



*Hello and  
Happy  
New Year.*

It's 2019 and the Chinese Year of the Pig. It's also when we acknowledge formally that the Continent of Australia has moved 1.82 metres since 1994. That's right, 7 cm per year; we are very slowly approaching the equator!

Seriously though, February 2019 marks the month when we alter our Coordinate Datum's to GDA 2020. This Coordinate Datum underpins all map systems we take for granted, so when we use Satellite locations (which is almost everywhere we go with a phone) our maps are now that much better. It is especially good for high precision agriculture which uses satellite location services, where 1.82 metres can put you into next doors paddock. As more and more business, transportation and agriculture use high precision Satellite locations, we will continue making changes to coordinates to reflect the moving continent.

Today's Survey Datum talks about Water Services for Land Divisions and Mobile Laser Scanning creating 3D Virtual Reality.

We also have our usual Competition for those who like a good test!

Michael—Ed

### Australian Citizenship Test Questions.

How would you go?

Try these sample questions, sending your answers to [admin@mgsurveys.com.au](mailto:admin@mgsurveys.com.au) for a Boost Juice 'On Us'!

No 'Googling' ...

1. Name the colours present on the Aboriginal flag of Australia?
2. What marked the beginning of the European settlement in Australia?
3. What type of majority is required during a referendum for making amendments to the constitution of Australia?
4. Name the town located near Australia's centre.

## Where Do These Pipes Go?



Drains, pipes, water, sewer. Sometimes the only evidence of their existence are the outlets, inspection points and mains tap.



This pipe work is an important consideration to any Land Division.

A new water meter will be required for the new allotment/s. It is the developer that requests the position of the new water meter. For many, the location has not previously been considered and can cause a dilemma as to their location.

Two important considerations are:

1. Location of the driveway (existing and new)
2. Obstacles - there needs to be a direct, straight path from the proposed meter to the road... no diversions around stobie poles, tree (including tree canopy), stormwater culverts, service pits etc.

*(Continued on page 2)*

### Newsletter Quote ...

**Happiness is like jam. You can't spread even a little without getting some on yourself.** - *Anonymous*

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)

When this information is required by SA Water, **Michael Grear Surveys** will forward a plan to you so that you can mark your preferred location for the water meter and we can inform SA Water. Our office is always available to discuss your decision.

SA Water generally choose the location of the new sewer connection, however, if you have a specific location in mind our office can make a request to SA Water on your behalf.

When considering a new boundary option, knowledge of underground water and sewer pipes can be important.

Sewer Pipes are often referred to as *internal drains*. For a Torrens Title development NO internal drains can cross the new boundary. A plumber is required to realign any pipe work to ensure that they are maintained within the one allotment.

This is an essential requirement for a Land Division and must be resolved prior to new titles being issued.

Michael Grear Surveys are happy to discuss this with you to ensure that your development progresses smoothly and with success.



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## Virtual Reality and Reality Capture

Virtual Reality and Reality Capture are the avenues that laser scanner are developing. Its aims are to acquire complex details of features that are in the area of interest. This could include street furniture, creek lines, urban canyons, landscaping, schools, parklands shopping malls, construction sites and so much more.

Michael Grear Surveys have taken ownership of a lightweight mobile laser scanner which can be handheld, mounted to a vehicle or backpack or even airborne and can collect 300,000 points of information per second. It creates wonderful 3-Dimensional models/point clouds which can be transformed into 3D models or 2D CAD maps for planning, design, risk assessment, presentations, volume determinations, virtual reality displays; this list of applications is endless.

It compliments all our other Traditional Survey tools and other Terrestrial Laser Scanner which can achieve millimetre accuracy but don't have the mobile functionality and huge data acquisition ability.

For rapid mapping surveys from 50m long to 50 km, from a small house to rural farms, from corner shops to major shopping malls, from one street to a suburb this is an amazing tool that captures the reality of the site in 3 dimensional clarity.

Please call us for a chat about how Scanning Solutions may benefit your next project.



*Virtual Reality and fun often go together as we found in a Melbourne Mall during the Christmas Holidays. Rather cool and super fun.*

### ANSWERS to the last Editions Riddles

1. How many seconds in 1 year?  
12 - Jan 2<sup>nd</sup>, Feb 2<sup>nd</sup> etc
2. During which month do people sleep least?  
February. It's the shortest month
3. What kind of room has no doors or windows?  
A mushroom
4. What is the centre of gravity? V
5. What's orange and sounds like a parrot?  
A Carrot