FLEMINGTON ROAD CORRIDOR CONCEPT PLAN





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1.0 INTRODUCTION

1.1 Purpose

The Flemington Road Concept Plan has been prepared to guide the future urban development of the road corridor and public realm immediately adjacent. This report includes Objectives and Planning Principles established to inform the preparation of the Concept Plan, outlines the processes undertaken in its conception and describes the main elements of the preferred development option for the road corridor. The Concept Plan has been adopted as a guideline under the Territory Plan. As such, the Concept Plan guides planning decisions and is required to be taken into consideration in development and land use proposals.

This document is an update to the *June 2005 Flemington Road Draft Final Concept Plan Report* and reduces the width of the Flemington Road reservation.

1.2 Scope

A site analysis of the study area and its surrounding context was conducted to identify opportunities, constraints and structure generators influencing the layout of the road corridor. The corridor's relationship with, connection to and impact on the adjacent residential estates of Franklin and Harrison was considered particularly important and analysed at some length during the site analysis process.

The Concept Plan was also informed by the guidelines and planning principles underpinning the existing Gungahlin Town Centre. In particular the Territory Plan Commercial 'D' Local Centre and Residential 'B8'and 'B9' policies have been reviewed and implemented in the Indicative Built Form Plans and the Development Control Requirements in this report.

A rigorous review of existing technical data applicable to the project, conducted site inspections and prepared a number of alternative indicative development options for review. The review of these options informed the finalisation of the preferred Indicative Development Plan, which forms the basis of the Concept Plan and supporting documents.

1.3 Project Team

The Concept Plan has been prepared by *The Expert Client Pty Ltd* (TEC) in association with *Brown Consulting* and the ACT Planning and Land Authority (the Authority). TEC has provided the Planning, Urban Design, Landscape and Architectural input into the project and produced the associated plans, sketches and report.

1.4 Methodology

The Concept Plan has been developed in consultation with a number of government stakeholders. This consultation led to the establishment of an agreed set of Objectives and Planning Principles that could be used as the basis for the preparation of the plan. Significant review of proposed transport strategies and objectives for the corridor also informed the preparation of the plan.

The steps leading to the preparation of the Concept Plan may be summarised as follows:

- 1. The development of a series of Objectives and Planning Principles which encompass current best urban design, transport, engineering and environmentally sustainable planning practices. The Objectives and Planning Principles relate to the immediate urban context as well as the broader ACT region.
- 2. The preparation of a rigorous site analysis. This was presented to ACT Government stakeholders to confirm the major environmental, cultural and engineering opportunities and constraints evident within and around the site.
- 3. The creation of a series of Indicative Development Options which show possible future subdivision layouts, built form, road networks and land uses.
- 4. The Indicative Development Options were critiqued by the Project Team and ACT Government agencies to confirm a preferred option to serve as a drawing base.
- 5. The preparation of a Concept Plan and the identification of the Development Control Requirements.

2.0 FLEMINGTON ROAD CONCEPT PLAN

2.1 Preamble

The Flemington Road Concept Plan has been prepared to guide future development along the road corridor and ensure that on-ground development responds to the agreed Objectives and Planning Principles. It aims to achieve highly amenable, vibrant and visually interesting development along the corridor that is based around an efficient transit network.

The Concept Plan also contains a series of Development Control Requirements that can be used to inform the preparation of Lease and Development Conditions for the future release of land along the road corridor. The Controls should be adopted within the Lease and Development Conditions to ensure that a high level of adaptability and amenity is achieved in buildings and that a high quality and useable public realm is established.

2.2 Site

The study area covers the Flemington Road corridor from immediately south of Well Station Drive up to the alignment of Sapling Street (Old Well Station Track). It includes a 65.1 metre wide road corridor (reducing to 62.3 metres at transit nodes), and development sections flanking the road on the eastern and western sides. The length of the study corridor is approximately 2 kilometres.

The section of Flemington Road comprising the study area generally dissects the residential estates of Harrison and its associated community facilities to the east, and Franklin to the west.

2.3 Objectives and Planning Principles

A number of key urban planning, transport, environmental and landscape Objectives and Planning Principles have been outlined to guide development along the Flemington Road corridor. These objectives and principles have been derived from contemporary best planning practice and existing planning policies relating to development in the Gungahlin Town Centre. They have all informed the preparation of the Indicative Development Plan and the other drawings comprising the overall Concept Plan.

The Objectives and Planning Principles are as follows:

Flemington Road - Objectives

- To provide an 'Urban Boulevard' that presents an attractive, vibrant and highly accessible entry to the Gungahlin Town Centre;
- To allow for the use of the Flemington Road corridor by a large range of vehicle types, both on and off-road, including buses, light rail (in the future), private vehicles, cyclists, pedestrians and motorised mobility devices;
- To implement the Objectives of the Sustainable Transport Plan including shifting the balance of travel from private vehicles towards greater use of walking, cycling, 'Park and Ride' facilities and public transport;

- To allow for a broad and diverse mix of uses fronting Flemington Road to provide a highly active continuous frontage with identifiable landmarks along its length;
- To integrate a mix of land uses within adaptable building types that preserve a high level of amenity for residents whilst allowing for active and vibrant commercial frontages at the ground floor;
- To provide strategically located Transit/Mixed-use nodes that will provide local shopping and Park and Ride opportunities for the community. These nodes should incorporate higher density residential housing to enhance viability of commercial uses:
- To ensure that development flanking Flemington Road is of an appropriate scale and form to reinforce the vibrant nature of the Urban Boulevard, and mark major entry points into adjoining estates;
- To provide for appropriate landscaping within verges and medians to present a boulevard of memorable character identifying the entry to the Gungahlin Town Centre:
- To provide a stormwater management system along Flemington Road that encompasses current Water Sensitive Urban Design (WSUD) principles and takes advantage of existing water quality systems in adjacent estates;
- To retain open space links between adjacent estates which continue landscape themes and pedestrian and cyclist networks;
- To provide for development that balances environmental and economic objectives and responds to existing and future market demands;
- To recognise and respond to the heritage values in the area including Old Well Station Track, Red Hill, North Mitchell Grasslands and Well Station Heritage Precinct.

Flemington Road - Planning Principles

The following Planning Principles will ensure the achievement of stated Objectives.

- Flemington Road reservation width is consistent with the need to fulfil its role as transit corridor, distinctive & distinguished Gungahlin Town Centre gateway, and meets minimum standards adopted by the Territory;
- The road structure will respond to the established Gungahlin road network, including the extension of Mapleton Avenue, Nullarbor Avenue, Well Station Drive and Old Well Station Track on alignments currently proposed;
- Main road intersections at the junction of Nullarbor Avenue, Mapleton Avenue, Well Station Drive and Flemington Road will be articulated and emphasised;
- The road hierarchy will allow for the separation of transit vehicles from local access traffic through the use of service access roads adjacent to Flemington Road;

- Transit stops will be easily accessible from commercial frontages by providing kerb side indented bus bays on the departure side of intersections;
- Transit stops will facilitate a range of activities including bus travel, window shopping and outdoor eating in comfortable and convenient circumstances;
- In the long term, the Intertown Public Transport (IPT) route will be provided with appropriate transit stops;
- Verges will allow for comfortable pedestrian movement, adequate pedestrian facilities and underground engineering services;
- Minor medians will be of a width that allows planting of 'Category 1' street tree; and the central median will be of an appropriate width to facilitate future IPT (including amenable and safe transit shelters);
- The built form to the corridor edges (and the supporting landscape treatment) will be of a scale that provides a sense of enclosure and positive edge definition. To the extent possible the interface distance will encourage interaction between one side of the street and the other;
- Commercial and mixed-use development fronting Flemington Road at major transit nodes will be a minimum of 4 storeys and maximum of 6 storeys high. Residential and mixed-use development along Flemington Road will be at least two storeys to a maximum of 3 storeys high. It will incorporate higher density residential development with a minimum net density of 30 dwelling units/ha and 40+ net density at commercial nodes;
- The front setback for commercial buildings at transit nodes will be 3 metres to allow protective awnings on-block. The front setback of buildings in B8 and B9 zones will generally be 6 metres to allow strong on-block landscaping outcomes. This may be reduced to 4 metres for apartment buildings and terrace housing blocks presenting 'side grain' to Flemington Road;
- Buildings fronting Flemington Road at major transit nodes will incorporate commercial uses at the ground floor with a minimum 3.6m floor to ceiling height to allow for commercial uses to be incorporated into a mixed-use facility;
- Residential buildings facing Flemington Road in B8 zones will be serviced from the rear and will incorporate a minimum 3.3m floor to ceiling height at the ground floor to allow for commercial/mixed uses in the short or intermediate term (consistent with the Territory Plan);
- Building form will generally be consistent, compatible and continuous for the full length of the corridor. Nevertheless, unrelieved and monotonous facades will be avoided by creating visual interest through the use of high levels of articulation and feature elements that will include two or more:
 - o Balconies:
 - Highlighted front doors;
 - Awnings to provide continuous shelter along commercial frontages;
- The built form outcomes will present a fine grain along all street frontages by dividing the façade into small scale modules with a maximum width of 9.5m;

- Residential and Mixed-use buildings will be constructed of a range of materials including rendered and painted masonry and feature "trim" elements. Buildings will be roofed with pitched and flat roof elements to add variety and visual interest. Buildings incorporating pitched roofs only will have a minimum pitch of 24.5 degrees. Commercial buildings will incorporate high quality steel, glass and masonry finishes and may incorporate flat and pitched roof elements;
- Residential dwellings adjacent to major transit nodes and commercial facilities will incorporate noise attenuation features to ensure compliance with applicable acoustic standards;
- Continue the landscaped open space link along Gungaderra Creek between Harrison 2 Estate and Franklin Estate at the planned width;
- Retain existing trees along the alignment of Old Well Station Track within a large verge. Respond to potential view corridors to heritage features including Old Well Station Track, Red Hill, North Mitchell Grasslands and Well Station Heritage Precinct;
- Provide public art installations at each transit node that are representative of the community and the place;
- Provide a temporary park and ride facility at the Well Station Drive transit node that caters for a minimum of 20 car parking spaces and provides an appropriately scaled station with undercover protection for commuters;
- Street furniture will be in accordance with the Gungahlin Codes Index. This
 includes the provision of lighting, seats, bike racks, bins, drinking fountains, paving,
 pram crossings and service covers;
- Water sensitive urban design principles will be incorporated in the corridor where possible including the use of:
 - o Grass swales:
 - Water quality ponds;
 - o Bio retention zones;
 - o Permeable pavements:
 - Stormwater collected from hard pavements (including roads) to water street trees and other plantings in the public domain.

2.4 Indicative Development Plan – Primary Elements

The preferred layout for the corridor (which best responds to agreed Objectives and Planning Principles) was used as a base for the Indicative Development Plan. The Indicative Development Plan includes primary elements considered essential to achieve all of the Objectives and Planning Principles. These elements are:

2.4.1 Landscape

Flemington Road is one of the major entry points into the Gungahlin Town Centre and should provide a highly amenable and memorable landscape theme reflecting its significance. The design of the road corridor adopted in the Concept Plan provides medians of sufficient width to allow the planting of large trees considered essential for

reducing the visual scale of the corridor and providing residential amenity along its length. Key elements in the landscape design of the corridor include:

- Pin Oak (Quercus palustris) or Brittle Gum (Eucalyptus mannifera) plantings in the 6
 metre wide minor median to reinforce the grand avenue character and to enclose and
 define the "outdoor rooms" associated with residential development;
- The proposal to adopt WSUD principles for watering street trees located in the minor median. It is intended to collect on-road stormwater and deliver it to trees via tree watering pits;
- The creation of on-block planting opportunities by specifying minimum front building setbacks. Consideration should be given to mandating tree planting in front courtyards;
- The continuation of native landscape treatments along the Gungaderra Creek open space system;
- Retention of existing Significant Trees in accordance with the requirements of the Tree Protection Act, 2005 and other relevant ACT legislation or Government quidelines.

2.4.2 Sustainable Transport Planning

The Flemington Road Concept Plan embraces the Objectives and Principles encompassed within the *Sustainable Transport Plan*. A number of design elements within the Concept Plan have been included to encourage the use of public transport, cyclist facilities and pedestrian facilities. These include:

- A series of highly accessible transit stops on the departure side of major transit nodes.
 These stops will be convenient for users to access and are located near commercial facilities and areas of high residential densities:
- A continuous dedicated cycle lane running along the entire study corridor;
- Precincts of higher residential densities adjacent to major transit lines and stops to encourage a greater modal split using public transport options;
- Accommodation for pedestrian refuges to facilitate safe and convenient road crossing points;
- A "Park n' Ride" facility adjacent to Well Station Drive to allow commuters to take advantage of public transport facilities linked to the Gungahlin Town Centre core commercial and employment areas.

2.4.3 Road Design

The design of Flemington Road shown in the Concept Plan includes a number of elements considered essential in achieving the qualities of an urban boulevard. They include:

 Dual carriageways for north-bound and south-bound traffic to facilitate bus, car and truck movement;

- An overall road reserve width of 65.1 metres (reducing to 62.3 metres at the transit nodes) to accommodate the requisite median, verge, carriageway and cycle lane widths. Detailed arrangements are shown on section drawings contained at Sheets 5-11;
- The use of a 6 metre wide minor median to accommodate large street tree plantings, and a 2.4 metre wide verge containing appropriate services and pedestrian movement networks. The 18.1 metre wide central median accommodates a future Inter-town Public Transport (IPT) mode if desired allowing a busway or light rail system. Provision has been made for IPT stations adjacent to major transit nodes to encourage efficient use of public transport facilities;
- An 11.1 metre wide paved curtilage (3 metres on-block and 8.1 metre verge) immediately adjacent to commercial and mixed-use buildings at major transit nodes to facilitate safe and convenient access from bus stops directly to commercial tenancies, and provide pedestrian amenity;
- The re-use of the majority of the existing road pavement to reduce cost. The
 proposed arrangement locates the existing 4-way trench (in the eastern minor
 median) in a workable position;
- The inclusion of a bus stop on the departure side of each intersection at major transit nodes:
- The use of service roads adjacent to the main Flemington Road carriageway to provide safe and convenient access to commercial and residential development and to separate local and transit based traffic.

The road design shown in the Concept Plan includes a number of departures from earlier schemes prepared by Maunsell McIntyre Pty Ltd (2000) and Parsons Brinkerhoff Pty Ltd (2004). The departures are:

- The Maunsell McIntyre scheme proposed a 66m wide road reserve the Concept Plan proposes a 65.1m wide road reserve reducing to 62.3m at transit nodes;
- The Maunsell McIntyre scheme proposed 5.0m wide minor medians with no tree plantings – the Concept Plan proposes a 6.0m wide minor median with a large Category 1 type tree plantings;
- The Maunsell McIntyre scheme proposed on-road transit lanes that entered the central median only at major IPT stations – the Concept Plan includes continuous dedicated IPT lanes within the central median;
- The Maunsell McIntyre scheme included service lanes between indented bus bays and commercial frontages – the Concept Plan removes the service road between the indented bus bay and the commercial frontages to allow direct interface between the bus stop and commercial areas;
- The Maunsell McIntyre scheme generally comprised single lane carriageways northbound and south bound outside of major intersections – the Concept Plan proposes continuous dual carriageways both north-bound and south-bound;
- The Parsons Brinkerhoff scheme proposed a 72m wide road reserve that stepped at major transit nodes the Concept Plan proposes a 65.1m wide road reserve that reduces in width at transit nodes and adjacent to open space areas;
- The Parsons Brinkerhoff scheme comprised single lane carriageways north-bound and south bound outside of major intersections – the Concept Plan proposes continuous dual carriageways both north-bound and south-bound;

 The Parsons Brinkerhoff scheme included service lanes adjacent to major transit stops – the Concept Plan removes the service road between the indented bus bay and the commercial frontages to allow direct interface between the bus stop and commercial areas.

2.4.4 Road Network and Structure

The Concept Plan incorporates the extension of existing and proposed collector roads in adjacent estates to ensure that future development will provide a clear, legible and integrated transportation network. It allows residents of local residential estates to have convenient access to the commercial facilities located at the major transit nodes within the study area, and will enhance access for more distant residents who travel on the collectors. Roads intersecting with Flemington Road within the study area include:

- Mapleton and Nullarbor Avenues servicing Harrison and Franklin Estates, and linking Flemington Road and Horse Park Drive;
- Well Station Drive immediately north of Mitchell linking Gungahlin Drive and Horse Park Drive;
- Sapling Street (Old Well Station Track) north of Gungaderra Homestead. The
 retention of this alignment and provision of appropriate interfacing development is
 important to conserve links between the Town Centre and surrounding existing
 heritage features.

The road intersections between existing roads in adjoining residential estates and proposed roads in the perimeter development along the corridor will require detailed resolution as the Estate Development Planning stage.

2.4.5 Pedestrian and Cyclist Network

A continuous 2.0 metre wide cycle lane has been provided on both the north-bound and south-bound carriageways. These on-road cycle lanes will be connected to the trunk cycle path running along the Gungaderra Creek open space system to allow users to access adjacent residential estates and the cyclist facilities along Gungahlin Drive and Horse Park Drive.

The 2.4 metre wide verges adjacent residential, and mixed-use development are fully paved to allow for convenient use by pedestrians.

2.4.6 Section Layout and Block Orientation

The orientation and dimensions of development sections shown in the Indicative Development Plan have been based on a range of planning considerations. These include solar access, built form and scale, housing choice, adaptability, prospect and site features. The alignment of Flemington Road results in sections fronting the road generally being oriented north-south, with sections turned at the end of rear lanes running east-west to enhance aspect and prospect.

Longer sections fronting Flemington Road are considered important to achieve the continuous, strong built form desired to enclose the road corridor. Sections have generally been limited to a maximum length of less than 100 metres to reduce the length of rear

laneways servicing each section. The length of laneways has been minimized by introduction of an east-west residential section. This avoids gun barrel laneways, and maximises solar access to resultant north-south blocks. Many of these north-south blocks achieve high quality prospect across open space areas.

Dimensions shown on drawings (other than road reservation dimensions) are nominal. These nominal dimensions have been rounded to the nearest 0.1 metre.

Development section widths on the western side of Flemington Road are 78 metres nominal. These have typically been divided into two back to back north-south sections 34 metres wide (nominal) with a 10 metre wide laneway separating each section.

Development section widths on the eastern side of Flemington Road are generally 72 to 80 metres (nominal). These are generally divided into two back to back north-south sections 31 to 34 metres wide (nominal) with a 10 metre wide laneway separating each section. It should be noted that the overall width of sections on the eastern side of Flemington Road is constrained by the edge of the future playing fields in Harrison and the existing Flemington Road carriageway.

East—west sections vary in depth depending on whether they are for terrace housing or apartment blocks. The former are generally 32 – 40 metres (nominal) to provide the optimum depth for north-south townhouse blocks. The latter, for east – west oriented apartment buildings, range from 31 to 60 metres (nominal) in depth.

The sections on the north-western and south-eastern corners of the mixed-use transit nodes are larger than other sections in the corridor. The service road has been removed from the front of commercial buildings to allow direct interface between bus stops and commercial frontage. The size of these sections adjacent major transit stops has been determined to allow a large range of site planning and built form options. The layout will assist in ensuring that an active and viable commercial component is integrated within other mixed-use residential development on the section.

A larger development section has also been provided on the south-eastern corner of the Flemington Road and Well Station Drive intersection to allow for the development of a service station and associated "Park n' Ride" facility.

2.4.7 Built Form Outcomes

The Indicative Development Plan shows a variety of built form outcomes along the Flemington Road corridor. The different building types have been chosen for their suitability in meeting the agreed Objectives and Planning Principles outlined in Section 2.3. Considerations of building uses, massing and scale, orientation, amenity requirements and the interface with adjacent development all informed the location and choice of building type. The main features of the built form outcomes shown on the Indicative Development Plan are as follows:

Apartment buildings from 4 to 6 storeys in height with ground floor commercial uses have been located on the north-western and south-western corners of the Mapleton Avenue intersection, and on the north-western, south-western and north-eastern corners of the Nullarbor Avenue intersection. These locations correspond with proposed major transit stops and will provide an active and vibrant mixed-use node. Locating a commercial facility on the eastern and western sides of Flemington Road is designed to allow convenient access to local shopping facilities for the residents of both Franklin and Harrison.

 Developments on the north-western and south-eastern corners of the Mapleton Avenue intersection and the south-eastern corner of the Nullarbor Avenue intersection are also proposed to be 4 storeys in height but ground floor commercial uses are not mandated for initial development. It is possible that the ground floor of these buildings will convert from residential uses to commercial uses in the short to medium term.

To provide for local convenience and viable commercial gross floor area (GFA) in the short term, it is recommended that the following limits are imposed:

- 700 1000m2 of commercial GFA plus 600m2 of retail GFA at the Nullarbor Avenue transit node, and
- 500 700m2 of commercial GFA plus 400m2 of retail GFA at the Mapleton Avenue transit node;

The distribution of this space at each of the transit nodes will be subject of review when a clearer understanding of local and town centre commercial requirements is known.

- Taller buildings have been indicated at the Flemington Road intersections with Mapleton Avenue and Nullarbor Avenue will allow for the development of a strong urban form to clearly mark and "bookend" major entries to adjacent estates and identify the mixed-use transit nodes;
- 3 and 4 storey apartment buildings have been located adjacent to development at major transit nodes. This will provide a transition in scale between the taller 4 – 6 storey commercial and mixed-use buildings at transit stops, and the lower 2 – 3 storey residential development beyond;
- 2 3 storey Townhouses with rear lane access have been provided in north-south sections directly fronting Flemington Road. This type of housing provides the opportunity for ground floor areas to be used for commercial/mixed use purposes in the short, medium or longer term provided that floor to ceiling heights are adequate. Accordingly the Concept Plan mandates a minimum floor to ceiling height of 3.3 metres in all residential dwelling types fronting Flemington Road. Groups of attached town houses provide a continuous and strong built form to Flemington Road. This, together with landscaping, will reduce the apparent road corridor width and strengthen its "urban boulevard" character.
- Duplex housing with rear lane access is shown on north-south sections facing into adjacent residential estates. This form of development will allow for improved solar access to dwellings on those blocks where continuous built form is not considered to be a paramount objective.

Notional floor Plans for the duplex housing and townhouses scheduled above are shown in drawings at the end of the Report. These floor plans demonstrate how each dwelling type can be accommodated on blocks within the Flemington Road corridor whilst still achieving front, side and rear setback requirements. Each dwelling type achieves good solar orientation and access to private open space areas, and demonstrates that a wide range of dwelling types are capable of being accommodated along the Flemington Road corridor.

Notwithstanding the described uses and built form outcomes, alternative uses consistent with the Territory Plan including childcare centre may also be appropriate activity within the Corridor, subject to detail assessment.

2.4.8 Building Adaptability

The sectional layout shown in the Concept Plan allows broad housing choice for the development market and facilitates adaptability and change of use over time. This is consistent with the principles and objectives for the Gungahlin Town Centre and is considered socially and environmentally responsible in such a prominent urban location. The Concept Plan mandates minimum floor to ceiling heights at the ground floor level of all buildings fronting Flemington Road to ensure that buildings are capable of being adapted to a range of ground floor uses. The use of rear lanes to access blocks allows for the separation of service and address functions, removes potential pedestrian and vehicular conflict and allows maximum exposure of a shopfront to the address street.

2.4.9 Generational Densification & Block Release Packages

Opportunities for generational change (to density and built form) are permitted by the section and indicative block layout. These include the possibility of future block amalgamation and redevelopment from detached or attached dwellings to apartment buildings. The amalgamation of individual blocks plays an important role in allowing densification in the future.

Accordingly, the retention of a number of blocks within single ownership will encourage and simplify the redevelopment process and allow for densification as market demands dictate.

2.4.10 Community Facilities

A site to the immediate east of the Mapleton Avenue transit node has been identified as a possible location for a community facility development. The site will have close access to commercial, transit and school facilities. It is envisaged that the site could be used for a Child Care Centre, Community Activity Centre, Cultural Facility or the like. These types of uses would assist in fulfilling a current strong need for Community Facilities within the Gungahlin Town Centre and would successfully integrate with commercial and mixed uses adjacent.

2.4.11 Open Space Structure

The Concept Plan allows for the continuation of the Gungaderra Creek open space linking between Harrison and Franklin. The Indicative Development Plan allows dwellings to overlook the adjoining open space areas along the creek. The layout will ensure natural surveillance and encourage community use of the open space corridor.

The Concept Plan promotes the use of the open space areas for recreation and incorporates a proposed trunk cycleway along Gungaderra Creek. The provision of barbeque/picnic facilities within the open space is encouraged where areas are large enough to accommodate these facilities.

Parallel parking spaces have been indicated adjacent to the Gungaderra Creek water quality pond on the eastern side of Flemington Road to provide convenient and safe community access to the pond.

2.4.12 Natural and Cultural Heritage Features

A number of natural and cultural heritage features exist within close proximity of the Concept Plan study area. They include:

- North Mitchell Grasslands;
- Gungaderra Creek;
- Red Hill
- Well Station Homestead
- Old Well Station Track.

Strategies have been included within the Concept Plan to ensure that conservation and interpretation of these features occurs appropriately, whilst other controls and strategies would need to be resolved during future planning stages. The strategies incorporated into the Concept Plan include the provision of a wider road reserve to preserve views to the Well Station Homestead from Flemington Road, establishing development boundaries to preserve protected grasslands, providing a wider verge to preserve Old Well Station Track and adjacent existing tree plantings, and the preservation and enhancement of the Gungaderra Creek floodway. Details of these measures are as follows:

- Development on the western side of Flemington Road has been confined to the area outside of the North Mitchell Grasslands, and also to the north of the existing stand of Eucalypts directly north of the grasslands. This preserves a significant visual and environmental feature along the road corridor enhancing the recreational amenity provided for residents;
- Views through Harrison to the Well Station Homestead have been preserved in the Concept Plan by aligning the road reservation one section south of the southeastern Nullarbor Avenue transit stop with the road reservation in Harrison. This will provide a view corridor for vehicular traffic and pedestrians from Flemington Road to the Well Station Homestead and associated landscape;
- The Old Well Station Track alignment at the north-western end of the study site has been retained within a wide verge to allow for the track to be upgraded to a multi purpose trail with a distinctive surface treatment. The surface may be formed from compacted Paddy's River Gravel to ensure that its significance will be retained and interpreted. The details of the proposed finish would be provided at the detail landscape design stage during the Estate Development Planning development application process;
- The Gungaderra Creek alignment has also been retained and enhanced as part of the Concept Plan. This includes proposing landscaping along the corridor which continues the landscape themes along the creek corridor adjacent to Harrison (north) and Wells Station Estates.

Further controls of building materials and finishes, colours and heights will need to be investigated during the Estate Development Planning development application process and within the preparation of Lease and Development Conditions. It is expected that the implementation of these controls would occur in consultation with the ACT Heritage Unit. This may include:

- The preparation of controls on material and colour use to ensure development is sympathetic to the surrounding native landscape setting;
- Controls on the use of landscape species to ensure that highly visible landscape areas from heritage features are sympathetic to the endemic species evident in the area; and

• Controls on built form to restrict building height and scale to permit views from major transit and pedestrian routes to surrounding heritage features.

2.4.13 Land Program

The Concept Plan proposes that the corridor is developed with a variety of high density dwelling types and the following dwelling number.

Rules	Criteria
Dwelling Numbers	
R1	C1
The maximum number of dwellings within the Flemington Road corridor concept plan area is 1225 dwellings.	The estate development plan (EDP) provides for a variety of higher density housing that is capable of being supported by the planned and constructed services and transport infrastructure
	An increase in the number of dwellings above that specified in R1 may be considered where all of the following can be demonstrated:
	a range of different dwelling types and sizes are provided to cater for changing demographics and improved housing affordability
	b) additional dwellings minimise detrimental impacts on the character of adjacent residential zones in Franklin and Harrison by limiting overshadowing, maximising access to sunlight and ensuring that the height, scale, setbacks and built form establish an appropriate visual streetscape character and separation.

3.0 DEVELOPMENT CONTROL REQUIREMENTS

To ensure that the Objectives and Planning Principles for the Flemington Road corridor are achieved, a series of rules and criteria have been established to control and inform future development. The utilisation of these rules and criteria will ensure achievement of a high quality development outcome.

Part A – Land Use		
Rules	Criteria	
1. Land Use Plan		
R2	C2	
The land use plan submitted with an estate development plan (EDP) will be in accordance with the <i>Territory Plan</i> map under the future urban	The land use plan submitted with an EDP is generally in accordance with the Territory Plan and the following:	
area overlay.	 a) that the Flemington Road Corridor contains a majority of commercial CZ5 mixed use zoning 	
	b) the quantity of areas zoned commercial CZ4 local centre adjacent to the intersections of Flemington Road and Mapleton Avenue (Manning Clark Crescent), and Flemington Road and Nullarbor Avenue may be reviewed through a retail and commercial needs assessment to the satisfaction of the Territory	
	 c) additional RZ4 medium density residential zone may be incorporated. 	

Part B – Subdivision		
Rules	Criteria	
1. Subdivision		
	C3	
There is no applicable rule.	Subdivision of the land addresses all of the following:	
	provides for appropriately scaled development relative to the context and function of Flemington Road Corridor as a vibrant, higher density urban boulevard	
	 b) provides opportunities for dwellings to maximise solar orientation and solar access and allow for visually interesting higher density built form outcomes. 	
2. Density		
R4		
The minimum residential density along the corridor is:	This is a mandatory requirement. There is no applicable criterion.	
a) 60 dwellings/hectare for development in commercial CZ4 local centre zone areas and in commercial CZ5 mixed use zone areas adjacent to the intersections of Flemington Road and Nullarbor Avenue and Flemington Road and Mapleton Avenue (Manning Clark Crescent)		
b) 40 dwellings/hectare for development in other commercial CZ5 areas and in RZ4 medium density residential areas.		
3. Bushfire Protection		
R5		
A bushfire risk assessment is required to be undertaken and endorsed by the ACT Emergency Services Agency.	This is a mandatory requirement. There is no applicable criterion.	
Any required mitigation measure is incorporated into the ongoing provisions identified in the EDP.		

Part C – Buildings and Structures		
Rules	Criteria	
1. Built Height and Form		
R6 Building heights in commercial CZ4 local centre zone are a minimum of 4 storeys and a maximum of 6 storeys except where adjacent to a RZ3 urban residential or RZ4 medium density residential zone.	This is a mandatory requirement. There is no applicable criterion.	
R7	C7	
Where development in a commercial CZ4 local centre zone is located adjacent to a RZ3 urban residential or RZ4 medium density residential zone, the building height of that component of the	An increase in the building height up to a maximum of 6 storeys may be considered provided that the development complies with all of the following:	
development adjacent to the RZ3 urban residential or RZ4 medium density residential zone is a maximum of 3 storeys.	a) is appropriate to the scale and function of the uses	
maximum of a storeys.	b) minimises detrimental impacts on the character of adjacent residential zones by limiting overshadowing, maximising access to sunlight and ensuring that the height, scale, setbacks and built form establish an appropriate visual streetscape character	
	c) does not restrict solar access requirements from being achieved for other development on the same parcel of land	
	d) protects the amenity of adjacent residents in Harrison and Franklin	
	e) incorporates a variety of articulation elements that are not continuous or monotonous.	
R8		
For development on Block 1 Section 127 Harrison, buildings fronting Flemington Road are a minimum of 3 storeys and a maximum of 6 storeys.	This is a mandatory requirement. There is no applicable criterion.	
R9		
For development on Block 1 Section 127 Harrison, buildings fronting Kings Canyon Street is a minimum of 2 storeys and a maximum of 3 storeys.	This is a mandatory requirement. There is no applicable criterion.	

Rules	Criteria
R10	C10
For development in a commercial CZ5 mixed use zone adjacent to the intersections of Flemington Road and Mapleton Avenue (Manning Clark Crescent) and Flemington Road and Nullarbor	An increase in the building height up to a maximum of 6 storeys may be considered provided that the development complies with all of the following:
Avenue, development is a minimum of 3 storeys and a maximum of 4 storeys.	a) is appropriate to the scale and function of the use
Where this development is also located adjacent to a RZ3 urban residential zone, the building height of that component of the development adjacent to the RZ3 urban residential zone is a maximum of 3 storeys.	b) minimises detrimental impacts on the character of adjacent residential zones by limiting overshadowing, maximising access to sunlight and ensuring that the height, scale, setbacks and built form establish an appropriate visual streetscape character and separation
	c) does not restrict solar access requirements from being achieved for other development on the same parcel of land
	d) protects the amenity of adjacent residents in Harrison and Franklin
	e) incorporates a variety of articulation elements that are not continuous or monotonous.
R11	C11
For all other residential and mixed use development within commercial CZ5 mixed use zone and RZ4 medium density residential zone, buildings are a minimum of 2 storeys and a maximum of 3 storeys.	An increase in the building height up to a maximum of 4 storeys may be considered provided that the development complies with all of the following: a) is appropriate to the scale and
	function of the use b) minimises detrimental impacts on the character of adjacent residential zones by limiting overshadowing, maximising access to sunlight and ensuring that the height, scale, setbacks and built form establish an appropriate visual streetscape character and separation
	c) does not restrict solar access requirements from being achieved for other development on the same parcel of land
	d) protects the amenity of adjacent residents in Harrison and Franklin
	e) incorporates a variety of articulation elements that are not continuous or monotonous.

Rules	Criteria
R12	C12
For all other residential and mixed use development within commercial CZ5 mixed use zone and RZ4 medium density residential zone that fronts Flemington Road, Christina Stead Street, Clare Burton Circuit, Henry Kendall Street, Wimmera Street and King Canyon Street, development is to comprise: a) not less than 25% of the length of the frontage is 2 storeys b) not less than 25% of the length of the frontage is 3 storeys.	Building design, articulation, detailing and finish provide an appropriate scale, add visual interest and enable visual differentiation between buildings when viewed from public streets. A variety of building heights to add visual interest is required.
R13	
Development on Block 1 Section 127 Harrison is constructed as apartments.	This is a mandatory requirement. There is no applicable criterion.
	C14
There is no applicable rule.	Roof top plant that is set back and screened from the street is not included in the maximum number of storeys.
2. Setbacks	
R15	
Development in a commercial CZ4 local centre zone has a minimum front setback to all streets of 3.0m.	This is a mandatory requirement. There is no applicable criterion.
R16	
For apartment development, the minimum front setback to all streets is 4.0m except within areas identified as deep root planting zones.	This is a mandatory requirement. There is no applicable criterion.
Note - deep root planting zones and associated setback requirements are described in R19 and R29 to R32.	

Rules	Criteria
For other development, the minimum front setback to all streets is 6.0m except within areas identified as deep root planting zones. Note - deep root planting zones and associated setback requirements are described in R19 and R29 to R32.	This is a mandatory requirement. There is no applicable criterion
R18 For other development on the southern side of the block and not adjacent to Nullarbor Avenue, Mapleton Avenue and Manning Clark Crescent, the minimum front setback is 4.0m.	This is a mandatory requirement. There is no applicable criterion.
R19 For that component of the development, located behind a deep root planting zone, other than at street corners, the minimum front setback is 9.0m to provide articulation in the built form.	This is a mandatory requirement. There is no applicable criterion.
3. Commercial Gross Floor Area	
R20	C20
Development in commercial CZ4 local centre zone incorporates the following amounts of commercial gross floor area (GFA):	A variation in the amount of gross floor area may be considered where a retail needs assessment has been undertaken
a) 700–1000m ² of commercial GFA and in addition 600m ² of retail GFA at the Flemington Road and Nullarbor Avenue intersection	demonstrating to the satisfaction of the Territory that the scale of commercial and retail use is sufficient to service the local retail needs of residents in Harrison and
b) 500–700m² of commercial GFA and in addition 400m² of retail GFA at the Flemington Road and Mapleton Avenue (Manning Clark Crescent) intersection.	residents in Franklin.
4. Commercial Building Frontages	
R21	C21
Development in a commercial CZ4 local centre zone provides all of the following:	Alternative facade treatments maybe considered which address all of the following:
a) a continuous awning to all commercial active frontages being a minimum of 3.0m in width	following: a) provides highly identifiable building entry points
b) a maximum of 5 tenancies will be served by one entry.	b) preserves resident amenity
one onay.	c) provides separation to residential above
	d) provides a high level of address, safety and legibility for residents and visitors.

Rules	Criteria
5. Floor to Ceiling Heights	
There is no applicable rule.	C22 The ground floor level of buildings fronting Flemington Road, Mapleton Avenue, Manning Clark Crescent and Nullarbor Avenue are designed to be adaptable for commercial use.
6. Service Entries	
	C23
There is no applicable rule.	All service areas to commercial facilities are located away from main street frontages and screened from public view.
7. Articulation Zone	
R24	C24
For development in commercial CZ5 mixed use zone and RZ4 medium density residential zones including apartment development, an articulation zone may encroach up to 2m into the front setback provided that the total extent of the articulation does not exceed 50% of the overall building frontage.	Building design, articulation, detailing and finish provide an appropriate scale, add visual interest, and enable visual differentiation between dwellings when viewed from public streets. Note: Articulation elements can include verandahs, balconies, porches, awnings, shade devices, pergolas, dwelling entries, building entry foyers, and the like.
	C25
There is no applicable rule.	Articulation elements comply with all of the following: a) Length and depth in commercial CZ4 local centre zones are visually interesting, reflect the mixed use nature of the development, and enhance streetscape character b) Development will incorporate appropriate detailing and articulation to ensure that individual dwellings are identifiable and their entries highlighted.

Rules	Criteria		
8. Materials and Colours			
	C26		
There is no applicable rule.	Development incorporates a variety of materials, colours, detailing and finishes that adds visual interest and enables visual differentiation between dwellings when viewed from public streets.		
9. Verges			
R27	C27		
Verges adjacent to commercial CZ4 local centre zone and residential frontages at the intersections of Flemington Road and Nullarbor Avenue and Flemington Road and Mapleton Avenue (Manning Clark Crescent) are paved.	An alternative treatment may be considered where it can be demonstrated that the alternative provides for a highly accessible and walkable public realm.		
10. Street Interface			
	C28		
This is no applicable rule.	Development must address all of the following: a) Individual dwellings must address the street frontage and areas of public open space		
	b) Pedestrian access points to the development and to individual dwellings must be at regular intervals and significantly landscaped.		
11. Deep Root Planting Zones			
R29			
All development in commercial CZ5 mixed use and RZ4 medium density residential zones fronting Flemington Road, Christina Stead Street, Clare Burton Circuit, Henry Kendall Street, Wimmera Street and King Canyon Street incorporates deep root planting zones capable of supporting large trees (semi-mature stock with a minimum mature height of 5m) within the front setback.	This is a mandatory requirement. There is no applicable criterion.		

Rules	Criteria		
R30	C30		
Deep root planting zones as identified in R24 are provided along the street frontage of each block to a total length of not less than one third of the block frontage and addresses the following:	An alternative strong landscaped treatment may be considered provided that the treatment addresses all the following:		
a) mid block planting zone has a minimum dimension of 9m measured from front boundary and planted with large trees (semi-mature stock with a minimum mature height of 5m)	a) supplements the public realm landscaping within the Flemington Road corridor		
	b) defines and reinforces the development as part of the gateway to Gungahlin and the town centre		
b) a 12m x 12m planting zone is provided at each street corner of the block and includes splayed corners and planted with	c) reduces and softens the visual scale and bulk of the development in terms of its width and length		
large trees (semi-mature stock with a minimum mature height of 5m).	d) provides articulation to the built form in terms of width and height		
	e) provides landscaping to enhance and define the local area		
	f) includes deep root planting areas capable of accommodating large trees		
	g) incorporates large trees as part of the landscaping.		
R31 A minimum of 50% of the deep root planting zone being that area planted with large trees is to be provided as common property to ensure the longevity of the trees.	This is a mandatory requirement. There is no applicable criterion.		
R32 Basements or other sub-surface structures and building encroachments, other than permitted articulation elements, are not located under any part of the deep root planting zone.	This is a mandatory requirement. There is no applicable criterion.		
12. Courtyard Walls			
For development other than in commercial CZ4 local centre zones, courtyard walls are setback a minimum of 1m from the front boundary.	This is a mandatory requirement. There is no applicable criterion.		

Rules		Criteria		
R34		C34		
a) b) c)	ard walls forward of the building line have: a total length not exceeding 50% of the width of the block at the line of the wall a maximum height not exceeding 1.8m brick, block or stonework construction, any of which may be combined with feature panels the area between the wall and the front boundary planted with shrubs courtyard walls do not obstruct site lines for vehicles and pedestrians on public paths on driveways in accordance with A2890.1- The Australian Standard for Off-Street Parking.	Courtyards walls must address all of the following: a) are designed and detailed to provide visual interest to the streetscape and provide for landscaping to reduce their scale and soften the visual impact of the wall surfaces with respect to: i) height ii) relationship to verge footpath iii) colour and design features iv) transparency and articulation v) protection of existing or future desirable landscape features vi) tree and shrub planting forward of the wall b) do not obstruct sight lines for vehicles and pedestrians on public paths or driveways in accordance with AS2890.1-The Australian Standard for Off-Street Parking.		
13. Public Art				
		C35		
There i	is no applicable rule.	Public art must address all of the following: a) is installed adjacent to major transit nodes at the intersections of Flemington Road and Mapleton Avenue and Flemington Road and Nullarbor Avenue within a highly visible and accessible public area b) incorporates hard wearing durable materials appropriate within a high use public area.		

Rules	Criteria		
14. Communal Open Space			
R36	C36		
For apartment developments, 20% of the total site area is to be provided as communal open space that is centrally located with at least 50% located on natural ground level. Note: The calculation of the communal open space does not include front setbacks or narrow strips of residual land not visually or physically incorporated into the area, or areas not readily accessible by residents.	Communal open space must address all of the following: a) contributes to the legibility and character of the development b) provides for a range of uses and activities c) contributes, wherever possible, to		
	stormwater management		
	d) provides landscaping to enhance and define the area, including provision for large scale trees and deep rooted planting.		
R37	C37		
Total open space for attached house developments (including private open space) is not less than 50 m ² per dwelling and is located at ground level.	Both private and communal open space is provided for attached house developments. The communal open space must address all of the following: a) contributes to the legibility and character of the development		
	b) provides for a range of uses and activities		
	c) contributes, wherever possible, to stormwater management		
	d) provides landscaping to enhance the area.		

4.0 STATUTORY PLANNING CONTEXT

4.1 Territory Plan

The Concept Plan has been developed in accordance with the Principles and Policies set out in Variation to the Territory Plan No. 53, and the principles outlined in the relevant Land Use Policies.

The Territory Plan identifies the Corridor as comprising a Residential Land Use with a B8 Area Specific Policy (to provide a vibrant mixed-use precinct along the length of the road corridor) and Commercial 'D' nodes at intersections with Mapleton Avenue, Nullarbor Avenue and Well Station Drive. However there are two areas north of Sapling Street which have a B9 ASP where commercial ground floor uses are denied. The Corridor is also identified under the Territory Plan as having a Define Land Overlay.

The Concept Plan specifies building heights. The heights specified in the B8 zones vary from 2 to 4 storeys. In some instances a mandatory height is indicated to visually reinforce major intersections and define commercial nodes.

It is considered that the extent of Commercial 'D' Land Use Policy shown on the Territory Plan Land Use Map is unlikely to be viable in the short to medium term. The Concept Plan responds by allowing ground floor residential development within commercial areas in the short term but incorporates requirements for buildings in these areas to be easily converted from residential to commercial purposes.

The Concept Plan departs from one of the Acceptable Standards within Territory Plan Schedule 2 of the Commercial B2D that prescribes a maximum building height of 2 storeys. However the proposed building height of between 4 and 6 storeys at the major transit nodes are acceptable for the following reasons:

- 4 6 storeys will provide buildings that are of an appropriate scale for the location, given that adjoining residential development along the road corridor may be up to 3 storeys in height. The use of 4 6 storey buildings at prominent locations will reinforce and mark the major transit nodes.
- The extent of Flemington Road within the study area has very little horizontal and vertical articulation. The use of large marker buildings at regular intervals is essential in providing a break to the continuous built form and will provide visual relief and interest.
- The larger buildings at major transit nodes will provide the highest density residential development immediately adjacent to commercial and transit facilities. This is essential to ensure the viability of transit and commercial facilities in the short term.
- The length and width of the study corridor is substantial (approximately 2 kilometres long and 65 metres wide) and will need significant building form to descale the large areas of road pavement.

4.2 Gungahlin Residential Development Control Plan

The principles and policies outlined in the Gungahlin Residential Development Control Plan (DCP) have informed the development options along the corridor. This includes the

provision of higher density development adjacent to commercial nodes, and the use of medium density development adaptable to a range of uses along the corridor generally.

4.3 Spatial Plan

The Concept Plan has been developed within the framework of the Canberra Spatial Plan and recognises the major land use and transport initiatives contained therein.

4.4 Guidelines for the Planning and Design of Residential Subdivisions

The Indicative Development Plan layout has been based on the policies and standards within the latest version of the Guidelines for the Planning and Design of Residential Estates, September 2005. This includes road layout, section layout, open space design and infrastructure provision.

4.5 Bushfire Prevention Plan

A Bushfire Threat Analysis Study in Franklin was carried out by *Conacher Travers Pty Ltd* prior to the preparation of this Concept Plan. It identified the North Mitchell Grasslands as potential bush fire threat within the study area.

So as to maintain a safe environment within the site, all open spaces and recreational park lands will be required to be appropriately managed in terms of available fuel loads. A road system capable of providing safe and efficient access and egress in times of emergencies will also be established.

4.6 Preliminary Assessment

A Preliminary Assessment (PA) of proposed development in the Gungahlin Town Centre and Central Area was prepared in August 1995. This PA was associated with Territory Plan Variation No. 53 (Gungahlin Town Centre and Central Area).

An evaluation of the PA by the ACT Planning Authority in the same year concluded that no further assessment of any natural, physical, cultural or human environmental issues was required.

The Concept Plan is consistent with the PA recommendations and the PA evaluation. In summary, the Concept Plan is consistent with the Variation to the Territory Plan No. 53 including recommendations relating to Natural, Physical, Cultural and Human environmental issues. More specifically, the Concept Plan:

- Retains significant cultural heritage features, grasslands and existing stands of local Eucalypt species;
- Identifies the need for appropriate acoustic treatment of buildings near areas of high traffic noise and in mixed-use developments to ensure appropriate levels of residential amenity;
- Incorporates broad scale Water Sensitive Urban Design principles and mandates the use of rain water tanks on individual blocks to address issues of increased stormwater runoff;
- Provides a highly efficient public transit system to assist in dealing with increased traffic volumes, and a legible and permeable street network generally to ensure convenient access to nearby commercial and community facilities.

5.0 SITE ANALYSIS, OPPORTUNITIES & CONSTRAINTS

A detailed site analysis was conducted to identify opportunities and constraints impacting on proposed development of the corridor. This process identified a series of major site characteristics that are described below.

5.1 Locality (refer to Drawing No. 05/21)

The study area covers the Flemington Road corridor from immediately south of Well Station Drive up to the alignment of Sapling Street (Old Well Station Track). It includes a 65.1 metre wide road corridor (reducing to 62.3 metres at transit nodes), and development sections flanking the road on the eastern and western sides. The length of the study corridor is approximately 2 kilometres.

5.2 Land Use and Land Tenure (refer to Drawing No. 05/22)

The study area includes the existing Flemington Road carriageway and verge which is used as a primary link between the Gungahlin Town Centre and Civic.

5.3 Microclimate

The site is subject to hot and cold north-westerly winds in summer months and winter respectively. It is also partially impacted by cold air drainage that follows the Gungaderra Creek alignment. The study site is aligned approximately 11 degrees east of a north-south axis.

5.4 Natural and Cultural Heritage Areas (refer to Drawing No. 05/23)

A number of significant natural and cultural heritage features are visible from the subject site. These include:

- Red Hill Heritage site This site has been subject to an assessment by Navin Officer Heritage Consultants Pty Ltd in August 2003. The ACT Heritage Unit has indicated that the site will be registered in accordance with the recommendations of this Report. Significant views to Red Hill are evident from the entire study site.
- North Mitchell Grasslands The North Mitchell Grasslands forms a large natural feature immediately adjacent to the south–western portion of the study area. The grasslands are proposed for retention within the Franklin Estate to the west of the site.
- Gungaderra Creek The Gungaderra Creek crosses the site mid-way along its length. It provides the potential to be landscaped as an endemic landscape feature capable of accommodating a pedestrian and cyclist corridor linking adjacent suburbs.
- Old Well Station Track Old Well Station Track provides an important cultural trace of past rural and commercial practices. It provides an historical link to other heritage features within Franklin and adjacent estates. Its upgrading to a multi-purpose trail (walking and cycling) is consistent with the treatment of the track elsewhere along its length.
- Well Station Homestead views to the Well Station Homestead and surrounding landscape are evident from the southern portion of the subject site. There is an opportunity to retain these views through appropriate breaks in built form and controls on building height.

5.5 Road Hierarchy (refer to Drawing No. 05/26)

One existing road and two proposed roads intersect Flemington Road within the study area. Each of these roads provide distribution to surrounding estates and connect to other arterials. These roads are as follows:

- Nullarbor Avenue is an existing collector road. It intersects with Flemington Road midway along its length. The road connects residential traffic from Harrison to Flemington Road and Horse Park Drive;
- Mapleton Avenue is a collector road proposed for construction at the northern end of the study area. The road will connect residential traffic from Harrison to Flemington Road and Horse Park Drive:
- Well Station Drive is proposed for construction at the southern end of the study area and will become a sub-arterial road linking Gungahlin Drive and Horse Park Drive.

5.6 Pedestrian and Cycle Network (refer to Drawing No. 05/27)

Flemington Road is proposed as a major cycle link between Civic and the Gungahlin Town Centre. Consequently sufficient on road cycling facilities should be incorporated into the road design to provide safe and convenient travel for cyclists along the corridor.

The Gungaderra Creek open space system has a major role in connecting trunk cycle networks in the Gungahlin area. It is proposed that the creek open space system will include a trunk cycle path and pedestrian link between Horse Park Drive and Gungahlin Drive linking Gungahlin residents to Civic and northern Canberra.

Old Well Station Track also traverses the study area at its northern end. It is understood that the track will be upgraded to a multi-purpose trail linking Gungahlin Place in the Town Centre to surrounding heritage sites.

5.7 Existing Engineering Services (refer to Drawing Nos. 05/29, 05/30)

The Flemington Road corridor already houses a number of engineering services. These include:

- A 4-way trench running from the northern end of the study area to Nullarbor Avenue in the eastern verge. The trench houses telecommunications, gas and electricity supply services;
- A series of street lights and associated cabling within both the eastern and western verges of Flemington Road at the intersection with Nullarbor Avenue;
- Water and stormwater mains at the Nullarbor Avenue intersection:
- A trunk sewer exists within the Gungaderra Creek open space system generally in alignment with the existing creek line;
- A trunk sewer and stormwater main serving Harrison mid way between Nullarbor Avenue and Well Station Drive;
- A water main immediately south of Well Station Drive.

These services should be retained where appropriate.

5.8 Tree Survey and Assessment (refer to Drawing No. 05/32)

A detailed tree survey and assessment for the site has been conducted as part of the planning work for Franklin Estate (on the western side) and the Gungaderra Creek open space system (on the eastern side). These studies identified a small number of trees within the site generally located in two discrete precincts. The first is a stand of mature Eucalypts immediately north of the North Mitchell Grasslands. The second is a stand of existing Pinus radiata and immature Eucalypts at the northern end of the site on the western side of the existing carriageway. It is proposed to keep the vast majority of trees adjacent to the North Mitchell Grasslands as part of the Franklin Concept Plan, with the need to remove a small number to allow for the Flemington Road duplication.

It is considered that the stand of Pinus radiata and immature Eucalypts at the northern end of the site hold little or no significant environmental or visual quality and are proposed for removal.

5.9 Landform, Slopes and Drainage

There are a number of minor topographical features evident along the study area. These include:

- A knoll in the south-eastern corner of the site on the north-eastern corner of the Flemington Road and Well Station Drive intersection;
- A depression following the alignment of Gungaderra Creek.

The rest of the study area is generally flat.

5.10 Visual Features and Major Views

The surrounding hills form the major natural features visible from the study area. The Red Hill site is particularly prominent because of its height, visible red earthy soils and stands of mature Eucalypts. Significant views to the National Capital Area and Civic, and further to the hills south of Canberra are evident while travelling south-bound along Flemington Road.

The existing stand of Eucalypts to the north of the North Mitchell Grasslands provide a significant visual feature in a largely treeless landscape (due to past agricultural practices).

5.11 Habitat and Ecology

It is recognised that the site includes a riparian habitat along Gungaderra Creek. The creek corridor should be retained at an appropriate width to ensure that it can be landscaped and utilised as a link between surrounding habitat areas.

5.12 Bushfire Protection & Interfacing

The North Mitchell Grasslands abut the Flemington Road corridor north-east of Well Station Drive.

Conacher Travers Pty Ltd conducted a Bush Fire Threat Study for the Franklin Estate area and the report nominated the North Mitchell Grasslands and adjacent stand of Eucalypts as a potential bush fire threat within the study area. It identified the need for a 20 metre

wide fire protection zone and a 10 metre wide mown edge between the source and any urban development.

5.13 Summary of Opportunities and Constraints and Structure Generators

5.13.1 Opportunities & Constraints

A consolidated review of the major opportunities and constraints identified during the site analysis stage is summarised below:

- Recognise the opportunity for Flemington Road to become an attractive and vibrant entry to the Gungahlin Town Centre;
- Recognise the opportunity for higher density and commercial mixed-use development along the road corridor, particularly at major transit nodes;
- Recognise the important role of transit nodes along Flemington Road and the opportunity to develop a highly efficient public transport system attractive to potential users;
- Recognise the opportunity to continue established road, cycleway and pedestrian networks within adjacent suburbs across the site;
- Exploit the major views from the study area to surrounding visual features including the National Capital area, Canberra Hills and Civic;
- Retain the existing natural and cultural heritage areas within the site and recognise
 the need to provide these sites with an appropriate buffer from adjacent
 development;
- Retain the alignment of the existing Gungaderra Creek open space system, and exploit the opportunity to utilise it as a linear open space network linking residents of adjacent estates;
- Retain the existing trunk sewer line, 4-way trench (with TransACT, Telstra, gas and
 electricity lines) and other services within the subject area and provide appropriate
 separation between these services and urban development;
- Recognise the 1 in 100 year flood level impacting on development within the study area corridor. (this is contained within the proposed Gungaderra Creek floodway upgrade).

5.13.2 Structure Generators

The site analysis and opportunities and constraints processes have lead to the formulation of the structure generators. These identify those primary elements, which act as design generators for the estate. They include:

- Site boundaries;
- Connection points to the existing road network intersecting with Flemington Road;
- The boundaries and associated cartilage to the natural and cultural features within the study area;
- Identified major natural drainage lines, areas of steep slopes and flood prone land;
- Urban edge and interfacing requirements with adjacent estates and land uses;
- Pedestrian and cycleway links into existing systems surrounding the site.

6.0 RECOMMENDATIONS FOR FUTURE PLANNING & DESIGN

The Concept Plan identifies a number of planning and development issues which will need to be carefully considered in future development planning processes. The detailed resolution of these issues is important to ensure that the desired outcomes identified in the Concept Plan are realised. The issues include the following:

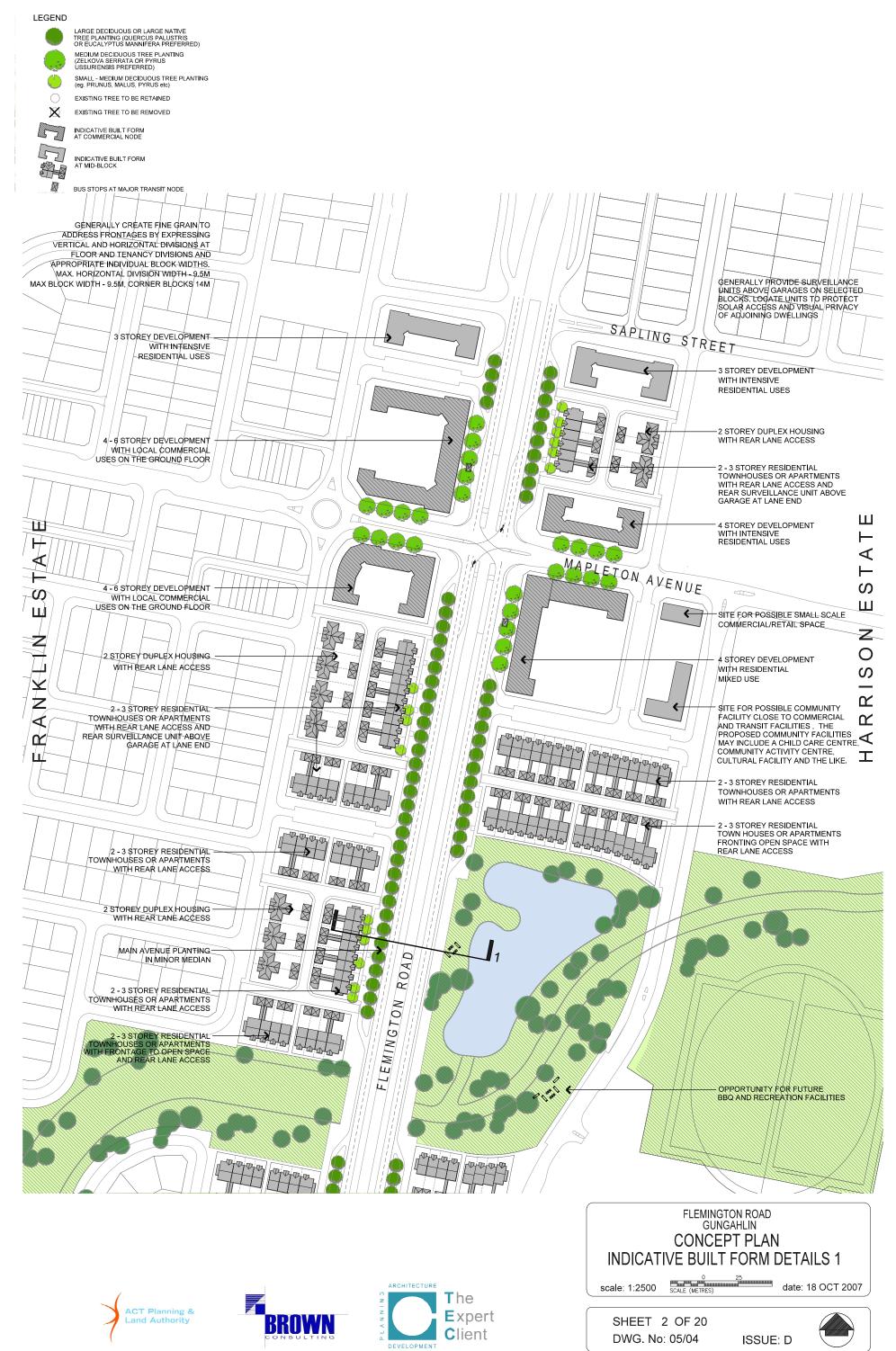
- A detailed tree survey and assessment classification is required for all existing trees in the road corridor. A tree management plan, including tree damaging activity report, in accordance with the Tree Protection Act 2005 will be required.
- The release of land for commercial development will need to be staged to ensure that the viability of the major transit nodes is not compromised. There must be a thorough assessment of existing and future retail demands in the Gungahlin Town Centre to ensure that the Town Centre retail core is supported as the primary commercial hub for Gungahlin. A review of the land uses at the transit nodes will be required in the future when a clearer understanding of local and town centre commercial requirements is known.
- The design of major road intersections should be carefully reviewed to ensure compliance with stated urban design objectives. The current designs appear to give priority to vehicular movement at the expense of the pedestrian environment on adjacent verges. Dedicated left turning lanes, as designed, erode and degrade adjoining pedestrian areas.
- The Concept Plan shows 6.3 metre wide service roads with parking and carriageway provision. Streetlighing is shown in blisters defining car parking spaces. Detailed resolution of the cross section will occur at Estate Development Planning stage taking into account agreed objectives and planning principles.
- The kerb radii and turning movements provided in the rear lanes meet required ACT standards, however further review of the lane design will occur at detailed design stages.
- The interface between the existing kerbs built in Harrison and Franklin and adjoining 'piecrust' development, and the interface between proposed roads in Franklin 3 and the adjoining 'piecrust' require detailed resolution as part of future Estate Development Planning. Demolition and rebuilding of certain road stubs will be required.
- The Concept Plan shows the transition from dual carriageways in each direction in the study area (with central and minor medians), to the existing single carriageways at the northern and southern ends of the site. However the site for the service station and associated Park n Ride facility is located to respond to the probable future Well Station Drive and Flemington Road corridors east and south of the intersection and is subject to detail design.
- Requirements and detail design of engineering infrastructure will need to be provided in accordance with relevant ACT Standards. This includes WSUD measures which are currently being developed and reviewed by ACT Government agencies.

7.0 BIBLIOGRAPHY

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CONCEPT PLAN - DRAWINGS













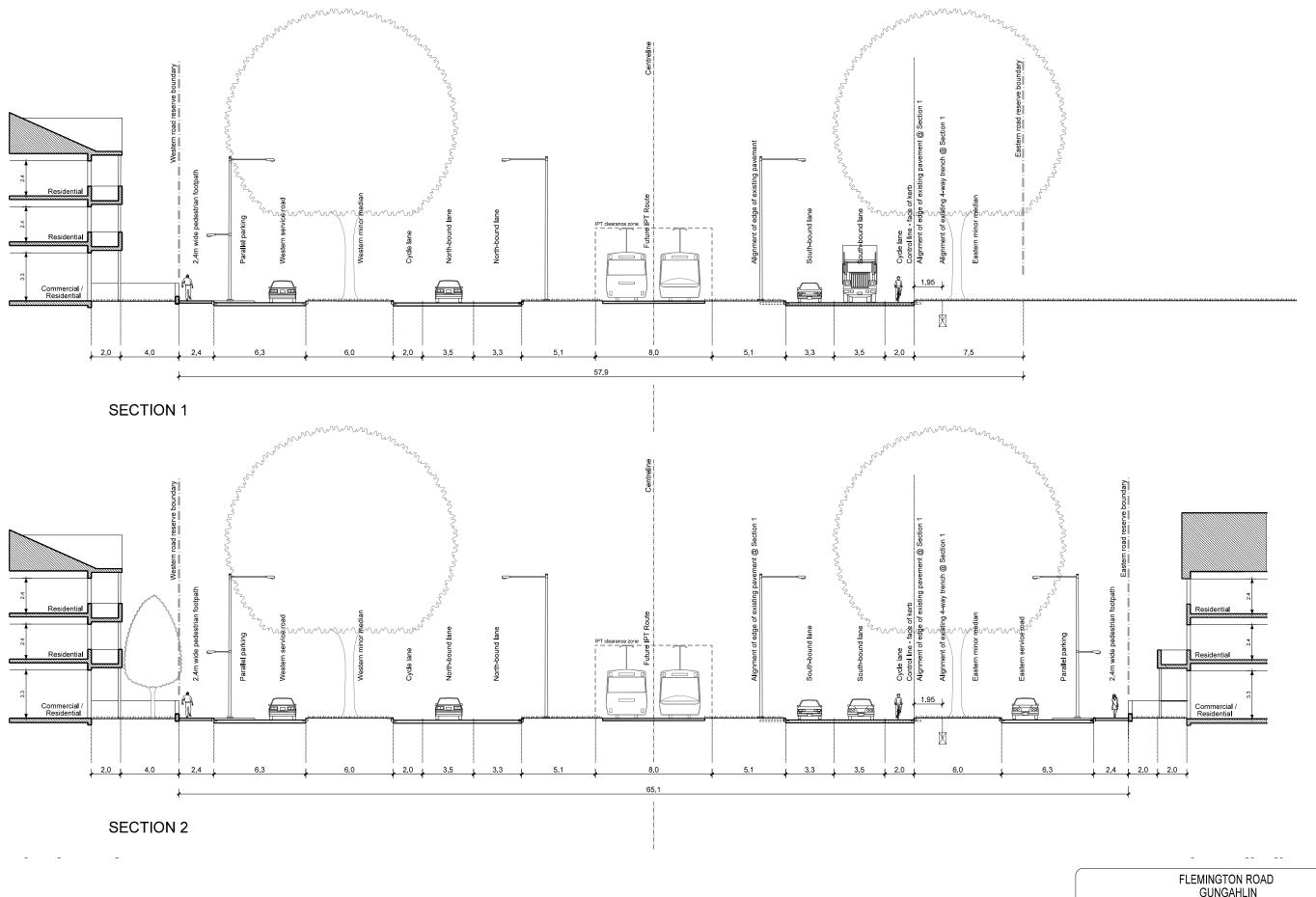




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SHEET 4 OF 20 DWG. No: 05/06







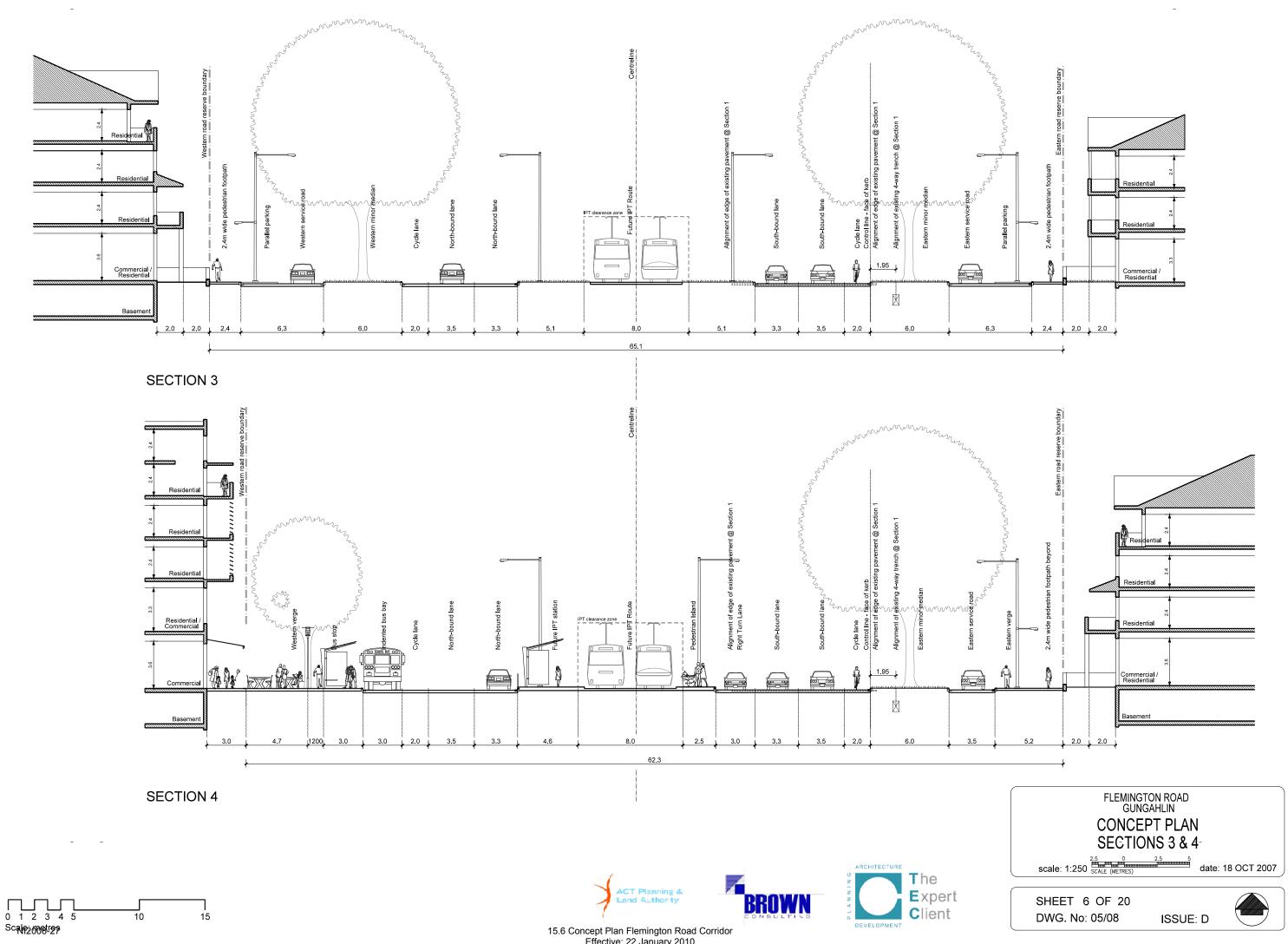


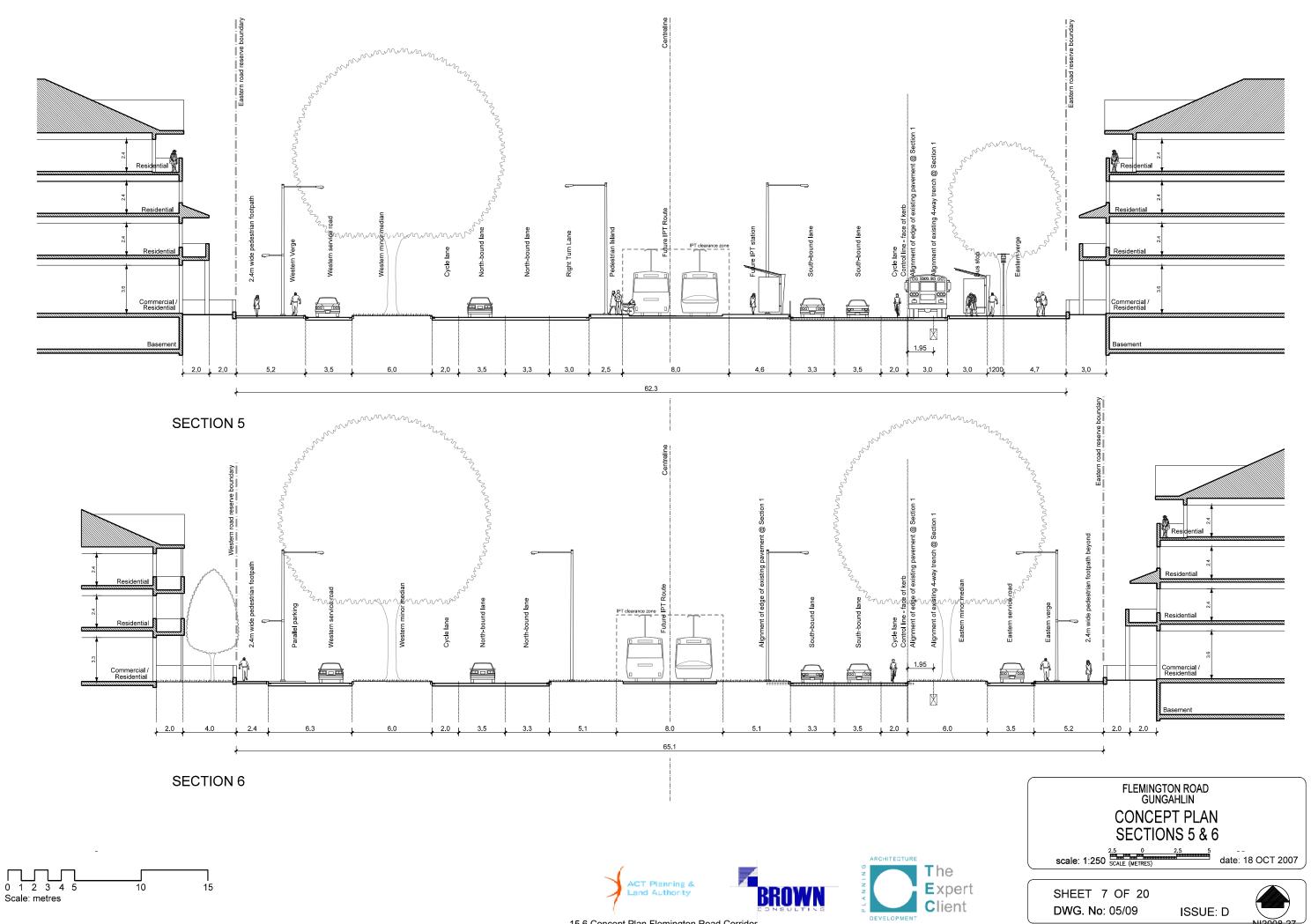


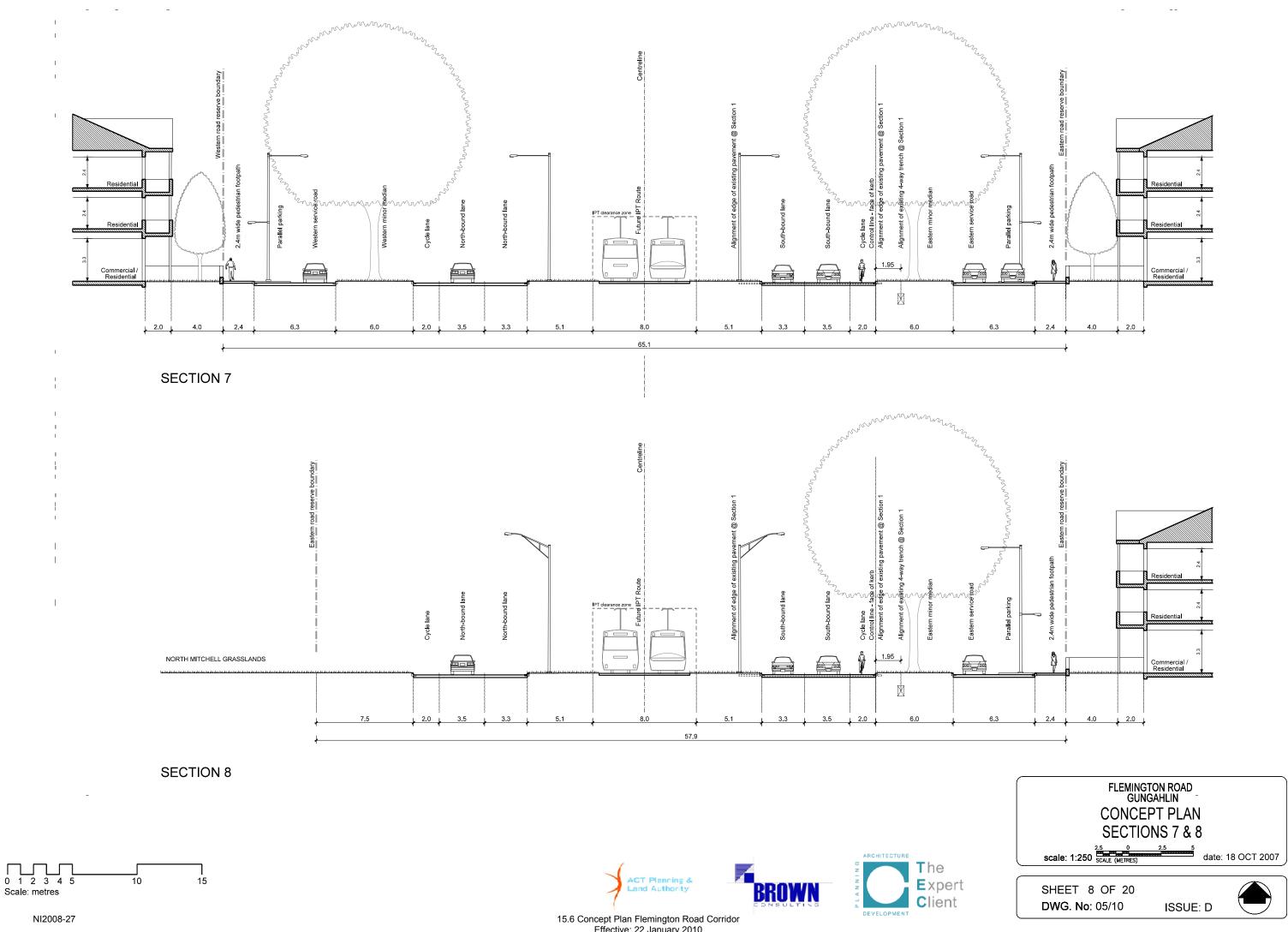
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GUNGAHLIN
CONCEPT PLAN
SECTIONS 1 & 2
scale: 1:250 SCALE (METRES) date: 18 OCT 2007

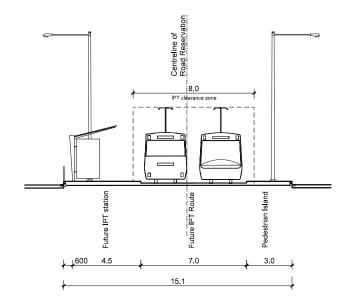
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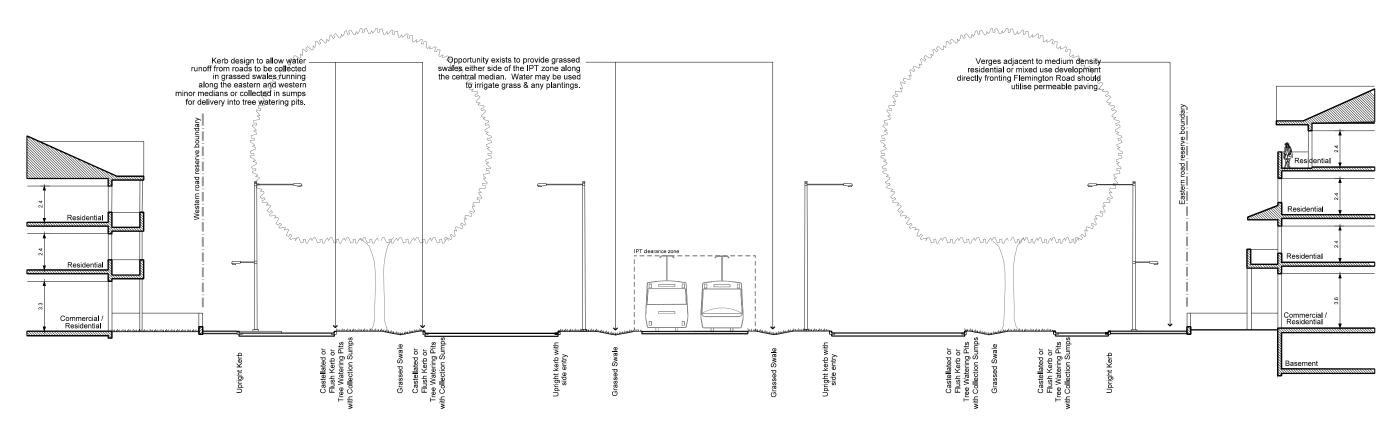




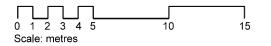




SECTION 9 - FUTURE IPT STATION



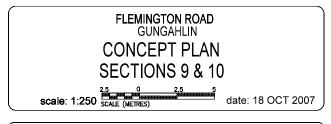
SECTION 10 - INDICATIVE WATER SENSITIVE URBAN DESIGN MEASURES





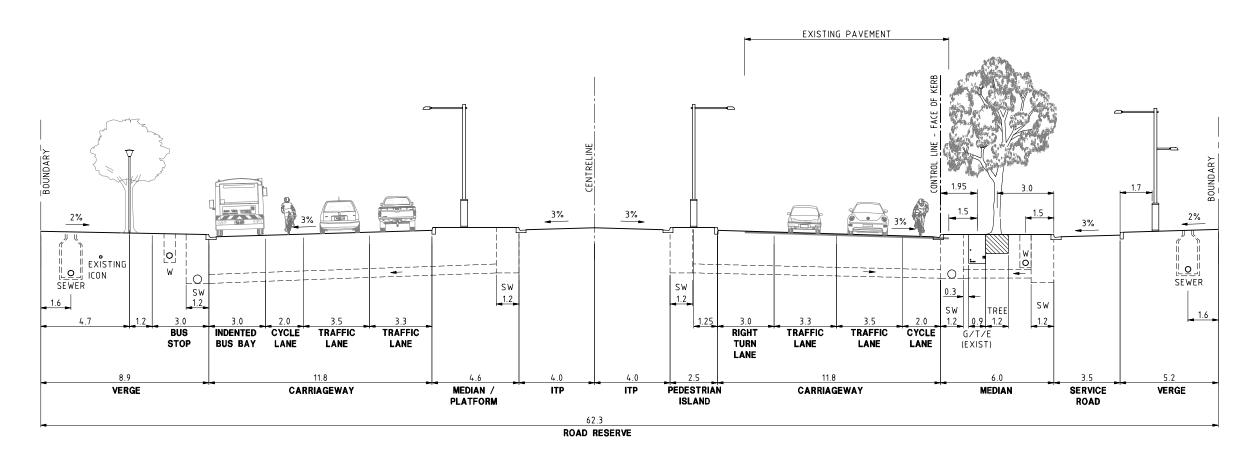






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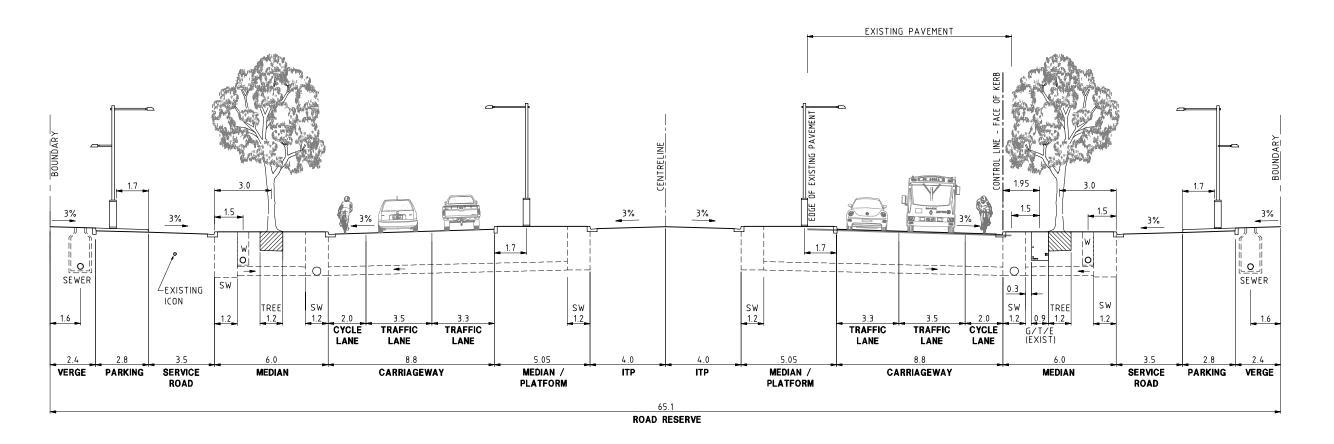
FLEMINGTON ROAD - COMMERCIAL NODE 62.3m ROAD RESERVE - 80km/hr SCALE 1:100

ASSUMPTIONS

- 1. DEDICATED PARKING BAYS IN SERVICE ROAD.
- 2. SHARED TRENCH SERVICING OF BLOCKS FROM REAR LANE.
- 3. EXISTING TRUNK SHARED TRENCH IS ON A CONSTANT ALIGNMENT.

FILE:C07033-SK26.dwg 12th-Oct-2007 5:00PM USR:timothy

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B B C C C C C C C C C C C C C C C C C C	PROJECT No.	PROJECT FLEMINGTON ROAD	7 PPNWN		
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FLEMINGTON ROAD - MID BLOCK 65.1m ROAD RESERVE - 80km/hr

SCALE 1:100

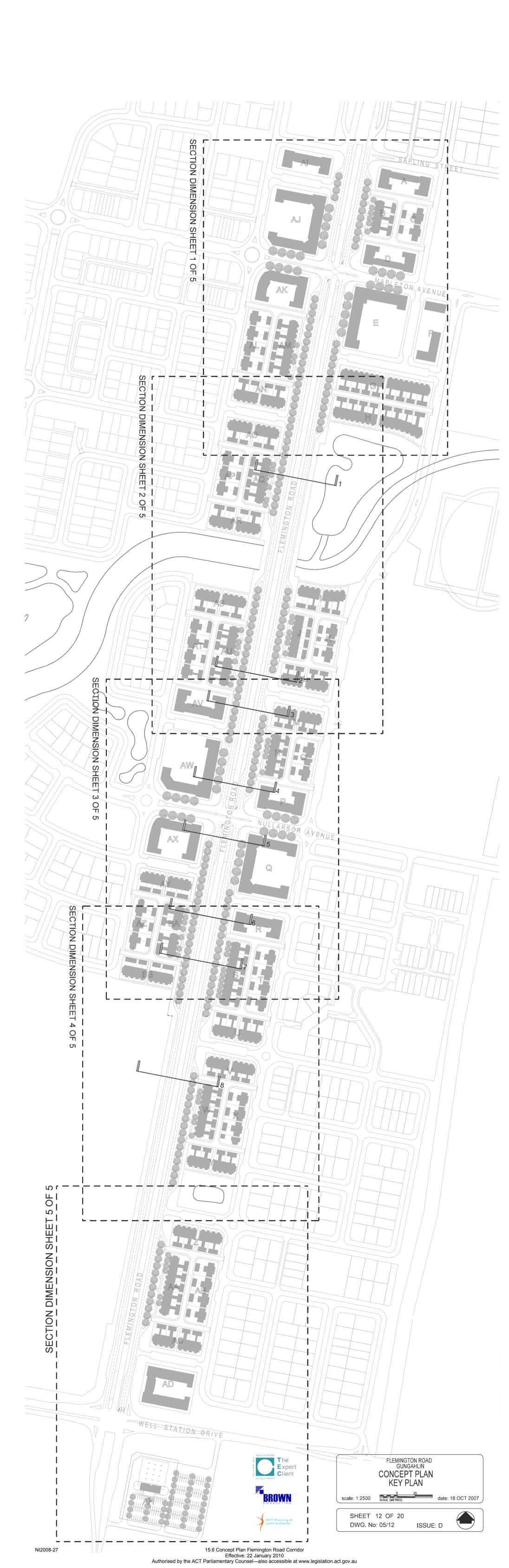
ASSUMPTIONS

- 1. DEDICATED PARKING BAYS IN SERVICE ROAD.
- 2. SHARED TRENCH SERVICING OF BLOCKS FROM REAR LANE.
- 3. EXISTING TRUNK SHARED TRENCH IS ON A CONSTANT ALIGNMENT.

Quality Endorsed Company ISO 9001 Lic 4084

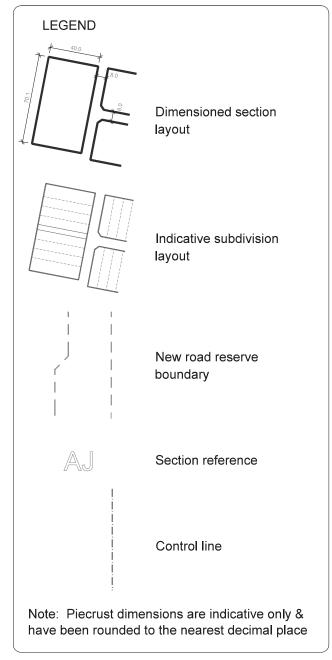
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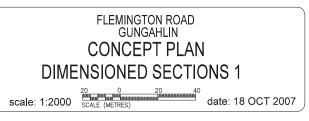
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D	PROJECT No. PROJECT FLEMINGTON ROAD 15.6 Concept Plan: Flemington Road Corri GONCEPT PLAN	DRAWING MUMBER C07033-SK27 NI20	008-27 A				
Effective: 22 January 2010							









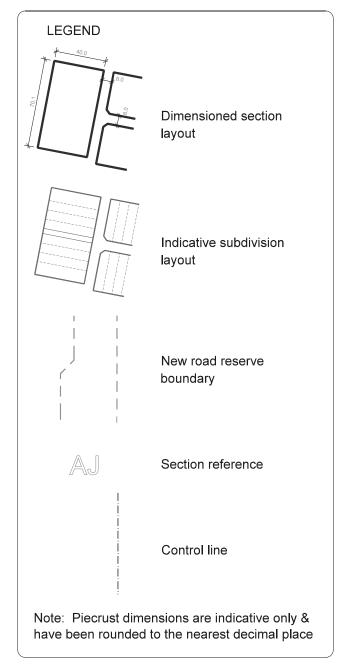


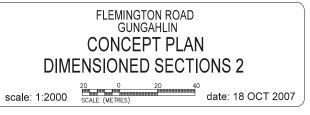
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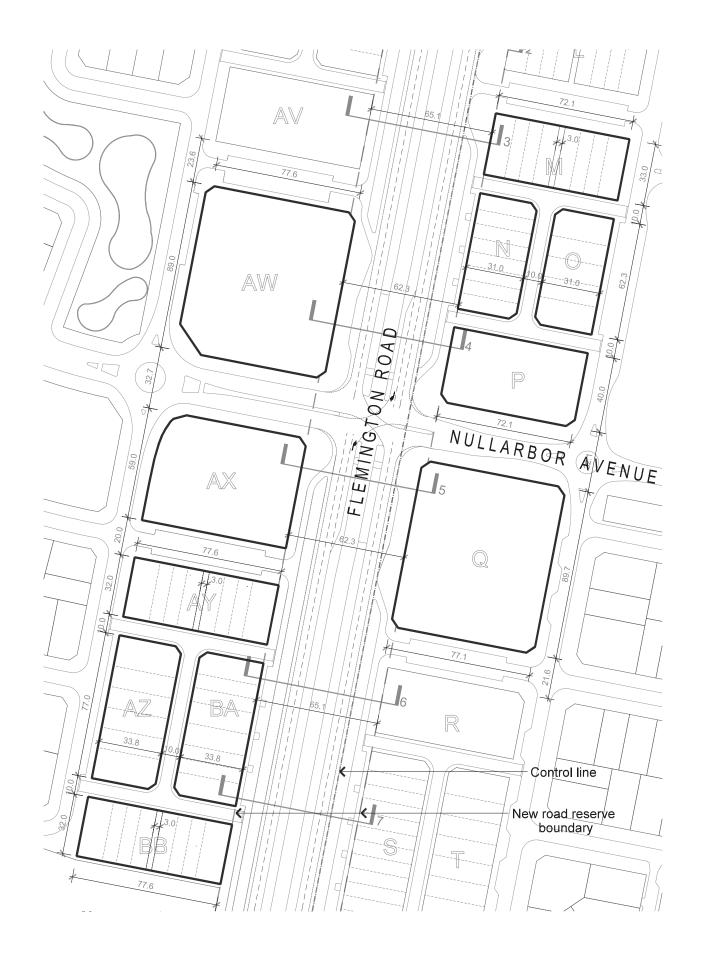




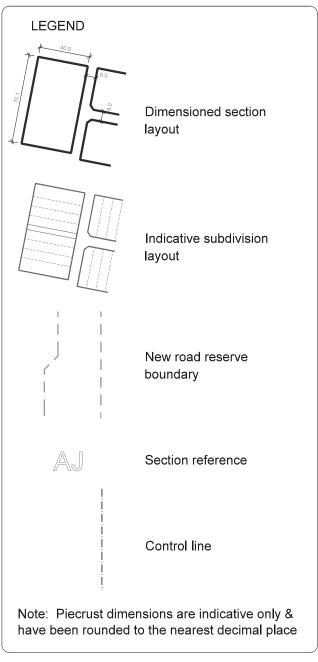
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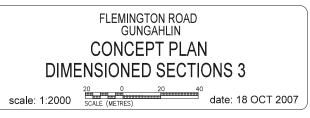
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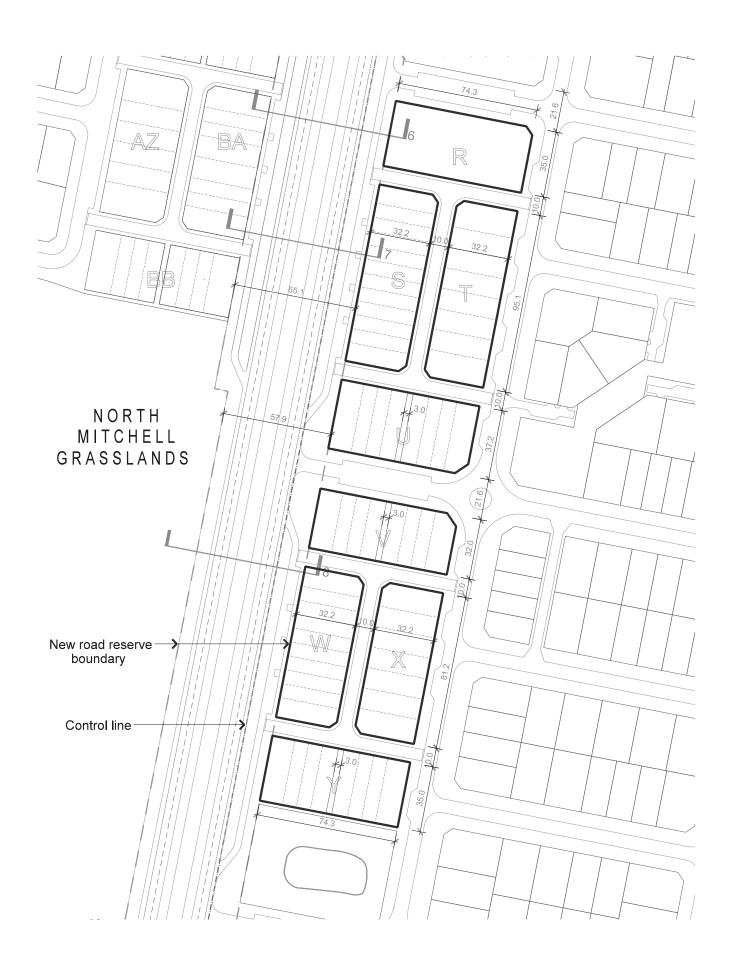




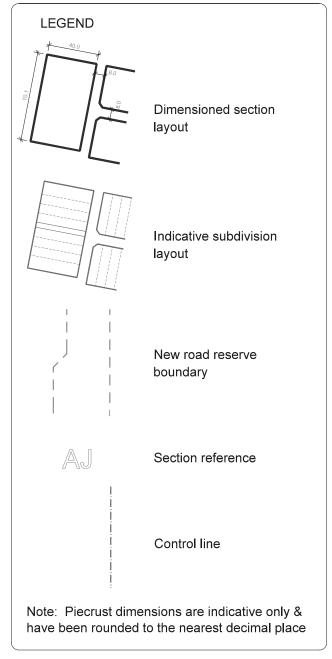


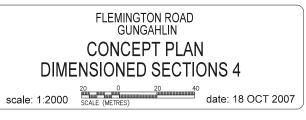
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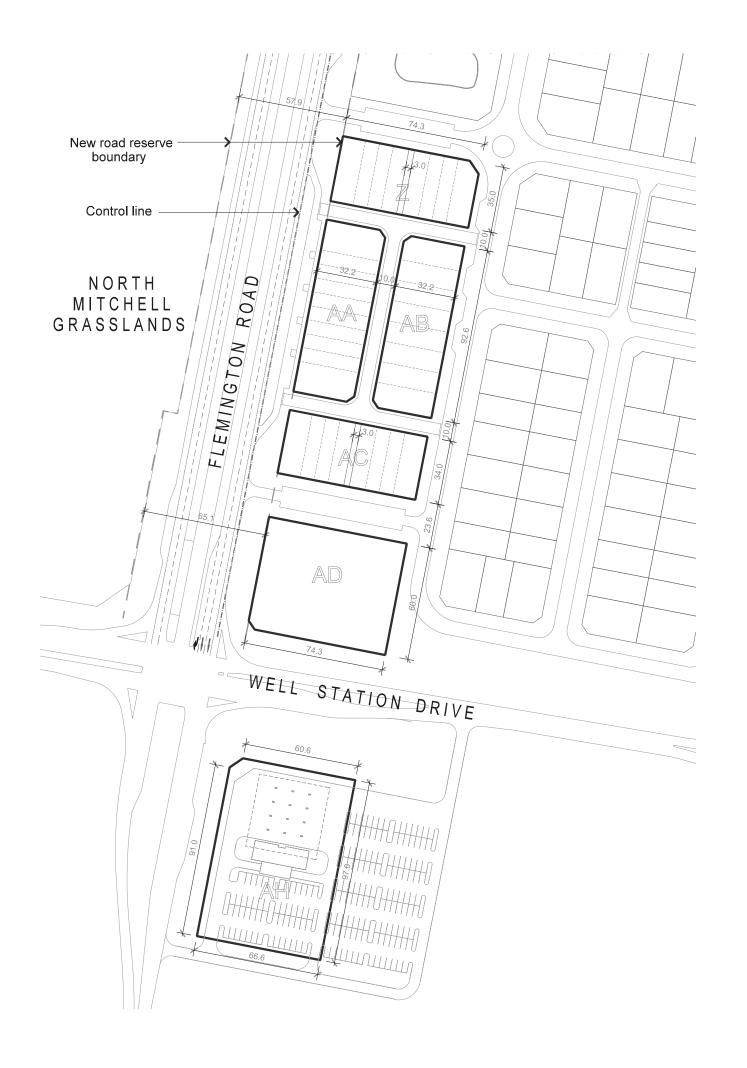


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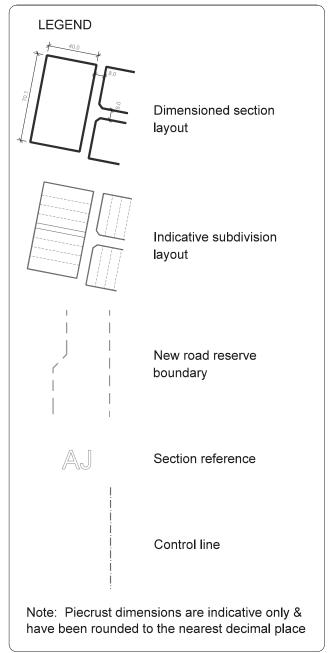
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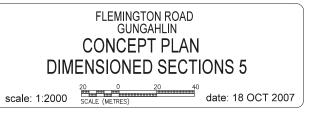
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Large deciduous or native tree in minor median (Eucalyptus maniferra or Quercus Palustris preferred)











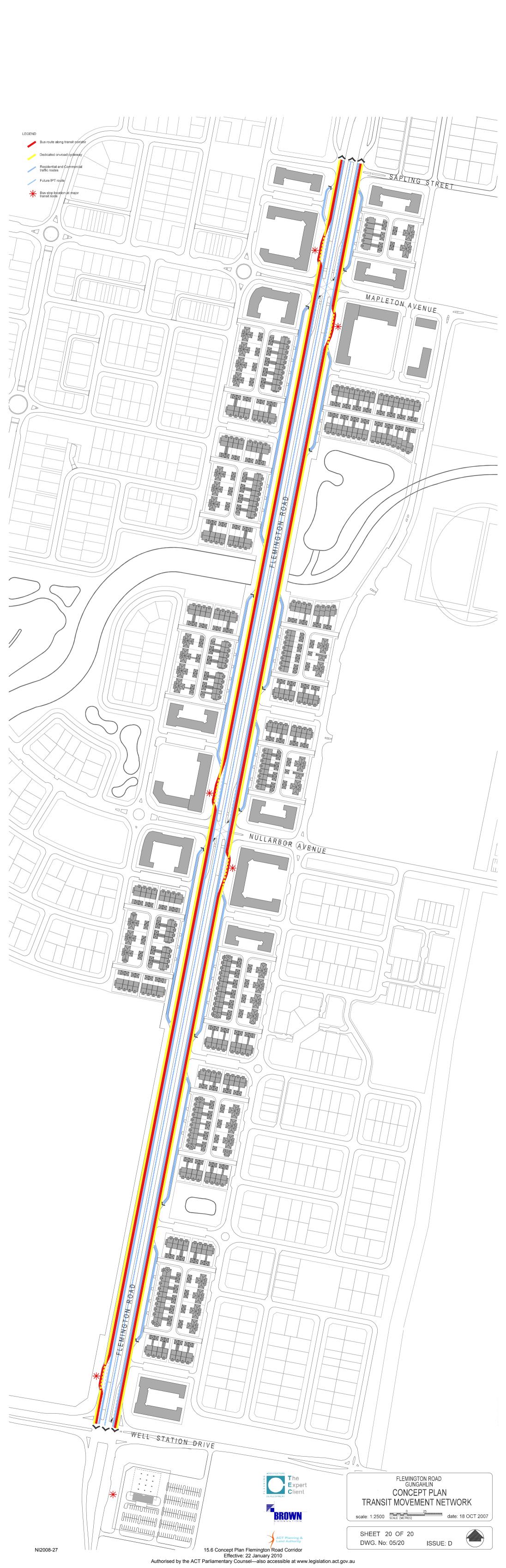
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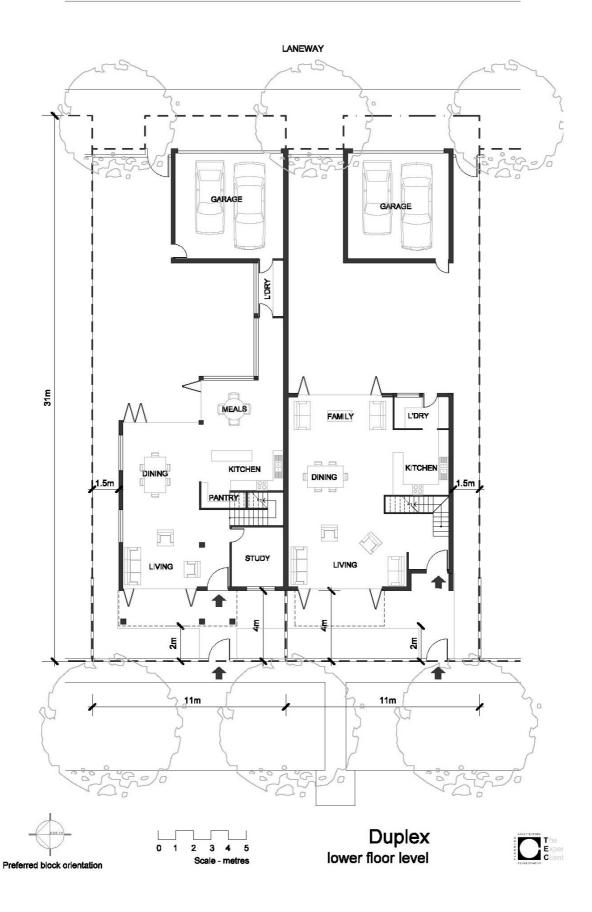
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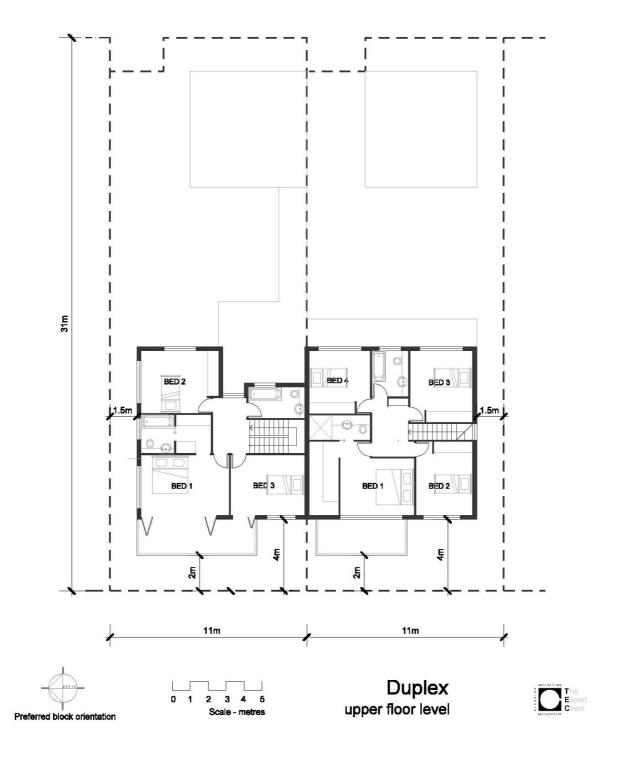




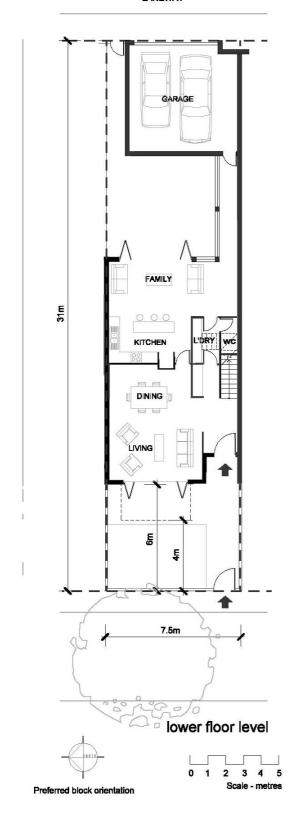


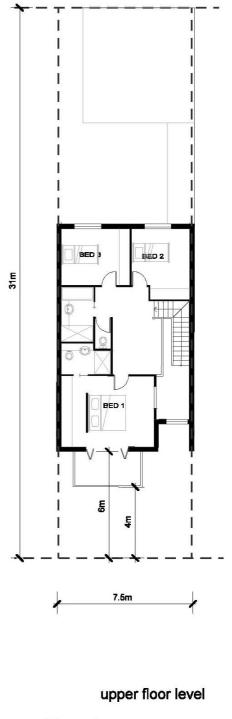
INDICATIVE FLOOR PLANS - DRAWINGS





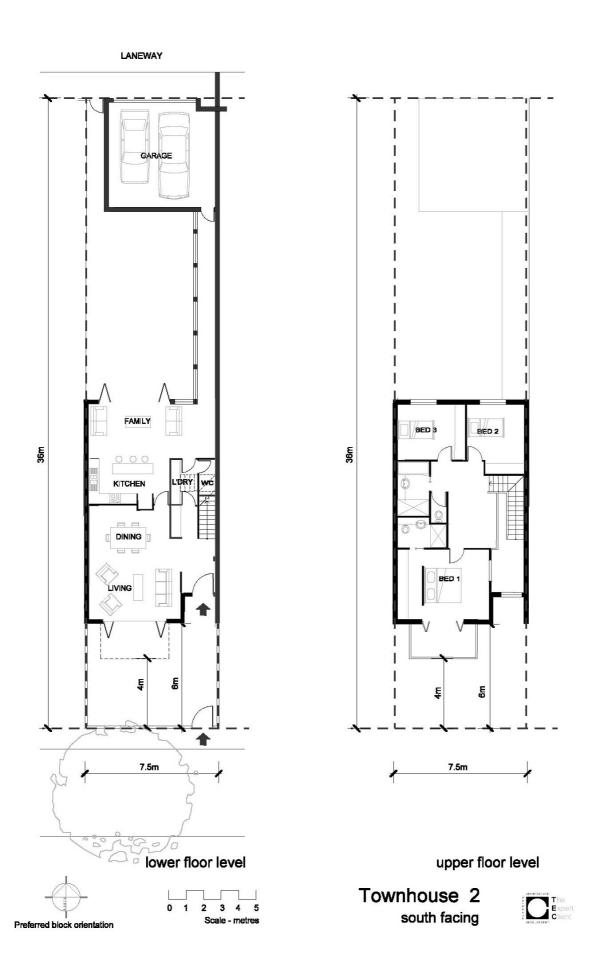
LANEWAY



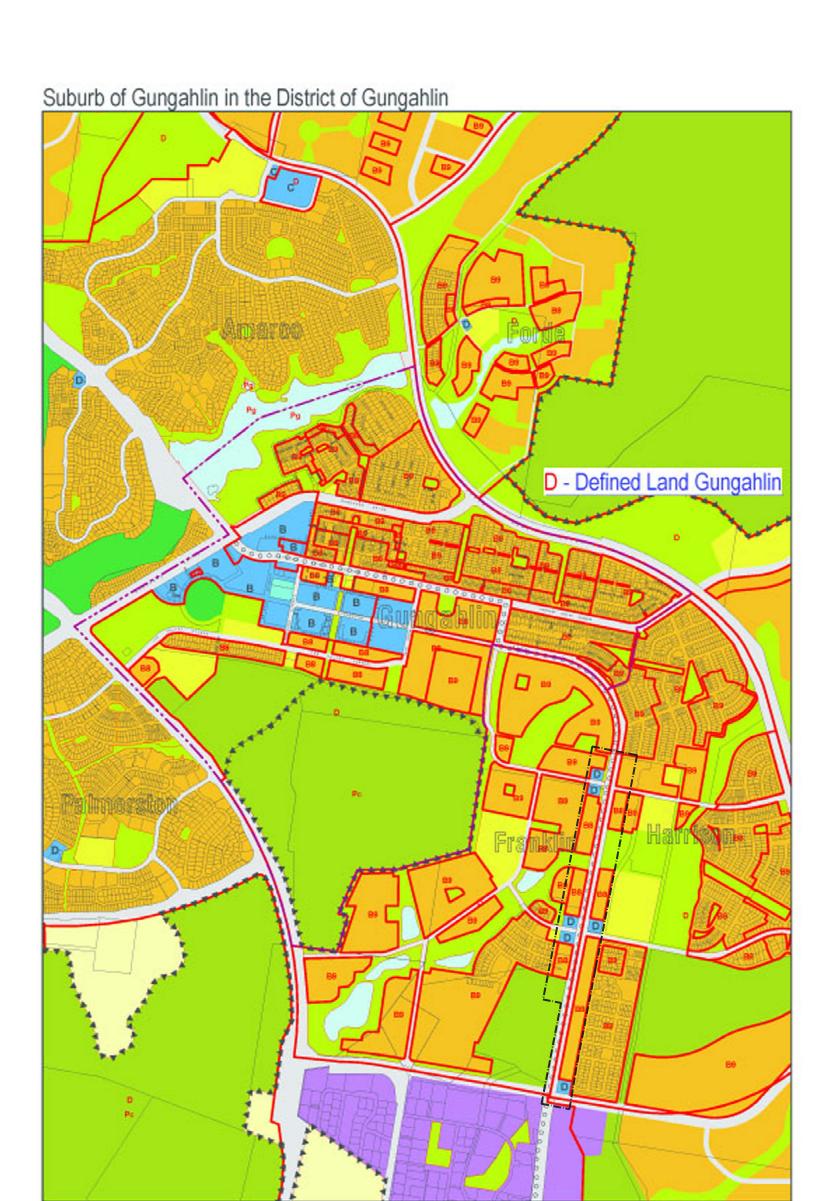


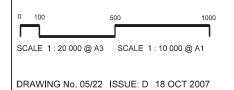
Townhouse east-west facing





SITE ANALYSIS - DRAWINGS







FLEMINGTON ROAD CONCEPT PLAN **EXISTING**

LAND USE















The Red Hill Heritage Site holds both natural and cultural heritage significance and provides interpretive and educational opportunities. There are significant views to Red Hill from the study area.



The Old Well Station Track alignment provides an important cultural link to the Well Station Homestead, Mullangarri Grasslands and Red Hill. It is proposed to retain the tracks alignment and upgrade it to a multipurpose trail.



The North Mitchell Grasslands has environmental significance as an example of a rare endemic grassland landscape. The grasslands will form part of the Canberra Nature Park within the Franklin Residential Estate and abuts the south-western portion of the Flemington Road study area.



The Well Station Homestead provides a highly visible example of early rural practices near the subject site. This includes a distinctive landscape and architectural character that has been recognised by the ACT Heritage Unit.



Mulangarri Grasslands holds particular environmental significance because of its endangered native grasses. The grasslands will provide major recreational opportunities for future residents of the Gungahlin Town Centre and Franklin Estate.



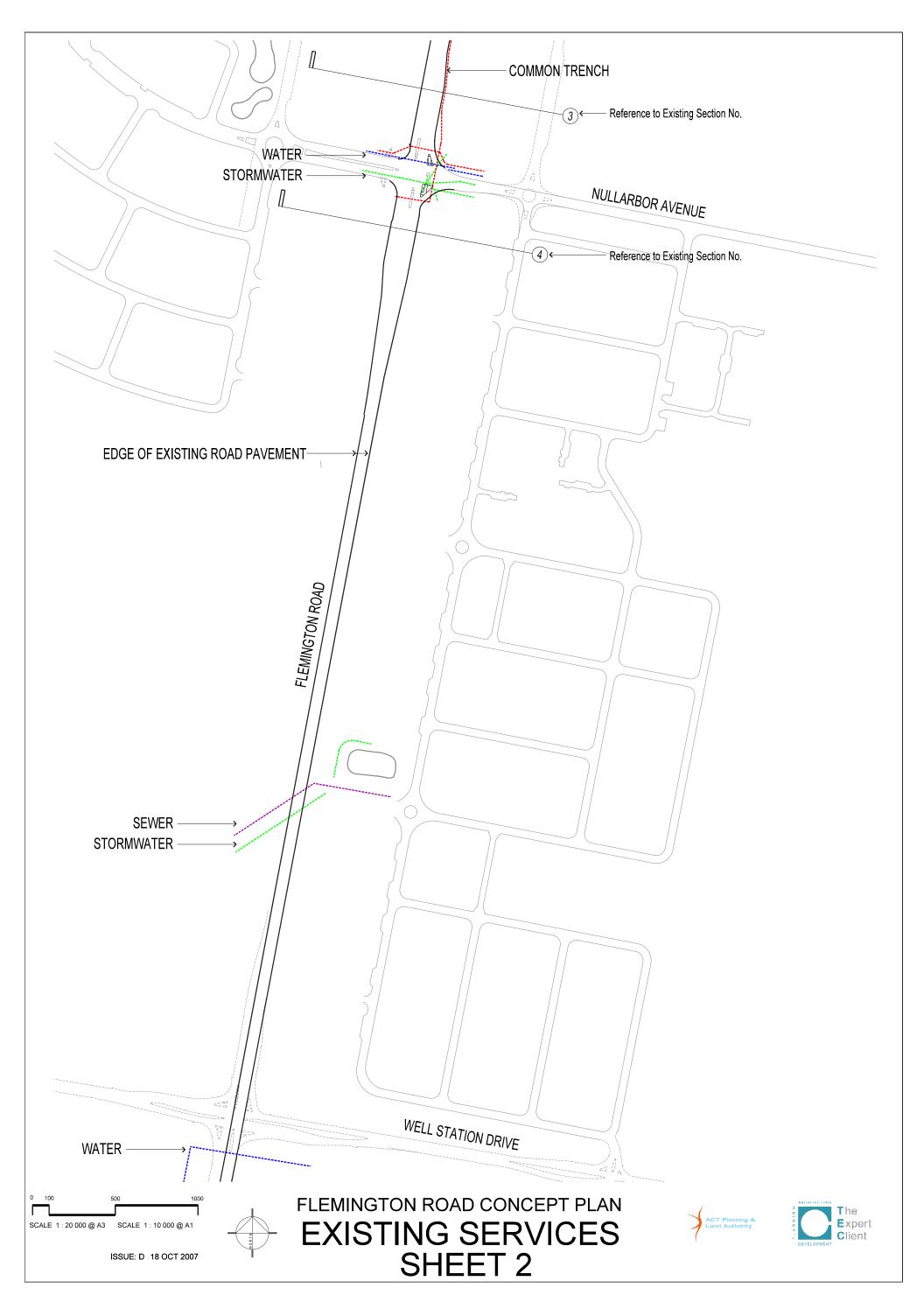
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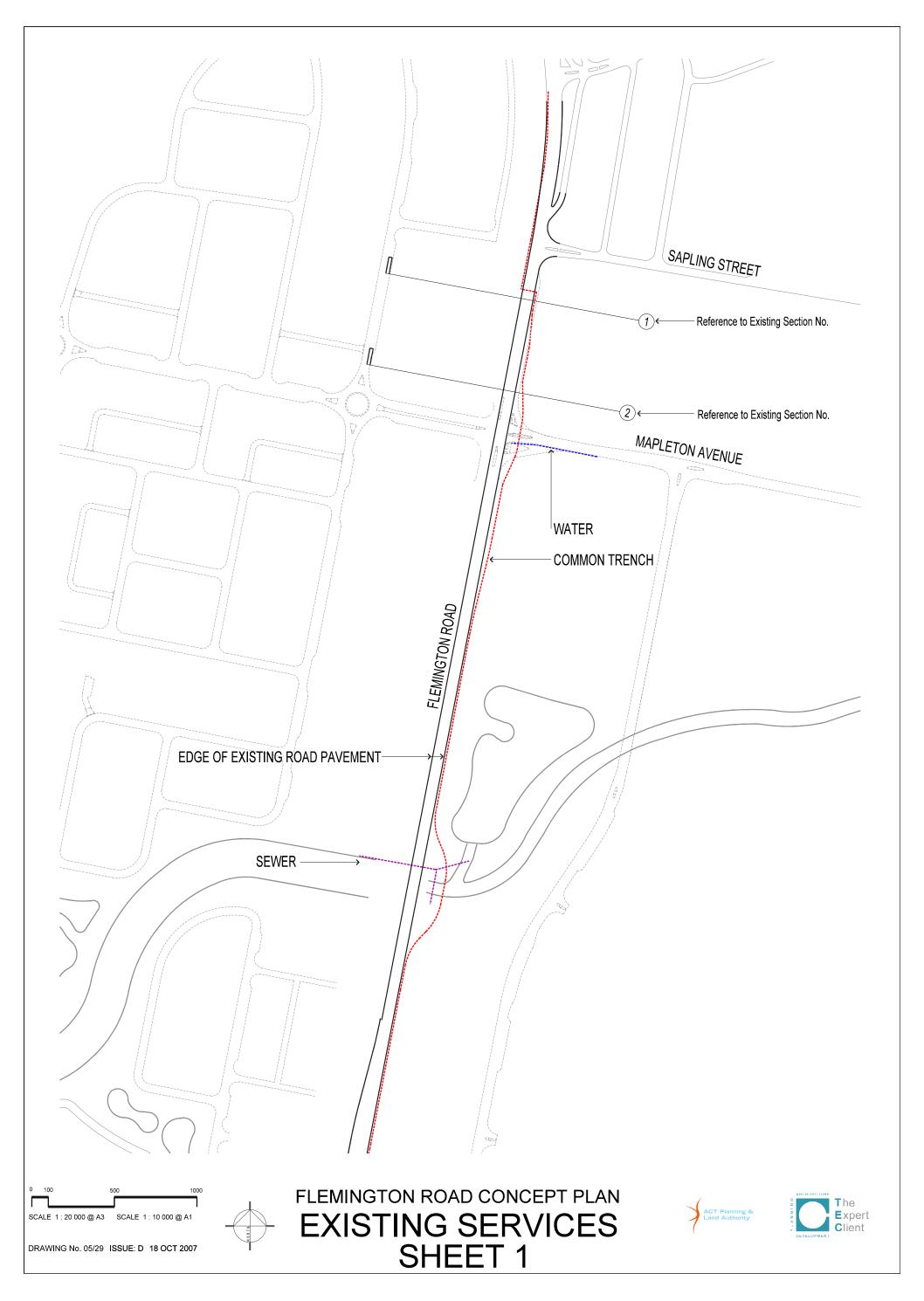


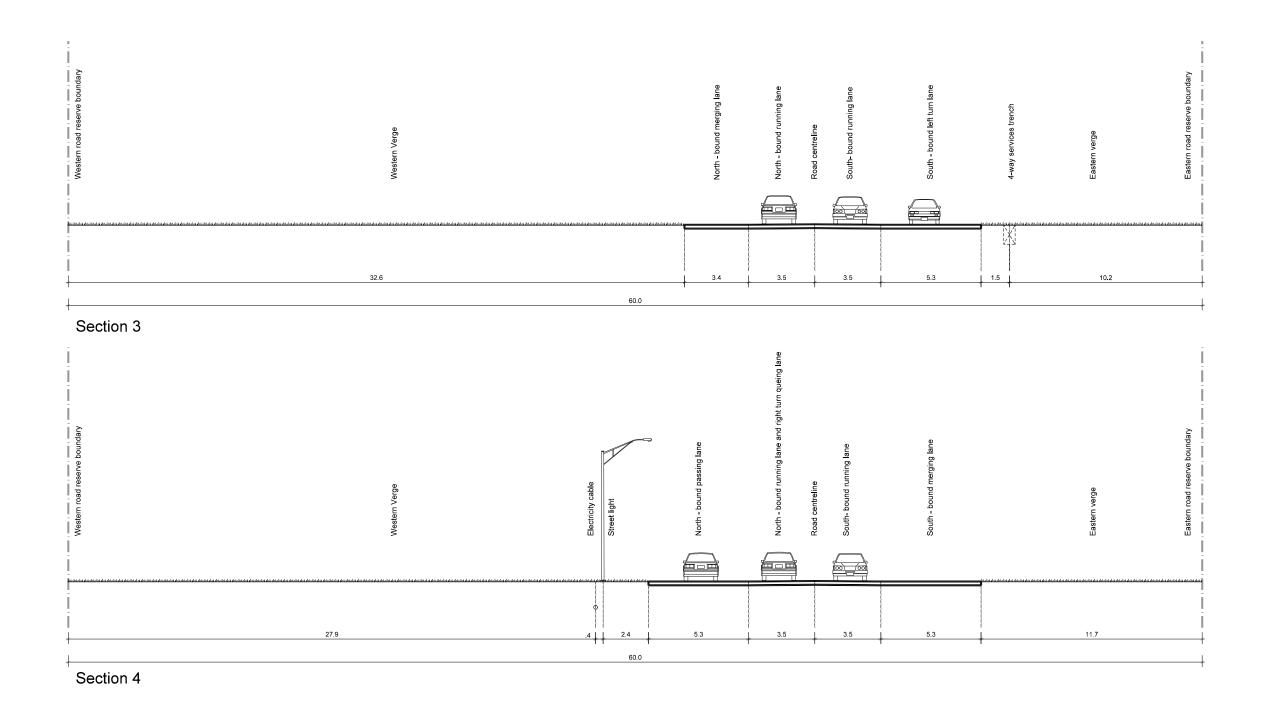
NATURAL & CULTURAL HERITAGE AREAS





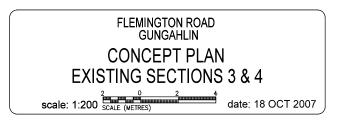


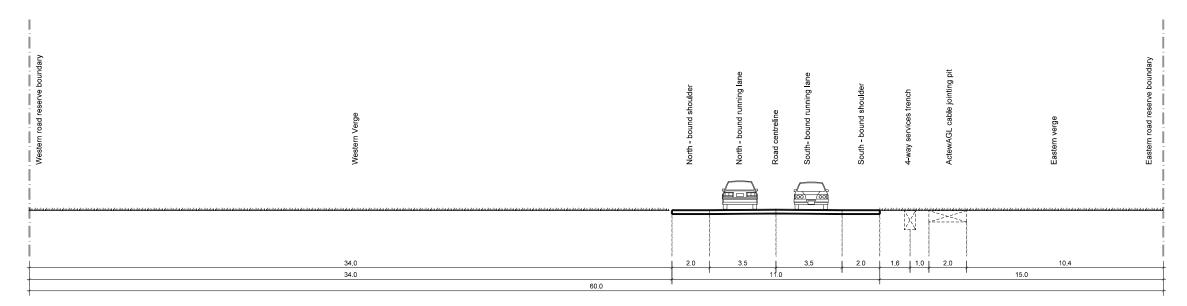




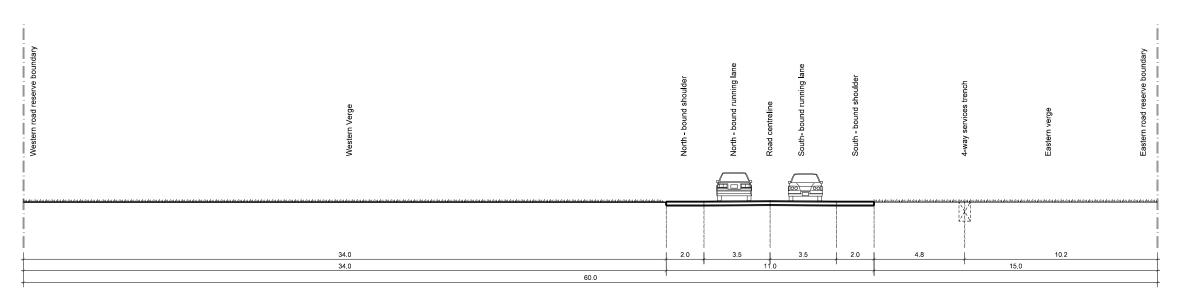








Section 1



Section 2





