

Happy New Year for 2020!

We have certainly all been aware of the bushfire impact both here in SA and also interstate. If you have not looked at the online fire maps available for SA, NSW and Vic fires, some of which have been burning since September 2019 (in NSW), it is well worth taking a look. The enormity of the areas burnt can be clearly seen.



In SA, the Surveying profession has been working with the Surveyor General on assisting the bushfire victims and also preventing the loss of historical survey markings used to redefine boundaries, (includes historical fencing locations). More broadly a volunteer 'Map-a-thon' organised by the Surveying and Spatial Sciences Institute (SSSI) began on Sunday 9<sup>th</sup> February across Australia. Hundreds of SSSI members and other volunteers joined together to start the process to locate and map damaged infrastructure and the environment to assist in making informed decisions for the future. <https://sssi.org.au/fire-map-a-thon>

We have some exciting new scanning equipment arriving soon, the Leica P40 Scan Station. This will significantly increase our capacity to help our new and existing clients with scans of schools, factories, construction sites, historical buildings, roadways, volume surveys and so much more.



Finally, we welcome Evan to our permanent team! He is a new Surveying Graduate from the University of SA and is raring to go in his new career.

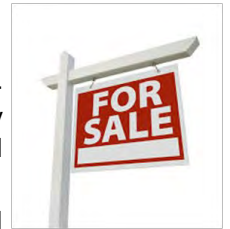
Stay safe and have a wonderful year ahead.

Michael—Ed

Visit the **Michael Grear Surveys** website for more information and past issues of **The Survey Datum** @ [www.mgsurveys.com.au](http://www.mgsurveys.com.au)

### Is It Time Yet?

A common question from clients looking to sub-divide is, "When can they commence the selling or build process?"



Ideally, you should wait for Council Approval to be issued prior to placing any property on the market to ensure the development gains approval as per the submitted application. Once approval has been granted a sales contract can be entered into, however settlement cannot occur until the land division process has been completed and new Certificates of Titles issued. Your Real Estate Agent/Conveyancer will be able to advise on the appropriate wording for the contract.



If you are planning to build on the site, the build can start prior to completion of the land division and the issuing of new Certificate of Titles as long as relevant approvals have been issued for the build. If you are using a financial institution to fund the build you may need to discuss their requirements as they may not release funds until Titles have been issued.

All Land Divisions completed by Michael Grear Surveys are continually monitored by a surveyor and our Land Division Co-ordinator, Annette. We are always keen to discuss your project.



**Newsletter Quote ...**You don't drown by falling in the water. You drown by staying there.

**Edwin Louis Cole**

# The Total Station Explained



A question that people often ask, "Is that a camera?" The quick answer is no. In looks, it does resemble a camera but is not. It is a highly accurate measuring instrument.

The Theodolite (old traditional name ) or Total Station (reflecting all the electronics and capabilities the equipment now has) or Jigger (a generic name we use) is an instrument we use to accurately measure angles and distances from known reference points (survey marks etc), to the objects we are surveying (buildings, roads, boundaries).



When you look through a Total Station eye-piece, what you will see is somewhat akin to a gun sight. There is a simple cross hair through the centre which we line up with our "target" using the dials on the side, with a

push of a button, the jigger records the horizontal and vertical angle, as well as the distance to the target.

Using multiple measurements, geometry, computers and calculations this information generates coordinates that we can then use to define areas, objects and dimensions that we display on a plan. An essential part of the Surveyor 'toolbox'.

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# It's A Leap Year!

This is a repeat from 4 years ago but it continues to amuse in a day and age with dates and times are so important.

Have you wondered why the month of February has only 28 days? Or 29 days? Why February? In fact why each other month of the year oscillates between 30 and 31 days? The quick answer is that it is to do with the rotations of the earth around the sun but there is more.

Below are some interesting discussions – In the Roman calendar March was the first month of the year. There were 10 months in the year with no January and February as these wintery, 'un-useful' times were not worth counting. This would explain why the prefixes for September, October, November and December mean 7, 8, 9 and 10 (respectively), instead of their actual month placement of 9, 10, 11 and 12.

Around 700BC King Numa Pompilius is suggested to have added in the months of January and February so that the calendar covered a standard lunar year. The months were counted following the lunar cycle (354 days) but really the length of year follows a solar year (365 days). More additions of months were erratically added when seen fit to ensure that the months aligned with seasons also.

In the time of Roman emperor Julius Caesar, who instituted the Julian calendar in 45 BC it was decided that all months would have 30 or 31 days, except February, which at that time had 29 days (being the last month of the year perhaps). It is suggested that after Julius Caesar's death, the month that was then known as Quintilis was renamed July in his honour. During the reign of Julius's successor, Augustus Caesar, the month that then had the name Sextilis was renamed in honour of the new emperor as August. While July had 31 days, August only had 30, and in order to make his month as long (and as important) as Julius's month, Augustus took a day from February and added it to August. From then on August had 31 days and February 28 (except on leap years, when it once again has 29 days).

The "new" calendar, as we know it today, was not adopted uniformly across Europe until well into the 18th century.

Happy Leap Year!



**Congratulations** to the word sleuths!

The nine letter Target Word in the 2019 Spring Edition of "The Survey Datum" was CHRISTMAS.

## Competition Time...

Where in South Australia would you find the largest bird?