

## Appendix C Site Plans

ENVIRONMENTAL AREA

TEMPORARY CONSTRUCTION SECURITY FENCING CONTRACTOR TO CONFIRM EXTENT & LOCATION

KINGSCLIFF POOL

CONSTRUCTION FENCE LINE OF SIGHT ON OR INSIDE BOUNDARY ALLOW FOR TREE REMOVAL CONTRACTOR TO CONFIRM EXTENT AND LOCATION

CUDGEN ROAD

CONSTRUCTION FENCE LINE OF SIGHT ON OR INSIDE BOUNDARY ALLOW FOR TREE REMOVAL CONTRACTOR TO CONFIRM EXTENT AND LOCATION

EXISTING ENERGY ASSETS TO BE DEMOLISHED

TEMPORARY A/T-F TYPE FENCE AROUND EXISTING BUILDINGS UNTIL PERMANENT CONSTRUCTION FENCE ESTABLISHED

A/T-F TYPE FENCE CLOSING TEMPORARY ACCESS

EXISTING STRUCTURES TO BE DEMOLISHED

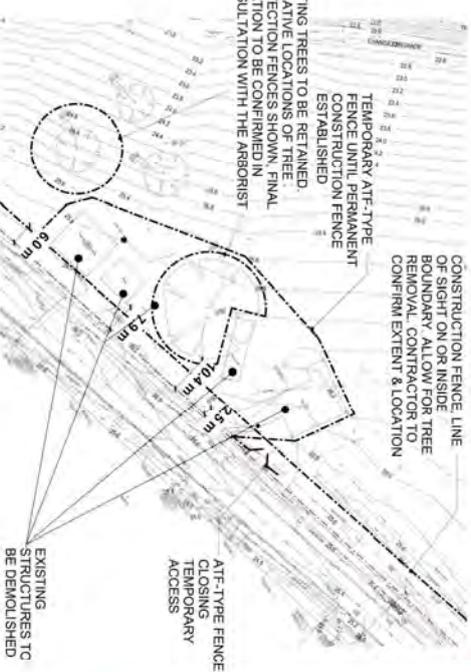
EXISTING TREES TO BE RETAINED. INDICATIVE LOCATIONS OF TREE PROTECTION FENCES SHOWN. FINAL LOCATION TO BE CONFIRMED IN CONSULTATION WITH THE ARBORIST

A/T-F TYPE FENCE CLOSING OLD ACCESS

EXISTING TREES TO BE RETAINED. INDICATIVE LOCATIONS OF TREE PROTECTION FENCES SHOWN. FINAL LOCATION TO BE CONFIRMED IN CONSULTATION WITH THE ARBORIST

TEMPORARY A/T-F TYPE FENCE PERMANENT CONSTRUCTION FENCE ESTABLISHED

CONSTRUCTION FENCE LINE OF SIGHT ON OR INSIDE BOUNDARY ALLOW FOR TREE REMOVAL CONTRACTOR TO CONFIRM EXTENT & LOCATION



**LEGEND**

— SITE BOUNDARY

— CONSTRUCTION FENCE

**COPYRIGHT**

**DISCLAIMER**

This document is the property of STH Batesmart. It is to be used for the purposes stated in the contract. It is not to be used for any other purpose without the written consent of STH Batesmart. The information contained herein is for general information only and does not constitute an offer of any financial product or service. The information is not intended to be relied upon as a basis for any investment decision. The information is not intended to be used for any other purpose without the written consent of STH Batesmart.

**ISSUED FOR INFORMATION**

**STH BATESMART**

**TSA**

**NSW Health**

**TWEED VALLEY HOSPITAL**

**PRELIMINARY WORKS CDC SITE PLAN**

**LEGEND**

- SITE BOUNDARY
- MAXIMUM PLANNING ENVELOPE
- TREE TRUNK LINE
- APZ OFFSETS
- PROBABLE MAXIMUM FLOOD LEVEL
- INDICATIVE BUILDING ENTRIES

**N**

**COPYRIGHT**  
ALL RIGHTS RESERVED. THIS WORK IS COPYRIGHTED AND CANNOT BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS GRAPHIC, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, WITHOUT THE WRITTEN PERMISSION OF THE PRINCIPAL. UNDER THE TERMS OF THE CONTRACT ANY LICENSE, EXPRESS OR IMPLIED, TO USE THE DOCUMENT FOR ANY PURPOSE WHATSOEVER IS RESTRICTED TO THE TERMS OF THE AGREEMENT OR IMPLIED AGREEMENT WITH THE PRINCIPAL UNDER THE TERMS OF THE CONTRACT.

**DIMENSIONS**  
USE FIGURED DIMENSIONS. GOUGE SCALE. CONTRACTORS MUST VERIFY ALL DIMENSIONS ON THE SITE. BUILDING COMMENCE ANY WORK OR ISSUE ANY SHOP DRAWING WHICH MUST BE SUBMITTED AND REVIEWED BEFORE MANUFACTURE.

**FIXTURES, FITTINGS & EQUIPMENT SPECIFICATIONS**  
SUBSTITUTE FF&E EQUIPMENT SPECIFICATIONS  
THE FF&E DESIGN AND DOCUMENTATION HAS BEEN COMPLETED ON THE BASIS OF FF&E AND EQUIPMENT ADVISED TO THIS OFFICE AT THE TIME OF BREEFING. THE DESIGN PROVIDING FOR FF&E AND EQUIPMENT INCORPORATES SPATIAL ALLOCATIONS, SERVICING, LOADING AND ACCESS CLEARANCES WHERE APPROPRIATE. SERVICES REQUIREMENTS HAVING BEEN OBTAINED FOR SURROUNDING FUTURES AND FITTINGS, IT SHOULD BE NOTED THAT SUBSTITUTE FF&E OR EQUIPMENT WITH ALTERNATE SPECIFICATIONS SHOULD NOT BE PROCURED PRIOR TO VALIDATING THESE SPECIFICATIONS AGAINST THE DESIGN CONTRACT, SCHEDULE AND SERVICE PROVISIONS IN THIS MODEL. THIS OFFICE ACCEPTS NO RESPONSIBILITY FOR THE PROCUREMENT OF SUBSTITUTE FF&E AND EQUIPMENT WHICH HAS NOT BEEN REVIEWED AND VALIDATED AGAINST THE ORIGINAL DESIGN PROVISIONS.

**SERVICE POINTS DISCLAIMER**  
THE SERVICE POINTS IDENTIFIED ON THESE DRAWINGS HAVE BEEN OBTAINED FROM THE BUILDING SERVICES ENGINEERING MODEL, AND ARE PROVIDED FOR INFORMATION AND DESIGN PURPOSES ONLY. WE HAVE BEEN ADVISED BY THE SERVICES ENGINEERS THAT THE POINTS REPRESENTED ON THESE DRAWINGS ARE CORRECT AT THE TIME OF PUBLICATION. THIS OFFICE DOES NOT WARRANT THE ACCURACY OF THIS DATA. REFER TO THE BUILDING SERVICES ENGINEERING DOCUMENTATION FOR THE IDENTIFICATION OF THE SERVICE POINTS AND THE INTERVENE BETWEEN THE SERVICE POINTS AND THE RESPECTIVE ENGINEERING SYSTEMS.

**ISSUED FOR INFORMATION**  
ARCHITECTS

**STH BATESSMART.**

LEVEL 4, 89 YORK STREET, SYDNEY, NSW 2000  
 A/N: 73 94 0000 FAX: 935 00 4000  
 email: info@sths.com.au

43 BRISBANE STREET, SURRY HILLS, NSW 2010  
 PH: 02 9554 1000  
 email: sales@sths.com.au

THIS ARCHITECTURAL DESIGN IS THE COPYRIGHT OF SILVER THOMAS HANLEY AND BATES SMART AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

PROJECT MANAGER

**TSA**  
MANAGEMENT

CLIENT

**NSW** GOVERNMENT  
Health Infrastructure | Health Northern NSW Local Health District

PROJECT

**TWEED VALLEY HOSPITAL**  
771 Cudgen Road, Cudgen

DRAWING TITLE

**MASTERPLAN**  
CONCEPT PLAN

SCALE: 1:2500 @ A3    DATE: 19/09/2018    DRAWN BY: CE    CHECKED: MH

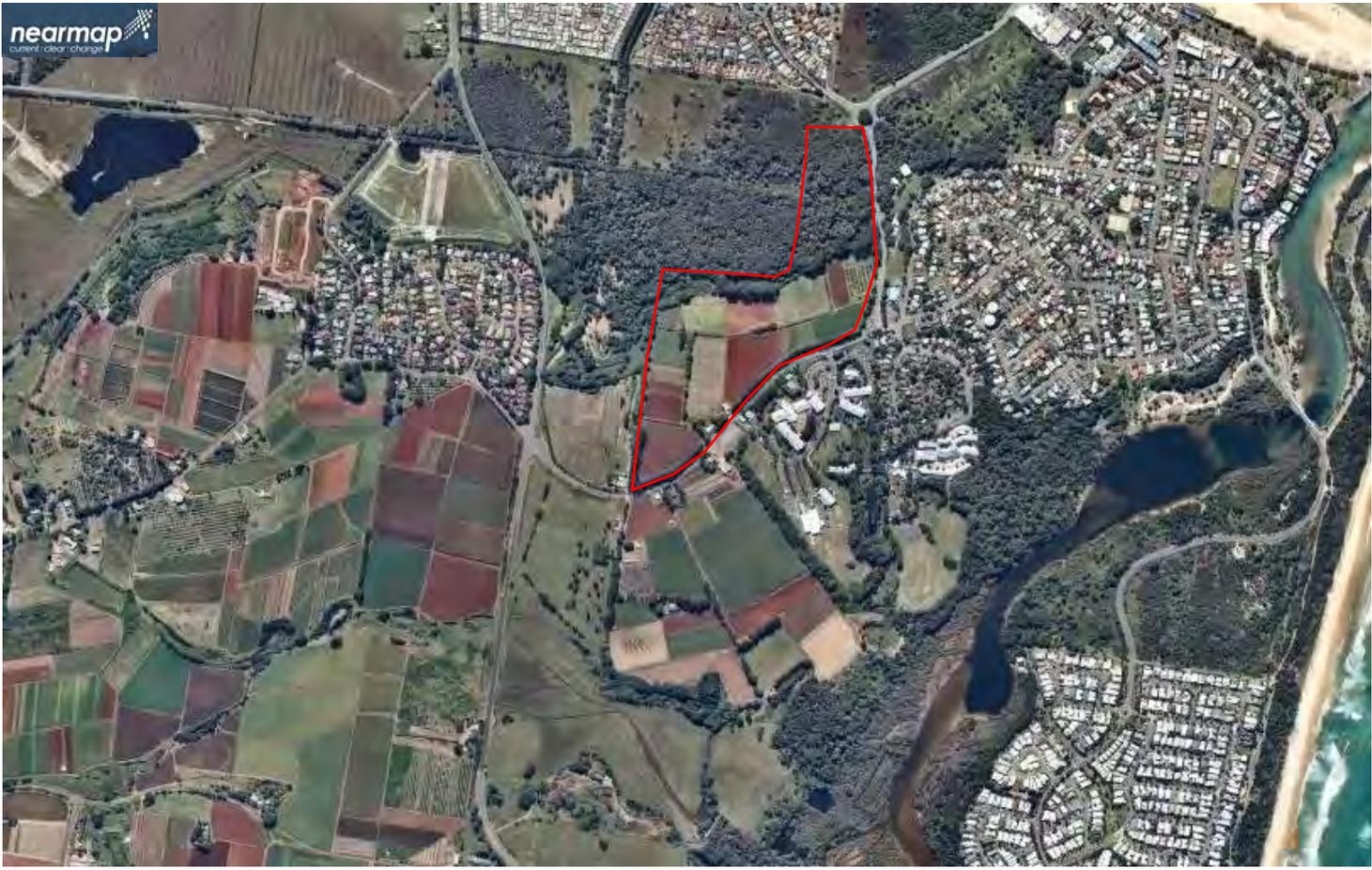
PROJECT NO: 10363    DRAWING NO: AR-SKE-10-006    REVISION: 04



ESSENTIAL ENERGY SWITCHING STATION

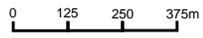
NOTES  
LANDSCAPE INDICATIVE ONLY - REFER LANDSCAPE ZONAL PLAN L-MP-12

## Appendix D Consultant's Figures



LEGEND

 Site Boundary



1		04/7/2018	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



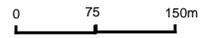
CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital PSI/DSI	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Site Location	JOB No:	J8961
		DRAWING No:	1



**LEGEND**

 Sampling locations - PSI Site Inspection (14/6/2018)

 Site Boundary



1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital PSI/DSI	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Areas of Potential Environmental Concern	JOB No:	J8961
		DRAWING No:	2



### LEGEND

HA37  
Hand Auger  
location -  
Composite  
Sample

HA37  
Hand Auger  
location -  
Discrete  
Sample

Site Boundary



REV	DESCRIPTION	DATE	INT	APP
1		04/4/2016	MO	RJ



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital PSI/DSI	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	DSI Sampling Locations	JOB No:	J8961
		DRAWING No:	3



**LEGEND**

HA37  
Hand Auger location.

SAMPLE ID 3148  
Zinc (mg/kg) 1,600

Sample results exceeding guidelines



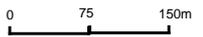
Site Boundary



1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital PSI/DSI	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Sample locations exceeding investigation guidelines	JOB No:	J8961
		DRAWING No:	4



- LEGEND**
- Monitoring well GW1
  - SED01 Sediment Sample
  - WS01 Surface Water Sample



1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital PSI/DSI	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Groundwater and Surface Water Samples	JOB No:	J8961
		DRAWING No:	5



LEGEND

1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital - RAP	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Site Location	JOB No:	J8961
		DRAWING No:	1



LEGEND

HA37  
Hand Auger location



0 75 150m

1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital RAP	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	DSI Sampling Locations	JOB No:	J8961
		DRAWING No:	2



Indicative Remediation Area

1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



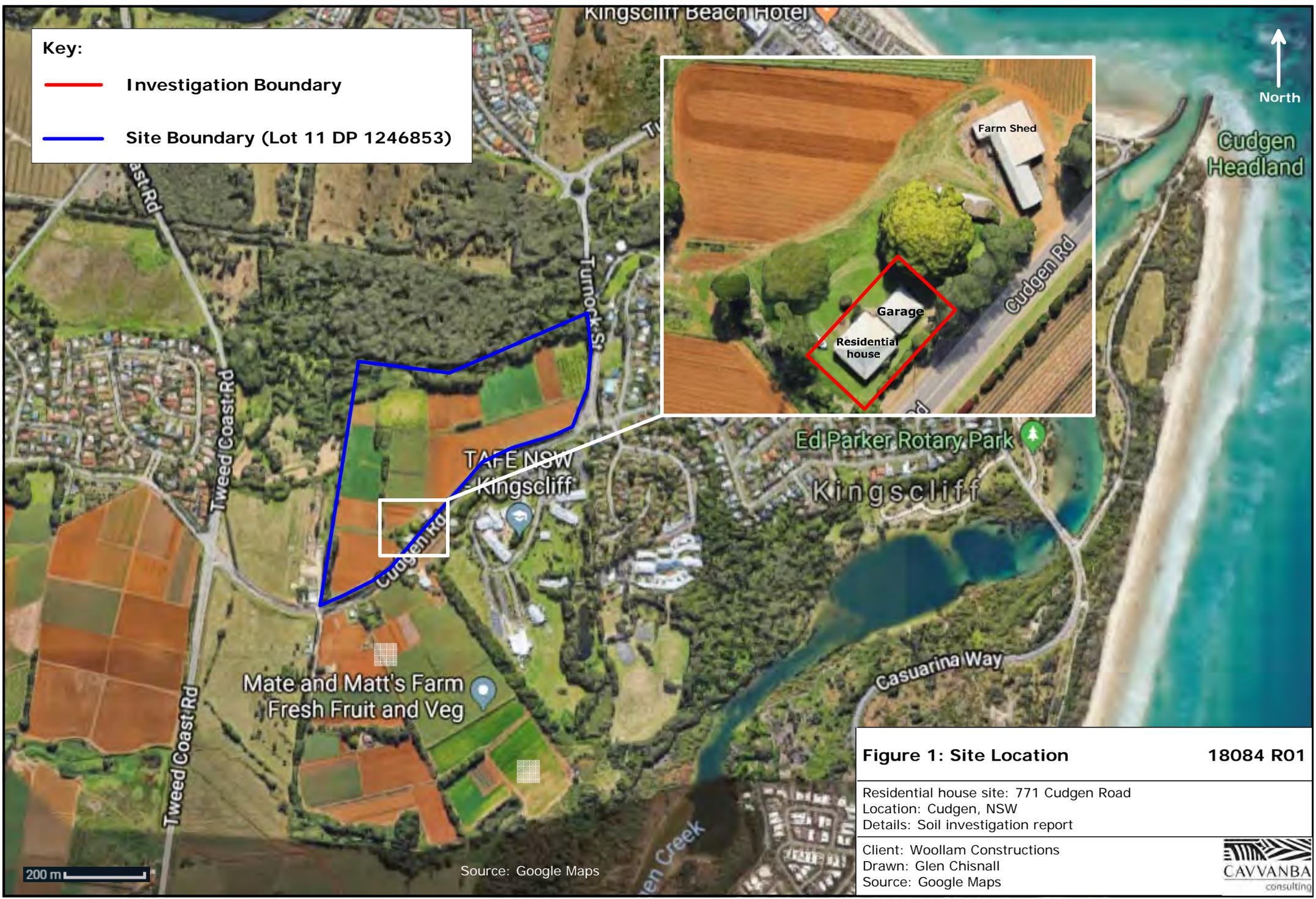
CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital RAP	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Remediation Area	JOB No:	J8961
		DRAWING No:	3



1		04/4/2016	MO	RJ
REV	DESCRIPTION	DATE	INT	APP



CLIENT:	Health Infrastructure NSW	DESIGNED:	DRAWN:
PROJECT TITLE:	Tweed Hospital RAP	CHECKED:	No. SHEETS:
SITE ADDRESS:	771 Cudgen Road, Cudgen	SCALE:	DATE STARTED:
DRAWING TITLE:	Indicative Data Gap Investigation Area	JOB No:	J8961
		DRAWING No:	4



**Key:**

- Investigation Boundary
- Site Boundary (Lot 11 DP 1246853)

**Figure 1: Site Location** **18084 R01**

Residential house site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Soil investigation report

Client: Woollam Constructions  
 Drawn: Glen Chisnall  
 Source: Google Maps



Source: Google Maps

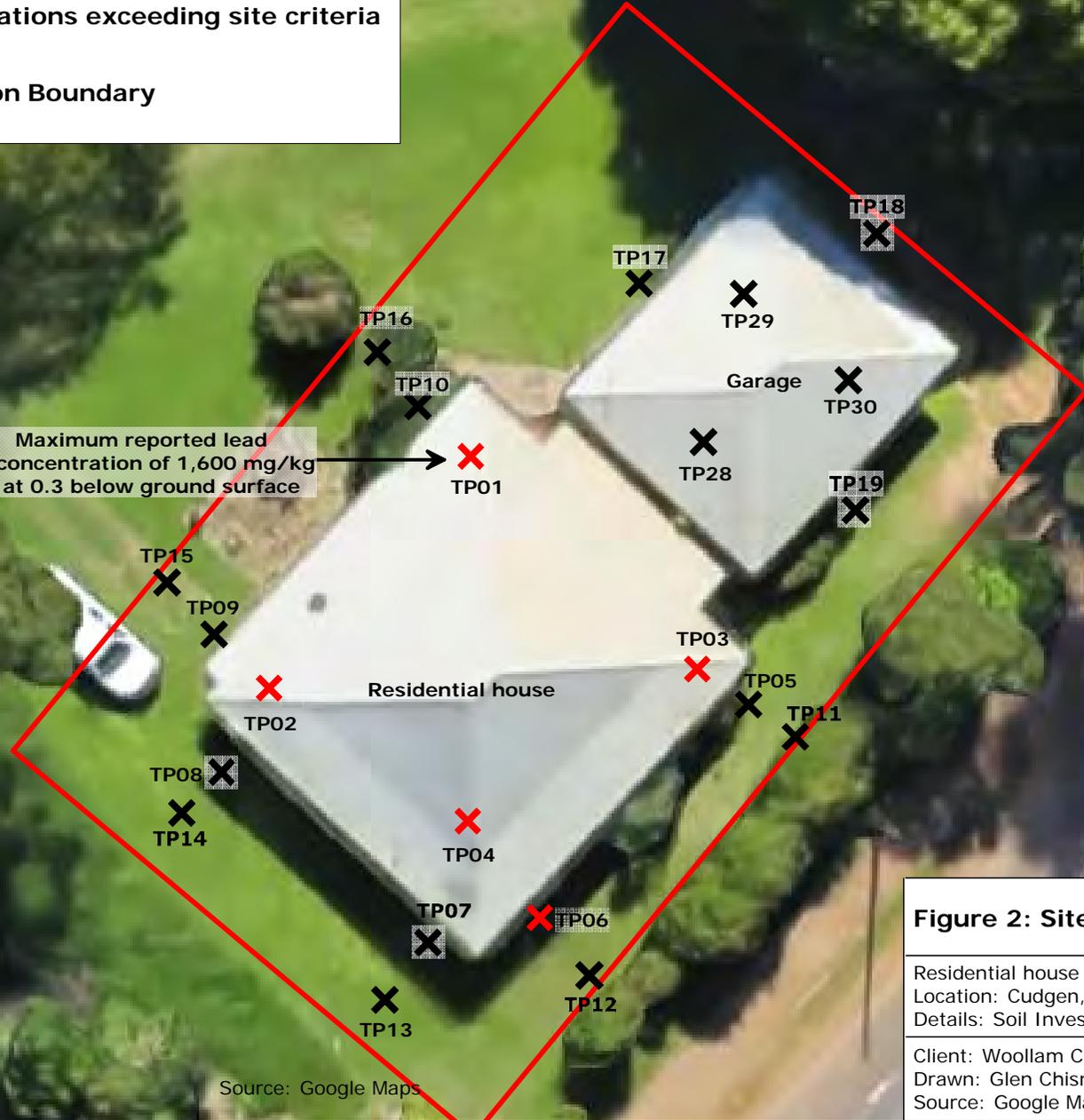
200 m

Key:

- ✘ Test Pit Locations
- ✘ Test Pit Locations exceeding site criteria
- Investigation Boundary



Maximum reported lead concentration of 1,600 mg/kg at 0.3 below ground surface



10 m

Source: Google Maps

Figure 2: Site Layout

18084 R01

Residential house site: 771 Cudgen Road  
Location: Cudgen, NSW  
Details: Soil Investigation Report

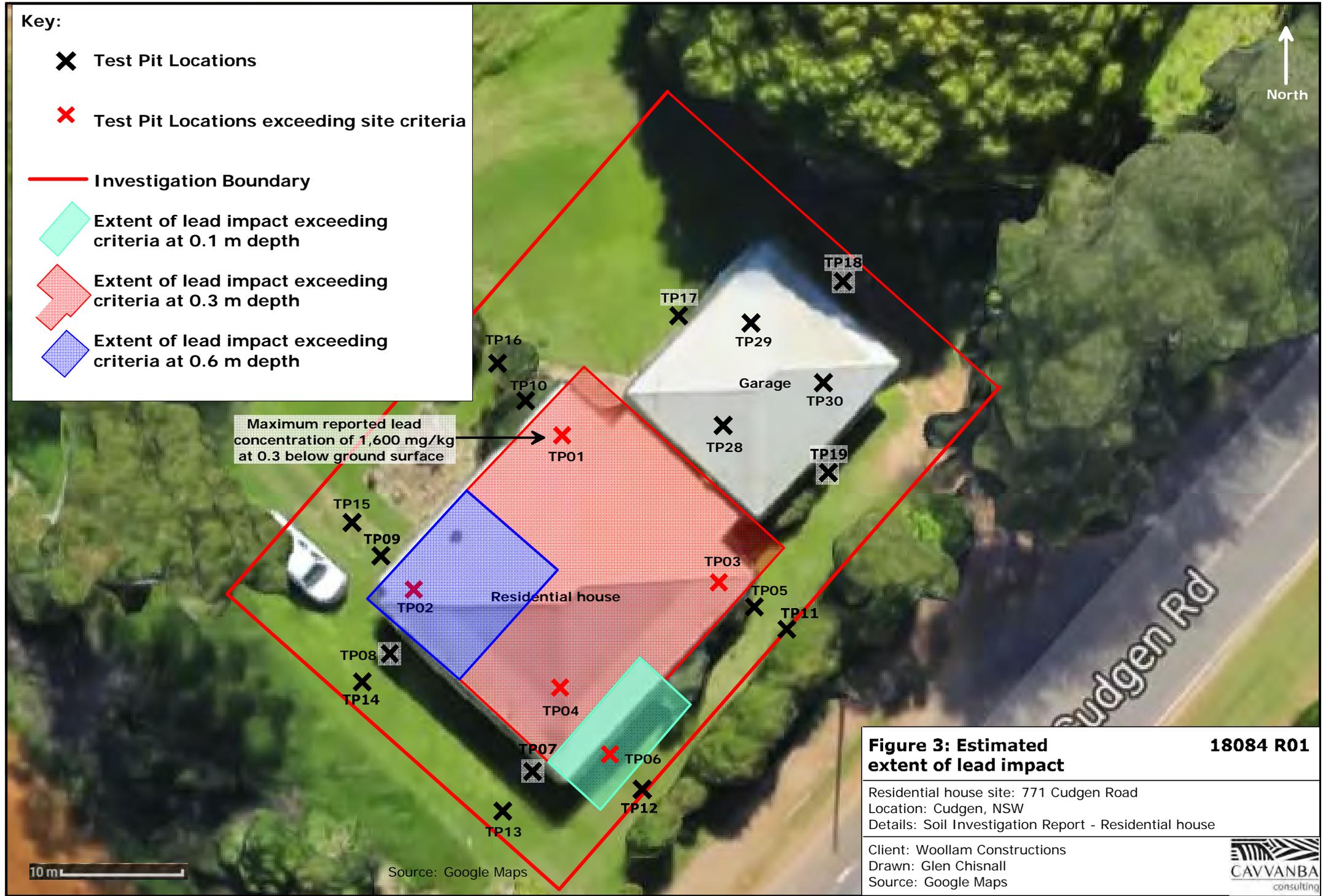
Client: Woollam Constructions  
Drawn: Glen Chisnall  
Source: Google Maps



Key:

- ✕ Test Pit Locations
- ✖ Test Pit Locations exceeding site criteria

- Investigation Boundary
- Extent of lead impact exceeding criteria at 0.1 m depth
- Extent of lead impact exceeding criteria at 0.3 m depth
- Extent of lead impact exceeding criteria at 0.6 m depth



**Figure 3: Estimated extent of lead impact** **18084 R01**

Residential house site: 771 Cudgen Road  
Location: Cudgen, NSW  
Details: Soil Investigation Report - Residential house

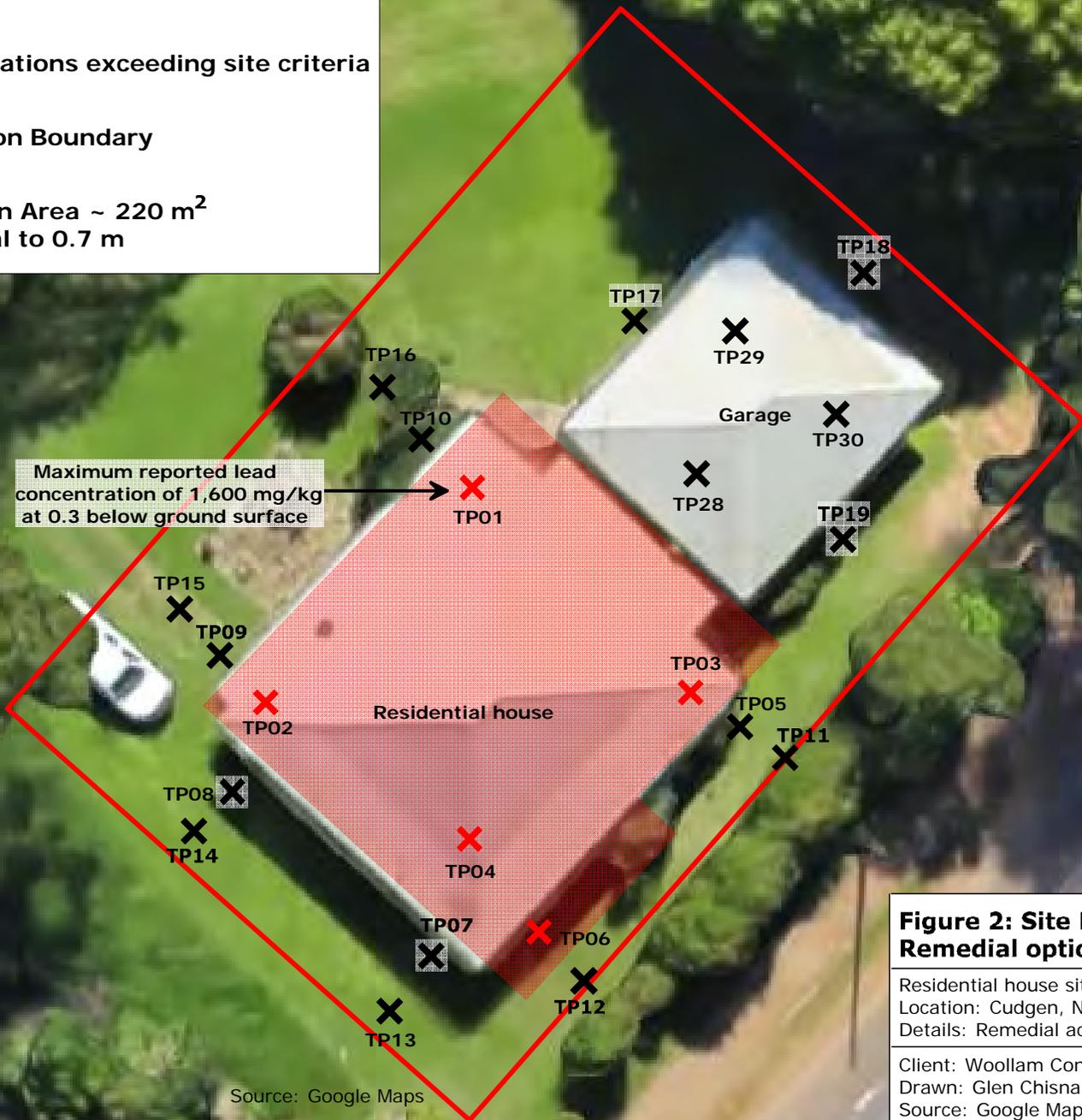
Client: Woollam Constructions  
Drawn: Glen Chisnall  
Source: Google Maps





**Key:**

-  Test Pit Locations
-  Test Pit Locations exceeding site criteria
-  Investigation Boundary
-  Remediation Area ~ 220 m<sup>2</sup>  
Soil removal to 0.7 m



Maximum reported lead concentration of 1,600 mg/kg at 0.3 below ground surface

10 m

Source: Google Maps

**Figure 2: Site Layout Remedial option 1** **18084 R02**

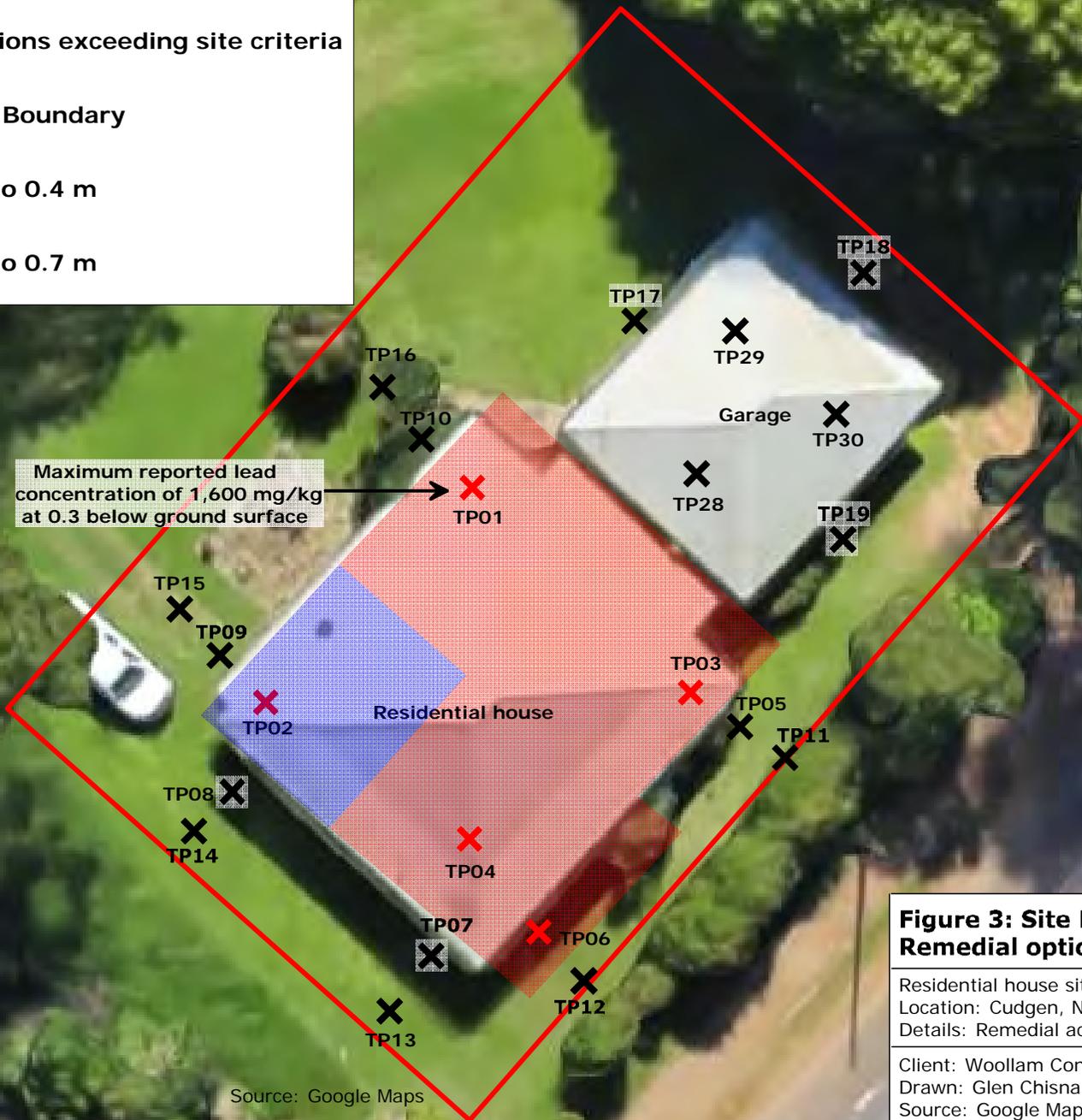
Residential house site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Remedial action plan addendum

Client: Woollam Constructions  
 Drawn: Glen Chisnall  
 Source: Google Maps



Key:

- ✕ Test Pit Locations
- ✖ Test Pit Locations exceeding site criteria
- Investigation Boundary
- ◊ Soil removal to 0.4 m
- ◊ Soil removal to 0.7 m



Maximum reported lead concentration of 1,600 mg/kg at 0.3 below ground surface

10 m

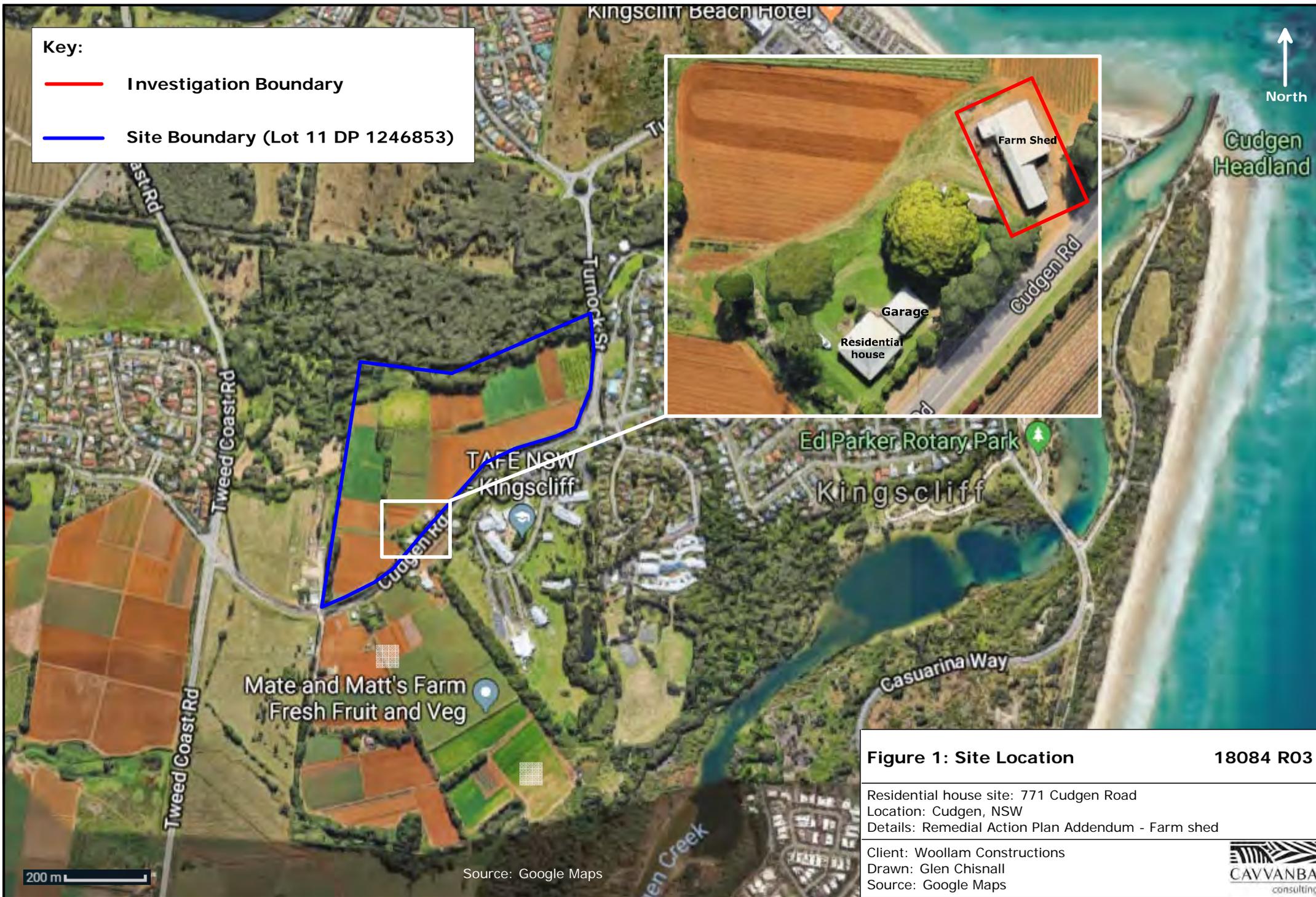
Source: Google Maps

**Figure 3: Site Layout Remedial option 2** **18084 R02**

Residential house site: 771 Cudgen Road  
Location: Cudgen, NSW  
Details: Remedial action plan addendum

Client: Woollam Constructions  
Drawn: Glen Chisnall  
Source: Google Maps





**Key:**

- Investigation Boundary
- Site Boundary (Lot 11 DP 1246853)

**Figure 1: Site Location** **18084 R03**

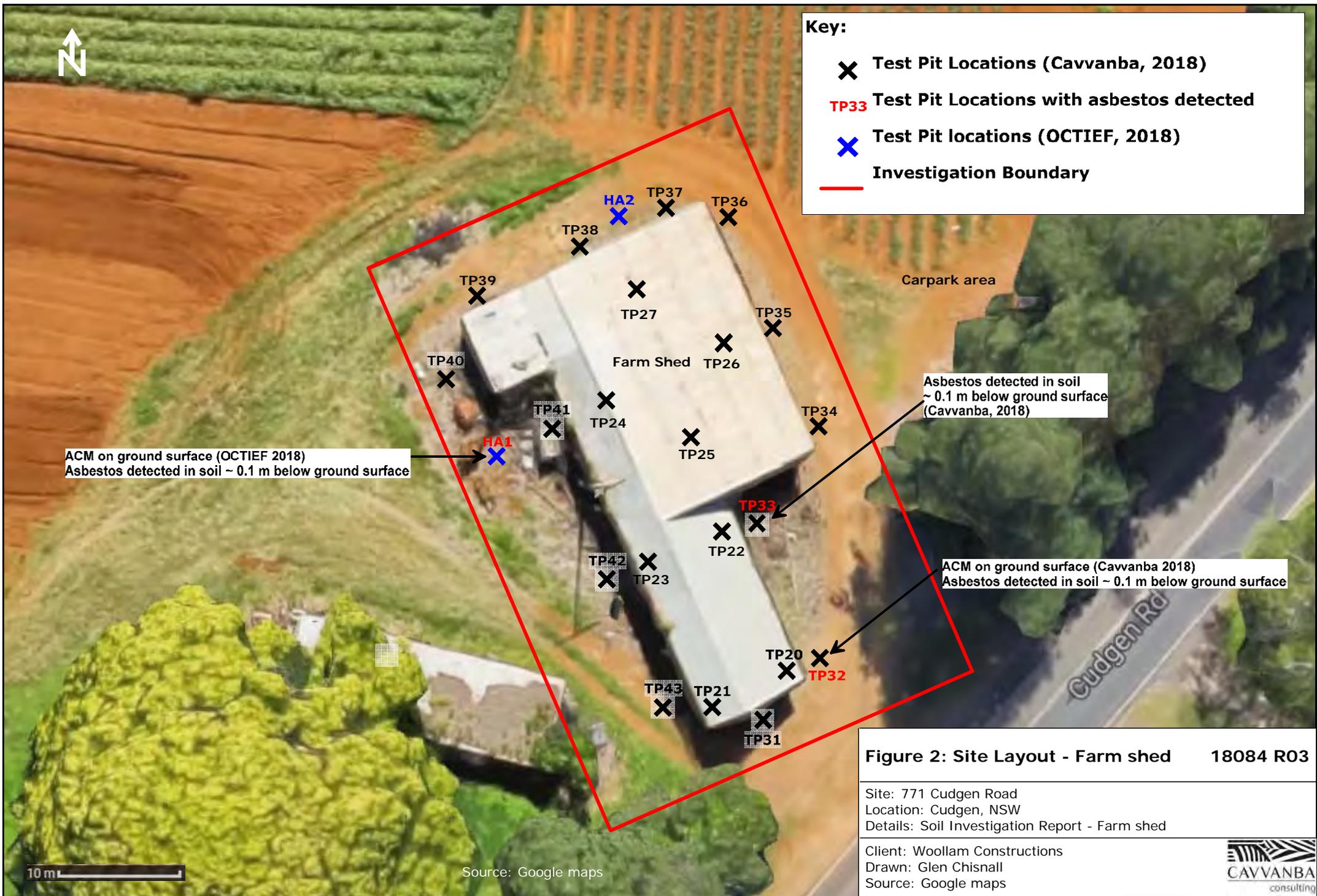
Residential house site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Remedial Action Plan Addendum - Farm shed

Client: Woollam Constructions  
 Drawn: Glen Chisnall  
 Source: Google Maps



200 m

Source: Google Maps



**Key:**

- ✕ Test Pit Locations (Cavvanba, 2018)
- TP33 Test Pit Locations with asbestos detected
- ✕ Test Pit locations (OCTIEF, 2018)
- Investigation Boundary

ACM on ground surface (OCTIEF 2018)  
Asbestos detected in soil ~ 0.1 m below ground surface

Asbestos detected in soil  
~ 0.1 m below ground surface  
(Cavvanba, 2018)

ACM on ground surface (Cavvanba 2018)  
Asbestos detected in soil ~ 0.1 m below ground surface

**Figure 2: Site Layout - Farm shed 18084 R03**

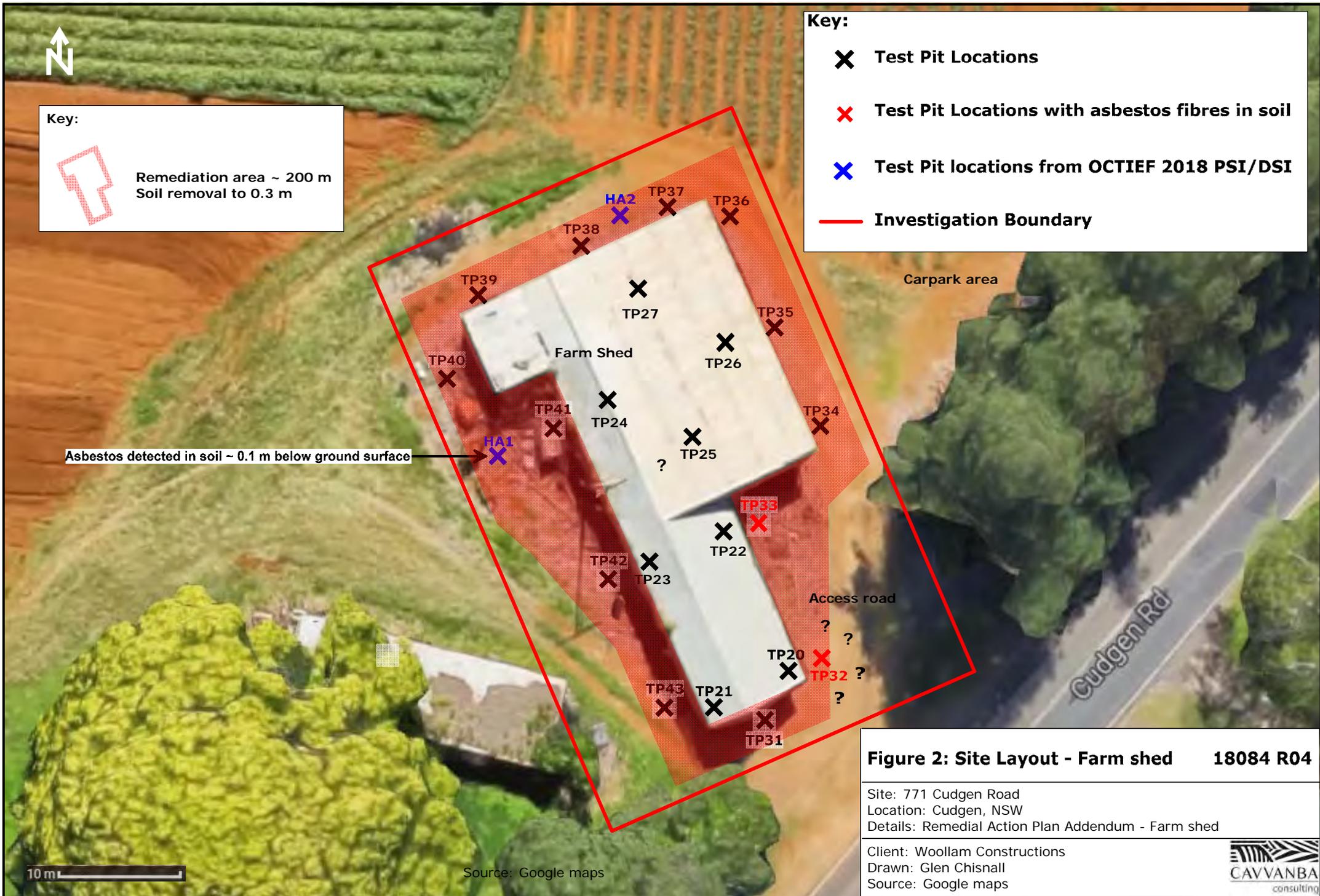
Site: 771 Cudgen Road  
Location: Cudgen, NSW  
Details: Soil Investigation Report - Farm shed

Client: Woollam Constructions  
Drawn: Glen Chisnall  
Source: Google maps



Source: Google maps

10 m



**Key:**

 Remediation area ~ 200 m  
Soil removal to 0.3 m

**Key:**

-  Test Pit Locations
-  Test Pit Locations with asbestos fibres in soil
-  Test Pit locations from OCTIEF 2018 PSI/DSI
-  Investigation Boundary

**Figure 2: Site Layout - Farm shed 18084 R04**

Site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Remedial Action Plan Addendum - Farm shed

Client: Woollam Constructions  
 Drawn: Glen Chisnall  
 Source: Google maps



10 m

Source: Google maps



Key:

-  Test Pit Locations
-  Test Pit Locations exceeding site criteria (lead)
-  Test Pit Location exceeding site criteria (aldrin and dieldrin)
-  Investigation Boundary

Maximum reported lead concentration of 1,600 mg/kg at 0.3 below ground surface

→  TP01

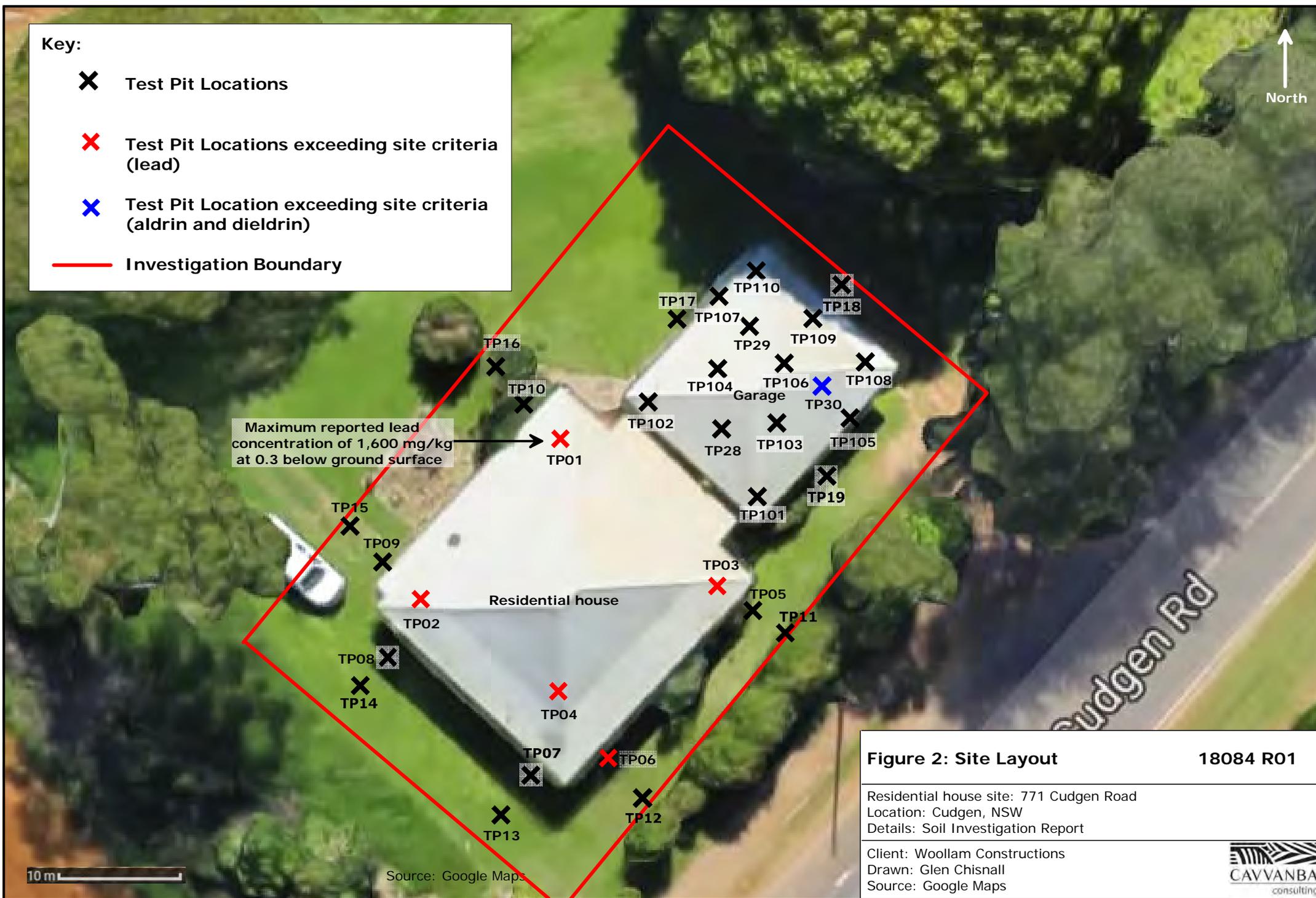


Figure 2: Site Layout

18084 R01

Residential house site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Soil Investigation Report

Client: Woollam Constructions  
 Drawn: Glen Chisnall  
 Source: Google Maps



10 m

Source: Google Maps

Key:

- ✕ Test Pit Locations
- ✕ Test Pit Locations exceeding site criteria (lead)
- Investigation Boundary
- Soil removal to 0.4 m
- Soil removal to 0.7 m



Maximum reported lead concentration of 1,600 mg/kg at 0.3 below ground surface

10 m

Source: Google Maps

Figure 3: Extent of lead impact 18084 R01

Residential house site: 771 Cudgen Road  
Location: Cudgen, NSW  
Details: Soil Investigation Report

Client: Woollam Constructions  
Drawn: Glen Chisnall  
Source: Google Maps





**Key:**  
 — Site Boundary (Lot 11 DP 1246853)

**Figure 1: Site Location** **19038 R02**

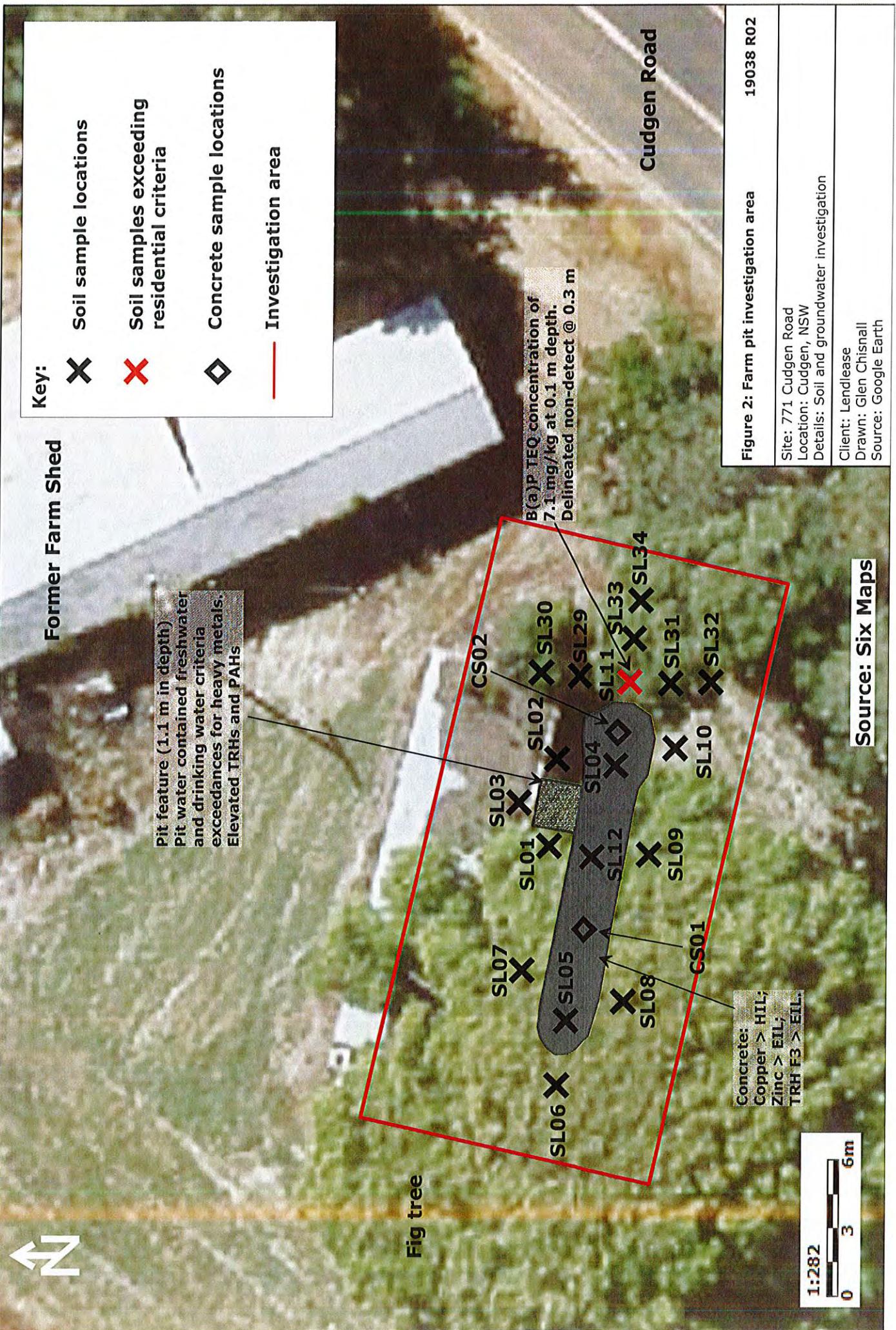
Site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Soil and groundwater investigation

Client: Lendlease  
 Drawn: Glen Chisnall  
 Source: Google Maps



Source: Google Maps

200 m



Former Farm Shed

Pit feature (1.1 m in depth)  
 Pit water contained freshwater and drinking water criteria exceedances for heavy metals. Elevated TRHs and PAHs

B(a)P TEQ concentration of 7.1 mg/kg at 0.1 m depth. Delineated non-detect @ 0.3 m

Concrete:  
 Copper > HIL;  
 Zinc > EIL;  
 TRH F3 > EIL.

- Key:
- ✕ Soil sample locations
  - ✖ Soil samples exceeding residential criteria
  - ◇ Concrete sample locations
  - Investigation area

Fig tree

Cudgen Road



1:282

Figure 2: Farm pit investigation area 19038 R02

Site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Soil and groundwater investigation  
 Client: Lendlease  
 Drawn: Glen Chisnall  
 Source: Google Earth

Source: Six Maps



**Key:**

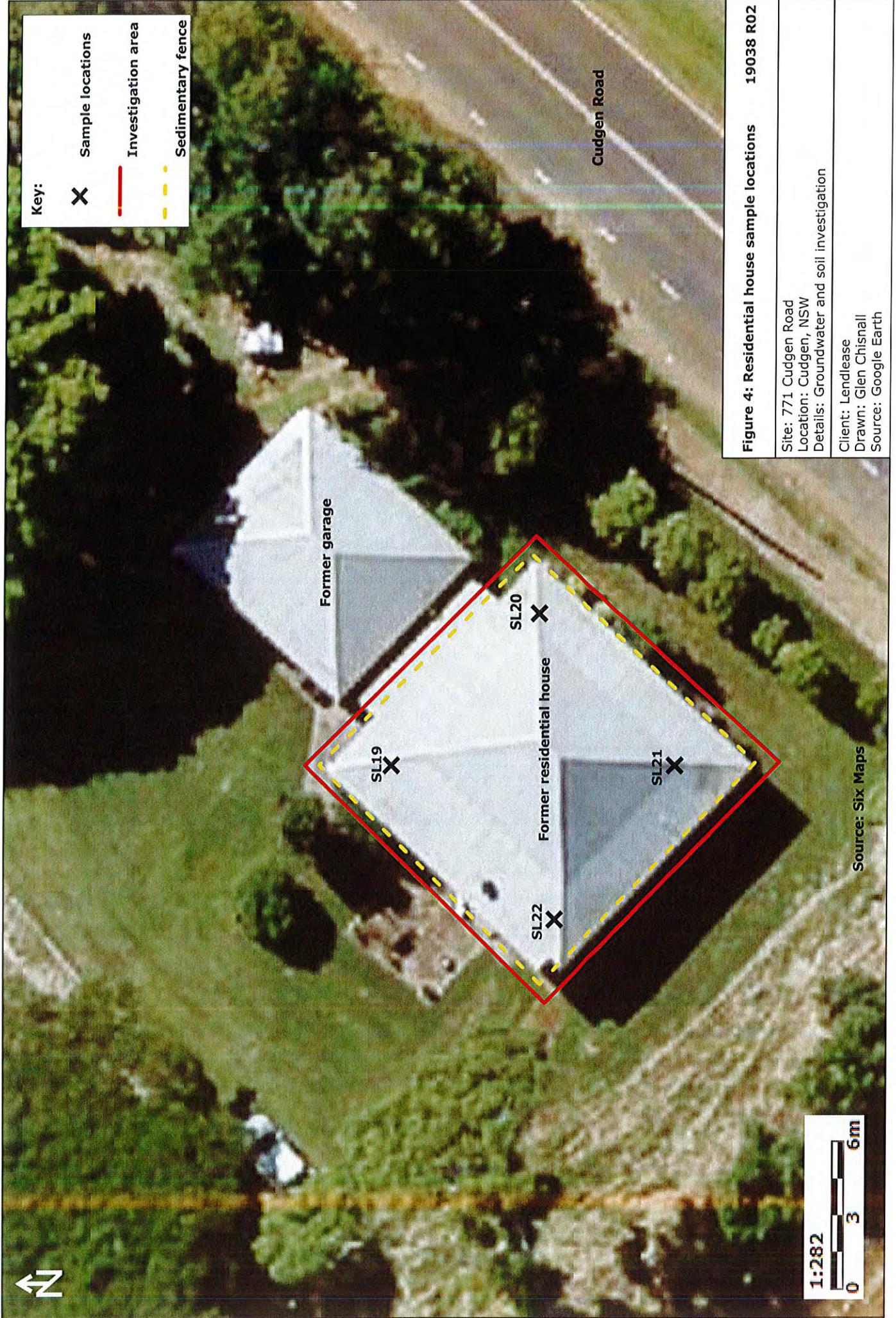
- X Sample locations
- Investigation area

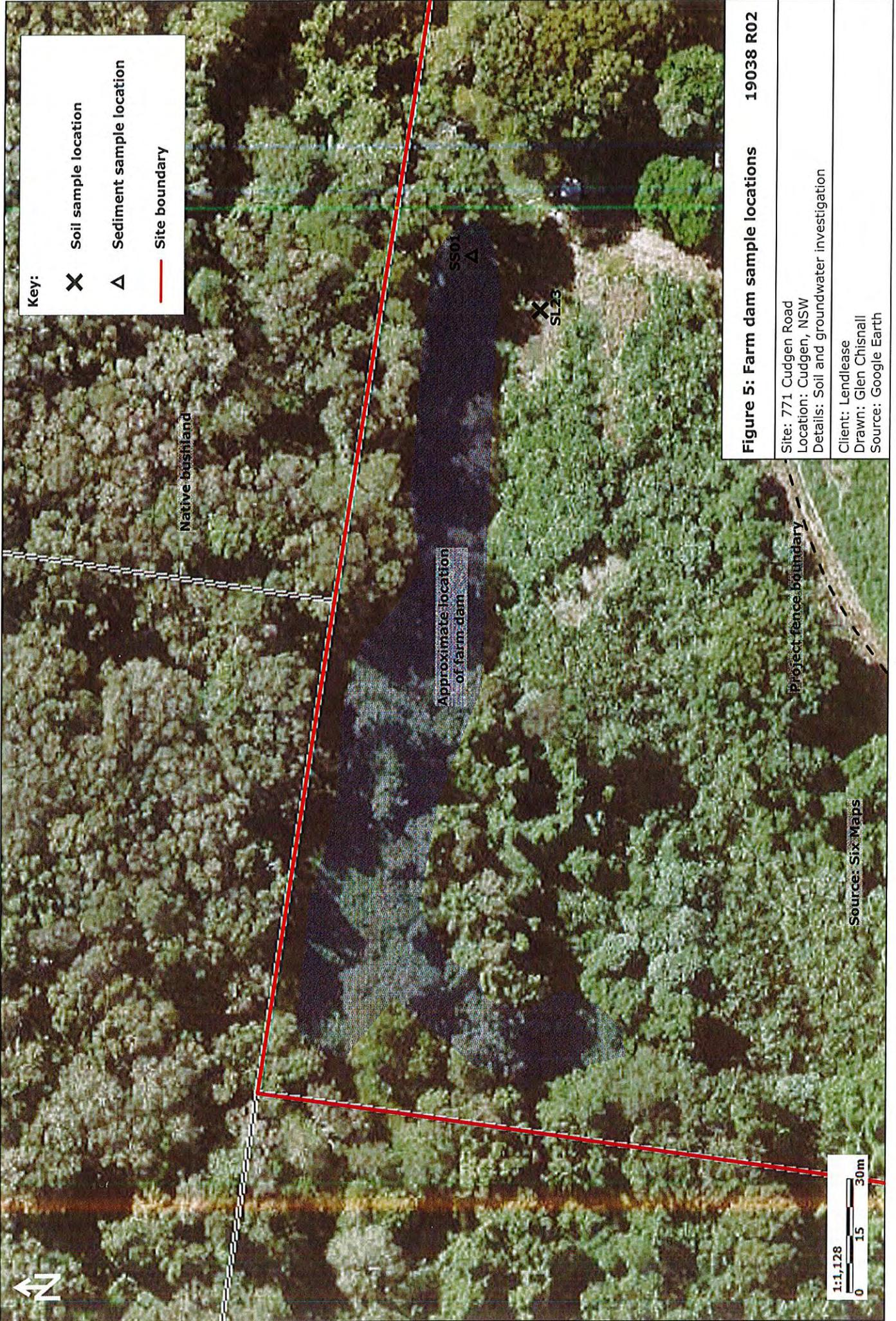
**Figure 3: Farm shed sample locations 19038 R02**

Site: 771 Cudgen Road
Location: Cudgen, NSW
Details: Soil and groundwater investigation
Client: Lendlease
Drawn: Glen Chisnall
Source: Google Earth

Source: Six Maps







**Figure 5: Farm dam sample locations 19038 R02**

Site: 771 Cudgen Road
Location: Cudgen, NSW
Details: Soil and groundwater investigation
Client: Lendlease
Drawn: Glen Chisnall
Source: Google Earth



Key:

X Sample locations

- - - Approximate extent of farm dump

Native bushland

Project fence boundary

Approximate extent and location of farm dump

SL24

SL25

SL26

SL27

SL28

**Figure 6: Farm dump sample locations** 19038 R02

Site: 771 Cudgen Road

Location: Cudgen, NSW

Details: Soil and groundwater investigation

Client: Lendlease

Drawn: Glen Chisnall

Source: Google Earth

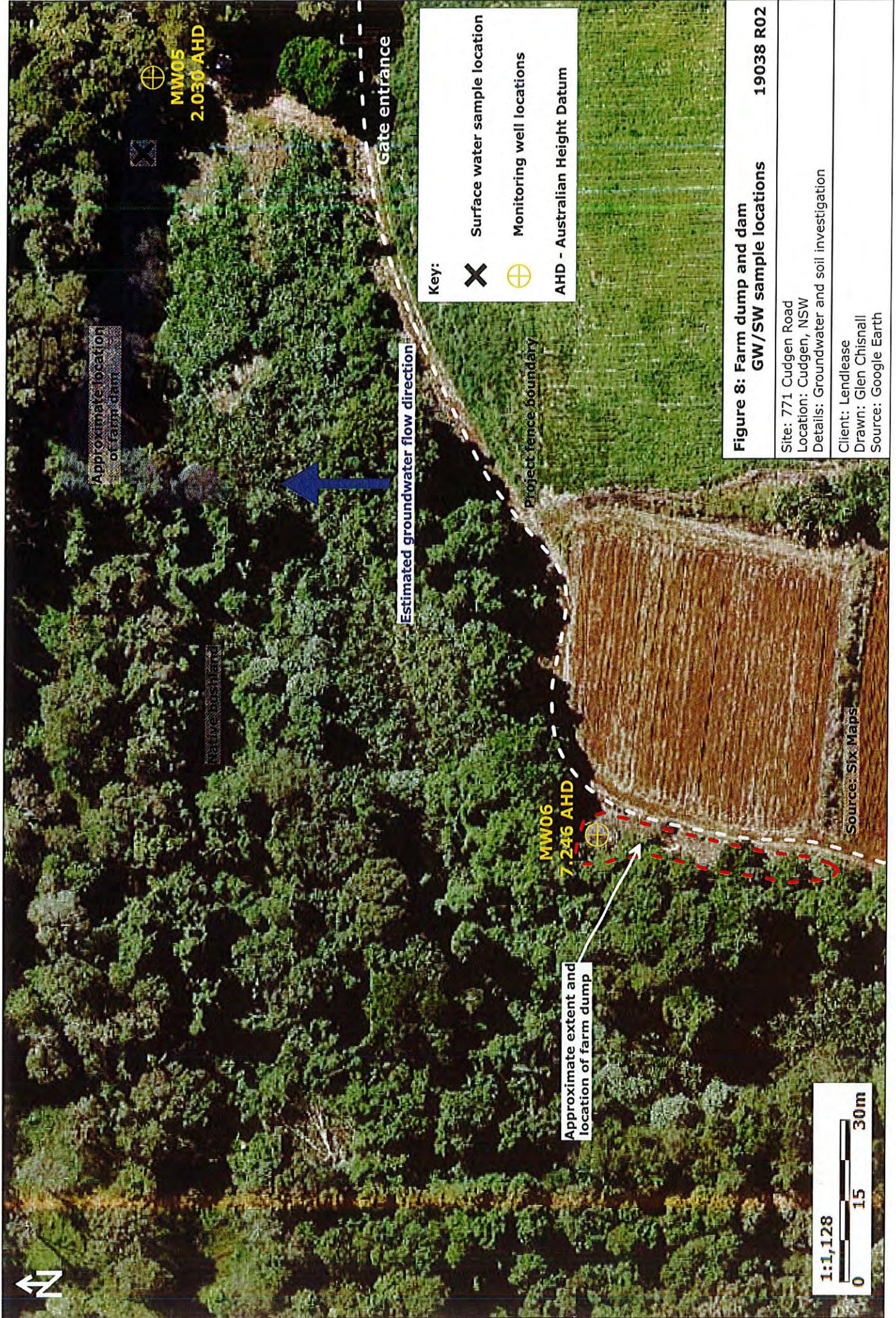
1:564  
0 5 10m

Source: Six Maps



**Figure 7: Farm pit and shed  
GW/SW sample locations 19038 R02**

Site: 771 Cudgen Road
Location: Cudgen, NSW
Details: Groundwater and soil investigation
Client: Lendlease
Drawn: Glen Chisnall
Source: Google Earth



**Figure 8: Farm dump and dam  
GW/SW sample locations 19038 R02**

Site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Groundwater and soil investigation  
 Client: Lendlease  
 Drawn: Glen Chisnall  
 Source: Google Earth

North-west

- CONTAMINATION SOURCES**
- 1 - Asbestos in soil
  - 2 - B(a)P TEQ in soil
  - 3 - Lead in soil
  - 4 - Heavy metals & TRHs in surface water

- EXPOSURE PATHWAYS**
- A - Direct contact (dermal or incidental ingestion)
  - D - Excavation/disturbance

- RECEPTORS On-site**
- i Site users
  - ii Surface Water
  - iii Ecological

South-east

Former location of residential house

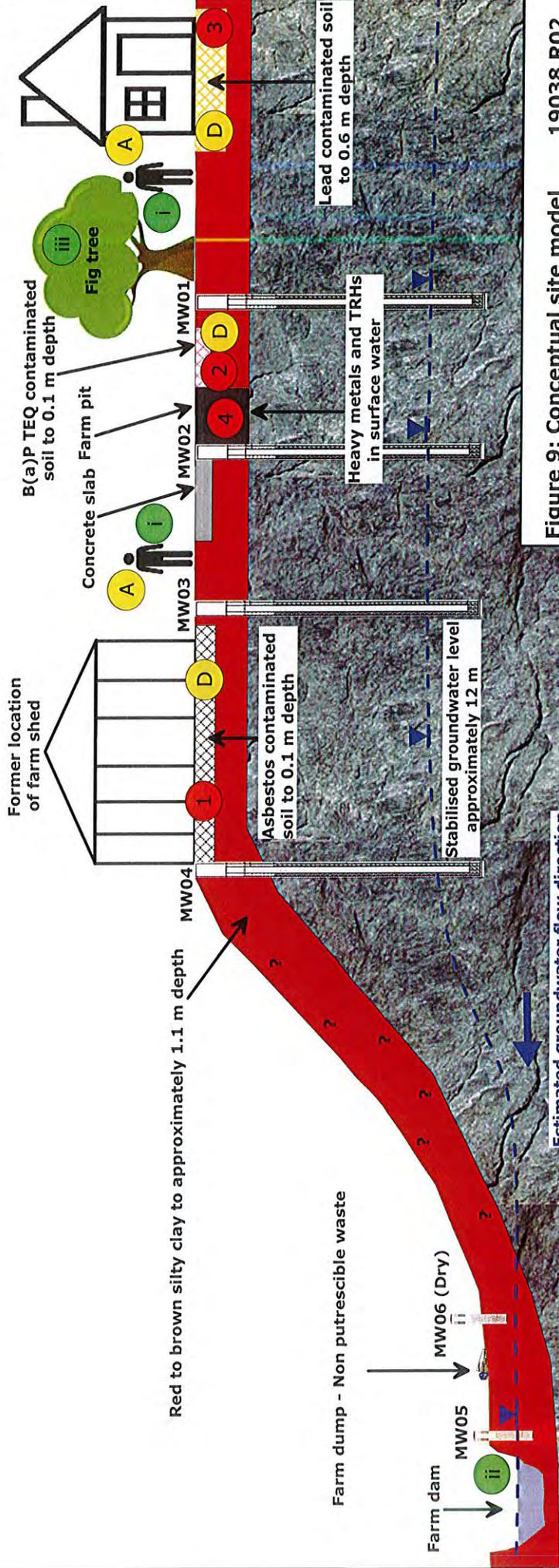


Figure 9: Conceptual site model

19038 R02

Site: 771 Cudgen Road  
 Location: Cudgen, NSW  
 Details: Groundwater and soil investigation

Client: Lendlease  
 Drawn: Glen Chisnall

