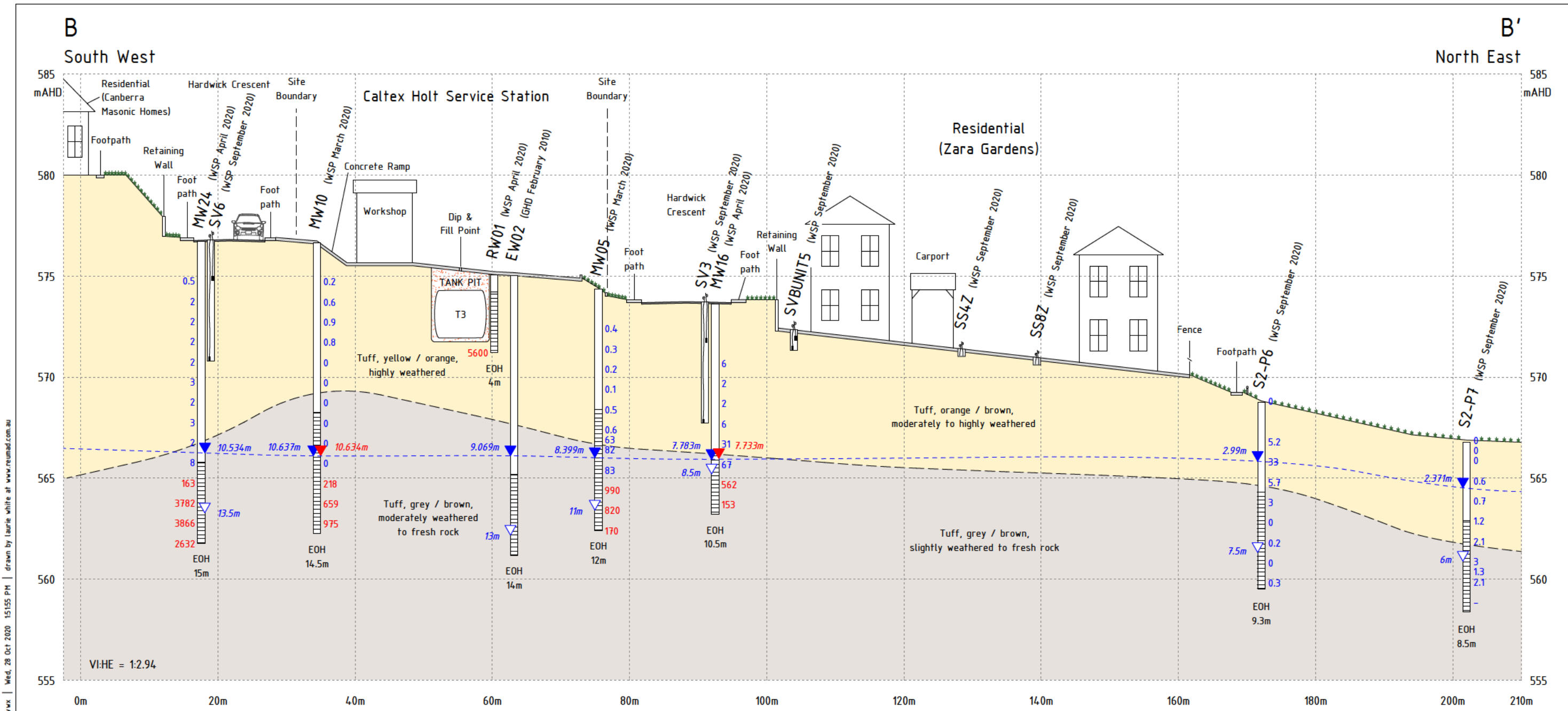
REFERENCE: CALTEX 'DANGEROUS GOODS PLAN' DRAWING NO. 22546-DG
 REV. B DATED 25/11/2011 AND VERIS SURVEY 217267.01 DATED
 02/10/2020 SUPPLIED BY CLIENT.

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CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

FIGURE 4b
CROSS-SECTION LOCATION PLAN



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LEGEND

- | | | | | | |
|--|--------------------------------------|--|--------------------------------------|--|--|
| | MONITORING WELL ID | | SUB SLAB SOIL VAPOUR PIN ID | | CONCRETE |
| | MONITORING WELL CASING | | SUB SLAB SOIL VAPOUR PIN | | BITUMEN |
| | SCREENED INTERVAL OF MONITORING WELL | | PID < 100ppm | | TANK PIT |
| | SOIL VAPOUR BORE ID | | PID > 100ppm | | TUFF, YELLOW / ORANGE OR ORANGE / BROWN. |
| | TEFLON TUBE | | GROUNDWATER ENCOUNTERED LEVEL (mBGL) | | TUFF, GREY / BROWN |
| | SOIL VAPOUR IMPLANT | | GROUNDWATER STABILISED LEVEL (mBGL) | | |
| | TEFLON TUBE | | GAUGED LNAPL LEVEL (mBGL) | | |
| | SOIL VAPOUR IMPLANT | | GRASS SURFACE | | |
| | | | INFERRED GEOLOGICAL CONTACT | | |
| | | | INFERRED GROUNDWATER LEVEL | | |

NOTE

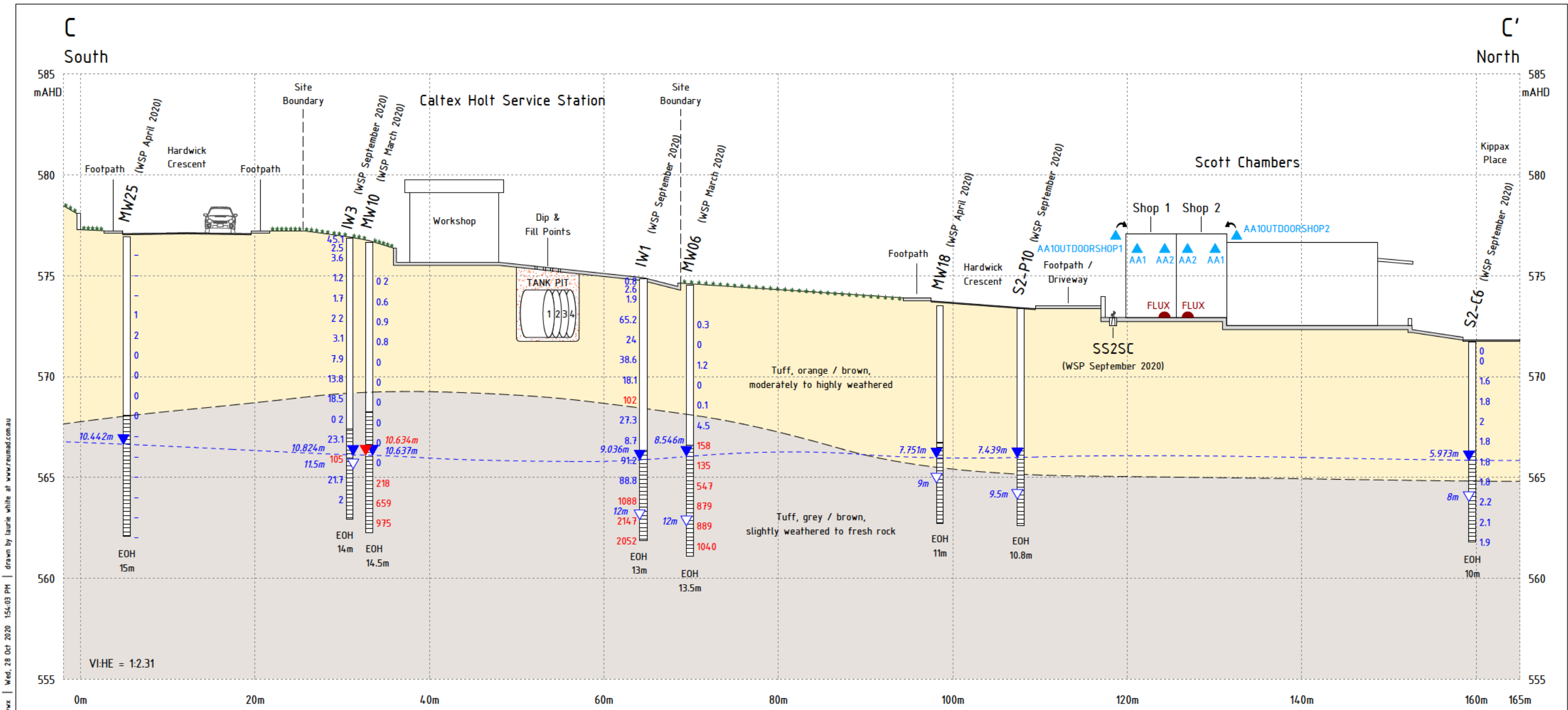
EW02 INSTALLED BY GHD FEBRUARY 2010, MW05 & MW10 INSTALLED BY WSP MARCH 2020, RW01, MW16 & MW25 INSTALLED BY WSP APRIL 2020, SV3, SV6, SVBUNIT5, SS4Z, SS8Z, S2-P6 & S2-P7 INSTALLED BY WSP SEPTEMBER 2020.
 GROUNDWATER & LNAPL LEVELS GAUGED 28 & 29 SEPTEMBER 2020.

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CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

FIGURE 4d
CROSS SECTION B-B'



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LEGEND

- MONITORING WELL ID
- MONITORING WELL CASING
- SCREENED INTERVAL OF MONITORING WELL
- SUB SLAB SOIL VAPOUR PIN ID
- SUB SLAB SOIL VAPOUR PIN
- PID < 100ppm
- PID > 100ppm
- GROUNDWATER STABILISED LEVEL (mBGL)
- GROUNDWATER STABILISED LEVEL (mBGL)
- GAUGED LNAPL LEVEL (mBGL)
- GRASS SURFACE
- INFERRED GEOLOGICAL CONTACT
- INFERRED GROUNDWATER LEVEL
- AMBIENT AIR SAMPLE LOCATION
- FLUX SAMPLE LOCATION

- CONCRETE
- BITUMEN
- TANK PIT
- TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
- TUFF, GREY / BROWN

NOTE

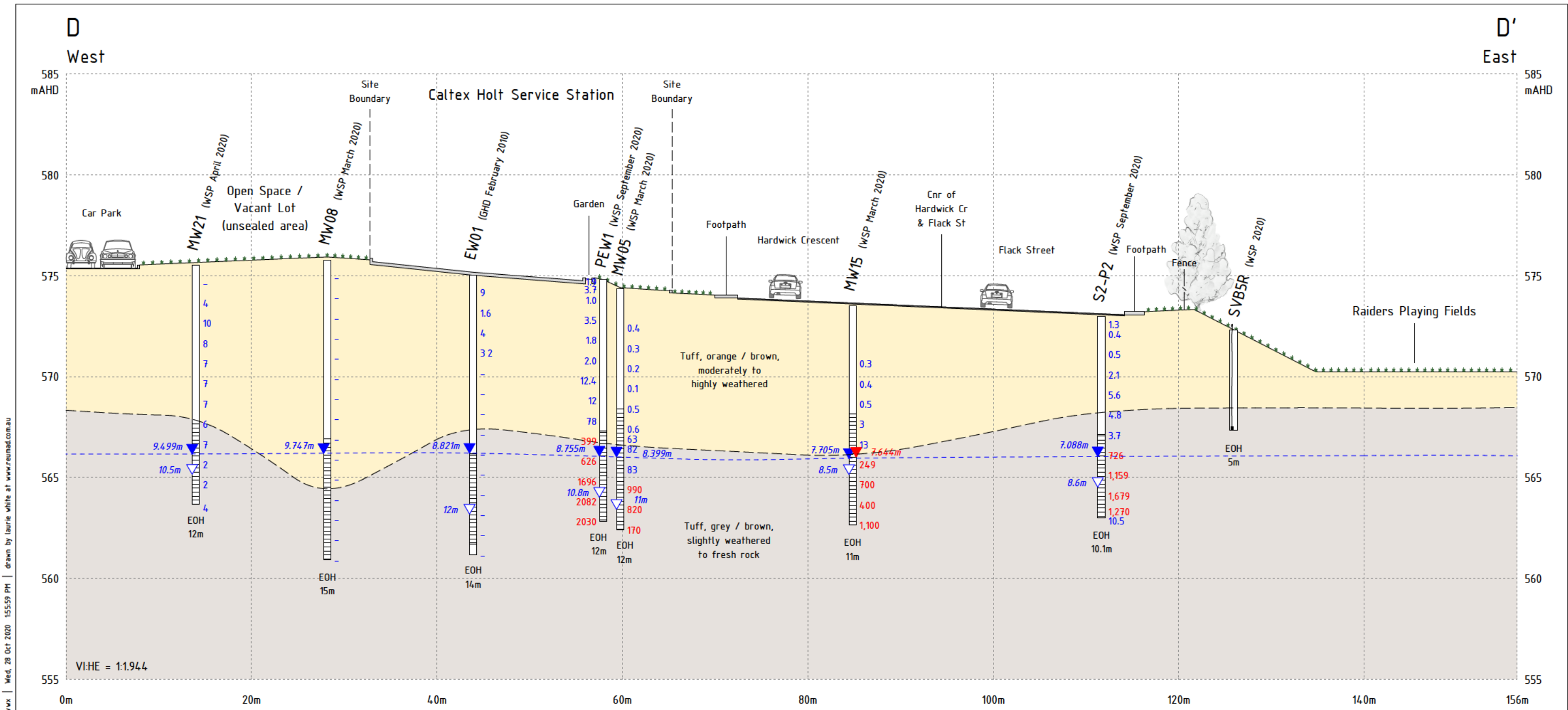
MW06 & MW10 INSTALLED BY WSP MARCH 2020, MW18 & MW25 INSTALLED BY WSP APRIL 2020 AND IW1, IW3, S2-C6, S2-P10 & SS2SC INSTALLED BY WSP SEPTEMBER 2020.
GROUNDWATER & LNAPL LEVELS GAUGED 28 & 29 SEPTEMBER 2020.

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

**FIGURE 4e
CROSS SECTION C-C'**



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LEGEND

- MW## MONITORING WELL ID
- MONITORING WELL CASING
- SCREENED INTERVAL OF MONITORING WELL
- SV# SOIL VAPOUR BORE ID
- TEFLON TUBE
- SOIL VAPOUR IMPLANT
- TEFLON TUBE
- SOIL VAPOUR IMPLANT
- ### PID < 100ppm
- ### PID > 100ppm
- ##m ▽ GROUNDWATER ENCOUNTERED LEVEL (mBGL)
- ##m ▾ GROUNDWATER STABILISED LEVEL (mBGL)
- ##m ▿ GAUGED LNAPL LEVEL (mBGL)
- GRASS SURFACE
- INFERRED GEOLOGICAL CONTACT
- INFERRED GROUNDWATER LEVEL

- CONCRETE
- BITUMEN
- TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
- TUFF, GREY / BROWN

NOTE

EW01 INSTALLED BY GHD FEBRUARY 2010, MW05, MW08 & MW15 INSTALLED BY WSP MARCH 2020, MW21 INSTALLED BY WSP APRIL 2020 AND S2-P2 & SVB5R INSTALLED BY WSP SEPTEMBER 2020. GROUNDWATER & LNAPL LEVELS GAUGED 28 & 29 SEPTEMBER 2020.



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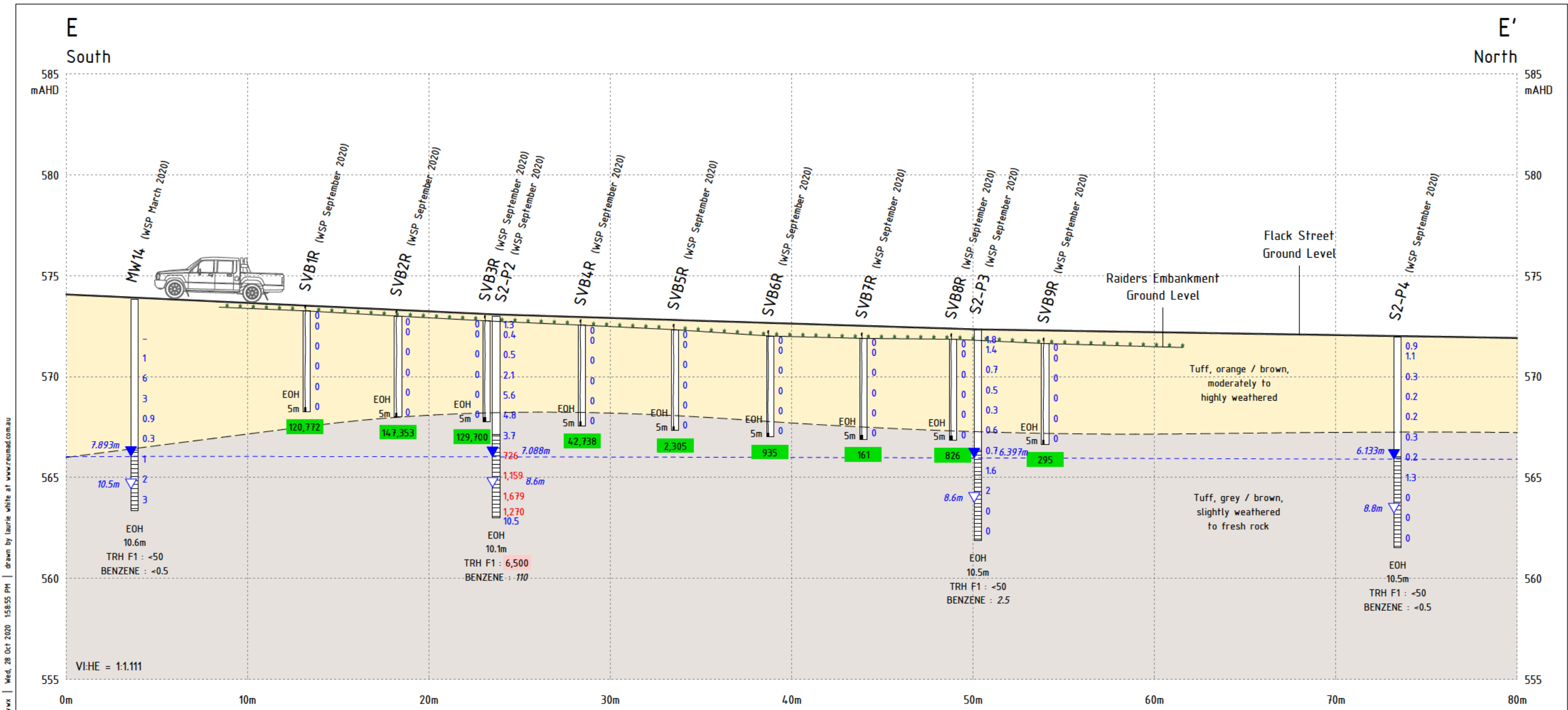
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CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

FIGURE 4f
CROSS SECTION D-D'



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LEGEND

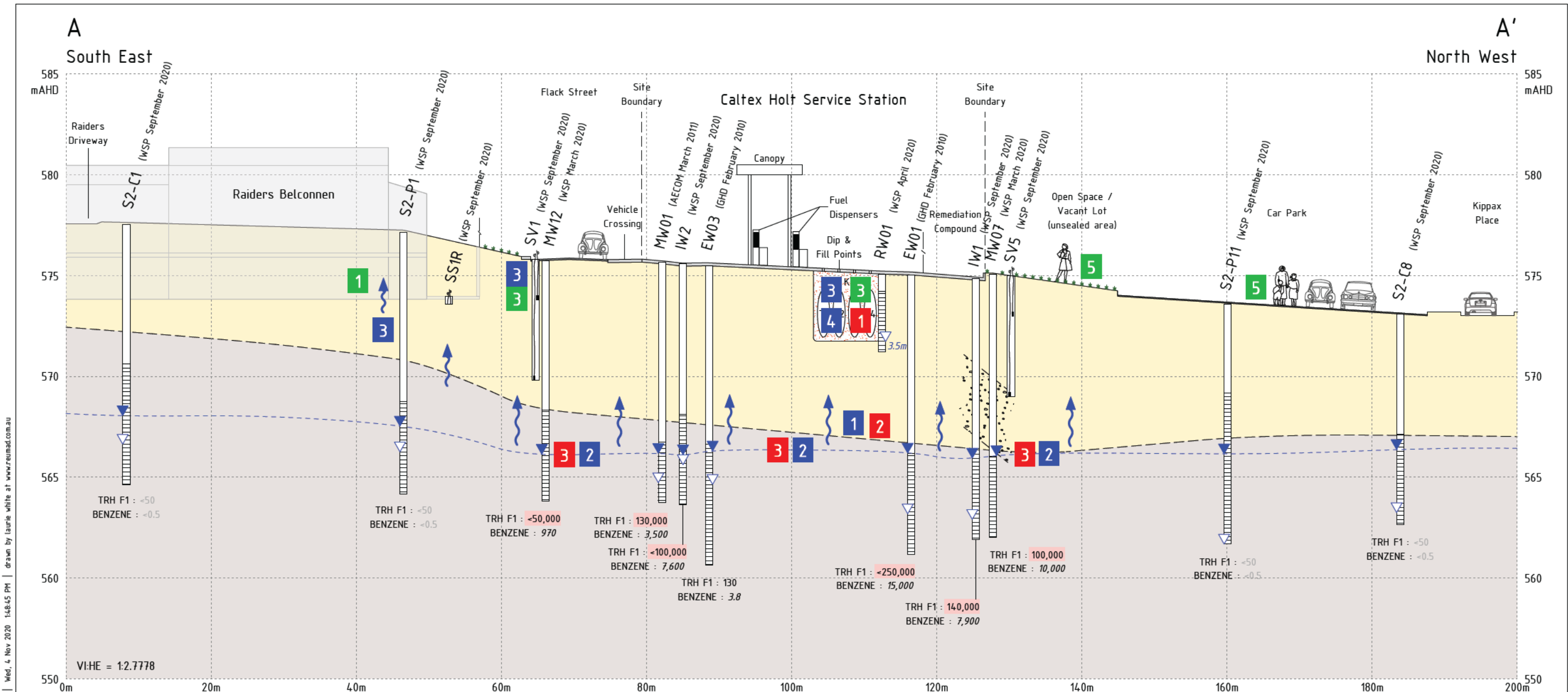
- MW## MONITORING WELL ID
- MONITORING WELL CASING
- SCREENED INTERVAL OF MONITORING WELL
- SV# SOIL VAPOUR BORE ID
- TEFLON TUBE
- SOIL VAPOUR IMPLANT
- TEFLON TUBE
- SOIL VAPOUR IMPLANT
- ### PID < 100ppm
- ### PID > 100ppm
- ##m ▽ GROUNDWATER ENCOUNTERED LEVEL (mBGL)
- ##m ▾ GROUNDWATER STABILISED LEVEL (mBGL)
- ***** GRASS SURFACE
- - - - - INFERRED GEOLOGICAL CONTACT
- - - - - INFERRED GROUNDWATER LEVEL
- CONCRETE
- BITUMEN
- TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
- TUFF, GREY / BROWN
- ### ## ## ## CONCENTRATION OF THE SUM OF THE LIGHT ALKANES C5+C6 FRACTIONS IN THE RAIDERS SOIL VAPOUR BORES (µg/m³)
- CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMMERCIAL/INDUSTRIAL HSL D (µg/L)
- ITALICS CONCENTRATION EXCEEDING ANZG 2018 DRINKING WATER GUIDELINES 6 (µg/L)

NOTE

EW01 INSTALLED BY GHD FEBRUARY 2010, MW05, MW08 & MW15 INSTALLED BY WSP MARCH 2020, MW21 INSTALLED BY WSP APRIL 2020 AND S2-P2 & SVB5R INSTALLED BY WSP SEPTEMBER 2020. GROUNDWATER LEVELS GAUGED 28 & 29 SEPTEMBER 2020. CONCENTRATION OF TRH F1 IN WELL S2-P2 AT 6,500 µg/L EXCEEDS NEPM (2013) HSL FOR COMMERCIAL/INDUSTRIAL LANDUSE. GROUNDWATER CONCENTRATION UNITS: µg/L. SOIL VAPOUR CONCENTRATION UNITS: µg/m³.

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

**FIGURE 4g
CROSS SECTION E-E'**



POTENTIAL SOURCES:

1. REMNANT SPILLED PETROL IN AND BENEATH THE TANK PIT
2. IMPACTED SOIL/ROCK GENERALLY BENEATH THE TANK PIT
3. IMPACTED GROUNDWATER INCLUDING LNAPL IN THE AQUIFER

POTENTIAL PATHWAYS:

1. MIGRATION OF PETROL THROUGH THE SOIL PROFILE
2. MIGRATION OF PETROL THROUGH GROUNDWATER, AS DISSOLVED PHASE OR LNAPL
3. VAPOUR INTRUSION INTO BUILDINGS AND UTILITY PITS/TRENCHES
4. INGESTION AND/OR DERMAL/DIRECT CONTACT
5. VAPOUR INHALATION
6. DISCHARGE OF GROUNDWATER INTO SURFACE WATER BODIES

POTENTIAL RECEPTORS:

1. COMMERCIAL WORKERS WITHIN THE ON-SITE BUILDINGS
2. OCCUPANTS OF RESIDENTIAL PROPERTIES
3. INTRUSIVE MAINTENANCE WORKS BOTH ON-SITE AND OFF-SITE
4. ECOLOGICAL RECEPTORS - SURFACE WATER BODIES (NEAREST IS A CREEK 580 METRES TO THE NORTH-WEST)
5. HUMAN RECEPTORS ON OPEN SPACE LAND

LEGEND

MW#	MONITORING WELL ID	SS#	SUB SLAB SOIL VAPOUR PIN ID		CONCRETE
	MONITORING WELL CASING		SUB SLAB SOIL VAPOUR PIN		BITUMEN
	SCREENED INTERVAL OF MONITORING WELL		GROUNDWATER ENCOUNTERED LEVEL		TANK PIT
	SOIL VAPOUR BORE ID		GROUNDWATER STABILISED LEVEL		TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
	TEFLON TUBE		GRASS SURFACE		TUFF, GREY / BROWN
	SOIL VAPOUR IMPLANT		INFERRED GEOLOGICAL CONTACT		TUFF / QUARTZITE FAULT ZONE
	TEFLON TUBE		INFERRED GROUNDWATER LEVEL		CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMMERCIAL/INDUSTRIAL HSL D (µg/L)
	SOIL VAPOUR IMPLANT				CONCENTRATION EXCEEDING ANZG 2018 DRINKING WATER GUIDELINES (µg/L)

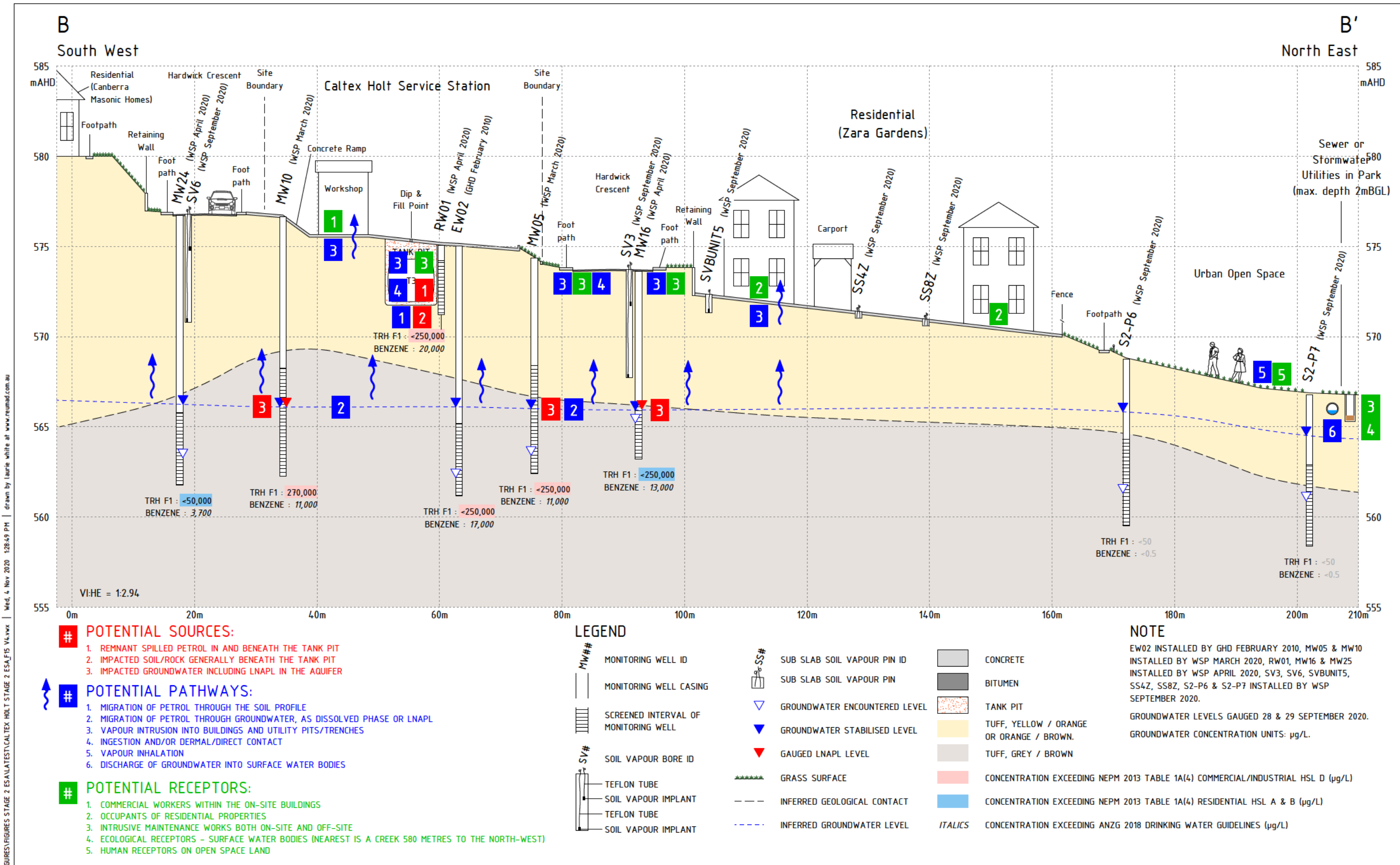
NOTE

EW01 & EW03 INSTALLED BY GHD FEBRUARY 2010, MW01 INSTALLED BY AECOM MARCH 2011, MW07 & MW12 INSTALLED BY WSP MARCH 2020, RW01 INSTALLED BY WSP APRIL 2020 AND IW1, IW2, SSR1, SV1, SV5, S2-P1, S2-P11, S2-C1 & S2-C8 INSTALLED BY WSP SEPTEMBER 2020. GROUNDWATER LEVELS GAUGED 28 & 29 SEPTEMBER 2020. GROUNDWATER CONCENTRATION UNITS: µg/L.

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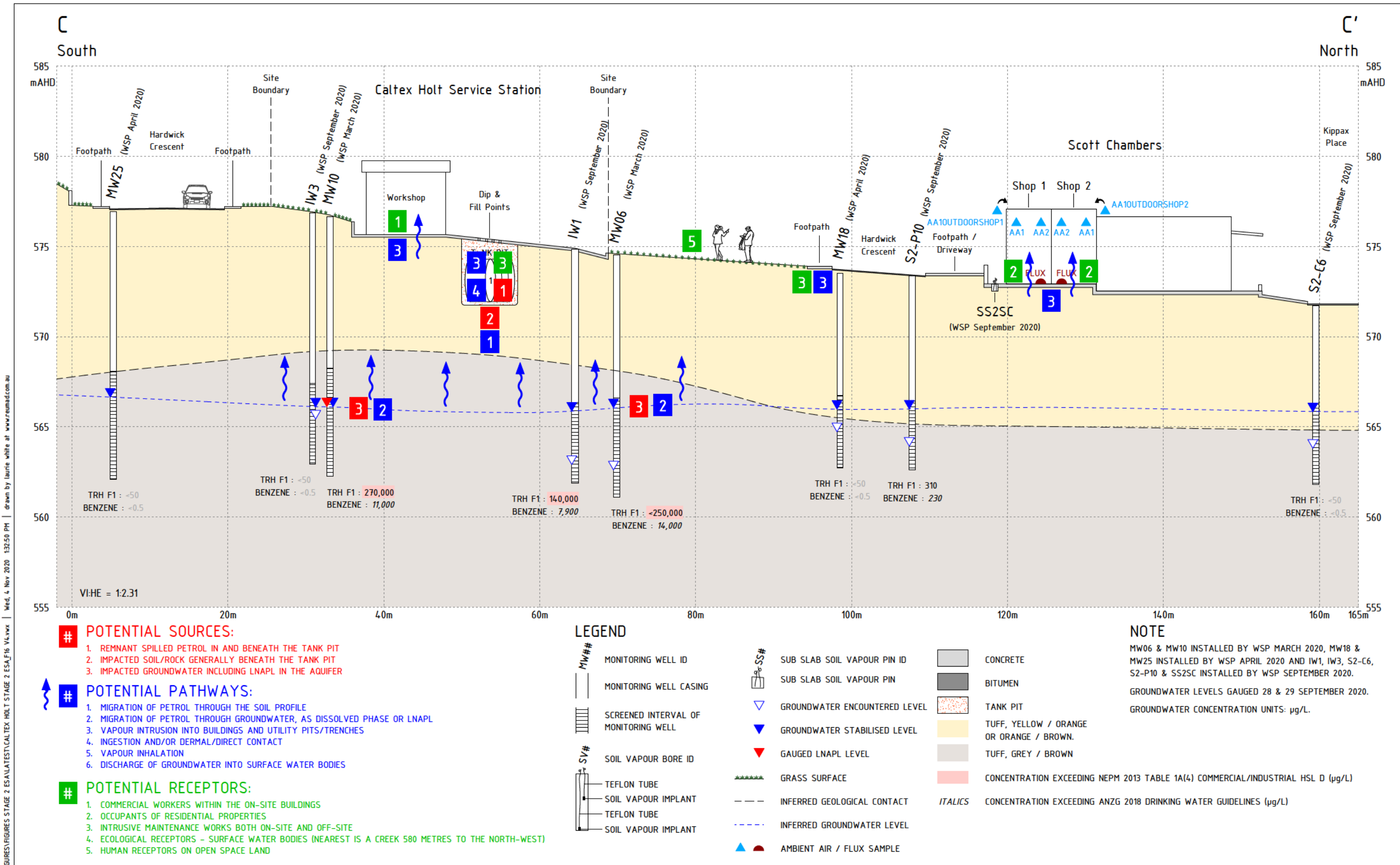
CALTEX HOLT SERVICE STATION
 1 HARDWICK CRESCENT
 HOLT ACT

FIGURE 5a
 CONCEPTUAL SITE MODEL
 ALONG CROSS SECTION A-A'



CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

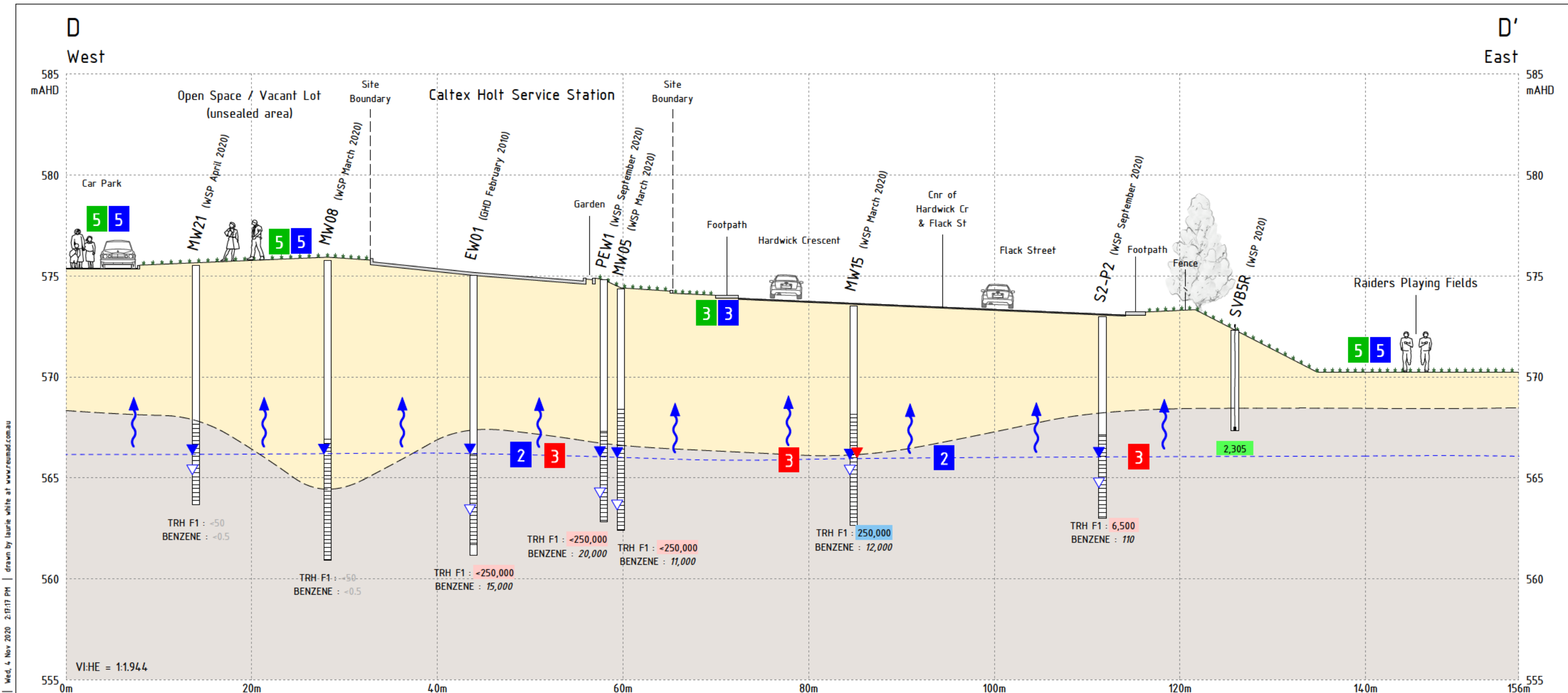
FIGURE 5b
CONCEPTUAL SITE MODEL
ALONG CROSS SECTION B-B'



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CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

FIGURE 5c
CONCEPTUAL SITE MODEL
ALONG CROSS SECTION C-C'



POTENTIAL SOURCES:

1. REMNANT SPILLED PETROL IN AND BENEATH THE TANK PIT
2. IMPACTED SOIL/ROCK GENERALLY BENEATH THE TANK PIT
3. IMPACTED GROUNDWATER INCLUDING LNAPL IN THE AQUIFER

POTENTIAL PATHWAYS:

1. MIGRATION OF PETROL THROUGH THE SOIL PROFILE
2. MIGRATION OF PETROL THROUGH GROUNDWATER, AS DISSOLVED PHASE OR LNAPL
3. VAPOUR INTRUSION INTO BUILDINGS AND UTILITY PITS/TRENCHES
4. INGESTION AND/OR DERMAL/DIRECT CONTACT
5. VAPOUR INHALATION
6. DISCHARGE OF GROUNDWATER INTO SURFACE WATER BODIES

POTENTIAL RECEPTORS:

1. COMMERCIAL WORKERS WITHIN THE ON-SITE BUILDINGS
2. OCCUPANTS OF RESIDENTIAL PROPERTIES
3. INTRUSIVE MAINTENANCE WORKS BOTH ON-SITE AND OFF-SITE
4. ECOLOGICAL RECEPTORS - SURFACE WATER BODIES (NEAREST IS A CREEK 580 METRES TO THE NORTH-WEST)
5. HUMAN RECEPTORS ON OPEN SPACE LAND

LEGEND

	MONITORING WELL ID		GROUNDWATER ENCOUNTERED LEVEL		CONCRETE
	MONITORING WELL CASING		GROUNDWATER STABILISED LEVEL		BITUMEN
	SCREENED INTERVAL OF MONITORING WELL		GAUGED LNAPL LEVEL		TANK PIT
	SOIL VAPOUR BORE ID		GRASS SURFACE		TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
	TEFLON TUBE		INFERRED GEOLOGICAL CONTACT		TUFF, GREY / BROWN
	SOIL VAPOUR IMPLANT		INFERRED GROUNDWATER LEVEL		CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMMERCIAL/INDUSTRIAL HSL D (µg/L)
	TEFLON TUBE				CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) RESIDENTIAL HSL A & B (µg/L)
	SOIL VAPOUR IMPLANT			<i>ITALICS</i>	CONCENTRATION EXCEEDING ANZG 2018 DRINKING WATER GUIDELINES (µg/L)
					CONCENTRATION OF THE SUM OF THE LIGHT ALKANES C5+C6 FRACTIONS IN THE RAIDERS SOIL VAPOUR BORES (µg/m³)

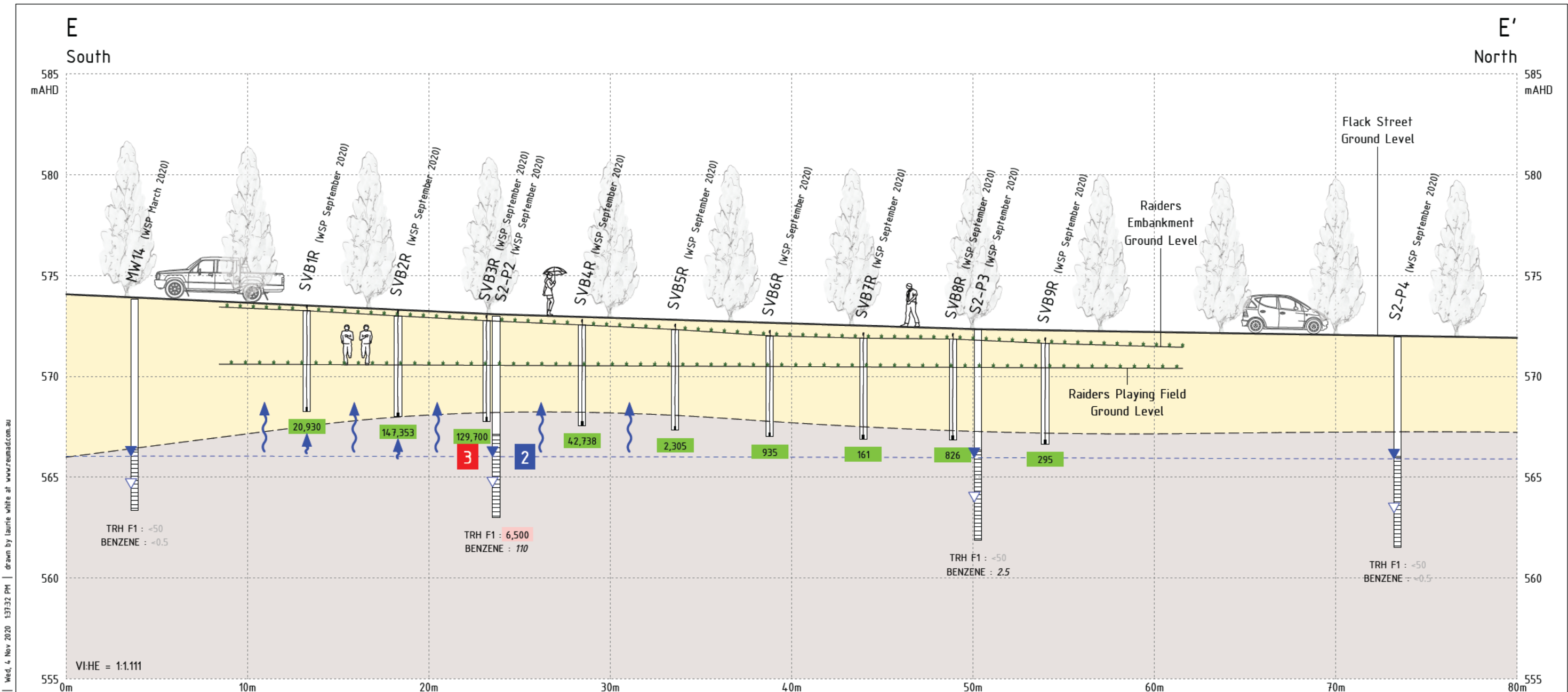
NOTE

EW01 INSTALLED BY GHD FEBRUARY 2010, MW05, MW08 & MW15 INSTALLED BY WSP MARCH 2020, MW21 INSTALLED BY WSP APRIL 2020 AND S2-P2 & SVB5R INSTALLED BY WSP SEPTEMBER 2020.
GROUNDWATER LEVELS GAUGED 28 & 29 SEPTEMBER 2020.
GROUNDWATER CONCENTRATION UNITS: µg/L.
SOIL VAPOUR CONCENTRATION UNITS: µg/m³.

CALTEX HOLT SERVICE STATION
1 HARDWICK CRESCENT
HOLT ACT

FIGURE 5d
CONCEPTUAL SITE MODEL
ALONG CROSS SECTION D-D'





POTENTIAL SOURCES:

1. REMNANT SPILLED PETROL IN AND BENEATH THE TANK PIT
2. IMPACTED SOIL/ROCK GENERALLY BENEATH THE TANK PIT
3. IMPACTED GROUNDWATER INCLUDING LNAPL IN THE AQUIFER

POTENTIAL PATHWAYS:

1. MIGRATION OF PETROL THROUGH THE SOIL PROFILE
2. MIGRATION OF PETROL THROUGH GROUNDWATER, AS DISSOLVED PHASE OR LNAPL
3. VAPOUR INTRUSION INTO BUILDINGS AND UTILITY PITS/TRENCHES
4. INGESTION AND/OR DERMAL/DIRECT CONTACT
5. VAPOUR INHALATION
6. DISCHARGE OF GROUNDWATER INTO SURFACE WATER BODIES

POTENTIAL RECEPTORS:

1. COMMERCIAL WORKERS WITHIN THE ON-SITE BUILDINGS
2. OCCUPANTS OF RESIDENTIAL PROPERTIES
3. INTRUSIVE MAINTENANCE WORKS BOTH ON-SITE AND OFF-SITE
4. ECOLOGICAL RECEPTORS - SURFACE WATER BODIES (NEAREST IS A CREEK 580 METRES TO THE NORTH-WEST)
5. HUMAN RECEPTORS ON OPEN SPACE LAND

LEGEND

MW##	MONITORING WELL ID		GROUNDWATER ENCOUNTERED LEVEL		CONCRETE
	MONITORING WELL CASING		GROUNDWATER STABILISED LEVEL		BITUMEN
	SCREENED INTERVAL OF MONITORING WELL		GRASS SURFACE		TANK PIT
	SOIL VAPOUR BORE ID		INFERRED GEOLOGICAL CONTACT		TUFF, YELLOW / ORANGE OR ORANGE / BROWN.
	TEFLON TUBE		INFERRED GROUNDWATER LEVEL		TUFF, GREY / BROWN
	SOIL VAPOUR IMPLANT				CONCENTRATION EXCEEDING NEPM 2013 TABLE 1A(4) COMMERCIAL/INDUSTRIAL HSL D (µg/L)
	TEFLON TUBE			<i>ITALICS</i>	CONCENTRATION EXCEEDING ANZG 2018 DRINKING WATER GUIDELINES (µg/L)
	SOIL VAPOUR IMPLANT				CONCENTRATION OF THE SUM OF THE LIGHT ALKANES C5+C6 FRACTIONS IN THE RAIDERS SOIL VAPOUR BORES (µg/m³)

NOTE

MW14 INSTALLED BY WSP MARCH 2020, S2-P2, S2-P3, S2-P4 AND SVB1R TO SVB9R INSTALLED BY WSP SEPTEMBER 2020.
 GROUNDWATER LEVELS GAUGED 28 & 29 SEPTEMBER 2020.
 GROUNDWATER CONCENTRATION UNITS: µg/L.
 SOIL VAPOUR CONCENTRATION UNITS: µg/m³.

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REMADA technical services geotechnical & environmental drafting support

InSite REMEDIATION SERVICES

AMPOL

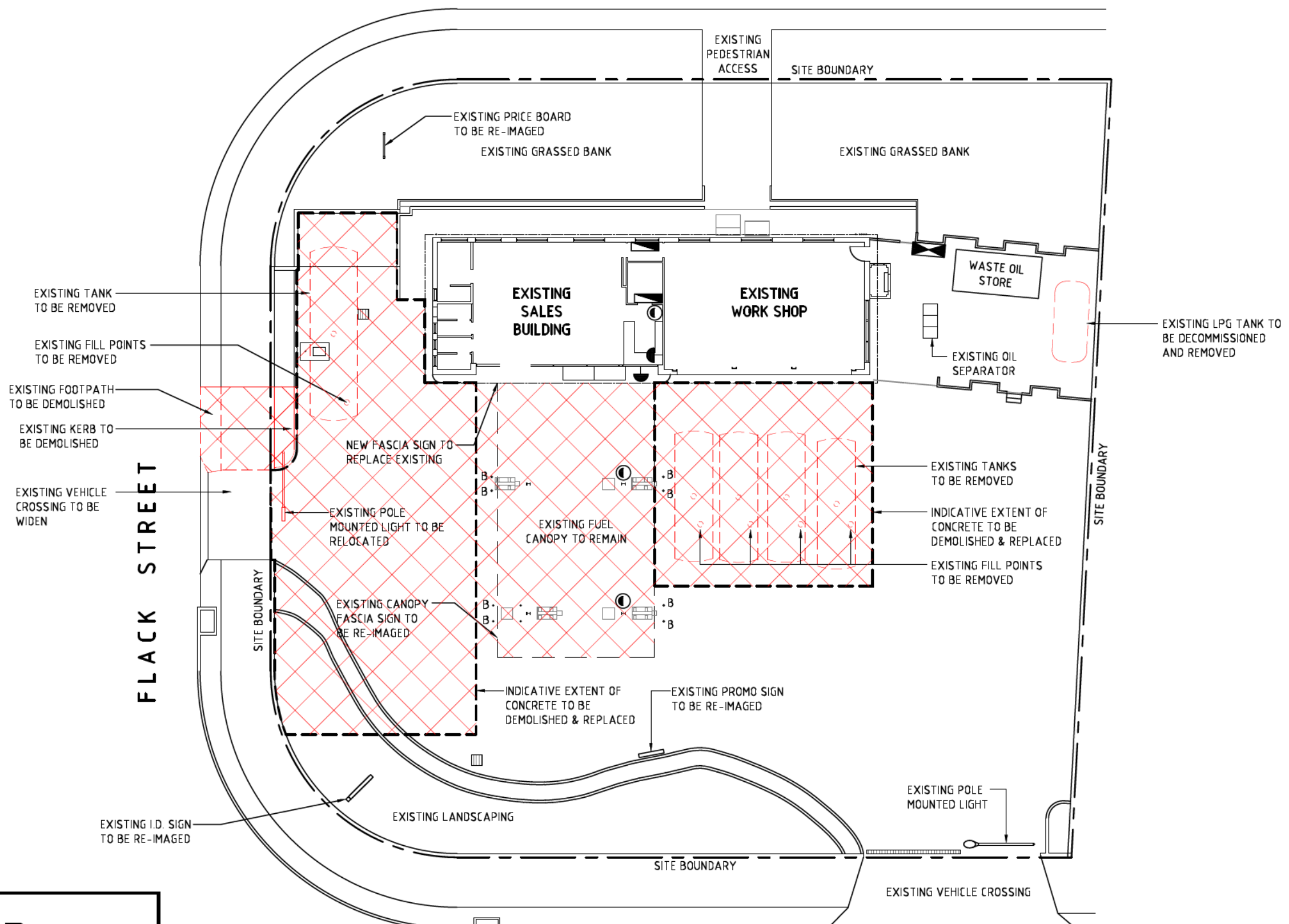
CALTEX HOLT SERVICE STATION
 1 HARDWICK CRESCENT
 HOLT ACT

FIGURE 5e
 CONCEPTUAL SITE MODEL
 ALONG CROSS SECTION E-E'

APPENDIX B

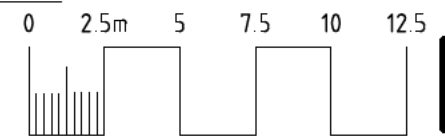
UPSS REPLACEMENT PLANS





Job No.200403
Richmond+Ross PTY LIMITED
 CONSULTING ENGINEERS AND PROJECT LEADERS
 ABN 34 001 485 436
 38 WILLOUGHBY ROAD, CROWS NEST, NSW 2065
 TEL : (02) 9490 9600 FAX : (02) 9438 1224

HARDWICK CRESCENT



DA ISSUE



REV.	BY	DATE	DESCRIPTION OF CHANGE
A		16.11.20	DA ISSUE
REVISION			

PROJECT
HOLT - ACT
 Cnr HARDWICK CRS & FLACK ST
 HOLT

TITLE
EXISTING AND DEMOLITION
SITE PLAN

DRAWN	DATE	APPROVED	DATE
	07.10.20		
SCALE	SIZE	DRAWING No.	REV.
1:250	A3	22546-A100	A



INDICATIVE EXTENT OF CONCRETE REPLACEMENT SHOWN SHADED
OIL SEPARATOR INDICATIVE LOCATION

RELOCATED POLE MOUNTED LIGHT

PROPOSED WIDENING OF EXISTING VEHICLE CROSSING TO IMPROVE FUEL DELIVERY VEHICLE ACCESS

KERB TO BE REINSTATED

REINSTATED LANDSCAPE

NOTE:
EXISTING FUEL DELIVERY PATH TO REMAIN

PROPOSED 2x90 kl COMPARTMENTED FUEL STORAGE TANK FARM

RE-IMAGED I.D. SIGN REFER DWG. A130 A131 FOR DETAILS

FLACK STREET

SITE BOUNDARY 218°00

HARDWICK

CRESCENT

0 2.5m 5 7.5 10 12.5

DA ISSUE

Job No.200403

Richmond+Ross PTY LIMITED
CONSULTING ENGINEERS AND PROJECT LEADERS
ABN 34 001 485 436
38 WILLOUGHBY ROAD, CROWS NEST, NSW 2065
TEL : (02) 9490 9600 FAX : (02) 9438 1224



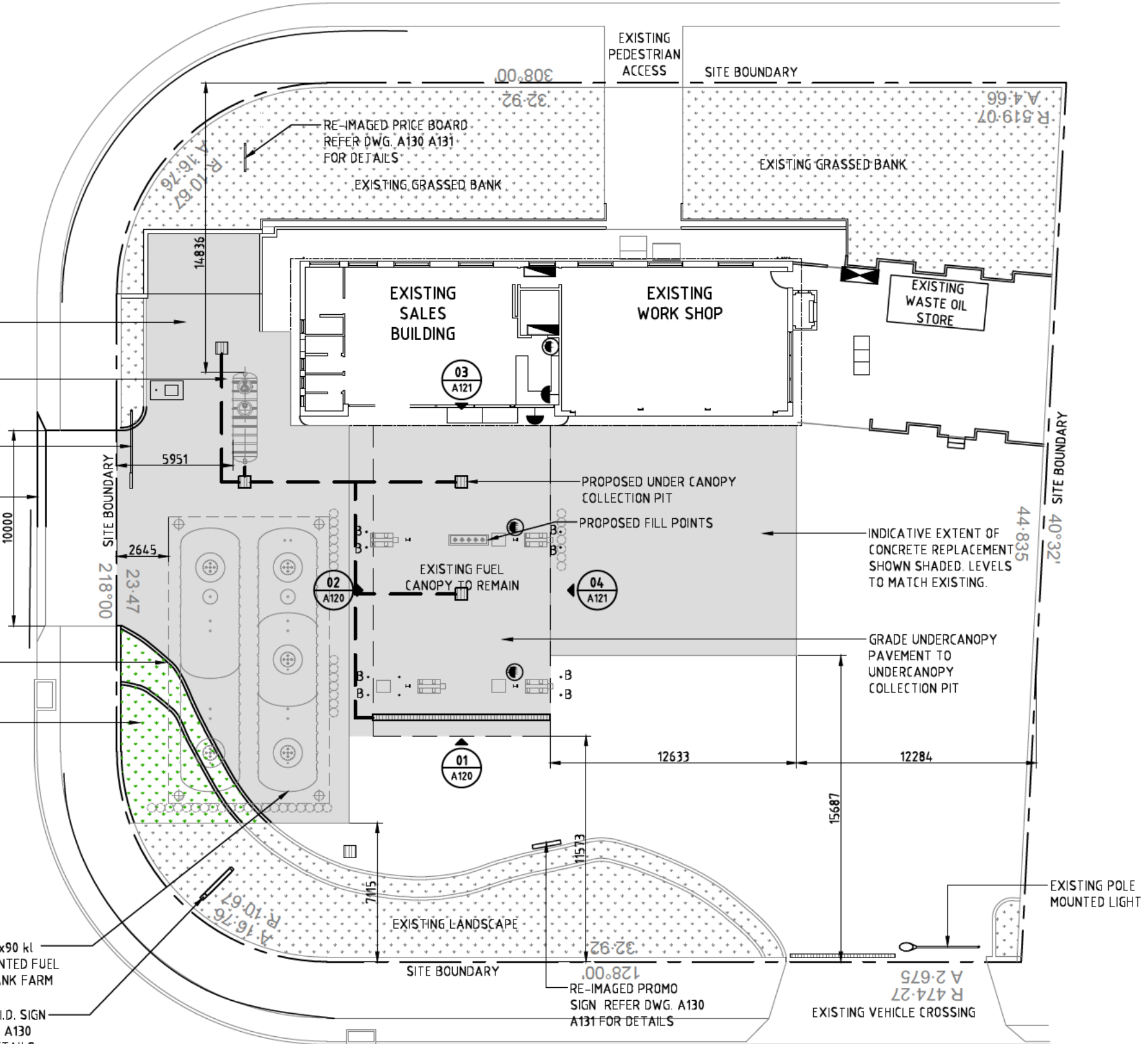
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REV.	BY	DATE	DESCRIPTION OF CHANGE
A	MA	16.11.20	DA ISSUE
B	MA	11.12.20	DA ISSUE
C	MA	19.01.21	DA ISSUE

REVISION

PROJECT	HOLT - ACT Cnr HARDWICK CRS & FLACK ST HOLT
TITLE	PROPOSED SITE PLAN

DRAWN	DATE	APPROVED	DATE
SCALE	SIZE	DRAWING No.	REV.
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APPENDIX C

PREVIOUS INVESTIGATIONS



GHD 2010, PHASE 2 ENVIRONMENTAL SITE ASSESSMENT

GHD were commissioned by Caltex to undertake contamination assessment at the site, with the objective to assess the status of soil and groundwater contamination at the site and if identified how potential contamination may affect the site's ongoing use as a service station facility. The scope of works included:

- A limited desktop-based assessment of the site.
- Drilling of six soil sampling boreholes (CH1 to CH6) to a depth of 4 mBGL and the collection of soil samples.
- Conversion of three borehole into groundwater monitoring wells (CH1, CH4 and CH5) in a triangulated pattern around the underground petroleum storage system (UPSS) and the collection of groundwater samples.
- Laboratory analysis of the soil and groundwater samples for total petroleum hydrocarbons (TPH), BTEX, polycyclic aromatic hydrocarbons (PAHs) and lead.

Results of the GHD (2010) Phase 2 environmental assessment found that standing water levels for groundwater were measured between 10.190 m below top of casing (mBTOC) and 10.570 mBTOC with a groundwater flow in a north and north-west direction. Soil and groundwater analytical results were below the laboratory limit of reporting (LOR) for TPH, BTEX and PAH, while concentrations of lead were found to be below the site assessment criteria (SAC).

GHD concluded that there was no evidence that would suggest the site has been impacted by hydrocarbon contamination.

AECOM 2011, GROUNDWATER MONITORING WELL REPORT

AECOM were commissioned by Caltex to install groundwater monitoring wells and undertake a groundwater monitoring event (GME) at the site. The objective of the investigation was to assess the groundwater conditions at the site with respect to potential hydrocarbon impacts from the UPSS infrastructure. The scope of works included:

- Drilling of two soil boreholes (BH01 and BH02) to a depth of approximately 12 mBGL and the collection of soil samples.
- Installation of two groundwater monitoring wells (MW01 and MW02) at the borehole locations and the collection of groundwater samples.
- Collection of groundwater samples from the three existing groundwater monitoring wells installed by GHD. These well were renamed from CH1, CH4 and CH5 to EW1 to EW3.
- Laboratory analysis of the soil and groundwater samples for TPH, BTEX and lead.

The AECOM (2011) GME found standing water levels in groundwater monitoring wells to be between 8.588 mBTOC and 9.230 mBTOC, with a groundwater flow to the north and north-east. Concentrations of contaminants in soil samples were below the laboratory LOR for TPH and BTEX and below the SAC for lead. A slight hydrocarbon odour and sheen was observed in MW02 and BTEX compounds were detected in EW2, but all groundwater results were less than the adopted groundwater assessment criteria.

AECOM concluded that the investigation adequately assessed the groundwater conditions at the site within the vicinity of the UPSS infrastructure.

CALTEX 2013, ENVIRONMENTAL MANAGEMENT PLAN

The Caltex (2013) environmental management plan outlines the procedures for loss monitoring, incident management, maintenance schedule and groundwater monitoring.

WSP 2013, GROUNDWATER MONITORING EVENT

WSP (as Parsons Brinckerhoff) undertook a GME of four groundwater monitoring wells (EW1 to EW3 and MW02; MW01 was not sampled) in May 2013. The scope of works involved the sampling of the groundwater monitoring wells and laboratory analysis of the groundwater samples for TRH, BTEX and lead. Key outcomes of the GME are as follows:

- Minor concentrations of TRH C6-C10 and TRH >C10-C16 in wells MW02 and EW2 and concentrations of TRH C15-C28 in well MW02 were identified.

- Concentrations of BTEX compounds in all wells were below the laboratory LOR. BTEX concentration that were reported in the AECOM 2011 GME in well EW2 were no longer present.
- All groundwater results were below the adopted SAC.
- Standing water levels for the groundwater monitoring wells were measured between 8.809 mBTOC and 9.486 mBTOC, with a groundwater flow direction inferred to the north and north-west; based on the AECOM 2011 GME.

WSP 2014, GROUNDWATER MONITORING EVENT

WSP (as Parsons Brinckerhoff) undertook a GME of four groundwater monitoring wells (EW1 to EW3 and MW02; MW01 was not sampled) in November 2014. The scope of works involved the sampling of the groundwater monitoring wells and laboratory analysis of the groundwater samples for TRH, BTEX, ethanol and lead. Key outcomes of the GME are as follows:

- Minor concentrations of TRH C6-C10 in groundwater sample from wells MW02 and EW2 and TRH >C10-C16 in groundwater sampled from well MW02 below the SAC were identified. MW02 recorded a TRH C10-C40 of 740 µg/L which exceeded the SAC.
- Minor concentrations of BTEX compounds in well EW2 below the SAC were identified. Concentrations of toluene (1,400 µg/L), ethylbenzene (585 µg/L) and xylenes (3,370 µg/L) recorded in well MW02 exceeded the SAC.
- Concentrations of lead were below the SAC in most samples with the exception of well EW1 which recorded a lead concentration of 9 µg/L which exceeded the SAC.
- Concentrations of ethanol were below the laboratory LOR in all samples.
- Standing water levels for the groundwater monitoring wells were measured between 8.560 mBTOC and 8.918 mBTOC, with a groundwater flow direction inferred to the north-east.

WSP 2015, CLASSIFICATION OF STOCKPILED MATERIAL

WSP (as Parsons Brinckerhoff) were commissioned by Caltex to prepare a waste classification of 4 cubic metres (m³) of soil excavated during sign replacement works at the site. The objective of the works was to classify the excavated soils for disposal at an appropriate facility in accordance with ACT EPA guidelines. The scope of works involved the collection of soil samples from the stockpile which were analysed for TRH, BTEX, PAH, heavy metals and asbestos. The results of the waste classification reported the following:

- Concentrations of TRH, BTEX and PAH were reported to be below the laboratory LOR.
- No asbestos was detected in the samples.
- Concentrations of heavy metals were reported to be below the general solid waste contaminant threshold values.
- The stockpiled material was classified as general solid waste (non-putrescible).

URS 2015, GROUNDWATER MONITORING EVENT

URS undertook a GME of three groundwater monitoring wells (EW2, MW01 and MW02; EW1 and EW3 were not sampled) in September 2015. The scope of works involved the sampling of the groundwater monitoring wells on site and laboratory analysis of the groundwater samples for TRH, BTEX and PAH; lead was considered to not be a contaminant of concern. The results from the GME can be summarised as follows:

- Groundwater was observed to be slightly turbid with no sheens or odours.
- Concentrations of TRH C6-C10 in wells MW02 and EW2, concentrations of TRH >C10-C16 in well MW02 and concentrations of TRH >C16-C34 in wells MW01 and MW02 were identified. With the recorded TRH concentrations below the SAC.
- Concentrations of BTEX compounds or PAHs were below the laboratory LOR in all samples.

- All groundwater results were below the adopted SAC. It is noted that the groundwater samples were not assessed against the assessment criteria outlined in the site's Environmental Authorisation (EA).
- Standing water levels for all the groundwater monitoring wells were measured between 8.549 mBTOC and 9.100 mBTOC, with a groundwater flow direction inferred to the north and north-east; based on the regional topography and hydrology.

URS concluded that any potential risks from groundwater petroleum hydrocarbon impacts to onsite and nearby off-site receptors are low and acceptable.

ACT EPA 2016, ENVIRONMENTAL AUTHORISATION LETTER

The ACT EPA (2016) Environmental Authorisation letter is a variation to the EA that was granted on 19 October 2011. The notable variation to the 2011 EA is the inclusion of ethanol as a groundwater parameter as well as adjustments to the criteria values for other groundwater parameters.

GHD 2017, GROUNDWATER MONITORING EVENT

GHD undertook a GME of five groundwater monitoring wells (EW1 to EW3, MW01 and MW02) in September 2016. The scope of works involved the sampling of the groundwater monitoring wells on site and laboratory analysis of the groundwater samples for TRH, BTEXN, ethanol and lead. The results from the GME can be summarised as follows:

- LNAPL was not recorded in any well, however slight hydrocarbon odours were noted in wells EW1, EW2, MW01 and MW02.
- Concentrations of TRH and BTEXN were below the laboratory LOR in most samples with the exception of minor concentrations of TRH F1 in well EW2.
- Concentrations of ethanol and lead were below the laboratory LOR in all samples.
- Standing water levels for all the groundwater monitoring wells were measured between 7.918 mBTOC and 8.530 mBTOC. Groundwater flow direction was not conclusive due to the uncertainty surrounding the previously surveyed relative levels.

WSP 2017, GROUNDWATER MONITORING EVENT

WSP undertook a GME of five groundwater monitoring wells (EW1 to EW3, MW01 and MW02) in July 2017. The scope of works involved the sampling of the groundwater monitoring wells on site and laboratory analysis of the groundwater samples for TRH, BTEX, ethanol and lead. The results from the GME can be summarised as follows:

- All hydrocarbon concentrations in groundwater were either below the laboratory LORs or below the adopted assessment criteria.
- Minor concentrations of ethanol were detected below the adopted assessment criteria in monitoring well MW01.
- The field measured pH in monitoring well MW02 fell outside of the acceptable criteria stipulated in the EA but was within the historical range and was considered to be the result of natural groundwater conditions.
- All groundwater results were below the adopted SAC.
- Standing water levels for the groundwater monitoring wells were measured between 8.618 mBTOC and 9.282 mBTOC. The groundwater was inferred to flow towards the north to north-east; however, there was still uncertainty regarding flow direction of groundwater due to the location of the monitoring wells.

WSP 2018, GROUNDWATER MONITORING EVENT

WSP undertook a GME of five groundwater monitoring wells (EW1 to EW3, MW01 and MW02) in July 2018. The scope of works involved the sampling of the groundwater monitoring wells on site and laboratory analysis of the groundwater samples for TRH, BTEX, ethanol and lead. The results from the GME can be summarised as follows:

- All hydrocarbon results were either below the laboratory LORs or below the adopted assessment criteria, however, groundwater sampled from EW2 and MW02 were identified with minor detections of medium fraction hydrocarbon chains (TRH C10-C16), located in the central northern portion of the site.
- Minor concentrations of benzene below the SAC were recorded in EW2.
- Minor concentrations of lead below the SAC were recorded in EW1, MW01 and MW02.
- Concentrations of ethanol were below the laboratory LOR in all samples.
- The field measured pH ranged from 6.58 to 6.82, indicating circumneutral conditions and were within the acceptable criteria.
- All groundwater results were below the adopted SAC.
- Standing water levels for the groundwater monitoring wells were measured between 9.072 mBTOC and 9.737 mBTOC. There was still uncertainty regarding flow direction of groundwater due to the location of the monitoring wells.

WSP 2019, GROUNDWATER MONITORING EVENT

WSP undertook a GME of five groundwater monitoring wells (EW1 to EW3, MW01 and MW02) in September 2019. The scope of works involved the sampling of the groundwater monitoring wells on site and laboratory analysis of the groundwater samples for TRH, BTEX, ethanol and lead. The results of GME reported the following:

- All hydrocarbon results were either below the laboratory LORs or below the adopted assessment criteria, however, concentrations of TRH C6-C10 were present in monitoring well EW2, located in the central northern portion of the site.
- Minor concentrations of benzene and total BTEX below the SAC and were recorded in EW2.
- Concentrations of ethanol and lead were below the laboratory LOR in all samples.
- The field measured pH ranged from 7.01 to 7.71, indicating circumneutral conditions and were within the acceptable criteria.
- All groundwater results were below the adopted SAC.
- Standing water levels for the groundwater monitoring wells were measured between 8.490 mBTOC and 10.081 mBTOC. The groundwater was inferred to flow towards the north to north-east; however, there was still uncertainty regarding flow direction of groundwater due to the location of the monitoring wells.

WSP MARCH 2020, ASSESSMENT OF VAPOUR RISKS

In March 2020 WSP conducted an investigation of potential vapour intrusion risks to users of the service station from a confirmed fuel loss. Lost fuel was identified as LNAPL and measured in previously installed on-site monitoring wells. The scope of work comprised:

- Measurement of soil vapour concentrations beneath the forecourt pavement.
- Measurement of soil vapour fluxes diffusing through the floor slab of the sales building and the workshop.
- Measurement of ambient air concentrations of volatile organic compounds (VOCs) (targeting petrol vapours) in the buildings and outside on the forecourt.
- Continuous measurement of photo-ionisation detector (PID) readings within the sales building – to look for evidence of possible advective flows into the sales building.

Sub-slab soil vapour concentrations were measured at three locations outside the workshop and the sales building. VOCs characteristic of petrol vapour were detected at all three locations but at low concentrations. The low concentrations, all well below the adopted assessment criteria, indicated that an unacceptable vapour intrusion risk to occupants and visitors to the buildings was unlikely.

Surface flux was measured on the floors of the workshop and sales building at a total of six locations. The results show that all flux rates were trace or low. All the BTEX compounds had very minor flux strengths which would not contribute significantly to indoor air concentrations.

Measured ambient indoor and outdoor air concentrations of VOCs were typical of Australian service stations. With the exception of benzene, the concentrations of all VOCs of concern were either greatly less than the risk-based criteria or were not detected.

The continuous recording of VOCs using a PID instrument showed no evidence of advective pressure driven flows of soil vapours into the building. It was concluded from this record that advective vapour intrusion was not occurring at levels of concern.

No unacceptable human health risk was identified from the intrusion of vapours from the sub-floor indoors or the ground outdoors and, with respect to soil vapours, the site was suitable to continue operating as a service station.

WSP MAY 2020, TIER 1 RISK ASSESSMENT

In May 2020, WSP prepared a draft Tier 1 Risk Assessment to assess the potential risks to human health both on- and off-site from impacted soil and groundwater following a fuel loss..

- The assessment used the outer ring of 13 monitoring wells installed March 2020, during the Environmental Site Assessment (WSP, August 2020). The conceptual site model (CSM) was updated and the following potential source-pathway-receptors were identified: Vapour intrusion from contaminated groundwater into residential buildings on Hardwick Crescent (north and south of the service station)
- Vapour intrusion from contaminated groundwater into commercial buildings on Flack Street (east of the service station).
- Intrusive maintenance workers in trenches and services trenches in locations over contaminated groundwater.
- Human consumption of groundwater if abstraction bores are installed in areas affected by the hydrocarbon contamination.
- Dermal contact with extracted groundwater.

The Tier 1 Risk Assessment identified a need, with a high level of certainty, for follow-up measurements of soil vapour to ascertain whether the vapour intrusion pathway-receptor linkages are complete and to quantify the risk if the pathway were shown to be complete. As a result, six soil vapour bores were added to the ESA scope (WSP, August 2020) as described below.

WSP AUGUST 2020, ENVIRONMENTAL SITE ASSESSMENT

In February 2020, WSP commenced a program of ESA works to investigate possible risks to human health and to the environment caused by hydrocarbon impacts to the soil and groundwater resulting from the fuel loss.

The purpose of the ESA was to characterise the contamination on the service station and surrounding land to evaluate the possibility that the contamination migrating off-site may present a risk to off-site receptors.

The scope of work undertaken comprised:

- Drilling and installation of 22 new groundwater monitoring wells on and off-site. The wells were drilled in two concentric rings around the service station to assess the extent of the contamination migration; one inner ring of 8 wells and one outer ring of 13 wells
- Logging, collection and analysis of 76 primary soil samples from the boreholes during the drilling of the new groundwater monitoring wells
- A GME comprising the collection and analysis of 27 primary groundwater samples from the five existing (EW01 to EW03, MW01 and MW02) and the 22 new monitoring wells (MW04 to MW21, MW23 to MW25 and RW01)
- Monitoring of air quality within utility pits surrounding the site using a photoionisation detector (PID)

- Drilling of six new soil vapour bores (SV1 to SV6) in the Hardwick Crescent and Flack Street roadways and installation of 12 soil vapour implants with implants installed at 2 m and 6 m below ground level (BGL). Soil vapour bore locations were co-located with groundwater wells known to be impacted
- Collection and analysis of 12 soil vapour samples from each soil vapour implant location.
- No hydrocarbon impacts were identified in the soil in the bores in the unsaturated zone. Hydrocarbons were detected in the saturated zone.

Groundwater sample results indicated that hydrocarbon impacts had migrated in diverse directions. Preferential migration of LNAPL along rock faults or along the more permeable bands in the rock profile were considered the most probable reason for the diverse spread of the hydrocarbon impacts in groundwater. The site surface and groundwater levels indicated a groundwater flow direction of north to north-east, however, the presence of LNAPL and/or contaminant concentrations in groundwater to the east, south and west of the site indicates another pathway of migration counter to the potentiometric gradient. The extent of dissolved phase groundwater impacts appeared to have been delineated to the north-west and west, however, based on the geological and hydrogeological conditions of the local area and variability of groundwater results from the wells located to the east and south, it was considered that there was potential for undefined preferential migration pathways to exist to the north-west and west of the site. The extent of the groundwater impacts to the north, east and south was not determined.

Soil vapours were measured at 6 m deep to assess vapour near the saturated zone and at 2 m to assess vapour intrusion risks to off-site buildings.

Two soil vapour bores were installed approximately 15 m from residential buildings on Hardwick Crescent to the south-west of the site. HSLs for residential and commercial land use were exceeded at a depth of 2 m in one bore and exceeded at a depth of 6 m depth in both bores. The residential buildings are of slab on grade foundation construction, 1.5 m lower than the road level which may result in a greater potential for vapour intrusion risk than was indicated by the vapour bore measurements.

Soil vapour concentrations were reported below the HSL in the soil vapour bore installed on Flack Street (near commercial properties to the south-east of the site) and adjacent to residential properties to the south-west of the site. Potential vapour intrusion risks at these residential and commercial properties are considered low.

Soil vapour concentrations were below the HSLs in the vacant open space land to the west of the site. It was unlikely that there would be an unacceptable vapour risk in this open space, for open space use, nor for residential or commercial/industrial use, were the site to be developed. However, if the site were to be developed for any use other than open space, testing at additional sampling locations would be advisable to confirm no unacceptable risk existed.

Works commenced to assess the potential risks to the residential properties on the northern side of Hardwick Crescent, and possibly to the commercial units also on the northern side of Hardwick Crescent further westward.

WSP DECEMBER 2020, VAPOUR RISK ASSESSMENT (OFF-SITE)

The objectives of the off-site risk assessment were to assess the risks to off site commercial and residential properties from potential vapour intrusion as identified in WSP, May 2020.

The three private properties identified as having potential risk of unacceptable vapour intrusion were:

- Raiders Belconnen sports club – building complex, about 20 m to the east of the service station
- Zara Gardens residential complex (ground floor and level 1 units and townhouses) to the north-east approximately 22 m from the service station boundary
- Scott Chambers commercial building comprising a series of retail shops and commercial offices located about 29 m to the north of the service station.

The vapour investigations involved the measurement of VOC vapours from sub-slab fittings and soil vapour bores, and surface vapour flux measurements in pavement or garden areas immediately outside the three building complexes. If a

vapour intrusion risk was identified at this point, WSP proposed to undertake the measurement of VOC vapours in the indoor air and vapour fluxes from inside flooring areas.

The outdoor soil vapour concentrations at the Raiders Belconnen sports club were low and no unacceptable vapour intrusion risk to the occupants of the clubhouse building was identified, thus no indoor assessment was deemed to be necessary.

The first phase outdoor assessment at Zara Gardens residential complex comprised soil vapour bore and sub-slab vapour sampling at the first row of ground floor residential units. Concentrations of the light alkanes were high and US EPA sourced criteria for n-pentane and n-hexane were exceeded in two of six sampling locations. The presence of high concentrations of light petroleum hydrocarbons, including exceedances of the US EPA guidelines in the vapour intrusion screening level (VISL) data base lead to the instigation of indoor air concentration assessment. During this assessment five of the six ground floor units, of slab on grade construction, backing onto Hardwick Crescent, were sampled for indoor air and indoor vapour flux. Concentrations of benzene and naphthalene exceeded the reference criterion. Exposure criteria were applied to the reference criterion for benzene and the vapour intrusion risk for that compound was also shown to be acceptable. The presence of naphthalene in one unit at concentrations exceeding the reference concentration was determined to be from an indoor source not related to vapour intrusion

At the Scott Chambers building two sub-slab vapour sampling points were installed in pavement outside Shop1. Several light aliphatic compounds were detected at substantial concentrations, none of which have criteria for vapour intrusion risk in the NEPM 2013. Of those aliphatics, n-pentane exceeded the US EPA criteria. As a result, two shops in the Scott Chambers retail/commercial building closest to the service station were tested for indoor and outdoor ambient air VOC concentrations and for indoor vapour flux. Shop 1 showed elevated concentrations in ambient air of toluene, ethylbenzene, xylenes and methylbutane, although none exceeded its reference criterion (none exists for methylbutane which is not considered to have significant toxicity).

The vapour fluxes of ethylbenzene and xylene from the floor of Shop 1, and the resulting elevated indoor air concentrations, were attributable to the freshly painted floor. The source of the elevated indoor air concentration of toluene was considered likely to be a product used in the barber shop as vapour fluxes from the floor show very minor contribution of toluene. In conclusion, the ambient indoor air and vapour flux measurements in the two shops tested in Scott Chambers showed no evidence of unacceptable vapour intrusion risk

No unacceptable vapour intrusion risk was identified at the off-site properties during the season of testing. There remained uncertainty as to the possible influence of warmer weather on the risk. Limited and targeted re-testing in warm weather was considered likely to resolve the uncertainty of seasonal effect on risk level.

WSP DECEMBER 2020, ENVIRONMENTAL SITE ASSESSMENT – STAGE 2

The purpose of this ESA was to present the results of a concluding stage of investigations regarding the nature and extent of contamination relating to the fuel loss. The report also provides a conclusion as to the suitability of impacted areas off-site for their current permitted uses under the ACT Territory Plan from a contamination perspective.

Thirty-eight groundwater wells were installed in three stages of ‘step-out’, at increasing distances from the service station. These wells have shown that hydrocarbon impacts in groundwater have migrated outwards from the service station in several directions along preferential migration pathways. Although the potentiometric levels show there is a clear north to north-easterly gradient to the groundwater, the hydrocarbon impacted groundwater has migrated in a radial pattern away from the site along preferential pathways formed by fractures in the Tuff bedrock, within the saturated zone, and along zones of softer rock due to greater weathering. The lateral extent of an individual fracture or series of fractures, or zones of softer rock could not be determined. The borehole imaging shows a multitude of fine fractures that are likely to be typically short in length, but frequently interconnect. Some of the zones of preferential migration may terminate, thus limiting the migration of the hydrocarbons, other than by the much slower process of diffusion and seepage through more competent rock. The results of this investigation are explained in further detail within Section 3.1 of this report.

Based on the results of the Stage 2 ESA, and from a contamination perspective, it is considered that all land uses identified on and around the site are suitable (based on the current site configurations), however in the event the service station site or the sites in the immediate vicinity of the service station were to be redeveloped, further assessment work would be required to ensure that the site is suitable for the future land use (under the ACT Territory plan).

WSP APRIL 2021, LNAPL MANAGEMENT PLAN

An LNAPL Management Plan (LMP) was developed (WSP, April 2021) to identify and provide a framework for the clean up and management of on- and off-site residual hydrocarbon impacts in groundwater (including LNAPL) in accordance with the requirements of the ACT EPA, Environment Protection, *Contaminated Sites – Information Sheet 9: Management of groundwater impacted by light non-aqueous phase liquids (LNAPL)*, dated April 2019. A key component of the LMP was the Remediation Action Plan (RAP), which was prepared with the following objectives:

- Review and assess the suitability of remediation options to manage and mitigate the identified hydrocarbon impacts at the site;
- Ensure the effectiveness of the remedial options is clear and based on all available data;
- Provide Ampol with remedial options that offer value and assist in moving the site (and affected sites) towards end point classification in a timely fashion; and
- Provide Ampol with recommended additional measures which will assist with refining the final remedial strategy.

The LMP / RAP outlined the proposed technology for the remediation of LNAPL impacts (soil vapour extraction (SVE) and pumping), and the monitoring and validation plan during and following the active remediation works.



INDICATIVE EXTENT OF CONCRETE REPLACEMENT SHOWN SHADED
OIL SEPARATOR INDICATIVE LOCATION

RELOCATED POLE MOUNTED LIGHT

PROPOSED WIDENING OF EXISTING VEHICLE CROSSING TO IMPROVE FUEL DELIVERY VEHICLE ACCESS

KERB TO BE REINSTATED

REINSTATED LANDSCAPE

NOTE:
EXISTING FUEL DELIVERY PATH TO REMAIN

PROPOSED 2x90 kl COMPARTMENTED FUEL STORAGE TANK FARM

RE-IMAGED I.D. SIGN REFER DWG. A130 A131 FOR DETAILS

FLACK STREET

HARDWICK

CRESCENT

0 2.5m 5 7.5 10 12.5

DA ISSUE

Job No.200403

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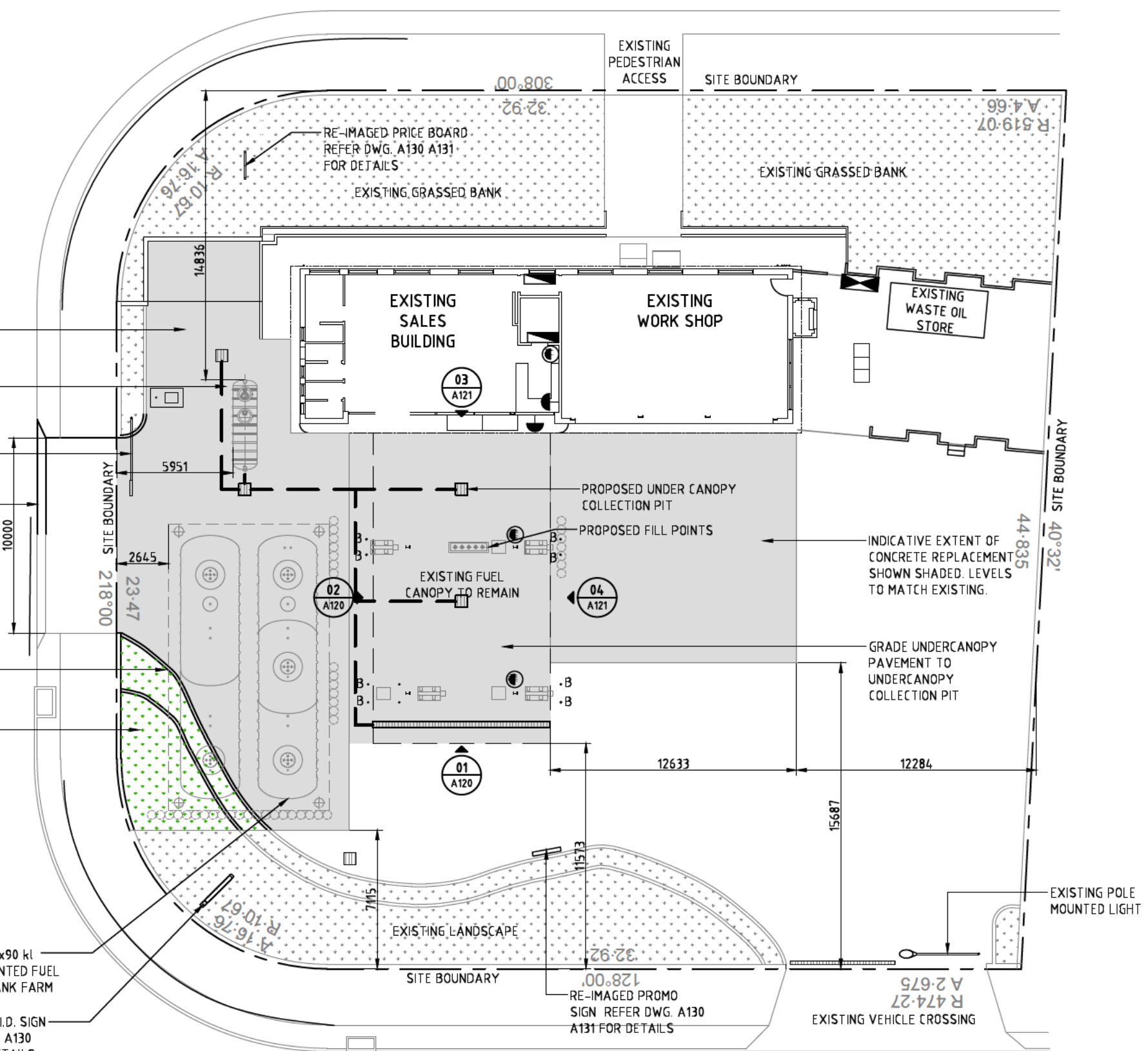
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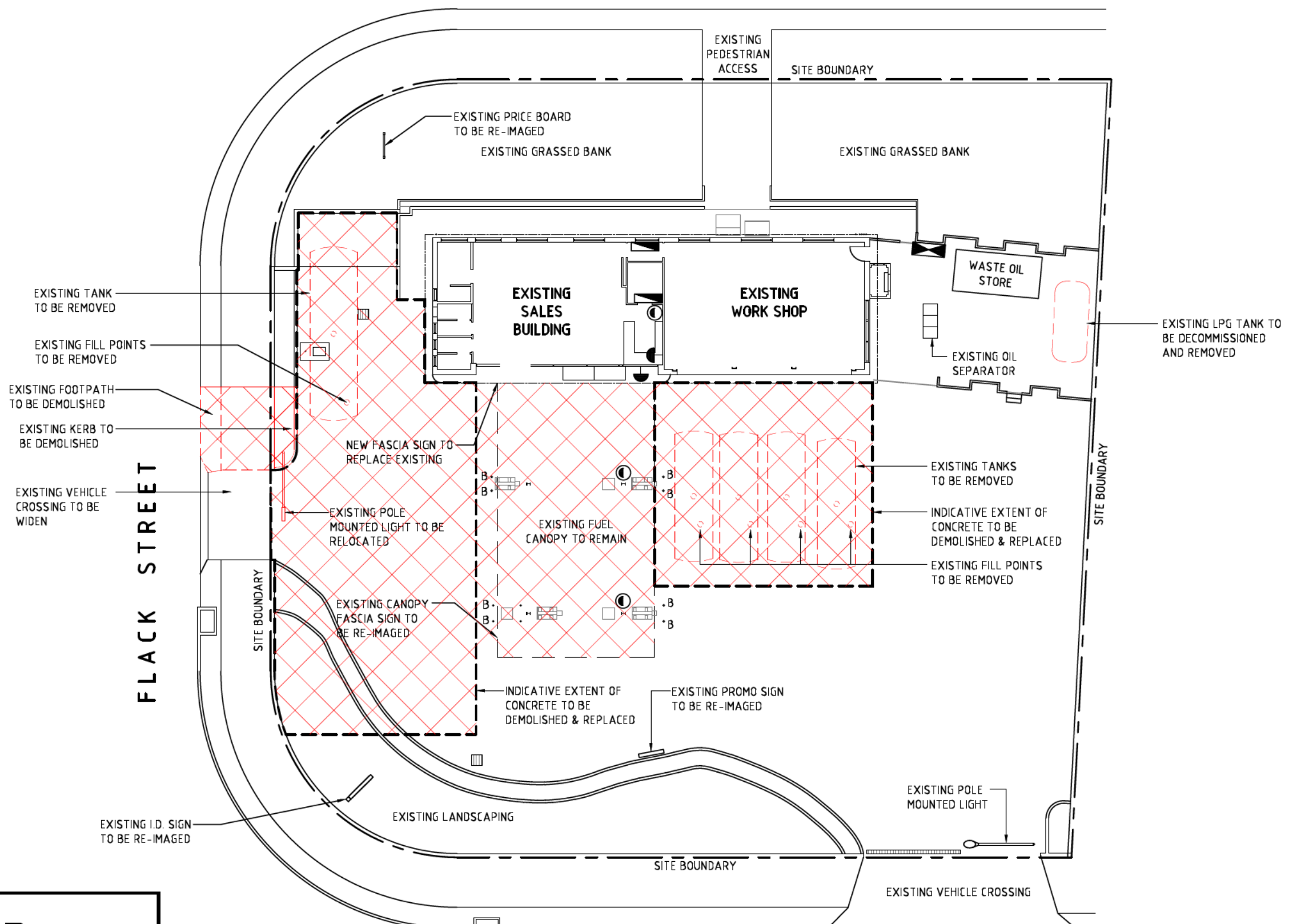
REV.	BY	DATE	DESCRIPTION OF CHANGE
A		16.11.20	DA ISSUE
B		11.12.20	DA ISSUE
C		19.01.21	DA ISSUE

REVISION

PROJECT	HOLT - ACT Cnr HARDWICK CRS & FLACK ST HOLT
TITLE	PROPOSED SITE PLAN

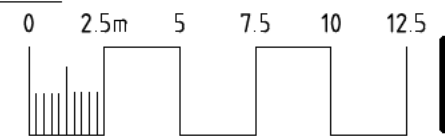
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HARDWICK CRESCENT



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A		16.11.20	DA ISSUE
REVISION			

PROJECT
HOLT - ACT
 Cnr HARDWICK CRS & FLACK ST
 HOLT

TITLE
EXISTING AND DEMOLITION
SITE PLAN

DRAWN	DATE	APPROVED	DATE
	07.10.20		
SCALE	SIZE	DRAWING No.	REV.
1:250	A3	22546-A100	A



**APPLICATION FOR:
EIS SCOPING DOCUMENT
ENVIRONMENTAL SIGNIFICANCE OPINION
S211 EXEMPTION FROM EIS
Form 1M**

1. Type of Application

- Request for Scoping Document OR
- Request for Exemption to Provide Environmental Impact Statement
Section 211 Planning and Development Act 2007 OR
- Application for Environmental Significance Opinion
Section 138AA Planning and Development Act 2007 OR
- Additional Information as requested by the planning and land
authority for any application for Scoping, EIS, or ESO

If you attended a pre-application meeting or written pre-application advice in relation to the proposal that is the subject of this application please provide proposal number **Proposal Number 20** _____

Project Name

Project Description

2. Lease/Site Details *Please Print*

Provide the following details for each lease/site:

Site 1

Block: Section: Suburb:

Street Address (if applicable)

Land Use Zone/s applicable to this site

Site 2

Block: Section: Suburb:

Street Address (if applicable)

Land Use Zone/s applicable to this site

Site 3

Block: Section: Suburb:

Street Address (if applicable)

Land Use Zone/s applicable to this site

If more than three sites please provide details on separate page