



## *Propwash*

*February 2017*

*From the President.*



Welcome to the first edition of the Propwash for 2017, we take a look at where we have come from in this edition and look forward to the challenges ahead in 2017.

It is hard to mentally reflect back on what the field looked like some three years ago, or is that just age, so I have put together a sequence of photos of the progression of the changes step by step from then to present day, I believe a picture speaks a thousand words and it certainly does in the case. I have also put together brief details of the progress in a summery written about the steps taken along the way.

Two major events have recently occurred over the past few months, the annual Scale Rally and for the first time this year the club participated in the RFDS flyin day. Both events were well patronised by both club members and visitors with a variety of models in the air.

Looking ahead at what we need to do for the future in relation to club facilities, decisions need to be made in order to maintain the existing facilities and where appropriate replace equipment to ensure we have a safe environment for club members and visitors to enjoy their sport.

Funding has and always will be an issue when big projects are identified, this is due mainly to the number of members we have and the lack of financial turn over.

We have been fortunate enough in the past to have been able to secure grant money form Lotterywest and AWA to complete the two major projects being the installation of the toilets and the upgrade of the pits.

With our sights firmly set on the upgrade of the taxiways we have been fortunate enough to secure funding from AWA to the value of \$5,000 to assist with this project.

The club is appreciative of the generosity of AWA for their assistance to ensure that the surfaces of the taxiways can be improved long term, when the project is completed it will not only benefit SWARMS but also AWA club members from through out the state when they visit the field.

SWARMS will provide the additional funding and labour to complete the project, it is planned to have the project completed by the end of March so during this period there will be some disruption and inconvenience to members, however, long term it will be all worth it.

A busy bee will be arranged for club members to remove the existing matting from the runways so earthworks can be carried out, the boxing and pouring of these strips will be completed be a contractor.

At the general meeting on Sunday 12th February a discussion around the removal of the large trees surrounding the club rooms was held, we have a motion moved at a previous meeting that the tops be removed but the availability of a cherry picker has delayed completion. It was suggested we obtain a quote from a professional tree lopper to compare removal prices prior to commencing the task.

As indicated within in this edition there is a field improvement progression from when the project was commenced with a sequence of events and series of photos displaying the various staged of the upgrade.

It all commenced back in 2012 long before any visible activity was evident at the field with Dennis Miligan working through the required drawing modifications of the existing steel work to ensure the plans would be approved at the Capel Shire. The completed plans were then signed off by Engineer Peter Suckling and submitted to the shire for approval.

The first of the physical work commenced with a busy bee conducted out at Humphro's workshop to sort out, cut and drill the purlins for the roof structure and we had a good turn up for this with a production line set up to achieve a satisfactory result.

With the co-operation of Ian Humphryson and his employees Dennis and myself (two ex-boilermakers) were given access to the workshop to modify the steelwork in preparation for transport to the field. This turned out to be a bigger job than first anticipated and after 7 straight days of cutting and welding we were in a position to make the necessary arrangements for transport.

Arrangements were being made to have the old pits structure removed for the site and the matting removed, this was achieved with the assistance of Danny and Brady arranging for a crew from the prison to complete the task. You might notice that there are no photos in the timeline of this part of the project being undertaken due to confidentiality of those involved.

Sand was then transported in and the pit floor was leveled in readiness for the concrete to be poured, the foundation holes were then dug to the required specification, however, with the water table very high at that time of the year the walls of the holes continued to collapse making it difficult to maintain the specification.

Arrangements were made with the concrete supplier to deliver the required quantity to the field the next morning at 11 o'clock.

This time frame was set so that the water in the holes could be lowered prior to the concrete going in, I went to the field early and with a plastic bucket proceeded to empty the water from the holes. This proved to be a fruitless task as I emptied one and moved on the previous one would start to fill up again.

So with this in mind and not being able to cancel the concrete the only way forward was to wait until the truck had arrived on site and progressively empty the holes of water and immediately fill them with concrete, this method worked and the ten holes were completed.

Next step was to stand all the steel posts in the erect position and secure them to the foundation bolts in the concrete, when they were all upright the steel bracing was bolted to each post to ensure they remained secure in preparation for the roof trusses to be fitted. The four roof trusses were lifted into position and they fitted like a glove which proved the work on the foundation bolts was near on perfect.

With the trusses secure in place the purlins were then fitted, this however, was done in two stages as sections of the roof had to be left open to enable the concrete trucks access to the floor of the pits for the big pour. With the necessary number of the purlins fitted it was time to square up the building in preparation for the pit floor to be concreted. By this stage it was evident just how big the pits were going to be and the extent of the floor area realized.

Arrangement were made for the floor to be poured and the field was a hive of activity on the day, 34 cubic metres of concrete in 7 delivery trucks was delivered to the field in a well coordinated time schedule, there were no trucks sitting waiting to empty their load, it did look like these guys had done this type of thing on a few previous occasions.

Within a time frame of about 4 hour the pour was complete and the rendering of the surface was well underway and the contractor left the field around 2 o'clock and SWARMS now had a totally new pits floor surface.

With this all behind us now the next morning it was back to business for us to complete the purlins, roof braces and sheeting. Just like when flying the wind had to come up when we commenced putting the long roofing sheets up on the building which did cause some minor problems at the time.

Wall sheets and braces were the next thing to be secured and the major works on the pavilion were nearing completion, minor tasks like flashing was put in place and the concern of not having this building ready for the Scale flyin was now history as the task was complete.

After the flyin weekend the pits store room along with the access ramp to the pit startup line were completed the pavilion and pits were now fully operational.

Due to strict health laws and regulation the toilet septic system had to be installed by a licensed plumber but the installation of the toilet facilities inside the building was something I could do and then just get the plumber to make the connection to the tank system.

All went well and the plumber was eventually booked to make the connection from the toilets to the tank, however, on the morning the job was to be undertaken I arrived at the field only to find that with the increase amount of rain we had received at the field the septic tank and been floated out of the ground with the high water table.

A phone call to the plumber and I cancelled the job and we were left with the task of lifting the tank out cleaning out the residue and water that had accumulated under the tank and repositioning it to the required specifications. The plumber returned to site and made the connection, every thing lined up and the water tank connections were completed, it all worked fine.

The only thing that needs to be kept in mind long term is the location of the tank and the leach drain so that no vehicular traffic is driven over them causing them to subside. The project was larger than first expected but with a bit of perseverance the light at the end of the tunnel was reached.

Having spent a lot of time working with Dennis over the life of this project from it's inception, drafting and construction stages I can honestly say we never had an argument, we may have had a difference of opinion at times but nothing to hinder the progress on the job at hand. It is difficult to estimate the amount of hours that have gone into this project but it is pleasing to say that with all the work that was undertaken, off site and at the field, it was done with out incident or injury which is a credit to all who participated.

Was this due to the fact that there was no Workers Compensation claims forms available during the project.

A "BIG" thank you to all who participated in this project in taking a dream that was discussed half heartedly at a meeting and making it into a reality, all members current and pending now have a clean safe environment to enjoy their chosen sport. The current facilities are the envy of many so we need to ensure that they are maintained in good order for them to be available to all for many years to come.

With all that behind us now let's go enjoy some flying:

*Put out a few fires with the contractors during the life of project*



***A walk down memory lane:***

It is sometimes hard to reflect on what the field looked like prior to the upgrade so I have put together a few pictures to remind members and readers of how far we have come since the commencement of the project in March 2014.

***The antiquated toilet system needed to be upgraded:***



***The pits as they used to be prior to upgrade:***



***Rear end of the clubrooms prior to commencement of work:***



***The concrete slab poured for the toilet block and store room.***



***The steel studded wall frames were pre-fabricated off site transported in and placed into position.***



*Roof sheets and insulation was put on, as you can see all safety regulations were adhered to throughout the project:*



*The existing pit structure was dismantled and matting removed in readiness for the new structure:*



*Wall cladding and windows were fitted:*



*The access door fitted and the toilet block is at lock-up stage, however, during one of our unfortunate breakins during construction the offender tried to kick this door in all to no avail.*



*Sand was brought in to level the pit floor and was compacted ready for the concrete slab measuring 21 metres x 16 metres to be poured:*



*A memorable moment when the first sod of sand was removed for the foundation holes, we experiences some difficulty here as the water table was quiet high at the time and the walls continued to cave in when we got down a bit into the ground.*



*The support post were then stood up and bolted to the concreted foundation bolts:*



*The braces were then fitted to tie the posts together:*



*After the completion of digging the holes someone came along with a big truck and filled them up again, the first hole pour for the foundations:*



*The roof trusses were then lifted into place:*



*Keeping in mind this structure was from a previous building and had to be redesigned and modified for this stand alone structure. With the draftsman working to precision measurements and the construction crew following them to the finest detail the trusses fitted without any hassles.*



*The purlins which also had to be modified and re-drilled were then fitted to the trusses without any problems. The structure was squared up in preparation for the concrete pour to commence on the floor of the pits:*



*The concrete slab for the pit floor had to be poured prior to completing the purlin and any further fitting of the roof structure so sections had to be left out to enable the concrete trucks to access the floor area to eliminated the need to wheelbarrow concrete around.*

*After several hours of pouring concrete and several concrete truck arriving and departing the field in a well balanced sequence the pour was complete:*

*Concrete was poured from all angles with a constant flow throughout the morning:*



*Trucks lined up to deliver their product:*



*With the floor slab now complete we were ready to put the remainder of the purlins and roof sheeting on. The full length roofing sheets did pose a bit of a problem in the windy condition, but the crew battled on to completion without incident:*



*At this stage we did not realise the area of the building until we commenced the roof sheeting, however, the good thing was each sheet covered a large area so was not too long before all was covered:*



*It was now starting to have a very close resemblance to what the draughtsman has designed prior to commencement of the construction:*



*Almost completed the roof sheeting the end is in sight:*



*With the end in sight the goal of having the structure ready for the scheduled Scale rally looked a reality but there were still some problems with the toilet system that had to be overcome. These were sorted out the Friday prior to the event and all went off very well:*

*Sponsors signs displayed at the Scale Rally:*



*With the last of the roof sheeting in place it was time to start on the wall cladding:*



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*One of the highlights of the biology course at my university was the monthly feeding of a caged rattlesnake kept in the laboratory. One time, the entire class gathered around the cage and, in complete silence, watched as the feeding took place.*

*'I'm jealous of the snake,' the instructor said. 'I never get the class's undivided attention like this.'*

*A student answered matter-of-factly,*

*'You would if you could swallow a mouse.'*

*Pit area filled with model planes on the day of the first event since completion, Scale Rally, clean concrete floor with plenty of space:*



*Pits were transformed into a Restaurant for the evening BBQ with plenty of room to accommodate the members and guests:*



*D.I.Y. installation of an improvised ceiling fan.*



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*Writing on a headstone in a cemetery in England,  
Remember man, as you walk by,  
As you are now, so once was I.  
As I am now, so shall you be,  
Remember this and follow me.  
To which someone replied by writing on the tombstone:*

*To follow you I'll not consent,  
Until I know which way you went.*

#####

*Here lies the body of Jonathan Blake,  
Stepped on the gas instead of the brake.*

*Panoramic view of the completed pit upgrade project, the start up area for petrol planes were also concreted*



*Oh yes, the toilets we had to improve on this and it would not have been too hard to do that, the only difference we now had to install a septic tank system:*



*The tank was installed and ready for connection to the outlets, however, the day before this was scheduled the water table rose and lifted the tank out of the ground:*



*So we were back to square one, tank had to come out:*



*Now when you flush at the field this is what it goes into: (But it is back under the ground)*



*The hole was deep and muddy but with Ian at the controls of his backhoe the hole was quickly cleaned out and the tank set back into position:*



*The budget did not facilitate for this unplanned event so we had to remove the tank dig out the hole and reposition it ourselves, almost completed:*

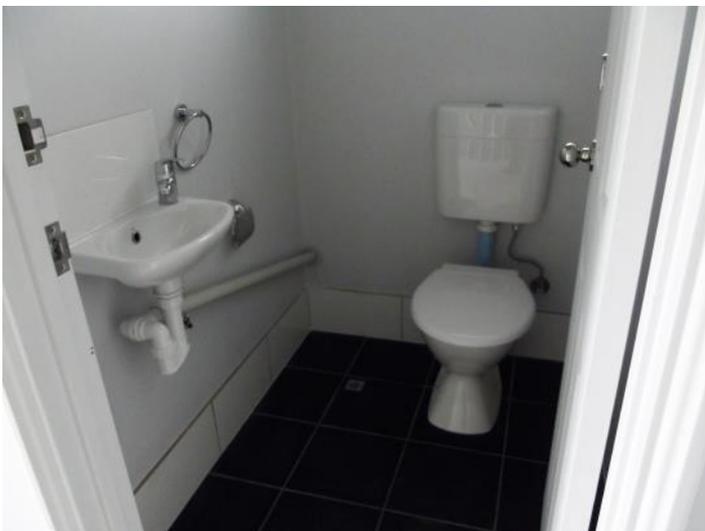


**Completed female / disabled toilet:**



How many of us can honestly say this poem did not relate to us at the time and had not actually happen to us, whilst we were growing up none of this information was relevant, or so we thought. Hindsight is a wonderful thing but it is after the event if you had your time over again would you have listened with a bit more interest and would things have been different today ??

**Completed male toilet:**



**BACK HOME!**

If I had the power to turn back the clock,  
Go back to that house at the end of the block—  
The house that was HOME when I was a kid,  
I know that I'd love it more now than I did.

If I could be back there at my mother's knee,  
And hear once again all the things she told me,  
I'd listen as I never listened before,  
For she knew so well just what life had in store.

And all the advice my dad used to give,  
His voice I'll remember as long as I live;  
But it didn't seem really important then;  
What I'd give just to live it all over again.

And what I'd give for the chance I once had,  
To do so much more for my mother and dad;  
To give them more joy and a little less pain;  
A little more sunshine—a little less rain.

But the years roll on and we cannot go back,  
Whether we were born in a mansion or in a shack;  
But we can start right now—in the hour that's here,  
To do something more for the ones we hold dear.

And since time in its flight is traveling so fast;  
Let's not spend it regretting that which is past;  
But let's make tomorrow a happier day  
By doing our "good to others"—TODAY.

(Author Unknown)

**Passageway main entrance:**



**What happens to a frog's car when it breaks down?  
It gets toad away.**

### *Safety in the pit area*

Now let's address the matter of being safe in the pits. While most of these rules may seem to be nothing more than common sense, you'd be surprised at the number of pilots who break these rules.

Hold on to your plane whenever the engine is running - NEVER, repeat NEVER let go of an airplane with its engine running until it is on the flight line and ready for taxi out. Always keep it under complete control. And always treat an airplane with the engine running as if the radio is going to fail at any moment. We highly recommend the use of hold-down devices that ensure that the airplane cannot move until the flyer is ready to carry it out to the flight line.

NEVER taxi in the pit area - Along the same lines, when you are ready to bring your airplane out to the flight line, carry it out. NEVER taxi out to the flight line! In the same manner, after landing, carry your airplane back to the pit area. Never stand in line with the propeller of a running engine - A propeller rotating at 10,000 to 20,000 RPM carries a great deal of centrifugal force. The most dangerous position to be in near a running engine is directly in line with the prop. A piece of dirt attached to the prop during a hard landing will usually be thrown from the prop. Or, if the propeller is fractured in any way, an injury could occur if the propeller shatters. Once the engine is started, ALWAYS stand behind the airplane.

Make needle valve adjustments from behind the airplane - Once your engine is running, if adjustments must be made to the needle valve, be sure to get yourself into a convenient and safe position from which to make the adjustments. If you are behind the airplane, you can easily hang on to it with one hand while you adjust the needle valve with the other.

Use a glove, chicken stick, or electric starter - Especially for beginners just getting started with RC, until you really get to know your engine, exercise extra caution when starting your engine. A flooded engine can really bite you if you use your bare finger to start it.

No breaking in new engines in the pits - As a courtesy to other flyers, NEVER break in an engine in the pit area. If you must do it at the flying field, move down to the end of the pits. From there, the noise in the pit area won't be excessive.

### *Breaking in a new engine*

No matter what the engine manufacturer says, it is ALWAYS best to break in a new engine. Breaking in will ensure that internal engine parts wear into position properly, while not under a great deal of load. While you can break a new engine in while it is mounted to your airplane, many flyers like to perform the break in procedure on a test stand.

Either way, keep the engine running cackling rich during the first stages of the break in procedure. At full throttle, keep the needle valve well open to ensure that the engine never comes close to peaking out. As the fuel tank empties, be ready to stop the engine to keep it from leaning out. We recommend running about two to three tank fulls of fuel through the engine in this manner.

The second step to breaking in a new engine is to begin leaning it out. Start the engine again and slowly turn in (CW) the high end needle valve. As you do, the engine will begin to accelerate. Don't peak it out yet. Just get it running faster, a little at a time. As you do this, start manipulating the throttle to let the engine run at various throttle settings for 10-20 seconds at a time. Repeat this for 2-3 tank fulls.

Finally, the engine is ready to peak out. With the engine running, continue turning the needle valve in (CW) until the engine peaks. To tell if it has peaked, lightly squeeze the fuel line. If the engine accelerates more, go another click of the needle valve in. Squeeze the fuel line again. Continue until the engine has peaked. THEN BACK OFF ABOUT TWO TO THREE CLICKS of the needle valve (making it slightly richer). Keep in mind that any engine will have the tendency to lean out in the air. Backing off a little on the ground will keep the engine from becoming too lean in the air.

We cannot stress enough the importance of keeping a new engine running on the rich side. Admittedly, there are times when an airplane (even a trainer) is somewhat underpowered and the engine must be peaked out to its maximum before the plane can even be flown. However, in most cases, there is ABSOLUTELY NO REASON to peak out an engine to the max, even after break in.

The engine could be running quite rich and still pull the plane nicely. If your plane is overpowered, why not run the engine a little rich to ensure that the engine properly breaks in REPEAT AFTER ME: A rich running engine will last forever - a lean running engine will soon wear out!

### Take off hints for student Pilots

**Take off practice:** Once you can handle the plane well on the ground, you head the plane into the wind practice some high speed take off runs. Don't take off quite yet. As soon as the plane builds up speed, cut the throttle. Practice to see how little rudder it takes to make the plane respond at high ground speeds. Beginners have a tendency to over control with rudder their first few times, so be ready to react to the control at all times

**Actually taking off :** By this point, you should be quite comfortable with handling the plane on the ground. Taking off is just a matter of building up flying speed while heading into the wind. Once flying speed is reached (you should know when flying speed is reached by having watched the instructor do it many times), then must apply just a small amount of up elevator (though some well trimmed planes may actually lift off by themselves). Once the plane comes off the ground, the nose will be pointed up slightly and you can release the up elevator.

If the plane is properly trimmed, the plane will continue its gradual climb at full throttle until it reaches a comfortable altitude and can be turned. As the plane rises, you must be ready to make minor corrections to hold the plane's heading directly into the wind (with aileron) and to maintain a gradual ascent (with elevator). Always make your first turn away from the pit area! Once the plane has reached a safe altitude, the throttle can be cut back.

If the field allows it, the beginner should be positioned so that they can take off in a direction directly away from them. Walk out to the middle of the field if necessary. Once you master this, you will still have to learn how to take the plane off in different directions while standing at the flight line.

Beginners have problems in three areas.

**First**, they have problems holding the plane in the proper heading with the rudder while the plane is on the ground. This can be very dangerous if the plane wanders off in the direction of the pits.

Be aware that because you started the take off roll does not mean you have to take off. If anything looks wrong or you feel panic for any reason, cut the throttle this is why the high speed practice runs are so very important.

During these runs, the beginner does not expect to take off and will be cutting the throttle every time. With this experience, you will be much more likely to cut the throttle at the first signs of problems during actual take off runs.

**Second**, when taking off in winds over about 2-3 mph and especially with a cross wind, beginners have trouble holding the wingtips level after the plane lifts off. Since the plane is not moving very fast at this point, it may respond rather sluggishly. The beginner must be ready with firm, accurate aileron control.

When taking off in any kind of cross wind, be sure to make a prediction which way the wind will tend to blow the plane as it lifts off the ground. This way, you will be ready to apply the opposite aileron.

**Third**, beginners tend to apply too much up elevator to get the plane off the ground. Or they hold the elevator in too long. Either way, the plane will have the tendency to stall soon after liftoff.

Practice, practice, practice many beginners who think they have mastered takeoffs with their first successful one, regardless of how scary it was. However, I stress that each takeoff will be different, and it will take many takeoffs to become fully proficient. Wind direction, wind speed, and rudder sensitivity will make for a few nerve-wracking moments.

As soon as the beginner has successfully taken off, the instructor will retake control, land the plane, and make you do it again - and again - and again. If all practice is done on a nice calm day, be sure you are aware of the change in handling the first few times you takeoff on windy days.

When you have completed this step and you are deemed confident that you are in complete control on the ground, and when you have been seen to make a mistake and know enough to cut the throttle (and recognize when to abort takeoffs), when you can repeat the takeoff roll time and time again regardless of wind conditions, when you can maintain the takeoff heading in a nice gradual climb over and over again - then you are ready to go on to the fourth and final step - landing.

*Catch you when we fly into the next edition.*

