

Application for an enforceable undertaking

June 2019

Part 4, Health and Safety at Work Act 2015

The commitments in this application are offered to WorkSafe New Zealand by

Name of entity or, partnership or individual applying for this undertaking

Downer New Zealand Limited

Application for an enforceable undertaking

Part 4, Health and Safety at Work Act 2015

The commitments in this application are offered to WorkSafe New Zealand by

Name of the person or persons who will be signing this undertaking in section 4:

Craig West, Executive General Manager Transport

On behalf of:

Downer New Zealand Limited

Name of the entity giving this undertaking (if an individual or sole trader, leave blank - complete in all other cases)

Downer New Zealand Limited

This enforceable undertaking is given on the day and date that it is accepted and signed by WorkSafe. The undertaking and its enforceable terms will operate as a legally binding commitment on the part of the person from the date it is given.

Do not refer to the victim by name in this document. Please refer to the victim/worker/employee/volunteer/or other term as appropriate.

WorkSafe respects your privacy and is committed to protecting personal information. The information provided in this document is for the purpose of an undertaking given to WorkSafe under Part 4 of the *Health and Safety at Work Act 2015*. This information will be managed within the requirements of both the *Privacy Act 1993* and the *Official Information Act 1982*.

There is an expectation that WorkSafe will generally publish the undertaking in full on its website.

TERM	DEFINITION
Contravention	An action which offends against the <i>Health and Safety at Work Act 2015</i> and/or any Regulations made under it. It includes both health and safety contraventions. A contravention also includes an alleged contravention.
HSMS	A Health and Safety Management System.
Person	An individual who or a legal entity which has a duty under the <i>Health and Safety at Work Act 2015</i> and can give a written undertaking. The term includes individuals, each partner in a partnership, corporations, trustees of trusts, and crown organisations.
Health and Safety legislation	<i>Health and Safety at Work Act 2015</i> and associated regulations.
Enforceable undertaking	An enforcement pathway that allows a duty holder to voluntarily enter into a binding agreement with WorkSafe. The agreement outlines actions the duty holder will undertake to address the contravention. It is expected to deliver activities which benefit workers, the wider industry or sector and/or the community as well as acceptable amends to any victim(s).

1. General information

1.1 Details of the person/persons/entity giving the undertaking

Name of person(s) making this undertaking: (in all cases complete with the name(s) of those who are signing this undertaking under Section 4)

Craig West

Name of entity: (if applicable, leave blank if an individual)

Downer New Zealand Limited

Type of legal entity: (complete in all cases, for example individual, sole trader, partnership, trust, company, etc)

Incorporated company

Nominated contact person: (the same person listed above/one of those listed above)

John Burden

Physical address:

Downer New Zealand Limited
130 Kerrs Road
Wiri
Auckland 2104

Postal address: (if different from physical address)

Downer New Zealand Limited
Private Bag 93325
Otahuhu
Auckland 1640

Work phone: 09 251 0340

Mobile phone: 027 472 5848

Email: john.burden@downer.co.nz

Industry: Civil construction and infrastructure

Workers (enter numbers):

Full-time: 6262 Part time: Casual: 102

Description of the products and services provided by the business or undertaking:

Downer New Zealand Limited ('Downer') provides services in engineering, construction and maintenance, transportation, technology and communications, and utilities services.

This incident arose out of Downer's Transport business unit. Downer's Transport business unit builds, maintains and operates transport assets in New Zealand.

It carries out network maintenance and civil construction services for over 25,000 km of roading network for Waka Kotahi New Zealand Transport Agency and local authorities. This work includes, but is not limited to, pavement construction, surfacing, pavement repairs, moving, grading, signs maintenance and renewals and road marking. The works range from routine and cyclical works to fixed sites.

Routine/cyclical works are generally mobile operations that include mowing, maintaining signs, grading roads, pavement repairs and road marking. Fixed sites are work sites that are static and can be defined as a discrete job (i.e. start and end points of the site are defined and the tasks are non-routine).

Comments:

At the time of the incident, Downer and McConnell Dowell Constructors Limited ('McConnell Dowell') were joint venture partners undertaking construction of stage 2 of the Christchurch Southern Motorway extension and upgrade ('CSM2 Project'). This is a large-scale infrastructure project for Waka Kotahi New Zealand Transport Agency.

1.2 Detail of the contravention

Downer has been charged with one offence under sections 36(2), 48(1) and 48(2) of the Health and Safety at Work Act 2015 in relation to an incident on 30 October 2019 on Springs Road, Christchurch.

WorkSafe New Zealand ('WorkSafe') alleges that Downer, being a Person Conducting a Business or Undertaking and having a duty to ensure so far as reasonably practicable that the health and safety of members of the public was not put at risk by work carried out as part of the business or undertaking, namely construction works as part of the CSM2 Project, did fail to comply with that duty and that its failure exposed members of the public, including the Victim, to a risk of death or serious injury.

WorkSafe says there were two practicable steps that Downer could and should have taken to ensure the health and safety of members of the public:

- Maintained safe and effective temporary traffic management for cyclists using Springs Road, in particular by maintaining a minimum one metre usable shoulder for cyclists as required by the Traffic Management Plan
- Provided adequate information, instruction, and supervision specifically in relation to traffic management operations.

WorkSafe has made identical allegations against McConnell Dowell.

1.3 Detail the events surrounding the contravention

On 30 October 2019 the Victim, a cyclist, was fatally injured in a collision with a concrete truck delivering concrete to the CSM2 Project.

The incident scene was located on the Greenfields portion of the CSM2 Project site, also known as Separable Portion 2. Separable Portion 2 involved the construction of an 8.4 kilometre four-lane median separated motorway and supporting bridges. During construction of an overpass bridge, a temporary road was in place at Springs Road. There were a number of site access points off Springs Road, including Gate 57, which provided access to the construction site.

At about 8am on 30 October 2019, the Victim was travelling northbound along Springs Road towards Halswell Junction Road on her bicycle.

At the same time, a truck driver driving a concrete truck was proceeding north on Springs Road towards the CSM2 Project site entrance at Gate 57, in order to make a delivery of concrete to the project.

As the driver began to turn left into the site access driveway at Gate 57, the Victim approached the same location, travelling along a temporary pedestrian pathway separated from the road. The Victim and the truck collided. The Victim sustained very serious injuries and died at the scene.

1.4 Detail any enforcement notices issued that relate to the contravention as detailed in term 1.2

DATE	NOTICE TYPE	NOTICE NUMBER	CONTRAVENTION OR PROHIBITED ACTIVITY	ACTION TAKEN IN RESPONSE TO NOTICE
/ MM / YEAR	None	N/A	N/A	N/A
/ MM / YEAR				
/ MM / YEAR				

1.5 Detail the rectifications to the workplace or work practices made as a result of the contravention (1.2), events (1.3) and the enforcement notices issued (1.4)

As a result of the contravention, Downer and McConnell Dowell together took the following remedial steps to address the work practices which WorkSafe has alleged were deficient:

Review and make improvements to traffic management provisions for cyclists and pedestrians:

- The joint venture undertook a complete review of all traffic management onsite. This included confirming that all sign and cone placement and traffic management layouts were installed as per the approved traffic management plan.
- The joint venture completed a review of all pedestrian walkways and cycle paths on the CSM2 Project. This was to ensure that it was clear to pedestrians and cyclists which path to use, and all road shoulders were adequate for all cyclists to use. As a result:
 - Additional signage was installed to ensure all pedestrians and cyclists were notified of the correct pathway to use.
 - The existing road sweeper was engaged to continuously sweep the road and cycle paths to ensure they were clear of debris and safe for use by cyclists.
- A regular formal inspection focused on the cycling and pedestrian pathways was created. This was completed in addition to the two hourly checks that were completed by the Site Traffic Management Supervisor.

CONTINUED AT APPENDIX A

1.6 Total amount of money spent on rectifications

The direct costs of the rectifications undertaken by Downer and McConnell Dowell following the Incident are unable to be quantified.

The indirect and direct costs for Downer of the creation of a National Temporary Traffic Management role is \$250,000 annually. This will be an ongoing investment by Downer in temporary traffic management.

1.7 Detail the injury sustained or illness suffered by victim(s) or other(s) as a consequence of the contravention or, (as applicable) the *potential* for fatal injury or future fatal illness

The Victim suffered serious head and pelvic injuries and died at the scene.

1.8 Detail any offer of amends or payments made to the victim(s) who sustained injury or suffered illness (the total monetary amount here is also to be included in the table at 3.12.3)

Describe the victim(s) relationship to you/the entity in question: (eg employee(s)/shareholder/director/family member/contractor, etc. If the relationship has more than one dimension, for example a family member who is also an employee and a director and/or shareholder of the business, or an employee who is a shareholder (etc) – then please describe this)

The Victim was a member of the public and had no pre-existing relationship with or connection to Downer or McConnell Dowell.

Detail offer of amends or payments:

On the day of the accident, Waka Kotahi advised the joint venture team on site that a family liaison had been appointed by the Victim's family, and the joint venture was given her details. A joint venture representative made contact with the family liaison to express their condolences and advise that the joint venture was available if the family wished to meet or discuss the accident. The joint venture representative later contacted the family to advise that the joint venture intended to arrange a whakanoa (blessing) at the site and invited the family to attend. The whakanoa was performed by Ruawhiti Pokaia, the lead Kaumātua of Rehua Marae. To give the family their privacy, a whakanoa was attended by CSM2 Project workers and senior members of Downer and McConnell Dowell in the early morning and a private whakanoa was held for the family later that same morning.

CONTINUED AT APPENDIX A

1.9 Detail any consultation with the victim(s) as to their views on whether an enforceable undertaking would be an acceptable alternative to prosecution

Downer and McConnell Dowell have consulted with the Victim's family about this enforceable undertaking. Details regarding the consultation are included at APPENDIX A.

1.10 Detail any consultation with unions/sector/industry as to their views on whether an enforceable undertaking would be an acceptable alternative to prosecution

Downer and McConnell Dowell have worked together collaboratively as joint venture partners to develop the enforceable undertakings they are each submitting. The focus has been to ensure the activities each business takes are not only relevant to their businesses, industry and support the wider community, but are also complementary of each other ensuring the benefits of the activities reach as many people as possible.

In developing this application Downer has discussed the proposed initiatives it intends to undertake (individually and jointly with McConnell Dowell) with leading industry participants including Fulton Hogan, HEB Construction and Higgins. All are supportive of the initiatives proposed and agree an enforceable undertaking would be an appropriate alternative to prosecution.

CONTINUED IN APPENDIX A

1.11 Detail the support provided or proposed by the person to the victim(s), other(s)

DATE	DESCRIPTION OF SUPPORT	COMMENTS
DD / MM / YEAR	SEE APPENDIX A	
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		
DD / MM / YEAR		

1.12 Detail any current HSMS implemented and maintained by the person

Describe how health and safety risks are managed, including types of procedures or policies or standards:

Downer has an integrated management system, which includes our Health and Safety Management System ("HSMS") and is currently accredited to ISO 45001. Downer is also a member of the ACC Accredited Employer Programme and is meeting the tertiary requirements for the Safety Management component, and Injury Management components of the program.

Health and safety management procedures

In terms of development and implementation of this HSMS, policy and framework standards are authored and provided by Downer's Zero Harm team in conjunction with Downer Group based in Australia. These set both expectation and tone, as well as applying certain minimum levels of control for all Downer business units to achieve in the management of health and safety. Local procedures, standards and forms are then created by a dedicated Health, Safety, Sustainability, Environment, and Quality (HSSEQ) Systems and Assurance team. Operational Health, Safety, and Environment (HSE) teams then engage and influence the business to effectively implement the requirements locally within the business units.

Our HSMS processes, include:

1. Leadership

- Assigning roles and responsibilities to manage health and safety
- Encouraging worker participation

2. Planning

- Planning to meet all legal requirements
- Planning for management of risks and opportunities
- Setting objectives and targets

3. Support

- Providing resources to manage health and safety
- Providing training and assessing competencies
- Internal and external communication

4. Operations

- Implementation of management plans
- Managing subcontractors and service providers
- Preparing for emergencies

5. Evaluation

- Monitoring, measuring and analysing performance,
- Auditing and reviewing performance of the HSMS

6. Improvement

- Responding to incidents and non-conformance
- Continual improvement of the HSMS.

CONTINUED IN APPENDIX A

1.13 Detail the level of auditing undertaken on the HSMS, including compliance audits and audit frequency

Downer's HSMS is regularly tested through a series of programmed internal and external audits. These include:

- Annual external audits undertaken on Downer's HSMS by GRS (and prior to their engagement Telarc) and ACC (as part of its tertiary accreditation employer programme).
- Downer's Australian parent, Downer Group, also undertakes internal audits against Downer's HSMS and Critical Risk programmes.
- Projects and Sites also perform annual self-assessments of sites, which include assessment of management activities and processes and compliance with Downer Standards.

In addition to structured audit programs, Downer recognises that it is important to understand how its HSMS is implemented on the ground i.e. "work as done" vs "work as planned". This is a key part of Downer's commitment to Zero Harm.

Downer assesses implementation and engagement with its HSMS through a program of visual leadership and monitoring. This requires 'buy in' from all levels of the business. Most importantly, this means our business leaders are actively engaged in health and safety and 'walk the talk' in leading health and safety from the top. Senior leaders in the business are expected to regularly conduct Critical Risk Observations and Critical Risk Verifications. This ensures that the risk mitigation strategies being employed on site are aligned with our overall approach to managing risks. Presence of senior leaders on site also reinforces the importance that Downer puts towards safety in the field.

CONTINUED IN APPENDIX A

1.14 Detail the consultation undertaken or proposed to be undertaken, in relation to this undertaking

As discussed in sections 1.9 and 1.10 above, Downer and McConnell Dowell have consulted with the Victim's family, and other relevant industry participants to seek their views on the appropriateness of Downer and McConnell Dowell agreeing Enforceable Undertakings with WorkSafe as an alternative to prosecution and the various activities proposed to be completed by Downer and McConnell Dowell..

In addition, in preparing the content of this enforceable undertaking application, Downer has also engaged with, and sought the views of, the following people/groups:

- Members of Downer's internal management, including Downer's Chief Executive Officer, Executive General Manager of Zero Harm, Executive General Manager of Dower Transport, Chief Financial Officer, Chief Legal Counsel – New Zealand, General Manager Major Projects and the General Manager Operations South Island & Wellington.
- Downer's temporary traffic management representatives, as they have real world experience and technical skills that are relevant to the changes the business is seeking to effect.
- Members of the Downer Zero Harm Learning and Development teams, as they will be involved in the development and implementation of the activities set out in the undertaking.
- Downer Group to seek their views and support of the activities proposed in the undertaking and seek their input into the activities based on their experience.

2. General terms

The person acknowledges and commits to the general terms set forth in the sub-terms below.

2.1 Acknowledgement that WorkSafe alleges a contravention occurred as detailed in term 1.2

Downer acknowledges that WorkSafe alleges Downer has contravened section 36(1)(b) of the Health and Safety at Work Act 2015. Downer has taken this incident and WorkSafe's allegations seriously. This is reflected in the investigation undertaken by Downer into the circumstances of the incident and the implementation of the remedial steps outlined in section 1.5 above to prevent recurrence of the incident.

2.2 Statement of regret that the contravention occurred

Downer deeply regrets that this tragic incident occurred and acknowledges the pain and suffering caused to the Victim's family and friends as a result of losing their loved one. Downer and McConnell Dowell have engaged with the Victim's family and apologised directly to them for what occurred. Downer again extends its deepest condolences to the Victim's family for their loss.

Downer is committed to ensuring the business and industry learn from this tragic incident and that improvements are made across the industry in the hope that no similar event occurs in the future. The actions Downer proposes to take in this enforceable undertaking are evidence of its desire to effect long lasting change in this area.

2.3 Statement of the reasons why, on balance, the person considers this undertaking is the most appropriate response to the contravention

Downer acknowledges that WorkSafe generally considers an enforceable undertaking is unsuitable where a fatality has occurred and understands the basis for this. In this case, however, Downer and McConnell Dowell consider that an enforceable undertaking is the most appropriate response to the contravention, and that it will provide a significantly better outcome for all parties (WorkSafe, the Victim's family, the roading construction industry, Downer and McConnell Dowell) than a court imposed penalty would.

This is because this enforceable undertaking will facilitate investment by Downer and McConnell Dowell in a number of key initiatives that will move industry beyond mere compliance with existing requirements and have a significant step change effect and benefits for the construction industry and the broader community, especially (but not limited to) in Christchurch where cycling is a common recreational and commuter activity. This enforceable undertaking provides a practical opportunity for work to be completed that can help prevent similar incidents occurring in the future. Cyclists are exposed to risk in their interactions with motorists every day. This risk is exacerbated when traffic is moving through road works.

In recent years Downer and McConnell Dowell have seen an increase in the number of cyclists using the roads, along with increasing traffic volumes. This has intensified the interaction between vehicles and cyclists. Unfortunately, the practices the construction industry has been using to manage temporary traffic management situations has not responded as well as it could have to keep up with the changes in transport modes and volumes. Construction delivery is constantly evolving and there is an opportunity here through this enforceable undertaking to build up the capability of the temporary traffic management designers and site traffic management supervisors to better identify the risks to cyclists and other vulnerable road users, and provide clear guidance on how to use control measures so cyclists and vulnerable road users are better protected.

It is noted that the current Code of Practice for Temporary Traffic Management is a rules-based document and relies on site traffic management supervisors to implement the traffic management plan with a focus on compliance, rather than risk. Working with the industry, Downer and McConnell Dowell would like to improve the way in which risks associated with temporary traffic management are assessed and managed, so that going forward there is greater awareness of the impacts of decisions for all road users, especially vulnerable road users.

By contrast, any penalty imposed by a court will have an effect for a limited duration and will only result in a monetary penalty imposed. It will not necessarily result in the wider benefits for the industry and cyclists generally which is what is proposed by this enforceable undertaking. Together, Downer, McConnell Dowell and the Victim's family believe that this enforceable undertaking will be a better outcome than a court imposed fine (and reparation which is also part of this enforceable undertaking).

2.4 Statement of commitment that the behaviour, activities and other factors which caused or led to the contravention has ceased and will not reoccur

Downer understands that it is important to reflect on and learn from this incident. It is committed to ensuring the behaviour, activities, and other factors, which caused the alleged contravention, have ceased and will not reoccur. Since the incident Downer has taken steps to communicate the issues highlighted by this incident to the business through toolbox talks and industry through safety alerts and discussions with other industry participants and will continue to do so.

The number one consideration in Downer's business is the safety of those engaging with it, whether they are workers, contractors, or members of the public. Downer commits to complete the activities set out in this enforceable undertaking so that, so far as is reasonably practicable, those circumstances will not reoccur.

2.5 Acknowledgment of the policy published by WorkSafe for the acceptance of an undertaking

(write the name of the person(s) or entity giving the undertaking)

Downer

has read and understood the Enforcement Undertaking Operational Policy.

2.6 Acknowledgement that this undertaking will be published and publicised in full

(write the name of the person(s) or entity giving the undertaking)

Downer

acknowledges that the undertaking will, if accepted, be published on WorkSafe's website in full and referenced in WorkSafe material.

2.7 Statement of the person's ability to comply with the terms of this undertaking and meet the projected costs of the activities

(write the name of the person(s) or entity giving the undertaking)

Downer

has the financial ability to comply with the terms of this undertaking and have provided evidence by way of

(type of evidence provided)

Downer's parent company is a publicly listed company in Australia with publicly available financial information. Further assurances can be provided with this undertaking to support this declaration.

In the event of impending receivership, liquidation or sale of the entity, (write the name of the person(s) or entity giving the undertaking)

Downer

will advise WorkSafe of the relevant circumstances and its capacity to comply with the outstanding terms of this undertaking.

2.8 Statement outlining any relationship between the person and any corporations, officers, employees, contractors, proposed beneficiaries of donations or scholarship or other recipient of financial benefit contained in this undertaking

Downer acknowledges that it has, or members of its senior management team have, current relationships with the following entities or people proposed as beneficiaries in this undertaking:

- Civil Contractors New Zealand – Downer is a current member.
- CHASNZ – Downer's CEO is a Board member.
- Current workers of Downer.

Aside from those relationships Downer is not aware of any other current relationships with any of the proposed beneficiaries outlined in this undertaking.

2.9 Statement regarding Intellectual Property

(write the name of the person(s) or entity giving the undertaking)

Downer

grants WorkSafe a perpetual, non-exclusive, worldwide and royalty-free licence to use, for any purpose, all Intellectual Property Rights in relation to any material developed as a result of this undertaking. This licence includes the right to use, copy, modify and distribute the materials.

2.10 Acknowledgement that the person may be required to provide a statutory declaration

(write the name of the person(s) or entity giving the undertaking)

Downer

acknowledges that it may be necessary for WorkSafe to obtain a statutory declaration outlining details of any prior convictions (safety related) outside of New Zealand and that it will provide such declaration if required by WorkSafe

2.11 Statement of commitment from the person to participate constructively in all compliance monitoring activities for this undertaking

1. It is acknowledged that responsibility for demonstrating compliance with this undertaking rests with the person.
2. Evidence to demonstrate compliance with the terms will be provided to WorkSafe by the due date for each term.
3. The evidence provided to demonstrate compliance with this undertaking will be retained by the person until advised by WorkSafe, that this undertaking has been completely discharged.
4. It is acknowledged that any failure to meet the due date for an enforceable term will result in the matter being escalated and may lead to enforcement action.
5. It is acknowledged that WorkSafe may undertake other compliance monitoring activities to verify the evidence and compliance with an enforceable term, and cooperation will be provided to WorkSafe.
6. It is acknowledged that WorkSafe may initiate additional compliance monitoring activities, such as inspections, as considered necessary at WorkSafe's expense.
7. It is acknowledged that details of all seminars, workshops and training conducted by a non-registered training provider must be notified to WorkSafe, by email, at least one week prior. Notification should include time, date, location and the trainer/facilitator.

(write the name of the person(s) or entity giving the undertaking)

Downer

3. Enforceable terms

The person acknowledges all activities set forth in the enforceable terms below must be auditable and include a date for completion and an estimated cost for each activity.

The person commits to performing the activities below diligently, competently and by the respective completion date.

3.1 A commitment by the person to perform activities that will ensure the ongoing effective management of risks to health and safety in the future conduct of its business or undertaking

Detail the management strategies to be employed that will satisfy and demonstrate to officer/s of the person that this commitment is being met:

Continuous improvement in setting and implementing workplace health and safety practices and expectations is an important aspect of Downer's business. Central to this is a focus on identifying, assessing, and effectively managing Critical Risks in work activities to ensure the health and safety of Downer workers and others. Downer is committed to ensuring the business takes all reasonably practicable steps to effectively manage risks to health and safety in its current and future work activities.

In addition to the other initiatives outlined in this undertaking in sections 1.12 and 1.13, Downer intends to realise its commitment to continuous health and safety improvement and the management of Critical Risks by focusing on two programmes that will improve the effectiveness of risk management:

1. Stand in the Gap

This programme, originally introduced a number of years ago, has undergone a refresher and is being re-released. The programme calls on workers at all levels to have the courage to intervene and speak-up if they see unsafe situations or behaviours onsite. It is made explicit that workers have not just the right, but the obligation, to stop an unsafe job. As part of this programme, Downer seeks to create an environment where all workers feel safe and empowered to call out health and safety concerns or poor behaviours, to ensure those around them complete work safely and to challenge leaders about how work is done so that safety is the number one priority. The programme is consistent with WorkSafe's "You can sense it, you can stop it" campaign.

2. Blueline Learning Teams

This programme is a way of engaging directly with those who undertake work and to learn and understand how work is actually done, rather than relying only on compliance with the planned Safe Work Methods.

It is acknowledged that workers must make decisions on site, and occasionally deviate from the plan, to accommodate circumstances that could not be anticipated. This adaptive behaviour usually allows work to be successful. The purpose of the learning is to build team capability to work effectively and safely in a dynamic and unpredictable worksite, by identifying where processes are sensitive to error and promoting those factors that increase the likelihood of success.

We already have a small group of trained facilitators and have undertaken a number of sessions that includes processes for temporary traffic management.

Downer has, and will continue to, dedicate significant financial and personnel resources to risk reduction activities.

3.2 A commitment by the person to disseminate information about this undertaking to workers, and other relevant parties

(this may include to work health and safety representatives and in the organisation's annual report, if applicable)

Dissemination will be achieved by doing the following:

Downer commits to disseminating information about the incident and this enforceable undertaking with its workers and other relevant parties. Downer will share the information by:

- Publishing a copy of the undertaking on Downer's intranet site which is accessible by all Downer employees.
- Preparing a one-page alert summarising the agreed undertaking, the activities that will be undertaken by Downer and McConnell Dowell and referring to the availability of the full undertaking on the intranet. The alert will be emailed to all employees with a Downer email address.
- Preparing a toolbox talk to be completed by all project sites explaining the circumstances of the incident and the terms of the undertaking.
- Briefing Downer's Health and Safety Representatives and the Health and Safety Committee members about the undertaking so they can be a contact point for other workers.
- Briefing all managers in the Downer Transport business unit in relation to the undertaking in order that they can have informed discussions with workers, Downer contractors and clients about it.
- The Zero Harm team will provide updates on a quarterly basis for the term of the undertaking to the business, including Downer Group. The updates will provide information on progress implementing the commitments in the undertaking.
- Downer and McConnell Dowell will work together to produce an article to be published in the Civil Contractors New Zealand Magazine "Contractor" explaining the learnings from the incident and the changes that have been made. This will be placed on the Downer intranet site which is accessible by all Downer employees.

Dissemination will occur by: 07 / 12 / 2023

3.4 Activities to be undertaken to promote the objectives of the health and safety legislation that will deliver benefits for the wider industry or sector

ACTIVITIES Outline the activity and the expected outcomes	COST (\$)	TIMEFRAME
3.4.1 CHASNZ Scoping Study	\$60,000	15 months
3.4.2 CHASNZ Scoping Study Pilot	\$30,000	12 months
3.4.3 Creation of a National Good Practice Guide for the treatment of Vulnerable	\$17,050	18 months
3.4.4 Good Practice Guide: Safety Alert	\$420	24 months
3.4.5 Good Practice Guide: Webinar	\$1,050	24 months
3.4.6 Good Practice Guide: Roadshow	\$9,900	24 months
3.4.7 Development of NZQA Qualification for Risk Assessment & Decision Making	\$90,000	12 months
3.4.8 Registration of the training program with NZQA	\$11,250	24 months
3.4.9 Creation of a "Train the Trainer" program	\$29,500	27 months
3.4.10 Creation of training fund	\$54,000	27 months
3.4.11 Risk assessment matrix	Unquantifiable	12 months

SEE APPENDIX A FOR FURTHER DETAILS

Total estimated cost of benefits for industry

\$ 303,170



3.5 Activities to be undertaken to promote the objectives of the health and safety legislation that will deliver benefits for community

ACTIVITIES	COST (\$)	TIMEFRAME
3.5.1 Donation to Table Tennis Canterbury	\$20,000	1 month
3.5.2 Facilitate a cyclist awareness campaign	\$270,000	15 months
3.5.3 Funding BikeReady (Share the Road) Workshops for the public	\$25,680	12 months

SEE APPENDIX A FOR FURTHER DETAILS

Total estimated cost of benefits for the community

\$ 315,680

3.6 Where WorkSafe considers appropriate in the circumstances, undertaking a SafePlus Onsite Assessment

Further information about SafePlus can be found here: worksafe.govt.nz/about-us/who-we-are/our-priorities/safeplus/about-safeplus

- 3.6.1 The suitability of a SafePlus assessment will be determined by the Enforceable Undertakings Panel when your application is considered.
- 3.6.2 In addition to the total cost below (3.7) all costs of a SafePlus Onsite Assessment will be met by the person making this undertaking. The fee charged for an Onsite Assessment is a commercial matter between your business and the SafePlus Accredited Assessors that you commission.

3.7 Minimum spend

(write the name of the person(s) or entity giving the undertaking)

3.7.1 Downer

commits to a minimum spend of \$ for this undertaking.

(write the name of the person(s) or entity giving the undertaking)

3.7.2 Downer

agrees to spend any residual amount arising from an original term not being completed or being less costly than estimated in this undertaking. Agreement on how to spend this residual amount will be sought from WorkSafe

(write the name of the person(s) or entity giving the undertaking)

3.7.3 Downer

Acknowledges the minimum spend comprises of the:

TOTAL COST	MINIMUM SPEND
Financial amends paid to victims (if applicable)	\$118,704.37
Benefits to workers/others	\$328,440
Benefits to industry	\$303,170
Benefits to community	\$315,680
Estimated cost of the undertaking Plus GST (if any)	\$ 1,065,994.37

4. Execution

Authorised representative of an organisation

Undertaking given by (name of authorised representative)

Craig West

In my own right and in my capacity as (eg President, Chairperson, etc)

Executive General Manager Transport

of (eg organisation name) **Downer**

On the (day) 30 day of (month) March, 2022 (year)

Signature of the



Undertaking given before me:

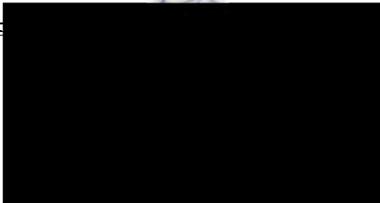
Witness name:

Barry Signell

Witness signature:



Witness signature:



5. Acceptance

This undertaking is accepted by WorkSafe.

On the (day) 01 day of (month) April, 2022 (year).

Signature of person accepting the undertaking:



Name of WorkSafe representative: (General Manager, WorkSafe (or delegate))

Dr Catherine Gardner

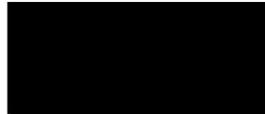
Undertaking given before me:

Witness name:

Cordell Weir

Witness signature:

Witness signature:



APPENDIX A – ADDITIONAL INFORMATION FOR ENFORCEABLE UNDERTAKING APPLICATION

Additional information in respect of relevant sections of Downer's enforceable undertaking application is set out below.

1. GENERAL INFORMATION

1.8 Detail any offer of amends or payment made to the victim(s) who sustained injury or suffered illness (the total monetary amount here is also to be included in the table at 3.12.3)

CONTINUED FROM THE APPLICATION FORM

As part of the preparation of this enforceable undertaking, Downer and McConnell Dowell have contacted the family liaison and members of the family on several occasions and met with family members on two occasions (as outlined in section 1.11 below). Downer and McConnell Dowell have made an offer of reparation in the sum of [REDACTED] in recognition of the emotional harm they have suffered, and continue to suffer, as a result of Victim's death. Downer will contribute [REDACTED] towards this payment. Downer will make payment of its share of the reparation payment within 3 months of this undertaking being accepted.

In addition to this sum, Downer and McConnell Dowell have agreed to share the costs of:

- The family's legal fees associated with their engagement with the enforceable undertaking process. [REDACTED]
- A payment to the Victim's mother to cover the unpaid sick leave/bereavement leave taken by her as a [REDACTED]
- Building/installing a memorial at a site chosen by the family, and a second tree memorial and plaque planted at the actual accident site, following discussions with Waka Kotahi and the Selwyn District Council.

In total, this support involves a quantifiable payment of \$118,704.37 by Downer.

Downer and McConnell Dowell have also offered to attend a restorative justice conference with the family, if they wish to do so. The Victim's father has requested that this occur and arrangements for the conference are underway at the time of submission of this application.

1.9 Detail any consultation with the victim(s) as to their own views on whether an enforceable undertaking would be an acceptable alternative to prosecution

Downer and McConnell Dowell have consulted with the Victim's family about this enforceable undertaking. This consultation included:

- [REDACTED]

It is impossible to fix or agree an adequate sum of reparation by way of compensation or reparation for the family in relation to the loss of their loved one. The Victim's family do, however, support the concept and intent of enforceable undertakings.

In this case, the Victim's family have seen, taken independent legal advice on, and support the detailed enforceable undertakings being offered by Downer and McConnell Dowell as an acceptable alternative to prosecution, as the undertakings should result in wider benefits for the industry and cyclists generally.

In particular, the Victim's family supports the initiatives in respect of changes to the approach to temporary traffic management planning that will focus on all vulnerable road users using the roading network, including cyclists, and which should move the industry towards best practice and away from mere compliance.

1.10 Detail any consultations with unions/sector/industry as to their views on whether an enforceable undertaking would be an acceptable alternative to prosecution

CONTINUED FROM THE APPLICATION FORM

Downer has also engaged with industry groups, cycling organisations and regulators that have an interest in this matter. These include:

- Civil Contractors New Zealand (CCNZ) – an industry body, whose members include all major contractors/sub-contractors (including Downer and McConnell Dowell) and clients.
- CCNZ Traffic and Road Safety Technical Committee – members include representatives of a wide cross section of the construction and traffic management sectors.
- Construction Health and Safety New Zealand (CHASNZ) – an industry body that covers all sectors of construction with a focus on health and safety in this space.
- Waka Kotahi New Zealand Transport Agency – the regulator for traffic management and author of the Code of Practice for Temporary Traffic Management.
- Share the Road – a national education group that develops and delivers training to cyclists and heavy vehicle drivers with the aim of encouraging positive behaviour between drivers of heavy vehicles and cyclists.

All of the above organisations are supportive of Downer offering an enforceable undertaking to WorkSafe. Many have expressed an interest in being involved in helping to improve health and safety around traffic management and vulnerable road users.

Downer has not consulted directly with any union in relation to the enforceable undertaking, as no unions were identified as appropriate in the circumstances.

1.11 Detail the support provided or proposed by the person to the victim(s), other(s)

In addition to the support and assistance detailed in section 1.8 above, Downer has sought to provide further support to the Victim's family as follows:

Date	Description of support	Comment
1 November 2019	Contact with the family liaison was established by the CSM2 Stakeholder and Communications Manager. A whakanoa was discussed and the family were invited to attend if they wished.	
2 November 2019	CSM2 Stakeholder and Communications Manager spoke with the Victim's sister.	
2-3 November 2019	A planned full closure of the Springs Road area of the CSM2 Project took place over the weekend. Contact was made with the family liaison to let the family know that pedestrian and cyclist access was being maintained to the area so that they could attend the site if they wished.	

	Over the weekend, small groups of the Victim's family and friends attended the site. The CSM2 Stakeholder and Communications Manager was available to escort family and friends to the site. Work at the site ceased while the groups attended the site.	
4-6 November 2019	Correspondence was sent to the family liaison confirming the plans for the whakanoa.	
7 November 2019	Downer and McConnell Dowell senior representatives met with the family prior to the whakanoa when the family came to site.	
21 May 2021; 11 June 2021	An offer was made to pay for legal support for the family as part of their engagement with the enforceable undertaking process. This offer was made so they could have their own independent legal advisor to assist them to understand the legal process and answer any questions they had about the court and enforceable undertaking processes.	This offer was taken up by the Victim's family.
1 July 2021; 3 August 2021; 18 October 2021; 15 November 2021	An offer was made to assist with the provision of counselling support for the Victim's family to assist with the grief process.	This offer has been taken up by a member of the Victim's family.
18 October 2021	Downer and McConnell Dowell made a payment to the Victim's mother to cover the unpaid sick leave/bereavement leave taken by her as a result of the incident.	Downer paid its share of this payment on 18 October 2021.
14-15 February 2022	Downer and McConnell Dowell offered to assist the Victim's family to create a memorial to the Victim. This offer has included facilitating discussions with Waka Kotahi and the Selwyn District Council and to build/install the memorial chosen by the family. Following consultation with the family and Waka Kotahi two memorials and sites were chosen.	The two memorials have been installed.

1.12 Detail any current HSMS implemented and maintained by the person

CONTINUED FROM THE APPLICATION FORM

Downer Standards and Critical Risk Program

Health, Safety and Environmental (HSE) Risk Management Standard

Downer's process for managing HSE risk is based on the following five steps:

1. Identify hazards based on scope of planned work and assess the risks.

This step leads to a Contract HSE Risk Register, which is owned and controlled by the Project Manager.

2. Plan the controls to mitigate the risk associated with hazards that cannot be eliminated. This step leads to documentation of Safe Work Methods, with input from Managers, Supervisors and subject matter experts as required.

3. Implementation of the planned controls on site.

This step involves communicating the risks and controls from the Safe Work Method document to those doing the work, using Inductions, Toolbox talks and daily Crew Briefing Plans. This is owned and controlled by the Supervisor of the work. The Crew Briefing Plan also addresses the site-specific hazards and risks that are not reflected in the Safe Work Method document.

4. Monitoring of Work.

This step is for the supervision and monitoring of work activities to ensure that the planned controls have been implemented and are effective in mitigating risks onsite. This includes a range of onsite inspections as covered below under "HSE Verification Procedure".

5. Review of the hazards and controls.

This step is based on a combination of audits, incident investigation and proactive management reviews to drive continual improvement of HSE performance on site.

Downer has developed and delivered training in the above processes, with courses in place for Senior Managers, Project Managers and Front-line Leaders (Supervisors).

Critical Risk Programme

Operating alongside, and complementary with, the above HSE Risk Management processes, Downer has a Critical Risk Programme that puts particular emphasis on those risks with potential for greatest harm. This includes the risks of Driving, Working at Height, Confined Space Entry, and Temporary Traffic Management.

For each Critical Risk, the potential causes and consequences of incidents are identified and then controls prescribed to both prevent incidents and also to mitigate the consequences when incidents occur. This analysis is done by a team of Health and Safety professionals and subject matter experts. Some of these controls are identified as being Critical Controls, and the implementation and effectiveness of these controls are subject to specific checks by Managers, Supervisors and HSE professionals.

Each month, incidents that were associated with any of the Critical Risks are analysed as part of assessing the ongoing effectiveness of the Critical Risk Programme. In the past year, additional Critical Controls have been added as a result of this analysis. This includes adding a specific Critical Control (and so specific checks) for protection of vulnerable road users as part of temporary traffic management.

Other elements of the HSMS that are most relevant to this incident are the following:

Temporary Traffic Management Standard:

Downer has a document that provides guidance on management of risks associated with temporary traffic management. This document is consistent with, and references to, the Code of Practice for Temporary Traffic Management ('CoPTTM') but summarises key requirements and integrates these with the more general duty to manage risks to health and safety. Sections cover:

- Requirement for approved Traffic Management Plans for all sites
- Training and competency requirements for people responsible for managing temporary traffic management;
- Hierarchy of controls relevant to temporary traffic management, to be included in defined Safe Work Methods for planned work;
- Requirements for audits and inspection of temporary traffic management sites;
- Process for selection of Traffic Management Plans (including a risk assessment for mobile and short-duration operations);
- Process for installation of selected Traffic Management Plan; and
- Requirements for supervision and monitoring of active temporary traffic management sites.

Subcontractor Management:

Downer has documented procedures and processes in place for management of subcontractors that involve the following steps:

1. **Prequalification** – All subcontractors must go through a prequalification process to demonstrate that they have processes in place to meet their duties to manage health and safety.
2. **Onboarding** – Subcontractors are inducted to each project, and checks performed to ensure they are capable of undertaking the planned work safely.
3. **Management** – Depending on Downer's degree of control and influence over the subcontractors' activities (e.g. whether they are working under our supervision, and the nature of the work), Downer monitors the performance of the subcontractor workers. Where appropriate, the subcontractors are involved in the Downer Toolbox meetings and sign-on to daily Crew Briefing Plans.
4. **Review** – Once their work is complete, or at least annually, the performance of the subcontractor is reviewed by the Project Management team. This includes their performance in management of health and safety.

HSE Verification Procedure:

Downer has a procedure that outlines requirements for regular verification of health and safety on site. The procedure covers requirements for:

1. Establishing a schedule for planned verification activities, with responsibilities assigned;
2. Performing verification using a suite of check-sheets – some paper-based but mostly now using an electronic App called "Downer Survey". In addition to general "Site Inspections", check-sheets available include CoPTTM-based "Site Condition Rating" forms, and the Critical Control Verification checks as referenced above; and
3. Monitoring findings from verification and closing out corrective actions identified.

Day-to-Day management

On-site risks are managed through a coordinated and systematic process of developing Safe Work Method Statements (SWMS) for activities, ensuring relevant permits or authorisations are in place, and communicating risks to front-line teams through visual and handwritten/drawn Crew Briefing Plans. These provide a simple and visual reference for teams to plan out work, identify the risks on site, and ensure that the necessary controls are communicated to all involved in the work. JobSTART forms are also used and signed at the beginning of every shift to ensure that everyone is aware of the particular risks and controls that will be present that day. Each of these activities tie back to the relevant Downer Standard applicable to the work being completed.

CSM2 Health and Safety Management System

On the CSM2 Project, Downer and McConnell Dowell ran an integrated health and safety management system that incorporated elements of both joint venture partners' systems. This included preparation of a Project Risk Register, which detailed health, safety and environmental risks and how they would be controlled. It formed the basis for ongoing risk management of the project.

Construction Packs were used on the CSM2 Project. In essence they were packs of documents that contained all of the necessary information for workers to safely complete a task. The packs included:

- Method statements – A step by step methodology on how the work would be executed with reference to drawing and specifications, as required.
- Job Safety and Environmental Analysis (JSEA) - A guide to how the work is to be completed safely without harming people or the environment. These are prepared by the supervisor and work team, with input from Health, Safety, and Environment staff. The JSEA will break a section of works down to individual steps, identifying risks and controls.
- Inspection and Test Plans – A plan that stated the inspections, tests and hold-points and records with reference to the drawings and specifications as required.

Once a Construction Pack was developed by the supervisor, with input from the work team, it was forwarded to the HSE team to review the controls in the JSEA, and then forwarded to the Project/Construction Manager for approval.

Site crews were briefed on how to perform a task based on the information set out in the approved Construction Pack and the crews signed on to the JSEA, acknowledging the risk controls that were in place. The Construction Packs would then be used to produce daily Crew Briefing Plans based on where the work team were up to in the job.

All workers were also actively encouraged to report hazards on site using "See Say Do" cards. These forms give workers the option to raise their concerns anonymously or record their name. Hazards reported using the "See Say Do" cards were addressed immediately wherever possible or escalated to supervisors and project management for formulation and implementation of control measures.

The CSM2 project also ran a health and safety committee, which had elected H&S representatives from the site crews. Representatives were available for all crews to discuss and raise any health and safety concerns on site.

1.13 Detail the level of auditing undertaken on the HSMS, including compliance audits and audit frequency

CONTINUED FROM THE APPLICATION FORM

Auditing on the CSM2 Project:

On the CSM2 project specifically, the site undertook regular ACC AEP Self-Assessments. Senior leaders were also engaged with safety. The total number of 'engagements' between management and workers was 1,353 over the course of the CSM2 Project (approximately 2.5 years).

In addition to audits of the site as a whole, temporary traffic management sites were the subject of regular external and internal audits. Audits were completed by Waka Kotahi, its representative on the project – AECOM and the joint venture project team to assess the sites for compliance with the approved temporary traffic management plan. These were on top of the daily pre-start review and 2-hourly site checks that are required to be undertaken by Site Traffic Management Supervisors by operation of the Code of Practice for Temporary Traffic Management, which governs the operation of temporary traffic management.

3. ENFORCEABLE TERMS

3.3 Activities to be undertaken to promote the objectives of the health and safety legislation that will deliver benefits for workers and/or work and/or the workplace

ACTIVITIES	Cost (\$)	Timeframe
Outline the activity and the expected outcomes		
<p>3.3.1 Fleet training program</p> <p>Scope: Downer will run workshops for heavy vehicle truck drivers and Temporary Traffic Management workers focussing on the potential impact of their actions on vulnerable road users such as cyclists.</p> <p>The focus will be on the risks created by heavy vehicles on the road and through temporary traffic management sites and the steps that drivers and temporary traffic management workers can take to manage risks, such as blind spots, and identify other daily activities such as movement through site access ways, that have the potential to cause harm.</p> <p>Delivery: The workshops will be run across 45 sites covering the Downer Transport and Downer Utilities businesses for all 2315 heavy vehicle drivers and 750 Temporary Traffic Management managers, planners, designers and site traffic management supervisors.</p> <p>The sessions will be facilitated by Share the Road and will cover:</p> <ul style="list-style-type: none"> - What safe passing feels like for a cyclist? - Why cyclists ride where they do - How they can manage their interactions with cyclists <p>Sessions will include a mix of classroom teaching and real-world experience, involving drivers experiencing road conditions for themselves on bicycles.</p> <p>We are conscious that it is not always possible to attend a session in person (particularly following COVID), so we will livestream the classroom component of sessions and make recordings available</p>	<p>Workshop: \$232,000</p> <p>Travel: \$60,000 (based on average travel to 40 branches outside of Auckland for two facilitators)</p> <p>Total Spend: \$292,000</p>	<p>Within 15 months of the date of this undertaking.</p>

<p>through the Downer e-learning portal and available to contractors and sub-contractors.</p> <p>Outcome: The programme will provide heavy vehicle drivers and critical Temporary Traffic Management workers with a better understanding of the risks created by their work and ways to manage those risks dependent on their role.</p>		
<p>3.3.2 Creation of online risk assessment tool</p> <p>Scope: Managing risks is an activity undertaken by all workers every day. Often workers are managing risks in a very complex outdoor environment. In addition to their operational activities, road workers are exposed to a varied and changing environment and are not only tasked with controlling hazards generated by the work they perform but they also need to consider external hazards outside of their control such as weather conditions and driver/other road user behaviour.</p> <p>Currently existing technology and risk assessment tools available in the market and used by industry do not adequately cover all scenarios face by Temporary Traffic Management workers. To assist our crews to make the best decisions in this complex environment Downer will develop risk assessment tools to be used by those implementing Temporary Traffic Management on Downer sites that specifically integrates the learning from the proposed NZQA qualification (discussed in section 3.2), the New Zealand Guide for Temporary Traffic Management being developed by Waka Kotahi and the Good Practice Guideline for the Treatment of Vulnerable Road Users to be developed by CCNZ. This will allow them to not only ensure they consider all of the work hazards but will provide an easily accessible tool that will give them real time guidance to assist them to implement controls that meet the needs of the site and manage the risks that are being observed.</p> <p>Delivery: Downer's Zero Harm team will workshop with a group of Temporary Traffic Management personnel to create a risk assessment matrix that will formulate the baseline for risk-based decision making in the field.</p> <p>Based on the output from the Temporary Traffic Management workshop, Downer's internal software development team will develop an update that can be integrated into Downer's existing risk assessment app – Downer Survey – that will assist workers to assess sites and implement appropriate traffic management solutions.</p> <p>Outcome: Updates to the Downer Survey application will assist Downer's Temporary Traffic Management personnel to move from the existing mindset and approach to traffic management based on adherence to the Code of Practice for Temporary Traffic Management, to the updated risk based approach in the New Zealand Guide to Temporary Traffic Management. The outcomes from using the app are that 'no go' points will be created based on the risk exposure to vulnerable road users that will require Temporary Traffic Management workers and managers to stop and reconsider how to manage risks.</p>	<p>Risk assessment app modification: Direct costs are unable to be quantified.</p> <p>Development of reporting tool: \$15,000</p> <p>Total spend: \$15,000</p>	<p>Within 12 months of the date of this undertaking.</p>

<p>3.3.3 NZQA pilot and TTM Risk Assessment training</p> <p>Downer will bring together the pilot that forms part of the NZQA qualification development and the update to the Downer Survey to train Temporary Traffic Management workers.</p> <p>The pilot will not only upskill Downer's workers but will also ensure that the resources and materials developed as part of the NZQA qualification are fit for purpose and meet the needs of those completing the assessment.</p> <p>Feedback on the assessment will be used to make any amendments to the programme.</p> <p>Those completing the pilot will be provided with any necessary hardware required to access and use the updated Downer Survey application and will be awarded the qualification once it is registered with NZQA.</p>	<p>Cost of hardware (rugged android tablet, including case): \$14,000</p> <p>SIM cards for mobile internet access: \$2,880</p> <p>Training module development: External provider's fee is covered under activity 4; Downer's time is unable to be quantified</p> <p>Costs of piloting the program: \$2,400 fee for external provider to train Downer workers.</p> <p>Registration of NZQA qualifications for those that successfully meet training criteria: \$2,160 (18 credits, at \$6 per credit for 20 workers.)</p> <p>Total spend: \$21,440</p>	<p>Within 10 months of the date of this undertaking.</p>
<p>Total estimated costs of benefits for workers/others:</p>	<p>\$328,440</p>	
<p>3.4 Activities to be undertaken to promote the objective of the health and safety legislation that will deliver benefits for the wider industry or sector</p>		
<p>ACTIVITIES Outline the activity and the expected outcomes</p>	<p>Cost (\$)</p>	<p>Timeframe</p>
<p>3.4.1 Construction Health and Safety New Zealand (CHASNZ) scoping study</p> <p>Scope: Pedestrians and cyclists use of roading and infrastructure is a growing feature of the urban landscape in most New Zealand cities. Environmental, government policy, lifestyle and commuting needs are encouraging more people to walk or cycle as a daily commute and for recreational purposes.</p> <p>The construction industry is currently experiencing continued high demand for development across all parts of the sector, including civil, commercial, and residential construction. This is particularly intensified in New Zealand's cities with residential intensification,</p>	<p>Cost of scoping study: \$120,000</p> <p>The cost of this activity is being shared with McConnell Dowell.</p> <p>Total Downer spend: \$60,000</p>	<p>Within 15 months of the date of this undertaking.</p>

major infrastructure projects and a continued investment in commercial development.

These two factors are potentially resulting in an increased societal risk of pedestrians and cyclists (vulnerable road users) being hurt as a result of interaction between the vulnerable road users, construction vehicles and construction worksites.

There are currently no guidelines or protocols for how to deal with these risks in New Zealand. There is also little data or useful statistics around the number and type of incidents involving construction vehicles, construction sites and vulnerable road users. As far as can be ascertained, there has been no study or data formulated to date to cover the New Zealand position.

Downer and McConnell Dowell propose that it fund CHASNZ to undertake a scoping study to provide a better picture of how best to mitigate risks to vulnerable road users.

Delivery: CHASNZ will undertake a scoping study based on the New Zealand situation with comparisons to worldwide better practice, such as the United Kingdom. The deliverables from a scoping study will be:

1. Problem definition:
What is the current state analysis of both New Zealand and international incidents and causation i.e. how bad is the problem and how much data exists evidencing it in New Zealand and overseas. This work will include literature review and comparison data study to better define the current state.
2. Intervention logic (option analysis):
What initiatives will make a difference based on literature reviews and safety science. What, if any, international options exist that could be implemented in whole or in part in New Zealand?
3. Stakeholder engagement:
It will be particularly important to understand the current issues and challenges to providing for and maintaining effective and safe solutions for cyclists around construction sites. CHASNZ will need to determine: Who needs to be involved and who is impacted by this project? Who is best to implement and lead change?
It is anticipated that at a minimum CHASNZ will engage with Waka Kotahi, Civil Contractors NZ, ACC, WorkSafe, Local Government New Zealand, and the Cycling Action Network. The goal of the engagement is to identify and agree with industry the minimum standards for the safety of cyclists and vulnerable road users that will be incorporated into any framework implemented on sites.
4. Development of key components of framework (including risk analysis):
The information gathered from the first three stages of the scoping study will be used to develop a draft framework that is intended to meet the needs of clients, contractors, and cyclists. Downer and McConnell Dowell will work with CHASNZ to develop the detailed framework/protocols to be implemented at their sites, based on the research conducted in stages 1-3.

It is anticipated that the framework will include several key components:

Procurement – Procurement requirements will be implemented, focusing on the standard of safety of heavy vehicles transporting to site. CHASNZ will create a catalogue of multiple options for heavy vehicles with a minimum standard or requirements to complete access to a project.

Transport impact risk assessment – The transport risk assessment will review the impacts of added construction traffic on the local network including the potential impact and exposure to cyclists and pedestrians around the project.

Construction logistics plan – The construction logistic plan will support the communication with construction transport operators and agreed timing, routes, and entry to the site operations.

Monitoring and validation – A monitoring and validation process will be implemented to ensure the agreed standards are adhered to, and appropriate records are maintained to facilitate a robust verification process.

5. Pilot study:

Once the draft framework/protocol has been developed, Downer and McConnell Dowell will implement the framework (see activity number 2 in this section 3.2) over a 90 day period on site which will enable CHASNZ to assess the effectiveness of the framework in practice. The measures of this will be the stepped implementation of the requirements. The information about the New Zealand practices and how the differing options or parts of them worked will be utilised in the benefits analysis.

6. Benefits analysis:

Data compiled from the pilot study will be assessed to determine the success or otherwise of the framework and the viability of adopting such a framework across all of New Zealand. This will include assessing: What will be achieved? What improvements do we expect to see from the proposed changes?

7. Expected return on investment:

An assessment of the benefits over the investment.

These areas of consideration will be collated into a business case that details the analysis and process for determining CHASNZ's recommendation of options for intervention and a suggested funding model for implementation of the recommendations.

Outcome: Any initiative that intends to change industry practice across the country needs to be carefully structured and managed to ensure that the engagement with industry and impact on safety is achieved. The CHASNZ scoping study will produce a business case that sets out the deliverables referred to above and provides a high-level plan including timeframes and investment requirements for implementation of the recommended actions.

This business case will be presented to government and industry for consideration/discussion, approval and support. It is intended to support a long-term goal of the implementation of an industry lead, government backed initiative designed to improve the safety of vulnerable road users.

<p>3.4.2 CHASNZ Scoping Study Pilot</p> <p>To support the CHASNZ scoping study, Downer and McConnell Dowell will work with CHASNZ to prepare the pilot materials required to inform and train workers and contractors accessing sites on the proposed protocol.</p> <p>Downer and McConnell Dowell will then implement the protocol across two of its operational sites in different regions with high volume cycling activity, the pilot based on the preferred option CHASNZ establishes for New Zealand.</p> <p>It is anticipated based on initial discussions with CHASNZ that in addition to time to upskill and train workers and contractors on the framework, additional equipment will be required for vehicles which may include items such as mirrors for trucks, alarms and cameras. These additional pieces of equipment are anticipated based on the requirements of the United Kingdom's Construction and Logistics Cyclist Safety Scheme (CLOCS).</p> <p>During the pilot, records will be kept noting the number of cyclists moving through the site, records regarding vehicle and pedestrian/cyclist interactions, engagement records with the community and workers/subcontractors and any other data that CHASNZ seeks to be recorded.</p>	<p>Time costs: Unable to be quantified</p> <p>Allowance for additional equipment: \$30,000 (This figure is based on upgrading vehicles componentry to include minimum equipment specified under the United Kingdom's CLOCS scheme and may be subject to change based on the outcome of the CHASNZ framework developed as part of the scoping study.)</p>	<p>Within 12 months of the date of this undertaking.</p>
<p>3.4.3 – 3.4.6 Creation of a national Good Practice Guide for the treatment of Vulnerable Road Users in Traffic Management Planning</p> <p>Scope: It is apparent that there is a lack of clear guidance on how to treat cyclists and other vulnerable road users at present. Downer and McConnel Dowell propose to develop, in conjunction with other industry participants and stakeholders, a good practice guideline for the treatment of vulnerable road users.</p> <p>We know that there are some limited guidelines available, such as the one produced by the Stronger Christchurch Infrastructure Rebuild Team (SCIRT). Now that SCIRT is no longer operating this important resource needs to be reviewed, updated, and adopted nationally by the Industry.</p> <p>This project will result in a national guidance document that can be implemented across all sites where Temporary Traffic Management is required, similar to the "Road and Roadworker Good Practice Health and Safety Guideline" being produced by WorkSafe in conjunction with industry.</p> <p>Delivery: Downer and McConnell Dowell have chosen to work with CCNZ to develop the Good Practice Guide, as it has experience developing similar guidelines. CCNZ also has a strong membership of businesses that undertake or specialise in temporary traffic management and includes as part of its activities, a 'traffic and road safety committee' that regularly meet to discuss and share knowledge and implement improvement across the civil construction industry. These connections will assist CCNZ with the development of the Good Practice Guideline.</p> <p>Downer and McConnell Dowell will fund the development of the Guideline by CCNZ, which will leverage its connections in the temporary traffic management area to ensure it is obtaining information that is not only technically accurate but also relevant to businesses experiences.</p>	<p>Development of Guideline: \$34,100 (Activity 3.4.3)</p> <p>Development and issuing of Safety Alert: \$840 (Activity 3.4.4)</p> <p>Development and delivery of webinar: \$2,100 (Activity 3.4.5)</p> <p>Education roadshow: \$19,800 (Activity 3.4.6)</p> <p>Engagement with Waka Kotahi and local regulators: Unable to be quantified</p> <p>Total project cost: \$56,840</p> <p>The cost of this activity is being shared with McConnell Dowell.</p> <p>Total Downer spend: \$28,420</p>	<p>Activity 3.4.3 – within 18 months</p> <p>Activity 3.4.4. – within 24 months</p> <p>Activity 3.4.5 – within 24 months</p> <p>Activity 3.4.6 – within 24 months</p>

<p>CCNZ representatives will:</p> <ul style="list-style-type: none"> - work with industry experts to workshop and develop the Guideline - engage with Waka Kotahi regarding the need to produce the Guideline and how it will interact with the Code of Practice for Temporary Traffic Management and the New Zealand Guide to Temporary Traffic Management which is currently being produced by Waka Kotahi - engage with the relevant local bodies regarding the proposed Guideline - engage with cycling groups, such as Cycling Action New Zealand and Share the Road, regarding the proposed Guideline and seek their input into the Guideline so that it incorporates controls that are supported by cyclists - publish the Guideline - develop a Safety Alert for industry which will be shared through CCNZ members to industry participants - produce a webinar training session to educate industry on the content of the Guideline and how it operates - run a national roadshow to CCNZ's 9 branches to educate the industry. <p>Outcome: Creation of a national document that provides best practice guidance on how to ensure the safe passage of vulnerable road users through temporary traffic management sites. Downer and McConnell Dowell will work together to support and promote the use of the Good Practice Guideline by clients and other industry participants, alongside CCNZ.</p>		
<p>3.4.7 Development of NZQA Qualification for Risk Assessment and Decision Making in Temporary Traffic Management.</p> <p>Scope: Risk Assessment and subsequent determination of appropriate controls is a foundational component of Temporary Traffic Management ('TTM'). Through the development and launch of the CCNZ Good Practice Guide for the Treatment of Vulnerable Road Users, and the Waka Kotahi NZ Guide for Temporary Traffic Management ('NZGTTM') there has been a refined focus on risk-based planning, decision-making and execution that makes this paramount to systemic improvement of safe TTM outcomes.</p> <p>Currently no formal risk assessment training exists across the Temporary Traffic Management industry, and a deeper and more comprehensive understanding is required to align with these new standards, as well as connect the current training systems with the overall 'why' of the basis for Temporary Traffic Management i.e. to keep road workers and road users safe.</p> <p>To this end, Downer intends to develop, with assistance from industry experts, a theory and practical blended-learning training package to generate meaningful understanding of risk-based decision making in Temporary Traffic Management. Then, deliver that training package to industry across managerial and operational influencers, project staff, trainers and assessors, as well as those who are at the coal face of determining optimal Temporary Traffic Management solutions. The intent is to equip these people with a genuine context and framework for good risk-based design and Temporary Traffic Management delivery, and establish this within the NZQA Qualifications Framework to allow accredited achievement and a national standard.</p>	<p>Analysis, design, development, implementation, and assessment of training program for industry: \$52,500 external provider costs; Time associated with Downer employees input is unable to be quantified.</p> <p>Production costs associated with the delivery of the training program: \$37,500 for external provider support; Time associated with Downer employees input is unable to be quantified.</p> <p>Total spend: \$90,000</p>	<p>Within 12 months of the date of this undertaking.</p>

<p>Delivery: Downer will deliver a stand-alone “Risk Assessment and Decision Making in TTM” training qualification, involving key critical areas of well-rounded risk decision-making in TTM:</p> <ul style="list-style-type: none"> - Knowledge of working safely as a General Worker in Temporary Traffic Management - The Health and Safety Framework (the why) - The TTM Industry and how it works (the what) - The risk equation: Making deliberate risk assessments and decisions (the how) - Quality Management, compliance, and continuous improvement <p>The Training package is intended as a blended learning pathway, covering theory-based (online) knowledge aspects, and practical in-person scenarios. Approximately 20-hours of learning will culminate in the award of a series of NZQA Unit Standards, accrediting learners with formal acknowledgement of understanding in the context of Temporary Traffic Management.</p>		
<p>3.4.8 Registration of the training program with NZQA</p> <p>Scope: The culmination of activity 3.4.7 is a comprehensive training programme for industry, centred around Temporary Traffic Management Risk Management. With the award of a series of NZQA Unit Standards, these can be grouped into an NZQA-accredited micro-credential – awarding learners with a tangible recognised qualification upon completion of the training.</p> <p>Through the Infrastructure Industry Training Organisation (Connexis), Downer will accredit and register a micro-credential attributed to completion of the aforementioned training package.</p> <p>Delivery: Alignment with both existing and new unit standards will allow the development of the micro-credential through Connexis’ qualification development processes.</p> <p>Appropriate liaison and collaboration with NZQA, and industry, will be required to ensure the need is clearly articulated and subsequently accommodated within the accredited micro-credential. Downer and McConnell Dowell will work together to gain the necessary support from industry for the micro-credential.</p> <p>Outcome: Registration will ensure trainees who undertake the aforementioned Risk Assessment and Decision Making in Temporary Traffic Management training package will subsequently be awarded formal Unit Standards, and an NZQA-accredited micro-credential within the New Zealand Qualifications Framework (NZQF).</p>	<p>Cost of consultation, liaison, development and engagement with NZQA and vocational educational institutions (i.e. Connexis and the CIWDC): \$22,500 for external provider support; Downer and McConnell Dowell’s costs are unable to be quantified.</p> <p>Cost of registration of the training program with NZQA: This cost will be borne by Connexis.</p> <p>The cost of this activity is being shared with McConnell Dowell.</p> <p>Total Downer spend: \$11,250</p>	<p>Within 24 months of the date of this undertaking.</p>

<p>3.4.9 Creation of a “Train the Trainer” program</p> <p>To facilitate ongoing delivery of this training Downer will work with an external expert to develop a “Train the Trainer” package and framework to embed this training and qualification across the industry and maximise industry-wide accessibility.</p> <p>These individuals will be able to take the training and run the programme within their own organisations to extend the capability of the TTM workforce.</p> <p>Together, Downer and McConnell Dowell will fund the delivery of the training sessions run by an external provider. An external provider will run four 2-day Train the Trainer sessions in Auckland (2 sessions), Wellington (1 session) and Christchurch (1 session).</p> <p>To ensure good uptake by the industry Downer and McConnell Dowell will use their industry contacts to support and advocate for businesses to attend these sessions. Assessors, once qualified, will be able to train those in their organisations without significant cost. The intention is to extensively promote the training program with a particular focus on small contractors so that they can minimise training spend in this space.</p>	<p>Development of the training package: \$20,000 for external provider; Downer’s costs are unable to be quantified</p> <p>Cost of training industry assessors: \$19,000 external provider fee for delivery of training package, and estimated venue, catering and travel costs.</p> <p>The cost of training assessors is being shared with McConnell Dowell.</p> <p>Total Downer spend: \$29,500</p>	<p>Within 27 months of the date of this undertaking.</p>
<p>3.4.10 Creation of a training fund</p> <p>Downer and McConnell Dowell wish to ensure that all those that are provided training are able to have it recognised through registration with NZQA. To ensure that this occurs Downer and McConnell Dowell will jointly contribute to a fund so that all credits (associated with record of achievement reporting) can be recorded. It is intended that the fund will cover the costs of registration of one thousand (1000) individuals across a wide-reaching cross-section of New Zealand’s infrastructure and construction sectors (focussing on maximum regional spread with a specific focus on smaller contractors).</p>	<p>Registration fund: \$108,000 (This fund is based on registration of 18 credits, at \$6 per credit for 1000 trainees.)</p> <p>The cost of this activity is being shared with McConnell Dowell.</p> <p>Total Downer spend: \$54,000</p>	<p>Within 27 months of the date of this undertaking.</p>
<p>3.4.11 Risk assessment matrix</p> <p>Scope: To share and make freely available the risk assessment matrix that Downer’s online risk assessment tool is based on, so that there is a baseline for risk assessment within industry. Similar action has been taken by other industry participants following safety incidents which have been invaluable and assisted greater awareness of risks and how to control them across the industry. This work would build on previous matrix made available by industry and incorporate the risks to vulnerable road users and how to appropriately control them.</p> <p>Delivery: As part of the work Downer undertakes to create an online risk assessment tool, a risk assessment matrix will be prepared dealing with the treatment of vulnerable road users, which will form the basis of the online risk assessment tool add-on. Not all businesses will be able to utilise the app-based code Downer develops, so Downer will provide the risk assessment matrix openly for other businesses to use and implement as they see fit within their organisations as part of their risk management program.</p>	<p>Direct costs of the creation of the matrix are unable to be quantified.</p>	<p>Within 12 months of the date of this undertaking.</p>

<p>The matrix will be made available free of charge through industry groups such as CCNZ and/or CHASNZ.</p> <p>Outcome: Providing industry a risk assessment matrix which can be utilised by all businesses to improve their existing risk management programs and tools that are being utilised within their businesses and will assist workers onsite to make appropriate decisions about risk to vulnerable road users.</p>		
<p>Total estimated costs of benefits for industry:</p>	<p>\$303,170</p>	
<p>3.5 Activities to be undertaken to promote the objectives of the health and safety legislation that will deliver benefits for the community</p>		
<p>ACTIVITIES Outline the activity and the expected outcomes</p>	<p>Cost (\$)</p>	<p>Timeframe</p>
<p>3.5.1 Donation to Table Tennis Canterbury</p> <p>Downer is aware of the Victim's ties to Table Tennis Canterbury. Downer will make a donation to Table Tennis Canterbury to be used to meet organisational needs as the organisation sees fit.</p>	<p>\$20,000</p>	<p>Within 1 month of the date of this undertaking</p>
<p>3.5.2 Facilitate an awareness cyclist awareness campaign</p> <p>Research* conducted evaluating the effectiveness of dynamic display signs focussed on safety messaging, in particular speed reduction, has shown that dynamic display signs are an effective tool to impact driver awareness and behaviour short term. This research concluded that use of digital display signs has a positive impact on behaviour where digital display boards were used at critical points where the probability of [crashes] is high or safety is very important. However, research also noted that effectiveness reduces over time.</p> <p>Taking into account this research Downer intends to implement an awareness campaign focussing on vulnerable road users at sites across the country where there are known to be high numbers of vulnerable road users interacting with vehicles and the temporary traffic management site or where the site poses risk to vulnerable users. The aim of the campaign is to bring to the attention of drivers the potential for interactions with vulnerable road users and seek to instil safe driving practices, similar to the "Please Slow Down My Mum Works Here" campaigns.</p> <p>Downer proposes that it implement a campaign where boards are utilised at critical sites for no more than two days with messaging alerting vehicles to the presence of vulnerable road users. Downer will facilitate through the implementation of 20 variable message signs (VMS) on short life projects across the country. The VMS will be moved to new sites at least every two days, for the duration of the construction season (approximately 90 days) to varying projects sites. VMS will be taken to different projects to ensure the messaging doesn't become stagnant and road users do not become desensitized to the messaging.</p> <p><small>*Jeihani, M, Morgan State University National Transportation Center Research Report: Evaluating the Effectiveness of Dynamic Speed Display Signs (September 2012)</small></p>	<p>Cost of VMS: \$270,000 (20 VMS; total daily cost of \$3000 per day for 90 days)</p> <p>Total Spend: \$270,000</p>	<p>Within 15 months of the date of this undertaking.</p>

<p>3.5.3 Funding BikeReady (Share the Road) Workshops for the public</p> <p>BikeReady is a national organisation that provides training to cyclists of all ages and skill levels. It is focussed on providing cycling skills and training, so people are equipped with the right skills to be safe and considerate on the road. Share the Road sits under the BikeReady umbrella and provides specific training for drivers and cyclists.</p> <p>Downer specifically seeks to support the implementation of the "Share the Road Blindzone Workshops" for cyclists across the country. These are workshops run by experienced facilitators and enable cyclists to understand where drivers of heavy vehicles can and cannot see them as they approach.</p> <p>The session provides cyclists:</p> <ul style="list-style-type: none"> - a demonstration of heavy vehicles features - an opportunity to sit in the driver's seat and experience blind zones for themselves - understand the mechanics of how truck and trailer units move when turning corners <p>Working with Bike Ready/Share the Road, Downer will facilitate publicly accessible workshops in 20 locations across the country. Downer will support the workshops by making its heavy vehicles available and pay for the facilitator's time.</p> <p>Downer will also advertise the workshops through its own networks, social media and local cycling groups, as well as arrange the registration of participants.</p>	<p>Workshop: \$15,180</p> <p>Travel: \$10,500</p> <p>Total Spend: \$25,680</p>	<p>Within 12 months of the date of this undertaking.</p>
<p>Total estimated costs of benefits for the community:</p>	<p>\$315,680</p>	