Kushed Bulletin

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Foreword by our President

How long can this go on? When can we get back to the Shed? What conditions will we have to work in? These are the questions that I don't believe anyone can answer in all certainty, although guidelines from both the Government and AMSA outline a way ahead.

Perhaps the most constructive question should be: "What do we do in the meantime"? Well I believe one should keep oneself active – both some physical exercise as well as some mental activity. Previous issue of the Bulletin have provided some ideas including the list of virtual tours you can take, upskilling by reading the product reviews as well as having a go at some of the recipes from our Cooking Group.

Otherwise, we as Shedders can start preparing for the re-opening of the Shed, which we have been undertaking.

Kevin C. has prepared a comprehensive list of protocols and a plan to recommence operations in accordance of the anticipated Work Safe requirements, Government requirements and those recommended by AMSA, the 'Peak' body of member sheds throughout Australia. Of course, we will have to adhere to the general restrictions imposed by both Federal and in particular, the NSW State Government. The main concern is likely to be restricting the numbers attending, cleaning protocols and social distancing.

We are seeking assistance from Ku-ring-gai Council under a special COVID grant to aid moving forward, both for those who feel more vulnerable and wish to remain at home until the situation improves, and those wishing for an early return to a New normal' at The Shed.

For the future, we are looking forward to getting back and commencing the construction of our planned office. Our funding status remains very solid despite lack of income from projects and daily attendance fees. However, our overheads are minimal so we don't anticipate too much damage to our coffers.

General consensus is that we will not get the green light to recommence until we move into Step 3 of the Government's lifting of restrictions. So, grab a good book, watch a bit of Netflix and enjoy the "serenity".

I would also encourage you to have the flu inoculation and also to download the **COVIDsafe** app. Do keep in touch with your colleagues from the Shed. A phone call from time to time can help maintain good spirits.

Most importantly, STAY WELL.

Stephen Lloyd – President

What is the COVIDSafe app?

The **COVIDSafe** app helps find close contacts of COVID-19 cases. The app helps state and territory health officials to quickly contact people who may have been exposed to COVID-19.

The **COVIDSafe** app speeds up the current manual process of finding people who have been in close contact with someone with COVID-19.

This means you'll be contacted more quickly if you are at risk, which reduces the chances of you passing on the virus to your family, friends and other people in the community. State and territory health officials can only access app information if someone tests positive and agrees to the information in their phone being uploaded.

The health officials can only use the app information to help alert those who may need to quarantine or get tested. The COVIDSafe app is the only contact trace app approved by the Australian Government. Visit: **https://www.health.gov.au/resources/apps-and-tools/covidsafe-app** Get it at:

Download on the App Store

GET IT ON Google Play

Lin Smith

I am pleased to report that Lin Smith is recovering after a successful back operation. Lin had a surgery on his spine to release nerve pressure which as he says will hopefully enable him to throw away the crutch on which he has been hobbling around with for some time. Lin is transferring from Royal North Shore hospital to Mount Wilga for rehabilitation. We wish him well for total recuperation.

What's Cooking

In the last few weeks, we gave you the recipes for a 3-course meal. Below is the entrée for the next 3-course meal from our renown cooking group.

Five spice duck rolls

Ingredients

2 x 177g duck breast fillets, skin on, trimmed
1 teaspoon Chinese five spice powder
Sea salt and cracked pepper
1 small carrot, julienned
1 small lettuce green, washed
¼ cup coriander leaves
8 chives, cut to match carrots
50g dried rice vermicelli noodles
8 pieces rice paper, 20cm diameter round (or square)

Plum dipping sauce

¼ cup (60ml) Chinese plum sauce
½ teaspoon red wine vinegar
Above items available from Woollies or Harris Farm.
Makes 8 rolls.

To cook the duck

Preheat oven to 180C. Sprinkle duck skin with five spice, salt and pepper. Heat a medium non-stick frypan over medium heat. Add the duck skin side down and cook for 3 minutes each side or until browned. Transfer to the oven and cook for a further 8 - 10 minutes or until cooked through. Cool for 5 minutes before slicing. Slice the duck and place on a plate.

Preparation for rolls

Place the noodles in a bowl and cover with boiling water. Allow to stand for 6 -10 minutes or until soft. Drain and set aside. Place carrots, lettuce, noodles, chives and coriander on a plate.

To make the plum dipping sauce

Place plum sauce and red wine vinegar in a small saucepan mix and warm through (thin with water if required), set aside in a small bowl.

To make the rolls

Place warm water in a bowl large enough to soak the rice paper. Soak rice paper 1 at a time for 30sec or till soft, (avoid over soaking). Place soaked rice paper on a clean moist cloth. Top with lettuce, noodles, carrots, chives, duck and coriander. Fold over each end and wrap to enclose filling. Place the roll on a service plate and cover with a moist cloth till ready to serve

To serve the five spice duck rolls

Place on a service plate with the plum dipping sauce.

Enjoy!

What to do With a Piece of Badly Warped Oak, by Rod G.

The Chief of Navy, Vice Admiral Michael Noonan's medallion was presented to retired Chief Petty Officer Bill Fitzgerald for his 90th birthday and in recognition of his long service with the Royal Australian Navy Clearance Diving Team.

It looked very lonely on its own in the Avalon Beach RSL history cabinet and needed a shield to make it stand out. So, what to do with a badly warped scrap piece of oak lying around.

1. It firstly needed to be straightened and the piece was put through a thicknesser and machined to 20mm, getting one face level first then the other.

2. Two holes were cut with a Forstner bit. The first one was cut to the diameter of the medallion with a 50mm bit but only to the depth of the medallion i.e. 5mm. The second hole was cut partly through the piece with a 48mm. bit to produce a ledge on which to seat the medallion. The hole was drilled from the reverse side to prevent tear out. This allowed light through to the obverse side of the medallion.

3. The shape of the shield was drawn with a set of French curves and cut out with a band saw.

4. The edge was shaped with a round-over bit in a table mounted router.

5. The shield was sanded, stained, finished with a clear polyurethane varnish and buffed with fine steel wool.

6. To complete the job for presentation, a plaque was engraved and mounted on the shield.

All told, a simple but very satisfying project which was much appreciated.

Sticky Tape

Sticky tape, or more correctly named Pressure Sensitive Adhesive tape, is widely used at home, in industry, the office and the Shed. There are almost as many tapes as there are applications. This article will shed (pun intended) some light on the most common tapes available from the hardware stores and office suppliers.

Before Adhesive Tape
In 4000 B.C. earthenware pots were mended with an adhesive substance made from the sap of trees or pitch. The earliest written records of adhesives, that date back to 2000 B.C. describe simple instructions for the preparation of fish glue.

1500-1000 B.C. Egyptian hieroglyphics suggest they used glue made from animal derived adhesives for bonding and laminating. The Romans and Greeks developed adhesives made from a variety of materials including egg whites, blood, bones, hide, milk, and vegetable matter.

In 618-906 B.C., China used fish, ox, and stag horn material for adhesives. The best was made from the bladder of the sturgeon and called isinglass.

The first patent for an adhesive was issued in 1750 in Britain for a fish-based glue and led to the opening of the first commercial glue factory in Holland.

Invention of Adhesive Tape

The history of adhesive tape made its first appearance in 1845. Dr. Horace Day, a surgeon used a rubber adhesive applied to strips of fabrics to make a new invention called Surgical Tape.

In 1921 Earle Dickson, a cotton buyer for Johnson and Johnson invented the Band-Aid. The surgical strips created by Horace Day kept falling off his wife's fingers after she cut herself in the kitchen, so he attached a piece of gauze to some cloth-backed tape and covered it with crinoline. Johnson and Johnson made him V.P. for his efforts.

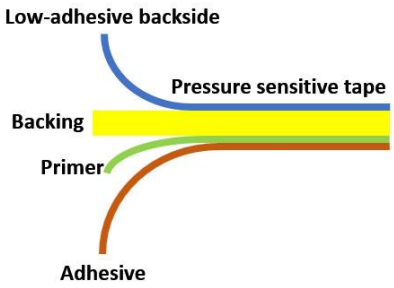
In 1923, Richard Drew joined the 3M company located in St. Paul, Minnesota. At the time, 3M only made sandpaper. Drew was product testing 3M's Wet/Dry sandpaper at a local

auto body shop, when he noticed that auto painters were having a hard time making clean dividing lines on two-colour paint jobs. Richard Drew was inspired to invent the world's first masking tape in 1925, as a solution to the auto painter's dilemma.

Today the range of pressure sensitive tape has vastly expanded from the masking tape to industrial, home, office, medical and many other fields due to its ease of dispensing and use. The differences are in the backing materials and the type of adhesive coated onto them

General construction

The backbone of the tape is the backing. The adhesive is coated onto a flexible material like paper, foil, fabric, or plastic film such as biaxially oriented polypropylene or polyvinyl chloride to provide strength and protect the adhesive from degradation by environmental factors including humidity, temperature, and ultraviolet light. Backing tensile strength, elongation, stiffness, and tear resistance can be matched to the intended use of the tape. Many office tapes are based on synthetic transparent cellulose acetate film.



To allow for the winding and unwinding of the tape roll, the backing is coated with a release agent, or low adhesive backside, that prevents the tape from sticking to itself too strongly when unrolling them. Two common release coatings used in adhesive tapes are fluoro silicones and vinyl carbamates. During peeling, fluoro silicone release liners make no noise whereas vinyl carbamates make loud noises.

A primer is coated on the other side to make the adhesive preferentially sticks to the backing. Some plastic films can have the surface modified by corona treatment or plasma processing instead.

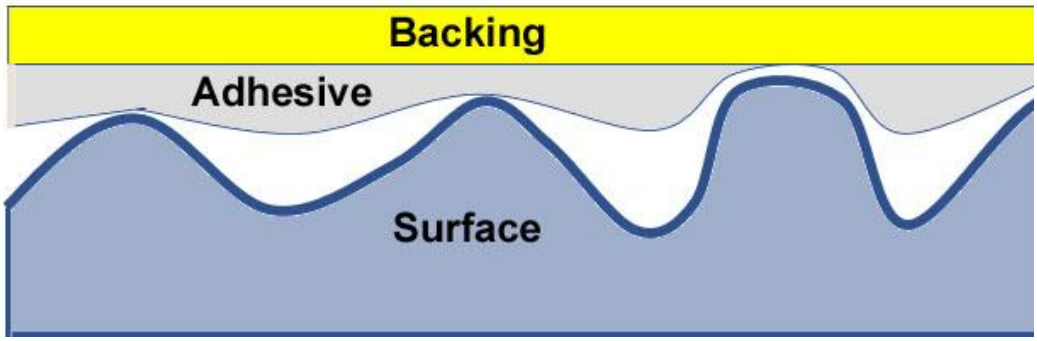
Pressure-sensitive adhesive (PSA, self-adhesive, self-stick adhesive) is a type of non-reactive adhesive which forms a bond when pressure is applied to bond the adhesive with a surface. No solvent, water, or heat is needed to activate the adhesive. It is used in pressure-sensitive tapes, labels, glue dots, note pads, car trim, and a wide variety of other products.

Under a magnifier lens the adhesive looks like a clear jelly. Poke it with a sharp point and it will move and then pull back like elastic.

As the name "pressure-sensitive" indicates, the degree of bond is influenced by the amount of pressure which is used to apply the adhesive to the surface. Surface factors such as smoothness and surface energy are also important for proper bonding.

PSAs are usually designed to form a bond and hold properly at room temperatures. They typically reduce or lose their tack at low temperatures as they glassify or solidify. They reduce their shear holding ability at high temperatures as the adhesive becomes softer or more viscous. Special adhesives are made to function at high or low temperatures.

Pressure-sensitive adhesives are designed with a balance between flow and resistance to flow. The bond forms because the adhesive is soft enough to flow, or wet, the adherend surface. The bond has strength because the adhesive is hard enough to resist flow when stress is applied to the bond. Once the adhesive and the adherend are in proximity, there are also molecular interactions such as van der Waals forces involved in the bond, which contribute significantly to the ultimate bond strength. PSAs exhibit viscoelastic (viscous and elastic) properties, both of which are used for proper bonding.



Ensure that the surface the tape is adhered to, has no oily or greasy residue, or loose particles. Wipe the surface with mineral turps and remove any loose particles. It will stick better to a smooth surface than a rough surface as the adhesive may not flow into the valleys between the peaks on rough surfaces, thereby reducing the surface area it can stick to.

In contrast with structural adhesives, whose strength is evaluated as lap shear strength, pressure-sensitive adhesives are characterized by their shear and peel resistance as well as their initial tack.

These properties are dependent, among other things, on the formulation, coating thickness, rub-down, or pressure, and temperature.

"Permanent" pressure-sensitive adhesives are initially pressure-sensitive and removable (for example to recover mislabelled goods) but after hours or days change their properties, by becoming less viscous, or by increasing the bond strength, so that the bond becomes permanent.

The most common adhesives used

- **Rubber:** Adhesives which are based on natural or synthetic rubbers and formulated with tackifying resins, oils and anti-oxidants. Rubber is the most cost-effective PSA and offers quick stick capability. Rubber adhesive is not recommended for high heat applications. These adhesives may solidify over time.
- **Acrylic:** Adhesives, formulated with acrylic polymers, have generally a better long-term aging and more resistance to solvents and environmental factors. Acrylic adhesives typically develop a stronger bond than the traditional Rubber adhesive and are able to take higher temperatures
- **Silicone:** Formulated with Silicone polymers and the only adhesive that will bond well with silicone substrates. Silicone adhesives are relatively expensive and have a very low initial tack, but can withstand higher temperatures than both Rubber and Acrylic adhesive.

A few of the many varieties of PSA tapes are:

- *Archival tape* is similar to transparent office tape, with low-acid adhesives that will not degrade surfaces they are applied to, protecting documents from damage during long-term storage.
- Box-sealing tape, or "packaging tape, is a type of packaging tape which is clear or opaque, and used for closing packages for shipment. It is usually two inches (48 mm) or three inches (72 mm) wide and is made of a polypropylene or polyester backing.

- *Duct tape* usually has a plastic-coated fabric backing and a strong adhesive.
- *Double-sided tape* has adhesive on both sides of a backing material, for attaching two surfaces together. These come often with a liner between the layers that has a low adhesive coating on both sides. Others have no liner but different adhesives on each side that prevent them bonding to each other. An interesting property of double-sided foam tape is that if you stretch the foam, the adhesive will readily release the surface it is stuck to.
- *Electrical tape* (or insulating tape) stretches to conform to irregular objects, and is made of materials like vinyl that do not conduct electricity.
- *Filament tape* or "strapping tape" has filaments (usually fiberglass) embedded into the adhesive for extra strength.
- *Gaffer tape* is normally based on a heavy fabric or plastic tape backing, similar to Duct tape.
- *Masking tape* is used to cover areas that should not be painted. It usually has a crepe paper backing to provide limited conformity to the surface and an adhesive designed to be removed from surfaces within a limited time before it hardens, typically rubber based.
- *Removable adhesive*, like Post-it notes, have a low tack adhesive and are in a globular form to reduce the contact area, they can be repositioned many times without damage to the surface they are stuck to.
- *Security tape* has special features to make it tamper evident
- *Self-fusing tape* is a non-tacky silicone-rubber tape which when stretched and wrapped around cables, electrical joints, hoses and pipes combines or fuses on itself into a strong, seamless, rubbery, waterproof, and electrically insulating layer. Unlike many other polymers and fibres, it is heat, sunlight, and weather-resistant. This type of tape is also described as "self-fusing", or "self-vulcanizing".
  It can be used for emergency repair of leaking low-pressure hoses and pipes.
  Compared to most other electrical and utility tapes, this tape is not particularly tough mechanically.
- *Surgical tape*, like 3M micropore and band aids, is an adhesive bandage that is used to hold a dressing on a wound.
- *Transparent office tape* is used for repairing torn paper products, sealing envelopes, general holding, etc. It is a transparent film of cellophane, cellulose, polypropylene, or other similar, with an acrylic or synthetic rubber–based adhesive. Clear tape with a matte finish is branded "Scotch Magic Tape" also called "invisible tape". Clear tape is sold in pre-filled single-use tape dispensers and in "refill" rolls for permanent desktop tape dispensers.

Tips on using PSA tapes

Masking tape uses a crepe backing to give a degree of conformity to the surface it is adhered to. The adhesive is designed to give a relative low tack that allows for ready removal. If it is stuck to paintwork that has not yet been fully cured, or where the surface it was painted-on was contaminated, then it is likely it will lift the paint off. It relies on the fact that it has less adhesion to the surface than the surface has to its substrate. Take care not to leave the tape in place for more than a week, as it is likely to harden and difficult to remove. This is accelerated at higher temperatures or in the sun. Press or rub-down the tape firmly to the surface to minimise the paint flowing in any cervices beneath the tape.

Double sided foam tape, usually white in colour with a green plait liner, will release the surface it is stuck to when you stretch the tape.

Polyester and polypropylene based backings are very strong and resist tearing unless the edge is damaged with a sharp implement creating the start of a tear. This is often the reason why it will tear when unrolling.

Inspect the side of the roll to look for a nick. Tearing a piece off a roll on a dispenser does the same thing.

Most tapes have a low adhesive backside. This property can be handy when using structural adhesive to prevent it sticking to the bench, or other support and clamps, when gluing things together as most adhesive will not firmly stick to it.

A number of dispensers are available, from the office desk to industrial application. Most will retain the end of the tape for easy access. **If a dispenser is not available then, as a courtesy to the next user, double-over the end of the tape to make it easy to find the end of the roll.**


Be aware that many cheaper products fail in durability or heat stress. Typically, the adhesive coating will let go of the tape's backing.

Use Mineral Turps to prepare the surface and to remove any adhesive left when removing tape or labels.

The Shedder Newsletter

The AMSA newsletter is now available on-line See the full text at:
https://mensshed.org/wp-content/uploads/2014/10/The-Shedder-Autumn-2020-LOW-RES.pdf

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And on a Lighter Note

When we can go back to the Shed, we will give you the route map to get there, in case you have forgotten, and a photo of what the Shed looks like. (joke).

Jigsaw Puzzles

Cannot find a jigsaw puzzle in the shops, here is one you can do on-line. You will never lose another piece again. They range in sizes from 20 to 300 pieces. See
https://www.jigsawplanet.com/

Matchstick builder

Looking for a project that will occupy you for a while? Tony G. sent in this matchstick maker

modeller: **https://www.youtube.com/embed/HyuE1XnYO0I**

Carrot music

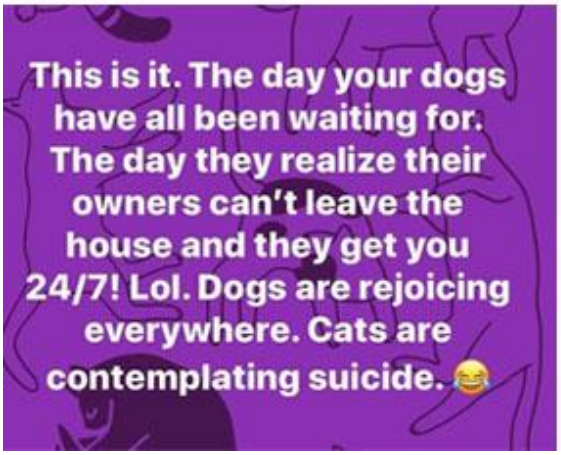
Tony G. found this video Ted Talks. It is a short video, that may appeal to our music lovers, on making a clarinet from a carrot. **https://www.youtube.com/embed/BISrGwN-yH4**

Ted Talks

Instructive, and often amusing, talks can be found at: **https://www.ted.com/talks**. They are all short and cover a range of issues. Well worth the time.

Call for articles

Thanks to all that have contributed to this and previous Bulletins. If you have any articles about work you may be doing now or before the Lock-Down, please share them with your fellow Shedders through this Bulletin. Send them to: **kushed@bigpond.com**



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