

### Part A

#### Introduction

The **ACT Suburban Challenge** education resource was trialled in ACT schools during 2009 and 2010 and acclaimed as a welcome addition to the curriculum. The resource is aligned with the ACT curriculum framework *Every chance to learn* which is the mandated curriculum framework for ACT schools. The resource will be adapted to meet the requirements of the national curriculum when the areas of learning are finalised.

The ACT Government has provided this resource to all public and private schools in the ACT and supports implementation with support from the ACT Government- Sustainable Development Directorate's Education Officer.

The **ACTGov Suburban Challenge** contains two parts.

**Part A** provides information which will position teachers with the knowledge and understandings to deliver the unit. It contains:

- principles of urban planning
- dual planning processes
- spatial planning
- Territory Plan
- planning process for the ACT
- FAQs
- assigning a street name suffix
- planning terminology
- large format maps and 3D model cut outs
- scenario cards
- self-discovery activities
- quizzes.
- **Part B** contains the links to the ACT curriculum framework *Every chance to learn*, the unit of work model, the explicit teaching and learning processes and activities.

To find out more, contact ACT Government – Environment and Sustainable Development Directorate's Education Officer on (02) 62075220 or email [mark.mettters@act.gov.au](mailto:mark.mettters@act.gov.au)

# ACT SUBURBAN CHALLENGE

## Part A

### Principles of urban planning

Before any work is undertaken to select land for a new suburb, urban planners have a very clear set of 'sustainable planning principles' that capture the vision and aspirations for the suburbs development.

'A sustainable suburb embodies the principles of sustainable development respecting ecological limits and natural resource constraints, encouraging prosperity and well-being while optimising conditions for human development' (Green star 2010).

Put simply, developing a sustainable suburb requires urban planners to balance human needs with environment needs.

Establishing a set of sustainable principles helps establish what this 'aspired balance' might look like and provides a basis for which to measure the success of the suburbs performance.

There are many frameworks used to determine sustainable planning principle, however, for the purposes of the ACTGov Suburban Challenge, students will be using the Green Star Communities: National Framework 2010.

<http://www.gbca.org.au/green-star/green-star-communities/framework/green-star-communities-framework/2712.htm>

### Dual planning organisations

Two organisations are responsible for planning in the ACT—The ACT Government-Sustainable Development Directorate and the [National Capital Authority](#) (NCA - a Commonwealth Government agency).

*For the purpose of the ACT Suburban Challenge any reference to land throughout the units will be in reference to the ACT Territory and not designated land, which is managed by the Commonwealth Government.*

*Environment and Sustainable Development Directorate (ACT GOVERNMENT - SUSTAINABLE DEVELOPMENT DIRECTORATE) - role and function*

The key piece of planning legislation in the ACT is the [Planning and Development Act 2007](#), which is administered by ACT GOVERNMENT - SUSTAINABLE DEVELOPMENT DIRECTORATE. The ACT Minister for Planning is [Andrew Barr MLA](#). (need to adjust when Minister is announced)

The ACT Government-Sustainable Development Directorate has administrative responsibility for control of development on 'Territory land'. It has many functions, with its core function planning for Canberra's future growth in partnership with the community.

The ACT Government-Sustainable Development Directorate has statutory roles performed under various pieces of legislation, the most important of which is development assessment under the

[Planning and Development Act 2007](#), and the organisation advises the ACT Government on land, planning and building policy.

The key statutory planning document used by ACT GOVERNMENT - SUSTAINABLE DEVELOPMENT DIRECTORATE is the Territory Plan, which provides the policy framework for the administration of planning in the ACT. The purpose of the Territory Plan is to manage land use change and development in a manner consistent with strategic directions set by the ACT Government, Legislative Assembly and the community. It must not be inconsistent with the National Capital Plan.

[Click here to show map of Territory areas \(ACTMAPi\)](#)

ACT GOVERNMENT - SUSTAINABLE DEVELOPMENT DIRECTORATE also has many less well-known functions including:

[building regulation](#)

[leasing](#)

[land information](#)

[Territory Plan administration](#)

[urban design and spatial planning policy.](#)

Act Government - Sustainable Development Directorate [engages regularly with the community](#) particularly about the development of new suburbs and proposed changes to Territory Plan. Act Government - Sustainable Development Directorate notifies major development applications and submissions are taken into account during the assessment of these applications.

The [Canberra Spatial Plan](#) is the key strategic planning document for directing and managing urban growth and change for the next 30 years and beyond. **(this will be replaced by the ACT Planning Strategy)**

*National Capital Authority - role and function*

The key piece of Commonwealth legislation dealing with planning and approvals is the [Australian Capital Territory Planning and Land Management Act 1988](#). This legislation is administered by NCA. The Minister for Home Affairs, the [Hon. Brendan O'Connor MP](#) is responsible for the Act.

[The National Capital Authority \(NCA\)](#) has administrative responsibility for control of development on designated land which is identified in the National Capital Plan (NCP), as being “areas of land that have the special characteristics of the National Capital”.

[Click here to show map of designated areas \(ACTMAPi\)](#)

[The National Capital Plan](#) is the strategic plan for Canberra and the Territory. It ensures that 'Canberra and the Territory are planned and developed in accordance with their national significance'.

## **Spatial Planning** (note, this section will need to be replaced)

Once the sustainable planning principles are agreed, urban planners must select where development is going to occur. To do this, urban planners refer to a spatial plan, a strategic document that outlines future potential land use projections for the territory. They usually project land use up to 20-30yrs.

In the ACT we refer to the strategic planning of land as The Canberra Spatial Plan. The plan outlines the strategic land direction that will help manage change and provide for growth to achieve the social, environmental and economic sustainability of Canberra. Under the umbrella of The Canberra Plan, it forms part of a comprehensive, integrated strategic plan for Canberra's future. The Canberra Spatial Plan reflects the community's aspirations for the future of the city and its setting.

### **Purpose of the Canberra Spatial Plan**

The purpose of the Canberra Spatial Plan is to provide clear strategic directions for the development of Canberra over the next 30 years and beyond, but with the flexibility required to respond to change. It is the Territory's key strategic planning document for directing and managing urban growth and change.

With its focus on spatial planning — how we use space (the land and environs of the ACT) and manage competing demands for space — it will ensure that Canberra can achieve a more sustainable, prosperous and equitable future.

Based on community aspirations and detailed planning analysis, it provides a Canberra-wide context within which neighbourhood and district planning policies can be set. It maps a course of short, medium and long term actions to support the strategic approach to the key urban development issues facing Canberra. It helps to improve understanding of and response to issues and implications that have geographical or physical and spatial dimensions. The policies provide a clear framework within which all of the stakeholders in Canberra's future can plan their own activities to best effect.

The Canberra Spatial Plan is intended to guide the Territory in its allocation of resources, such as the use of land and the construction of capital works as well as to inform changes to both the National Capital Plan and the Territory Plan. The Spatial Plan will not replace the Territory Plan — it is a strategic document to guide more detailed planning. It sets the framework for spatially based decision making in the future and outlines the actions needed to achieve the strategic direction for Canberra over the next 30 years.

## **Territory Plan**

The Territory Plan is the key statutory planning document in the ACT, providing the policy framework for the administration of planning in the ACT. The purpose of the Territory Plan is to manage land use change and development in a manner consistent with strategic directions set by the ACT Government, Legislative Assembly and the community. It must not be inconsistent with the [National Capital Plan](#).

The Territory Plan includes a [statement of strategic directions](#), a map (the [Territory Plan Map](#)) which sets out zones and precincts in the ACT, objectives and development tables applying to each zone, and a series of general, development and precinct codes. It also includes [structure plans](#) and [concept plans](#) for the development of future urban areas.

The statutory requirements for the Territory Plan are set out in the [Planning and Development Act 2007](#) primarily in Part 5.

The object of the Territory Plan is to ensure, in a manner not inconsistent with the National Capital Plan, the planning and development of the ACT to provide the people of the ACT with an attractive, safe and efficient environment in which to live, work and have their recreation.

The Territory, the Executive, a Minister or a Territory authority must not do any act, or approve the doing of an act, that is inconsistent with the Territory Plan.

The authorised Territory Plan is available on the [ACT Legislation Register](#).

## **Planning process in the ACT**

The following provides a simplified step by step explanation of the processes undertaken when planning a new suburb from the beginning. The process is obviously more complex than that presented, however for the purposes of this exercise provides an easy to follow guide.

### **Land identification**

Potential land areas for development are identified as 'parcels of land', either infill (redevelopment of an existing suburb) or green field (new land, often rural) are identified in the Canberra Spatial Plan.

Canberra Spatial Plan <http://apps.ACT.Government - Sustainable Development Directorate.act.gov.au/spatialplan/index.html>

The Canberra Spatial Plan broadly describes Canberra's community aspirations for land development now and in 25-30 years time. It recognises that the community will be different in 30 years and is therefore reviewed regularly. It outlines the characteristics encapsulated in the Strategic Direction and the key initiatives to achieve the goals and objectives underpinning the plan. The Canberra Spatial Plan also includes a detailed implementation plan and mechanisms for regular review. (Canberra Spatial Plan 2004).

For the purposes of the Suburban Challenge, the students are provided with a large scale (A0) paper map (supplied by the ACT Planning and Land Authority). This map represents a portion of land identified within the Canberra Spatial Plan. The map can also be used to represent a parcel of land in and around their suburb (school).

### **Place naming**

It is at this initial 'spatial planning stage' that the Place Names Committee meet to discuss and propose a suburb name. The name of the suburb is generally a leading figure in a proposed theme, such as, theme: International Year of Woman nominee: Dame Rome Mitchell proposed name: Mitchell. It is then proposed to the Minister and the Legislative Council to agree and register as a new suburb name.

Even though roads have not been considered, the Place Name Committee begin to undertake extensive research, based on the agreed theme, to establish a database of potential street names for the suburbs.

### **Planning principles**

Once the land (infill or greenfield) has been identified a set of guiding sustainable planning principles are applied to the development of that land. These act as a vision for the development of the land as a whole. In essence, they become the corner stone, the base in which all ideas are developed and all evaluations are measured against...for example if one of the principles is 'enhance environmental quality' then every aspect of the development will need to show how it enhances environmental quality.

For the purpose of the Suburban Challenge we are using the 'Green Star Communities National Framework'. It is the most widely recognised and utilised national framework and will provide students with a clear, easily understood, transferable and applicable framework.

In general Green Star Communities National Framework provides a sustainable communities vision for Australia.

A sustainable community embodies the principles of sustainable development, respecting ecological limits and natural resource constraints, encouraging prosperity and happiness and optimising conditions for human development over time.

A sustainable community has aspirations for the future that acknowledge the challenges brought about by change. It is liveable, resilient and adaptable. It strives for a lower carbon and ecological footprint. It has environments designed for all. A sustainable community evolves through policy and practice that respects and embraces the aspirations of existing and future community stakeholders. (Green Star Communities National Framework 2010)

There are five principles in the Green Star Communities National Framework

- Create liveable communities
- Provide opportunities for economic prosperity
- Enhance environmental quality
- Design great places
- Promote good urban governance

Note: these principles will be explained further in the document.

Once these principles have been agreed to, they are then applied to every aspect of the land development.

### **Land assessment**

*Update: the land has been identified, sustainable principles are now in place and now we look to undertake an Environmental Impact Assessment.*

It is at this point an environmental impact assessment (EIA) is undertaken to assess the environmental impact of developing the land identified in the Spatial Plan (students maps).

An EIS assessment is usually undertaken by private contractors specialised in particular areas of environmental research.

Environmental: fauna and flora, hazardous materials

Infrastructure : water, power, sewerage, telecommunications, engineering

Social: heritage, population mix, schools, community facilities

Economic: land sales, business opportunities

### **Master plan**

*Update: the land has been identified, sustainable principles are now in place, EIA undertaken and we now put it all together into a master plan.*

A master plan is an idea/proposal for what the new suburb could look like. A master plan is usually undertaken by a planning department (in this case Act Government - Sustainable Development Directorate) and incorporates all of sustainable principles agreed to and the findings of the EIA.

A master plan is also referred to a 'framework'.

Examples of ACT master plans can be found at : [www.actpla.act.gov.au/master\\_plans](http://www.actpla.act.gov.au/master_plans)

### **Legislative approval (government sign off)**

*Update: the land has been identified, sustainable principles are now in place, EIA undertaken and a master plan drafted. It is now time to gain legislative approval (government approval).*

Once a master plan is drafted, it gets tabled in the ACT Legislative Assembly by the Planning Minister. At this point all members receive a copy of the concept plan and ask their respective departments/parties to review and comment on the plan.

Note: Master plans for a new suburb are not just about land development, they are about building a community. Where people will live, how they might live, work and play and the principles in which the community will be exposed to (e.g. sustainable living).

The government look at several things:

- does the master plan fit with the government overall vision for the ACT?
- does it fit with the principles of the Canberra Plan: social, economic, spatial?
- will the new suburb be economical viable, in other words, if the government spend \$ amount building it (roads, public transport, land development, schools etc) will the return generate enough money to make it viable?

A concept plan will have to be significantly modified after the Legislative assembly review to address issues that may have arise throughout the process. It may be that additional research needs to be undertaken or principles or new conditions need to be added. Again, this is a normal part of the process and is part of our democratic process.

### **Community consultation**

*Update: the land has been identified, sustainable principles are now in place, EIS undertaken and a master plan drafted. The legislative approval (government approval) has been granted and now it is time for the community to comment on the plan.*

After the modified draft concept plan has been approved by the Legislative Assembly it is then shown to the community via a process called 'community consultation'.

This consultation process is different from the notification process for development applications. Notification is a statutory form of consultation that allows nearby property owners and others the opportunity to look at a proposed development, consider its likely impacts on them and provide comment prior to a decision being made. Developers are now required to consult with the community on certain projects before applying for development.

The community are then given a set period of time to review the concept plan and make comment.

Note: community consultation is open to all Canberrans either as individuals or those in an interest team (e.g. residents' association) or businesses etc.

### **Precinct planning and code**

*Update: the land has been identified, sustainable principles are now in place, EIS undertaken and a concept plan drafted. The legislative assembly has given its approval, community comments on the plan has been sought and now it is time for a precinct code to be drafted and cleared by the community and Legislative Assembly.*

Precinct planning is essentially a much more detailed master plan (the next step). It involves the preparation of written documents and plans consisting of: block information, maps and diagrams relating to the future development of land within a precinct

Agency circulation: both government and private stakeholders will be given the opportunity to provide comment (including supporting plans traffic, heritage, bushfire etc). Each department has representatives that ensure their agency comments are reflective in the brief. Once all interested parties have submitted a response, the legislative Council considers the comments and suggest alterations.

The Council's recommendations are then put into a re-drafted concept plan and showcased to the community.

### **Place Names**

*Update: the land has been identified; sustainable principles are now in place, EIS undertaken and a concept plan drafted. The legislative assembly has given its approval, community comments on the plan has been sought, a precinct code has been drafted and cleared by the community and Legislative Assembly and now the Place Names Committee recommend the remaining street/road names etc.*

It is at this point that names for all roads and significant places are proposed by the Place Names Committee to the Planning Minister and the Legislative Council for approval.

[http://www.ACT Government - Sustainable Development Directorate.act.gov.au/tools\\_resources/maps\\_land\\_survey/place\\_names/place\\_search](http://www.ACT Government - Sustainable Development Directorate.act.gov.au/tools_resources/maps_land_survey/place_names/place_search)

### **Private land development – estate development**

The ACT Government has a primary role in the packaging and marketing of land. It is run through a corporate arm of government the [Land Development Agency \(LDA\)](#). The Land Development Agency (LDA) sells and develops land on behalf of the ACT Government.

## Frequently Asked Questions

### *What is an Environmental Impact Assessment?*

An environmental impact assessment (EIA) details the expected environmental effects of a development on the environment.

### *What is development?*

Buildings on vacant land, or reworking old structures for new uses such as the 'Glasshouse in Kingston –old power station to a new art centre). It can be as large as a group centre (shopping centre) or small as a house.

### *What is a green field development?*

Development of vacant land, usually rural land near a city such as Molonglo.

### *What is a brown field development?*

Building development on vacant land, usually on old industrial land such as East Lake.

### *What is sustainable development?*

Development that does not deplete environmental resources, and where communities and economies function well in the short and long term.

### *What is a master plan?*

A vision of how a place could evolve over time. It could cover a place as small as a village, like Hall or as large as a section of the city (section 54).

### *What is a development application?*

A development application is a request for permission to carry out proposed development. It must comply with the *Planning and Development ACT 2010*

### *What is indicative plan?*

A draft plan, a first cut, concept plan.

### ***Who decides where a new developments will happen?***

In the ACT, the Minister for Planning outlines the strategic direction that will help manage change and provide for growth to achieve the social, environmental and economic sustainability of Canberra.

### ***When does urban design take place?***

At the broad level, in planning the structure of new places (structure planning and master planning); at the detailed level, in the design of new streets and buildings.

### ***What subjects do urban designers study?***

At high school the most relevant subjects are geography, art, technical drawing, economics and urban history. Much more specific subjects about history and design techniques are studied at university.

### ***What skills do urban designers use in their work?***

Knowledge of different urban environments, drawing, writing, computer graphics and communicating with people.

### ***Who do urban designers work for?***

Councils, state governments, developers and private landowners.

### ***Who decides where new suburbs are built?***

The ACT Government – Sustainable Development Directorate is responsible for identifying new greenfield or brownfield land parcels suitable for sustainable development. This is called the spatial planning. ACT's current spatial plan is the [Canberra Spatial Plan](#). Prior to this, new suburbs were decided using the 'Y-plan' and prior to that the 'Griffin plan'.

Fast fact: The [Griffin plan](#) was implemented in 1912, replaced by the [Y-plan](#) in 1967-70 and further updated to the [Canberra Spatial Plan](#) 2002-2004. The Canberra Spatial Plan is currently being reviewed under the project title ACT Planning Strategy. The Canberra Spatial plan and any other long-term planning strategies are required to be prepared under the [Planning and Development Act 2007](#). When developing any spatial plan, it must consider statement of strategic directions in the [Territory Plan](#).

***Who decides where things such as houses, schools, shopping centres and parks are located in a new suburb?***

These decisions are made during the master planning stages and can be undertaken by the government planning organisation or a private developer (usually in consultation)

***Are there rules about the types of building materials you can use?***

There are policies on this, particularly in areas where the predominant existing building materials create a special character that should be preserved, such as in a heritage area. There is also rules about the use of sustainable building products to be used in the construction of a new suburb ...for example East Lake Urban Renewal.

***Can high-rise, high density buildings be built anywhere in Canberra?***

No. The Territory Plan defines different development zones and where they are. The zones define building heights.

## Assigning a street name suffix

When deciding which description should apply to a new street name, consideration should be given to the physical layout of the street and, in some instances, the function (for example, a ceremonial drive is usually described as a “parade”). In the ACT, the most commonly used suffixes include street, place, close, court, drive and road. The following list contains a description of street name suffixes:

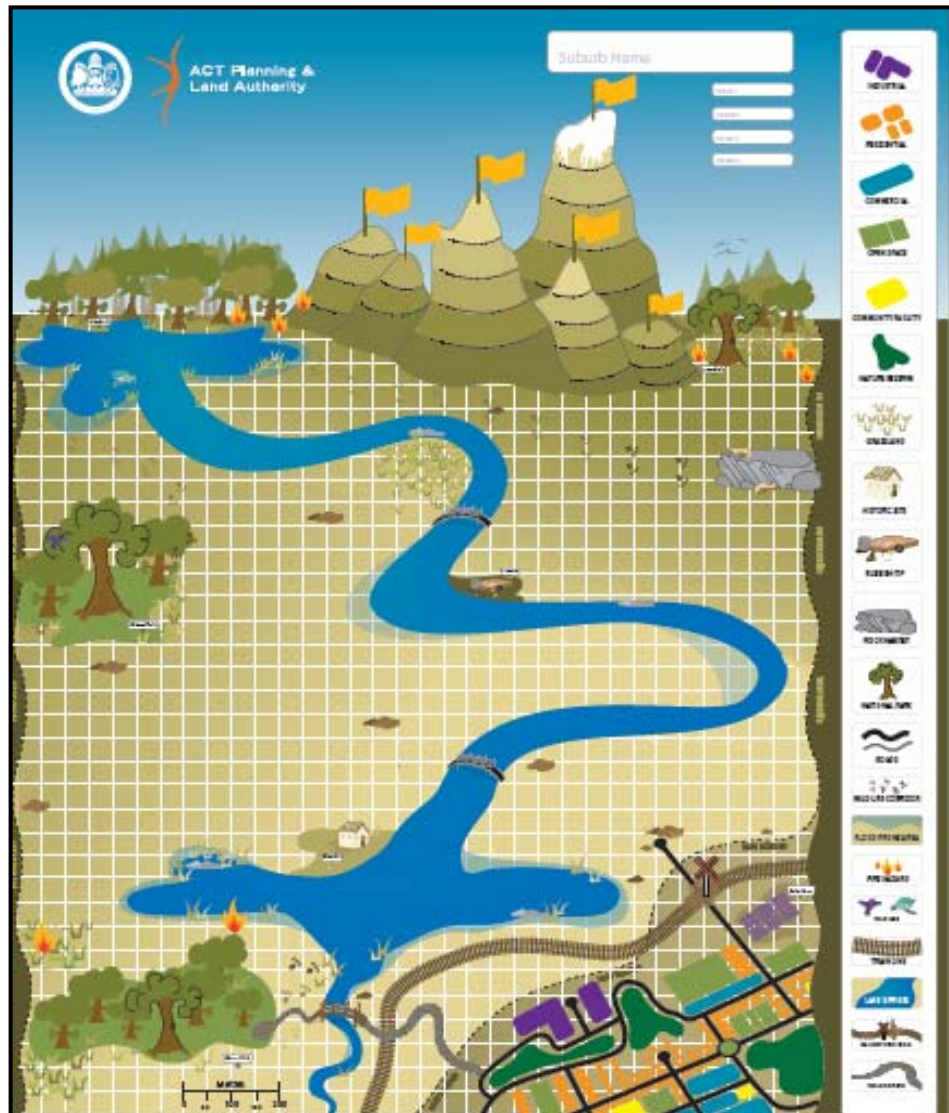
Note: this correlates with **Name-it**

Suffix	Definition
Arcade	A passage having an arched roof, or any covered passageway, especially one with shops along the sides.
Avenue	A broad passageway planted on each side with trees.
Boulevard	A wide street or avenue, well paved, usually ornamented with trees and grass plots.
Circle	A thoroughfare which forms a circle or part of a circle.
Circuit	A road or way enclosing an area.
Circus	A circular open place where many streets come together.
Close	A narrow passageway, leading from a street to a court.
Corner	The junction of two or more roads.
Court	An uncovered area wholly surrounded by buildings or walls.
Crescent	A thoroughfare in the form of a crescent or halfmoon.
Cross	A street which runs across another and continues with the same name (a ‘cross street’).
Crossing	As above
Drive	A wide thoroughfare allowing a steady flow of traffic without many cross streets.
Esplanade	An open, level roadway, often along the seaside or a river.
Fairway	A short open roadway between two streets.
Freeway	An express highway, usually with limited or controlled access.
Gardens	A roadway leading to a place for public enjoyment planted with trees, flowers, etc. and often having special displays of animal or plant life.
Grove	A roadway ending in a square having a group of trees standing together.
Highway	A road freely open to the public; main road or thoroughfare; a main route.
Interchange	A road or street junction designed so that traffic streams do not intersect.

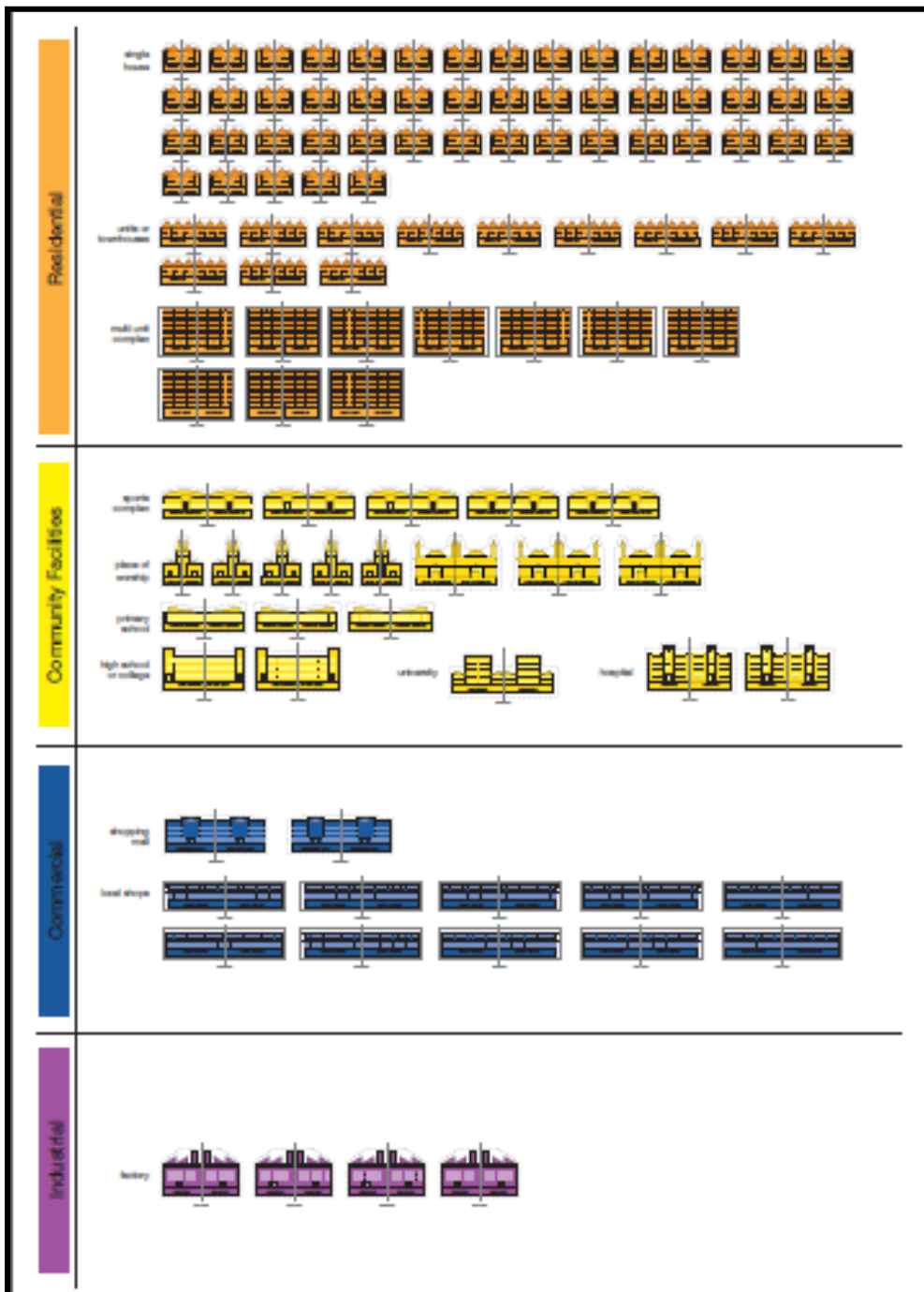
Lane	A narrow way between hedges, walls, buildings, etc.; a narrow country road or city street.
Loop	A road, street or way that diverges from and rejoins the main thoroughfare.
Mall	A sheltered walk, promenade or shopping precinct.
Parade	A public promenade or road which has good pedestrian facilities along the sides.
Parkway	A road, street or way through parkland, or open grassland area.
Path	A way or street, not specially constructed, usually used for pedestrian traffic.
Place	A short, usually narrow street usually with one prominent building.
Plaza	A street bounded on four sides of an area forming a market place or open space.
Retreat	A cul-de-sac forming a place of seclusion.
Ridge	A road, street or way along the top of a hill.
Rise	A road going to a higher place or position.
Road	A place where one may ride; an open way or public passage for vehicles, persons and animals; a street forming a means of communication between one place and another; generally applied outside an urban district.
Row	A street with a line of buildings on either side.
Square	A street bounding the four sides of an area to be used as open space or a group of buildings.
Street	A public road in a town or city especially; a paved thoroughfare with footpaths and buildings along one or both sides.
Terrace	A road which has the houses on either side raised above the road level.
Track	A road, lane or way with a single carriage way.
Trail	A road or way through a wilderness region.
View	A road, street or way commanding a wide panoramic view across surrounding areas.
Vista	A road with a view or outlook.
Walk	A thoroughfare with restricted vehicle access, used mainly by pedestrians.
Way	A short access way between two streets.

## Planning teams student maps:

Large format maps (supplied by the ESDD)



Large format maps (building cut outs) (supplied by the ESDD)



## Scenario cards

Each student planning team will be given one of three different scenarios describing a simulated planning situation in the ACT:

- creation of a small suburb - high density mixed use (inner suburban)
- creation of a medium suburb - medium density mixed use
- creation of a large suburb – low density (outer suburban).

According to their scenario, each planning team will be tasked to develop a preliminary master plan using the large Suburban Challenge map and the planning resources within the Teachers Resource Kit..

### ACT Suburban Challenge

small suburb scenario

Population 2000 people

**Low density housing 25%**  
Hint: low density housing sits outside medium to high density housing areas.

**Medium density housing 25%**  
Hint: keep medium density residential near main arterial roads and near shopping centres.


**High density housing 50%**  
Hint: keep high density housing along main arterial roads and close to shopping centres.

Work out how much low, medium and high density housing is required for your suburb.


Low density  
25% of 2000 = 500 people  
1 house represents 50 people      **total \_\_\_ houses**

Medium density  
25% of 2000 = 500 people  
1 townhouse represents 100 people      **total \_\_\_ t/houses**


Hi density  
50% of 2000 = 1000 people  
1 apartment represents 200 people      **total \_\_\_ apartments**




Low density housing  
1 X house represents 50 people



Medium density housing  
1 X town house represents 100 people



High density housing  
1 apartment represents 200 people



Local shops  
1 X local shops for 1500 people

### ACT Suburban Challenge

medium suburb scenario

Population 3000 people

**Low density housing 25%**  
Hint: low density housing sits outside medium to high density housing areas.

**Medium density housing 25%**  
Hint: keep medium density residential near main arterial roads and near shopping centres.


**High density housing 50%**  
Hint: keep high density housing along main arterial roads and close to shopping centres.

Work out how much low, medium and high density housing is required for your suburb.


Low density  
25% of 3000 = 750 people  
1 house represents 50 people      **total \_\_\_ houses**

Medium density  
25% of 3000 = 750 people  
1 townhouse represents 100 people      **total \_\_\_ t/houses**


Hi density  
50% of 3000 = 1500 people  
1 apartment represents 200 people      **total \_\_\_ apartments**




Low density housing  
1 X house represents 50 people




Medium density housing  
1 X town house represents 100 people



High density housing  
1 apartment represents 200 people



Shopping mall  
1 X shopping mall for 2500 people



Local shops  
1 X local shops for 1500 people

### ACT Suburban Challenge

large suburb scenario

Population 5,000 people

**Low density housing 25%**  
Hint: low density housing sits outside medium to high density housing areas.

**Medium density housing 25%**  
Hint: keep medium density residential near main arterial roads and near shopping centres.


**High density housing 50%**  
Hint: keep high density housing along main arterial roads and close to shopping centres.

Work out how much low, medium and high density housing is required for your suburb.


Low density  
25% of 5,000 = 1250 people  
1 house represents 50 people      **total \_\_\_ houses**

Medium density  
25% of 5,000 = 1250 people  
1 townhouse represents 100 people      **total \_\_\_ t/houses**


Hi density  
50% of 5,000 = 2500 people  
1 apartment represents 200 people      **total \_\_\_ apartments**




Low density housing  
1 X house represents 50 people




Medium density housing  
1 X town house represents 100 people



High density housing  
1 apartment represents 200 people



Shopping mall  
1 X shopping mall for 2500 people



Local shops  
1 X local shops for 1500 people