# Guidelines for Planning and Assessment of Road Freight Access in Industrial Areas Checklists

These checklists have been extracted from the Austroads Report [*Guidelines for Planning and Assessment of Road Freight Access in Industrial Areas*](https://www.onlinepublications.austroads.com.au/items/AP-R470-14)(AP-R470-14). The report should be read before using the checklists.

The checklists have been provided in Microsoft Word format, separately form the report, to assist council officers, developers and consultants when making assessments of access arrangement for industrial areas.

In cases where a development and its impacts are straightforward minimal data collection will be required and the list can be primarily used to ensure that no relevant factors are overlooked. In other cases a detailed investigation will be needed based on the guidelines to determine a response.

The checklists have been structured to guide three levels of assessment for industrial areas:

* Level 1: Strategic Planning of Industrial Areas
* Level 2: Structure Planning and Zoning
* Level 3: Estate Access

Checklists are provided that apply to the different levels of planning. They cover the following:

* Land use assessment
* Access assessment
* Site assessment
* Implementation
* Handover and ongoing management.

Figure 13 summarises the information provided in the checklists and how it relates to the different elements of the assessment and implementation process.

Figure . Summary of check lists

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|  | **Land use****assessment** | **Access****assessment** | **Site****assessment** | **Implementation** | **Handover and ongoing management** |
| **Level 1.Strategic assessment** | **(L1.1)** | **(L1.2)** |  |  |  |
| **Level 2. Structure planning** | **(L2.1)** | **(L2.2)** |  |  |  |
| **Level 3. Access design** | **(L3.1)** | **(L3.2)** | **(L3.3)** |  |  |
| **Implementation and management** |  |  |  | **(IM1)** | **(IM2)** |

**Although every effort has been made to develop robust and comprehensive checklists, planners and developers should use their own judgement and local context/knowledge in the application of assessing and developing industrial areas.**

## Level 1: Strategic Level Planning

The strategic planning of industrial areas is often outlined in state planning or land use strategies, economic and employment Lands strategies or industrial land strategies. The local Council /Shire economic or land use strategies can also provide the vision for the future growth and development of a local government area. It provides the rationale for future land use change, which is reflected in the local planning scheme/development plan.

#### L1.1. Land Use Assessment

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| **Level 1: Strategic Planning of Industrial areas** Strategic Land Use Checklist |
| **Strategic Planning – Land Use**Site selection and assessment requires the consideration of location and site features consistent with council and state land use and economic development strategies to identify the optimal position within a region for a new industrial area. |
| **Question** | **Check (Y/N)** | **Comments** |
| Is the location of future industrial areas justified in the relevant council or state planning strategies, or as part of a sub-regional or district structure plan? |  |  |
| Will the site accommodate the range of industrial land use types proposed? |  |  |
| Does the intended use and scale of the industrial estate/area require integration with other transport networks, such as rail/ports or intermodal sites? |  |  |
| Will the location be compromised by pressure from competing land uses in the future? If likely, how may this be managed?  |  |  |

#### L1.2. Access Assessment

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| **Level 1: Strategic Planning of Industrial areas** Strategic Access Checklist |
| **Strategic Planning – Access**Site selection and assessment requires the consideration of regional transport network and vehicle access size consistent with council and state transport strategies to identify the optimal position for a new industrial estate. |
| **Question** | **Check (Y/N)** | **Comments** |
| Is the location of future industrial areas located on the appropriate part of the transport network and/or near a port/rail terminal or intermodal site?  |  |  |
| Is there a direct link that high productivity vehicles (eg. PBS2B) can use between the location and the state road network? |  |  |
| Can access be provided in a safe and practical way?  |  |  |
| Does the network provide an efficient connection with other industrial clusters/ supporting industrial areas? |  |  |

## Level 2: Structure Planning and Zoning/Sub-division Design

Structure planning and zoning process are managed by local government. There are benefits in consulting and working with the freight industry and the industrial development industry during this process to develop robust and fit-for-purpose structure plans.

#### L2.1. Land use assessment

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| **Level 2: Structure Planning and Zoning** Structure Planning Land Use Checklist |
| **Structure Planning – Land Use**Once an appropriate location has been identified for industrial purposes, it is necessary to determine the broad land use form and layout of the area. |
| **Question** | **Check (Y/N)** | **Comments** |
| What are the likely industrial or mixed use zones within the area? |  |  |
| Will its hours of operation be compatible with adjacent land uses? |  |  |
| What land use scenarios are feasible within the zoning requirements/constraints? Do they have different transport implications? |  |  |
| Are adequate on-site buffers to protect/shield adjacent land uses? |  |  |
| Are industries likely to co-locate and create clusters? Will this create a diversity of needs? |  |  |
| How do lots within the estate interact? How will traffic movements to and from lots and estates occur?  |  |  |
| What is the employee density, travel mode and time of day travel distribution (work patterns)? i.e. lower density warehouses versus high tech industries are significantly different. |  |  |
| Will be site be developed consistently with the final plan, or is staging of development likely? |  |  |

#### L2.2. Access Assessment

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| **Level 2: Structure Planning and Zoning** Structure Planning Access Checklist |
| **Structure Planning – Access**Once an appropriate location has been identified for an industrial estate, it is necessary to determine the road network, distribution of traffic and broad transport design for the area. |
| **Question** | **Check (Y/N)** | **Comments** |
| What types of vehicles are expected to access the precinct, on opening and over the coming decade? |  |  |
| How much traffic is estimated to be generated for each area and what impact will it have on surrounding roads? - truck, commercial and private car movements (AM, PM, AADT) |  |  |
| Is a traffic management plan required to identify infrastructure timing and traffic management during staging of development? |  |  |
| How will traffic move to and within an estate? |  |  |
| How is traffic distributed within the internal network and externally onto the arterial road network? |  |  |
| What type of access is required onto major roads and where will access points be the located? For example, what intersection designs do future volumes warrant and are service roads required? |  |  |
| Are there parts of the external network that could constrain access to the area? |  |  |
| Who is responsible for the connecting infrastructure - what are the downstream effects? ie other junctions and on and off ramps onto freeways. |  |  |
| **Resources** |
| Apply ITE, RMS or other traffic generation guidelines (Austroads) or use actual/historic data |
| Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD04A-10)Austroads Design Vehicles and Turning Path Templates (AP-G34-13)  |
| Austroads Guideline for Freight Routes in Urban and Rural Areas (AP-R316-07) |

## Level 3: Estate Access

Existing engineering standards and guidelines (including Austroads, Australian Standards and State Government Standards and Guidelines) provide a good starting point for the development and assessment of industrial areas. However there is a view that if a ‘bottom up’ engineering standards driven approach is applied that a conservative design outcome may eventuate that may be uneconomic leading to developers being dissuaded from approaching the investment. An opposing position is that existing standards can sometimes be seen as minimal but it is hard to require developers to go above these recommendations.

#### L3.1. Land use assessment

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| **Level 3: Industrial Lot Development** Road Network and On-site Access Checklist |
| **Road Network and On-site Access – Land Use**Once a Structure Plan has been finalised precinct design guidelines and Development Plans/Schemes provide the necessary minimum development requirements and design details. |
| **Question** | **Check (Y/N)** | **Comments** |
| Does the area incorporate a transport distribution or intermodal site necessitating specialised design controls? |  |  |
| Has a risk management strategy been developed for this development? For example, changes in technologies or business practices? |  |  |
| Does the Development Plan/planning Scheme require set road reserves, verge and carriageway widths to accommodate the full range of vehicles? |  |  |
| Will the location and size of a distribution / logistics terminal necessitate special design requirements; and network access points to reduce impacts on adjacent land uses? e.g. a turning circle at least 30 metres in diameter is provided to permit the safe and convenient manoeuvring of vehicles on site |  |  |
| Have opportunities for shared facilities and services, such as breakdown or waiting areas, been identified? Are they located in a central, easily accessible location? |  |  |

#### L3.2. Access assessment

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| **Level 3: Industrial Lot Development** Access Checklist |
| **Road Network and On-site Access – Access**It will be necessary to identify the engineering requirements to meet short and long term operational requirements. |
| **Question** | **Check (Y/N)** | **Comments** |
| Has a traffic management strategy which addresses access to industrial developments including noise management and parking needs and encourages increased public transport use, walking and cycling to maximise the use of land and minimise emissions from transport sources been developed? |  |  |
| Have road pavements been designed to accommodate the type and volume of anticipated traffic? (in accordance with best engineering practice and in accordance with the relevant and current Australian Standards) |  |  |
| Have provisions been made to ensure access points and driveways are not located too close to intersections and are of sufficient width to accommodate the swept paths of a range of larger trucks (build in this provision to ensure site is robust for future industrial land uses)? |  |  |
| Does development and access result in commercial and industrial vehicle movements through residential streets and adjacent other sensitive land uses such as schools? |  |  |
| Will minimum road widths need to apply to allow for on-street parking/which may be required if larger freight vehicles need to access the site? |  |  |
| Have adequate set backs been provided for vehicle movement both internally of site and surrounding roads.  |  |  |
| Are sites integrated within public transport routes, as well as safe and connected dual-use pathways, footpaths (which should be included on all local roads) and bicycle facilities (including end-of-trip facilities)? |  |  |
| Can verge parking be provided by the developer to reduce the amount of on-site parking? |  |  |
| Can cycling facilities be integrated to increase the uptake of cycling as an alternative mode of transport. |  |  |

#### L3.3. Site assessment

| **Level 3: Industrial Lot development** Design Principles Checklist |
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| **Road network and on-site access – site operations**Detailed consideration of traffic operations entering the site and while on the site are necessary to ensure that these can be undertaken safely and do not cause traffic disruption off the site. |
| **Question** | **Check (Y/N)** | **Comments** |
| **Loading and unloading** |
| Have loading / unloading areas been reconciled with parking and hard-stand areas? |  |  |
| Will the site be large enough for all loading and unloading so that service vehicles are located wholly within the site and generally not impede traffic movements? |  |  |
| Are loading docks and loading areas able to accommodate the anticipated vehicle types? |  |  |
| **Road access points and cross overs** |
| Will the lot require the installation of a suitable cross-over/driveways? |  |  |
| Has access to and from the site been designed to allow simultaneous movement of vehicles entering and exiting in a forward direction? |  |  |
| Have crossovers that traverse a roadside drainage reserve been constructed using box concrete culverts of adequate length to ensure flows are not constrained? |  |  |
| Can agreements be established for the shared use of an access ways, including rights of access? Arrangements must consider sharing maintenance and repair and insurance) |  |  |
| Does the nature of the development and locations require the developer to control dust emissions? |  |  |
| **Parking** |
| Are car parking bays and associated circulation and manoeuvring areas for standard vehicles been designed in accordance with Australian Standard AS2890? |  |  |
| Has adequate parking been provided on site for the proposed use and is there capacity to increase parking if the land use changes? |  |  |
| **On-site activities** |
| Can turning circles and access ways be strategically placed to maximise the efficient use of land? |  |  |
| **Amenity** |
| Are roadways and parking areas surfaced in a manner sufficient to control dust emissions from the site?  |  |  |
| Will traffic activities cause noise problems for surrounding areas? |  |  |
| Can pervious paving be used in hardstand areas to provide additional areas for infiltration? |  |  |
| **Circulation** |
| Are industrial/commercial vehicle movements separated from passenger vehicle car-parking areas. |  |  |
| Has sufficient provision been given on site for the loading, unloading and turning of all traffic likely to be generated? |  |  |
| Are waste and recycling areas clearly signposted and accessible to employees and recycling trucks? |  |  |
| Have areas been set aside on the site of the development for the marshalling and manoeuvring of vehicles attending the site? |  |  |
| Can vehicle circulation between activity areas be contained within the site (or across multiple sites) without the need to use public roads? |  |  |
| Is there potential for conflict between freight movements and/or loading activities and on-site pedestrian and/or vehicle movements. |  |  |

## Implementation and on-going management checklist

#### IM1. Implementation

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| **Implementation and Management** Implementation and on-going management checklist |
| **Implementation** Once approval has been given to the development of an industrial area it is necessary to oversee construction so that the area is developed as per the plans and development agreements. |
| **Question** | **Check (Y/N)** | **Comments** |
| Has a development agreement been completed and signed before work commences? |  |  |
| Have the necessary bonds or other sureties been received? |  |  |
| Is an independent process in place to check construction standards? |  |  |
| Have all of the design and management requirements set out in the development approval been met? |  |  |
| Are approved staging steps being followed? |  |  |

#### IM2. Handover and ongoing management

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| **Implementation and Management** Implementation and on-going management checklist |
| **Handover and on-going management** Privately developed road networks in industrial estates are often handed back to council to manage after an agreed time period. Action is required to ensure that council understands the financial and other costs it is accepting with the transfer of management responsibility. |
| **Question** | **Check (Y/N)** | **Comments** |
| Has the network been tested or independent evidence produced to give confidence that it is being handed over at an appropriate and agreed standard? |  |  |
| Are there any bonds or warranties to put in place before management responsibility is handed over? |  |  |
| Has council budgeted for ongoing maintenance and renewal costs associated with the network? |  |  |
| Has a whole-of-life analysis been undertaken that includes construction, maintenance and renewal requirements over the coming 10-20 years? |  |  |
| Are there any works identified at the time of development approval that have not been completed as per the agreement? |  |  |