

Projects, Trucks & Bikes

The challenges of Melbourne's public construction boom

CLOCS-A Safety Forum - Melbourne

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Metro Tunnel presented an opportunity to fix the truck problem

“I think we can”

Swanston Street: We dig it

1 June 2015. The construction of the Metro Rail tunnel under Swanston Street will cause massive dislocation on Australia’s busiest bike street but at the same time opens up opportunities to bring forward other improvements to the central Melbourne bike network.

Planning for the project is well underway, with the government announcing \$1.5 billion to cover anticipated planning, design and significant early works ahead of major construction in 2018.

Although 2018 is a few years away, the selection, design and construction of alternatives could easily eat up the time available.

The last thing riders want is to be left high and dry with no acceptable alternative routes when Swanston, and possible other bike thoroughfares, close down for construction.

Now is the time for the [Metro Rail Authority](#) to start working with stakeholders to plan the work-around bike routes.



Government blind spot on truck standards

- Side under-run protection was a world-wide trend

Turnbull's blind spot on trucks

16 March 2017. The tragic death of rider in a collision with a truck last Friday in Melbourne has again turned the spotlight on the the Federal Government's refusal to bring Australia's vehicle regulations for heavy vehicles into the modern age.

As governments around the world move rapidly to mandate additional truck safety measures that reduce risks for bike riders, our national leaders turn a blind eye.

Side under-run protection rails are a proven measure that should be compulsory on all trucks in urban areas.

The rails run down the side of trucks and connected vehicles between the wheels, and they are particularly effective in reducing the risks of riders going under the wheels of left turning heavy vehicles.

The circumstances of the death of Arzu Baglar are still being investigated, but it did involve a heavy vehicle making a left turn movement when a rider was proceeding straight ahead.

There is now overwhelming evidence from around the world that left turning trucks provide a major risk for vulnerable road users, and mitigation measures have been mandated across Europe.



Government blind spot on truck standards

- Side under-run protection was a world-wide trend
- Trucks-related cycling deaths were clicking up and campaigns were afoot

Lorries Killing Cyclists

In the last week two London cyclists were killed in collisions with lorries and another was seriously injured. A London Road Safety Unit study of London cyclist fatalities between 1999 and 2002 concluded that, of the 49 collisions with lorries, more than half were the result of a left turn by the lorry.

The design of many of London's cycle lanes and advance stop lines (green boxes at traffic lights) lure cyclists into the most dangerous position at junctions: slightly in front of and to the left of lorries. At the two junctions where cyclists were recently killed by left-turning lorries (Upper Thames Street junction with Queen Street Place, and Camley Street junction with Goods Way) there are advance stop lines, both with feeder cycle lanes from the left.

What is needed:

1. A ban on very large lorries (HGVs) from the current Congestion Charge zone during Congestion Charge hours.
2. Compulsory installation of the latest 'blind spot' mirrors and more training for drivers on how to use them.
3. Removal of dangerous cycle lanes.
4. Tougher punishments for drivers and lorry companies convicted of negligent driving.

Government blind spot on truck standards

- Side under-run protection was a world-wide trend
- Truck-related cycling deaths were clicking up and campaigns were afoot
- New regulations such as the direct vision standard in London were rolling out

London bans 35,000 high-risk trucks

2 February 2017. Only trucks that allow drivers good, direct vision of bike riders and pedestrians will be permitted to use London streets in the future.

The City has been plagued by serious crashes involving trucks and bikes, attributed to the fact that many truck cabin designs deny their drivers direct vision of bikes on the road.

Research has found that 70 per cent of cyclist fatalities in the city have involved trucks that have the lowest levels of vision from the cab.

There are 35,000 of these trucks and they will be banned from London's roads by 2020.

London has developed a five-star rating system for trucks vision. After the one-star rated trucks are gone by 2020, it will aim to get two-star rated trucks gone by 2024.

Truck manufacturers are introducing five-star trucks on to the market. They have low cabins, large windscreens and additional side windows and windows in the lower door. The drivers are no longer totally reliant on mirror or cameras.

This is the core of the Direct Vision Standard. [See more here.](#)



Looked at international developments

- Accessed resource and reports from across Europe
- Changing truck design
- Banning certain trucks from certain districts
- Options for Melbourne?



CLOCS caught our attention

- Risk and reputation
- Wide industry support
- Evidence based
- Systematic approach
- Adaptability

Trucks construct safety initiative

13 July 2015. The UK's trucking sector has developed new safety standards that could be adopted in Australia to reduce the risks to bike riders.

Following a distressing spike in bike fatalities in London resulting from collisions with construction vehicles, the trucking industry responded by developing new guidelines for truck design and operation.

Such has been the success of the project—the [Construction Logistics & Cyclist Safety \(CLOCS\) Initiative](#)—that it is set to be adopted across the UK, and possibly adapted for Australia.

This year in London all of the cycling deaths to date have involved heavy goods vehicles (HGVs). In 2011, of the nine deaths involving HGVs, seven were construction vehicles.

An investigation of the issue found that construction vehicles had larger blind spots, and that road safety was not considered in the same way as on-site OH&S. It also determined that there was little understanding of the impact of construction activity on road safety and that there was no common standard for the industry to work to in order to manage work related road safety.



What could go in the contract?

- Driver vision requirements
- Side under-run
- Accessing sites safely
- Route selection
- Requirements for rider engagement

Swanston Street: We dig it deeper, keeping the bikes.

22 October 2015. New construction plans for the Melbourne Metro Rail Project will mean that the street will mostly remain open to bikes during the construction of the rail tunnel and stations.

Early plans to dig massive cuttings along segments of the streets for the construction of two new stations have been superseded.

Now the rail tunnels will be significantly deeper, and can be excavated without disturbing the road above.

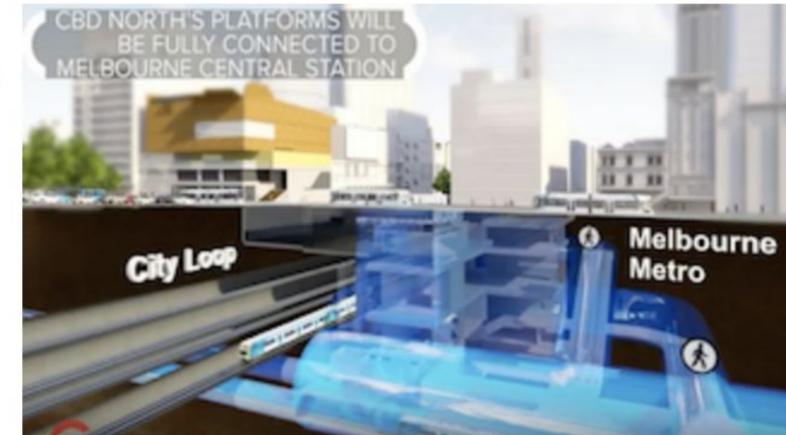
And the station cavities will be dug out from underground—more like an underground mining operation as opposed to an open-cut, which was the earlier plan.

The new plans should keep Australia's busiest bike route open to riders, save disruption now and then. [Watch the video.](#)

However, La Trobe and Flinders Street will now suffer more, with increased construction traffic and possible closures and diversions.

Bicycle Network is in talks with MMRA about how problems in La Trobe Street, an increasingly busy bike route, can be ameliorated.

And with the additional truck traffic, Bicycle Network is pushing for the mandating of side under-run protection for all heavy vehicles in the project, as well as detail consideration for bikes in the Traffic Management Plans for the construction phase of the project.



The fuse was lit

- Workshops
- Stakeholder Forums
- Working Groups
- Widespread enthusiasm and support
- Embraced by industry
- CLOCS-A

Vulnerable Road User Safety Around Construction Trucks

Stakeholder Forum
6th December 2016



OUR PURPOSE - How can we increase road safety for vulnerable road users around construction trucks?

What we had landed on

- Truck design standards.
- Route selection and management
- Engagement and behavioural influence
- Traffic management plans and compliance.
- Major project alignment and standards

Truck plan gears up

23 May 2017. Work continues on the development of new safety practices for the massive truck construction fleet that will hit Melbourne when the Melbourne Metro tunnel project formally gets under way later this year.

Melbourne Metro is coordinating a number of teams charged with designing new systems to keep Melbourne's bike riders and pedestrians out of harm's way when trucks begin to saturate the streets around the new underground stations and tunnel access sites in inner Melbourne.

And the new methods are set to be adopted by other major projects in the state, including the level crossings removals, the Westgate Tunnel and the planned North East Link, coming in 2019.

And bike riders can do their bit to inform these developments. Melbourne Metro wants to [hear your stories about interactions with trucks](#) that could shed light upon the best solutions for the project.

Since the beginning of this year four working groups have been developing ways to reduce the risks of trucks to vulnerable road users.

Among the initiatives are:

1. Truck Design Standards

The initial meetings of this working group focussed on three areas – what should be the minimum appropriate truck features to protect vulnerable road users; how do we encourage further improvements above that minimum; and the challenges that operators may face in implementing improvements.

The group has undertaken a process to identify a graded level of truck safety design features, from the basic minimum to the “gold standard”. The results of this process will be distributed for consultation.

2. Route Selection and Management

Appropriate route selection and risk assessment is a key foundation for managing safety and preventing interactions.

Progress is being made towards developing criteria which will help inform route section in order to improve vulnerable road user safety, with a focus on high risk intersections and locations.

Finalisation of this work will follow the selection of the lead contractor as different contractors may have differing construction methodologies and route choices.

3. Engagement and Behavioural Influence

This working group has been focussed on how best to improve public awareness and engagement, with the aim of influencing road users to choose “more safe” behaviours. Having met four times, the focus has been on identifying public influence and awareness initiatives that have worked for other organisations both here and abroad.

A story collection campaign mentioned above, is aimed at engaging directly with cyclists, pedestrians, motorcyclists, and truck drivers – asking them their stories about near misses and incidents, and gathering their input on what makes for “more safe” or “less safe” behaviours.

4. Traffic Management Plans and Compliance

The remit for this group goes beyond the risks involved with trucks around changed traffic conditions, and includes all the safety risks that temporary traffic management changes present to the public around construction work sites.

The working group has started development of a guidance document for industry which will be focussed on how to minimise risks for vulnerable road users when temporary traffic management is in place. This guideline aims to fill a gap in the current suite of standards and guidance regarding traffic management, which has traditionally focused primarily on the safety of the site workers and drivers, and managing efficient traffic flows.

5. Major Project Alignment and Standards

Following consultation on the results of that review, a proposal has been developed to create a “standard” which covers all the areas addressed by this project, bringing them together into a single document would form a condition of work on major Victorian infrastructure projects in future.

All Victorian major projects and other States onboard

Up, Up and Away!

13 April 2017. Riders commuting from Melbourne's west will be able to leave the hassle of traffic behind when they ascend to the new elevated bike path from Footscray to the city.



For 2.5 kilometres from Shepherd Bridge to Docklands riders will soar above Footscray Road, above intersections and traffic lights, clear of railway lines and Port entrances, on their own exclusive 4 metre wide path, suspended from the Western Distributor Roadway above.

The new "veloway" was announced at the weekend by the State Government as part of the \$6.6B Western Distributor tunnel project to provide new routes to the Port of Melbourne and take trucks off streets in Melbourne's inner west.

The elevated bike way was part of the submission of the preferred tenderer, a consortium led John Holland and CPB Contractors.

Contracts for the project will be signed after the Environmental Effects Statement process is successfully concluded around the end of the year.

When the government, together tollway operator TransUrban, first announced the project last year it undertook to provide a traffic-free, non-stop route to the city along the Footscray Road alignment.

Fantastic opportunity for Frankston–City Rail Trail

16 November 2016. A first class, end-to-end bike trail along the Frankston Line rail corridor can be delivered in conjunction with the level crossings removals scheduled for the Line, recent project planning has confirmed.

The result would be a highly valuable bike route connecting train stations, schools, shopping districts, beaches and other bike routes to the south of Melbourne and down the Peninsula.

And, in one brilliant swoop, the plan would complete the missing stretch of the Bay Trail to Frankston.

Additionally, the project would deliver sections of the VicRoads' Strategic Cycling Corridor (SCC) identified for that route.

The concept would be delivered like this:

1. The Level Crossings Removal Authority (LXRA) would deliver the new trail in the sections where it was undertaking work.
2. Local councils would deliver some of the short links where the route takes local roads, and would make



Bikes to benefit from Outer West roads splurge

17 November 2016. A \$1.8 billion road building splurge in Melbourne's outer western suburbs will deliver a huge upgrade to a severely undernourished bike network in the region.



An entire grid of arterial roads will be duplicated, or widened. More than 30 kilometres of links is involved

The roads have long been part of the Principal Bicycle Network, although little bike infrastructure is currently provided.

Typically VicRoads would build out the bike routes at the time when the roads are duplicated, as it is doing on a number of other suburban arterials right now.

This usually means off-road, wide, two-way bike paths on one side, or in some cases, both sides of the arterial.

In this instance though it appears the government will adopt a different delivery mechanism by combining construction and maintenance into a long term contract.

None-the-less, the policy of including bike infrastructure will remain.

The roads identified for expansion include some of the key direct links in and through the fast growing suburbs of the west, and with connections to residential, industrial, educational and commercial precincts.

Contract signed and works starts

- Traffic Planning
- Detours
- Work notices
- Constant communication
- Worked well where we were watching



Behaviour change is hard but essential

- Swapping Seats
- Riders and pedestrians don't understand the vision constraints
- Swept path and vehicle alignment on left turn is major issue
- Riders peripheral vision sends a false positive for gap between truck and dog



Where from here?

- CLOCS-A era arrives
- What are the differences?
- Have we lost or gained?
- The world beyond construction

Topic	Model contract clause
Truck safety features	<p>Safe vehicles - Specialist VRU Equipment</p> <p>Ensure heavy vehicles used in the carrying out of contract activities:</p> <ol style="list-style-type: none"><li>1. have side under-run protection;<li>2. have front, rear and side blind-spots eliminated or minimised through the use of direct and indirect vision aids, sensors and audible or visual driver alerts;<li>3. have audible means of warning other road users of a left-turn manoeuvre; and<li>4. have prominent signage on the vehicle warning cyclists and other road users of the dangers of manoeuvring past the inside of the vehicle or getting too close to the vehicle.<li>5. use fluorescent and retroreflective tape to outline the body of the truck and trailer, and increase the visibility of the drawbar.<li>6. use trucks that meet a minimum of Euro 4, but preferably Euro 5 or above standard.