





# **CLOCS-A Planning Workshop**

A partnership between:









# Agenda for today

- 1. Welcome
- 2. Project Plan, Deliverables and Timeline
- 3. CLOCS operational delivery in the UK
- 4. CLOCS-A Standard and Governance
- 5. CLOCS-A within the National Road Safety Strategy 2021-2030
- 6. Case Study Major Transport Infrastructure Authority
- 7. Technical Groups
  - 1. Vehicle Safety
  - 2. Driver Safety
  - 3. Logistics and Planning
  - 4. Communications and Advocacy
- 8. Discussion and summary
- 9. Close and thanks



# Acknowledgements - MoU Members

#### **Steering Group**

































**Supporting Partners** 























# Acknowledgements

1. Amelia Cavanagh Amy Gillett Foundation

2. Chris Loose Truck Industry Council

Greg Dikranian Transport for NSW

4. Ian McLeod Major Transport Infrastructure Authority

5. Kim Hassall CILT-A

6. Karyn Walsh CILT-A

7. Martin Toomey ARTSA-i

8. Michael Chan Victorian Department of Transport

9. Michael Holmes Sydney Metro

10. Patrick Trowse Bicycle Queensland

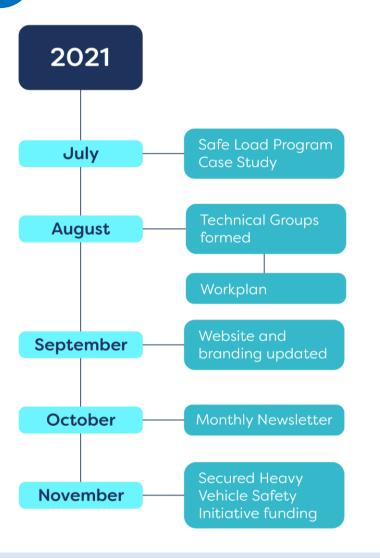
11. Owen Corey HSE Global

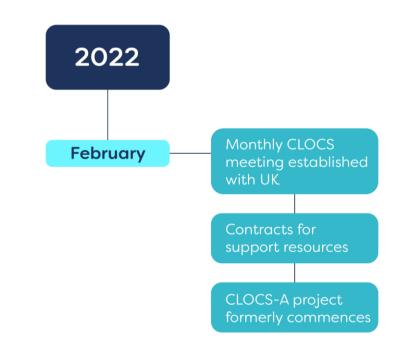
12. Andy Brooke CLOCS under TfL link

13. Tia Gaffney ARRB

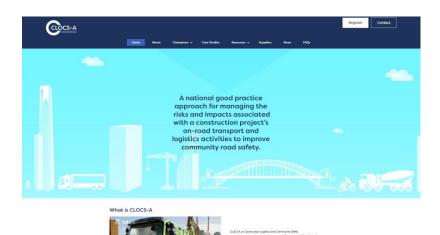


# Progress since May 2021 meeting















# **CLOCS-A Project Objectives**

The objectives in this project over 18 months following the signing of the contract include:

- 1. Establish a national voluntary standard that draws on adapting United Kingdom (UK)'s world's best-practice Construction Logistics and Community Safety (CLOCS) program to Australia.
- 2. Establishing the minimum requirements for the CLOCS-A standard which is developed consultatively through its expert technical groups.



# **CLOCS-A Deliverables**

- 1. CLOCS Governance Body which will include:
  - Memorandum of Understanding which will highlight CLOCS-A Champions
  - 2. Program Charter
  - 3. Preferred Host of CLOCS-A
- 2. Establishment of Technical Groups 1-5
- 3. CLOCS-A Standard
- 4. Engagement and awareness campaign of CLOCS-A
- 5. Ten CLOCS-A related case studies



# **CLOCS-A Timelines**













# CLOCS update and Q&A













www.clocs.org.uk

# Working together to create safer, leaner and greener construction logistics

CLOCS-A | 23 February 2022

Andy Brooke, CLOCS Programme Director





# So what is CLOCS UK?

A national standard developed by the industry for the industry to facilitate, support and drive the development of safer, leaner and greener construction logistics to:

- Reduce risk to vulnerable road users
- Improve efficiencies through effective planning, consideration of alternative solutions and more efficient turnaround of vehicles
- Improve air quality through reduced emissions
- Improve public confidence in construction industry and encourage active travel by reducing congestion and inconvenience



# **CLOCS Stakeholders**

A need for a consistent approach across industry and for stakeholders to collaborate within an agreed standard







# Regulators (particularly planning and highway authorities) shall >>

- embed the requirement to operate to the CLOCS Standard into policy and guidance documents
- ensure the planning process requires submission and approval of an outline and/or detailed Construction Logistics Plan (CLP) that addresses the main transport impact/risks in delivering the project safely before consent is granted
- require a project to have effective CLOCS implementation monitoring mechanisms and to provide to the authority (if requested) CLOCS compliance performance data
- have in place effective enforcement mechanisms to secure prompt action by the project team should a breach occur





## Clients shall>>

- specify in tender and contract documents for all stakeholders to comply to the CLOCS Standard
- ensure the project team develops and implements a suitable and sufficient CLP (Construction Logistics Plan)
- ensure effective monitoring of compliance to the CLOCS Standard

- obtain and monitor the contractor's action plan to address all identified issues and non-compliances
- ensure that all collisions that result in harm (and near miss incidents) that occur on journeys associated with the project are quickly investigated and actions taken to prevent recurrence





## Principal contractors shall >>

- ensure the project's potential impact on the community has been properly risk-assessed
- develop and/or implement the agreed CLP and ensure it remains suitable and sufficient
- procure site and fleet operations that comply to the requirements of the CLOCS Standard
- ensure site arrangements enable the safest fleet operations including, but not limited to, 'last mile' routing, level access/egress, stable loading/ unloading areas, effective delivery management systems and competent site access traffic marshals
- ensure effective and efficient site access gate checks of HGVs and

- their drivers to ensure they always comply to the CLOCS Standard. Non-compliances must be immediately risk-assessed, appropriately mitigated and addressed through procurement processes
- ensure effective independent monitoring of the project's compliance with the CLOCS Standard is undertaken approximately every 6 months and appropriate action taken to address non-compliance
- review information on all collisions that result in harm (and near miss incidents) that occur on journeys associated with the project and ensure they are quickly investigated and actions taken to prevent recurrence





# Fleet operators shall>>

- ensure all journeys are compliant with the CLOCS Standard, meeting the requirements described as Silver in the FORS Standard addressing management, driver, vehicle and operations issues
- Provide acceptable evidence of compliance as defined/specified by each procurer



# CLPs – the golden thread

The CLP focuses specifically on construction supply chains and how their impact on the road network can be reduced. The construction supply chain covers all movements of goods, waste and servicing activity to and from site.

A CLP provides the framework for understanding and managing construction vehicle activity into and out of a proposed development, encouraging modal shift and reducing overall vehicle numbers. A full assessment of all phases of construction should be included and detail:

- The amount of construction traffic generated
- The routes the construction vehicles will use
- The impact on relevant community considerations
- Any traffic management that will be in place
- Any policies which encourage modal shift



# **Construction Logistics Plans**

- CLOCS CLP Guidance document available on CLOCS website along with template and case studies
- Planned measures to be used to minimise vehicle trips and reduce opportunities for collisions with vulnerable road users
- Engage key suppliers/fleet operators in development of CLP
- Specify risk-assessed vehicle routes
- Ensure it is regularly reviewed as project develops
- Is it being complied with?

CLOCS CLP training available – Foundation, Practitioner and Advanced – and delivered online monthly



#### **Outline CLP Template**

| Development name:  |  |
|--------------------|--|
| Landowner:         |  |
| Site address:      |  |
| Site postcode:     |  |
| Existing site use: |  |
| Summary of works:  |  |

| Construction Logistics Manager:  |  |
|----------------------------------|--|
| Phone number:                    |  |
| Email:                           |  |
| Logistics provider contact name: |  |
| Phone number:                    |  |
| Email:                           |  |

#### CLP Produced by:

| Name | Signature               | Date |
|------|-------------------------|------|
|      |                         |      |
|      | CLP Accreditation date: |      |

#### CLP reviewed I

| •    |           |      |
|------|-----------|------|
| Name | Signature | Date |
|      |           |      |
|      |           |      |

LOCS\_CLP outline template\_V1.1.docx





# Where are we now?

#### Members

- 340 fee-paying CLOCS Champion members
- 20 Industry Partners
- Financially self-sustaining since June 2021
- Annual fee of £850 or 10% discount for 3-year commitment

## Member engagement

- Strategy, Standards and Governance Board
- Working Group
- E-Bulletin
- Annual Conference
- Social media



# Where are we now?

## **Training**

- Construction Logistics Planning training Foundation, Practitioner and Advanced
- Site Access Traffic Marshal training

## Support

- Resources
- Compliance Toolkit
- Best Practice Hub
- Online Safety Forum
- CLOCS Monitoring



# What next?

- Updated CLOCS Standard
- New website and revamped member portal
- Site Manager's Guide for Implementation
- Self-Assessment online tool
- Gate check app
- Fleet accreditation guidance
- Reward and recognition
- Member segmentation
- Focused Business Development Manager engaged

# Questions?





# The CLOCS-A Standard — what does that look like?







A partnership between:



# The CLOCS-A Standard - Purpose and Scope

#### Mission

Ensuring the safest construction vehicle journeys

#### Goals

Zero road trauma between construction vehicles and the community
Improve efficiency of construction deliveries
Build community confidence and reduce reputational risk
Improved air quality and reduced emissions

## **Scope / Application**

All construction projects that include government funding and their road transport supply chain

### **Key Stakeholders**

Government Clients/ Developers
Construction Companies
Transport Companies
Regulatory Authorities



# The CLOCS-A Standard – Proposed Structure

- 1. Executive Summary
- 2. Purpose and Scope
- 3. About the CLOCS-A Standard
  - Framework, application, key terms/ definitions, alignment to other schemes, etc.
- 4. Requirements (minimum, recommended, best practice)
  - Clients/ Developers
  - Principal Contractors
  - Transport Companies
  - Regulatory Authorities







#### Planning

- Develop Construction Traffic Management Plan / Construction Logistics Plan
- Undertake Haulage Route Risk Assessments
- Plan construction site layout, marshalling areas, etc.
- Consider alternative transport/logistics

#### **Procurement**

- Issue CLOCS-S specification in tender documents (CLOCS-A vehicle and driver requirements)
- Engage CLOCS-A accredited companies

#### **Implementation**

- Onboard and pre-mobilise CLOCS-A accredited companies
- Ensure safety of construction site / roadworks interfacing with community
- Conduct community road safety engagement (e.g. local campaign deployment, exchanging places, etc.)
- Report/ investigate and share lessons from incidents and near misses

#### Monitoring and Review

- Monitor performance and compliance
- CLOCS-A Site Visit/ Audit
- Self-assessment

**Input Group** 

TG3

TG1

TG2

G1 TG3

G2

TG4

TG3

Audit



Consolidation Group

#### **Planning**

- Input to CTMP/ CLP for project
- Input to Haulage Route Risk Assessments
- Investigate / propose logistics efficiencies (e.g. PBS, SPECTS)

#### **Procurement**

- Vehicle procurement includes CLOCS-A vehicle safety specifications
- Engagement of CLOCS-A accredited sub-contractors

#### **Implementation**

- Ensure heavy vehicle fleet safety and compliance maintained
- Ensure driver training and competencies, fitness for duty, etc.
- Conduct community road safety engagement (e.g. exchanging places/ swapping seats)
- Report / investigate and share lessons from incidents and near misses

#### **Monitoring and Review**

- Monitor performance and compliance
- CLOCS-A Site Visit/ Audit
- Self-assessment

**Input Group** 

TG3

TG1

TG2

31 | 1

TG4

ΓG2

TG3

Audit



Consolidation Group

# The CLOCS-A Standard – Development timeline

# February 22

## October 22

## February 23

## May 23

- Technical Groups 1-4 workshop and draft requirements
- Consolidation Group develop structure and incorporate requirements
- Audit / self-assessment process development

- Technical requirements consolidated in first draft CLOCS-A Standard
- Audit / self-assessment process drafted
- CLOCS-A Community review and consultation

- CLOCS-A Standard final draft
- Audit / self-assessment process final draft
- Finalisation of CLOCS-A Standard and Audit / selfassessment process



# Questions







# The CLOCS-A Program Governance — what does that look like?

J<sub>NHVR</sub>





A partnership between:



# Proposed Governance Structure of CLOCS-A

### **Steering Group**

- Overall governance and strategic direction of the CLOCS-A Program and Standard
- Approve CLOCS-A Standard and changes

### **Managing Body**

- Management of CLOCS-A Program and Standard
- Publish and maintain CLOCS-A standard, supporting resources
- Manage website, branding, marketing
- Establish two-way communication between CLOCS UK and CLOCS-A
- Provide clarification and support to CLOCS-A community and champions
- Identify sources of funding with view of sustainable model

### **Supporting Partner / CLOCS-A Champions**

- CLOCS-A community stakeholders
- Contribute industry best practice, case studies and lessons learnt
- Industry Champions of the CLOCS-A Standard



# The CLOCS-A Standard and Governance

## Technical Groups (1 – 4)

- Draft and develop technical requirements for the CLOCS-A Standard
- Subject matter experts within respective technical workstream

## **CLOCS-A Standard Consolidation Group**

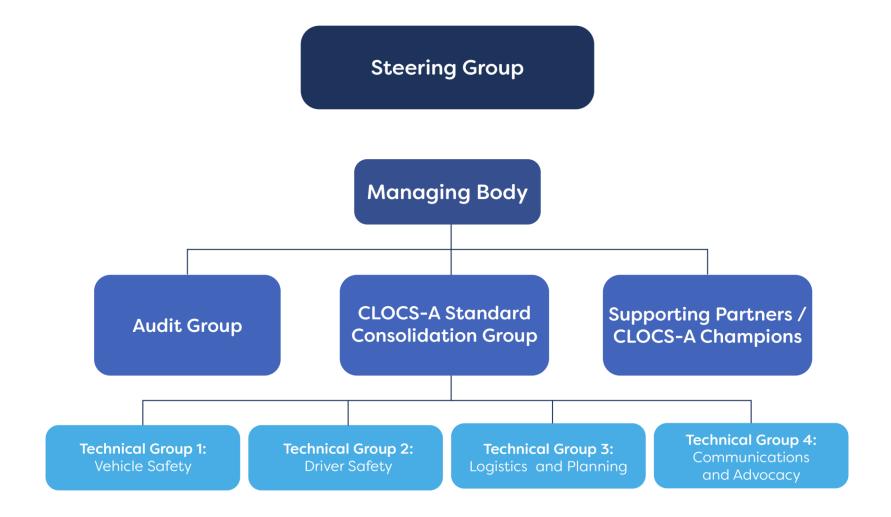
- Consolidate technical requirements into CLOCS-A Standard
- Coordinate consultation with CLOCS-A community on Standard development and updates
- Maintain CLOCS-A Standard

## **CLOCS-A Audit Group**

- Development of the auditing and monitoring requirements
- Undertake site, vehicle and driver checks
- Review self-assessments
- Provide recommendations for improvement



# **CLOCS-A Governance**





# Questions





# Vulnerable Road User Initiatives

23 February 2022











## Major Transport Infrastructure Authority – MTIA Who We Are

## Level Crossing Removal Project

Removing 85 level crossings across metropolitan Melbourne.

## Major Road Projects Victoria

Reducing congestion and travel times, improving safety, and connecting communities.

## Melbourne Airport Rail

Travel to the heart of Melbourne's CBD in around 30 minutes.

## Metro Tunnel Project

A city-shaping project for Melbourne and Victoria.

## North East Link Program

Bringing our road, bus and bike network together.

## Regional Rail Revival

Upgrading every regional passenger rail line in Victoria.

## Suburban Rail Loop

Connecting Melbourne's middle suburbs by rail.

## West Gate Tunnel Project

An alternative to the West Gate Bridge – reducing congestion and removing trucks from residential streets.















# 2016 - 2019



Joint Venture

# Typical Contract Requirements E.G.

### 6.1 Safety equipment on vehicles

Without limiting the Developer's obligations under the Heavy Vehicle National Law, the Developer must ensure that all heavy vehicles used during the performance of Oversito Development Works have:

- (a) side under run guards fitted (unless the Developer can demonstrate to the satisfaction of the State that the vehicle will not perform the function for which is intended if side under run guards are fitted);
- (b) front, rear and side blind spots completely eliminated or minimised as far as practical and possible, through the use of fully operational direct and indirect vision aids, sensors and audible or visual driver alerts;
- (c) equipment fitted with an audible means of warning other road users of a left manoeuvre; and
- (d) prominent signage on the vehicle to warn cyclists and other road users of the dangers of passing the vehicle on the inside or of getting too close to the vehicle.

### 6.2 Driver training

Throughout the performance of the Oversite Development Works, the Developer must ensure that all heavy vehicle drivers, including drivers employed by the Developer's subcontractors, undergo training (to include a mix of theoretical, e-learning, practical at on the job training) and continuous professional development covering the safety of

# **Implementation Strategy**

- Major urban projects first (Metro Tunnel, Westgate Tunnel, North East Link all have VRU requirements)
- Other projects progressively requiring blind spot elimination / warning signs / driver training in contracts
- Some projects also requiring side underrun / left turn audible alarms dependent on project VRU risk profile.

# Challenges

- VRU requirements perceived as one way (onus on the industry, not the VRU's to comply)
- The construction industry needed time to understand how to operationalise the requirements

   we asked for too much too quickly – needed to stage the implementation.
- Major contracts now require a VRU coordinator
- A joint working group developed a heavy vehicle specification to translate contractual requirements to operational requirements
- Truck fleet age is an issue for retrofitting of equipment such as side underrun where engineering certification was required

# **Challenges**

- Left Turn audible alarm technology was not readily available in Australia initially (there are now suppliers / installers)
- Not all aspects of the driver training program are accepted by industry (e.g. on bike)
- Managing / coordinating interfaces between:
  - site access points and complex VRU movement zones
  - Placement / management of queuing trucks
  - adjoining project activities using heavy vehicles (not MTIA related) but presence of these trucks causes confusion and saturates local areas creating VRU hazards
- Pedestrian / Cyclist behaviour in urban environments (walking / riding into vehicles)

# **VRU fitted Trucks –reference photos**





# **VRU - Site Photos**

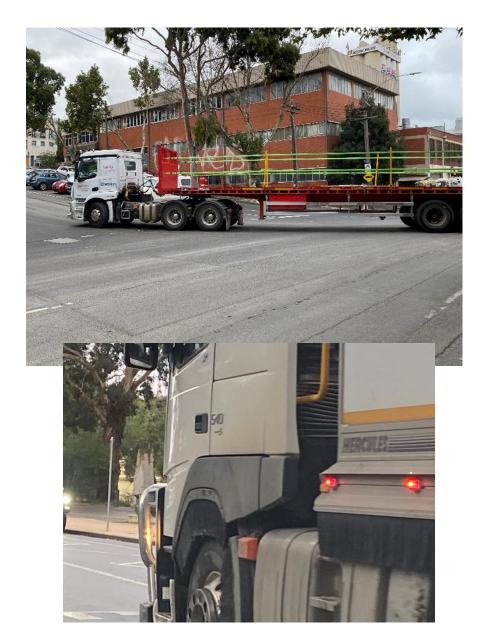


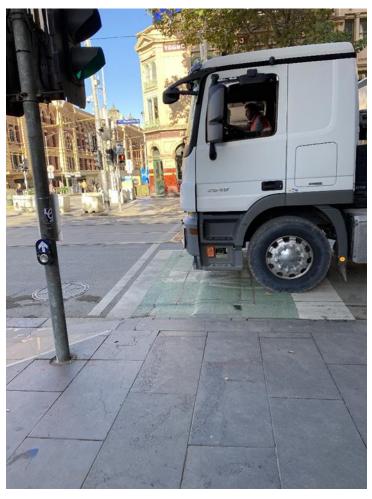
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# **VRU Site Photos**





# **VRU Education is Critical (swapping seats)**







# **VRU Education is Critical (swapping seats)**

- Truck drivers have no visibility of you when you're in front of the truck
- Visibility is so minimal
- I would have thought you could see a lot more from the truck than you can actually see by sitting up here
- Oh my god, just keep clear of trucks
- It helps people understand how trucks need to manoeuvre around tight corners in the city
- It only really comes to life when your really sitting up in the truck
- In a nutshell, they (drivers) just can't see you, that's confronting
- From today, I think I will stop in different places around trucks
- That will be a bit of a tweak on my behaviour

# Thank you



# CLOCS-A within the National Road Safety Strategy 2021-2030







A partnership between:





# Technical group (TG 1) - Safer vehicles







A partnership between:



# TG 1 – Safer Vehicles

### **Chairperson:**

Michael Chan
Senior Vehicle Standards Engineer



### **Supporting Chair:**

Chris Loose
Technical Officer



### **Supporting Chair:**

Greg Dikranian
Safe System Manager (Safer Vehicles)



### **Members:**





















### **Support Project Officer:**

Merv Rowlands
Construction Vehicle Consulting
process of on-boarding

### **Admin support:**

Olivia Dobson







### TG 1 – Safer Vehicles

### Aim:

Working group to identify what safety features should be included on trucks and trailers to align with CLOCS and protect vulnerable road users.

The technical group will create an implementation pipeline of technologies over a 10-year period to assist project managers to improve safety outcome.



# Pipeline of planned deliverables in stages for TG1 STAGE 1

### Analyse and finalise the truck safety features for inclusion in 3 Tiers

- TG1 completed workshop to analyse truck/trailer safety features
- Draft proposal has been tabled with 80% in-principle agreement achieved
- Overlay other factors to further refine draft include cost benefits, VRU safety benefits, etc
- Endorsement of the standards

### STAGE 2

### **Develop recommendation for the adoption of the 3 Tiers**

• TG1 to develop recommendation of adoption for Level 1, 2, 3 based on project value, time and risk

### STAGE 3

### **Develop an efficient and cost-effective Certification system**

- TG1 to consider the adoption and development of a simple and effective way to certify vehicles/operators
- Identification of suitable organisations that can preform this service.

### STAGE 4

### Compilation of the 3 Stages into a homogeneous package

All 3 stages to be integrated well and ready for simple adoption for project managers



# Questions



















# TG 2 – Driver Safety

### **Chair:**

Michael Holmes



### **Supporting Chair:**

Amelia Cavanagh
Amy Gillett
FOUNDATION
Safe together

### **Supporting Chair:**

Patrick Trowse



### **Members**:





















# TG 2 – Driver Safety

### Aim:

- Define the minimum driver training and competency standards, fitness for duty and safe driver behaviour standards required to ensure safe and professional operation of heavy vehicles around vulnerable road users on construction projects in the community.
- Develop the overarching safe driver requirements for heavy vehicle drivers working on construction projects and transport companies accredited to the CLOCS-A Standard.



# Planned deliverables for TG2



### STAGE 1

Review current industry standards and identify good practice training and competencies, fitness for duty standards and safe behaviour initiatives and programs.



### STAGE 2

Draft minimum requirements for respective parties in a construction project to ensure driver training and competency, fitness for duty and safe driving behaviours.

Assess and allocate recommended level of each requirement based on 3-tired approach (Basic / Intermediate/ Advanced).



### STAGE 3

Develop supporting guidance and tools to assist industry in implementation.



### STAGE 4

Consolidate into the Driver Safety Requirements component of the CLOCS-A Standard.



# Questions











# TG3 – Logistics Stream (Dr Kim Hassall)

A partnership between:









# TG 3 – Logistics and Planning

### **Co-Chairperson:**

Dr Kim Hassall
Chair



### **Supporting Chair:**

Ian McLeod
Director Delivery Safety



### **Members:**



















# TOOWOOMBA REGION Diek treeditiese De

Rich traditions. Bold ambitions.

### **Project Manager:**

Drew Gaynor
Drew Gaynor Consulting
process of on-boarding

### **Project Support:**

Masters student process of on-boarding





# To be activated - TG3

- Will be holding Monthly Meetings for the TG3 Stream
- Select and Integrate the New Masters Student into TG3 and across the CLOCS-A community
- Task allocation across the 'finalized' work program (11 projects)



# Work Program

**Item** Description

Create a Construction Logistics Plan (CLP). This can embrace both a macro and several micro plans that span not only the logistics space but to a lesser extent the contract purchasing and the field operations, encompassing the protection of vulnerable area users is paramount.

- 2 Vehicle Movements and Traffic management planning for delivery into an off-site operation,
- The need for specific <u>Route Assessment Planning</u> covering not only possible high volume day-to day operations As such route assessment planning is essential to the project.
- The larger and more diverse floats/flat-tops that carry Over Dimensional, and Heavy Haulage loads, which may need alternative routing, in possibly different time windows is often done by specialist contractors. (Note: Route assessment for ODs is often handled by the specialist sub-contractor)



# Work Program – TG3

5/6

Where to place a range of construction activity sites, from assembly of major project components (perhaps from other assembly areas), storage and holding sheds and even truck parking and site inspection areas. There can be restrictions on many urban construction sites due to size however, green field sites offer more site planning potential. It should be noted that smaller sites and smaller projects are far more compromised in space and flexibility and as many are urban they are also riskier.

Outside the gate, the construction zone, the project interfaces with the community. As such minimizing freight exposure: noise, emissions and vehicle trips need planning attention as does the time windows allowed for construction.

8

Can other freight modes be used to assist or during the project's construction? This is often a neglected thought but there are examples where rail, barges have integrated with road transport to move specific project inputs. (Who knows what role larger drones may have in delivering vital spare parts to machine that has broken down.)



# Work Program – TG3

Not all projects are major or mega projects. The elements of logistics
planning also need to be scalable to suit medium and smaller projects that
have shorter timeframes.

Across a major project's timeline elements may change and unplanned events can/will happen. These ad-hocs need to have a presence in the contract that allows the flexibility to overcome unexpected happenings. These could be partial route closures, unexpected changes to regulation or even network modifications impacting on the usual delivery of some materials.

Are there multi site/project economies of scale to be had with near vicinity projects? How could this work?



11

10

# Work Program – TG3

Assembly of Potentially useful freight/Logistics Standards, eg

- Humanitarian Logistics Standard Format interesting/flexible
- ISO Draft Freight Standard Format / pretty inflexible

Case Studies – City Logistics SUGAR Urban Freight compendium – London Construction Freight Consolidation Centre

Sharing the VicRoads road use construction charges policy (may face more of these across States)



# Approaches Program – TG3

**Approaches to potential CLOCS-A Community Members** 

- Holmesglen TAFE (Construction Department)
- MAV
- ALGA (Transport Desk) \*
- RMIT (Logistics/Transport Safety Group)
- VU (Freight/Infrastructure Group)



# Questions











# TG4 – Communications and Advocacy











# Acknowledgement to current members

### **Chairperson:**

Jerome Carslake
Director



### **Supporting Chair:**

Martin Toomey
Chair























### **Support Project Officer:**

Masters student process of on-boarding



### Admin support:

ACCIDENT RESEARCH

Olivia Dobson





# **TG 4 – Communications and Advocacy**

### Purpose:

This Technical Group 4 for *Communications, Engagement and Advocacy* is established to develop a CLOCS-A stakeholder engagement and communications strategy and actions.

This strategy will aim to engage all road user groups, in particular vulnerable road users, to help educate and raise awareness on the risks of interacting with construction related vehicles and the safe and appropriate behaviours we all have a responsibility to follow to stay safe.

# Approach:

TG4 will be delivered through two streams:

Stream 1: Community Engagement - awareness beyond major projects

Stream 2: Advocacy - making the business case for CLOCS-A



# Planned deliverables for TG2



### STAGE 1

- Map the stakeholders
- Define problem / issue and understand the view points
- Scan of existing content / material / literature





### STAGE 2

- Development of draft CLOCS-A guidance/tools relating to key risks and areas
- Consultation with members

Eg case studies, engagement plans, consistent guidance along routes,



### STAGE 3

- Agreement of CLOCS-A content
- Translation of deliverables from TG1-3 outputs



### STAGE 4

Monitoring and evaluation framework



# TG 4 – Communications and Advocacy

# **Case Study – champions sharing good practice:**

- Template based on Sydney Metro which is contract requirement
- Template developed (BaseCamp) all members/champions invited to submit topics

### **Topics Under Development:**

Be Truck Aware – TfNSW

Conspicuity Markings – Holcim

Left turn audible alarms – Transurban > MTIA > Holcim

HIRA Tool – Vic DoT

Safety Vehicle Check/Pre start check – WestConnex John Holland CPB





# Questions





# Thank you

# **Contacts**

TG1: Michael Chan - Michael.Chan@roads.vic.gov.au

TG2: Michael Holmes - michael.holmes@transport.nsw.gov.au

TG3: Kim Hassall - <u>translog@iprimus.com.au</u>

TG4: Jerome Carslake - Jerome.Carslake@monash.edu

