117 Bull Street, Newcastle West NSW 2302
Tel 02 4908 4300 | www.subsidenceadvisory.nsw.gov.au
24 Hour Emergency Service: Free Call 1800 248 083
ABN 87 445 348 918

FN11-28119N1
TBA18-01418

Coffey
ATTN: Simon Baker
Simon.baker@coffey.com

Dear Simon

RE PROPOSED SEVEN (7) X COMMERCIAL BUILDINGS UP TO NINE (9) STOREYS IN HEIGHT AT 16B HONEYSUCKLE DRIVE NEWCASTLE; LOTS 1,2,3 DP 1163346, AND LOTS 2 &3 DP 1247375; TBA18-01418

NOTICE OF DETERMINATION

I refer to the application detailed above. Subsidence Advisory NSW has determined to grant approval under section 22 of the *Coal Mine Subsidence Compensation Act 2017*.

Approval has been granted, subject to the conditions set out in the attached determination under Schedule 2. The stamped approved plans are attached.

Once relevant documentation to meet the conditions in Schedule 2 are available, please email through to SA-Risk@finance.nsw.gov.au quoting reference **TBA18-01418**.

Should you have any questions about the determination I can be contacted by phone on 02 4908 4300 or via email at shane.mcdonald1@finance.nsw.gov.au

Yours faithfully,

Shane McDonald
Senior Risk Engineer

18 January 2019

DETERMINATION

Issued in accordance with section 22 of the *Coal Mine Subsidence Compensation Act 2017*

As delegate for Subsidence Advisory NSW under delegation executed 18 January 2019 approval is for the development described in Schedule 1, subject to the conditions attached in Schedule 2.

Determination Date: 18 January 2019

Approval to Lapse on: 18 January 2024

The conditions of approval are imposed for the following reasons:

a) To confirm and clarify the terms of Subsidence Advisory NSW approval.

b) To minimise the risk of damage to surface development from mine subsidence.

Shane McDonald
Senior Risk Engineer

18 January 2019

SCHEDULE 1

Application No:	**TBA18-01418**
Applicant:	**COFFEY**
Site Address:	**16B HONEYSUCKLE DRIVE NEWCASTLE**
Lot and DP:	**LOTS 1,2,3 DP 1163346, AND LOTS 2 &3 DP 1247375**
Proposal**:**	**SEVEN (7) X COMMERCIAL BUILDINGS UP TO NINE (9) STOREYS IN HEIGHT**
Mine Subsidence District:	**NEWCASTLE**

SCHEDULE 2

CONDITIONS OF APPROVAL

GENERAL	
Plans, standards and guidelines.	
1.	The development being undertaken strictly in accordance with the details set out on the application form, any information submitted with the application and the plans submitted, as amended or as modified by the conditions of this approval. **Note**: Any proposal to modify the terms or conditions of this approval, whilst still maintaining substantially the same development to that approved, will require the submission of a formal application for consideration by Subsidence Advisory NSW. If amendments to the design result in the development not remaining substantially the same as that approved by this approval, a new application must be submitted to Subsidence Advisory NSW.
2.	This approval expires 5 years after the date the approval was granted if construction work has not physically commenced.
PRIOR TO COMMENCEMENT OF CONSTRUCTION	
3.	**Prescribed Design Parameters – Sites 1 and 1A** The proposed structure(s) is to be designed to be "*safe, serviceable and any damage from mine subsidence shall be limited to 'very slight' in accordance with AS2870 (Damage Classification) and readily repairable*" using the subsidence parameters delineated in the attached **figures**, and as outlined in Coffey report "*Honeysuckle City Campus Development – Site 1 – 16. Mine Subsidence Remediation Strategy and Numerical Analysis Report"*, dated 16 November 2018, ref: 754-NTLGE213472-R06.
4.	**Prescribed Design Parameters – Sites 2 and 3** The proposed structure(s) is to be designed to be "*safe, serviceable and any damage from mine subsidence shall be limited to 'very slight' in accordance with AS2870 (Damage Classification) and readily repairable*" using the subsidence parameters for the portion of the site within the angle of draw delineated in the attached **figure** and as outlined in Coffey report "*Honeysuckle City Campus Development – Sites 2 and 3 – Wight Lane, Newcastle, Mine Subsidence Remediation Strategy and Numerical Analysis Report*", dated 1 May 2018, ref: 754-NTLGE213472-R04 Final. a) Maximum Vertical Subsidence: 40 mm b) Maximum Tensile Strains: 0.5 mm/m c) Maximum Tilt: 1.5 mm/m d) Maximum Radius of Curvature (down): 20 km The proposed structure(s) is to be designed to be "*safe"* using the subsidence parameters for the portion of the site within the angle of draw delineated in attached figure and as outlined in Coffey report "*Honeysuckle City Campus Development – Sites 2 and 3 – Wight Lane, Newcastle, Mine Subsidence Remediation Strategy and Numerical Analysis Report*", dated 1 May 2018, ref: 754-NTLGE213472-R04 Final. e) Maximum Vertical Subsidence: 60 mm f) Maximum Tensile Strains: 0.75 mm/m

	g) Maximum Tilt: 2.25 mm/m h) Maximum Radius of Curvature (down): 15 km
5.	**Mine Workings Remediation** Mitigate the risk of mine subsidence by grouting based on reports: • *"Honeysuckle City Campus Development – Site 1 – 16. Mine Subsidence Remediation Strategy and Numerical Analysis Report"*, dated 16 November 2018, ref: 754-NTLGE213472-R06. • "*Independent Review of the Mine Subsidence Assessment for the Proposed University of Newcastle's Honeysuckle City Campus Development (Sites 1-3), Honeysuckle Drive, Newcastle*", dated 19 October 2018, ref: DGS Report No. COF-008/1. All newly emplaced grout is to be 5Mpa. On completion of grouting submit a ***Grout Verification Output Report*** for Subsidence Advisory NSW's acceptance, endorsed by the grout designer and site verification engineers for compliance with the Grouting Plan. Cored grout verification holes will be required to confirm the grout emplacement and strengths.
6.	**Site Remediation** The risk of sinkhole subsidence due to new and existing grout holes / boreholes is to be eliminated via a suitable means. A report is to be submitted for Subsidence Advisory NSW's acceptance this has been completed.
7.	Submit an "Engineering Impact Statement" prior to commencement of detailed design for acceptance by Subsidence Advisory NSW, which shall identify the: a. Mine subsidence parameters used for the design. b. Main building elements and materials. c. Risk of damage due to mine subsidence. d. Design measures proposed to control the risks. e. Comment on the: • likely building damage in the event of mine subsidence. • sensitivity of the design to greater levels of mine subsidence.
8.	Submit architectural designs and final designs incorporating the design methodology contained in the "*Engineering Impact Statement*", for acceptance by Subsidence Advisory NSW prior to commencement of construction. The final designs shall include certification by a qualified structural engineer to the effect that the improvements will remain "*safe, serviceable and any damage from mine subsidence shall be limited to 'very slight' damage in accordance with*

	AS2870 (Damage Classification), and readily repairable" taking into consideration the mine subsidence parameters outlined above.
9.	The final designs submitted for acceptance by Subsidence Advisory NSW prior to the commencement of any construction work and shall: a) Include sufficient drawing plans, long-sections, elevations and details, to fully describe the work and proposed mine subsidence mitigation measures. b) Include design mitigation measures to reduce the transfer of horizontal strain into building structures. c) Include design mitigation measures to relieve excessive strains into building structures. d) Ensure there is provision for isolation joints between adjoining structures. For example between a building and adjacent paving. e) All roads, driveways and pavement areas, as shown on the approved plans, are to be designed as flexible structures with an asphalt surface. If a concrete surface course is required, it shall be designed to include expansion and crack control joints or sacrificial sections to minimise the risk of damage from mining subsidence.
DURING CONSTRUCTION	
10.	Establish a number of permanent survey marks to AHD so that building movement can be monitored should mine subsidence occur. Details are to be forwarded to Subsidence Advisory NSW.
POST CONSTRUCTION	
11.	Upon completion of construction, works-as-executed certification by a qualified engineer is to be forwarded to Subsidence Advisory NSW confirming that construction was in accordance with the plans approved by Subsidence Advisory NSW.

Dispute Resolution

If you are dissatisfied with the determination of this application an appeal may be formally submitted with the Chief Executive Officer for an independent internal review. The application must be made in writing and must provide reasons why the determination should be changed.

18 Jan 2019
CONDITIONS OF DA - ATTACHED

SHANE MCDONALD
FOR SUBSIDENCE ADVISORY NSW

6.2 Blocking & Stacking

The segregation of buildings into either academic or student accommodation uses simplifies staging and planning of buildings. It allows discreet projects to be brought on-line as required.

The building forms have been positioned to enable a high amenity pedestrian environment within the campus as well as allowing links through the site with view corridors preserved towards the waterfront. Building form and scale has been arranged to maximise solar access to open spaces as well as opportunities to capture views from upper levels over the lower scaled buildings on the waterfront.

Building A1 has been identified as the first stage academic building, located in a visually prominent position on the corner of Honeysuckle Drive and Worth Place.

Following this, Building B may be developed for student accommodation and has capacity for up to 400 student beds.

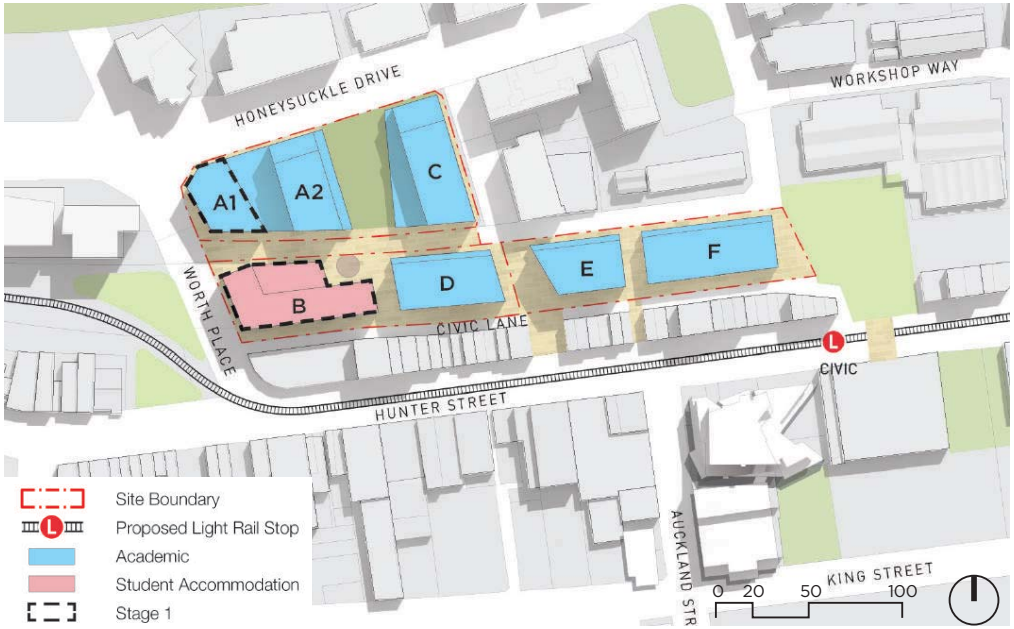
6.2.1 Indicative Development Yield

The table below outlines the GFA for each building proposed in Concept Master Plan:

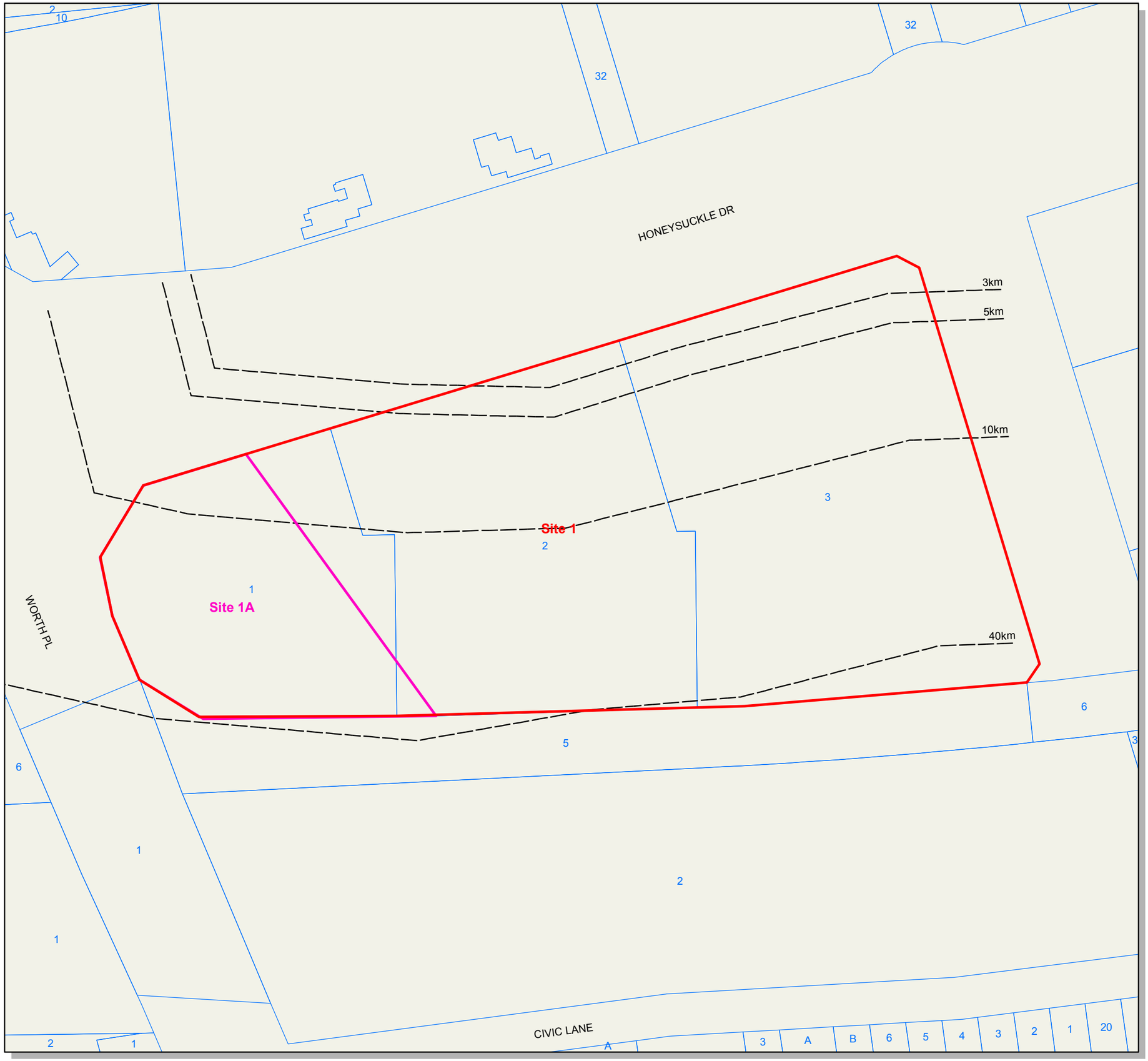
Building	GFA	Site	Stage	Use
Building A1	4,608m²	Site 1	1	Academic
Building A2	10,299m²	Site 1	2	Academic
Building B	11,828m² 394 beds	Site 2	1	Student Accommodation
Building C	12,217m²	Site 2	3	Academic
Building D	9,415m²	Site 2	4	Academic
Building E	7,158m²	Site 3	4	Academic
Building F	7,049m²	Site 3	4	Academic
Total GFA	**62,573m²**			
Total Target/ Permissible*	62,659m²			

* Site capacity including 10% bonus

Gross floor area (GFA) refers to the Council definition of floor space which counts all internal floor space above ground excluding voids and plant areas. A factor of 95% has been used on the overall built area (Gross Building Area – GBA on Academic and Commercial uses. On student accommodation, the figure is 80% to allow for more complex floor plates that adjust for differing accommodation unit configurations.



UoN Site 1-
Lot 1, 2 & 3 DP1163346
CURVATURE



Legend

- Site 1
- Site 1A
- Curvature
- Cadastre

Scale 1:650

Datum GDA 94

Source:

Curvature data has been derived from Coffey report
"Honeysuckle City Campus Development – Site 1 – 16.
Mine Subsidence Remediation Strategy and Numerical Analysis Report",
dated 16 November 2018, ref: 754-NTLGE213472-R06.

Digital data in this plan has been sourced from DFSI Spatial Services and NSW Resources Regulator..

The cadastral fabric and the used to produce this plan was extracted from the Digital Cadastre Database (DCDB). The DCDB is linked to the NSW State Control Survey and agree with those as at the date of extraction.

The underground coal mining used to produce this map was derived by the Subsidence Advisory NSW, based on confidential information held by the NSW Resources Regulator.

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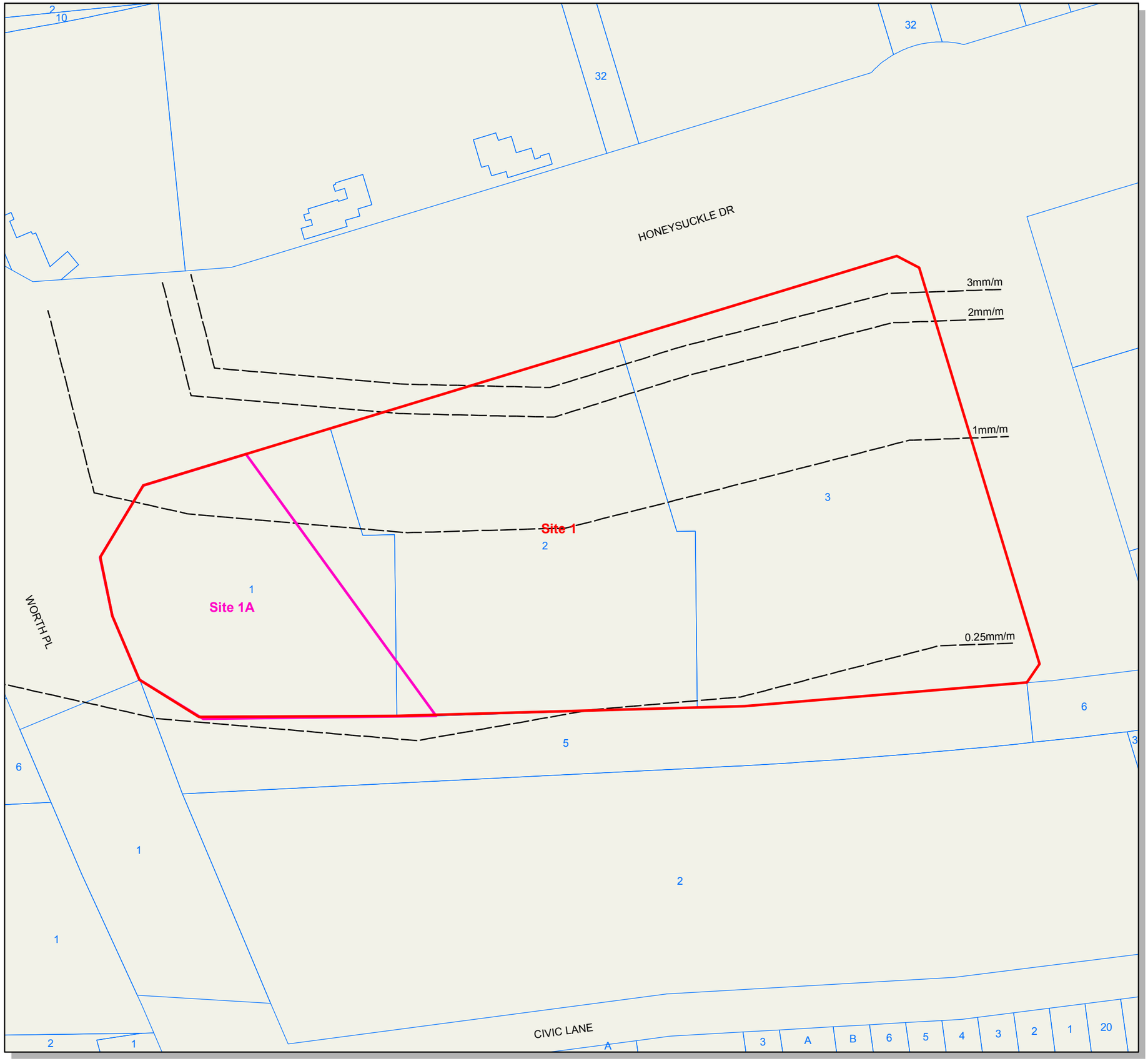
Date: 19/12/2018

Prepared by: kauterm

NSW GOVERNMENT

Subsidence Advisory

UoN Site 1-
Lot 1, 2 & 3 DP1163346
STRAIN



Legend

- Site 1
- Site 1A
- Strain
- Cadastre

N

Scale 1:650

Datum GDA 94

Source:

Strain data has been derived from Coffey report
"Honeysuckle City Campus Development – Site 1 – 16.
Mine Subsidence Remediation Strategy and Numerical Analysis Report",
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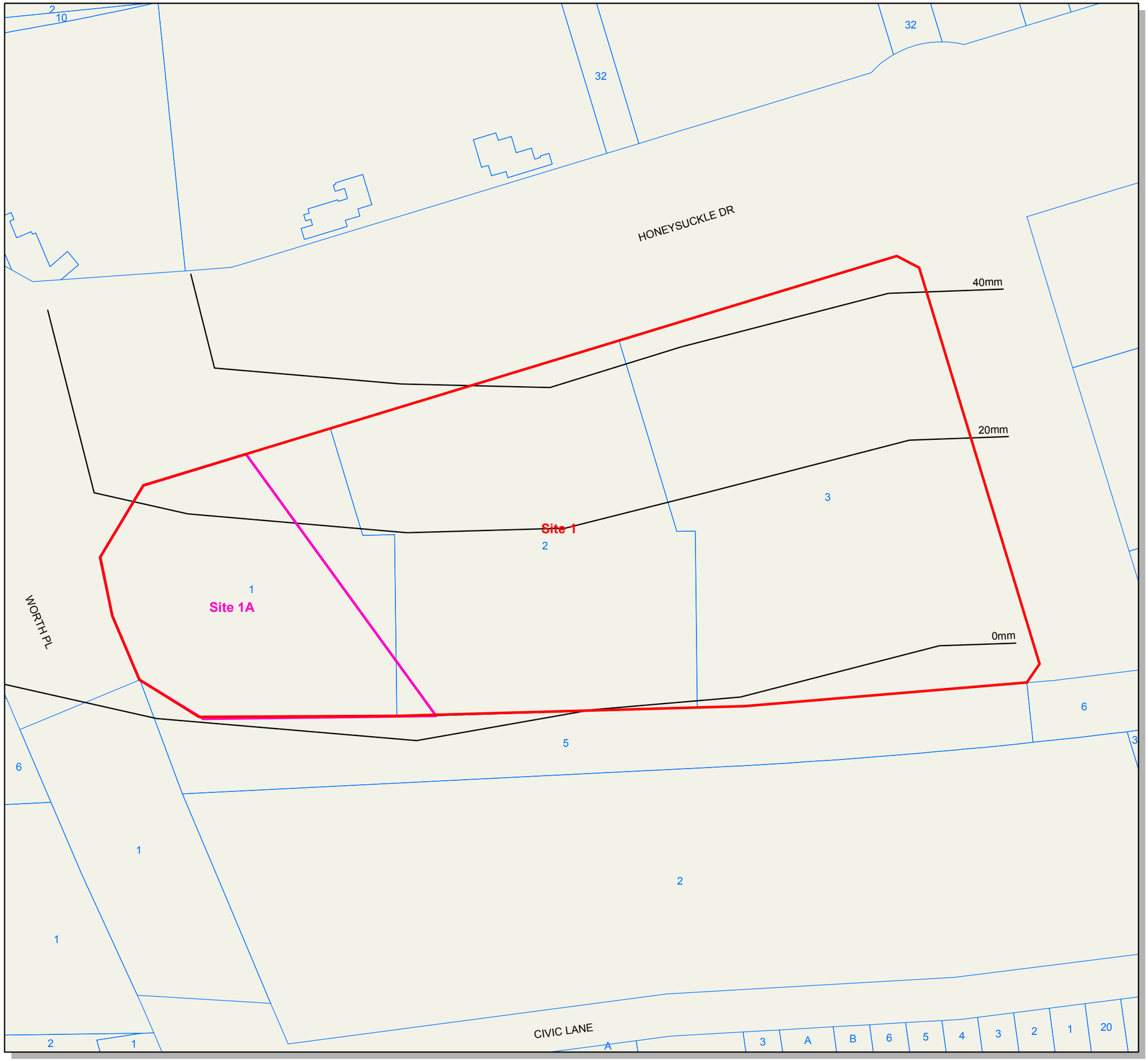
Date: 19/12/2018

Prepared by: kauterm

NSW GOVERNMENT

Subsidence Advisory

UoN Site 1-
Lot 1, 2 & 3 DP1163346
SUBSIDENCE



Legend

- Site 1
- Site 1A
- Subsidence
- Cadastre

N

Scale 1:650

Datum GDA 94

Source:

Subsidence data has been derived from Coffey report
"Honeysuckle City Campus Development – Site 1 – 16.
Mine Subsidence Remediation Strategy and Numerical Analysis Report",
dated 16 November 2018, ref: 754-NTLGE213472-R06.

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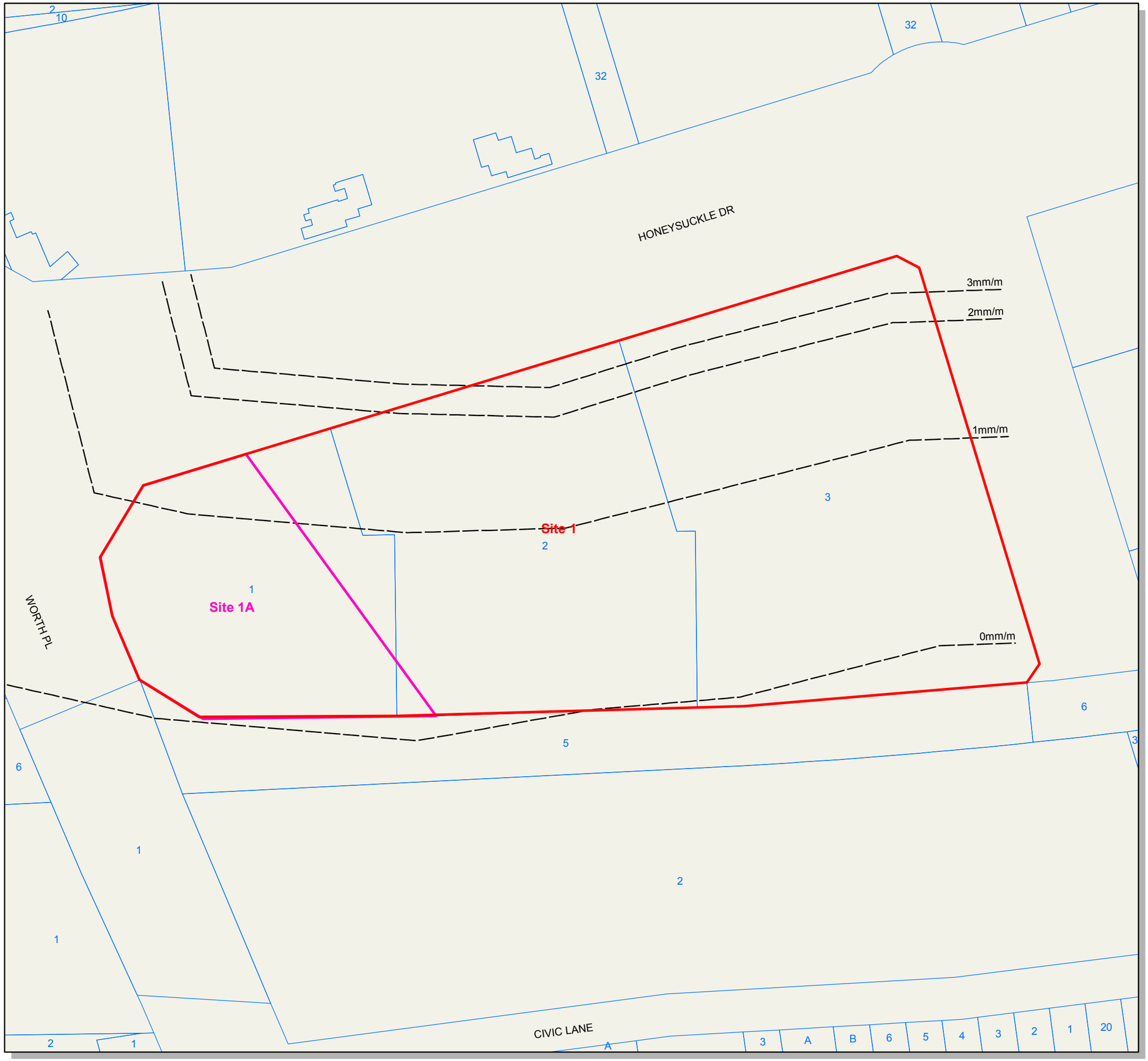
Date: 19/12/2018

Prepared by: kauterm

NSW GOVERNMENT

Subsidence Advisory

UoN Site 1-
Lot 1, 2 & 3 DP1163346
TILT



Legend

- Site 1
- Site 1A
- Tilt
- Cadastre

N

Scale 1:650

Datum GDA 94

Source:

Tilt data has been derived from Coffey report
"Honeysuckle City Campus Development – Site 1 – 16.
Mine Subsidence Remediation Strategy and Numerical Analysis Report",
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Date: 19/12/2018

Prepared by: kauterm

NSW GOVERNMENT

Subsidence Advisory

UoN Site 2 & 3 - Lot 2 & 3 DP1247375 EXTENT OF ANGLE OF DRAW

Legend

- Angle of Draw
- Site 2 & 3
- Cadastre

N

Scale 1:1,200

Datum GDA 94

Source:

Angle of draw data has been derived from Coffey report "Honeysuckle City Campus Development – Site 1 – 16. Mine Subsidence Remediation Strategy and Numerical Analysis Report", dated 16 November 2018, ref: 754-NTLGE213472-R06.

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Date: 19/12/2018

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NSW GOVERNMENT Subsidence Advisory