



Bee & Lethbridge

Quality Surveying & Development Solutions

The General Manager
Northern Beaches Council
725 Pittwater Road
Dee Why NSW 2099

10 August 2022
File Ref: 22569

Additional Information on St. Michael's Cave

DA 2022/0084

73 Marine Parade, AVALON

Dear Sirs

This data and information is to confirm the location of St Michael's Cave, Avalon Beach, and its relationship to the subject property No.73 Marine Parade Avalon Beach where a proposed new residence is planned.

The entrance and main structure to St Michael's Cave, Avalon Beach Headland is located directly under the common boundary of lot 116 (No.77 Marine Parade) and lot 117 (No.79 Marine Parade) in DP8394.

The geographical co-ordinates of the cave entrance are:

- GDA2020 MGA EASTING 345,953.9 being Latitude -33.630° South
- GDA2020 MGA NORTHING 6,277,629.2 being Longitude 151.339° East

Figure 1. Aerial of St.Michael's Cave



The cave entrance is located approximately 50 metres north of the subject property No.73 Marine Parade, as indicated in Figure 1.

www.beeleth.com.au

Bee & Lethbridge Pty Ltd
Suite 2, 14 Starkey Street,
PO Box. 330, Forestville, NSW 2087
Phone: 9451 6757
Email: survey@beeleth.com.au
ABN: 13 003 194 447

**Members of The Surveying and Spatial Sciences Institute
and The Institution of Surveyors NSW Inc.**



Bee & Lethbridge

Quality Surveying & Development Solutions

The entrance to St Michael's Cave and the main structure formation being the volcanic dyke roof, project back into the sandstone headland under the property No.79 Marine Parade, shown in figure 1 above & Figures 2 and 3 below.

Figure 2

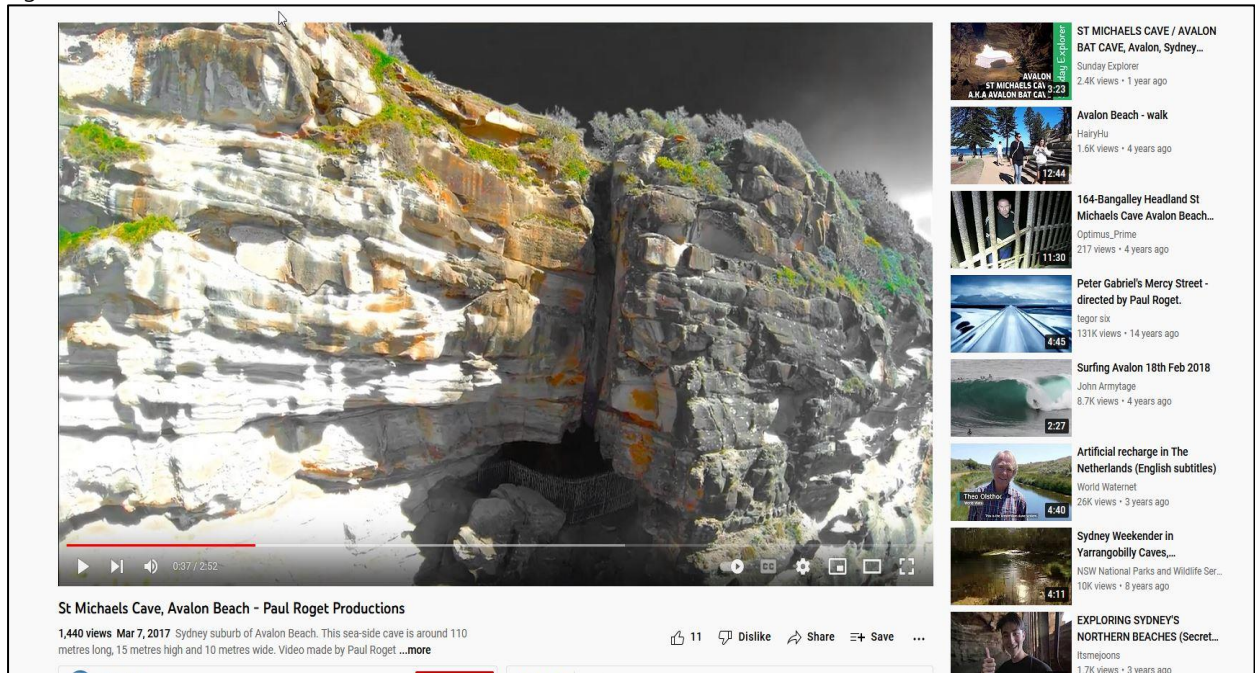
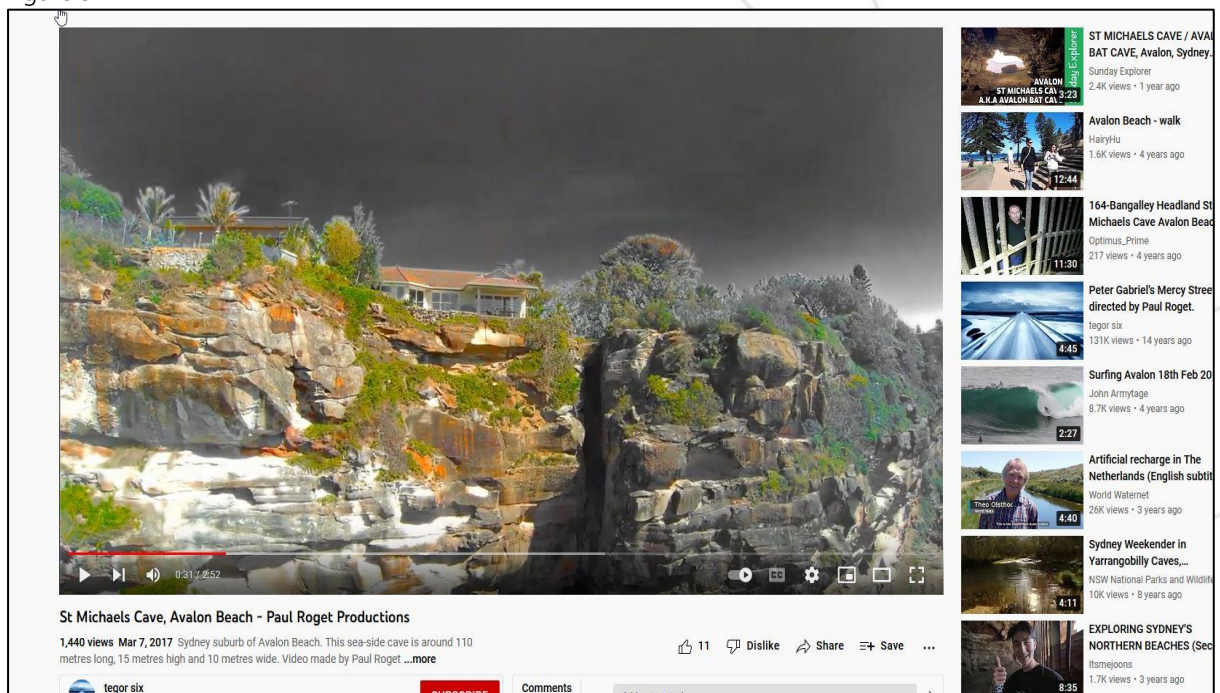


Figure 3



www.beeleth.com.au

Bee & Lethbridge Pty Ltd
Suite 2, 14 Starkey Street,
PO Box. 330, Forestville, NSW 2087
Phone: 9451 6757
Email: survey@beeleth.com.au
ABN: 13 003 194 447

**Members of The Surveying and Spatial Sciences Institute
and The Institution of Surveyors NSW Inc.**



Bee & Lethbridge

Quality Surveying & Development Solutions

This data & information is supported by the following sources, attached images and Youtube video link provided below:

- Physical access for survey purposes to St Michael's Cave is not permitted and the cave entrance is fenced off (Figure 4)
- Geographical coordinate data from Six Maps NSW
- Six Maps NSW – see Figure 1. No.73 Marine Parade is highlighted with a yellow arrow marker showing the distance from the subject property to the cave entrance being approximately 50 metres
- Figures 2 and 3 clearly show the cave entrance directly under properties No.77 & No.79 Marine Parade. The restricted barrier fence at the cave entrance can be seen clearly.
- The youtube link below is a drone survey from Avalon Headland to Palm Beach highlighting the geological structures & rock failures along cliff face profile. The video duration is 28 minutes, however I draw your attention to the footage from the 2 minute mark to 3 minute mark where St Michael's Cave is featured and is clearly shown below No.77 Marine Parade.

<https://www.youtube.com/watch?v=ERIFZGcfjLE>

Figure 4



www.beeleth.com.au

Bee & Lethbridge Pty Ltd
Suite 2, 14 Starkey Street,
PO Box. 330, Forestville, NSW 2087
Phone: 9451 6757
Email: survey@beeleth.com.au
ABN: 13 003 194 447

**Members of The Surveying and Spatial Sciences Institute
and The Institution of Surveyors NSW Inc.**



Bee & Lethbridge

Quality Surveying & Development Solutions

This report confirms the location of St Michael's Cave in relation to No.73 Marine Parade.

The report does not confirm any geological or engineering constraints of the rock face surrounding St Michael's Cave or the immediate vicinity.

Please contact the writer should there be questions relating to information in this report or the attachments.

Yours faithfully

Copland C Lethbridge

REGISTERED SURVEYOR - Mob: 0418 203769

Bee & Lethbridge Pty Ltd – Consulting Surveyors – Ph: 9451 6757

www.beeleth.com.au

cope@beeleth.com.au



www.beeleth.com.au

Bee & Lethbridge Pty Ltd

Suite 2, 14 Starkey Street,

PO Box. 330, Forestville, NSW 2087

Phone: 9451 6757

Email: survey@beeleth.com.au

ABN: 13 003 194 447

**Members of The Surveying and Spatial Sciences Institute
and The Institution of Surveyors NSW Inc.**