



ACT
Government

BUILDING AN INTEGRATED TRANSPORT NETWORK— FREIGHT



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MESSAGE FROM THE MINISTER



'Delivering an efficient, safe and sustainable freight network and services for a growing ACT and regional economy and community while protecting urban amenity and freight access and reducing the emission intensity of the freight transport industry.'

Each day the food we eat, the clothes we wear and items we use on a daily basis are transported to and across the ACT in trucks. We all rely upon this to happen smoothly and without delays. The task is diverse and includes large loads and small parcels, groceries, and raw materials to build our houses and businesses. Our approach to freight must be both flexible and adaptable as our shopping habits and delivery practices evolve and change.

Efficient freight movement is vital to the liveability and prosperity of the ACT. Although geographically small, the national capital plays an important role as a freight hub for the ACT and region. As the population and economy continue to grow, so too does the freight task.

While the actual operations of freight and logistics are largely carried out by the private sector, the freight transport system relies upon much of the same infrastructure that is used for moving

people. Therefore, the ACT Government plays an important role in ensuring that network planning is in place and the infrastructure and land needed to carry and store goods, connect services and suppliers functions as reliably and efficiently as possible while at the same time having a positive impact on the community and urban amenity.

At a broad level this means ensuring our infrastructure and transport networks (road, rail and air) are well planned and sufficiently designed for larger vehicles and trucks associated with bulk goods movement. At a more localised level, there is a particular need to better understand and manage the 'last mile' access and interface issues, including delivery, loading and parking requirements at local shops as well as noise and amenity impacts.

An efficient and effective freight system integrated with land use development that is supportive of freight movement will ensure ACT businesses and communities have continuing access to the goods, services and markets necessary to remain competitive and enable the ACT and region to flourish and grow.

I encourage you to use the Building an Integrated Transport Network – Freight (Freight Strategy) as a key part of the Transport for Canberra policy framework. The strategy informs future decision making by focussing on the key issues, current and future demand and planning required to ensure that the ACT has a sustainable and productive freight transport system at the local, regional or national level.

By providing clear strategic directions on the development of the freight network over the coming decades, the strategy should ensure that we unlock the ACT's potential for economic growth and enhance the ACT's standing in the region as a place to invest and do business.

Mick Gentleman MLA
Minister for Planning and Land Management
March 2016



Contents

Message from the Minister	i
List of acronyms	iv
Executive summary	1
1. Introduction	3
1.1 What is freight?	3
1.2 Strategic framework	4
1.3 Vision	4
1.4 Objective and principles	5
2. Context	7
2.1 Key policy directions	7
2.2 Freight overview	14
3. Current and future freight environment	27
3.1 Economic and population growth outlook and emerging trends/technologies	27
3.2 Current and future freight demand	30
3.3 Heavy vehicle/infrastructure issues and ACT's statutory obligations	36
3.4 Impacts of freight on safety, amenity and sustainability	46
4. Directions and actions	51
Direction 1: Understand the freight task and plan for the future	52
Direction 2: Invest in the right infrastructure	54
Direction 3: Implement better regulation and enforcement	55
Direction 4: Build community support	56
Direction 5: Connect with the region and other stakeholders	57
5. Implementation and funding	59
6. Monitoring and reporting	61
7. Appendix	63
7.1 Appendix A – Implementation table	63
7.2 Appendix B – References	69

BUILDING AN INTEGRATED TRANSPORT NETWORK

LIST OF ACRONYMS

ABS	Australian Bureau of Statistics
ATDAN	Australian Transportation Data Action Network
BITRE	Bureau of Transport, Infrastructure and Regional Economics (Australian Government)
CBRJO	CBR Region Joint Organisation
CMA	Capital Metro Agency
CMTEDD	Chief Minister, Treasury and Economic Development Directorate (ACT Government)
CML	Concessional Mass Limits (vehicle)
EPD	Environment and Planning Directorate (ACT Government)
GML	General Mass Limits (vehicle)
HML	Higher Mass Limits (vehicle)
HPV	High Productivity Vehicle
HVNL	Heavy Vehicle National Law
IAHVR	Intergovernmental Agreement for Heavy Vehicle Regulatory Reform
IAP	Intelligent Access Program
JACSD	Justice and Community Safety Directorate (ACT Government)
NHVR	National Heavy Vehicle Regulator
NLFS	National Land Freight Strategy
PBS	Performance Based Standards (vehicle)
RMS	Roads and Maritime Services (NSW)
SEROC	South East Regional Organisation of Councils (NSW)
TAMSD	Territory and Municipal Services Directorate (ACT Government)
WIM	Weigh-in-motion (station)

EXECUTIVE SUMMARY

The ACT Government is committed to delivering an efficient, safe and sustainable freight network and providing freight services for a growing ACT and regional economy and community.

The ACT freight network is an important seam in the national freight network. Whilst modest compared to other jurisdictions, it is regionally significant as a freight hub and for connection with the NSW network.

The Building an Integrated Transport Network – Freight (Freight Strategy) recognises the important role that the freight network plays in ensuring the robustness of the overall transport system and the importance of planning and protecting freight corridors and precincts within the ACT. The strategy comprises five directions and seven actions that provide guidance to government, business and industry on the ACT’s approach to managing the freight task. The strategy reflects a range of influences including:

- alignment with the priority themes of the National Land Freight Strategy i.e. understanding the freight task and planning for the future, investing in the right infrastructure, better access, investment and charging for heavy vehicles, better regulation and building community support
- assessment of the gaps between the current situation or ‘business as usual’ future situation and desired state
- community and industry consultation outcomes following release of ACT Freight Strategy Discussion Paper.

The strategy discusses the existing environment and drivers of the demand for freight including:

- the economic and population growth outlook
- freight demand and its relationship with land use and regional development
- the ACT’s statutory obligations regarding heavy vehicles and freight infrastructure
- the importance of safety, amenity and sustainability in freight operations.

The strategy complements a range of ACT Government initiatives including the Majura Parkway, the development of an orbital route for traffic and freight movements, the Capital Metro Network and the prioritisation of the central transport corridors for public transport.

Any funding for actions adopted as part of the Freight Strategy will be considered as part of future ACT Government budgets and in the context of competing priorities. Opportunities for joint funding bids between the ACT and CBR Region Joint Organisation (formerly known as South East Regional Organisation of Councils (SEROC)) as well as potential sources of Australian Government investment funding will also be examined.

Arrangements will also be put in place to monitor the implementation of the Freight Strategy, to measure the performance of the freight network in the ACT and to report regularly on the delivery of actions to the community. This will be done through the Transport for Canberra report card.

Directions	Actions
1. Understand the freight task and plan for the future	Action 1.1 Improve data collection, reporting and analysis of freight activities. Action 1.2 Identify and protect future freight activities, corridors and local freight access.
2. Invest in the right infrastructure	Action 2.1 Develop, evaluate and implement an infrastructure upgrade program to meet the needs of future freight activities, larger freight vehicles and urban planning and redevelopment directions.
3. Implement better regulation and enforcement	Action 3.1 Implement local legislation to support national regulatory reforms. Action 3.2 Investigate options for larger freight vehicle access to local ACT destinations and also for limiting such access where urban planning and redevelopment directions may require.
4. Build community support	Action 4.1 Engage the community in understanding of freight and traffic management challenges, treatments and opportunities.
5. Connect with the region and other stakeholders	Action 5.1 Work with Australian, state and local governments and industry to take a strategic approach to protect and enhance freight routes and facilities in the region.



INTRODUCTION

The ACT Government is committed to achieving an efficient, safe and well-designed freight network that connects people, goods and services to, from, through and within the ACT. While the ACT freight network is modest compared to other jurisdictions, the continuing growth in freight movements presents ongoing challenges for local access and mobility to and from industrial precincts and activity centres. There is a risk of increasing impacts on safety, infrastructure and sustainability in the Territory given the anticipated growth in freight movements and ongoing national reform that supports higher productivity vehicles.

The Building an Integrated Transport Network – Freight (Freight Strategy) aims to provide a strategic framework for freight to guide the ACT’s development of more productive, more sustainable and safer freight services, and to meet the needs of a growing ACT economy and community. The strategy comprises five directions and seven associated actions that guide government, business and industry on the ACT’s approach to managing its freight task and achieving a safe and efficient transport network for both passengers and freight.

WHAT IS FREIGHT?

Austrroads defines freight as the movement of goods and services from one location to another as part of a collection, production or distribution and logistics chain. Goods movement includes core goods (that are generally for sale to customers) and ancillary goods (such as stationery or packaging materials used within a business).¹

Freight activities within a city are impacted by land use planning decisions such as the locations of industrial, commercial and residential areas and the routes used to deliver the goods. Planning for freight activities involves the integration of land use, transport and environmental objectives to promote economic and socially equitable outcomes.

Urban freight includes freight tasks that have origins and destinations within the urban area (intra – metropolitan freight) as well as freight movements where some part of the task may be located within an urban area (such as interstate and inter-regional movements).

During the movement of freight, smaller freight loads transported by light freight vehicles may be consolidated into larger freight loads to be transported by heavy road freight vehicles or other modes like rail. Similarly, larger loads may be broken down to smaller loads for distribution.

In this light, the movement of freight involves service area or end-of-route facilities for the manoeuvring, parking and loading or unloading of vehicles for the delivery or removal of goods or freight. Efficient movement of freight requires a strategy that integrates it with the efficient movement of people, especially in and around the city and town centres whilst protecting urban amenity and freight access.

The ‘last mile’ is an important part of freight movement as heavy vehicles access local shopping centres, group centres, town centres and the city centre or other areas, which may not necessarily be part of the approved routes for heavy vehicles. As this is where much of the interaction between the heavy vehicles and the community occurs, the ‘last mile’ impacts on infrastructure capacity and community safety and amenity.



A freight vehicle manoeuvring a turn after delivering fuel at a petrol station in Dickson

¹ Planning for Freight in Urban Areas, Austrroads, 2003

BUILDING AN INTEGRATED TRANSPORT NETWORK

STRATEGIC FRAMEWORK

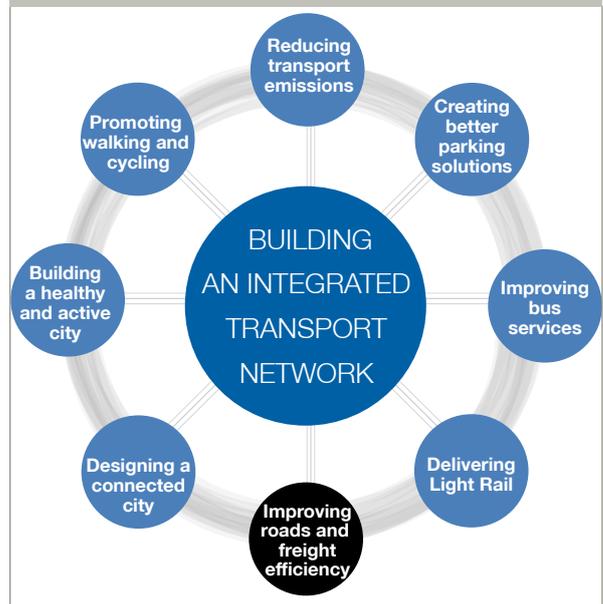
The Freight Strategy seeks to guide safe, efficient and effective movement of goods to strengthen the ACT and regional economy. Freight networks support key ACT industries including construction and manufacturing as well as wholesale and retail trade activities that generate jobs and keep the economy moving.

The strategy is a key part of the ACT Government's policy framework, including Transport for Canberra, and forms part of the National Land Freight Strategy. It provides guidance to business and industry on the ACT's approach to managing its freight task.

Improving roads and freight efficiency is part of ACT Government's complementary approach to build an integrated transport network that supports the government's broader economic, social and environmental objectives. Integrated transport networks shape the way cities grow and prosper by generating economic opportunities and jobs, and providing vibrant and attractive social environments for residents and visitors.

Freight is an important component of developing an Integrated Transport Network for Canberra as shown in Figure 1.

Figure 1: Building an Integrated Transport Network



VISION

The vision of the Freight Strategy is:

'Delivering an efficient, safe and sustainable freight network and services for a growing ACT and regional economy and community while protecting urban amenity and freight access and reducing the emission intensity of the freight transport industry.'



Freight vehicles delivering various goods and services including milk and construction materials

OBJECTIVE AND PRINCIPLES

The objective of the Freight Strategy is to guide the ACT's development of more productive, more sustainable and safer freight services to meet the needs of a growing ACT and regional economy and community while protecting urban amenity and freight access and reducing the emission intensity of the freight transport industry.

The strategy is based on a number of key principles:

- **Understanding** ACT freight flows, how they relate to the range of ACT and regional industries, the drivers of these flows and how they are likely to grow and change in the future.
- **Planning** on the basis of data and evidence for efficient, safe and sustainable freight for the ACT's future.
- **Investing** in infrastructure to facilitate freight movement including appropriate use of larger, more productive vehicles and to improve safety, community amenity and driver welfare.
- **Regulating** access to the road network so there is alignment with the capabilities of the infrastructure on one hand and certainty for industry and the community on the other hand and regulating industry compliance, taking the opportunities offered by new technology and cooperation with NSW. This will help protect urban amenity and freight access.
- **Building** community support through success with the above activities and through effective communication.
- **Engaging** with other governments in the surrounding region on the basis of mutual dependence and mutual benefit.
- **Interacting** with industry as a critical and informed stakeholder in a more productive, safe and sustainable freight system.



A semitrailer waiting to turn at the traffic lights

Aerial photo of Majura Parkway construction
Source: TAMS 2015



CONTEXT

The Freight Strategy responds to both key national and ACT policy directions (Figure 2) and to the broad context for freight for the ACT and region (Figure 3). While the ACT is geographically a small jurisdiction, it plays an important role as a freight hub for the ACT and region. The ACT national freight routes connect to national and regional freight routes in NSW and through them to other Australian States.

KEY POLICY DIRECTIONS

National Land Freight Strategy

The National Land Freight Strategy represents an agreed approach by Australian, State, Territory and Local Governments. It aims to ensure an efficient, sustainable national land freight system that is able to respond to growth; and that policies affecting land freight are aligned and coherent across governments.² The strategy requires jurisdictions to put in place long-term freight plans including mechanisms for protecting freight corridors and precincts for a growing freight task.

National Heavy Vehicle Regulator

The National Heavy Vehicle Regulator (NHVR) commenced initial operations in January 2013, taking over the management of the National Heavy Vehicle Accreditation Scheme and the secretariat functions for the Performance Based Standards arrangements.³ In February 2014, it assumed responsibility for issue of permits previously undertaken by the ACT and other jurisdictions⁴ and now coordinates an approvals process to allow access to road networks by restricted access vehicles. Development of the Freight Strategy provides an opportunity to reassess the requirements of the ACT freight network to meet a new national regulatory environment. In November 2014, the Transport and Infrastructure Council agreed to adopt the objective of a minimum baseline of 'as-of-right' access for B-doubles and/or Performance Based Standards (PBS) Level 2 (or equivalent) combinations on all key freight routes, noting that application of this objective for routes that do not currently provide this level of access will need to be considered by jurisdictions on a case by case basis.

High speed rail for the longer term

A high speed rail study completed for the Australian Government Department of Infrastructure and Regional Development in 2013 examined a high speed rail network for the east coast of Australia between Brisbane and Melbourne, including Canberra.⁵ The report identified a preferred alignment for a connection to the ACT branching from the main rail line west of Goulburn, allowing Canberra-bound trains to travel in either direction to and from Sydney or Melbourne. While high speed rail is mainly focussed on passenger movement, there may be opportunity for 'light freight' (e.g. parcels and other light, high value goods) to be transported, similar to the high speed rail network in France.⁶

Transport for Canberra

The Transport for Canberra policy is the foundation for transport planning in the ACT to 2031. It identifies a number of key actions for completion such as committing to an ACT partnership with the Australian Government to develop freight infrastructure that ensures productivity in the national freight sector. Specifically, Action 27 commits to the development and release of a Freight Strategy, with the freight strategy to complement other key initiatives such as Majura Parkway, the development of an orbital route for traffic and freight movements, the Capital Metro light rail and the prioritisation of central transport corridors for public transport.

2 National Land Freight Strategy A place for freight, Standing Council on Transport and Infrastructure, 2012 http://www.transportinfrastructurecouncil.gov.au/publications/files/National_Land_Freight_Strategy_Compressed.pdf, accessed 12 October 2014

3 National Heavy Vehicle Regulator 2013 <https://www.nhvr.gov.au>

4 Not including Western Australia and the Northern Territory.

5 High Speed Rail Study: Phase 2 Report, AECOM et al 2013 https://www.infrastructure.gov.au/rail/trains/high_speed/, accessed 25 October 2014

6 The Potential Impacts of High Speed Passenger Rail to Eastern Australia, Aurecon, Australasian Railway Association, 2014 [http://www.ara.net.au/UserFiles/file/Publications/14-10-27%20REPORT-The-Potential-Impacts-of-High-Speed-Rail-to-Eastern-Australia%20\(1\).pdf](http://www.ara.net.au/UserFiles/file/Publications/14-10-27%20REPORT-The-Potential-Impacts-of-High-Speed-Rail-to-Eastern-Australia%20(1).pdf), accessed 1 November 2014

BUILDING AN INTEGRATED TRANSPORT NETWORK

ACT Planning Strategy

The ACT Planning Strategy (2012) provides long-term planning policy and goals. Action 9 of the strategy specifies investigation of land use requirements for transport-related economic development including an intermodal freight facility served by national highways and near existing industrial lands and the airport in the short term and collaboration within the region in preparing an ACT and region freight strategy in the long term. These actions are complemented by the Eastern Broadacre Study investigations to advance planning for employment locations and add to the land supply in Symonston, Hume and Beard.

AP2 A new climate change strategy and action plan for the Australian Capital Territory

AP2 provides a pathway to achieve the ACT's legislated greenhouse gas reduction targets. The *Climate Change and Greenhouse Gas Reduction Act 2010* sets a target for 2020 of a 40% reduction in greenhouse gas emissions based on 1990 levels and zero net emissions by 2060. Through Transport for Canberra's implementation, the plan aims to reduce transport sector emissions generated by the ACT transport sector. In particular it aims to realise annual emission reductions of 138,000 tonnes from business as usual emissions by 2020 through a range of measures set out in the Transport for Canberra policy including vehicle fleet efficiency.

The Canberra Plan

The Canberra Plan: Towards Our Second Century (2008) builds on the original Canberra Plan by articulating key directions for the city's continued prosperity. Future directions from the Canberra Plan will continue to support the planned expansion of both passenger and freight activity.

ACT Government Infrastructure Plan

The ACT Government Infrastructure Plan: 2011–2021 outlines the ACT Government's commitment to release regularly updated, rolling ten-year infrastructure plans. In 2011–2012, the ACT Government Budget announced a capital program of \$885 million for new works over four years. The program included an allocation to transform freight travel in the region through development, jointly with the Australian Government, of the Majura Parkway. The ACT Government Infrastructure Plan 2013 updates the 2011–2021 Plan for 2013–14 and provides an overview of key infrastructure projects that the ACT Government has funded through the 2013–14 Budget (worth \$272 million over four years) or is considering for funding over the next decade. The infrastructure plan outline the government priorities in the four areas of growing the economy, healthy and smart, liveability and opportunity and urban renewal.



Confident and Business Ready: Building on our Strengths

Confident and Business Ready: Building on our Strengths sets out the ACT's plan to develop a strong economy by creating the right business environment, accelerating innovation to create wealth and jobs, and supporting business investment in future growth areas. Confident and Business Ready recognises the potential for freight operations, particularly in connection with Canberra Airport, to be a driver of growth and diversification in the ACT's economy.

Canberra Airport Master Plan

Released in January 2015, the master plan sets the airport's strategic direction for the next 20 years. Key elements of the plan include development of Canberra Airport as a major capital city and regional hub for passengers and freight. This is envisaged to facilitate Canberra's direct links with major cities in Australia and the Asia Pacific region and with smaller communities in the region. This will enhance its role as a critical hub for overnight freight traffic unable to access Sydney Airport during the Sydney curfew and to address the overflow due to capacity constraints on Sydney Airport.

The Heavy Vehicle National Law

The Heavy Vehicle National Law (ACT) Act 2013 (the national law) underpinning the NHVR commenced on 10 February 2014.⁷ In adopting the national law, the ACT supported the establishment of the National Heavy Vehicle Regulator as the administering authority in the ACT. The object of the national law is to establish a scheme for facilitating and regulating the use of heavy vehicles on roads in a way that:

- promotes public safety
- manages the impact of heavy vehicles on the environment, road infrastructure and public amenity
- provides for efficient road transport of goods and passengers by heavy vehicles
- encourages and promotes efficient, innovative, productive and safe business practices.

ACT Road Safety Strategy

Road safety affects the whole ACT community. Each year, an average of 14 people are killed and 565 people are injured on ACT roads.⁸ The strategy recognises that even though the ACT has a relatively small heavy vehicle fleet and limited geographical area, the importance of heavy vehicle issues on a national basis needs to be recognised at an ACT jurisdiction's level. As such, the strategy commits to the ACT's continued participation in national discussions on heavy vehicle safety issues. It is supported by multi-year action plans the first of which expired at the end of 2013. The current action plan covering the period to the end of 2020 includes a range of measures aimed at saving lives, reducing injuries, and strongly prioritising a "vision zero" approach to transport policy making.

Eastern Broadacre

Eastern Broadacre refers to land in the Majura Valley to the east of Canberra city, adjacent to the airport and to land located south of Fyshwick in the vicinity of Symonston and Hume. The ACT Eastern Broadacre Economic and Strategic Direction Study examined the area's suitability as a future employment corridor.⁹ The study confirmed that the area has the potential to provide for a range of light industrial uses, nationally and internationally significant businesses, freight distribution, logistics and emerging industries, bulky goods retailing, education and community uses.

A subsequent discussion paper, Planning the Eastern Broadacre Area, was released for public comment.¹⁰ As a result, areas were identified for further investigation. Investigations are underway to confirm the extent of land that is suitable for development. This will be based on a constraints analysis and will identify existing and proposed development footprints, conservation and offset areas and servicing corridors within Eastern Broadacre.

⁷ National Transport Commission, Heavy Vehicle National Law 2011 www.ntc.gov.au/heavy-vehicles/rules-compliance/heavy-vehicle-national-law

⁸ ACT Road Safety Strategy 2011–2020

⁹ ACT Eastern Broadacre Economic and Strategic Direction Study, MacroPlan, 2009

¹⁰ Planning the Eastern Broadacre Area, ACTPLA, July 2010

BUILDING AN INTEGRATED TRANSPORT NETWORK

State and regional policies

Released in December 2013, the NSW Freight and Ports Strategy is a core component of the state's strategic planning framework and also responds to the National Land Freight Strategy. The strategy provides a direction on NSW's interstate freight tasks and potential collaboration with the ACT in terms of infrastructure opportunities, such as freight terminals and decoupling stations. The strategy sits alongside Infrastructure NSW's First Things First: The State Infrastructure Strategy 2012–2032, which recommends a range of priorities for infrastructure development across NSW including regional transport.

The Victorian Freight and Logistics Plan, also released in 2013, sets out the state's directions and priorities. Along with NSW, Victoria is also an important source of freight for the ACT. The Bureau of Infrastructure, Transport and Regional Economics (BITRE) estimates that about 7% of ACT road freight is from or to Victoria.¹¹

In December 2013, the Australian and NSW Governments announced funding for the preparation of the Barton Highway Improvement Strategy. The strategy sets out a 20 year plan for the NSW Government to guide the ongoing development of the road corridor and to improve the safety and traffic efficiency of the Barton Highway, addressing the current issues and constraints and accommodating the anticipated growth in traffic demand in the NSW section of the highway, while complementing potential future duplication of the highway as far as practicable.

Other policy directions

At the national level, the Moving People 2030 Taskforce¹², comprising of a number of peak industry bodies, has prepared a transport plan report outlining a whole-of-system approach to how Australia fund infrastructure, move people, move goods and better integrate spatial planning systems with effective transport networks. This includes the development of improved freight networks in addition to the development of world class public transport systems, active travel (walking and bicycling) and connectivity and transit-oriented developments. The report recognises how movement of freight is managed, especially in relation to light commercial vehicles delivering to the inner and outer suburbs, will have a significant impact on the ways people travel to work or play in the future.

At the regional level, the Southeast Australian Transport Strategy Inc. (SEATS), an advocacy group for the development of transport infrastructure in the South East Australian region comprising local government, industry representatives and academics, has developed a strategic transport network plan. This includes Barton Highway duplication, King's Highway upgrade, Goulburn intermodal terminal and a Canberra Airport freight precinct as priority projects.¹³

11 BITRE Interstate freight in Australia, Research Report 120

12 Moving People 2030 Taskforce, Moving Australia 2030, A Transport Plan for a Productive and Active Australia, 2013
<http://bic.asn.au/solutions-for-moving-people/moving-australia-2030>

13 South East Australian Transport Strategy Inc., (SEATS), A Strategic Transport Network for South East Australia 2013
http://www.seats.org.au/publications/transport_network.asp, accessed 20 October 2014

Figure 2: Relationship of Freight Strategy with key policy directions



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Figure 3: The ACT and surrounding region



CASE STUDY: A snapshot of the extent of operation of freight providers in the ACT

There are several major freight and logistics providers delivering goods and services in the ACT and surrounding region. In the twelve months ending June 2012, there were over 12 million tonnes carried by all freight vehicles in the ACT. The majority of these goods belong to the 'crude materials' category comprising construction materials, metal scrap, wood, pulp and paper. Also significant were freight goods comprising containerised manufactured goods which are delivered overnight from NSW and Victoria in bigger and heavier freight vehicles which are then delivered locally in smaller freight vehicles. Among these providers is StarTrack, a business of Australia Post, which moves approximately 60% of its freight by air and 40% by road. Nationally, it operates from various depot locations. Locally, it operates from its depot at Hume and delivers across the ACT and throughout the region as partly shown below.

(<http://www.startrack.com.au/about-us/overview/>)



StarTrack Depot at Hume, ACT



Loading dock along Constitution Avenue



Bega Freight Centre (shared with Toll Ipec and other freight providers)

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FREIGHT OVERVIEW

Air freight

Canberra Airport is one of the few remaining curfew-free major airports in Australia, making it a potentially important link in the national freight network.

While current volumes of air freight into and out of the ACT are quite small, air freight typically involves high-value and time-sensitive freight.¹⁴ Canberra Airport handles a small amount of air freight at present, but aims to become a more significant freight airport in the future, with expected commencement of an overnight express freight hub that takes advantage of the airport's 24 hour curfew free status, as outlined in the recently released Canberra Airport Master Plan.¹⁵

An air freight hub in itself would not necessarily involve a larger number of heavy vehicle movements initially, but the airport estimates seven additional truck movements per day, including for aviation fuel, in a ten year time frame. The first stage of the freight hub will simply involve exchange between aircraft or trucks requiring minimal warehouse or other storage requirements.



Overnight loading of freight parcels at Canberra Airport

Trucks operating at night outside peak periods will access the Federal Highway and the Barton Highway via Majura Road (or Majura Parkway) or Sutton Road away from residential areas. Other roads for freight going to and from the region include Monaro Highway and Kings Highway.

The continuing development of Canberra Airport and its precinct and future development in the adjacent Eastern Broadacre Area is expected to lead to increased future freight movement on the Majura Parkway (which is partially opened with construction due to be completed in 2016) and Federal Highway links. The opening of the IKEA outlet in November 2015 is indicative of activity in the Eastern Broadacre in the vicinity of Canberra Airport precinct.¹⁶



Daytime loading of freight at Canberra Airport

14 BITRE advises that actual data are not available due to commercial confidentiality considerations.

15 Canberra Airport Master Plan 2014-2034 p.11

16 "Ikea comes to Canberra, Canberra Times 7 May 2014, <http://www.canberratimes.com.au/act-news/ikea-comes-to-canberra-20140507-zr6j2.html>

CASE STUDY: Canberra Airport and freight

In its master plan, Canberra Airport states its intention to increase freight throughput at the airport. Currently, much of Canberra's air freight is carried in the holds of passenger aircraft, supplemented by less frequent dedicated freight services to Sydney and Melbourne. Air freight carried to and from Canberra includes express freight envelopes, critical medical items such as blood, plasma and radioactive isotopes for cancer treatment, cash for the banking system, diplomatic parcels and newspapers. Current airfreight service providers at the airport include Qantas Freight, Toll and various courier companies.

With an intended expansion of freight services, the airport expects two to three jet freighter aircraft will be operating from the airport within five to seven years, eventually growing to five aircraft in total. The road freight implications of this potential growth are limited – estimated at three B-double trucks per week in the initial stages.

Stakeholder feedback generally endorsed the plan to increase the airport's freight handling capacity, noting the increased demand for time-sensitive, door-to-door deliveries due to the growth of online shopping. This growth is demonstrated by a carrier such as Australia Post now having more than 70% of its parcel business being driven by online ordering.¹⁷ Expanding dedicated freight services would allow currently unmet demand for the movement of larger and heavier parcels by air to be met and delivered within the region.

Expanded air freight services at the airport offer the potential to boost regional economic development, with locally sourced produce able to reach international markets. Seafood is particularly time sensitive and local exports of fresh produce such as oysters and fresh tuna from the NSW South Coast could leave the curfew-free Canberra airport in the early morning, for midday arrival in large Asian markets such as Singapore and China. The ACT Government is undertaking further consultation to determine the full extent of latent demand for air freight exports from the ACT.



Unloading/loading of airfreight containers at Canberra Airport

17 Australia Post Consumer Survey 2011

BUILDING AN INTEGRATED TRANSPORT NETWORK

Road freight

Nearly all freight (by volume) into and out of the ACT is road based. ACT road freight flows are primarily imports into the ACT rather than exports, with the majority coming from New South Wales, as shown in Figure 4.

Interstate road freight has grown rapidly throughout the country in recent decades. Freight flowing from NSW to the ACT is forecast to increase from a 2007 estimate of 720 million tonne-kilometres to 1,422 tonne-kilometres in 2030, at an average annual growth rate of 3.1%.¹⁸ With regard to Victoria, where the two-way freight volume totals 72 million tonne-kilometres, BITRE estimates that outbound freight will continue to grow strongly, as it will to NSW.

Figure 5 shows that over 12 million tonnes of commodities were carried by all freight vehicles operating in the ACT in the 12 months ending June 2012. At 4.2 million tonnes (32% of the total), the 'crude materials' category, comprising construction materials, metal scrap, wood, pulp and paper and other products was by far the most significant. This was followed by manufactured goods (18%) and tools of trade (15%). Nationally, crude materials are comparably significant (32%), followed by food and live animals (14%) and manufactured goods (13%).¹⁹

In some contrast, freight imported into the ACT appears to comprise a high proportion of manufactured goods. According to Transport for NSW data, of the top nine regional freight flows into the ACT, five comprised manufactured goods, consumer goods or containers while the other four were building products, crude materials, fuel and food products.²⁰ This is consistent with the data from the ABS Survey of Motor Vehicle Use, since construction materials, the largest category in Figure 5, are typically transported only a short distance and are likely to comprise predominantly 'within ACT' freight.

Road freight is likely to continue as the primary mode for freight delivery to, and distribution within, the ACT, rather than rail or air freight due to:

- the proximity of the ACT to Sydney, a major manufacturing, import, export and logistics centre
- the ongoing expansion of terminals and road-focused distribution centres in south-west Sydney and Goulburn
- interstate road freight usually offering a faster door-to-door service than a combination of road and rail service.



Heavy vehicles delivering road-based freight

18 tkm (tonne-kilometre) is a unit of measure of freight transport which represents the transport of one tonne of goods over a distance of one kilometre

19 ABS Survey of Motor Vehicle Use 2013 data cube

20 Transport for NSW (Bureau of Freight Statistics) data provided for the strategy

Figure 4: Interstate freight estimates and forecasts to and from the ACT

Source: BITRE Research Report 120, Intermodal freight in Australia

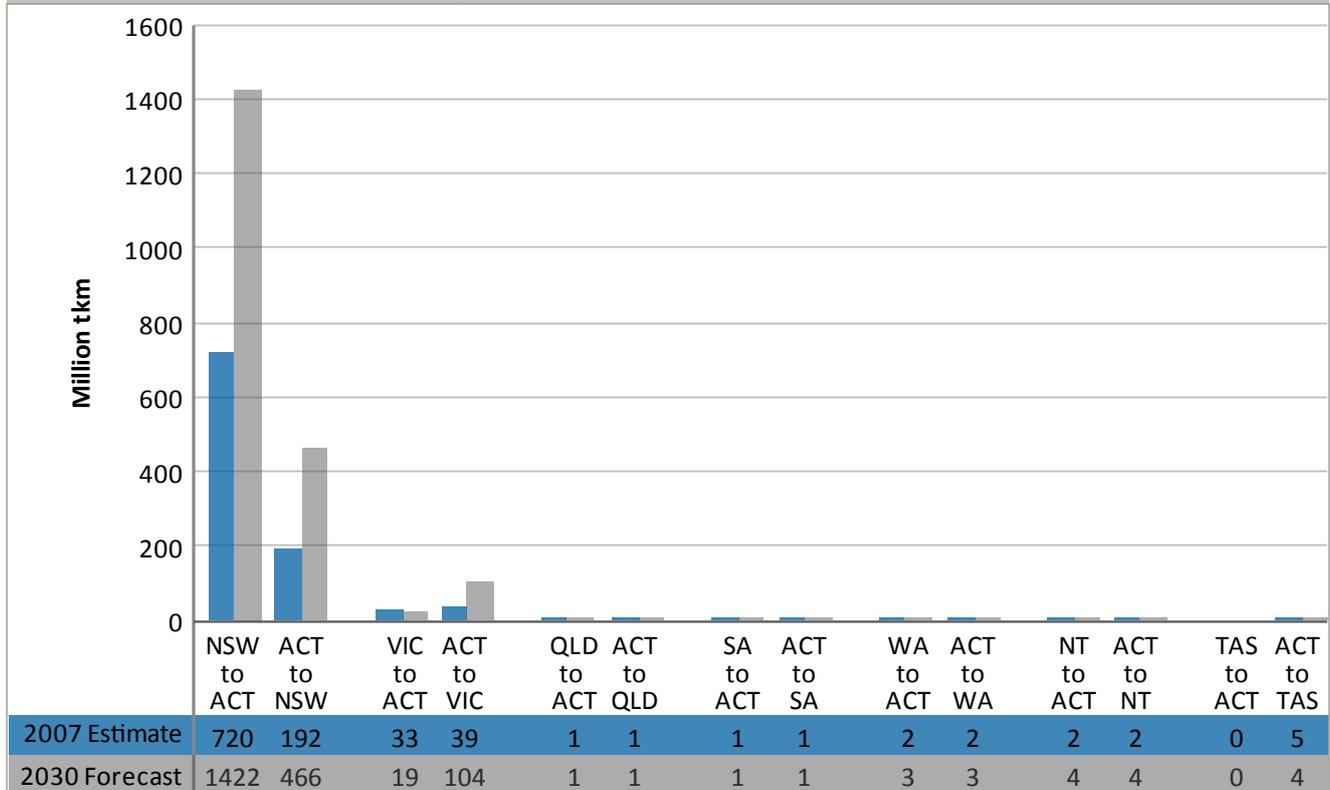
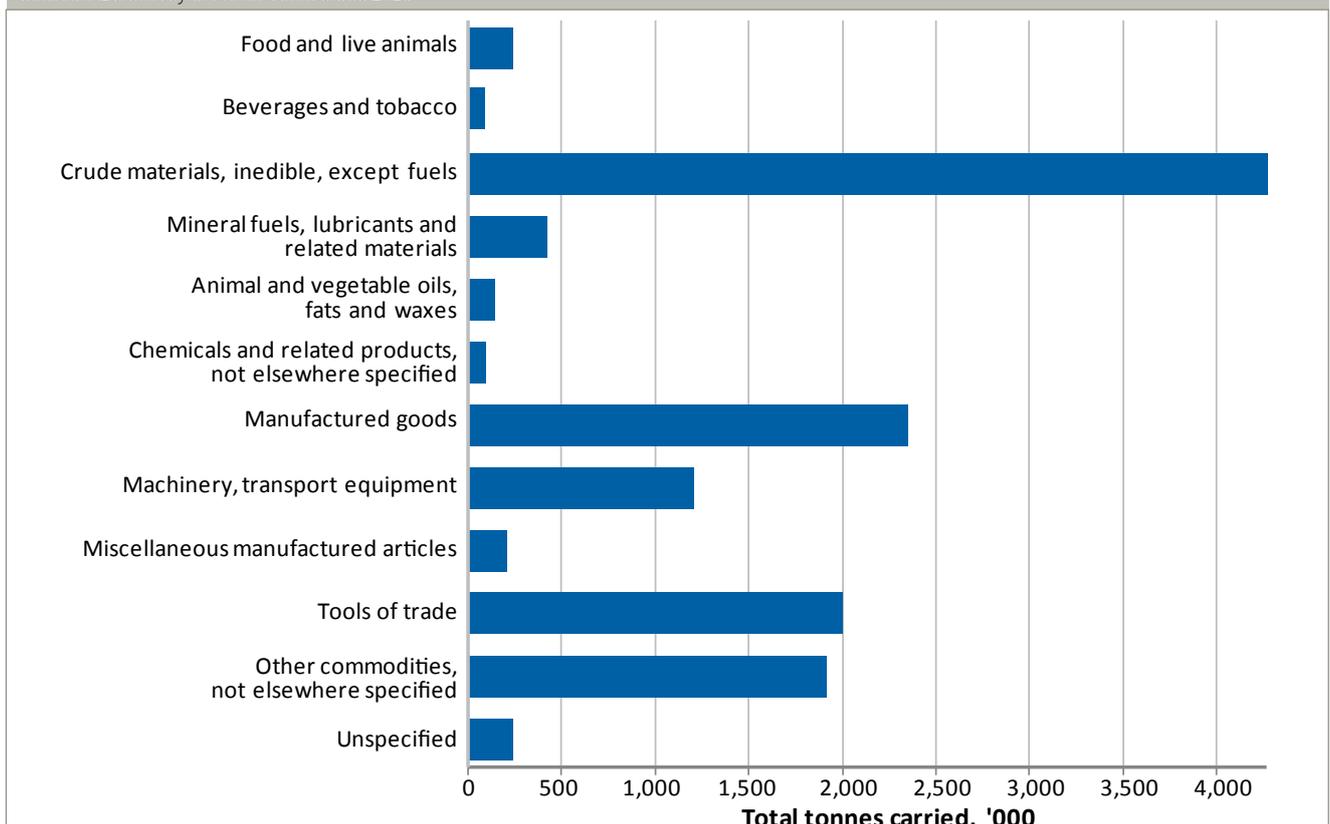


Figure 5: ACT road freight tonnages

Source: ABS Survey of Motor Vehicle Use 2013



BUILDING AN INTEGRATED TRANSPORT NETWORK

The road freight network

As in all jurisdictions, the ACT's arterial roads support large volumes of mixed (passenger and freight) traffic. Arterial roads are designed for General Mass Limit (GML) freight vehicles, comprising rigid trucks and semitrailers with gross vehicle mass up to 42.5 tonnes (semitrailers) and length to 19 metres. Combinations meeting these prescriptive dimension and mass limits have access to the entire road network, noting that operators have responsibility for determining if their vehicle will fit within the road network they wish to access. The ACT's GML road network including the national freight routes is shown in Figure 6 and information on light and heavy vehicle categories is in the Austroads light and heavy vehicle classification system outlined on the next page.

Restricted access vehicles are larger or heavier vehicles that exceed the general mass or dimension limits operating on a more confined network. The most extensively used vehicle type in more urbanised parts of the country, including the ACT, are 14.5 metre long buses and B-doubles, comprising a prime mover and two semitrailers with mass and dimension limits up to 68 tonnes and 26 metres in length (HML – see next page). The category also includes the still larger high productivity vehicles (HPV), including B-triples and road trains, which are not currently permitted in the ACT or roads connecting to it from NSW. Larger level 3 and 4 Performance-Based Standards (PBS) approved vehicles, that are assessed for suitability to the network on a case-by-case performance basis, are also considered to be HPVs. The ACT has not promulgated PBS L1 and L2 networks yet, however PBSL1 vehicles will generally be permitted access to all arterial roads subject to load restrictions on some bridges on some arterial roads. The same applies to PBS L2 vehicles on the B-double network (mainly the roads with conditions) where some bridges have load restrictions.

It is a current national policy goal to achieve a presumed right of access for B-double and equivalent PBS vehicles on national key freight routes. Figure 7 shows the ACT restricted access vehicle network, (including national freight routes), with current B-double access status indicated. The network includes three principal routes that connect the ACT with the region, i.e. the Federal and Barton Highways, connecting to the Hume Highway and to Sydney and Melbourne respectively and the Monaro Highway connecting through to Eastern Victoria.

The ACT Government has also provided a designated network for Australian Defence Force vehicles and equipment under the Australian Defence Force Road Transport Exemption Framework (ADFRTEF).²¹

The key freight providers who regularly operate in the ACT with the above types of vehicles as shown below are known to include: Abletts, Finemore, Linfox, StarTrack, TNT and Toll Ipec.



²¹ ADFRTEF specifies exemptions applicable to Defence for the conduct of military operations, exercises and for day to day activities. A Maintenance Group comprising Commonwealth, State and Territory agency representatives and the ADF exists to ensure the Framework is current.

The Austroads light and heavy vehicle classification system

Source: Automatic Vehicle Classification by Vehicle Length, Austroads 2006

Level 1 Length (indicative)	Level 2 Axles and Axle Groups		Level 3 Vehicle Type	AUSTROADS Classification			
	Type	Axes	Groups	Description	Class	Parameters	Dominant Vehicle
Short Up to 5.5 m	LIGHT VEHICLES						
			1 or 2	Short Sedan, Wagon, 4WD, Utility, Light Van, Bicycle, Motorcycle, etc.	1	$d(1) \leq 3.2\text{m}$ and axles = 2	
Medium 5.5 to 14.5 m	3, 4 or 5		3	Short – Towing Trailer, Caravan, Boat, etc.	2	groups = 3, $d(1) \geq 2.1\text{m}$, $d(1) \leq 3.2\text{m}$, $d(2) \geq 2.1\text{m}$ and axles = 3, 4 or 5	
	HEAVY VEHICLES						
	2		2	Two Axle Truck or Bus	3	$d(1) > 3.2\text{m}$ and axles = 2	
	3		2	Three Axle Truck or Bus	4	axles = 3 and groups = 2	
Long 11.5 to 19.0 m	>3		2	Four Axle Truck	5	axles > 3 and groups = 2	
	3		3	Three Axle Articulated Three axle articulated vehicle, or Rigid vehicle and trailer	6	$d(1) > 3.2\text{m}$, axles = 3 and groups = 3	
	4		>2	Four Axle Articulated Four axle articulated vehicle, or Rigid vehicle and trailer	7	$d(2) < 2.1\text{m}$ or $d(1) < 2.1\text{m}$ or $d(1) > 3.2\text{m}$, axles = 4 and groups > 2	
	5		>2	Five Axle Articulated Five axle articulated vehicle, or Rigid vehicle and trailer	8	$d(2) < 2.1\text{m}$ or $d(1) < 2.1\text{m}$ or $d(1) > 3.2\text{m}$, axles = 5 and groups > 2	
	>=6		>2	Six Axle Articulated Six (or more) axle articulated vehicle, or Rigid vehicle and trailer	9	axles = 6 and groups > 2 or axles > 6 and groups = 3	
Medium Combination 17.5 to 36.5 m	>6		4	B-Double B-Double, or Heavy truck and trailer	10	groups = 4 and axles > 6	
	>6		5 or 6	Double Road Train Double Road Train, or Heavy truck and two trailers	11	groups = 5 or 6 and axles > 6	
Long Combination Over 33.0 m				Triple Road Train Triple Road Train, or Heavy truck and three trailers	12	groups > 6 and axles > 6	

The Austroads system of vehicle classification organises vehicle types by axle configuration or by vehicle length, while regulation also takes account of mass limits.

Classes 1 to 9 correspond to General Mass Limits (GML) vehicles (i.e. up to 42.5 tonne gross vehicle mass and 19 metres length and including buses), which have unrestricted access to the ACT road network, while classes 10 and above are restricted access vehicles. Classes 1 to 9 also include Concessional Mass Limits (CML) vehicles. CML mass limits are set at 5% above GML provided that the operator is accredited under the National Heavy Vehicle Accreditation Scheme.

Under Higher Mass Limits (HML), semitrailers (class 9) and B-doubles (class 10) are permitted to operate at mass limits of 45.5 tonnes and 68 tonnes instead of 42.5 tonnes and 62.5 tonnes respectively, where vehicles are fitted with certified road friendly suspension systems and operating on an authorised route.

Other classes of heavy vehicles are permitted to operate at HML if they are fitted with a tandem axle with six or eight tyres i.e. a rigid truck with a tandem axle group with eight tyres can operate at 17 tonnes rather than 16.5 tonnes.

High Productivity Vehicles (HPV) are any vehicles that exceed a general or prescribed mass limit. HPVs include double road train (class 11) and triple road trains (B-triple, class 12). B-triples, with a gross vehicle mass of 82.5 tonnes and length of 36 metres are currently being considered for a trial on the Hume Highway.

HPVs also include performance-based standards (PBS) vehicles. PBS (Levels 3 and 4) vehicles are larger customised vehicles that are assessed on a case-by-case basis in terms of safety and other performance characteristics, in connection with the road network that they seek to access.

BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 6: ACT General Mass Limits road network

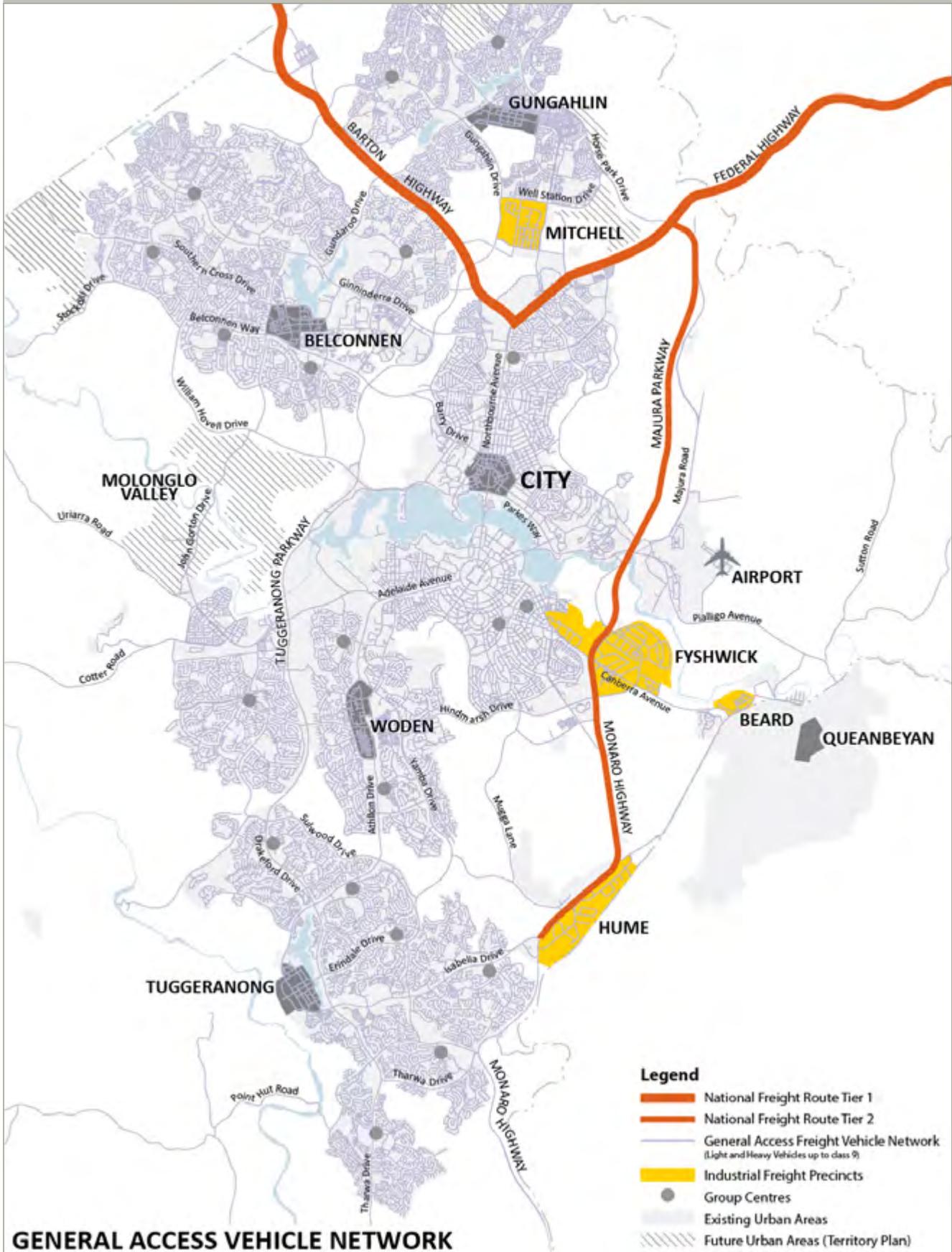


Figure 7: ACT Restricted Access Vehicle road network

Note: B-doubles operating at Higher Mass Limits as distinct from General Mass Limits are constrained to the authorised routes of the Barton, Federal and Monaro highways and Majura Road/Majura Parkway.



B-DOUBLE RESTRICTED ACCESS VEHICLE NETWORK

BUILDING AN INTEGRATED TRANSPORT NETWORK

CASE STUDY: Corridor Protection (Majura Parkway and Key Freight Routes)

Majura Parkway is a new 11.5 kilometre dual carriageway arterial road that is partially opened with construction due for completion in 2016. In 2015, it was partly opened to traffic between the Federal Highway and the Monaro Highway and will take pressures of Northbourne Avenue and other roads to the city. The Parkway is located about 500 metres to the west of Majura Road and will have grade separated interchanges with the Federal Highway, Fairbairn Avenue and Monaro Highway. The Parkway will replace an existing single carriageway rural arterial road (Majura Road) that is operating significantly above its capacity. The Parkway will also improve road safety and amenity and provide an alternative orbital ring road freight options for commuters in the ACT.

Majura Road will continue to operate as a local road to provide access to the existing properties and services along the road. Majura Parkway/Majura Road have also been recently identified as national key freight routes.

The Parkway links the Federal Highway with the Monaro Highway and provides improved freight access and operations to the industrial estates of Fyshwick, Hume and Eastern Broadacre and to Canberra Airport. As a result, freight transport will also be reduced on other arterial roads around Canberra. Freight demand by road to and from the ACT is expected to double in the next 20 years.

The Parkway will also improve road connections between north and south Canberra. Jointly funded by the ACT and Australian Governments, the Parkway is expected to fully open in 2016. The Parkway also provides opportunity for future land release and development for commercial and industrial uses along the corridor, subject to further assessment.

Under the National Land Freight Strategy, key freight route maps that connect nationally significant places for freight have been recently endorsed by the Transport and Infrastructure Council. In a separate initiative to the National Land Transport Network²², the mapping aims to represent in an objective and practical way the nationally significant land routes for moving freight in Australia. The maps are a coordinated initiative by the Australian, state and territory governments in consultation with industry to develop a more comprehensive understanding of the national land freight system and to help inform policy decisions on commercial, regulatory and policy initiatives. In addition to Majura Parkway, the ACT has identified the Barton and Federal Highways as National Freight Route Tier 1 which connects the ACT to NSW and Victoria. Majura Road and Monaro Highway which connects the National Freight Route Tier 1 to major freight destinations of Hume and Fyshwick have been identified as National Freight Route Tier 2. These routes are reflected on all our maps to consistently depict their function in future master planning and development decisions.



²² The NLTN is a key part of the Australian Government's Infrastructure Investment Programme, which has the objective of achieving a safe, sustainable national transport system that enhances the interconnectivity of corridors of significant economic opportunity across Australia. The focus of the NLTN is connectivity between capital cities, or major centres of commercial activity or intermodal terminals. It covers both freight and passenger movements. The NLTN plays an important role in the strategic planning for current and future road, rail and intermodal terminal infrastructure. The NLTN is determined by the Commonwealth Minister for Infrastructure and Regional Development under the Nation Building Program (National Land Transport) Act 2009. This legislation sets out the criteria which must be met for inclusion in the NLTN.

CASE STUDY: Future Planning (Northbourne Avenue and freight)

Northbourne Avenue provides opportunity for integration of land use and transport with transit oriented development and active frontage along the corridor. It serves as both the principal entry point into Canberra and a major transport corridor connecting to the ACT's two main interstate arterial roads, the Federal and Barton Highways. It is used by both general traffic and freight vehicles. It has three lanes plus a dedicated bicycle lane running in each direction. It is highly trafficked by public transport buses travelling between the City and Dickson, Gungahlin and Belconnen. The speed limit is 60 kilometres per hour, with an 80 kilometres per hour speed limit north of the intersection with Mouat Street and Antill Street.

With high traffic volumes and a variety of road users, Northbourne Avenue experiences safety, capacity and congestion issues during peak times. This congestion and slow travel times along the Northbourne Avenue and Federal Highway corridor is expected to worsen in coming years with the rapid growth of Gungahlin and other areas in northern Canberra.²³

ACT Territory and Municipal Services August 2014 traffic count data indicates the numbers of heavy vehicles on streets adjacent to Northbourne Avenue. Lonsdale Street and Mort Street, both in Braddon and close to the city, have the largest heavy vehicle numbers (250 to 300 per weekday, 4-5% of the traffic stream). Challis Street, Dickson is the next busiest freight location (100 heavy vehicles per weekday), where 10 vehicles are six-axle semitrailers or larger, likely accessing service stations and/or the Dickson group centre. These trips and others to nearby locations are likely to include use of Northbourne Avenue. The road is also known to be used by logging trucks travelling from the Bombala, NSW region via the Monaro Highway and seeking a shorter route to the Barton Highway on their way to mills at Tumut and elsewhere.

Development of a 12 kilometre light rail network, Capital Metro, is in planning and will run in part along Northbourne Avenue's wide median strip, terminating in the City. This development will necessitate changes to the road network. Restricting access for larger freight vehicles on Northbourne Avenue supports strengthening of Canberra's orbital network and the use of Majura Parkway for freight movement and the cross-connections to it. This will highlight the role of Northbourne Avenue as a major public transport corridor.



23 Light Rail Full Business Case, Capital Metro Agency, September 2014

BUILDING AN INTEGRATED TRANSPORT NETWORK

Rail freight

BITRE data show that rail freight from NSW to the ACT declined from 157 million tonnes in 1972 to 10 million tonnes in 2007, mirroring in reverse the trajectory of road freight.²⁴

BITRE estimates that for general or mixed commodity freight, unit costs for rail freight exceed those for road freight at distances less than 1,500 kilometres.²⁵ However, for geographically concentrated, single traffic markets such as container transport from ports to intermodal terminals and bulk minerals from mine to port, short distance is not necessarily a constraint to a competitive service.

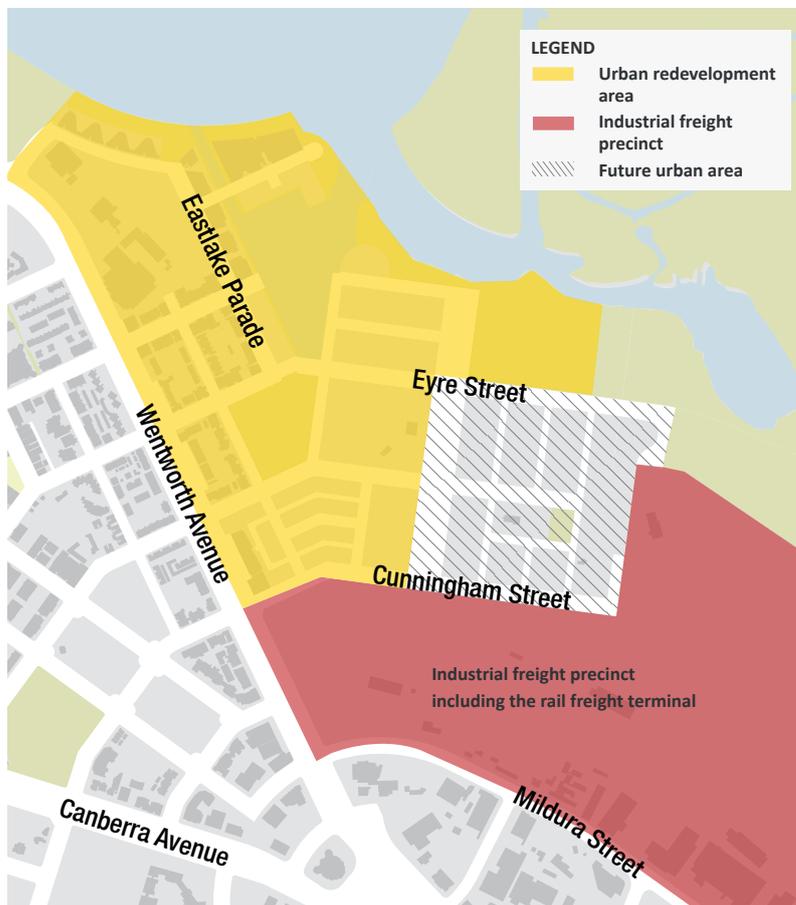
Rail freight can also draw on an extra reservoir of community goodwill, linked mainly to rail's ability to 'take trucks off the road' and a lower environmental (emission) footprint, assuming good capacity utilisation.

While trucking is likely to continue to be integral to the movement of containerised freight to and from the ACT into the future, there is potential to further explore existing rail freight opportunities for low value and high volume commodities such as scrap metal.

The last major rail freight train, carrying fuel only, ceased operations in February 2010. In March 2015, the rail freight terminal at Kingston, adjoining Canberra Railway Station resumed its operations for Access Recycling. This involves weekly freight train service transporting 1400 tonnes of processed scrap metal from Canberra to Sydney (Port Botany) to then be exported to Asia for use in steel mills.

The Kingston rail yards and a rail corridor through Fyshwick are part of the NSW country rail system, managed on behalf of Transport for NSW by John Holland Rail. There are also short non-operational rail lines to individual properties located at Fyshwick (built over and on privately owned land, in at least one case), as well as a spur line along the ACT–NSW border to the Hume industrial precinct.

For the longer term, the Kingston terminal would be a part of the East Lake development, where future freight operations would be constrained due to potential conflict of uses with the amenity of the new residents. Should a multi-modal terminal be required in the future, feasibility of alternative locations along the rail corridor would need to be investigated.



24 BITRE Report 120, p.104

25 BITRE 2009, Road freight and rail freight: competitors or complements? Information Sheet 34, p.8

CASE STUDY: Rail freight in the ACT

Factors such as the cost of transferring freight from road to rail and vice versa to enable ‘last mile’ delivery and the increased use of high productivity road vehicles means it is increasingly difficult for rail to compete with road in the transport of general urban freight in Australia. However, existing rail capacity should be used to support freight demand wherever possible and urban planning should protect existing rail infrastructure due to the unique freight handling characteristics of rail, its potential future uses and the often irrevocable character of urban development.

Due to its limited interaction with urban areas and other freight vehicles, rail is often a safer option for the longer distance movement of dangerous or hazardous materials that are necessary inputs or by-products of servicing urban areas. Accordingly, as the urban environment changes, maintaining a viable rail freight link within the ACT is an important consideration as other parts of the freight network become subject to more intensive use.

While road pavement rehabilitation may be required to restore the Kingston rail yards, prerequisites for a new rail terminal are demanding requiring level land and rail tracks to accommodate freight trains (can be up to 1.8km long) and the upgrading of neighbouring roads and pavements to accommodate trucks delivering or offloading freight. With only short branch lines in Fyshwick, it is not clear that an alternative location could be found along the corridor, as noted by community input to the freight strategy.

In March 2015, the ACT Government and the NSW Government agreed up to a two year trial whereby scrap metal will be transported to Sydney on rail via an arrangement between the Rail Infrastructure Corporation (now John Holland Rail), working with Access Recycling and Espee Railroad Services. This initiative would see a significant reduction of heavy vehicles using road networks to distribute freight and will reduce up to five long-distance B-double heavy vehicle movements on the ACT and NSW road network per day.



Loading of Access Recycling containers for transport to Port Botany



REDUCE NOISE



PLEASE LIMIT
COMPRESSION
BRAKING



CURRENT AND FUTURE FREIGHT ENVIRONMENT

Planning for freight activities needs to consider the existing environment and drivers of the demand for freight. This section discusses four main elements that are central to the future freight environment in the ACT:

- the economic and population growth outlook
- current and future freight demand in the ACT and its relationship with land use and regional development
- the ACT's statutory obligations regarding heavy vehicles and freight infrastructure
- the importance of safety, amenity and sustainability in freight operations.

ECONOMIC AND POPULATION GROWTH OUTLOOK AND EMERGING TRENDS/TECHNOLOGIES

Economic growth is the main driver of freight growth, directly through the growth of freight-intensive primary and secondary industries and indirectly through the impact on household incomes. This drives much of the growth in demand for consumption goods and construction activity. Population growth is also an important driver of freight growth, particularly for the ACT economy, where the industry groupings of public administration and safety and professional, scientific and technical services comprise nearly 40% of gross state product. Service sector growth is closely linked to population growth, while also driven increasingly by domestic and international export market opportunities.

The ACT's resident population in 2013 is approximately 381,500 people, with forecasts indicating that this will reach 553,000 by 2041, an average increase of 1.1% per year.²⁶ Historically, the ACT population has grown at an annual rate of 1.3% since 1990.²⁷

The ACT economy grew at an average annual rate of 3.0% between 1990 and 2012, similar to the national economy (3.1% growth per year).²⁸ The ACT experienced a sharp economic slow-down in 2012–2013, against the background of a reduction in Australian Government spending and jobs. Gross state product is forecast to increase by 1.75% in 2014–2015²⁹ and at an average of 2.1% per annum to 2023–24.³⁰

While these are modest rates of growth compared to the past, Canberra has a highly educated and productive workforce and GDP per capita is more than \$85,000 per annum, \$20,000 higher than the national average. This underpins high levels of imported freight in retail, construction and other sectors.

Online retail

Australians spent a record \$16.6 billion online in the year to January 2015. This is a 9% increase on the previous year's figure. Amidst this rapid growth, Canberra has the highest per capita online spend in the nation. Online sales now make up about 6.9% of Australia's traditional retail spend.³¹

It is unclear how this trend will impact the ACT freight network. One impact will be increased volumes of light commercial vehicles transiting urban areas for door to door delivery of the freight task. To the extent this offsets the need for larger and heavier freight vehicles in urban areas it may be a positive development for the network. However, traffic volume is likely to grow, as these vehicles have a higher tendency to operate part loaded due to the time sensitivity of online ordering.³²

26 ACT Population Projections: 2013 Edition, ACT Government (2013) <http://apps.treasury.act.gov.au/demography/projections/act/total>, accessed 9 December 2014

27 Business Outlook – June Quarter 2014, Deloitte Access Economics

28 Business Outlook – June Quarter 2014, Deloitte Access Economics

29 2014–2015 ACT Budget Paper No. 3 – ACT Government

30 Business Outlook – June Quarter 2014, Deloitte Access Economics

31 NAB Online Retail Sales Index January 2015, <http://business.nab.com.au/tag/online-retail-sales-index/>

32 See Ballantyne, E.E.F., Lindholm, M. and Whiteing, A. E. 'A comparative study of urban freight transport planning: addressing stakeholder needs'. *Journal of Transport Geography*, Volume 32, October 2013.

BUILDING AN INTEGRATED TRANSPORT NETWORK

Truck technologies

Technological changes in trucks are constantly changing the operational freight landscape. A current example of the deployment of these technologies can be found in the Intelligent Access Program (IAP). The IAP is a national program developed in partnership with all Australian road agencies. It uses satellite tracking and wireless communication technology to remotely monitor where, when and how heavy vehicles are being operated on the road network. The IAP can include on board mass (OBM) monitoring to record the mass of the vehicle in some cases.

With the operation of initiatives such as the IAP and other GPS linked systems operating in trucks, combined with the addition of OBM weighing systems, the essential technical infrastructure for road pricing for freight now exists. For freight vehicles, the impacts of this development could be profound. For example, if freight users were to pay for network use, this could introduce a pricing mechanism for congestion. This would allow operators to choose to avoid times of high-priced congestion or, alternately, pay a higher charge to drive at these times with, conceivably, less freight originated congestion to navigate. This technology also potentially offers road owners a better targeted funding stream to fund upgrades and new roads. Any such proposals would be pursued at a national level through intergovernmental processes.

Autonomous vehicles

Autonomous vehicle technologies are evolving rapidly, with many freight providers and operators investing heavily in them. There is a wide spectrum as to what automation means for vehicles, from warning systems through to driverless vehicles. Technologies such as automated braking, electronic stability control and dynamic cruise control systems are designed to make driving safer. More advanced automated features will include autonomous steering, accelerating and lane guidance.³³

Autonomous vehicles have the potential to make the ACT freight task safer. Engineering controls, when developed well, usually have approximately 10 times the reliability of a human operator per task. It is also estimated that 95% of collisions on roads are due to human error.³⁴

Autonomous vehicles also have the potential to be networked cooperatively. This allows them to communicate with each other and with road infrastructure, so that all can move around more safely and efficiently. Vehicles that can communicate with each other can avoid collisions and form efficient platoons that increase effective capacity. By communicating with infrastructure, they can be advised, for example, of a red-light ahead to brake in time and pass back information on traffic and infrastructure conditions.



33 <http://www.smh.com.au/digital-life/cartech/driverless-cars-closer-than-you-think-20140622-zsgwc.html>

34 Roads of the Future – Scenarios of Autonomous Vehicles in Australia, Mike Erskine, Russell Mills and Bernard Shepherd Risk Management Group, GHD Pty Ltd

CASE STUDY: Technology: Leveraging the opportunities

The Freight Strategy seeks to take account of the potential for technology to change important freight operating parameters in the foreseeable future. This includes decision making to allow maximum flexibility when it comes to taking advantage of new technologies and freight innovations. The areas where the biggest impacts of technological change on the ACT freight network are likely to be felt.

Intelligent infrastructure

Intelligent infrastructure offers the potential to increase productivity, reducing travel times and improving safety and reliability on the ACT freight network. It offers the promise of addressing inefficiencies such as stop-start traffic which reduces throughput at the times when network demand is at its highest. Examples of intelligent infrastructure deployment include dynamic network road management through real-time operation of:

- coordinated and isolated ramp signalling, to control access to congested roads
- lane use management
- the use of variable speed limits, to reflect congestion levels, weather conditions and traffic incidents
- roadside traveller information and incident management systems.

The hardware required to implement these innovations includes vehicle detectors and surveillance camera systems, as well as underlying infrastructure such as power and communication networks and, currently, a central control system.



BUILDING AN INTEGRATED TRANSPORT NETWORK

CURRENT AND FUTURE FREIGHT DEMAND

Freight volumes in the ACT are expected to almost double by 2030 (Figure 8). Nationally, freight is also projected to double during the same period, as shown in Figure 9. While growth in the number of vehicle movements will be lower, due to vehicle productivity trends, this means that nationally there is a need to either upgrade or expand the existing freight network in order to meet the forecast increase in demand.

For the ACT, the focus of infrastructure improvements should not only be centred on the freight network within the ACT but also on the freight routes that connect the ACT to the national freight network and the surrounding region.

Figure 8: Interstate freight forecasts from/to New South Wales and Victoria

Source: BITRE Report 120

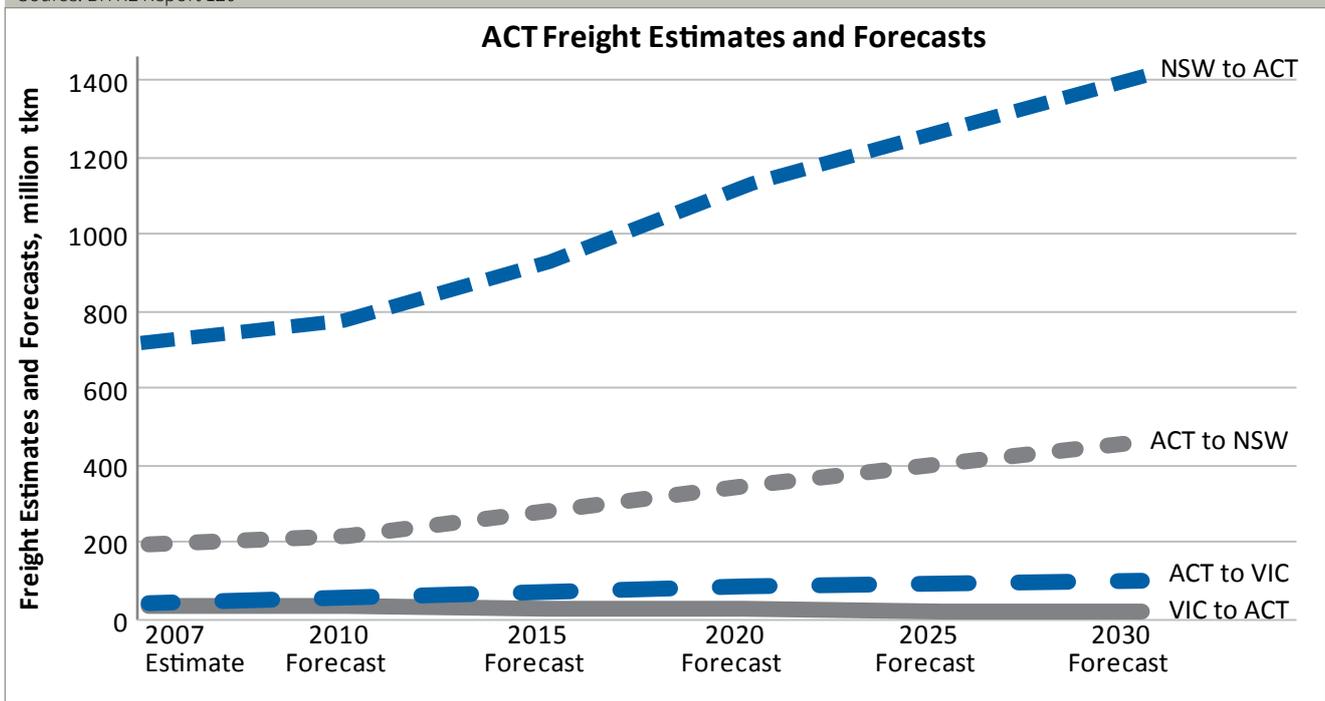
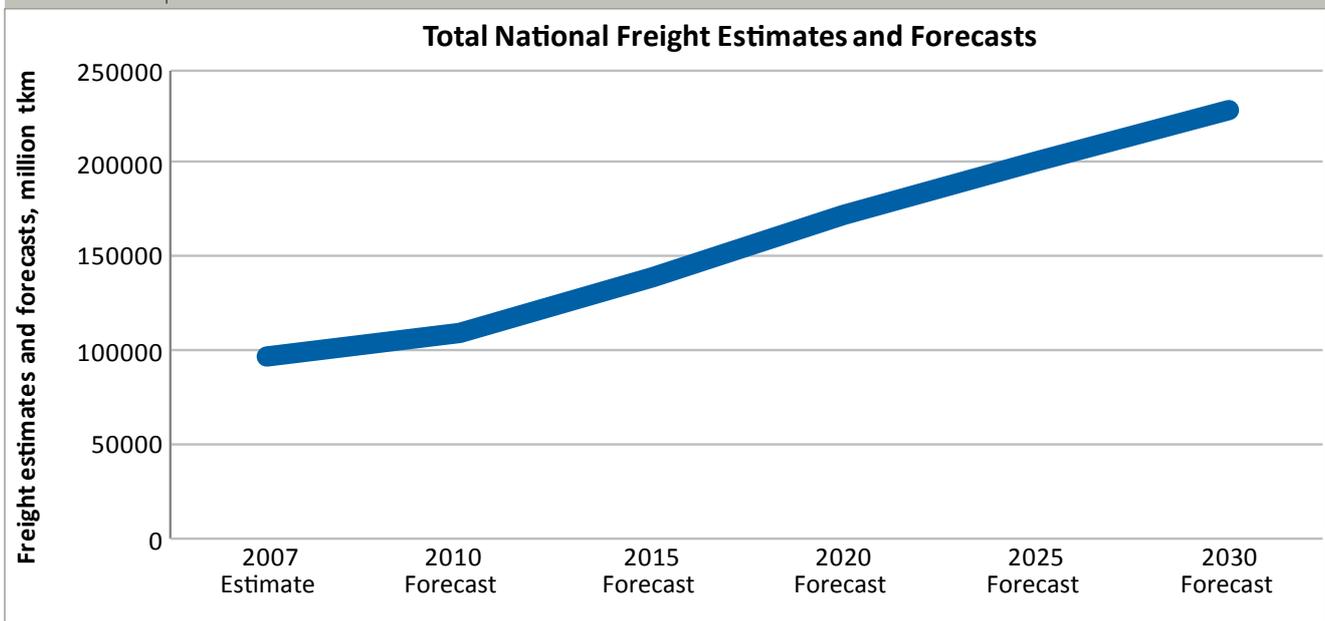


Figure 9: Total national freight estimates and forecasts

Source: BITRE Report 120



Key freight trends

A number of key national trends will influence future freight patterns in the ACT.

Firstly, more freight is being transported in larger road vehicles. This is a long-standing trend, serving both to reduce the unit costs of moving freight and to minimise the number of freight vehicles on the road. However, it presents an ongoing challenge for infrastructure capability and, in some instances, community acceptability. Notably, the six-axle semitrailer was introduced in the early 1970s and by the early 1990s was undertaking half the total road freight task. The (nine-axle) B-double overtook the semitrailer as Australia's dominant vehicle type in the mid-2000s, which has increased from near zero in 1988 to around 32% of the total road freight in 2007.³⁵

Secondly, the rate of growth of the light commercial vehicle sector exceeds that of both heavy vehicles and passenger cars. While generally less challenging in its implications for infrastructure than the heavy vehicle sector, the recent growth of online retail and associated parcel delivery is providing a further boost to the sector. Online retail is forecast to alter freight distribution logistics, with a likely increase in small distribution centres located close to final destinations.

Thirdly, the road freight sector as a whole is an 'early adopter' of new technology, using it as a management tool to reduce costs and improve both fleet performance and service reliability. Many heavy vehicle fleets now operate with GPS linked systems and On-Board Mass weighing is also now possible. Similarly, autonomous vehicles are expected within 20 years, with potential for step change improvement in safety performance. There are emerging opportunities to work with the sector for better outcomes, in areas such as regulatory compliance, safety performance and smart infrastructure planning.

Finally, the strong competitive dynamics of the road freight sector and the time and cost involved in transferring from rail to road for final delivery (or for pickup) means the competitive rail freight and its ability is often under pressure to retain markets, particularly over shorter distances.

Freight data availability

In the ACT, understanding the current and future freight task is crucial to inform evidence-based decisions and achieve an integrated and efficient freight network.

The Australian Bureau of Statistics (ABS) undertakes a biennial survey of motor vehicle use which provides aggregate information on road freight use for each jurisdiction.

Most critical for planning, however, are reliable data on the origin and destination of freight of different types into, out of, through and within the ACT. Data of this type was last collected in the early 2000s and is now being updated through the recent ABS Freight Movement Survey.

Road traffic data are also a useful source of freight-related information. The ACT has a network of classified counting stations, together with one weigh-in-motion station on the Federal Highway. This helps complement a network of NSW weigh-in-motion stations, as shown in Figure 10. Weigh-in-motion stations are used to monitor regulatory compliance with load limits, as well as for infrastructure planning and as an additional data source on freight tonnage flows.

The issue of nationally consistent road freight data is being addressed by the Australian Transportation Data Action Network (ATDAN), which provides leadership in national transportation data collection, dissemination and management approaches.³⁶

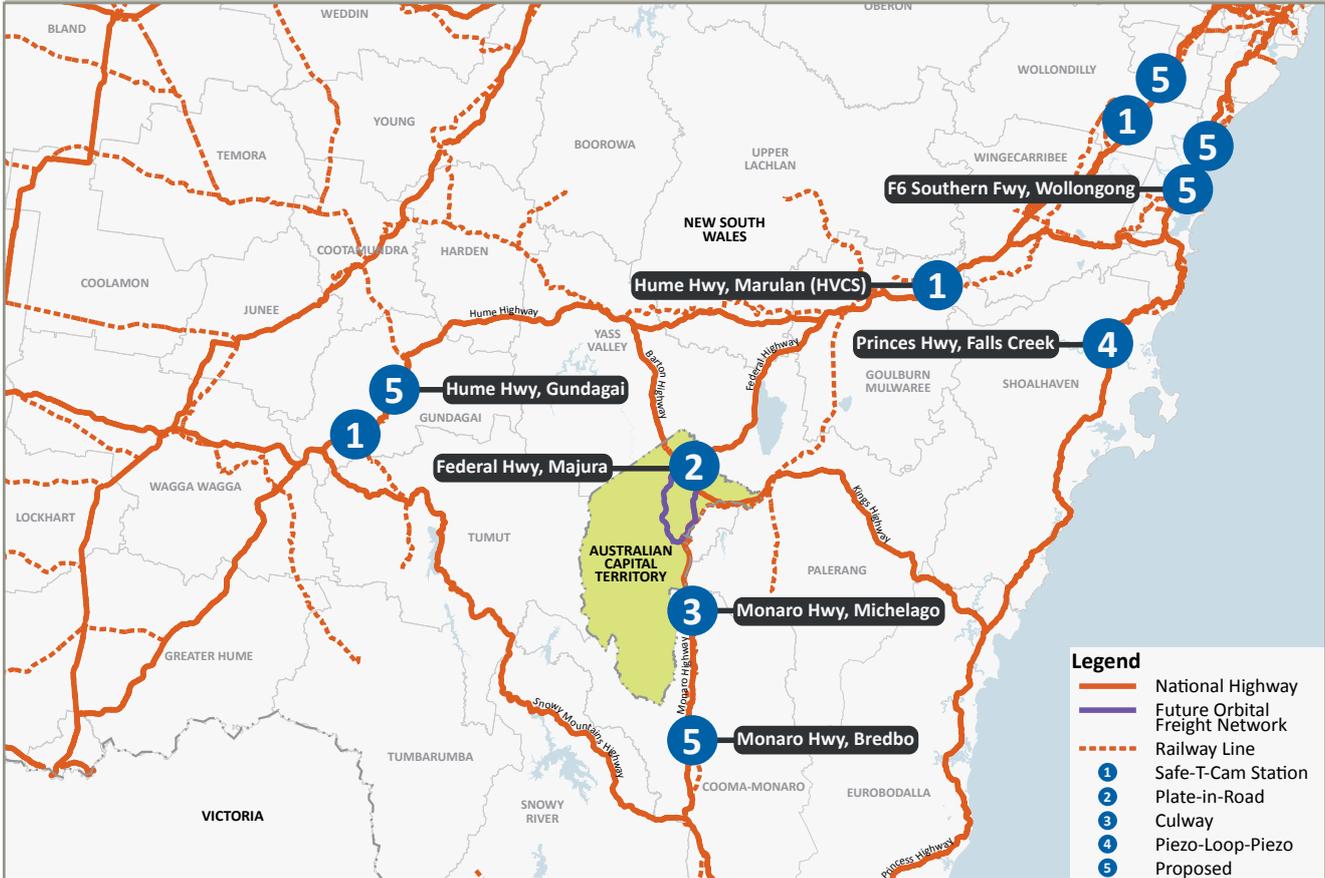
³⁵ Mitchell, D., Heavy vehicle productivity trends and road freight regulation in Australia, 2010 Australian Transport Research Forum Proceedings

³⁶ Chaired by ABS consistent with its leadership and coordination role as Australia's National Statistical Organisation, ATDAN comprises the ABS, the Department of Infrastructure and Regional Development, BITRE, the National Transport Commission and jurisdictional transport agencies (including the ACT) and other representatives as appropriate for specific issues or activities.

BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 10: Current and proposed weigh-in-motion stations in/near the ACT

Source: Transport for NSW (adapted)



Freight analysis and modelling

The ACT has a strategic road network modelling capability but, because of limited data, does not have a freight model.

Transport for New South Wales has developed a Strategic Freight Model, which includes the ACT as a region and which models and forecasts freight flows from both NSW and Victorian regions into the ACT. This is a potential resource that could offer strategic analytical insights for ACT freight planning.

While modelling can provide a useful tool for future planning, the success of any model depends on the ability to test its outputs logically and in the context of pragmatic and real freight transport operations. Understanding freight movement and its impact on transport infrastructure requires data collection and information collation.

The recently completed ARRB Freight Modelling Scoping Study Report outlines the freight data, information and modelling requirements to inform the strategic direction in understanding the freight task and planning for the future. These include:

- collection of video-based origin-destination (O-D) data and traffic count and classification data
- collaboration with local ACT freight operators to obtain insight into freight operations
- collection of tracking and operational data once the Intelligent Access Program (IAP) is operational in the ACT
- partnership with Transport for NSW Roads and Maritime Services (RMS NSW) on the use of Weigh-in-Motion (WIM) at the NSW/ACT borders and with Transport for NSW Bureau of Freight Statistics on the strategic freight modelling.

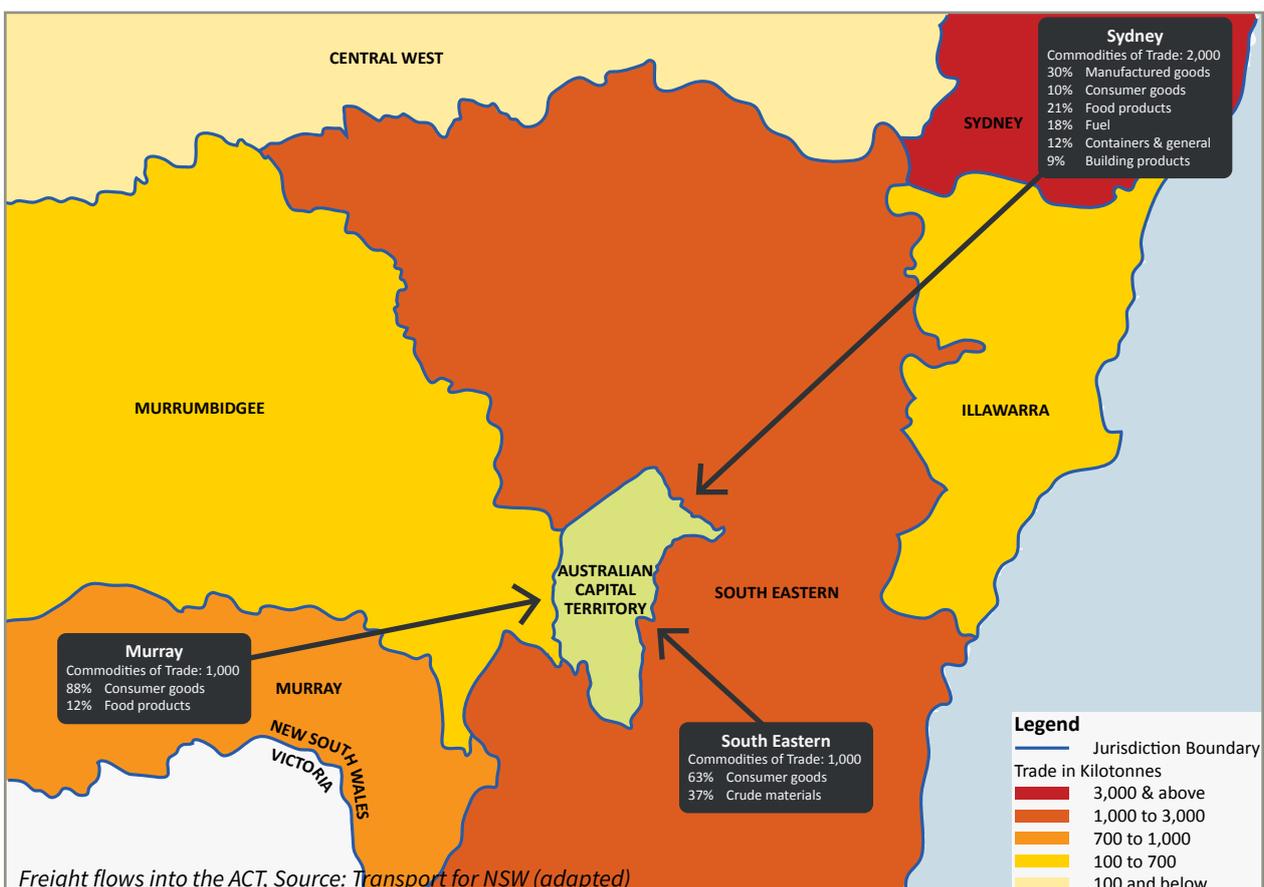
CASE STUDY: Understanding freight data and analysis

BITRE analysis, using the ABS Survey of Motor Vehicle Use data, provides the most comprehensive available insight into freight into and out of the ACT and highlights:

- a decline in the share of freight to and from Victoria and growth in the share involving NSW
- relative growth in export freight from the ACT, which comprised 9% of total freight in 1972 and 31% in 2007.

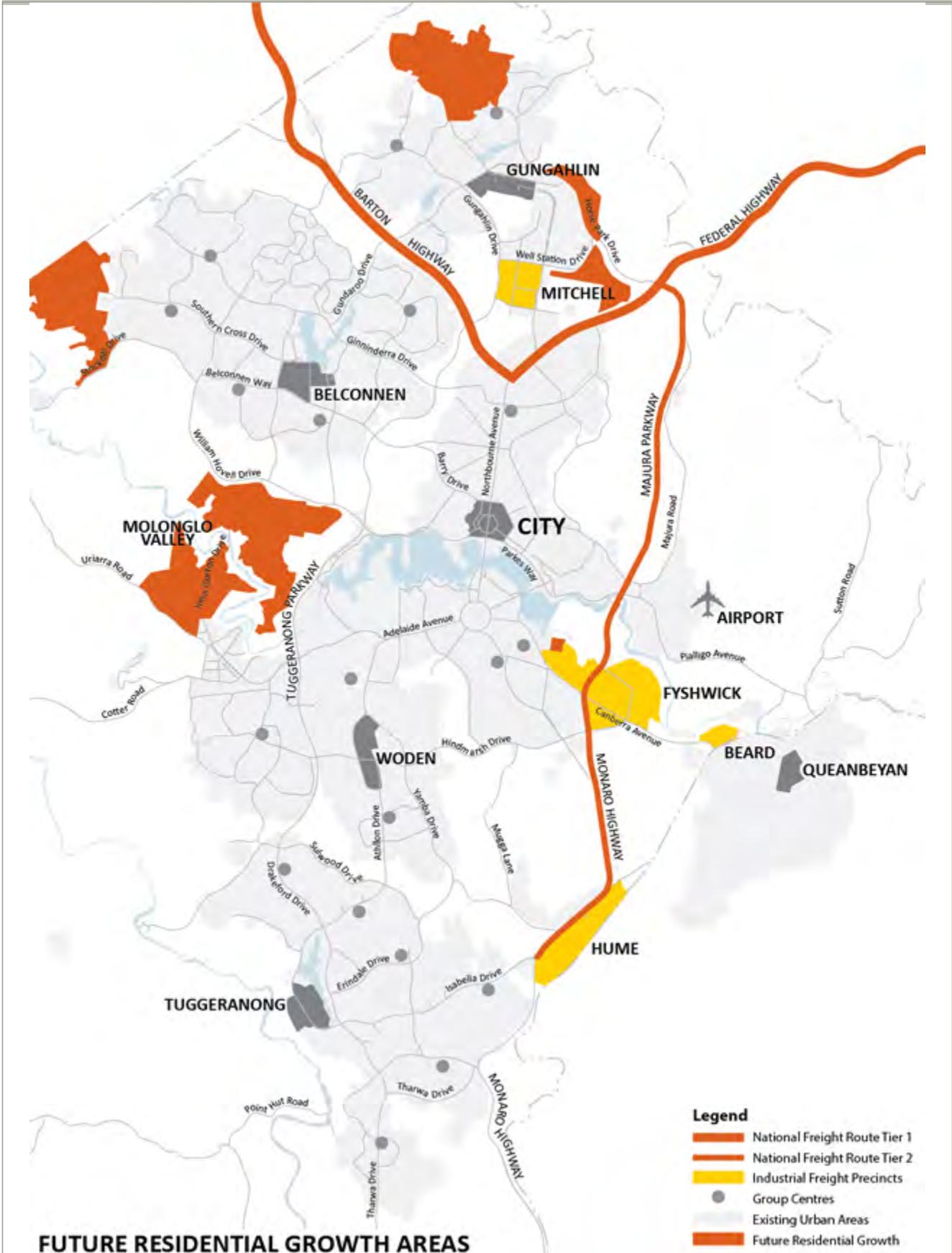
Imported freight into the ACT is predominantly from NSW, while 2011 data from the Bureau of Freight Statistics (Transport for NSW) highlights important flows from Victoria and the vicinity of the NSW border. Flows into the ACT from the Murray region, representing 15% of total freight tonnage flows into the ACT, include food and consumer goods coming from Melbourne via distribution centres in Albury (NSW) and Wodonga (Victoria). In addition to freight with origins and destinations in the ACT, freight also flows through the ACT to and from south-eastern NSW, entering the ACT via the Monaro Highway. When using the Survey of Motor Vehicle Use to derive freight flow information, origins and destinations are assumed from information supplied on jurisdiction of vehicle registration and area of operation (i.e. home jurisdiction and/or interstate). The recently released ABS Freight Movement Survey outcomes will provide up-to-date, directly derived and nationally consistent information on origin–destination freight movements.

A better understanding of ACT freight movements to, from and through the jurisdiction would assist in infrastructure and operational planning. The Freight Movement Survey should assist significantly with this. Freight movements passing through the ACT may become increasingly significant, if the quality of ACT's road infrastructure continues to improve relative to that of the surrounding region.



BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 11: Indicative locations of future ACT residential construction growth



Land use development

There are invariably implications for land use planning and development in ensuring that freight transport, including routes and associated supporting infrastructure, operates efficiently, safely and with minimum impact to the community.

Commercial and industrial land use

As shown in Figure 6, current commercial and industrial freight destinations in the ACT are focussed in Fyshwick, Mitchell and Hume and, to a lesser extent, the town centres.

The further development of the Hume industrial estate and future development of the Eastern Broadacre employment corridor along the Majura Parkway/Monaro Highway alignment will expand freight destinations and are also expected to increase road freight movements to and from the Monaro Highway. South Jerrabomberra in Queanbeyan (NSW) includes 130 hectares of light industrial/commercial land adjacent to Hume, which could also potentially increase freight traffic along the above routes.

Protecting and improving heavy vehicle access to industrial and commercial areas and avoiding conflict with passenger vehicles in these areas is important. This requires managing the location of new residential development and siting of the associated road links.

Residential and suburban land use

Figure 11 shows indicative locations of expected residential construction activities within the ACT over the next 20 years. There will be an increase in freight activities related to residential construction in Gungahlin to the north, Molonglo Valley to the west and Fyshwick/East Lake to the east.

Planning of new suburbs, including shopping centres and group centres, needs to take account of road freight trends and the emerging norm of B-double access throughout the road network, calling for larger loading docks at shopping centres, wider intersections and slip lanes to accommodate the larger swept (turning) path and adequate bridge strength and clearances these vehicles demand.

In addition, the emergence and growth of online retailing and its associated '24/7' freight movement needs to be considered. This is likely to result in increased demand for land to support small decentralised distribution centres, potentially close to group and town centres. Issues of noise and urban amenity impacts will need to be carefully managed to ensure productive freight access into the future.

Similarly, some heavy freight movements occur close to residential developments. This may affect present and future transport routes and developments in established areas, particularly those near public transport hubs and along major transport routes. For example, urban redevelopment in the Northbourne Avenue corridor and the fact that it is a designated public transport corridor require redirecting freight vehicles away from this route. This necessitates the completion of an orbital road freight network around the ACT and improvements of cross-connecting road arterials to facilitate access to the network.

Regional planning and development

As shown in Figure 6, the ACT national freight routes connect to national and regional freight routes in NSW and, through them, to other states. The ACT is tied to, and dependent upon, the region in terms of key freight routes, freight infrastructure and facilities such as rest stops, weighing stations and decoupling areas, which are all located in surrounding NSW.

At the same time, the region benefits both from the ACT as an economic hub and from the overall good quality of the ACT's road infrastructure. To illustrate, the Monaro Highway, which connects Victoria through Canberra to the Federal Highway and Sydney region, is reported to be preferred by some freight providers over the coastal Princes Highway route from eastern Victoria.

The ACT works closely with regional councils and the NSW Government in pursuing issues of potential mutual benefit. The ACT will continue to discuss and progress freight-related matters that impact on the region and the ACT.

BUILDING AN INTEGRATED TRANSPORT NETWORK

The ACT–NSW Memorandum of Understanding for Regional Collaboration provides for a three-yearly review process and the basis for regional freight discussions.

In addition, engaging directly with the freight industry could help to strengthen the ACT’s regional planning emphasis. Freight operators are based outside the ACT/Queanbeyan region, operate outside this region, or both, giving them a strong regional perspective. They also have a keen sense of freight infrastructure requirements that could help ensure key requirements are ‘planned in’ at the outset.

Heavy vehicle/infrastructure issues and ACT’s statutory obligations

Heavy vehicles make up a not insignificant share of traffic on key freight routes, ranging from around 9% on the Barton Highway near the Gungahlin Drive Extension to 29% on the Federal Highway at the ACT border (see Figure 12). While there are economic and productivity benefits from freight movement in our cities and regions, heavy vehicles also impact on road assets in terms of maintenance and rectification costs and, in some instances, traffic delays for other road users.

The ACT is a signatory to a number of national transport reforms that require infrastructure upgrades to the freight network to accommodate heavy and higher mass vehicles. These upgrades include pavement strengthening, bridge upgrades and redesign of roads/intersections and modifications to street lights, traffic lights and signs subject to funding over time. Bridge upgrades include strengthening of bridges and investigation of appropriate length, width and heights to accommodate heavy and higher mass freight vehicles.

The ACT Government has enacted legislation to apply the Heavy Vehicle National Law (HVNL) in the ACT. The Heavy Vehicle National Law (ACT) Act 2013 commenced on 10 February 2014. In line with its obligations under the Intergovernmental Agreement for Heavy Vehicle Regulatory Reform (IAHVR), the ACT committed to adopt the HVNL and establish the National Heavy Vehicle Regulator (NHVR) as the administering authority in the ACT.



Copyright Geoff Comfort

Bridge construction across Molonglo River

CASE STUDY: Planning for future freight generating activities (Hume industrial precinct)

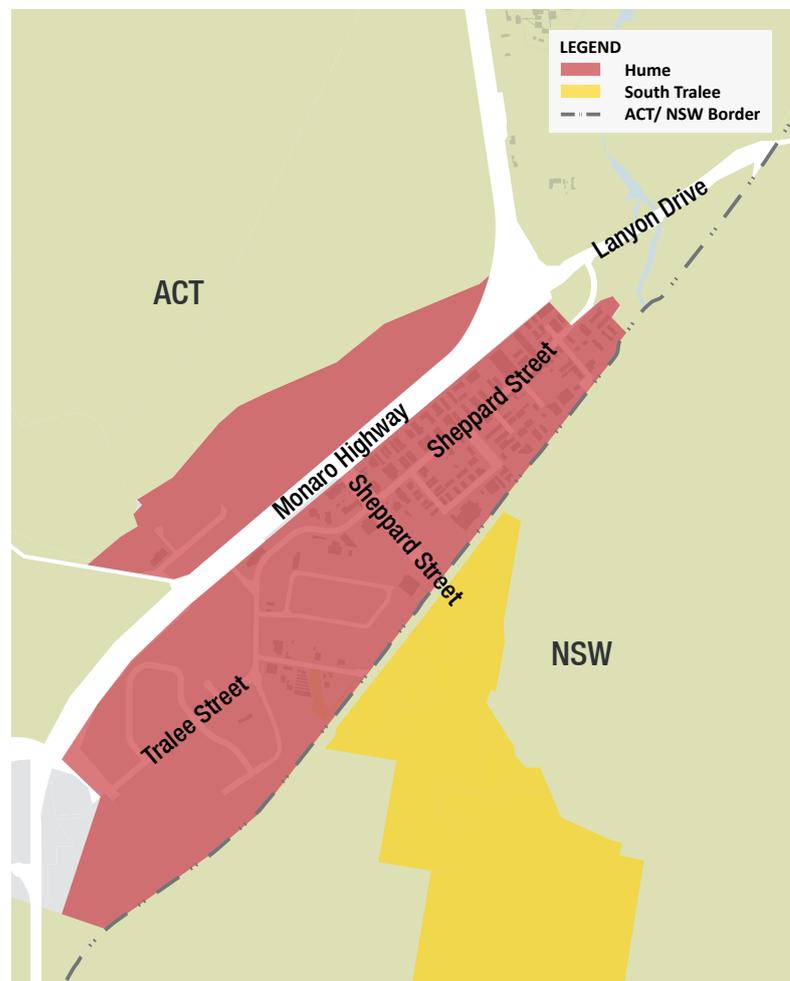
Hume is the ACT Government’s designated industrial growth precinct. The ACT Government is committed to a rolling release of commercial and industrial land in freight and transport hubs such as Hume. The development of the Hume industrial estate and future development of the Eastern Broadacre employment corridor along the Majura Parkway/Monaro Highway alignment are expected to increase road freight movements to and from the Monaro Highway.

Hume is a high functioning industrial estate that presents greater opportunities for growth than the ACT’s other industrial locations – Fyshwick and Mitchell. These have more intensive land use, including significant commercial activity and, as a result, are more constrained. Stakeholder consultations on the freight strategy revealed a high degree of satisfaction with the current operation of the Hume industrial estate, particularly on the availability of large block sizes that enabled decoupling of large trucks – in turn reducing issues of roadside decoupling being felt in other parts of the ACT freight network.

Experience in other Australian jurisdictions suggests that intrusion by extraneous traffic would likely compromise the productivity of this important industrial estate for existing and future freight generators and operators. Safeguarding the strategic importance of this area will require a continued commitment to the separation of freight and private passenger movements wherever possible.

However, the proximity of South Jerrabomberra residential estate in Queanbeyan (NSW) and growth of nearby residential developments presents a unique challenge to the Hume industrial estate. In particular, proposals for ‘through’ traffic connections to service the adjacent proposed South Tralee residential development in South Jerrabomberra have received attention. Achieving acceptance with the affected communities is important given the regular picking up and dropping off of payloads and requirements of large trucks regularly entering, exiting, and manoeuvring within roads throughout the Hume industrial estate.

The recently released Austroads ‘Guidelines for Planning and Assessment of Road Freight Access in Industrial Areas’ encourage the separation of freight and commuter traffic wherever possible in the interests of safety and efficiency. However it does not offer detailed guidance on thresholds for the interaction between freight and general traffic. Development of specific Austroads guidelines regarding appropriate siting and protection of freight precincts and industrial areas would assist with the future management of these issues.



Freight movement within the ACT under current regulations

With most freight being road-based, the ACT regulates the movement of larger freight vehicles (i.e. Restricted access vehicles comprising B-doubles and larger combinations) along road corridors. While heavy vehicles are allowed to move freight between districts and suburbs along all arterial roads, they may generate more noise than general access vehicles when they are too close to residential areas. General access vehicles, while not regulated, must comply with the road rules; operators make their own decisions about use of particular roads. There is therefore a need to maintain and upgrade the road infrastructure in order to accommodate and sustain freight movements.

Within the ACT, there are a number of infrastructure constraints including bridge load ratings, bridge weight restrictions and height limitations at tunnels and overpasses that preclude access to B-doubles, for example most of Parkes Way. These limitations have a flow-on effect in restricting B-double access to the Gungahlin Drive Extension and Parkes Way given the major ACT freight destinations are to the East.

In addition, as shown in Figure 7, the combined approved routes for B-doubles and higher mass limit vehicles currently run through public transport corridors such as Northbourne Avenue. The Transport for Canberra policy aims to complement the approved routes with a primary freight network by creating a ring road (orbital) option for freight traffic that will integrate with the central road corridors designated for public transport as shown in Figure 13.

The ACT will need to continue to manage potential urban amenity impacts and 'mode conflicts' (e.g. freight interactions with buses, cars, bikes, pedestrians and future light rail) in urban settings such as Northbourne Avenue. This is expected to ease when the Majura Parkway is completed and alternative higher mass limit vehicle routes are established with appropriate bridge and road strengthening infrastructure to complete this freight orbital route (and connections to it). In addition, the 'last mile' will remain a challenging issue, regardless of the size of the heavy vehicle.

Better enforcement

To achieve a safe freight network that supports heavy vehicle productivity initiatives the ACT needs to align with national reforms. Remote vehicle monitoring is an important part of the compliance and enforcement framework.

The Intelligent Access Program (IAP) is a national program developed in partnership with all Australian state and territory road agencies. The program provides heavy vehicles with improved access to the road network in return for remote monitoring of their vehicles. Monitoring enables road authorities to check heavy vehicles are running on the roads for which specific access has been granted, at approved times. It also enables an increase in productivity of road freight transport, while aiming to protect road infrastructure and improve road safety.

Larger and heavier freight vehicles

In a recent communique, the Transport and Infrastructure Council noted the extensive work undertaken by the NHVR in the operation of the National Heavy Vehicle Accreditation Scheme and Performance Based Standards (PBS) Scheme, including the approval of 415 PBS vehicles.³⁷

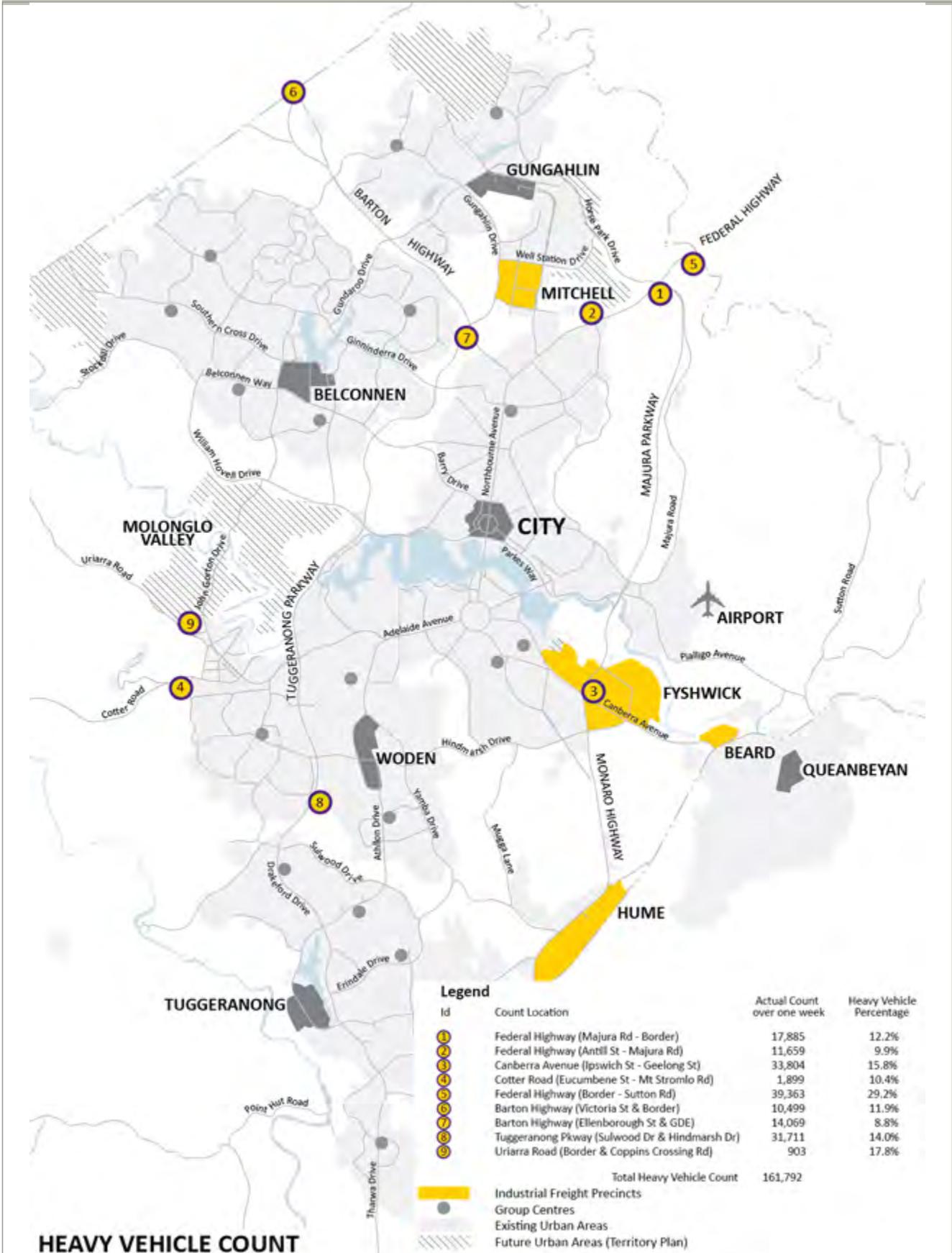
The PBS Scheme offers the heavy vehicle industry the potential to achieve higher productivity and safety through innovative and optimised vehicle design. The basic principle of PBS is matching the right vehicles to the right roads. For example, modular B-triples may access the current road train network on the same basis as double (Type 1) road trains. Estimated to provide more benefits than the road train, the modular B-triple is a straightforward extension of the B-double, with an addition of another lead trailer.³⁸

Not all heavy vehicles will operate at maximum mass limits so most (short span) bridges in the ACT will be capable of handling heavy vehicles. Managing these vehicles in the future is likely to involve a mix of upgrading road and bridge infrastructure to accommodate access and limiting access where necessary.

37 http://www.transportinfrastructurecouncil.gov.au/communique/files/Council_1st_Communique_23_May_2014_V1.pdf

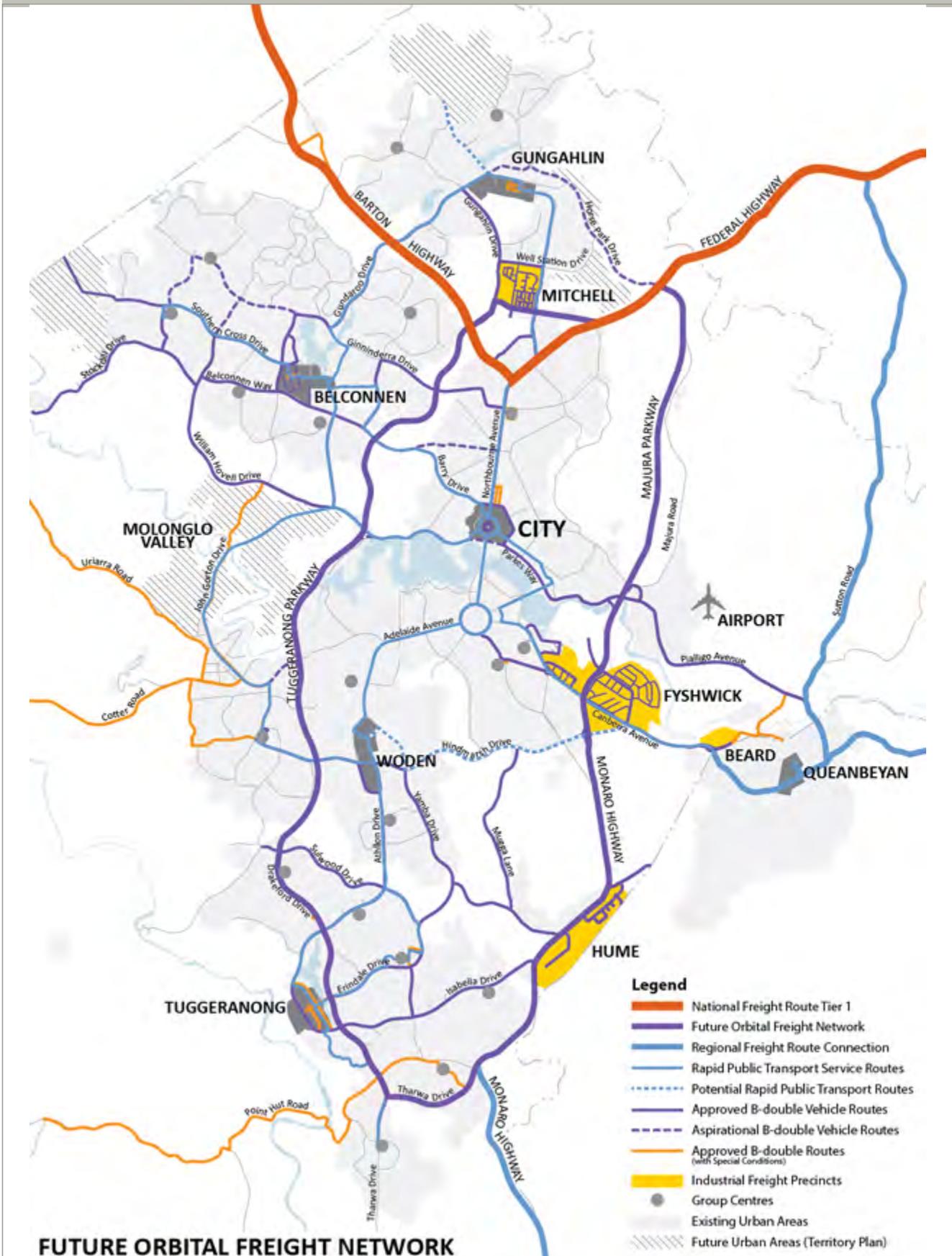
38 National Transport Commission, Modular B-triples <http://www.ntc.gov.au/heavy-vehicles/productivity/modular-b-triples>

Figure 12: Percentages of heavy vehicles at selected locations



BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 13: ACT future orbital freight network



Many bridges on the general access road network are not at PBS Level 2 (i.e. B-double) standard. For the restricted access network, bridge strengthening and load rating assessments are critical to a number of aspirational freight routes becoming part of the network (Figure 14).

Decoupling stations

A decoupling station requires an area of land to safely decouple the vehicle combination so a smaller combination (e.g. semitrailer) can be used for the final stage of the route. Decoupling facilities are needed within the ACT to enable B-doubles and other larger and heavier vehicles to both access and complete their deliveries in a safe and secure environment. A number of informal decoupling locations exist at the industrial areas of Fyshwick, Mitchell and Hume and on the sides of major roads. While road freight operators seek to decouple as close as possible to the final destination, this can be a less than optimal situation from safety, community amenity and driver welfare viewpoints.

Potential solutions include upgrading and formalising existing informal on-street locations (e.g. Hoskins Street and Sandford Street, Mitchell) and establishing new off-street facilities (e.g. Ginninderra Drive, adjacent to Isabella Drive). Locating relatively close to final destinations (i.e. town centres, group centres and industrial areas) will be important to attract operators and avoid continued informal arrangements. At least one location on the north side of Canberra and one on the south side would be appropriate.³⁹

To facilitate future B-triple and PBS level 3 vehicles, recent study identified potential locations for truck lay-bys in the vicinity of Majura Valley (Federal and Barton Highways and Majura Parkway).⁴⁰ The options were chosen based on their ability to service interstate freight traffic and traffic entering and exiting the ACT, serve as decoupling station for larger dimensioned vehicles and provide a compliance station and data collection location for heavy vehicle traffic prior to entering the ACT road network.

In February 2015, the Australian Government allocated \$3.2 million for the construction of truck lay-bys under the National Highway Upgrade Programme. Aimed at addressing driver fatigue and safety related issues, the work involves construction of two truck lay-bys (northbound and southbound) along the Federal highway including deceleration and acceleration lanes, installation of weigh-in-motion station, signage and lighting.

The design of these works was finalised with completion of construction expected before mid 2016.

Heavy vehicle parking

To protect neighbourhood amenity, parking of heavy vehicles in residential areas is severely constrained by regulation. However, anecdotally, some drivers park their vehicles near to home or near to where, as visiting drivers, they are staying overnight. In addition, stakeholder consultation indicates some interstate drivers sleep in their vehicle close to pickup/delivery sites.

The magnitude of the irregular parking issue is currently not known. This, and potential solutions, should be investigated. While the cost of establishing and running secure overnight parking facilities may be substantial, a commercial solution may be viable if rest and food service facilities are offered and the service is collocated with B-double decoupling stations (see above). However, location and market size would be critical considerations to commercial viability.

The 'last mile': loading zones and access routes

The 'last mile' is a freight movement term that refers to the links required for heavy vehicles to access the final destination for much freight.

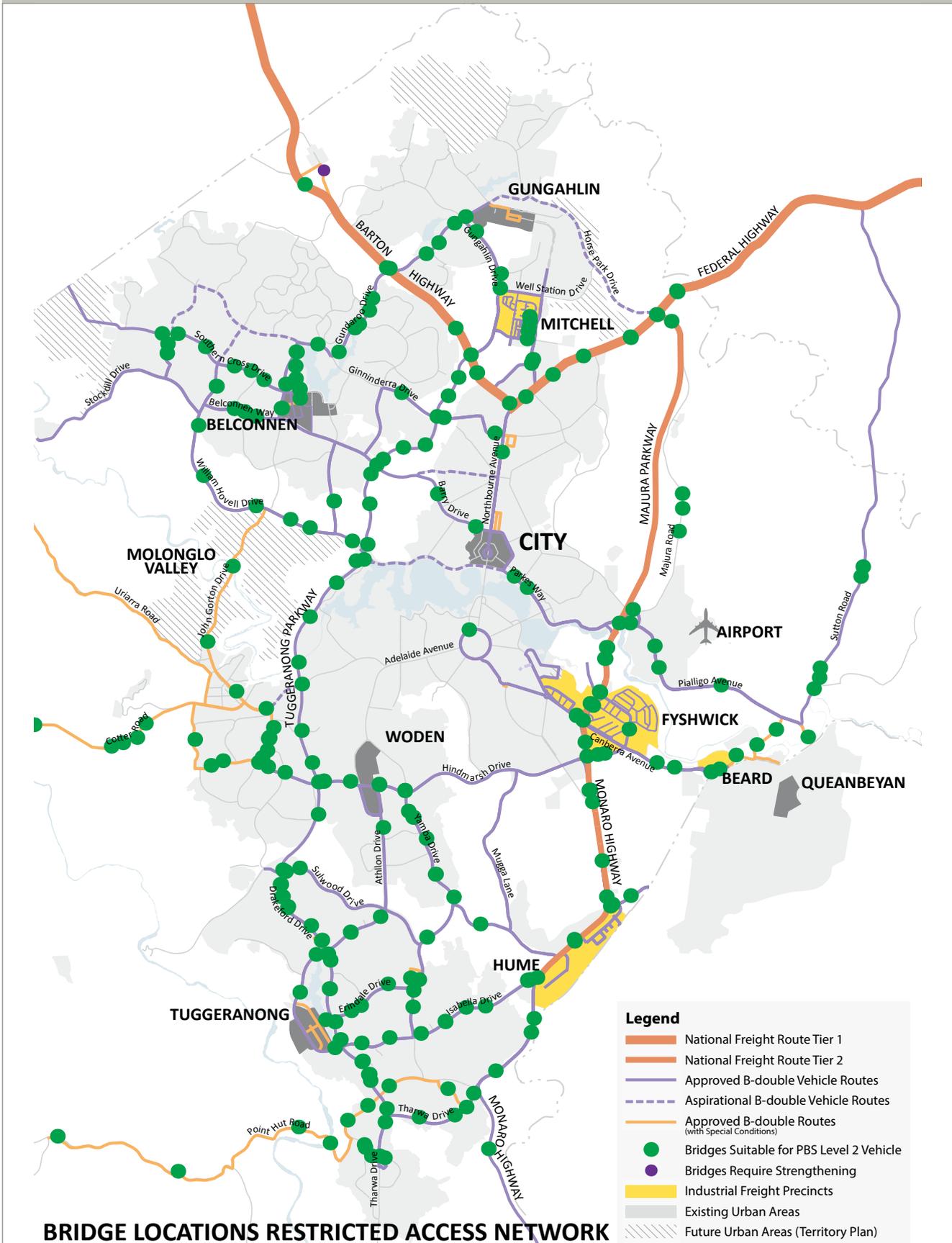
In the ACT context, these destinations include many of the local shopping centres, group centres, town centres and the city centre.

39 As recommended in AECOM (2013), *B-double Decoupling Sites Investigation Final Report*.

40 RD Gossip, "Options for truck lay-bys", 2014.

BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 14: Bridge locations on the ACT Restricted Access Vehicle network
 Source: TAMS 2015



The ‘last mile’ may not necessarily be part of the approved routes for heavy vehicles and may comprise major and minor roads in the existing road hierarchy. As this is where the interaction between the heavy vehicles and the community occurs, there are implications for both infrastructure capacity and community safety and amenity. There is potential for serious conflict between residents trying to protect urban amenity and noise impacts and freight companies trying to make deliveries if not managed well over the life of this strategy.

Currently, heavy vehicles deliver freight to the final destinations, i.e. B-double deliveries of groceries to group centre supermarkets direct from interstate warehouses and fuel to service stations. While there are approved legislated routes for heavy vehicles in the ACT, specific provisions for the ‘last mile’ in terms of loading zones and access routes need to be considered, discussed with the community and appropriately regulated. Infrastructure upgrades may be necessary in some circumstances, while other solutions can also be considered.

Figure 15 shows existing (and additional proposed) ‘last mile’ routes to destinations in the ACT including town centres, group centres and industrial areas.⁴¹ ‘Last mile’ access can be challenging for general access rigid heavy vehicles and semitrailers, as well as for restricted access vehicles depending upon the infrastructure capability (e.g. intersection width, pavement and bridge strength) of the destination. For restricted access vehicles, ‘last mile’ destinations will include group centres, town centres and industrial areas, trade areas and service stations, while for general access vehicles, these destinations could be everywhere.

The NHVR is now legally responsible for approving new B-double and HML routes, noting that access decisions remain the province of state and territory road managers. An application will need to be made to the NHVR, who will seek the advice of the road manager before gazetting the new routes.

As the road manager, Roads ACT will normally submit the application. However, anyone can make an application to the regulator for a road to be included in a restricted access vehicle network provided a proper route assessment is undertaken. A route assessment may include a bridge assessment, geometric assessment at intersections and pavement assessments. The road manager is responsible for undertaking the route assessment and can charge an applicant for undertaking the assessment. ‘Last mile’ issues can be many and varied and will usually be identified by an operator.

Alternative freight routes

If a primary (approved) freight route is closed or blocked for some reason, a suitable alternative route needs to be available. In order to sustain freight operations during adverse events, the ACT will consider upgrading infrastructure on alternative routes, particularly on the ‘orbital’ network. Within the ACT, bridge weight restrictions at tunnels and overpasses currently preclude access for B-doubles to most of Parkes Way. This is an important limitation in terms of access to the orbital route.

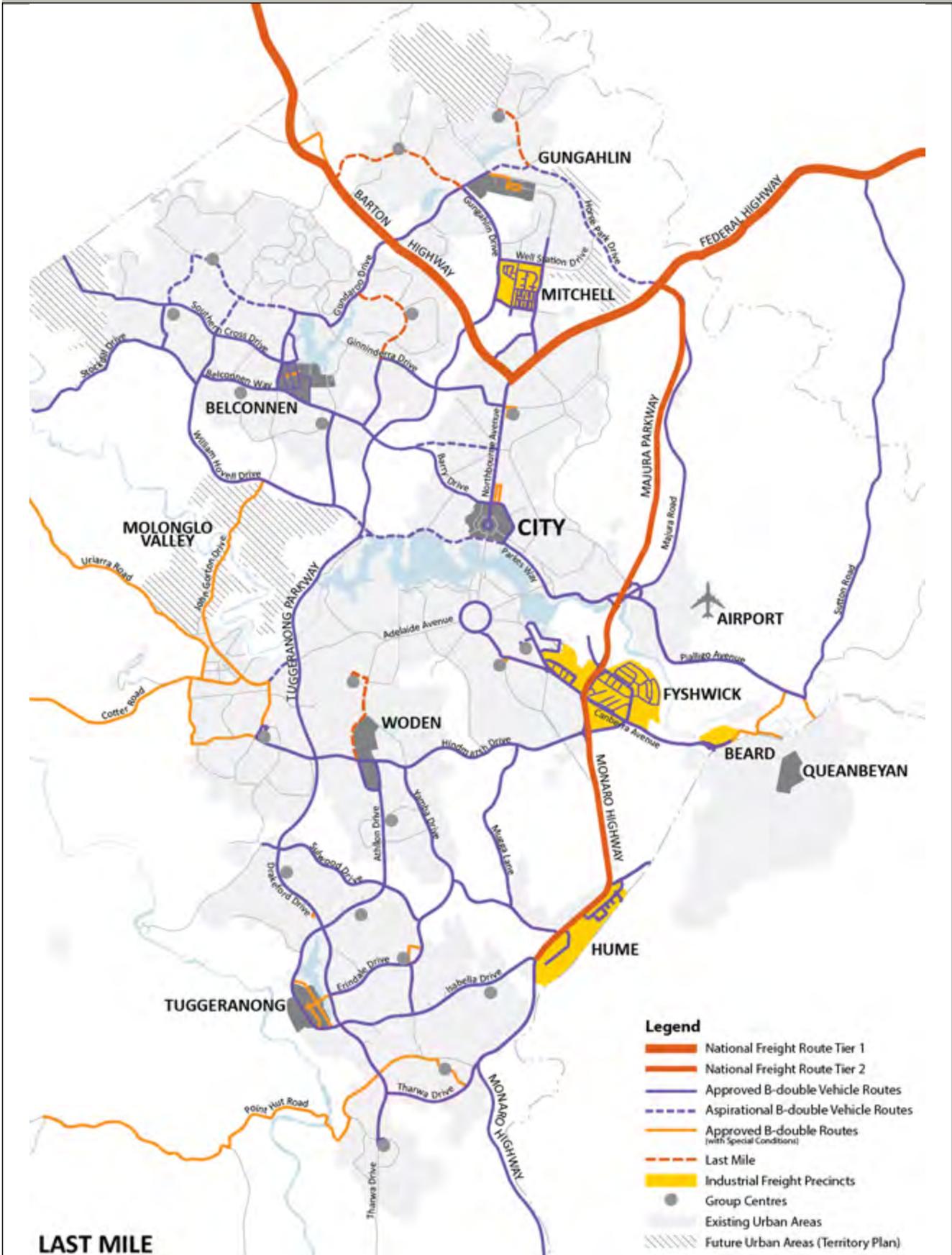
Strengthening bridges on Tuggeranong Parkway and Isabella Drive, particularly across the Molonglo River, could also be considered in order to provide alternative routes, particularly for the longer term should increased mass limits be required. However, existing bridges are adequate for B-doubles operating at higher mass limits (i.e. up to 68.5 tonnes) in these locations.



41 Road Transport (Mass, Dimensions and Loading) General B-Double Exemption Notice 2010 (no1)

BUILDING AN INTEGRATED TRANSPORT NETWORK

Figure 15: 'Last mile' routes to town centres, group centres, and industrial areas



CASE STUDY: Investing: Network Resilience (Road and decoupling infrastructure)

To accommodate national initiatives to increase the use of larger and more productive freight vehicles in the national freight task, the ACT will consider upgrades and expansions to the existing freight network. Upgrades are particularly important in ensuring the Canberra 'orbital network' is suitable for larger freight vehicles, in turn ensuring maximum segregation of larger freight vehicles from commuter traffic and vulnerable road users for the ACT and region.

The Majura Parkway project is currently in progress, with \$288 million invested to improve the forecast flow of freight on the orbital network for approximately 40,000 vehicles a day (including up to 6,000 trucks) by 2030.

Stakeholders noted a heavy reliance on Sutton Road (NSW) as a freight route to access Queanbeyan. This route, a NSW Government responsibility, reportedly presents challenges due to single lane carriageways and flooding (Oaks Estate Bridge to Queanbeyan) issues. As a forward planning exercise, the ACT Government intends investigating the use of the adjoining Pialligo Avenue to better understand the airport and Pialligo transport network, which connects with Sutton Road and Queanbeyan. The investigation should clarify the use of Sutton Road by freight vehicles as well as the potential for Pialligo Avenue augmentation as a key regional freight connection.

Other potential future investments in the ACT freight network include:

- freight supporting infrastructure such as rest stops, fuel stops, weigh stations, designated truck parking and decoupling stations
- land to be reserved for road terminals, decoupling of road trailers, truck parking and storage containers
- improved 'last mile' links for access by freight vehicles.

A 2013 investigation into larger heavy vehicle decoupling site options⁴² found freight industry support for investment to accommodate future B-triples in the following sections of the orbital freight network:

- Majura Road and Monaro Highway – to provide access to the industrial areas of Fyshwick, Hume and Canberra Airport
- Federal Highway – to provide access to the Barton Highway and Sydney
- Barton Highway – to provide access to the Federal Highway and Melbourne via the Hume Highway.

The ACT region does not currently have any dedicated B-double decoupling facilities. The same study identified a number of potentially suitable areas for a facilitated decoupling site, including:

- Sandford Street, Mitchell
- Hoskins Street, Mitchell
- Ginninderra Drive, Bruce
- Kuringa Drive Road Reserve, Fraser
- Sheppard Street, Hume
- Raws Crescent, Hume.

The ACT Government has undertaken to investigate the feasibility of either a private, public or jointly funded decoupling facility in the ACT, with potential for linkage with short-term accommodation options which may also provide economic development benefits to the surrounding area.

⁴² B-double Decoupling Sites Investigation, AECOM, 10 May 2013

BUILDING AN INTEGRATED TRANSPORT NETWORK

IMPACTS OF FREIGHT ON SAFETY, AMENITY AND SUSTAINABILITY

Road safety impacts the whole ACT community and involves all different types of vehicles. In 2013, of the 15,399 vehicles involved in a crash in the ACT, 47(0.3%) were articulated vehicles and 212 (1.38%) were trucks. Combined, these comprised 1.7% of the property crashes, 1.3% of the injury crashes and none of the nine fatal crashes.⁴³ Even though the ACT has a relatively small heavy vehicle fleet and limited geographical area, the importance of heavy vehicle safety issues needs to be recognised.

Consistent with the Transport for Canberra policy, it is envisaged that freight vehicles follow a route that limits interaction with people in residential areas and near schools and with other road users including cyclists, as shown in the draft ring road (orbital) freight network (Figure 13). However, freight delivery vehicles will continue to interact with pedestrians and others.

The orbital freight network will involve the completion of Majura Parkway and a link from Federal Highway to Sandford Street in Mitchell through to Gungahlin Drive, Tuggeranong Parkway, Drakeford Drive, Tharwa Drive and Monaro Highway.

It is also important to enhance community awareness of the value of freight through continued participation in local and national discussions on heavy vehicle safety and amenity issues for both road users and freight vehicle operators. Locally, engaging the community in freight and traffic management promotes a better understanding of the freight task in the ACT. Similarly, promoting safe practices and behaviours, including speed management among heavy and light vehicles and other road users, maximises safety outcomes to the community.

As freight transport can impact on safety and amenity, building community support can achieve a safe freight network that manages any impact on the community including externalities such as noise and other environmental impacts.

Traffic noise is considered in the provision of new roads, upgrade of existing roads, maintenance resurfacing of roads. Noise monitoring is usually undertaken on a reactive basis in response to complaints where residences front onto or back onto arterial roads or major collector roads with high volumes of traffic. Offensive noise from engine brakes is managed by the erection of engine brake signs.



Parcel delivery truck parked in a loading zone, with an unmanned car sharing the loading zone

⁴³ 2013 ACT Crash Report, Justice and Community Safety Directorate
http://cdn.justice.act.gov.au/resources/uploads/JACS/2013_ACT_Crash_Report.pdf, accessed 9 December 2014

Reducing transport generated greenhouse gas emissions

As discussed earlier, nearly all freight (volume) into and out of the ACT is road based. In the 12 months ending June 2012, over 12 million tonnes of commodities were carried by all ACT freight vehicles. This is equivalent to adding around 520 B-double vehicle movements on the ACT roads daily corresponding to 9000 tons of carbon dioxide emissions.⁴⁴

To reduce greenhouse gas emissions by heavy vehicles, Austroads proposed some strategic approaches.⁴⁵ These include improving efficiency of the heavy vehicle fleet using larger heavy vehicles with higher payloads to reduce heavy vehicle numbers in combination with diesel engines having improved fuel efficiency. Another is development of low emission zones by re-routing heavy vehicle traffic and the introduction of speed controls. Recent analysis undertaken by Massachusetts Institute of Technology (MIT) also indicated that smarter programming of stoplight could improve efficiency of urban traffic leading to reduced emission.⁴⁶

Efficiency of heavy vehicle fleet

Existing policies surrounding heavy vehicle registrations differ between jurisdictions, for example in concessions. Jurisdictions offer a range of concessions which can be triggered by a number of factors including level of emissions. In the ACT, gas and electric powered vehicles are entitled to 20% discount on registration. This means that the owner pays 20% less on the cost of the registration component but must pay the full fee for Compulsory Third Party Insurance, Road Rescue Fee, Road Safety Contribution and Short Term Registration Surcharge. For primary producers with gas or electric powered vehicles, the concession is 55% discount on registration.⁴⁷

Network efficiency by re-routing heavy vehicle traffic and speed controls

The Freight Strategy supports Majura Parkway and the development of an orbital route for traffic and freight movements around the city core as well as Capital Metro and the prioritisation of central transport corridors for public transport. Direct impacts of limiting access to specific part of the network include air quality, reduce noise pollution and greenhouse gas emissions.⁴⁸ This also provides opportunity for implementing agencies to target their funding for road upgrades and new roads.

Better signal timings and materials

A study by researchers at MIT could lead to better ways of programming traffic signal lights to reduce delays, improve efficiency and reduce emissions. In addition to optimising travel times, the model incorporates specific information about fuel consumption and emissions for vehicles from motorcycles to buses and other modes. It simulates behaviour of vehicles per day and considers driving behaviour arising from changes in signal patterns. Austroads also indicated that replacing incandescent and halogen lamps in traffic signals with LED array lamps reduce emissions. The benefits of LED traffic signals include up to 85% in energy consumption and increased reliability. This means reduced greenhouse gas emissions of similar proportion and lower operations costs.



A heavy vehicle with in-vehicle telematics technology

Source: Queensland Department of Transport and Main Roads

44 Australian Trucking Association, Truck Impact Chart, June 2010, www.truck.net.au

45 Austroads Research Report, Future Asset Management Issues Part 1: Impacts of Greenhouse Gas Emissions on Asset Management, 2010, p.4

46 MIT New Office, Better traffic signals can cut greenhouse gas emissions, March 2015, <http://newsoffice.mit.edu/2015/smarter-stoplights-cut-greenhouse-gas-0331>

47 ACT Road Transport Authority, Concessions, <http://www.rego.act.gov.au/registration/concessions#d>

48 Austroads, 2010, op.cit., p11.

CASE STUDY: Regulating freight access and building community support: Mapping the 'last mile'

The 'last mile' in the ACT often involves heavy vehicle access to local shopping centres, group centres, town centres and the city centre, which may not necessarily be part of approved routes for heavy vehicles. These freight movements ultimately serve the needs of the local community, but are also where freight movements interact most closely with the urban environment. Accordingly, 'last mile' freight movements impact on infrastructure capacity, community safety and amenity and are key Freight Strategy challenges.

Loading docks in older areas were not designed for B-doubles (or indeed semitrailers) and many loading zones similarly are unlikely to be appropriate for B-doubles to unload from. Nevertheless, freight industry stakeholders have indicated that B-double deliveries in the ACT (for example, groceries to supermarkets and fuel to service stations often encounter poor provision for 'last mile' delivery in terms of available loading docks and access routes. They also cited difficulties in the increased 'crowding' of loading zones by smaller utility and other vehicles.

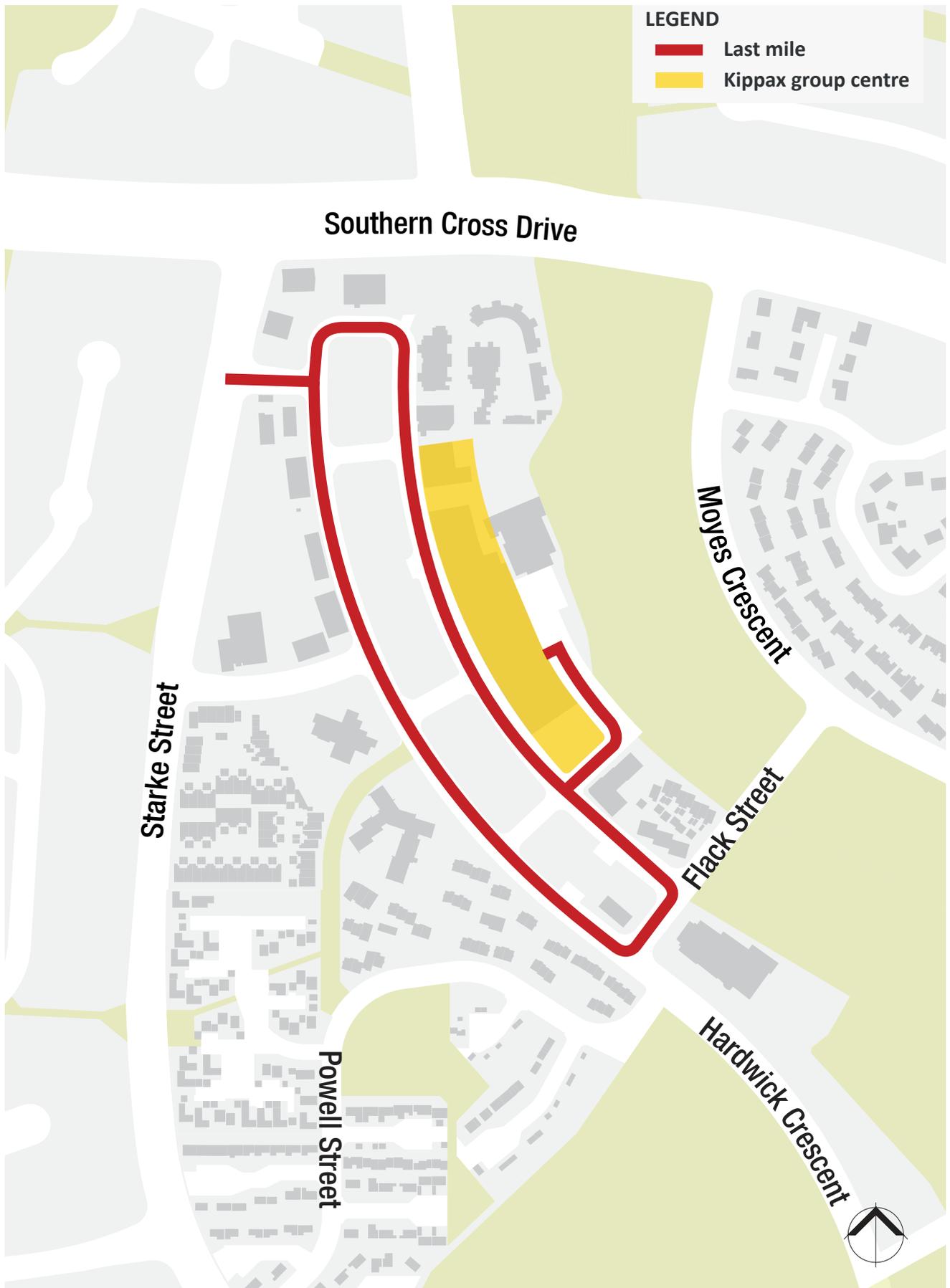
The Freight Strategy identified mapping the 'last mile' freight routes in addition to finalisation of new B-double and HML routes with the NHVR as an action. This undertaking should increase community understanding of the 'last mile' freight task in the ACT and build community support for any necessary upgrades, or alternative other optimisation as may be required. The strategy also identified the need to provide an evidentiary basis for assessing the interaction of the current 'last mile' freight task with the urban environment. A non-exhaustive list of potential 'last mile' management measures that might be considered is:

- time of day restrictions
- incentivising out of hours deliveries noting potential noise issues
- road use/congestion charging
- parking related policy instruments
- urban consolidation and distribution centres
- physical restrictions such as maximum weight limits and traffic calming
- provision of improved travel information to users.⁴⁹

Measures such as these are important in managing 'last mile' freight, particularly in environments where the ability to build new infrastructure is physically or fiscally constrained. Stakeholder feedback suggests the increased use of networked technologies to provide more customer-centric retail delivery will increase small freight vehicle traffic for 'last mile' deliveries. While this may mitigate large vehicle impacts in 'last mile' deliveries to an extent, likely increased volumes of smaller vehicle traffic add to the importance of mapping the ACT's 'last mile' routes.



⁴⁹ See Ballantyne, E.E.F., Lindholm, M. and Whiteing, A. E. 'A comparative study of urban freight transport planning: addressing stakeholder needs'. *Journal of Transport Geography*, Volume 32, October 2013.





DIRECTIONS AND ACTIONS

The Freight Strategy comprises five directions and seven actions, with 35 tasks linked to them.

The directions, actions and tasks reflect a range of influences:

- alignment with the priority themes of the National Land Freight Strategy, i.e.: planning for the future; investing in the right infrastructure; better access, investment and charging for heavy vehicles; better regulation; understanding the freight task; and building community support
- assessment of the gaps between the current situation or ‘business as usual’ future situation and desired state
- consultation outcomes.

The directions and actions are summarised below. These, together with the corresponding tasks are summarised in Appendix A.

Freight Strategy	
Direction 1: Understand the freight task and plan for the future	
Action 1.1	Improve data collection, reporting and analysis of freight activities.
Action 1.2	Identify and protect future freight activities, corridors and local freight access.
Direction 2: Invest in the right infrastructure	
Action 2.1	Develop, evaluate and implement an infrastructure upgrade program to meet the needs of future freight activities, larger freight vehicles and urban planning and redevelopment directions.
Direction 3: Implement better regulation and enforcement	
Action 3.1	Implement local legislation to support national regulatory reforms.
Action 3.2	Investigate options for larger freight vehicle access to local ACT destinations and also for limiting such access where urban planning and redevelopment directions may require.
Direction 4: Build community support	
Action 4.1	Engage the community in understanding of freight and traffic management challenges, treatments and opportunities.
Direction 5: Connect with the region and other stakeholders	
Action 5.1	Work with Australian, state and local governments and industry to take a strategic approach to protect and enhance freight routes and facilities in the region.

BUILDING AN INTEGRATED TRANSPORT NETWORK

DIRECTION I: UNDERSTAND THE FREIGHT TASK AND PLAN FOR THE FUTURE

Challenges

Up-to-date and nationally consistent information on freight movements to/from, through and within the ACT's borders is crucial in planning for and proactively managing the future freight task. The ACT lacks such information, as well as a corresponding freight analysis and forecasting capability.

In addition to better data, successful planning for the future requires a focus on the infrastructure needs of national and other approved freight routes, protection of future freight corridors and mapping of freight routes including 'last mile' access links.

Absence of ACT (and national) guidance on principles to apply in maintaining freight accessibility for industrial precincts, and conversely limiting incursion into these precincts by commuter and general traffic, is a vulnerability that should be addressed.



Action 1.1 Improve data collection, reporting and analysis of freight activities

To ensure an accurate and transparent base dataset of freight information, the ACT proposes to:

- 1.1.1 Participate in and support intergovernmental working groups, e.g. National Land Freight Strategy, Austroads Freight Taskforce and Australian Transportation Data Action Network (ATDAN), to improve freight data collection and dissemination.
- 1.1.2 Progress understanding of road freight task, i.e. road freight movements to/from, through and within the ACT by type of freight and use of the road network (including peak and non-peak period B-double use) through a combination of surveys and consultation with industry and research agencies.
- 1.1.3 Liaise with Transport for NSW on cross-border transport matters including freight.
- 1.1.4 Develop a freight analysis and forecasting capability that is compatible with the existing Canberra Strategic Transport Model (CSTM) and linked to the Transport for NSW freight model.
- 1.1.5 Undertake collection of video-based origin-destination (O-D) data and traffic count and classification data and collection of tracking and operations data once the Intelligent Access Program (IAP) is in operation in the ACT; coordinate with TAMS (Roads ACT) on the Smart Traffic bid for 2015–16.
- 1.1.6 Collect weigh-in-motion (heavy vehicle numbers and loads) data and partner with Roads and Maritime Services NSW (RMS NSW) on the use of weigh-in-motion at the NSW/ACT borders and with Transport for NSW Bureau of Statistics on strategic freight modelling.
- 1.1.7 For industrial precincts, develop effective freight transport plans to meet freight volume growth and investigate preparation of a Freight Code incorporating existing land use and access design guidelines, estate development code and municipal infrastructure standards.

Action 1.2: Identify and protect future freight activities and corridors and local freight access

To ensure evidence-based decisions for an integrated and efficient freight network that responds to current and future freight demand, the ACT plans to:

- 1.2.1 Maintain up-to-date national freight routes (maps) locally and regionally and update existing approved routes for all restricted access vehicle networks (B-double, HML, PBS Level 1 and PBS Level 2, 14.5 tonne buses, over dimension vehicles) indicating:
 - » current and future freight generating land use activities
 - » freight supporting infrastructure such as rest stops, fuel stops, weigh-in-motion stations and decoupling stations
 - » future freight corridors to be protected, including preservation of a rail corridor option
 - » land to be reserved for road terminals, decoupling of road trailers, truck parking, storage containers and rail intermodal facilities
 - » 'last mile' links for access by freight vehicles, using the existing road hierarchy.
- 1.2.2 Incorporate these maps into up-to-date national notices (HVNL) and regulations to provide clearer guidance to industry and the public about where particular types of freight movement are permitted.
- 1.2.3 Undertake analysis and forecasting of both freight and passenger movements in the transport network.
- 1.2.4 Complete strategic assessment of the Eastern Broadacre employment investigation area.
- 1.2.5 Take appropriate action, including statutory response, consultation, to protect corridors and land required to be reserved for future freight activities.
- 1.2.6 Investigate economic issues and opportunities associated with the freight industry in the ACT and surrounding areas and develop a detailed understanding of the air freight opportunity to support direct international flights.

DIRECTION 2: INVEST IN THE RIGHT INFRASTRUCTURE

Challenges

Infrastructure investment involves addressing four main challenges or gaps:

- retrofitting the road network to accommodate larger high productivity vehicles, including bridge strengthening, increasing bridge heights and widening intersections, in order to implement an orbital freight route with cross-connecting links and to provide access to local freight destinations
- providing new infrastructure on and adjoining key freight routes, including Canberra Airport/Majura Parkway and a missing 'orbital route' link between the Federal Highway and Gungahlin Drive
- providing decoupling and other facilities, e.g. rest and service areas, for B-doubles within an appropriate range of major destinations such as town centres
- providing infrastructure to accommodate HPV vehicles in the Canberra region, including improvements to the Barton Highway and a future B-triple decoupling facility in or near the ACT.

A further challenge is securing sufficient funding for timely investment to meet the gaps, involving prioritisation, accessing relevant national funding sources and also identifying and seeking support as appropriate from specific beneficiaries (industry, regional councils, NSW).

Action 2.1 Develop, evaluate and implement an infrastructure upgrade program to meet the needs of future freight activities, larger freight vehicles and urban planning and redevelopment directions

To meet a diverse set of infrastructure needs and ensure timely investment in the appropriate freight infrastructure, the ACT plans to:

- 2.1.1 Identify the range of infrastructure needs to support freight in the ACT.
- 2.1.2 Undertake assessments of roads and bridges to meet desired freight specifications in terms of strength, length, width and height of bridges.
- 2.1.3 Undertake assessments of intersections, slip lanes and other infrastructure as required (e.g. loading zones) to meet vehicle swept path and related requirements.
- 2.1.4 Improve supply and management of loading zones both on street and within developments, particularly in group and town centres, to limit the abuse of these zones by non-legitimate users.
- 2.1.5 Investigate decoupling stations, including rest and service facilities for B-doubles (B-triples in the future), within an approximate 10 kilometre range of ACT town centres.
- 2.1.6 Investigate the demand for overnight truck parking facilities and develop guidelines for rest areas and stopping opportunities including consideration of locations, to provide and manage them.
- 2.1.7 Investigate and reserve appropriate land to support future freight infrastructure needs.
- 2.1.8 Investigate optimisation of the total freight network taking account of rail infrastructure access opportunities.
- 2.1.9 Pursue ways to facilitate B-double and future high productivity vehicle access to the key Parkes Way cross-connecting route, for example by increasing the load rating of the bridges over Sullivans Creek and Clunies Ross Street (which may also be important in the context of limiting future freight access to a redeveloped Northbourne Avenue corridor).
- 2.1.10 Explore Australian Government funding opportunities for ACT and regional freight infrastructure initiatives, e.g. HPV decoupling facilities, Barton Highway full duplication, Pialligo Avenue/Canberra Airport improvements feasibility study.

DIRECTION 3: IMPLEMENT BETTER REGULATION AND ENFORCEMENT

Challenges

Regulation of freight vehicle access to the road network should always reflect the existing capabilities of the infrastructure. Regulation must also be clear, certain and predictable to optimise productivity, safety and community amenity. With industry seeking as extensive as possible B-double (or greater) access to many roads and with infrastructure limitations constraining this access, access is sometimes provided on an exception basis, at a cost to transparency.

The future role of the National Heavy Vehicle Regulator in approving new ACT B-double routes provides an opportunity to clarify access arrangements and the extent of any infrastructure or other gaps that would need to be filled for increased access.

Along with infrastructure priorities, regulation of heavy vehicle road access also needs to respond to urban planning and redevelopment directions; for example, future densification of the Northbourne Avenue corridor may require limiting freight vehicle access.

Regulation of industry compliance with access and other (e.g. load limit) requirements faces the challenge of sufficient, timely monitoring information. Taking the opportunities offered by innovative technology and by cooperation with NSW and with industry is key to better compliance regulation.

Action 3.1 Implement local legislation to support national regulatory reforms

To ensure a safe and sustainable freight network that provides for freight and passenger traffic and supports the Heavy Vehicle Regulatory Reform:

- 3.1.1 The ACT will commence and apply those provisions of the Heavy Vehicle National Law as soon as the National Heavy Vehicle Regulator is ready to manage those arrangements for the ACT. These include:
- » Registration
 - » Intelligent Access Program
 - » National Heavy Vehicle Accreditation Scheme
 - » Speeding Heavy Vehicles
 - » Fatigue (end of trip in ACT context).

Action 3.2 Investigate options for larger freight vehicle access to local ACT destinations and also for limiting such access where urban planning and redevelopment directions may require

The ACT will:

- 3.2.1 Investigate and appropriately manage access routes to 'last mile' destinations in town centres, group centres, service stations, industrial areas and elsewhere as appropriate.
- 3.2.2 Review road planning guidelines to minimise interaction of freight vehicles with people and traffic in high population areas by the use of physical design, access restrictions or time of day restrictions. This may involve transitioning some existing arterial routes away from freight activity in conjunction with timely infrastructure investment that facilitates viable alternative freight routes.
- 3.2.3 Undertake a study into the safety of B-doubles and double road trains including general access heavy vehicles travelling in lanes adjacent to bikes.

DIRECTION 4: BUILD COMMUNITY SUPPORT

Challenges

Better community understanding of the needs of the freight sector and of the functions of roads, in servicing freight as well as other road users, is important.

Addressing infrastructure gaps, ensuring consistency between infrastructure capability (including on issues such as resident noise exposure) and heavy vehicle access arrangements, providing clarity in road access regulation and improved heavy vehicle compliance with regulation, in line with directions 1–3, are all also key to building community support.

Action 4.1 Engage the community in understanding of freight and traffic management challenges, treatments and opportunities

In order to communicate the role and importance of the freight sector and to ensure a safe freight and traffic network that manages impacts on the community, including environmental and residential amenity impacts, the ACT plans to:

- 4.1.1 Identify a clear road hierarchy for freight and passenger movements, including:
 - » 'last mile' destinations and routes
 - » developing transitional arrangement to shift freight movements off Northbourne Avenue; i.e., following opening of Majura Parkway and start of light rail operations along the corridor
 - » Investigate freight–passenger conflict along major corridors and infrastructure improvements, e.g. Northbourne Avenue.
- 4.1.2 Undertake a review of the acoustic environment along the freight routes to assess noise impacts on residential developments.
- 4.1.3 Promote safe practices and behaviours such as seatbelt usage and speed management among heavy and light freight vehicles and other users to maximise safety outcomes to the community.
- 4.1.4 Continue the ACT's participation in national discussions on heavy vehicle safety issues to enhance community awareness of the value and importance of freight to the economy.
- 4.1.5 Continue participation in intergovernmental working groups in progressing national reforms and collaboration with industry on emerging technologies that contributes to energy savings and reduction in greenhouse gas emissions.



DIRECTION 5: CONNECT WITH THE REGION AND OTHER STAKEHOLDERS

Challenges

As a small jurisdiction, infrastructure deficiencies on roads beyond the ACT's borders have an impact on both the productivity and safety of the freight sector and the ACT economy. Roads of lesser national and state significance such as the Monaro Highway and the Kings Highway are important to the ACT, in addition to the national freight routes (Federal Highway, Barton Highway). Conversely, with its central location and strong road network, the ACT attracts 'through freight' traffic from south-east NSW and Victoria, with benefits to those regions. Identifying and pursuing opportunities for cooperation based on mutual dependence and mutual benefit with the NSW Government and with regional councils is particularly important.

In addition, within the ACT some key freight 'pinch point' infrastructure (major bridges) is Australian Government-owned. This calls for a degree of engagement with the Australian Government.

While the ACT is largely serviced by freight companies operating outside the ACT, infrastructure and policy planning for freight would benefit from greater industry involvement. Industry knowledge of strengths, issues and challenges relating to the ACT freight network is confirmed by consultation on the ACT Freight Strategy Discussion Paper. Further industry involvement would also reinforce a strategic regional context for ACT freight planning.

Action 5.1 Work with Australian, state and local governments and industry to take a strategic approach to protect and enhance freight routes and facilities in the region

The ACT plans to:

- 5.1.1 Take an integrated regional approach to connect freight infrastructure across the ACT and south-east NSW region, including identifying existing infrastructure on a 'whole of region' basis.
- 5.1.2 Work with the NSW Government and regional councils to discuss options for the location of freight-related infrastructure such as hubs, fuel stops, rest stops, decoupling locations and weigh stations, and possible upgrades to key freight connections in the region including the Barton and Federal highways.
- 5.1.3 Engage with the CBR Region Joint Organisation (formerly known as South East Regional Organisation of Councils (SEROC)) regarding regional transport infrastructure development.





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IMPLEMENTATION AND FUNDING

Some actions identified as part of the Freight Strategy are currently in progress, such as the passing of the Heavy Vehicle National Law in the ACT and the ACT's participation in intergovernmental working groups on freight.

A number of the identified actions, particularly involving infrastructure upgrades, will have financial implications. These actions will need to be considered as part of future ACT Government budgets and in the context of competing priorities.

Opportunities for joint funding bids between ACT and CBR Region Joint Organisation (formerly known as South East Regional Organisation of Councils (SEROC)) will also be examined.

Potential sources of Australian Government investment funding include:

- the Infrastructure Investment Program (National Land Transport Network, including Federal and Barton Highways)⁵⁰
- the Roads to Recovery Program (targeting local and regional projects)⁵¹
- the Black Spot Program (also targeting local and regional projects)⁵²
- untied grants for local roads⁵³
- the National Stronger Regions Fund (the purpose of which is to boost social and economic development in Australia's regions, with selected projects supporting disadvantaged regions or areas of disadvantage within a region)⁵⁴
- the Heavy Vehicle Safety and Productivity Program⁵⁵
- the Bridges Renewal Programme⁵⁶

In addition, the Australian Government has opened up the option for industry collaboration in funding road improvements in rural and mining regions. It would be a matter for investigation whether this could provide contributory funding for, say, the completion of duplication of the Barton Highway.

Notably also, Infrastructure Australia periodically updates the Infrastructure Priority List, which identifies projects of national significance.⁵⁷ The Majura Parkway project was funded following recommendation through the Infrastructure Priority List process.

Finally, the Rebuilding NSW program includes a Regional Roads Fund, with potential for access by councils in the ACT region.⁵⁸

50 http://investment.infrastructure.gov.au/funding/#anc_infrastructure, accessed 5 November 2014

51 <http://investment.infrastructure.gov.au/funding/r2r/index.aspx>, accessed 5 November 2014

52 <http://investment.infrastructure.gov.au/funding/blackspots/index.aspx>, accessed 5 November 2014

53 <http://investment.infrastructure.gov.au/funding/roads/index.aspx>, accessed 5 November 2014

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56 <http://investment.infrastructure.gov.au/funding/Bridgesrenewal.aspx>, accessed 10 December 2014

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MONITORING AND REPORTING

Arrangements will be put in place to monitor the implementation of the Freight Strategy, to measure the performance of the freight network in the ACT and to report regularly on the delivery of actions to the community. This will be done through the Transport for Canberra report card and at www.transport.act.gov.au.

A proposed monitoring framework is set out below

Freight Strategy Monitoring Framework

Directions	Actions	Outputs	Outcomes
1. Understand the freight task and plan for the future	1.1 Improve data collection, reporting and analysis of freight activities.	Data capture process put in place ensuring coordinated data with NSW.	Information accurately collected and readily available.
	1.2 Identify future freight activities, corridors and local freight access.	A road network map of the ACT indicating current and future freight activities.	Evidence-based planning on an integrated and efficient freight network that responds to current and future freight demand.
2. Invest in the right infrastructure	2.1 Develop, evaluate and implement an infrastructure upgrade program to meet the needs of future freight activities, larger freight vehicles and urban planning and redevelopment directions.	Inclusion of freight initiatives in the ACT Infrastructure capital works program.	Ensured that new infrastructure is designed to meet the future requirements of GML, HML and high productivity vehicles ACT and regional connectivity and 'last mile' accessibility to destinations.
3. Implement better regulation and enforcement	3.1 Implement local legislation to support national regulatory reforms.	Legislation enacted in the ACT mandating transport access and heavy vehicle regulation.	A safe and suitable freight network that supports heavy vehicles and productivity initiatives of national transport reforms.
	3.2 Investigate options for larger freight vehicle access to local ACT destinations and also for limiting such access where urban planning and redevelopment directions may require.	Maps, notices and regulations issues and requests for route access to the National Heavy Vehicle Regulator (HML and above).	Identified freight hierarchical structure based upon the current road hierarchy.
4. Build community support	4.1 Engage the community in understanding of freight and traffic management challenges, treatments and opportunities.	Clear road hierarchy for freight and passenger movement and local traffic management.	A safe freight and traffic network that manages any impact on the community including environmental and residential amenity impacts.
5. Connect with the region and other stakeholders	5.1 Work with Australian, state and local governments and industry to take a strategic approach to protect and enhance freight routes and facilities in the region.	Agreement on routes and supporting infrastructure (e.g. fuel stops, rest stops, decoupling locations, weighing stations).	Strategic approach to freight taken including understanding of the facilities/infrastructure that exists outside the ACT and that which should be provided within the ACT.

Maximum Clearance 3.3m

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APPENDIX

APPENDIX A – IMPLEMENTATION TABLE

Each action to implement a strategic direction involves one or more tasks. The timing of each task will depend on a range of considerations, including interdependencies between tasks and availability of resourcing and funding. Indicative commencement timing for each task, together with the name of the proposed lead ACT Government directorate, is shown in italics following the relevant description. Timings are short-term, medium-term or long-term, with definitions as follows:

Short term (S) to commence within 2 years and may include ongoing or already commenced activities

Medium term (M) to commence within two to five years

Long term (L) to commence after five years.

Direction 1: Understand the freight task and plan for the future						
Action	Task	Lead agency + participating agencies	Timing			
			S	M	L	
Action 1.1 Improve data collection, reporting and analysis of freight activities.	1.1.1	Participate in and support intergovernmental working groups, e.g. National Land Freight Strategy, Austroads Freight Taskforce and Australian Transportation Data Action Network (ATDAN), to improve freight data collection and dissemination.	<i>EPD, JACS, CMA, TAMS (Roads ACT)</i>	•	•	•
	1.1.2	Progress understanding of road freight task, i.e. road freight movements to/from, through and within the ACT by type of freight and use of the road network (including peak and non-peak period B-double use) through a combination of surveys and consultation with industry and research agencies.	<i>EPD, TAMS (Roads ACT)</i>	•	•	
	1.1.3	Liaise with Transport for NSW on cross-border transport matters including freight.	<i>EPD</i>	•	•	
	1.1.4	Develop a freight analysis and forecasting capability which is compatible with the existing Canberra Strategic Transport Model (CSTM) and linked to the Transport for NSW freight model.	<i>EPD</i>		•	•
	1.1.5	Undertake collection of video-based origin-destination (O-D) data and traffic count and classification data and collection of tracking operations data once the Intelligent Access Program (IAP) is in operation in the ACT; coordinate with TAMS (Roads ACT) on the Smart Traffic bid for 2015–16.	<i>EPD, TAMS (RoadsACT)</i>		•	
	1.1.6	Collect weigh-in-motion (heavy vehicle numbers and loads) data and partner with Roads and Maritime Services NSW (RMS NSW) on the use of weigh-in-motion at the NSW/ACT borders and with Transport for NSW Bureau of Statistics on strategic freight modelling.	<i>TAMS (Roads ACT), EPD</i>		•	
	1.1.7	For industrial precincts, develop effective freight transport plans to meet freight volume growth and investigate preparation of a Freight Code incorporating existing land use and access design guidelines, estate development code and municipal infrastructure standards.	<i>EPD, TAMS (Roads ACT)</i>		•	•

BUILDING AN INTEGRATED TRANSPORT NETWORK

Direction 1: Understand the freight task and plan for the future						
Action	Task	Lead agency + participating agencies	Timing			
			S	M	L	
Action 1.2 Identify and protect future freight activities and corridors and local freight access.	1.2.1	Maintain up-to-date national freight routes (maps) locally and regionally and update existing approved routes for all restricted access vehicle networks (B-double, HML, PBS Level 1 and PBS Level 2, 14.5 tonne buses, Over dimension vehicles) indicating: <ul style="list-style-type: none"> » current and future freight generating land use activities » freight supporting infrastructure such as rest stops, fuel stops, weigh-in-motion stations and decoupling stations » future freight corridors to be protected, including preservation of a rail corridor option » land to be reserved for road terminals, decoupling of road trailers, truck parking, storage containers and rail intermodal facilities » 'last mile' links for access by freight vehicles, using the existing road hierarchy 	EPD, TAMS (Roads ACT)	•	•	•
	1.2.2	Incorporate these maps into up-to-date national notices (HVNL) to provide clearer guidance to industry and the public about where particular types of freight movement are permitted.	TAMS (Roads ACT)	•	•	•
	1.2.3	Undertake analysis and forecasting of both freight and passenger movements in the transport network.	EPD	•	•	•
	1.2.4	Complete strategic assessment of the Eastern Broadacre employment investigation area.	EPD	•		
	1.2.5	Take appropriate action, including statutory response, consultation, to protect corridors and land required to be reserved for future freight activities.	EPD, CMTEDD		•	
	1.2.6	Investigate economic issues and opportunities associated with the freight industry in the ACT and surrounding areas and develop a detailed understanding of the air freight opportunity to support direct international flights.	CMTEDD, (EDD)	•		

Direction 2: Invest in the right infrastructure						
Action	Task	Lead agency + Participating agencies	Timing			
			S	M	L	
Action 2.1 Develop, evaluate and implement an infrastructure upgrade program to meet the needs of future freight activities, larger freight vehicles and urban planning and redevelopment directions.	2.1.1	Identify the range of infrastructure needs to support freight in the ACT.	EPD, TAMS (Roads ACT)	•		
	2.1.2	Undertake assessments of roads and bridges to meet desired freight specifications in terms of strength, length, width and height of bridges.	TAMS (Roads ACT)	•	•	•
	2.1.3	Undertake assessments of intersections, slip lanes and other infrastructure as required (e.g. loading zones) to meet vehicle swept path and related requirements.	TAMS (Roads ACT)	•	•	•
	2.1.4	Improve supply and management of loading zones both on street and within developments, particularly in group and town centres, to limit the abuse of these zones by non-legitimate users	TAMS (Roads ACT), JACS, EPD	•	•	•
	2.1.5	Investigate decoupling stations, including rest and service facilities for B-doubles (B-triples in the future), within an approximate 10 kilometre range of ACT town centres.	TAMS (Roads ACT), EPD	•	•	•
	2.1.6	Investigate the demand for overnight truck parking facilities and develop guidelines for rest areas and stopping opportunities including consideration of locations, to provide and manage them.	EPD, TAMS (Roads ACT)		•	
	2.1.7	Investigate and reserve appropriate land to support future freight infrastructure needs.	EPD			•
	2.1.8	Investigate optimisation of the total freight network taking account of rail infrastructure access opportunities.	EPD		•	
	2.1.9	Pursue ways to facilitate B-double and future high productivity vehicle access to the key Parkes Way cross-connecting route, for example by increasing the load rating of the bridges over Sullivans Creek and Clunies Ross Street (which may also be important in the context of limiting future freight access to a redeveloped Northbourne Avenue corridor).	TAMS (Roads ACT), EPD, CMTEDD		•	
	2.1.10	Explore Australian Government funding opportunities for ACT and regional freight infrastructure initiatives, e.g. HPV decoupling facilities, Barton Highway full duplication, Pialligo Avenue/Canberra Airport improvements feasibility study.	TAMS (Roads ACT)	•		

BUILDING AN INTEGRATED TRANSPORT NETWORK

Direction 3: Implement better regulation and enforcement						
Action	Task	Lead agency + Participating agencies	Timing			
			S	M	L	
Action 3.1 Implement local legislation to support national regulatory reforms.	3.1.1 Commence and apply those provisions of the Heavy Vehicle National Law as soon as the National Heavy Vehicle Regulator is ready to manage those arrangements for the ACT. These include: <ul style="list-style-type: none"> » Registration » Intelligent Access Program » National Heavy Vehicle Accreditation Scheme » Speeding Heavy Vehicles » Fatigue. 	JACS	•			
Action 3.2 Investigate options for larger freight vehicle access to local ACT destinations and also for limiting such access where urban planning and redevelopment directions may require.	3.2.1 Investigate and appropriately manage access routes to ‘last mile’ destinations in town centres, group centres, service stations, industrial areas and elsewhere as appropriate.	EPD, TAMS (Roads ACT), CMA	•			
	3.2.2 Review road planning guidelines to minimise interaction of freight vehicles with people and traffic in high population areas by the use of physical design, access restrictions or time of day restrictions; this may involve transitioning some existing arterial routes away from freight activity in conjunction with timely infrastructure investment that facilitates viable alternative freight routes.	EPD, TAMS (Roads ACT), JACS	•			
	3.2.3 Undertake a study into the safety of B-doubles and double road trains including general access heavy vehicles travelling in lanes adjacent to bikes.	EPD, TAMS (Roads ACT)	•			

Direction 4: Build community support					
Action	Task	Lead agency + Participating agencies	Timing		
			S	M	L
Action 4.1 Engage the community in understanding of freight and traffic management challenges, treatments and opportunities.	4.1.1	Identify a clear road hierarchy for freight and passenger movements, including: <ul style="list-style-type: none"> » 'last mile' destinations and routes » develop transitional arrangement to separate passenger and freight movements along Northbourne Avenue; i.e., following opening of Majura Parkway and start of light rail operations along the corridor » Investigate freight-passenger conflict along major corridors and infrastructure improvements e.g. Northbourne Avenue. 	EPD, TAMS (Roads ACT), CMA	•	
	4.1.2	Undertake a review of the acoustic environment along the freight routes to assess noise impacts on residential developments.	EPD, TAMS (Roads ACT), CMA	•	
	4.1.3	Promote safe practices and behaviours such as seatbelt usage and speed management among heavy and light vehicles and other users to maximise safety outcomes to the community.	JACS	•	
	4.1.4	Continue the ACT's participation in national discussions on heavy vehicle safety issues to enhance community awareness of the value and importance of freight to the economy.	JACS, EPD	•	
	4.1.5	Continue participation in intergovernmental working groups in progressing national reforms and collaboration with industry on emerging technologies that contributes to energy savings and reduction in greenhouse gas emissions.	EPD	•	•

BUILDING AN INTEGRATED TRANSPORT NETWORK

Direction 5: Connect with the region and other stakeholders						
Action	Task	Lead agency + Participating agencies	Timing			
			S	M	L	
Action 5.1 Work with Australian, state and local governments and industry to take a strategic approach to protect and enhance freight routes and facilities in the region.	5.1.1	Take an integrated regional approach to connect freight infrastructure across the ACT and south-east NSW region, including identifying existing infrastructure on a 'whole of region' basis.	<i>CMTEDD, Regional Development, EPD</i>	•	•	•
	5.1.2	Work with the NSW Government and regional councils to discuss options for the location of freight-related infrastructure such as hubs, fuel stops, rest stops, decoupling locations and weigh stations, and possible upgrades to key freight connections in the region including the Barton and Federal highways.	<i>CMTEDD, TAMS (Roads ACT), EPD</i>	•	•	•
	5.1.3	Engage with CBR Region Joint Organisation (formerly known as South East Regional Organisation of Councils (SEROC)) regarding regional transport infrastructure development.	<i>CMTEDD, TAMS (Roads ACT), EPD</i>	•	•	•

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