



Roadmarker

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Ipswich Motorway, looking towards Brisbane CBD.

Picture courtesy of Construction News, Queensland



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On Reflection

What do you think of when you hear the words “Coffs Harbour”?

The Big Banana, maybe?

Here in the depths of Melbourne’s winter, the image in my mind is of a crystal clear Coffs Harbour sky, pristine white sand beaches, holiday resorts, and a temperate escape from winter.

Now, can I take you a step further? This might be hard, but can you picture a future post-pandemic? Where it’s all behind us, to our relief social distancing, masks, elbow bumps, and “daily case numbers” are well and truly behind us?

What about the RIAA National Conference in Coffs Harbour, next July (2022)? The chance to travel interstate, stay at the beautiful Opal Cove Resort, meet old friends, colleagues, even rivals. To network, to learn, to socialise, to immerse oneself in our shared profession, in a convivial sub-tropical atmosphere. An exciting and exuberant Conference event, where our pent-up energy and networking opportunities are translated into a personally and professionally rewarding National Conference. And 48 hours of stress and sleep-deprivation for me, but that’s another story!

How long is a piece of string?

If you know the answer to that, then you’ll also be able to confidently predict the next sequence of COVID related events, and precisely how long this pandemic will last.

Global pandemic related events and responses have created such a difficult planning environment, whether that be for your next holiday, overseas trip, visiting relatives outside of your home state, and of course for our businesses.

For all of us in the workforce, this event has been unprecedented. And there are precious few alive at all, who could have recollection of the Spanish Flu pandemic of a century ago.

Enough of the gloom, what of the post-pandemic future ahead?

Amidst the negativity of COVID and lockdowns, RIAA Directors have RESCHEDULED the RIAA National Conference in Coffs Harbour to July 27 and 28, 2022; just under 12 months from now.

So in that regard, the RIAA is confident that the pandemic proverbial “piece of string” is less than 12 months in length.

Can you imagine the Gala Dinner on the last night; two years of pandemic behind us, making a business networking success of the Conference, and catching up with old friends and colleagues?

Opportunities abound for participation, so keep your eyes open for opportunities to present a paper, promote your business via Conference Sponsorship, display your services at a booth, or get involved and network as a delegate.

The RIAA has sought to remain active with the introduction of RIAA Injection Injury Cards, alongside RIAA Burns Cards. High pressure injection injury is a risk for our workforce that even seasoned medical professionals may not be familiar with. So RIAA Injection Injury Cards are available as a tool to help with managing this small, but real risk.

RIAA representatives have also worked hard in recent months with Standards Australia, the CSIRO, and State Road Authorities, representing our industries views on Standards, specifications, and a host of issues impacting pavement marking professionals.

The RIAA is monitoring supply issues created by a combination of increased infrastructure demand, international tensions, and pandemic related freight and storage issues.

The RIAA Technical and Car Parks/Off the road Committee’s have also worked hard to release a series of RIAA Industry Guides. For RIAA members, we believe these are an invaluable tool, and a significant source of information. More details our industry, on RIAA activity, RIAA Guides, and issues facing us is within this edition of “Roadmarker”. Enjoy,

Paul Robinson
GENERAL MANAGER

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Supply issues impacting the industry

A combination of increased demand for materials due to increased works, freight issues, and materials shortages globally are impacting supplies for pavement markers.

This summary details some of the current issues facing our industry from the perspective of suppliers of materials and equipment for pavement marking services.

It is based upon input from multiple industry participants.

Sharing these perspectives between different industry sectors increases communication, understanding, and the potential for increased efficiency of service delivery.

The current business environment includes pandemic related difficulties, and on-going tensions between the Australian and Chinese governments. This has created unique circumstances including lock downs, supply chain issues, new health and safety protocols, and increased infrastructure activity arising from government stimulus programs.

Increased demand for services is combining with these adverse impacts on production. This creates the potential for ongoing tension on price, and upon the timeliness that works can be completed.

Freight and supply chain difficulties

The cost and time of freight has increased during the COVID pandemic. It is likely to become increasingly important for State Road Authorities and other major stakeholders to:

1. Factor these considerations into budgets and planning; and
2. Provide the maximum possible advance warning on potential high-volume use, as it may now take at least three months from the order of materials to site, no matter how vital the works.

In saying the above, this forecast comes with the rider that no doubt we have all experienced how COVID can dramatically change the operating environment, almost overnight. None the less, awareness of these issues will be important for an efficiently functioning industry.

Materials that require freight or specifically sea freight are more difficult and costly for importers, with much higher lead times.

Raw materials and precursor chemicals

Global COVID lockdowns, production impacts, freight difficulties, and trade tensions have adversely impacted production of precursor chemicals and raw materials. An example is the global shortage of resin, which has already increased by more than 30 percent, and is forecast to further increase. This will translate into increased prices. This situation is further negatively affected by global supply chain issues, specifically shipping delays.

Port difficulties and container costs

Australian ports and shipping lines are increasing charges to ease congestion, translating into increased costs for finished goods and raw materials. For example, there are reports of shipping container costs increasing by 500%.

Most pavement marking products are affected in some way.

Material and labour

The cost of raw materials has almost doubled due to the higher demand.

COVID protocols and efficiency impacts have increased labour costs relative to outputs. Further cost impacts include increased overtime costs to meet demand, and increased maintenance costs due to the impact of increased machinery use.

Our industry operates in Australia as participants in global supply chains.

Within the current Australian setting, it is possible to be unaware of how serious the issues are internationally, and how little we have suffered to this point other, than the Tourism and Hospitality Industry.

In conclusion, recognising potential price and project delivery impacts, and including that in planning, budgeting, and communication, are likely to become increasingly important.



Current issues for pavement marking professionals

In addition to supply issues, this summary details some of the current issues facing our industry from the perspective of companies delivering pavement marking services.

Again, it is based upon input from multiple industry participants.

Sharing these perspectives between different industry sectors increases communication, understanding, and the potential for increased efficiency of service delivery.

In summary, demand for works is increasing due to infrastructure stimulus. Managing labour, supply, planning, and equipment to meet this demand is difficult.

Harmonisation

Various State Road Authorities (SRA's) and industry stakeholders often have slightly different requirements relating to such issues as reflectivity, formats, pre-qualification, width of markings etc. The greater the alignment of these requirements, the greater the quality, safety, and "value for money" delivery is to all industry participants. The RIAA has a Technical Committee and a Car Park / Off the road Committee. These groups assist in representing members views to SRA's, Standards Australia, Austroads, the Road Authorities Pavement Marking Group (RAPMG), the CSIRO (on PCCP, APAS, and specifications), the Civil Contractors Federation, the Traffic Management Association, and others. Through those endeavours, the RIAA seeks to ensure greater consistency of understanding and requirements, while recognising some of their perspectives may differ slightly.

End users understanding of pavement marking services

Give me access to Google and I become an expert on anything.

Managing the expectations of end users can be difficult at times. Requirements and standards set by SRA's can "trickle down" to Local Government, Car Park operators, and other asset owners. The RIAA Technical and Car Park / Off the road Committees have delivered a series of industry Guides. These guides are a tool to assist in advancing industry knowledge, consistency of understanding, and to enhance harmonisation activity.

Safety

Road user and road worker safety is paramount. In this area, the RIAA has provided some input to Austroads on their "Guide to Temporary Traffic Management". This work is on-going, as the Guide is a "living document", and the RIAA seeks to ensure our member interests are considered by Austroads.

Understanding and monitoring the increased use of recycled compounds in road surfaces:

While the use of recycled materials is not new to road surfaces, there is growing interest in the use of such materials by State Road Authorities, including from an environmental perspective. The RIAA is working on understanding these developments, and the impacts upon pavement marking materials and practices.

Ensuring the right balance with reflectivity readings:

Road user and road worker safety is always the primary goal. The challenge is achieving the balance between

the demand for greater reflectivity results, with the need for achievable outcomes and fair financial returns for providers. The RIAA encourages stakeholders to take a balanced approach from their perspective. For example, SRA's may seek pricing based on enhanced reflectivity readings. That becomes a matter for the tendering and quoting activity. However, those same reflectivity requirements will likely not be applicable to membership of PCCP / APAS, some of whom may work on car parks and other off the road settings.

Long term contracts

Freight issues are impacting the cost of materials. This is difficult for contractors with long-term contracts that have not factored this in.

Positively influencing the workload "pipeline" from Asset owners to maximise efficiency

Sometimes it is difficult to understand what works are coming up from State Road Authorities, only for major pieces of work to be suddenly announced. This adversely affects providers ability to coordinate equipment, material, and labour. Greater insight into forward plans would aid efficiency and end results for all.

Monitoring evolving industry trends such as interest in CAP, Audio Tactile Line Marking (ATLM), ATLM maintenance, and milled ATLM

Understanding the latest areas of interest for State Road Authorities (SRA's), and ensuring member views on those issues are communicated, is an important activity. As RIAA Sponsors, the RIAA conducts regular Executive Briefing sessions with Transport NSW and Main Roads WA, as well as ongoing communication with them and Australia's other State Road Authorities.

Maintenance

The amount of works underway will likely create increased demand for maintenance works. This may coincide with fiscal pressure on Government following the COVID pandemic. Effective long term maintenance planning requires consideration from asset owners.

Non-gender specific signage

The RIAA has received reports of car park operators requesting non-gender specific pavement markings, such as prams without an identifiable male or female figure. This evolution reflects evolving community standards in these issues. Currently there are differences from state to state on these requirements. The RIAA will seek to work with Car Park operators, Standards Australia, and other relevant stakeholders as this issue unfolds.

Finland rolls out gender neutral road signs, slew of new traffic laws

Up to 50 new signs will appear on Finnish roads under the Road Traffic Act, which also brings changes for all road users.

Gender neutral signs will begin to appear on roads across Finland as the new Road Traffic Act comes into effect from Monday, 1 June.

The act emphasises the importance of clear and easily understandable road signage in fostering better road safety, and will see older signs replaced by up to 50 new signs with gender neutral characters.

Tapani Lovén, Sales Manager of Normiopaste, Finland's largest manufacturer of road signs, told Yle that the new signs are an important reflection of changing times.

"The world has changed quite a lot in 38 years. Forms of exercise have changed, as have exercise equipment, human behaviour, and age structures. It is good to update traffic signs for this millennium," Lovén said, adding that the new signs will be gradually rolled out over the coming weeks and months as current signs are still valid for another 10 years.

Improving road safety is the main reason for the updating of signs,

Old



New



Example of how new signs will differ from the older signs. Image: Väylä

as some of the old ones can be difficult to see in dimly lit areas, while weather conditions can also have an adverse effect.

Despite the changes, Lovén added that the coming reform has been received very differently by municipalities across the country;

with some being "horrified", some finding the changes unnecessary, while others have been "excited".

"The fear of change has been created by the fact that employees have not been faced with such a change during their careers before," Lovén said.



Tapani Lovén showing an example of an older sign, on the left, and a new sign, on the right. Image: Timo Leponiemi / Yle "Many traffic signs are too low. The lower edge of the sign or its additional plate should be at least 220 centimeters high. For lower signs, the heavy snow load thrown by snowplows often twists them at an angle," Lovén explained.



Speeding drivers will face a driving ban if they commit 3 offences within 12 months. Image: Derrick Frilund / YleThis limit has now been extended to 10km/h when the speed limit is 60km/h, and to 15km/h if the speed limit is higher.

New act requires drivers to anticipate actions of others

The new Road Traffic Act also brings a number of minor changes and clarifications to road rules, including a new stipulation that all road users are obliged to anticipate the actions of others.

In other words, even if the road user complies completely with the rules in a certain situation, they must also try to anticipate and react to the actions of another user to avoid any collisions. This can be done by, for example, keeping a safe distance from another road user who is violating the rules.

Another change is to the punishment handed out to speeding drivers. In the past, drivers who exceeded the speed limit by seven kilometers per hour (km/h) could have faced a driving ban.

If drivers commit three of these offenses within one year, they will receive temporary driving bans. However, if a driver has had a license for less than two years, he or she will face a ban after just two violations within a year.

The nearly-ubiquitous blue plastic parking discs used to indicate when a vehicle was parked in restricted areas are also no longer mandatory. In the future, the parking time can be written on a piece of paper, if the time is clearly discernible.

Changes for cyclists too

Finland's cyclists will also need to become familiar with the terms of the new act, as a number of new regulations will be introduced from Monday.

For example, from the beginning of June every bike must now have a red light that shows back light at dusk or in the dark. Cycling helmets may also be fitted with a red light.

In addition, cycle paths will be one-way in the future. Two-way bike paths are marked separately with an additional sign.

The act also sees the introduction of a new type of street: the "bike street", which is not the same as a bike path. Other vehicles are also allowed on the bike street, but the driving speed is determined by the cyclists. Other vehicles must also allow cyclists unobstructed access.

The speed limit on the new bike street is a maximum of 30 km/h, and the beginning of the street is marked by a new traffic sign.

All of the new changes can be found on the Finnish Transport Infrastructure Agency's website (in Finnish).

The Hitchhiker's Guides to Pavement Marking

David Eldridge, Managing Director Guidance Road Management, RIAA Director, RIAA Technical Committee

The average commuter sitting in their Ford Prefect making their way to the airport carpark, down the Intergalactic Bypass may not even notice the bright, white pavement markings that affect many aspects of the journey. Yet every part of that journey is impacted by those markings. From lane keeping to regulation of traffic, efficient parking to the safe operation of the aerodrome, all is enabled by pavement markings.

The patterns, placement and materials are a product of a hierarchy of documents being Legislation, Standards, and specifications. This can be very confusing for applicators and designers alike, often with misinformation or poorly applied Standards being used. Each facility type has specific legislation appropriate to that facility, with a flow-on to the correct Standards and specifications.

Don't panic. To provide some guidance through this confusion the RIAA is in the process of producing a series of Technical Guides to indicate the appropriate treatment for each facility type, together with advice on materials and their selection. We have aimed to write in plain English so that a Babel Fish is not required to understand the content.

Series 1 Facilities Pavement Marking

- 1.1 Off Street Parking Facilities Marking Guide
 - 1.1.1 Outdoor Car Park Fact Sheet
 - 1.1.2 Undercover Car Park Fact Sheet
- 1.2 Aerodrome Marking Guide
 - 1.2.1 Airside Marking Fact Sheet
- 1.3 Ports and Wharves Marking Guide
- 1.4 Warehouse and Factory Marking Guide
- 1.5 Sports Facilities and Off-Road Shared Paths Marking Guide
- 1.6 Roads and Highways Marking Guide

Series 2 Materials

- 2.1 Cold Applied Plastic
- 2.2 Thermoplastics
- 2.3 Waterborne Paints
- 2.4 Raised Pavement Markers

Series 3 Methods

- 3.1 Pavement Marking Removal Systems
- 3.2 Set Out and Spotting
- 3.3 Plant Calibration Methods

Series 4 Inspection Guides

- 4.1 Marking Pattern Compliance
- 4.2 Performance Compliance
- 4.3 Thermoplastic Material Application Compliance
- 4.4 Waterborne Material Application Compliance
- 4.5 Cold Applied Plastic Material Application Compliance

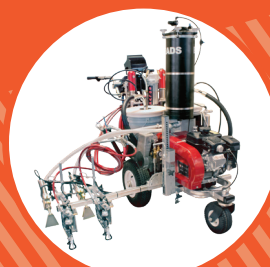


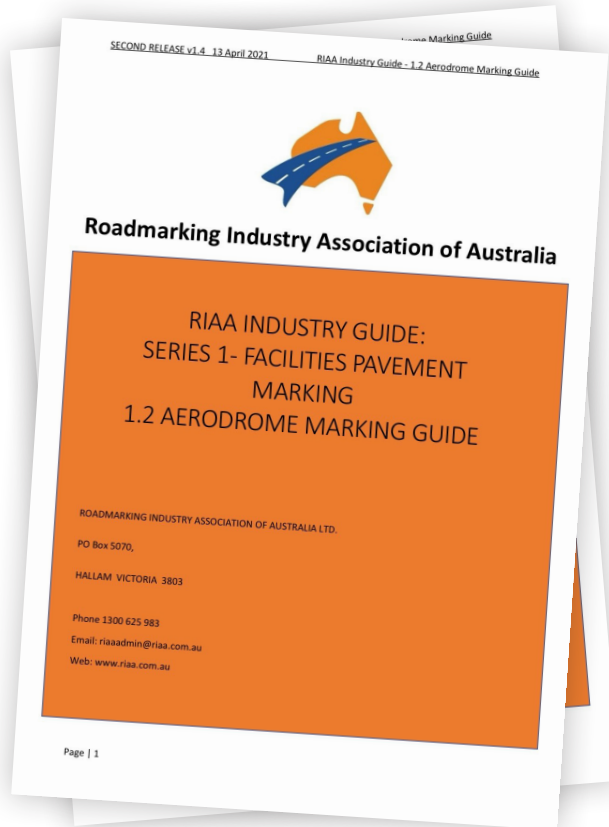
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The intention of these documents is to detail the issues not covered by regulations and specifications, pull together what items are relevant to specific topics, and provide a central source of information for each facility type or material type.

Roads are obviously subject to various State Roads Acts and Road Regulations that nominate specific marking patterns that are detailed in Standards. Materials, application rates and performance attributes are called up in Road Authority specifications. The selection of material type and compatibility / suitability issues are not addressed. Misinformation about materials in roadmarking is common with 'opinion' from Vagon engineering personnel not directly involved in pavement marking being passed off as fact with little understanding of the materials properties.

Carparks are often marked with arrows and legends at an architect's whim rather than following the appropriate Standards for a road related area. Road materials and specifications are not always suitable for underground use or surfaces used in these situations.

Aerodromes are tightly controlled for aircraft marking patterns in the CASA Manual of Standards, with airside roads marked to AS1742. Materials and application rates are nominated with a cut and paste approach of specifications that are unchanged from mid last century. The closest thing to a current specification is the Defence Airfield Pavement Maintenance Manual with a rather vague approach. This has resulted in our inclusion of a suggested specification in the RIAA Aerodrome Marking Guide.

Several guides are now available to Members and key stakeholders. They will be issued as a set with each update. We will continue to produce the library of information which we see as a daily benefit to Members in providing guidance to staff, solving site disputes, and reducing the possibility of product failures. They may not answer the "ultimate question of life, the universe and everything" but may help...

Marvin, The Paranoid Android



Always leave a safe distance



Development of drying adjuvants for waterborne traffic paints

By Stephen Borrie – Potters Industries Australia P/L

This article was prepared by RIAA member Stephen Borrie, from Potters Industries. This was originally prepared and presented by Stephen at the 2008 RIAA Coffs Harbour Conference when employed by Rohm and Haas Australia (RHA). Subsequently, RHA has been purchased by The Dow Chemical Company in 2009 with a transition of trademarks. The subject matter remains highly relevant to the industry. Minor word changes have been made to reflect current rather than past tense but maintained the use of Rohm and Haas name for context.

It is also timely as the RIAA intends to hold our postponed National Conference once again in beautiful Coffs Harbour, in July 2022. More details coming soon.

Introduction

Waterborne Traffic Paints have been around for since the late 1970's as a replacement for the solvent based incumbents. Their adoption was driven initially by the need to remove solvent based paints and the associated good experience most people had seen with the rapid uptake of water based decorative paints made this an easier changeover.

Designed for use as longitudinal highway maintenance markings the application was limited to 375 micron Wet Film Thickness (WFT) and often in conjunction with 300 micron drop on glass beads to provide retroreflectivity. The paint formulations had to rely on the 100% acrylic emulsions available at the time which had no advanced chemistry but rather a high solids content to maximise the dry speed of these paints. The high solids content was aimed to deliver the final formulated paint containing as little water as possible. While these high solids emulsions produced paints with significantly better performance than 100% acrylic house paints in common use, they still suffered from very slow dry which lead to poor washout resistance combined with lack of adhesion to both glass beads and the road itself.

Quickset or FASTRACK™ Technology

The industry required a breakthrough technology to improve drying speeds. Rohm and Haas Company developed and patented a "quick set" emulsion technology branded FASTRACK™ allowing waterborne traffic paints to dry under the adverse conditions of low temperature, high humidity and low air movement. The waterborne paints made from products such as FASTRACK 2706 (1992-1998), FASTRACK 3427 (1998- current, enhanced adhesion) served the Australian and New Zealand markets well. Newer generations of FASTRACK emulsion technology have different attributes such as HD-21A with cross linking chemistry for greater durability and glass bead adhesion and XSR™ for use in cooler climates (not commercialised for ANZ use). During the 1990's waterborne was universally adopted and the benefits of increased durability, high retro reflectivity, speed of application, low toxicity and water clean-up were quickly banked by the industry. Road Authorities progressively instituted specifications for 1mm diameter wet night visible glass beads as waterborne paints demonstrated they could hold these new large beads in place.

Drying Adjuvants

The need to further improve the speed of dry without compromising glass bead adhesion forced Rohm and Haas Researchers to look at externally or post applied drying "boosters".

This has lead to a number of different approaches. One system produced a rapid pH drop and subsequent skinning when acid was applied to a newly laid line. This is generally limited to approx. 400 micron WFT. This approach is both licensed and patented. Equally creative approaches (and patented) using super absorbent materials usually found in nappies and sanitary products can do the job but are have operational concerns in their use. Other ideas included addition of materials to destabilise the paint best described as controlled flocculation.

These ideas did not deliver the durability required. However combining the need to both rapidly drop the pH and isolate the water, has produced a Rohm and Haas patented product that balances speedier dry with sufficient free water to allow glass bead adhesion to fully develop. The product is best known as a drying adjuvant.

The first generation of these drying adjuvants were tested on the Desert Road in New Zealand in 2000 and again in Canberra in 2001. Extended trials were carried out in Canberra from 2002-2004. As the market was not fully committed to higher WFT it was not until 2007 when second generation drying adjuvants become a necessity for these thicker wet paint films.

Best described as Water Absorbing, Acidified Spherical Beads, these drying adjuvants rapidly drop the pH and their large surface area efficiently absorbs water (up to 3 times their volume). The absorbed water is then slowly released after the paint film has set.

To understand how these drying adjuvants work synergistically with waterborne paints we need to first understand how the FASTRACK emulsion used in the paint manufacture is designed to function.

FASTRACK emulsions and interaction with Drying Adjuvants

FASTRACK emulsions when they are used to manufacture waterborne paints produce a very stable paint because the quick set technology is neutralised in the wet paint stage. This stability is maintained while the pH remains >9.7. Hence all FASTRACK based waterborne traffic paints have the characteristic “ammonia” smell.

As the ammonia flashes off, the pH drops and quick set technology is no longer neutralised. It is attracted to the FASTRACK emulsion forming a multitude of bridges across the emulsion appearing as the paint quickly setting or drying.

Introducing a Drying Adjuvant to the mechanism described above does two things. The acidified surface of the Drying Adjuvant quickly neutralises

the ammonia and drops the pH which accelerates the activity of the quick set technology in the FASTRACK emulsion. The second effect is the nature of the drying adjuvant allows it to absorb one third to one half of the water in the paint allowing it to reach its set state much faster without having to rely completely on evaporation of the water.

Performance Attributes of Drying Adjuvants

The key requirement of a drying adjuvant is to improve the speed of dry and maintain or improve glass bead adhesion.

Table 1 evaluates the dry through performance of a Rohm and Haas waterborne traffic paint formulation GTC-104-14B based on FASTRACK 3427. Test conditions were altered to reflect moderate and high humidity (45% and 80% resp) and tested two different WFT with and without a drying adjuvant at a constant 23°C and zero airflow. Without a drying adjuvant high humidity has a dramatic impact on dry through speed at WFT varying from 360 micron through to 530um. Much of this effect can be offset by the drying adjuvant.

Drying Additive-effect on Dry Through Performance

Tested at 23oC, Zero airflow

Binder	Fastrack™ 3427	
Formulation	GTC-104-14B	
Alcohol	Yes	Yes
DA (50-75g/m ²)	No	Yes
<u>360 um WFT</u>		
- 45% RH	0:20	0:10
- 80% RH	1:25	0:10
<u>530um WFT</u>		
- 45% RH	0:30	0:20
- 80% RH	2:20	0:20

Please note, these are tough drying conditions and on most occasions while high humidity will be encountered, it is likely there will be some wind or air movement. Therefore the quick set technology provided by the FASTRACK emulsion is usually more than adequate to negate the need for the drying adjuvant under many climatic conditions

Equally well, data from Canberra trails in 2004 show the use of a drying adjuvant provides equal glass bead retention in paints allowed to dry unaided. This was valid for both FASTRACK 3427 and HD21A based paints.

Clearly the significant benefit of improved dry speed and subsequent glass bead retention is important but one of the real benefits is easily overlooked, the effect of the drying adjuvant on Washout Resistance. The practical application of this should read Early Rain Resistance. Some contractors have been unfortunate enough to get rain while in the middle of a job and witness the washing away of wet paint. It is not only the damage to the current work that is of concern but also the clean-up of the white water now being generated. A simple test deck can be used to demonstrate the improved resistance to rain. A test deck is constructed with three sections, two with different levels of drying adjuvant (40g/m² and 90g/m²) and one section with no drying adjuvant and was exposed to heavy rain 1 hour after the last line was painted. After 9 days of subsequent traffic exposure the section with no drying adjuvant is on the verge of failure. The other two sections are functioning as designed. The presence of the drying adjuvant has allowed the paint to sufficiently cure and lock away the water soluble components of the film still evident in the non-drying adjuvant section.

Airless Application considerations for Drying Adjuvants

The drying adjuvant is a free flowing dark coloured bead approx. 300-800 micron in diameter. This can be easily introduced into the paint stream by injection via a glass bead dispenser during airless spraying.

The preferred method for introducing the drying adjuvant is via the dual paint gun setup. The diagonally opposed guns create the ideal environment

to drop drying adjuvant via a Bell type glass bead dispenser. Other methods such as sandwiching the drying adjuvants between paint layers can also be effective but would require the use of dual paint guns.

Alternatively, as many contractors run single gun setups the drying adjuvant can be loaded to an additional hopper and fed through a camber gun in front of the paint stream. As there is significant turbulence at the point of intersection of the pavement and the paint, the drying adjuvant should be targeted at the same intersection point. Although no consideration is given to air assisted application, a similar arrangement can be used but with the camber gun following the paint gun rather than leading it as found in airless application.

Conclusions

The use of a drying adjuvant can be recommended when drying conditions are less than optimal. This can be characterised by high humidity, low temperature and low air flow. However as has been demonstrated there is a reasonable case to made for use when there is a chance of rain impacting the work within 2 hours, protection of the work is limited due to local regulations or road geometry or the specifications calling for a greater thickness of paint than might reasonably dry in the time provided.

While paints based on FASTRACK emulsion don't require a drying adjuvant in most conditions, the increasing performance demands of Road Authorities combined with changing workplace practises may necessitate the utilisation of a drying adjuvant on an as needs basis.

Due to the nature of the drying adjuvant and the need to technically support the adoption and application, Rohm and Haas decided to supply this product to the market via Potters Industries where it has been marketed and sold under the name Visilok® TPD. The product carries the co-brand FASTRACK™ Road Marking Technology logo in recognition of the development efforts and patent status.

™ FASTRACK is a Trademark of the Dow Chemical Company Philadelphia USA

® VISILOK is a Trademark of Potters Industries



A Minute With Our Members

with Peter Siegmund

Dolphin Group Pty Ltd

Name: Peter Siegmund

Position held: Owner

Brief work history & how you got involved in the roadmarking industry:

After 25 years pressure cleaning & graffiti removal and being asked to do linemarking jobs, i took the necessary steps to learn the trade

Favourite Food: French

Pets: Nil

Favourite TV Show: Hey Hey It's Saturday

Favourite Movie: Once Upon A Time In Hollywood

Favourite Book: Road Map

What Type of Car
Do You Drive?

Camaro

Ideal Holiday:

Barrier Reef Road Trip

Favourite Sport: Fishing, Watching Motor Sports

Dream Job: Being the boss with a good Deputy



A Minute With Our Members

with Jamie Moxham



Name: Jamie Moxham

Position held: Linemarking Manager

Brief work history & how you got involved in the roadmarking industry:

My first attempt at linemarking was at the age of 12 for a two-week stint with my grandfather. I came back to the industry when I was 19 and have always been in the linemarking game since. I started working for my Uncle Bernie at Allmark Linemarking and my career went from there. Almost 30 years on and I have worked with some of the best in the Australian and NZ business.

Favourite Food: German frankfurter with mashed potatoes and red cabbage

Pets:

2 Dogs, 3 Cat & 1 Lizard

Favourite TV Show:

Big Bang Theory

Favourite Movie:

Dune

Favourite Book:

Anything by Frank Herbert or Alastair Reynolds

What Type of Car
Do You Drive?

I have an Isuzu ute for the work car and for the weekend it's a Holden Trailblazer 4x4

Ideal Holiday:

In the mountains away for the Huggle and bustle

Favourite Sport:

Trail Running

Dream Job:

30 years linemarking.
I think I am doing it.



Workplace Diversity Achievement

Credit: Gemma Ferguson, original source article

RIAA Member Workforce Road Services has been acknowledged for embracing multiculturalism and diversity.

Samantha McAndrew, National Manager at Workforce Road Services, and RIAA President, says: "Our employees are handpicked based on skill, experience, and attitude regardless of race, gender, age etc. as we promote and practice inclusivity."

The Workforce Road Services Line Marking team has been providing line marking services to [Transport for NSW](#) across major roads in the Western NSW Region including Narrabri, Parkes, Forbes, Dubbo and Coonabarabran.

"We had the opportunity to update the existing line marking work on the Newell and Kamilaroi Highways" says Samantha.

Workforce extends thanks to all the regional businesses that assisted their crews whilst they were away, and [Ennis-Flint](#), Inc. for the great quality product they supply.

For more Workforce International Group updates and posts, follow their company page: <https://lnkd.in/gxQU45T>

Growth for Avante Linemarking

Long-term RIAA member Avante Linemarking advises they have just completed the acquisition of "LINEMARK" and "PROCOAT LINEMARKING" in Mackay, Queensland.

This dual acquisition, completed on July 12th, greatly enhances Avante's presence in that region, and Queensland overall. In completing the acquisition, Avante advise they have taken on local staff members of both companies.

Avante started as a father and son family owned business from the family shed. This latest development cements their growth

into one of Australia's largest line marking companies, with over 100 staff and over 120 registered vehicles and plant.

Avante Linemarking, Water Blasting Australia, and Avante Traffic Management, have become trusted names across Australia. The Avante Head office is located in St. Mary's, just west of Sydney, NSW, with a Queensland branch based in Yatala, just south of Brisbane.

Avante has worked right around Australia and New Zealand.

Congratulations to Leigh Moxham



Long time RIAA member Leigh Moxham of Road Art Linemarking, this year celebrates 20 years in the line marking profession.

Leigh Moxham has plied his trade for many line marking companies, working on such major works as the Westgate Tunnel, M80 upgrade, Monash freeway, and literally hundreds of jobs around Melbourne and the rest of Australia.

Leigh has become a highly respected industry professional, and an active participant within the RIAA Membership community.

Leigh is also very active on Instagram, posting photos & videos of not only the cool projects he works on, but also instructional videos of how to approach difficult situations, so much so that he is followed by quite a few international linemarkers that value his expertise and knowledge.

Congratulations on the anniversary Leigh, and here's to many more to come.

Thank you and good luck to Ron Koorengevel

The RIAA wishes Western Australia's Ron Koorengevel all the best upon his retirement from Main Roads WA (MRWA).

Ron has been a sterling contributor to the pavement marking profession in his roles with MRWA, the Road Authorities Pavement Markings Group, the RIAA Technical Committee, and countless industry bodies and projects.

Ron has been a staunch driver of national harmonization works and leaves a tremendous legacy to the RIAA and our industry, thanks Ron!



**AT MAIN ROADS
WE CARE ABOUT
YOUR JOURNEY
ON OUR ROADS,
WITH OUR
PRIMARY FOCUS
ALWAYS BEING
SAFETY AND
KEEPING WA
MOVING**



*We're working for
Western Australia.*

www.mainroads.wa.gov.au





Bruce Poehlsen and Ring Us Group

Long Time RIAA member Bruce Poehlsen is pictured here with his latest piece of equipment. Bruce is also part of the RIAA's Car Parks / Off the road committee.

We are Surface Preparations Specialists contracting to large construction companies, government road authorities, local councils as well as Commercial and Residential Projects.

Located in Sydney's vast western suburbs, Ring Us Group provides line and pavement marking removal, concrete surface preparation, concrete polishing, epoxy coating, concrete resurfacing and repairs, and high pressure water blasting.

Pushing the boundaries of traffic paint



With highly visible, long-lasting road stripes and markings that can withstand punishing weather and traffic conditions, Dow's patented FASTRACK™ technology allows to formulate reflective pavement markings that meet the toughest performance requirements - while reducing emissions for a smaller environmental footprint.

Since 1990, FASTRACK™ technology has dramatically reduced volatile organic compound (VOC) emissions by driving a mainstream shift from solvent-borne to waterborne traffic paint. This fast-drying waterborne binder provides a durable acrylic backbone for road-marking paints, with patented Quick-Dry chemistry that enables accelerated return-to-service times.

- Superior environmental impact - as measured by life-cycle analysis, compared to other pavement marking technologies.
- Enhanced retention of glass beads and greater flexibility - for extended retro reflectivity and improved night-time visibility.
- Fast-drying properties - with fast-dry-to-no-pickup and resistance to early rain showers under a wide range of climatic conditions.
- Improved wear properties - over various bituminous and concrete road surfaces.

Produced in Geelong, Victoria, FASTRACK™ Technology powers the water based line marking industry in Australia and New Zealand.

Make sure your water based road marking paint contains FASTRACK™ Technology from Dow.

Lake Macquarie Road Upgrade Now Complete

Minister for Regional Transport and Roads Paul Toole said the Macquarie Road Upgrade project was among 150 road and rail projects to be delivered under stimulus, funded by the NSW Government's \$2.3 billion COVID-19 package announced last March.

"Right across the State, this program alone has delivered 400 kilometres of rumble strips, which reduce the risk of head-on and run-off-road crashes by up to 25 percent, upgraded 200 kilometres of rail line, and improved carparks and customer amenities at more than 15 regional railway

stations," Mr Toole said.

"Bringing these projects forward through stimulus funding has given our regional communities a real shot-in-the-arm, especially those who have suffered a triple whammy of drought, bushfires and COVID-19.

"The Accelerated Capital Maintenance (ACM) program was designed to fast-track projects that have proven a lifeline for our community - delivering safer roads and stronger freight and rail connections, as well as creating local jobs when they're needed most."

Member for Lake Macquarie Greg Piper said "It's great that the ACM package allowed Transport for NSW to bring forward and deliver projects like this in addition to its planned program of work".

"On top of delivering a stronger, smoother road for the 16,000 motorists that use this section each day, this project also supported about 20 local jobs, helping keep our local economy ticking."

Original source article from <https://www.transport.nsw.gov.au/news-and-events/media-releases/lake-macquarie-road-upgrade-now-complete>

\$100M NSW Stimulus Program Boosts Road, Rail

More than 150 road and rail projects have been funded under the NSW Government's \$100 million stimulus spend to accelerate shovel-ready road and maintenance works, and support more than 600 jobs right across regional NSW.

Minister for Regional Transport and Roads Paul Toole said the projects were funded by the NSW Government's \$2.3 billion COVID-19 package announced last March.

"Our accelerated maintenance program has fast-tracked projects that have proven a lifeline for communities - delivering safer roads and stronger freight and rail connections, as well as creating local jobs when they were needed most," Mr Toole said.

"Right across the state, this program is rolling out about 400 kilometres of

rumble strips, which reduce the risk of head-on and run-off-road crashes by up to 25 percent, upgrading 200 kilometres of rail line, and improving carparks and customer amenities at 15 regional railway stations," Mr Toole said.

"Bringing these projects forward through stimulus funding has given our regional communities a real shot-in-the-arm, especially those who have suffered a triple whammy of drought, bushfires and COVID-19.

"In the south we've rolled out more than \$500,000 of roadside barriers and other safety upgrades to the Monaro Highway and Kosciuszko Road, almost \$2 million to rehabilitate the road on the Kings Highway near Nelligen, and more than \$1 million to rehabilitate a three-kilometre section of the Sturt Highway near Euston.

"Further north, almost \$770,000 went towards work on the Golden Highway near Muswellbrook, more than \$826,000 for road intersection upgrades in Taree, and more than \$5 million for Newell Highway upgrades at Pilliga, between Narrabri and Moree, and from Mungleback Creek to the Queensland border.

"In the state's far west, \$1.5 million was spent strengthening and widening a section of the Silver City Highway at Kellys Creek, south of Broken Hill."

The stimulus funding allowed Transport for NSW to deliver more projects in addition to the planned program of work, providing an essential boost to regional economies by supporting local jobs, businesses and sourcing local supplies.

Original source article from <https://www.transport.nsw.gov.au/news-and-events/media-releases/100m-nsw-stimulus-program-boosts-road-rail>



Safer Roads program

Safe roads are designed and built to be more forgiving and account for human error.

If a driver or rider makes a mistake, road infrastructure can significantly reduce the chance that it will result in a fatality or serious injury.

To do this, the NSW Safer Roads program:

- Upgrade roads and improve road design; install new road signs, surfaces, markings and safety barriers; and remove roadside hazards.
- Assess long stretches of major roads as part of route safety reviews to identify road improvements and couple with enforcement and education programs.
- Separate road users as much as possible with median separation treatments such as wide centreline and median safety barriers.

The NSW Government is investing \$1.9 billion over five years (to 2022/23) through a range of programs to help reduce road trauma. This includes investments of \$640 million to the [Saving Lives on Country](#)

[Roads](#) and \$180 million to the [Liveable and Safe Urban Communities](#) initiatives.

The investments will deliver proven safety treatments as outlined in the Road Safety Plan 2021. You can find out more about the treatments being installed in country areas and in urban areas at the Transport NSW web site.

Find out more about actions being undertaken to deliver safer roads across NSW under the [Road Safety Plan 2021](#).

View the interactive map below for 2019-20 Safer Roads Program projects across NSW, including those that are planned, in progress and completed.

The latest announcement of Safer Roads Program Projects is for the 2020-21 financial year and these projects will be added to the interactive map over time. You can also read the list of [2020-21 Safer Roads Program Projects](#).

Original source article <https://towardszero.nsw.gov.au/safesystem/safe-roads>

A better freight future for the Central Murray

A new plan will improve freight connections, boost safety and efficiency, and cut costs in the supply chain network for farmers and businesses in the Central Murray.

A \$75,000 road freight study will identify infrastructure constraints on the local road network and develop a plan to enhance access for high productivity freight vehicles (HPFVs).

The Department of Transport will work with Swan Hill Rural City Council and Gannawarra Shire Council, with the Victorian Government contributing \$50,000 to the project.

The study is an essential first step to improving the freight network for local farmers and industry and will provide strong evidence for further investments required to expand HPFV access restricted by load limits.

Freight Victoria will provide specialist advice as part of this project, with National Heavy Vehicle Regulator

data to inform the study alongside local freight industry knowledge.

Road and rail will continue to play vital roles in the efficient movement of freight across the state, with this study to complement significant rail freight investments.

Rail freight stimulus works on the Sea Lake and Dimboola lines have replaced more than 120,000 sleepers, removing more than 80 kilometres of speed restrictions funded under the \$83 million Building Works freight package.

The Victorian Government is also continuing to invest in the Mode Shift Incentive Scheme, with \$3.55 million allocated in the 2021/2022 Victorian State Budget to continue the program of freight corridors across the state.

Efficient freight is key to keeping Victoria moving. This project analyses the changes needed on council-owned roads and structures

to allow better access for efficient and modern HPFVs, which are safer, more modern heavy vehicles that reduce the number of trips required on the network and lessen the environmental impact of travel.

This investment complements the 3,000 kilometres of arterial roads added to Victoria's pre-approved high productivity freight vehicle network earlier in June.

This project is funded by the Victorian Government's Flexible Local Transport Solutions program, which provides grants to local government and community organisations for small-scale, high local impact transport projects.

Original source article from <https://transport.vic.gov.au/about/transport-news/news-archive/a-better-freight-future-for-central-murray>



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VICTORIA

Construction at its best in Melbourne's west

Commuters in Melbourne's west are the big winners as part of the Big Build, with new data showing dramatic reductions in travel times, and more works to come with the fast track removal of yet another dangerous and congested level crossing.

A 65-tonne piling rig and a 40-tonne excavator have begun digging nine-metre-deep foundations for a new road bridge in Ardeer, which will replace the Fitzgerald Road level crossing. The level crossing removal will help improve reliability on the Geelong and Ballarat lines, Victoria's fastest-growing and busiest regional rail corridors.

It will also reduce travel times, with boom gates currently down for up to 45 per cent of the morning peak in Ardeer, with 37 trains running through the crossing, delaying tens of thousands of cars and trucks every day.

The Fitzgerald Road level crossing removal has been fast-tracked and will be removed by 2023, along with the nearby level crossing at

Robinson Road, Deer Park. Their removal will pave way for the Mt Derrimut Road level crossing to be removed by 2024, making the Geelong and Ballarat lines level crossing-free between Deer Park and the city.

The massive undertaking of level crossing removals in the west builds on the \$1.8 billion Western Roads Upgrade, the largest-ever single investment in Melbourne's road network.

New data shows drivers on Palmers Road are saving 20 minutes during the morning peak, while upgrades to Leakes Road have shaved almost 12 minutes off the travel time for drivers, providing commuters with better access to Tarneit Station.

Congestion-busting upgrades have been completed on eight priority roads across Werribee, Point Cook, Truganina, Tarneit, Laverton North and Hoppers Crossing, as well as repair and resurfacing work on 37 roads between Footscray and Werribee.

The multi-year upgrade has given thousands of Victorians work during the coronavirus pandemic and will continue to do so over the life of a 20-year maintenance program. So far this year, an average of one road every week has been resurfaced in the west as part of the maintenance program, delivering smoother and safer journeys for all.

Work is continuing around the clock on the West Gate Tunnel Project, rebuilding ramps and bridges to make way for four extra through lanes on the West Gate Freeway. This stage of the project is more than half finished, with bridges over Kororoit Creek and Williamstown Road continuing to be upgraded and work to widen the bridge over Millers Road almost complete.

In total, more than \$20 billion is being invested in the western suburbs for essential road and rail upgrades as part of Victoria's Big Build.

Road and public transport works continue between June and August

Major road and public transport upgrades continue across Victoria. Make sure you check out scheduled disruptions and allow extra travel time over the next few months.

Melbourne's west and north west

Significant work is underway to remove the boom gates at Ferguson Street in Williamstown, by lowering the rail line under the road. Boom gates are also going at Old Geelong Road in Hoppers Crossing, where crews continue to build a new road bridge over the rail line.

Buses will replace trains on the Sunbury Line as crews carry out signalling works as part of the Sunbury Line Upgrade. There will be overnight lane closures on the West Gate Freeway as part of West Gate tunnelling works.



Excavators preparing ground for track turnouts leading into the approach structure at the western portal for the Sunbury Line Upgrade.



Inner Melbourne

The Metro Tunnel Project's new Arden Precinct is beginning to take shape, with construction works ramping up to build the new platform and station facilities.

St Kilda Road tram track renewal and Federation Square platform upgrades are scheduled during the winter school holidays.

Artist impression of the arched entrance to Arden Station.



Melbourne's north

Three mini-tunnel boring machines will continue the task of building 1.8km of new sewer for the North East Link Project. There will be ongoing lane closures on Greensborough and Bulleen Roads between June and August.

Tram tracks and overhead wires will be renewed along Route 86 on Plenty Road and crews will continue overnight works on the M80 Ring Road and Hume Freeway.



Melbourne's east and south east

Construction on the Mordialloc Freeway will progress, and work to add 36km of new lanes will continue on the Monash and Princes freeways.

The Maroondah Highway, Lilydale and Manchester Road, Mooroolbark level crossing removals on the Lilydale Line will ramp up. The Frankston Line will also see major construction over the coming months, with major works continuing to remove 5 level crossings at Chelsea, Bonbeach and Edithvale.



Melbourne's north

Additional upgrades along the regional network will continue this winter, specifically work along the Geelong and Warrnambool lines as part of the Regional Rail Revival Project. This includes work to build a new platform, additional track and an accessible overpass at Waurin Ponds Station.

Annual maintenance works will take place over June and July on the Bendigo, Echuca and Swan Hill lines. There will be disruptions on the Ballarat, Geelong and Warrnambool lines in July for level crossing removal works.

Temporary ramp closures for Bald Hills interchange



Progress is ramping up on the Gympie Arterial Road and Strathpine Road interchange upgrade at

Bald Hills with key works planned over the coming months.

Temporary night closures of the interchange's entry and exit ramps will begin from the night of

Monday, 26 July, and will occur intermittently until late 2021.

Transport and Main Roads' Metro Regional Director Patrick Dennehy said the upgrade was a

welcome solution for the renowned congestion spot.

"This work will transform the current interchange into a diverging diamond, which will help reduce

congestion and improve travel times and safety through the area," Mr Dennehy said.

"Works are now well and truly underway for this important upgrade," he said.

"These closures are necessary to maintain motorist and worker safety while new road barriers,

culverts and upgraded noise barriers are installed near the ramps.

"Closures will take place between 9pm and 5am intermittently over several nights until late 2021, weather and construction conditions permitting.

"Traffic controls will be in place to safely guide motorists past the works via signed detour routes.

"These detours will ensure motorists can still reach their destination, however, some delays are expected, and I encourage motorists to allow extra time when planning their travel.

"The project team will also send SMS updates to local residents and update

the QLDTraffic website for ramp closures as required."

The \$30 million project is jointly funded by the Australian and Queensland governments on a 50:50

basis. It is set to support an average of 65 direct jobs over the life of the project at a time when maintaining jobs has never been more critical.

The upgrade is being built by Fulton Hogan, with completion expected mid 2023, weather and construction conditions permitting.

For more information about the project, visit <https://www.tmr.qld.gov.au/projects/gympie-arterialroad-and-strathpine-road-bald-hills-improve-intersection> or email metropolitanregion@tmr.qld.gov.au.

For up-to-date road works and conditions across the state, visit www.qldtraffic.qld.gov.au, call 13 19 40 or download their app.

Queensland shares vehicle cloud technology with Victoria

The first multi-state collaboration in Australia using connected vehicle technology developed for Queensland's

Ipswich Connected Vehicle Pilot (ICVP) was announced today as part of Victoria's connected vehicle demonstrations in Melbourne.

The first phase of these Melbourne demonstrations, at the University of Melbourne led Australian Integrated

Multimodal EcoSystem (AIMES) testbed, will be delivered by the Victorian Department of Transport (VDoT) with Lexus Australia and Queensland's Transport and Main Roads (TMR).

Transport and Main Roads Director-General Neil Scales said the ICVP was Australia's largest connected

vehicle technology pilot, also known as Cooperative Intelligent Transport Systems (C-ITS) and was paving the way for the arrival of new vehicle technologies.

"I would like to thank everyone involved in this important initiative as we will continue to work together at a

national level with industry and governments which is integral to informing a national plan for the implementation of connected vehicles in Australia," Mr Scales said.

"We all agree, connected vehicle technology needs to operate in Australia irrespective of state borders and vehicles need to communicate with each other regardless of make or model.

"Connected vehicle technology is a key part of future vehicle technologies which have the potential to prevent road trauma, reducing the incidence of lives lost and serious injuries on Australian roads."

The connected vehicle demonstrations, using TMR's central system, shares speed, hazards and awareness messages to vehicles by talking to other connected vehicles, roadside infrastructure and centralised traffic management systems.

Connected vehicles and infrastructure will evolve the way vehicles and our roads interact and have the potential to enhance safety, reduce congestion, emissions or travel times.

Mr Scales said the security system ensured messages shared between vehicles and infrastructure could be trusted.

"Safety for all road users is a priority of both the Queensland and Victorian governments," he said.

"We are committed to Vision Zero, a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries involving road traffic and reducing the burden of road trauma on our communities."

Lexus Australia Chief Executive Scott Thompson said the luxury lifestyle brand is committed to investment in a wide ecosystem of new technologies to achieve higher vehicle safety standards.

"Imaginative technology and leveraging innovation are core to the Lexus DNA, and we are committed to delivering next-generation road safety outcomes," Mr Thompson said. "Lexus would like to thank the Victorian and Queensland Government, and the University of Melbourne, for their partnership in developing important road safety research."

Transport engineering expert and AIMES Director Professor Majid Sarvi said they were excited to announce the new partnership.

"With these connected Lexus vehicles, we hope to provide real-world evidence to put Australia at the forefront of global smart city technologies," Prof. Sarvi said.

Chief Network Operations for the Victorian Department of Transport Brett Langley spoke of the state government's interest in this latest C-ITS initiative.

"We're proud to partner with Lexus Australia, AIMES and Queensland – the data we get from these trials will help us shape our transport networks of the future," Mr Langley said.

For more information, visit <https://www.qld.gov.au/transport/projects/cavi/ipswich-connected-vehicle-pilot>

Media contact: TMR Media Unit, 3066 7060 or email media@tmr.qld.gov.au



WESTERN AUSTRALIA

Temporary ramp closures for Bald Hills interchange

Recycled material used on recently completed projects is leading the way.

Published: 25 June 2021, Updated: 28 June 2021

A new report by the Waste Authority shows recycled material trialled on a number of projects (including Kwinana Freeway Northbound Widening and Murdoch Drive Connection) have been a major success! Crushed recycled concrete from the Subiaco Oval demolition and other sources has proven to have several economic and environmental benefits.

Following the success, the Roads to Reuse program will be expanded to include material from Princess Margaret Hospital at Leach Highway and Welshpool Road Interchange and Tonkin Highway Corridor projects.

Learn more about what we're doing to deliver a transport network that meets social, economic, and environmental needs on our Sustainability page.



SOUTH AUSTRALIA

Yellow lines on Northern Connector as part of safety trial

New yellow line marking will be installed on a two kilometre section of the Northern Connector as part of a trial to increase safety and visibility.

Yellow lines will be marked on a section of the northbound carriageway between Bolivar Interchange and Waterloo Interchange.

The works will be undertaken on Sunday, 20 June 2021, between 9am and 6pm (weather permitting).

Speed restrictions, signage and traffic management will be in place in the section of the line marking works.

Please take extra care when workers are on site. Observe speed limits, signage and lane restrictions and traffic controllers when travelling through the area.

The yellow lines are part of a trial by the Department for Infrastructure and Transport (the Department) to determine the most effective line marking option for the concrete road.

This follows the initial review of the black contrasting line marking which was installed on the Northern Connector around the existing white lines in early April 2021.

The Department encourages road users and community members to submit feedback on the visibility of the line marking as part of the trials.

This feedback will assist in the Department determining the best long-term line marking solution for both carriageways of the motorway.

To provide feedback regarding the trial, complete the feedback form at www.dit.sa.gov.au/nsc/northern_connector/feedback_form2 or contact the Project Information Line on 1300 794 880.

The Department thanks you for your patience while these important works are being undertaken.



NORTHERN TERRITORY

10 Year Infrastructure Plan 2019 - Annual review

Infrastructure is a key enabler of economic development, which underpins our capacity to create jobs, increase productivity and stimulate growth.

The Department of Infrastructure, Planning and Logistics (DIPL, NT) 10-year plan aims to help industry with its own planning and workforce management, and inform decision-making across all levels of government.

Infrastructure supports the:

- quality of our social well-being
- the future of our children
- our cultural and lifestyle experiences
- services we use every day.

Over the longer term, the Infrastructure Plan sets direction for planning and delivering infrastructure in the Northern Territory.

All statistics referred to in the Plan are based on 2017-18 unless otherwise stated.

The Plan details planned projects for the first two years (2019-20 and 2020-21) with proposed infrastructure projects identified in the medium and longer term.

Published by the Department of Infrastructure, Planning and Logistics
© Northern Territory Government 2019
E: infrastructureplan.NTG@nt.gov.au
T: +61 8 8999 4743
Web page: <https://dipl.nt.gov.au/industry>



Infrastructure projects identified in the medium and longer term are at various levels of maturity and many are unfunded.

They represent potential projects for future investment either by the varying levels of government or the private sector.

As infrastructure priorities can change in response to changing demands from the community, new technologies and changes to growth and essential sectors, the Plan will be a living document which is refreshed annually.

The review will commence again in 2020. All input and feedback received will be considered.

In order to provide the most current and relevant information about issues affecting

Industry, you are encouraged to provide input and feedback by contacting the 10 Year Infrastructure Plan team on email InfrastructurePlan.NTG@nt.gov.au or telephone 8999 4743.

The Plan Sector table data underpins the Interactive Business Intelligence dashboard in a visual, online, model. The underpinning information is provided to enable industry and public to enable further analysis. Data may be analysed and reproduced (with attribution). Plan data and more information is published on the [Northern Territory Government Open Data Portal](#).

CALL FOR PAPERS



The RIAA's biennial conference will be held on the 27th and 28th of July, 2022.

We will provide an exciting, informative Conference, as we all play our role in the recovery.

The "ROAD TO SUCCESS" theme will provide you the opportunity to present papers to get everyone talking about your association and your industry. As part of this preparation we would like to invite you to share your knowledge and expertise and submit your paper for review.

Sessions may include:

Technical Papers or Case Studies: The latest technology from around the world

The Value of Linemarking: For customers, pavement marking has a price but how do we communicate the value?

Road Safety: The vital role our industry plays

Harmonization: Is it that hard to achieve

Customer Service: Dealing with difficult clients and suppliers.

The future of Linemarking: Where can we expect to be in 5, 10 or 20 years

Your Workplace: And you thought it was tough out on the road!!!! We now have to be social workers, therapists, councilors, experts on substance abuse. I just want to paint lines

Papers can be submitted to info@riaa.com.au

27th and 28th July, 2022, Coffs Harbour, NSW

