

Week 7 activity

Note: this is in addition to completing last week's activity.

Purpose

The purpose of the activity is to:

- familiarise students with the Geographical Information System (GIS) to be used in next week's activity;
- prepare the GIS system with the maps and map layers needed for next week's activity.

By the end of this activity, students should be familiar enough with Google My Maps and QGIS to locate and plot points of interest on a map and measure distances.

Students may choose to work individual or in groups. Students may also choose to take work home.

Material

Two GIS systems are to be used:

1. Google maps, via the MyMaps interface. Students should access MyMaps using their own Google account¹;
2. Quantum GIS² (QGIS) which has been preloaded onto the course Win10 VM. QGIS is available for download for other platforms and students may choose to install and use QGIS on their own computer.

Students will also need online Internet access to be able to access the following:

- ACMA Register of Radiocommunications Licences³ (RRL) and the ACMA RRL site map⁴;
- Open Street Maps⁵ (OSM) and its OSM API service;
- NSW Government mapping and imagery web services⁶ and its WMS web service;

Background

The case for this week (we will be using a different case next week) is based on the SHM article at Appendix A⁷ and using only published material. Non-published material, such as CCRs, have been excluded (for what should by now be obvious reasons). For the purpose of

¹ See <https://www.google.com/maps/about/mymaps/> and then use the Get Started button

² See <https://qgis.org/en/site/>

³ See https://web.acma.gov.au/rri/register_search.main_page

⁴ See https://web.acma.gov.au/rri/site_proximity.main_page

⁵ See <https://www.openstreetmap.org>

⁶ See https://www.spatial.nsw.gov.au/mapping_and_imagery/lpi_web_services

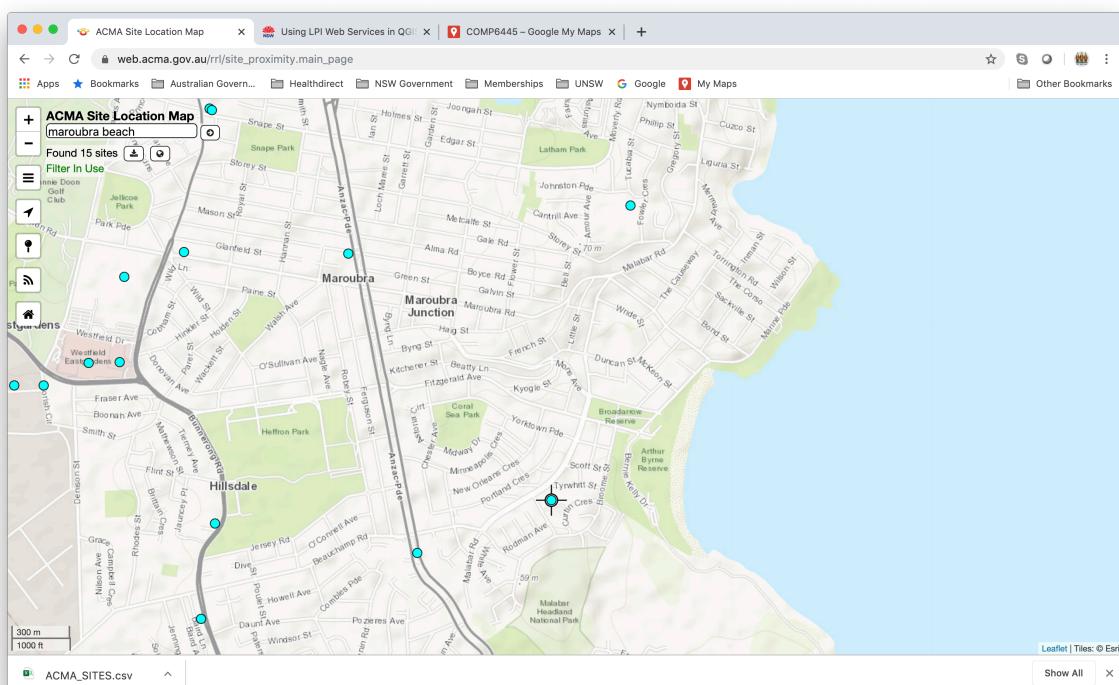
⁷ See <https://www.smh.com.au/national/nsw/brothers-charged-over-stabbing-death-of-homeless-man-at-maroubra-20170727-gxk1nm.html>

this activity, assume the crime scene is located near the intersection of Mons Avenue and Duncan St.

Instructions

Preparatory work

Go to the ACMA RRL site map and search for “maroubra beach”. Zoom out a little (using one click of the minus zoom) so your map looks like the screenshot below:



Depending on how you zoom you will have found 15-18 sites. Download the CSV file of these sites.

I have highlighted two Optus sites:

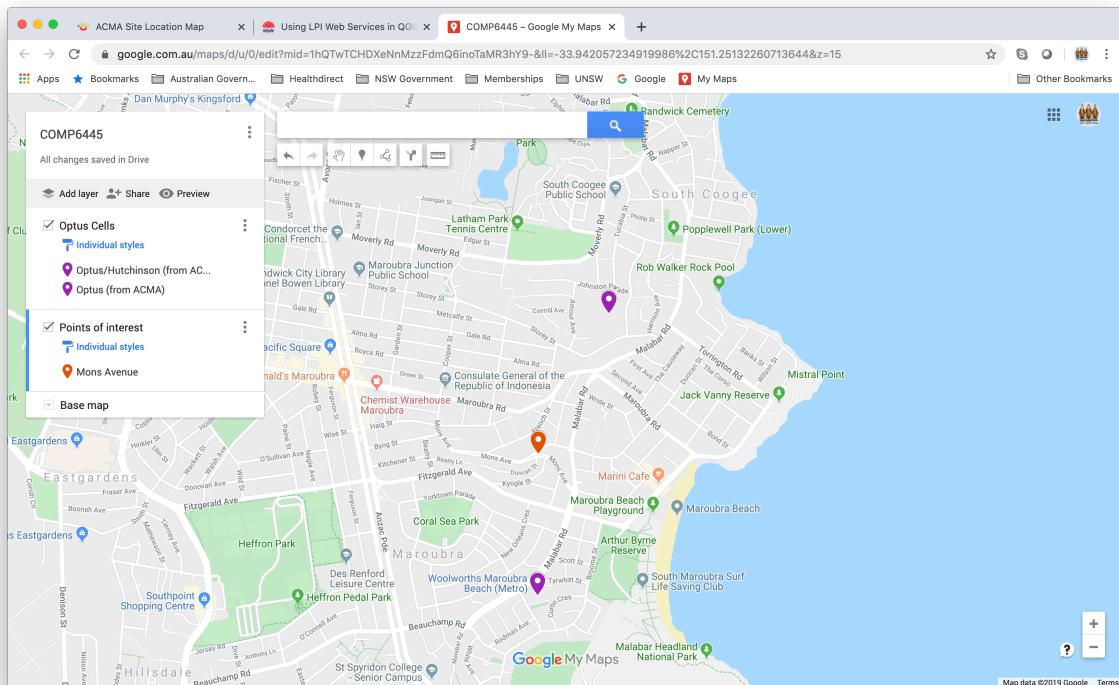
| SITE_ID | LATITUDE | LONGITUDE | NAME | STATE |
|----------|------------|------------|--|-------|
| 3815 | -33.941168 | 151.226078 | Westfield Drive PAGEWOOD | NSW |
| 3848 | -33.945107 | 151.224103 | Optus Site Westfield Bunnerong Rd PAGEWOOD | NSW |
| 51772 | -33.937871 | 151.254113 | Reservoir Amour Rd MAROUBRA | NSW |
| 101293 | -33.956865 | 151.230319 | Hutchison Site 472 Bunnerong Rd MATRAVILLE | NSW |
| 101548 | -33.944734 | 151.217013 | Amcor Building 2-6 Moore St BANKSMEDOW | NSW |
| 131311 | -33.946129 | 151.21997 | Vodafone site 77 Corish Circle PAGEWOOD | NSW |
| 134512 | -33.933435 | 151.230782 | Optus Site Kingsford South 161-165 Bunnerong Rd KINGSFORD | NSW |
| 134556 | -33.951388 | 151.249704 | Optus Site Maroubra Beach Cnr Malabar Rd Meaghel St MAROUBRA | NSW |
| 203374 | -33.933491 | 151.230933 | CMTS Site 161-165 Bunnerong Rd KINGSFORD | NSW |
| 203628 | -33.946153 | 151.221593 | Vodafone/Optus Site 77 Corish Circle PAGEWOOD | NSW |
| 402014 | -33.940083 | 151.238489 | Vodafone Site cnr 701-705 Anzac Pde & Boyce Rd MAROUBRA | NSW |
| 403802 | -33.945087 | 151.225834 | Westfield Bunnerong Rd EASTGARDENS | NSW |
| 9011360 | -33.940026 | 151.229402 | Pagewood Hotel 2 Maroubra Road PAGEWOOD | NSW |
| 9011811 | -33.952458 | 151.231114 | Vodafone Site 264 Bunnerong Road HILLSDALE | NSW |
| 10007365 | -33.95382 | 151.24228 | Malabar North Road Reserve near 1120 Anzac Parade MAROUBRA | NSW |

Google My Maps

Using Google My Maps:

- create a layer showing the two highlighted cells (hint: use the latitude and longitude given by ACMA);
- create a layer showing points of interest, such as the crime scene.

Your resulting map will look like this (depending on the zoom):



Swap the Base Map to “Satellite” and find the Optus cells and the crime scene (hint: use the coordinates, zoom in and visually find the cells).

Use the “measure distance and areas tool” to measure:

- The distance from the Reservoir Armour Rd Cell to the crime scene;
- The distance from the Optus Site Maroubra Beach to the crime scene.

QGIS

1. Start QGIS;
2. Check if the QuickOSM and QuickMapServices plugins have been installed – if not, install them;
3. Add an OSM layer – this will appear under XYZTiles;
4. Check if the NSW LPI Imagery has been installed – if not, install it using the instructions that are here:
https://www.spatial.nsw.gov.au/mapping_and_imagery/lpi_web_services/qgis
5. Go to Maroubra Beach and add in the two Optus cells and the crime scene;
6. Use the NSW LPI Imagery to find the Optus Cells and the crime scene;

7. Check the distances you measured using Google My Maps.

Assessment

Students will be assessed on the following (each worth 0.5 marks):

1. Google map showing the two Optus cells;
2. QGIS map showing the two Optus cells using Open Street Maps;
3. QGIS map showing the two Optus cells using NSW LPI Imagery;
4. The distance from the Reservoir Armour Rd Cell to the crime scene (within 10%);
5. The distance from the Optus Site Maroubra Beach to the crime scene (within 10%).

Thinking question (not assessed)

Note the different resolution of the Google Satellite images and the NSW LPI Imagery – which is why. Apart from resolution, why would we avoid using Google My Maps for a real case?

NATIONAL NSW

Brothers charged over stabbing death of homeless man at Maroubra

By [Ava Benny-Morrison](#)

Updated July 27, 2017 – 5.16pm, first published at 3.49pm



A "wannabe" Bra Boy gang member and his teenage brother have been charged over the fatal stabbing of a homeless man in Maroubra in Sydney's east.

Peter Hofmann, 68, was living in his car in the beachside suburb after a string of failed investments and scams resulted in him going broke.

He refused offers of accommodation from friends and family, and instead opted to live out of his 1990's-model Ford Laser.

The retired bus driver's body was found inside his car, parked on Mons Ave, on the night of June 21. He had been stabbed a number of times.



Ray Travers is due to face court on Friday.

Just over a month after he was killed, police on Thursday charged young brothers Ray and Jackson Travers with murder.

The duo are well-known in the surfing community in Maroubra and are the sons of [former amateur boxer Ronnie Reardon](#).

Twenty-year-old Ray has the words "my brother's keeper" - a slogan commonly associated with the Bra Boys gang - tattooed across his stomach.

However an associate of Ray has described him as a "wannabe" who was not a member of the group. The Bra Boys clan has strong roots in the Maroubra community and gained notoriety in the media following the 2005 Cronulla riots.



The crime scene on Mons Avenue in Maroubra on June 22 after Peter Hofmann's body was found. JANIE BARRETT

Less than two weeks after the siblings allegedly stabbed Mr Hofmann to death, the pair were accused of gatecrashing an out-of-control teenage birthday party in Matraville.

Ray and his 18-year-old brother Jackson allegedly climbed a fence to get into the 16th birthday party on the night of July 7.



Ray Travers, right, has been charged with murder over the death of Peter Hofmann at Maroubra.

The gate crashing sparked a brawl and ended with the alleged assault of the birthday girl's 60-year-old father and a 32-year-old security guard.

A 16-year-old boy was also stomped on during the melee.



Patricia Hofmann appealed for information about the death of her brother, Peter, last month.
NSW POLICE

Ray and Jackson were arrested on July 10 and have been in custody ever since.

On Thursday afternoon, Eastern Beaches detectives charged the brothers with murder.

They were refused bail to appear in Waverley Local Court on Friday.

Earlier this month police investigating Mr Hofmann's death turned their focus to the Lucas Heights tip, where they searched for clothing linked to the alleged murder.

Officers also revealed they had found the knife used in the attack.

Mr Hofmann's sister, [Patricia Hofmann, said she pleaded with her brother](#) to declare bankruptcy so his family could put a roof over his head after he hit financial strife.

"Being fiercely independent and honourable, he wanted to work things out himself and repay all his debts."

She said her brother was a "quiet and gentle man who'd never hurt anyone".

"Yet someone felt they had the right to brutally attack him and leave him to die alone," Ms Hofmann said.



Peter Hofmann was killed in his car at Maroubra.



Ava Benny-Morrison is crime reporter with The Sydney Morning Herald
