Flat Bush Spatial Structure and Built Form Review 2008

Prepared For:

Manukau City Council

Prepared By:

transurban®
design & planning

6th October 2008

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transurban®
design & planning

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1.0 Introduction

Manukau City Council has commissioned Transurban Limited to undertake a review of the spatial structure and built form outcome of the recently completed developments which make up the first stage of Flat Bush New Town. This review is part of Manukau City Councils' outcome monitoring commitment to achieve effective and integrated resource management throughout the city.

The planning mechanisms and approach that Manukau City Council has adopted for the development of Flat Bush New Town have been considered innovative and a positive approach for developing Greenfield land in Auckland. The approach is one that has been driven by the qualities and characteristics of the existing landscape, especially the natural water systems and remnant native vegetation. The *Development East Tamaki Concept Plan (June 1999)* has identified these qualities and is the main structure plan guiding development.

Development has generally conformed to the structure plan, so this review generally focuses on the next level of detail of the built environment within the main structure plan. The assessment aims to identify any issues of concern and to suggest ideas for moving forward to ensure the delivered environment meets original expectations and incorporates lessons learnt over the last ten years from New Zealand or elsewhere and accommodates expectations for the future.

There are many positive attributes of Flat Bush New Town that have gained recognition in the past. We recognize these, but choose to mainly focus and discuss issues or details that are of concern to achieving the desired high quality outcome. This report is therefore critical and negative for good reason.

2.0 Executive Summary

Transurban Limited has undertaken a review of the spatial structure and built form outcome of the recently completed developments which make up the first stage of Flat Bush New Town. This review is part of Manukau City Councils' outcome monitoring commitment and is part of the Section 32 report for the forthcoming review of the Operative District Plan.

The planning of Flat Bush has been regarded as a positive initiative for sustainable human settlements. The resultant built form generally conforms to the Development East Tamaki Concept Plan in terms of the green fingers, the main road network, neighbourhood centres, and residential areas, however there are a number of elements that are missing. These elements include community facilities, small business, small shops and parks within the residential zones, all of which significantly contribute to the development of a human settlement.

There are many good aspects to Flat Bush of which we have identified the most significant ones in section 4 of this report. Our assessment has raised a number of issues that need addressing, the fundamental ones relate to:

- The poor design of neighbourhoods, blocks, streets, lots and buildings resulting in a poor quality environment;
- The regimented use of the MCC Engineering standards which don't suit each individual environment;
- The lack of identity and character within Flat Bush;
- The supply of a limited diversity of community facilities;
- The failure to promote alternative modes of transport;

We recommend that a concerted effort by Manukau City Council, property owners, developers, infrastructure providers, and the local community is required to lift the quality of Flat Bush to a higher level and not only bring the quality of the development into line with best practice solutions, but lead New Zealand in developing urban environments that are designed for local conditions. Manukau City Council led this challenge approximately 10 years ago through the Flat Bush Concept Plan and Variation 13, and it is now time to do it again to ensure that a better environment is achieved.

The development of Flat Bush needs to be considered over a long time frame due to the large area of land to be developed at varying times. Timing issues need to be better integrated and planned for to ensure that all stages are developed appropriately and adequately catered for.

We recommend that development typologies be fostered that combine subdivision patterns, street typologies, building typologies and landscape concepts as integrated "wholes". This can be achieved by:

- Creating an interdisciplinary Council Development Team to lead development and be responsible for delivering the best outcome, (Flat Bush Development Team);
- Preparing a more detailed Structure Plan for Flat Bush, called the Urban Design Framework Plan;
- Compiling a comprehensive Design Code for Flat Bush;
- Reviewing engineering standards for Flat Bush;
- Use pilot projects to test and illustrate concepts and design code requirements;
- Preparing appropriate changes to the District Plan provisions for Flat Bush;
- Updating the Flat Bush Cycleways and Walkways Plan;
- Updating the Flat Bush Community Plan;
- Encouraging multi-agency cooperation for alternative transport;
- Developing a public art strategy for Flat Bush.

3.0 Methodology

Manukau City Council has identified seven areas of Flat Bush as a good representation of the type of development in the different zones and precincts that has occurred to date. Manukau City Council has prepared base plan information including street network, subdivision pattern, and building footprints from their GIS data base and aerial photography. This information has been used within this document to illustrate the development pattern of each area.

Our assessment is based on these seven areas A to G, illustrated in the following diagram.

Our methodology includes an analysis matrix which we developed to assess each of these seven areas in order to identify any issues. The matrix has been developed using the seven C's of the New Zealand Urban Design Protocol to which Manukau City Council is a signatory (Context, Character, Choice, Connections, Creativity, Custodianship, Collaboration). Each assessment criterion under these headings has been developed based on the aspirations for Flat Bush and best practice urban design. The assessments of each area are contained within Appendix 1 of this report.

This process identified a number of issues grouped into overarching themes. Each issue is discussed and alternatives or ideas are suggested to guide further work to ensure that the best urban outcome is achieved in Flat Bush.

4.0 Aspirations for Flat Bush

The existing development at Flat Bush New Town has been guided and driven by the following documentation:

- Community Workshops 1997;
- Development East Tamaki Concept Plan 1999 (Adopted);
- Catchment Management Plan 2001;
- Catchment Implementation Plan 2001;
- Flat Bush Street Tree Master Plan 2005;
- Flat Bush Community Plan 2006;
- District Plan 2002 (updated to include Variation 13 and the Structure Plan 2006)
- Long Term Council Community Plan;
- Flat Bush Schools Strategy 2006;
- Flat Bush Cycleway and Walkway Masterplan;
- Flat Bush Riparian Planting Guidelines;
- Variation 13 (District Plan) Notified 2001 [Includes Structure Plan] made operative in January 2006;
- Manukau City Council Engineering Quality Standards.

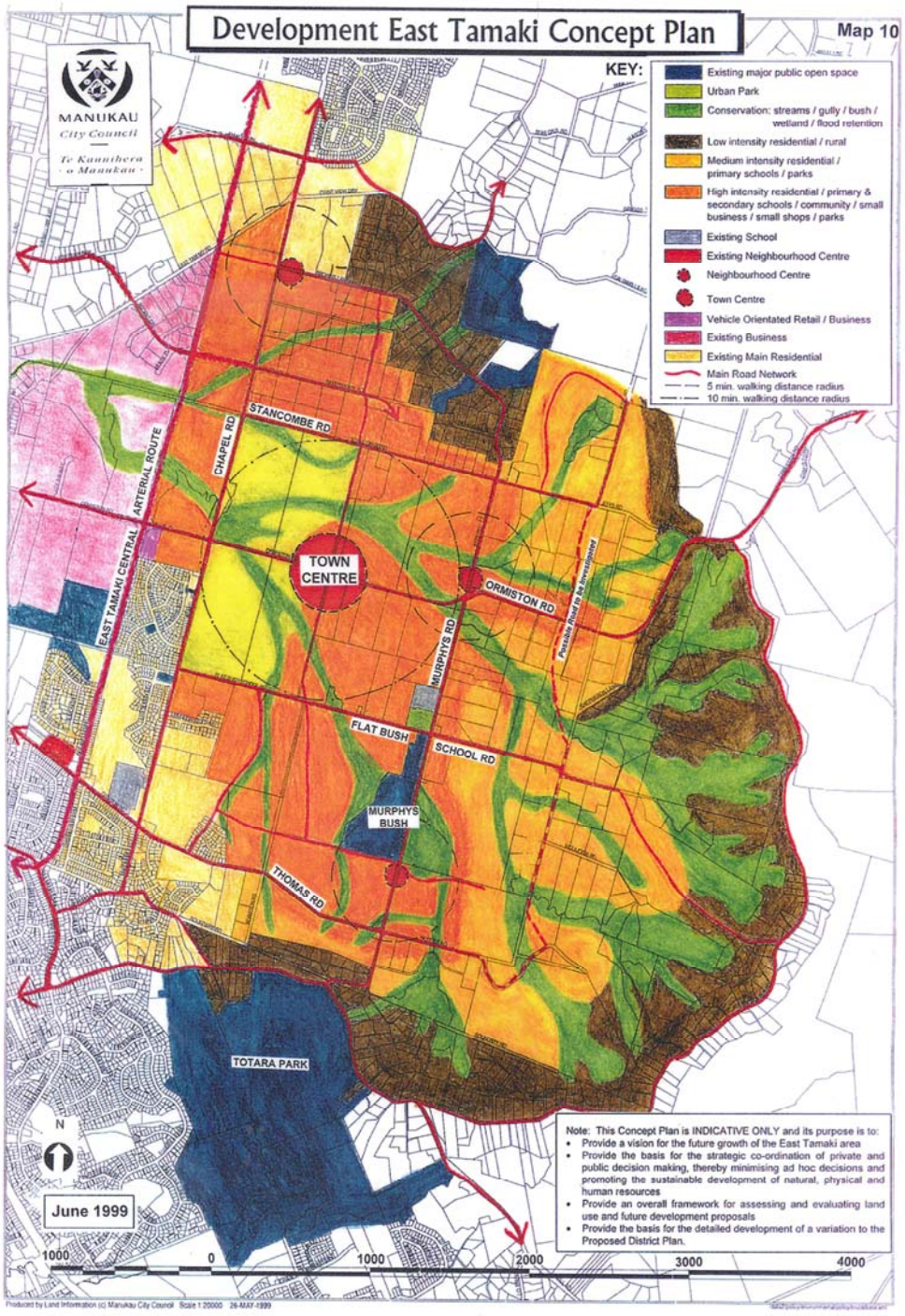
Manukau City Council considers that the most significant documents which shape the high level thinking and set the overall framework for Flat Bush are:

- The Development East Tamaki Concept Plan adopted 1999;
- Variation 13 to the District Plan (notified in 2001 made operative in 2006);
- Comprehensive Catchment Management Plan 2001;
- Flat Bush Community Plan 2006.

The key provisions that describe the aspirations for Flat Bush are summarised below.

3.1 Development East Tamaki Concept Plan June 1999

This document was developed following the initial community workshop held in 1997 and captures the essence of the overriding vision and objectives for the development of Flat Bush in a physical sense. This is a key document that was then used as the basis for the development of the Comprehensive Catchment Management Plan and Variation 13 to the District Plan.



The Vision

The overriding vision for the East Tamaki/Flat Bush area is to achieve a sustainable community in the broadest sense. A sustainable community is about using, managing and protecting natural and physical resources in a way that enables communities to develop economically, socially and culturally - while safeguarding the life supporting capacity of air, water, and ecosystems. A sustainable community must also take into account not only the health and well-being of the community but also the needs of future generations.

The purpose of the Concept Plan is to:

- *Provide a vision for the future growth of the East Tamaki area;*
- *Provide the basis for the strategic co-ordination of private and public decision making, thereby minimising ad hoc decisions and promoting the sustainable development of natural, physical and human resources;*
- *Provide an overall framework for assessing and evaluating land use and future development proposals;*
- *Provide the basis for the detailed development of a variation to the Proposed District Plan.*

Key Objectives/Goals

- To achieve an urban form that respects and works in harmony with the natural environmental patterns that exist in the East Tamaki/Flat Bush area;
- To promote the development of public values and recognition of the importance of the public realm in achieving healthy sustainable communities;
- To reduce the reliance on the private motor car as a means of transportation;
- To maximise "accessibility" for all ages and cultures, including accessibility to housing choice, mobility, employment;
- To achieve a reduction in travel demand and increase choice of travel modes;
- To facilitate the establishment of a strong central focus for community and civic life;
- To facilitate the establishment of a community that can celebrate its diversity and maximise opportunities for innovation;
- To facilitate an urban form that is flexible such that it can adapt to the constantly changing values and pressures which shape our natural and physical environment.

Key Features of the Adopted Concept Plan

- A new community containing up to 50,000 residents;
- Protection and enhancement of the natural gully/stream areas;
- A new Town Centre based around a traditional "mainstreet" concept. The location is on the eastern side of Barry Curtis Park which provides a unique opportunity to develop a focal point around which the Town Centre could develop. It is envisaged that this Town Centre would contain a diverse range of activities including residential, retail, office, community and light industrial activities. The Town Centre would be characterised by a compact pedestrian friendly environment;
- Three Neighbourhood Centres are proposed which will provide for a diverse range of activities. They are strategically located throughout the area on main roads where public transport options and accessibility will make them most viable. Neighbourhood

centres are envisaged to be developed around the principle of being a pedestrian friendly “mainstreet” based environment;

- A range of residential housing types are envisaged including detached or semi detached dwellings, terrace housing, townhouses, and apartments. Overall the densities suggested are higher than those found in traditional suburban areas. This is necessary in order to utilise a finite land resource more efficiently in light of a rapidly growing population and to encourage an urban pattern that can support alternative forms of transport including walking, cycling, and public transport. Higher average densities will result in a better range of services being available locally such as, shops, health and welfare facilities, recreation facilities, and child care;
- Overall it is suggested that the following densities should be achieved:
    - Low Intensity Residential / Rural areas - 2 dwellings per hectare (overall average)
    - Medium Intensity Residential areas - 15 dwellings per hectare (overall average)
    - High Intensity Residential areas - 20 dwellings per hectare (overall average)

  It is anticipated that residential densities would be highest closest to the Town Centre and Neighbourhood Centres;

- Connectivity and permeability of the street system should be maximised in order to promote convenience, social interaction, and to enhance user safety in the street and security of property;
- Buildings should positively address the street and other public spaces by providing good functional relationships to the public realm and providing opportunities for informal surveillance;
- Encourage along the main road corridors a wide range of activities including non-residential activities. These “mixed use” corridors will provide opportunities for residential, employment, local convenience shopping, community facilities such as places of worship, medical centres, and will support public transport options.

3.2 Relevant Key Objectives and Policies from Operative Manukau District Plan (adjusted to include Variation 13)

Objective 17.10.3.1 To create a diversity of living and working environments of high environmental quality within Flat Bush with an emphasis on the sustainable use of a scarce regional and district land resource.

Objective 17.10.3.2 To facilitate the urbanisation of the area in a manner and at a rate which takes account of the demand for such urbanisation while ensuring the efficient use of the diminishing land resource commensurate with the provision of appropriate levels of amenity for residents in the area.

Objective 17.10.3.3 To facilitate the development of an appropriate range of densities of development and living and working environments of good amenity within Flat Bush.

Objective 17.10.3.4 To achieve a well connected, adaptable, safe, attractive, healthy and pleasant environment for living and working and travelling with an emphasis on the importance of the public realm including parks, streets, civic areas, roads and the natural environment.

Objective 17.10.3.5 To achieve a pattern of commerce based on an identifiable community focus within Flat Bush, supported and supplemented by office or institutional activities, along with provision for small business activities and mixed use developments along nominated main roads.

Objective 17.10.3.6 To ensure the establishment of an appropriate range of physical and social infrastructure and facilities required to enhance the resulting urban environment and address any adverse effects of urbanisation within Flat Bush.

Objective 17.10.3.7 To protect, sustain, restore and enhance where practicable the remaining terrestrial and aquatic ecology of remnant native vegetation and waterways.

Objective 17.10.3.8 To achieve a safe, efficient, well connected, and integrated transport system within and beyond the Flat Bush area that provides a choice of travel modes including pedestrian, cycling, passenger transport and motor vehicles.

Policy 17.10.4.3 Zoning within the Flat Bush Structure Plan area shall be oriented primarily towards business, residential and open space activities and shall provide a gradation of residential activity density by:

- Focusing the highest allowable densities around the Town Centre, Neighbourhood Centres, the perimeter of Barry Curtis Park and along arterial roads;
- Allowing medium/higher densities within the remaining residential areas;
- Locating less intensive residential areas at the extremities of the Flat Bush Structure Plan area;
- Providing a transition precinct at the northern reaches of the Flat Bush Structure Plan area to enable an appropriate transition between the Main Residential zone immediately to the north and the more intensive development allowed for within the Flat Bush Structure Plan area as a whole.

Policy
17.10.4.4 A generous extent of integrated open space should be achieved as part of the urbanisation of the East Tamaki area, including provision of additional public open space, and fair and reasonable financial contributions.

Policy
17.10.4.5 Subdivision and development should incorporate urban design and sustainable management principles as part of the land modification process so as to:

- Retain significant landscape elements;
- Work with the natural characteristics of sites;
- Protect and enhance existing remnants of native vegetation and wetlands;
- Pursue opportunities to improve biodiversity;
- Incorporate stormwater and sediment management options that protect water quality and ensure the rate of run-off throughout the development cycle is similar to pre development levels;
- Comply with safe practices in the identification, assessment, treatment and/or remediation of asbestos containing materials.

Policy
17.10.4.6 Subdivision and development activity should achieve urban design and sustainable management principles by:

- encouraging a sense of place and identity;
- providing a high degree of 'connectivity' through well connected road networks based on block designs;
- promoting social interaction through attention to the placement of buildings on sites;
- facilitating safe walking and cycling, including through the identification of cycle routes;
- supporting or enabling opportunities for passenger transport services to establish;
- reducing travel distances, providing access to amenities, and supporting an integrated transport system that provides a choice of travel modes;
- maintaining contact between communities;
- being compatible with the part of the roading hierarchy on which it is located in terms of the type and level of traffic generation;
- designing local roads to ensure a safe low traffic speed environment;
- relating to the streetscape so as to enhance perceptions of safety;
- providing separation buffers between incompatible activities;
- promoting biodiversity;
- Ensuring there is provision for emergency services that takes account of strategic location requirements.

Policy
17.10.4.7 Public Open Spaces should:

- be able to be developed for public use with only minimal earth works;
- incorporate existing mature trees where possible;
- be accessible and useable;
- be well overlooked;
- be bounded by streets whenever possible.

Policy
17.10.4.9 Business activity, including carparking and other structures should be designed and located so as to contribute to amenity values, particularly pedestrian accessibility, visual amenity and informal surveillance of the street and public realm.

Policy

17.10.4.11 An integrated transport system shall be promoted by guiding the design and layout of subdivision and developments so that it provides 'connectivity' and the opportunity for a variety of travel modes.

3.3 Catchment Management Plan

Based upon the Development East Tamaki Concept, catchment planning and urban planning have been developed in an iterative manner where both processes have informed each other in order to achieve a truly integrated approach to planning for the development of this catchment. Although the Catchment Management Plan focuses on stormwater management and water quality issues it also address the integration of the natural and urban environments by developing the 'greenfinger' corridors identified in the original East Tamaki Concept plan.

The Catchment Management Plan identifies a number of objectives including:

Land use Objective

"To provide for a range of land use types within the study area whilst ensuring that the effects of urbanisation can be managed in a sustainable manner."

Landscape and Amenity Objective

"To identify and protect key landscape features and elements to retain a sense of identity for the East Tamaki area."

3.4 Flat Bush Community Plan 2006

Given until recently there has not been a resident population or local Community Board in Flat Bush to consult, the Community Plan has been developed last.

The Flat Bush Community Plan sets out the community's vision, objectives and priorities for Flat Bush. These are intended to provide the framework to develop, and the environment to nurture, a strong community that meets the needs of its people.

The Plan is a way for residents to express their aspirations for living in Flat Bush and to become involved in developing their community.

The Community Plan will also help guide the work programmes of Manukau City Council, Central Government, key agencies and community organisations. It will help them to be responsive to diverse community needs and to plan cooperatively and flexibly for the range of facilities and services required now and in the future

What Does the Community Plan do?

It helps Manukau City Council and other agencies and community organisations to decide how they can best respond to community needs and support community development.
It will help them to:

- generate a sense of community and identity;
- be more responsive to the needs of all groups within the Flat Bush community;
- plan resources to provide the range of services and amenities required;
- plan flexibly for any future changes in the community's population and needs;
- encourage the Flat Bush community to actively engage in the development of its community facilities, built environment and amenities;
- encourage and develop community based groups, networks and organisations that can meet the community's needs.

Community Plan Objectives

The Community plan objectives are listed below and where relevant the key priorities for the various objectives are identified.

- Flat Bush Objective for Educated and Knowledgeable People;
    - To provide accessible and excellent education at all levels;
- Flat Bush Objective for Healthy People;
    - To make being healthy an attainable goal through developing environments that contribute to healthy lifestyles.

Proposed Key Priorities for Flat Bush

- Establish neighbourhood parks and open spaces that are connected to neighbourhoods, which can be used safely by children and easy to supervise, and are located so that people do not have to cross main arterial roads to access them;
- Establish a framework for healthy neighbourhood design and encourage people to walk, cycle, use parks, open spaces and community facilities for active leisure;
- Establish transport links to give easy access to Barry Curtis Park and other green spaces.

Flat Bush Moving Manukau Objective

To ensure that people can access key services, schools, recreational and employment opportunities within and outside of Flat Bush through flexible and efficient transport options that can meet the diverse needs of the Flat Bush community.

Proposed Key Priorities for Flat Bush

- Minimise road-based congestion and improve traffic flow to, from and within Flat Bush, through effective and integrated roading and transport systems;
- Establish an effective road hierarchy that locates heavy traffic on key roads and separates different types of traffic, to reduce congestion and improve traffic flow including preserving easy access to Greenmount/East Tamaki;
- Introduce traffic flow measures such as light phasing and high occupancy vehicle lanes;
- Provide a choice of public and private transport alternatives;
- Establish an integrated cycling and public transport system within Flat Bush, connected to other Manukau suburbs and to Auckland City;
- Provide clean, safe, convenient and integrated public transport that is accessible to everyone;
- Inform people of available transport subsidies;
- Encourage community-based transport options;
- Encourage neighbourhoods to establish walking buses;
- Ensure safe and secure car parking in neighbourhoods, shopping centres and public transport facilities;
- Ensure adequate provision of off-street parking, especially in the town centre;
- Establish and maintain safe, well-designed streets that provide a balance between vehicle movement and pedestrian access and safety;
- Ensure that developments that incorporate commercial or other non-residential uses, provide adequate space for storage, loading and unloading activities as well as parking.

Flat Bush Safe Communities Objective

To engage the community in actively working with each other, community agencies, transport providers, the Council and the Police to create and manage the Flat Bush town centre and Flat Bush neighbourhoods in ways that enhance safety, minimise crime and reduce accidental injury.

Proposed Key Priorities for Flat Bush

- Encourage crime prevention through environmental design (CPTED) both within the town centre and neighbourhood design;
- Manage and monitor the use of alcohol in public areas to promote safety;
- Make provision for CCTV in Flat Bush town centre if it becomes necessary;
- Ensure that the design and width of streets facilitate safe and easy access for emergency services;
- Encourage community and other organisations to participate in emergency management;
- Manage and maintain parks, open spaces and stormwater areas to promote safety;
- Ensure planting schemes minimise obstacles, like overhanging plants, which are a hazard especially to blind and visually impaired people;
- Promote pedestrian and cyclist access and safety on roads, walkways, around neighbourhood parks and other recreational facilities, and in shopping centres;
- Actively monitor accident spots, with priority to schools, and introduce speed restrictions where necessary;

- Ensure there is adequate traffic signage around schools;
- Incorporate safe access to buses, trains and taxis (including lighting) into planning for shopping centres, community facilities and housing, including apartments;
- Ensure the provision of lighting in streets, shopping centres, open spaces and other public areas that maximises people's sense of safety and security.

Flat Bush Sustainable Environment and Heritage Objective

To give people the opportunity to recognise and enjoy the unique history, environment and cultural vitality of Flat Bush.

Proposed Key Priorities for Flat Bush

- Work in partnership with Mana Whenua kaitiaki through active consultation to ensure environmental well-being and protection of cultural heritage (including wahi tapu);
- Encourage community involvement in setting the scale, style and functionality of the Flat Bush town centre;
- Create an arts and cultural precinct in the town centre;
- Create and support opportunities for arts activities in Barry Curtis Park;
- Ensure naming of streets, parks, reserves, and features such as plaques and signs to reflect the ancestral and historic heritage of the Flat Bush area;
- Facilitate community initiatives directed at identifying and protecting heritage buildings and sites;
- Ensure landscape development and planting schemes that preserve existing plants and trees heritage and include planning native and heritage species;
- Ensure the on-going care and maintenance of green and open spaces to a high standard;
- Protect the recreational amenity of the natural environment e.g. eeling in waterways;
- Ensure a clean and tidy environment in the town centre and green spaces;
- Minimise pollution to local waterways from excavations and earthworks through:
    - monitoring and ensuring compliance with district and regional environmental standards and planning requirements;
    - engaging neighbourhoods in waterway protection and planting activities;
    - developing a mosquito control plan for the waterways;
- Advocate for underground national grid transmission lines.

Flat Bush Thriving Economy Objective

To promote economic prosperity in Flat Bush by maximising opportunities for employment and business ensuring residents are well connected to employment opportunities in the rest of Manukau and the Auckland region.

Proposed Key Priorities for Flat Bush

- Establish effective and integrated roading and transport systems within Flat Bush, between Flat Bush and the rest of Manukau, and the wider Auckland region;
- Ensure housing, amenities, facilities and streetscapes provide quality living and business environments and protect the value of residents' housing investment;
- Ensure that the design of buildings and width of streets and provision of parking is adequate for mixed-use areas and home based businesses.

Flat Bush Vibrant and Strong Communities Objective

To encourage community action and a sense of community belonging, identity and participation in the community and its democratic processes.

Proposed key priorities

- Design a built environment that allows residents to connect with one another and encourages neighbourhood activity;
- Provide safe places, activities and events for children and young people that encourage their connection to Flat Bush both in the town centre and in the neighbourhoods.

3.5 Summary of Aspirations

Overall, the comprehensive approach adopted for Flat Bush is seeking to achieve:

- urban containment within metropolitan urban limits – a smart use of a limited land resource;
- a strong Public Realm as the building block to creating a great new community;
- an integrated transport system that promotes a choice of travel modes – particularly reducing car dependency and which creates great streets;
- an integrated and multi functional public open space & water management network;
- enhancement of ecological diversity;
- improved water quality;
- diversity of activities, including housing types;
- selective intensification in locations that make sense ie close to arterials, public open space and/or amenities such as the town centre neighbourhood centres;
- employment growth;
- sense of place and community focus;
- safe and attractive environment.

5.0 Positive outcomes in Flat Bush

Flat Bush has been developing as a new town over the last ten years, based on a strong concept for development that recognises, and places a high level of importance on the natural topography and systems within this region. The most significant is the establishment of public open space in the form of 'green fingers' that penetrate through the area along natural water courses and incorporates existing native vegetation. The green fingers are multi-functional accommodating stormwater conveyance and groundwater recharge whilst filtering out nutrients and sediment loading. They will provide a fantastic walkway and cycleway network throughout Flat Bush with connections to Botany and the rest of Manukau. They include areas for children's play ground, picnicking, and general passive recreation. They also will provide habitat and a food source for our native wildlife.

Green Finger at Cyril French Drive

Flat Bush has allowed number of developers to take the opportunity to provide alternative house typologies to the previous typical Greenfield development of a single detached house on a site, and have experimented with terrace housing, duplex housing and more recently some apartment buildings. Some have a better outcome than others and are not ideal in every sense, but they have been a positive move for development in Auckland. Examples of these are below.

Terrace development on Carlos Drive

Apartments on Carlos Drive

Duplexes on Baverstock Road

The ability of Council to provide leadership and to secure the land necessary to develop Barry Curtis Park will provide a valuable asset for people of Flat Bush and Manukau. This vision has been developed over many years and approximately half of this park is to be opened to the public in early 2009.

The new bridge at Ormiston Road is a sculpture in itself which is iconic and helps to identify Flat Bush. It is the first cable stay road bridge in New Zealand which respects the importance of design rather than just another concrete solution.

There has been some good art and sculpture developed in Barry Curtis Park.

The Neighbourhood Centre at Chapel Road and Gracechurch Drive is very successful and provides a good range of services to locals and people travelling through the area.

New schools have been, and are currently being built by the Ministry of Education with good quality design and materials.

Baverstock Road Primary School (Photos from Stevensons Website)

Mission Heights Primary School on Jeffs Road.

Major community facilities have been developed such as the Fo Guang Shan Buddhist Temple on Stancombe Road.

6.0 Summary of Main Issues Concerning the Current Community

Gravitas Research and Strategy Ltd was commissioned by Manukau City Council to research and identify residents' aspirations, expectations, experiences, use and need of services and attitudes towards engagement with Council to inform future planning. This survey was completed in June 2008. It is important to understand some of these issues when reviewing the built form. The key points in the reported findings are summarised below.

Top negative aspects of living in Flat Bush are:

	% of responses	Issue	Urban design Issue?
1	26	Increasing crime and social disturbances	Yes
2	11	Traffic disturbances	Yes
3	10	Area is becoming densely populated / crowded	Yes
4	8	Reduced privacy due to houses built too close	Yes
5	8	Roads are too narrow	Yes
6	7	Close to lower income neighbours – less desirable people	No
7	6	Lack of public transport	Yes
8	5	Schools too far away	Yes
9	5	Noise	Yes
10	5	Small sections	Yes
11	4	Few amenities, lack of developed infrastructure.	Yes

All but one of these issues are urban design issues and need to be addressed.

Social and community needs

The community feels well serviced, but mostly by Botany Downs, Botany Town Centre or Botany Junction. 31% of people surveyed mentioned shops in Flat Bush.

38% of people surveyed have never used Barry Curtis Park, 19% use the park once per week. This is not surprising considering that only a very small portion of Barry Curtis Park (the Wetlands playground) is actually open to the public currently, and visits are likely to significantly increase in 2009 following the opening of the northern area.

Facilities that people requested are:

	% of responses	Issue
1	42	Recreation / pool centre
2	20	Sports clubs / grounds
3	20	Public transport
4	18	More parks/playgrounds
5	17	Community centre
6	14	Library
7	10	Shops/supermarket

It is clear that whilst the green fingers provide an important component of the recreational needs of the community, other facilities are required.

Population:

Ethnic group	% of population in region			
	Flat Bush*	Manukau**	Auckland**	New Zealand**
Asian (incl. Indian)	51	20.28	17.97	8.80
Pakeha / European	40	38.24	53.61	64.79
Samoan	3			
Maori	2	14.39	10.52	14.04
Cook Island Maori	2			
Niuean	<1			
Pacific Peoples		26.33	13.65	6.60
Middle eastern / Latin American / African		1.39	1.42	0.86
Other	5	5.19	7.67	10.70

* Gravitas survey 2008, ** Census NZ 2006.

The percentages for each region/area do not total 100% as there are a number of people that identify themselves with more than one ethnic group.

Just over half the population in Flat Bush is from an Asian or Indian ethnic group. This is a significantly higher percentage than the population in Manukau, Auckland, and New Zealand. The number of Pacific peoples is significantly less in Flat Bush as compared to the Manukau region, but close to the New Zealand average. One reason for this higher percentage maybe due to the lack of diversity of housing types, and/or affordability.

Household type:

% of population	
55	2 parent, 1-2 children
20	2 parent, 3+ children
16	Live with partner
3	Single parent family
3	Non family
2	Live alone
1	other

It is clear that well over half of the population lives in a two parent family with children.

House type:

% of population	
94	House on section
3	Terrace house
1	House divided into flats
1	Town House
<1	Unit
1	Other

It is also clear that a diversity of housing types does not exist, with most living in a detached house, and explains why there are a high percentage of families living in the area.

Of these houses, 87% have 4 or more bedrooms, 12% have 3 bedrooms and 1% has 2 bedrooms. Therefore most dwellings are of a large size.

7.0 Issues and alternative solutions

We have undertaken a detailed analysis and assessment of the existing Flat Bush development (refer appendix 1) which has identified a number of key issues that contribute to the failure in achieving the aspirations for the area, and concerns with regard to best practice urban design. The assessment has been undertaken using seven study areas identified as a good cross section of the type of development that has occurred in Flat Bush to date.

The main issue relates to precinct or neighbourhood design that has resulted in poor spatial definition of public and private spaces, neighbourhood identity, connectivity and legibility and the lack of diversity of housing types and people. This outcome has occurred mainly due to the design of the subdivision where irregular block shapes, curved narrow streets, cul-de-sacs, rear lots and square lots are common, and due to the misalignment of the building typology with the lot size and shape.

We have identified 71 issues that range from the large scale such as precinct subdivision, to the details of streets: widths, corner radii, location of pedestrian crossings and trees.

These issues have been grouped under the following headings, however they are all interrelated and need to be considered holistically.

- Subdivision and Connection Issues;
- Identity and Character Issues;
- Streetscape Issues;
- Site Design Issues;
- Building Design Issues;
- Public Open Space and Recreation Issues;
- Community Facilities Issues;
- Transport Issues;
- Engineering Issues;
- Planning Process Issues.

Where possible we illustrate the issue and provide suggested alternatives that would lead to a better outcome. We also suggest ways in which the issues may be resolved.

Subdivision and Connection Issues

Issue 1 - Subdivision and design has occurred within larger lot boundaries rather than as a holistic design for the area, due to ownership and timing, resulting in poor connections and many rear lots.

Current subdivision pattern with previous lot boundaries shown dashed

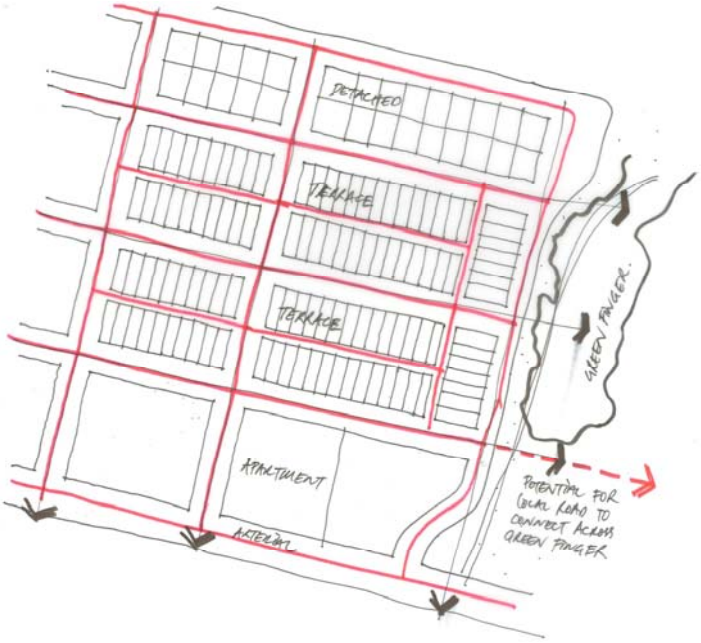
Alternative subdivision pattern which respects the pervious lot boundaries and allows incremental development, but allows good connections to occur to future stages with more than one connection to a lot.

The examples above illustrate that designing on a lot by lot basis (within blue lines) limits permeability and views to important elements, whilst the alternative is more integrated, provides more views to the green finger, provides more direct routes and is more logical and convenient.

Ideas: Provide incentives to develop concept plans for entire blocks or neighbourhoods, not individual lots. Ensure that there are a number of connections to adjacent large lots for future development to be contiguous spatially. Only allow short cul-de-sac streets where the topography (such as very steep land or a cliff) or other constraints (other than ownership issues) require such a street. Provide a more detailed structure plan.

Issue 2 - Block subdivision is not consistent with the building typology, usually resulting in a mix of incompatible typologies.

Current subdivision pattern illustrating different typologies within the same block



Alternative subdivision pattern developed according to building typology

Urban blocks usually provide good spatial environments, visual quality, outlook and privacy when they contain a single building typology. Multiple building typologies can exist within a block with good design. The example above on the left illustrates a poor outcome with terrace/duplexes in the same block as detached houses. The block size and shape results in the creation of rear lots, the need for access drives and cul-de-sac streets. There is a disconnect between the detached houses and terraces within the same block due to the block design and location of the access lane separating the two.

Ideas: Subdivision needs to be designed for the type of building and development. The building typology needs to be designed at the same time as the block and street pattern to achieve the desired environment, followed by compatible subdivision to facilitate ownership. A new Design Code for Subdivisions to be included in the District Plan immediately, and provide a more detailed structure plan.

Issue 3 - Some rear lanes are inefficient providing access to properties only on one side of the lane.

Rear lane at Flat Bush

Rear lane at Addison, Takanini (better quality but still inefficient)

Rear lane in Perth.

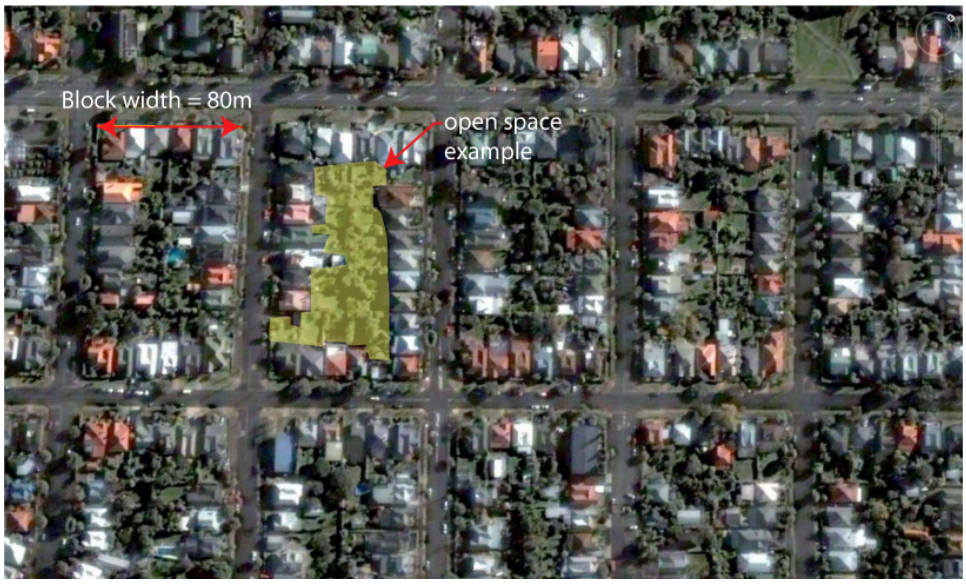
The images illustrate an example at Flat Bush resulting in a poor quality environment with a continuous blank, inactive fence/wall on one side, very poor relationships with the neighbouring properties, and generally no planting is provided. A better example at the Addison development in Takanini illustrates the inclusion of planting and better relationships with neighbouring buildings, and another appropriate lane in Perth (although different typology) with access to properties both side of the lane and the inclusion of planting and habitable rooms overlooking the lane from the first floor. Lanes need to be enjoyable spaces to be, and they need to accommodate a variety of uses (accessing garaging, informal games, part of the circulation network, etc).

The design of streets and lanes need to give clear indication to people (visitors, couriers, delivery drivers, taxis etc) where the front and back of the dwelling is, and therefore where their front door is. The lanes should be defined differently to streets including width, building setbacks, and materials. They need to be logical in layout and assist with the patterning of the street network ensuring good permeability and connectivity throughout the neighbourhood.

Ideas: Provide clear guidance in the Design Code and assessment criteria in the District Plan.

Issue 4 - Width and depth of lots are too similar creating square lots resulting in minimal outdoor space for planting and onsite recreation / amenity.

Example of open space within blocks in Flat Bush, assume two car parks per lot



Example of open space within blocks in Grey Lynn, Auckland. Block size is 80x140m and assume only one car park per lot.

Square lots reduce the ability for good private 'back yard' outdoor space for people and vegetation, and for diversity along the street. Square lots also create long street frontages which require more streets for the same density.

Ideas: Encourage block designs that facilitate rectangular lots with a back to back relationship that allows useable rear yards or develop courtyard housing suitable for square lots. Establish a Flat Bush Development Team that is a multidisciplinary team with common outcome objectives. This team would advise on all issues relating to Flat Bush. They would review, assess and determine development proposals including subdivisions.

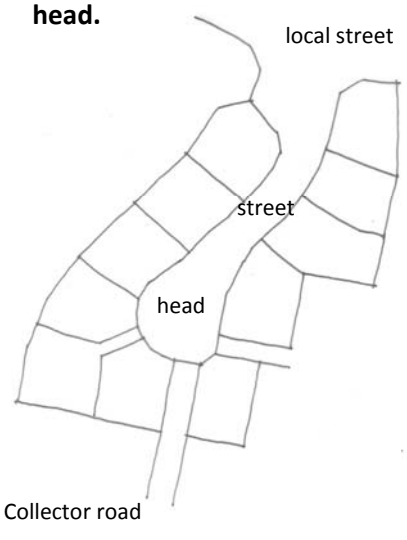
Issue 5 - Rear lots off lanes or ROW don't address the street, reduce the amenity quality of the street and the area, and have privacy and outlook issues with over looking all yards etc.

Figure ground illustrating private lane at Flat Bush (left) and photo of the same (above).

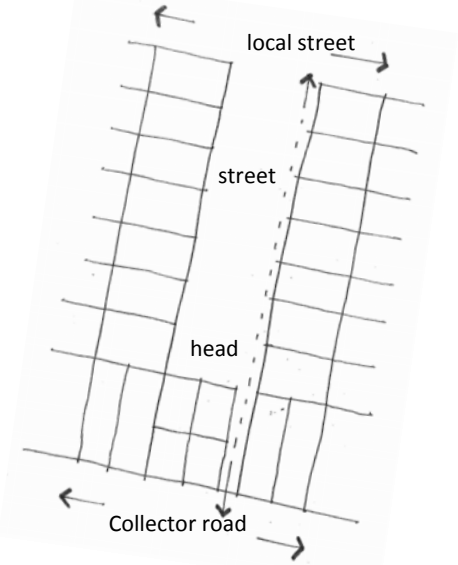
Rear lots are usually left over space, typically at the end of cul-de-sac streets. The resultant built form on such sites does not address the street or contribute to the spatial form of the street space. Rear lots also significantly reduce the amenity and privacy of adjoining lots where the traditional back to back relationship is confused. Additional street clutter also results with a higher density of vehicle crossings, fences, letterboxes, service pillars, and resulting in generally less trees. The example above goes one step further by creating a private lane to access a number of rear lots.

Ideas: Restrict the development of private lanes with Design Code for Subdivision. Prohibit rear lots.

Issue 6 - Hammer head and full turning cul-de-sacs (e.g. Bushpark Place) are not supported by subdivision or building design that strengthens the spatial configuration of the cul-de-sac head.



Existing cul-de-sac in Flat Bush illustrating poor form



A better alternative where the 'head' and street are contiguous spatially defined by the subdivision pattern and built form.

The subdivision pattern and built form is used to define the spatial configurations of the street. Generally the built form that exists at the cul-de-sac head does little to define the space, and the response is usually a typical setback from the boundary in both the street

and the cul-de-sac head. The boundary is determined by the turning circle at the head. There is no consideration as to whether the 'head' is still part of the street or something different. (also see built form later in this document).

Ideas: Provide design principles for designing cul-de-sac streets in design code for subdivision. Subdivision consent must be assessed and approved against the code. Limit use of cul-de-sac streets to locations where the topography or other physical constraints (other than ownership) requires them.

Issue 7 - Cul-de-sac streets are generally short and comply with the standards, but they are not visible for their entire length. Pedestrian connections at the end of cul-de-sacs are not always visible, or overlooked, resulting in an unsafe and undesirable connection or route.

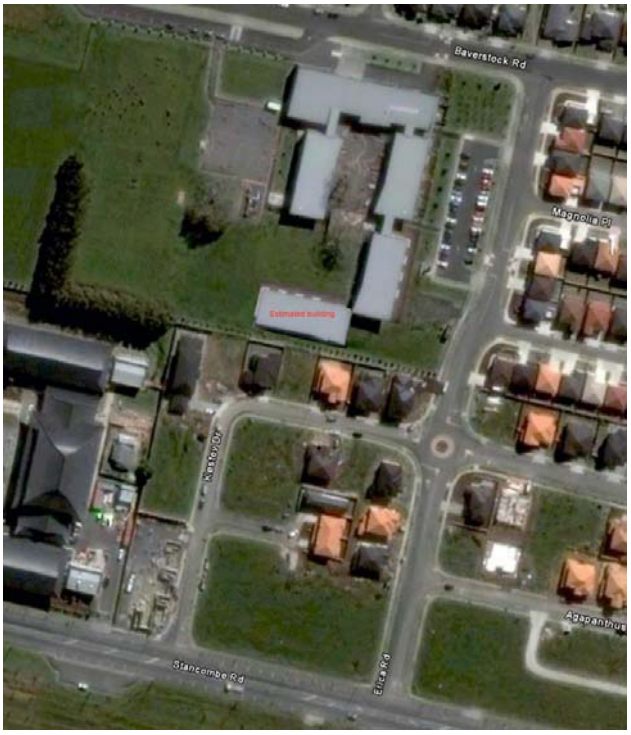
Existing pedestrian and cycle link with no frontage development

Alternative concept with good spatial relationships

To enhance legibility it is important that cul-de-sacs are visible for their entire length from the intersection with another road. If there is a pedestrian or cycle way connection from the end of a cul-de-sac, it should be visible also to allow people to make decisions on their intended routes and feel safe about using that route. Many unnecessary trips are made down cul-de-sac streets where a person intuitively thinks the street should connect through to another street. The current restriction on lengths of cal-de-sacs appears to be appropriate, however they must be visible for their entire length.

Ideas: Provide design principles within the Design Code for subdivision. Add rule requiring cal-de-sacs to be visible for entire length from intersection with another street.

Issue 8 - Subdivisions have created lots that back onto school sites. In one case, the rear yards of lots are overlooked by the school, reducing privacy. There is limited surveillance of the school site from the neighbourhood resulting in safety and security issues. Private lots are less secure and safe due to the rear yards being accessible from the school lot (over a fence). In one case, two parallel fences exist along a boundary which makes the school like a prison.



Upper and lower left illustrates the existing situation at Baverstock School Flat Bush.

The upper right illustrates an alternative where streets, not rear yards, bound the school.

Schools are an important community facility, although more and more are becoming gated communities themselves. They need to be highly visible by the community to provide the level of safety necessary and reduce the need to secure the perimeter.

Ideas: Consider school sites as open space and that they should be surrounded by streets with residential or other properties fronting these streets overlooking the street and the school. Include principles within the design code and provide a more detailed structure plan.

Issue 9 - Inappropriate block sizes such as north of Carlos Drive.

Existing block size at Carlos Drive, Flat Bush

Due to the inclusion of Carlos Drive and its location, the remaining block to the north of this street is too large with only one frontage resulting in a poor outcome with terrace houses not fronting the street and a large amount of 'left over' space. The zoning regulations on the north of these sites include a Flat Bush Buffer overlay of a width of 30m. The buffer exists along the edge of the zone where it has a common boundary with the Flat Bush Country Side Transition Zone. The intent of the buffer was to provide a transition from large lots with a rural quality to the medium density housing along Stancombe Road. This has not been interpreted correctly resulting in a poor outcome and an unsustainable use of the land as terrace houses are not the transitional form anticipated. It is important that block sizes are not too big that restrict permeability and choice.

The second image illustrates a large block where a mix of apartment buildings and terraces are being developed. The apartments are more suited to this block size, however there is limited open space. The block is 323m long which is considered too long for this type of development, and has no public links/roads through it. There are currently connections through this block shown in red, but they are on private land and are generally vehicle access lanes to the middle of the properties.

Ideas: Provide guidance for the Buffer overlay and maybe increase the depth of the overlay. Provide design principles for size of blocks with single frontage at these interface overlays, including a maximum block size. Consider providing more guidance on location of streets and the design of blocks.

Issue 10- There is little diversity in housing types, which can be a result of subdivision. Subdivision needs to occur in conjunction with the design of the building typology for the block.

Ideas: Provide an appropriate mix of house typologies in each neighbourhood. Develop with the structure plan

Issue 11 - It is important that most streets are located perpendicular to the 'green fingers' and other open spaces or parks to provide views and direct connections with these open spaces. Some existing developments have kinks in the alignment to the end of streets that prevent sight lines to the 'green fingers' or open space or other landscape features.

Existing street pattern at Flat Bush illustrating the importance of street alignment to the green fingers

Alternative pattern that could have allowed more direct linkages to the green finger

Views to major landscape features are important for all properties and assists with a sense of place and way finding. People appreciate and have high regard for views of

landscape elements. The view should be maximized for all people, rather than limited to only those close by. Major landscape elements could include, swamps, streams, ponds, playing fields, trees, green fingers, rock out crops, hills etc. The examples above illustrate how important the design of the blocks and the street network is in achieving maximum vantage points from streets and private properties.

Ideas: Provide design principles in Design Code for Subdivision and a more detailed structure plan. Identify elements that are considered major landscape elements.

Issue 12 - Curved streets currently give an appearance of a higher density than actually exists due to the high visibility of buildings.

Stornaway Drive as existing with appearance of high density due to curved roads

Stornaway Drive with simulated mature trees mitigating the issue

Trees generally mitigate the appearance of a higher density by providing screening, and a sense of depth due to the space required by trees to exist. The street trees are currently not large enough to provide the mitigation but should do over time. Secondly, curved roads are only visible for a short distance before they are obscured by buildings so the street space is not appreciated resulting in buildings being visually dominant.

It is important to discourage the use of curved road alignments to reduce the need to mitigate this issue. Straight roads with the right dimensions and design can reduce the appearance of a higher density.

Ideas: Provide guidance for road alignment within a Design Code. Provide guidance in the form of a more detailed structure plan. Ensure street tree planting establishes quickly with changes to planting size and protection and consider requiring planting to occur at completion of the road construction to provide a longer growing period.

Issue 13 - Curved streets that act as connector roads can provide issues in respect to perception of connectivity and apparent density, legibility and clarity.

Middlefield Drive is a connector road through the neighbourhood, but there are very little cues to a person on the ground as to where it leads / connects to.

Cues on connector roads might include bus stops, different lighting wider street width and footpaths, a variation to the street configuration such as this example in Australia.

Connector roads that are straight provide good connectivity and permeability as the destination at the end is visible. Curved roads need to be designed such that they give the user clues as to the destination of the road. This can be achieved through a clearly understandable street hierarchy with a design for each and the elements within each street, i.e. the same tree species may be used for connector roads, or a distinguishable species that people recognize and associate with the street.

Ideas: Review street hierarchy with a more detailed structure plan.

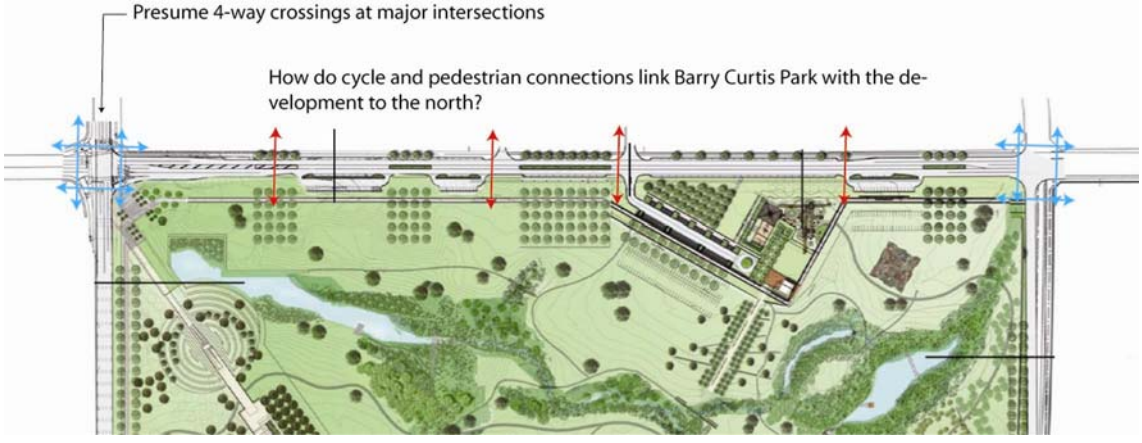
Issue 14 - Limited safety consideration of pedestrians crossing busy main roads.

"Kea" crossing Baverstock School, east of photo below

Existing situation at Baverstock School

There are currently no permanent pedestrian crossings to enable safe environments for children (or adults) to cross busy roads, especially at school sites. "Kea" crossings (illustrated above) have been introduced at some locations which turn into temporary pedestrian crossings at the beginning and end of school, but they don't assist people with crossing these roads outside the hours of their operation. The Kea crossing illustrated above does not align with a street or a pedestrian link, nor to the front door of the school.

The example below is the current design for the northern end of Barry Curtis Park (Isthmus, 2007), which raises the question, how will pedestrian and cycle connections be achieved to Barry Curtis Park over Stancombe Road, and other roads with an interface with this park? Pedestrian connections seem to be missing.



The aspirations for Flat Bush require less car travel and more walking, cycling and shared transport options. The development to date is generally vehicle dominated. It is important that parents walking with children or children on their own can walk or cycle to and from school in a safe environment, which includes crossing roads.

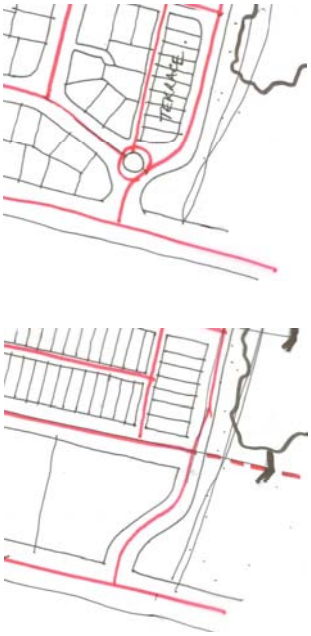
Pedestrian crossing and refuge in main street Griffith, NSW.

Well designed pedestrian space and crossing in Brisbane.

Ideas: Require all development proposals to design and illustrate how pedestrians, cyclists, disabled people and transport arrive at, circulate through and leave the development. Street design needs to include all elements of the street and the Design Code should provide guidance on principles and a number of alternatives.

Issue 15 - The alignment and location of streets and lanes significantly impacts the accessibility and permeability of a neighbourhood. The street hierarchy is not always appropriately resolved resulting in lanes having direct access off round-a-bouts at main access points. Local roads must provide access into the neighbourhood, with lanes accessible from these. A lane should not be accessed off a round-a-bout as it confuses the street hierarchy and creates a poor experience.

Existing lane directly off round-a-bout at Flat Bush.



Top diagram illustrates the existing situation, the bottom illustrates an alternative

Ideas: Include design principles for street hierarchy and layout in a Design Code. Restrict lanes off round-a-bouts and intersections.

Issue 16 - Streets and lanes with poor relationships with the surrounding existing landform (e.g. use of retaining walls at Elwyn Close, and the entry to Carlos Drive).

An example of a poor relationship with existing land required to be supported by a retaining wall at Flat Bush.

Street design has disregarded the natural site features and landform resulting in the streets existing on excavated ground, lower than the neighbouring land. Existing features or neighbouring properties are supported by retaining walls. Elwyn Close preserves an existing tree which now looks totally out of place and more like a pot plant.

Ideas: Ensure all developments (regardless of timing and phasing) relate positively with the surrounding landform. Include principles within the Design Code.

Issue 17 - Splays at street corners reduce the quality of both the street and the lot where they exist.

Example on Baverstock Road – Flat Bush

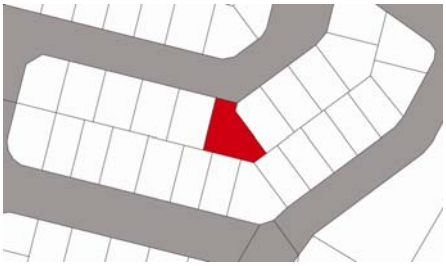
Splays create unusable and unsustainable pieces of land on road reserve, which would be better utilised within private property and creating a strong corner to the street. The notion that splays are required for driver sight lines promotes fast vehicle movement as a driver does not need to slow down or stop to see if the path is clear at intersections. They weaken the form of the street and limit the design of buildings to address the corners.

Manual for Streets published in England researched this issue and make the following observation "It is better to design the junction (intersection) on this basis (arrangement of buildings and footways) rather than purely on vehicle movement. In terms of streetscape, a wide carriageway with tight, enclosed corners makes a better junction than cutback corners with a sweeping curve. This might involve bringing buildings forward to the corner. Double-fronted buildings also have an important role at corners" (Manual for Streets, 2007).

Ideas: Delete this requirement from the Engineering Quality Standards.

Issue 18 - Front lots that have a very narrow street frontage causing frontage and access issues.

Example in Area E – Flat Bush



In some cases the lot shape does not facilitate the type of dwelling intended and has qualities similar to a rear lot. The example above illustrates this issue but the design of the site does not help the situation.

Ideas: Include principles with the Design Code to avoid this lot shape.

Issue 19 - Lack of good pedestrian connections across main roads (eg. Stancombe and Murphy's Roads). Apparently, some traffic lights will be installed to assist, but there is an issue of timing (as a residential population exists) and appropriate locations.

Ideas: Require holistic design for area including pedestrian crossings and signal lights at existing roads to conform to the Council walkways and cycleways network. Require a staging and implementation plan to ensure that the connections are provided for the population when they move there, not some years later. Council to provide leadership to install these elements and ensure that the network is realized in parallel with the development.

Red lines indicate 3m shared use path, underpasses are required at the black circles, but it is unknown what is require at the question marks.

Issue 20 - Confusing road naming that does not assist with wayfinding (e.g. Cyril French Drive which loops around through two neighbourhoods).

Ideas: Include principles in design code to create clear and logical road networks, and a more detailed structure plan.

Issue 21 - Poor understanding of the amongst lot size, lot shape, development typology and the zone do not assist with the creation of identity and character for neighbourhoods.

Development example in the Transition precinct with small lots and large detached houses.

Development example in the Residential 2 zone illustrating similar house to lot size proportions as that in the Transition precinct.

The intent of the various zones and precincts is to provide diversity and positively contribute to the surrounding context. Generally the site coverage rules for all zones are very similar, and don't assist with achieving the intended outcome in the different zones. The photos above are approximately at the same scale and illustrate the ratio of house to lot is very similar. The larger lots are generally further away from the town centre, close to the rural surrounding land. The intention was that larger lots would provide the opportunity for larger rear yards for the inclusion of tree planting to integrate the neighbourhood with the context better. The lots should be less urban and more sub-urban with a higher percentage of vegetation and open space, which is not occurring.

Ideas: Provide clarity of the various zones and precincts within the policy and objectives section of the District Plan is required, to describe the **intended character and outcome**. Adjust the DP objectives, policies and rules to be clear on desired outcome for each zone and precinct and provide the framework to achieve it. Include guidance on appropriate house typology for lot size and shape. Change site coverage rules, shape of lots and housing typology i.e. courtyard houses on square lots.

Issue 22 - Major earthmoving to create level building platforms is not a sustainable practice. A building typology that respects the natural topography is more appropriate and helps to create an identity for the neighbourhood.

Illustration of excessive cut has been undertaken to provide a level building platform, Carlos Drive, Flat Bush

Flat level sections are easy to develop with standard house designs but do not enhance the experience or the creation of an identity for the neighbourhood. It becomes the same as everywhere else. Some of the most exciting places to live and visit exist on interesting landforms which provide variation in height and aspect. Developments on natural landforms also provide more opportunities for exercise.

Ideas: Review the rules regarding earthworks to ensure that Council has discretion over the amount and extent of earthworks to facilitate a development, rather than altering the landform significantly. Provide guidance in the Design Code. Review engineering standards with regards to road gradients and vehicle access to all lots to allow more flexibility and response to the natural landform.

Issue 23 - Limited public art exists

Public art is a good way of expressing the cultural identity, creating a sense of place and further enhancing the character of an area. Furthermore, interpretive art helps people understand local systems, climate, or cultural issues such as weirs in stormwater systems that operate at different flood events or sculpture that might react differently to various strengths of wind. The art can tell a story that people can relate to. It is important that the community gets behind this initiative and helps to develop the outcome to enlist pride and ownership, rather than something a developer has to do.

Art is slowly being introduced to Flat Bush especially at Barry Curtis Park with sculptural elements such as the new vehicular bridge, and the elements within the Wetlands playground as pictured below which are both council projects. However there is limited art within the residential communities already built.





Examples of art in the environment either as sculpture, or incorporated into functional elements such as the bike stands.

Ideas: Provide a strategy for public art and a process for funding, designing and installation. This should be Manukau City wide, not just Flat Bush. It is something that should be facilitated by Council but developed by the community and at the time of development.

Issue 24 - Lack of diversity and distinctive character across Flat Bush.

Residential 1 Zone – General Precinct

Residential 2 Zone

Residential 1 Zone – Transition Precinct

Residential 2 Zone

The photos above illustrate a typical view of the various areas in Flat Bush and each having a similar character. The topography assists mostly with differentiating the areas, not the street, site or building design.

One area does have diversity and a distinctively different character to other parts of Flat Bush. This character is different due to the mix of building typologies that have been developed which are not necessarily well located, or relate well to one another. The typologies include a mix of detached dwellings, terraces and apartments as illustrated below. This neighbourhood is located at the intersection of Stancombe Road and Murphys Road.

Diversity of building and site design at Stancombe Road and Murphys Road

Ideas: A successful human settlement needs diversity in building typologies and uses to provide choice and availability to all people, whether for lifestyle, or financial reasons. Providing as many typologies in one neighbourhood is usually not the correct answer. Consistency of design within a precinct is an important way of developing character which may or may not need to vary between different neighbourhoods. It is therefore important that there is clarity about the character desired for all zones and precincts that make up the Flat Bush area, e.g. the Barry Curtis Park Edge Precinct should have a high percentage of apartments, and maybe no single dwellings. The desired character of the Residential 2 Zone may be more vegetative, etc. This clarity needs to be included in the Objectives and Policy section of the District Plan for Flat Bush. Provide design guidance in a design code to assist the development of each area. Provide assessment criteria relating to the character and identity to assess the positive attributes of a proposal, not just whether it will have an adverse effect.

Issue 25 - The landscape planting in most cases has not developed or indeed been designed and planted to assist with providing character to areas (except within the 'green fingers').

An example of poor landscape design left, and appropriate on right (both at Flat Bush)

The landscape design and installation of both public and private areas (excluding the green fingers) is poor and looks like an afterthought. Planting and landscape elements are very important to a city and neighbourhood by contributing to identity, shade and shelter, privacy, habitat for the local fauna, and structure to the street.

Ideas: Require detailed planting plans for each development including public and private areas for non-permitted activities. Provide assessment criteria to ensure planting will contribute to the character and identity of the locality. Potentially require a minimum landscape treatment to the front yard of all developments. Provide guidance in the design code. This issue is linked with Streetscape issues.

Issue 26 - Neighbourhoods are not recognisable, nor do they reflect cultural identity or personalisation.

There is a lack of neighbourhood definition and identity. There is also a lack of opportunity for community expression, and cultural identity.

Neighbourhoods can effectively be defined by physical constraints or characteristics and road structure. The design of each neighbourhood should embrace the local characteristics to provide a "base" identity. (i.e. designed to appreciate the slope when on a hill, or designed to maximise native bush etc). The cultural overlay is required in addition to the 'base' identity. This can be assisted through building design, landscape design and with the selection of materials that relate to the cultural influences of that neighbourhood.

In the initial period following development, the built form has a large contribution to the identity of a neighbourhood, as it is usually the most dominant element. Control over the design and materials used can produce a "sense of place" as clearly displayed at the Addison development in Takanini. There is the opportunity for a home owner to change the colour and materials in the future, but this will happen over a longer timeframe when maintenance is required. Over the long term timeframe, the street planting will have a large influence on the identity of various neighbourhoods.

Ideas: Provide a more detailed structure plan to define neighbourhoods. This should include plant species selection for each neighbourhood. Require building and site design to reflect the New Zealand culture (which is multicultural) and continue to develop architecture that is distinctive to New Zealand, rather than a copy of that done elsewhere. Ensure that each building fits within its context and assists with identity creation. Use the Design Code to assist with this.

Streetscape Issues

Issue 27 - Private vrs Public space at the street interface is generally not clearly identified, and reduces the spatial structure and importance of streets. There is a lack of front fences and/or planting resulting in the rear berm being a continuation of the front yard, effectively privatising this public space.

Privatisation of Road Reserve

Example of clear public and private space.

The road reserve needs to be a public space. The location and design of the front and rear berms, footpaths, services and trees needs to be such that the space benefits the public. Allowing private paving materials to exist on public land over rear berms instantly privatises the rear berm. The lack of front fences or planting also blurs the boundary and reduces the quality of both the street and the private front yard.

The street design is currently guided by the engineering standards which require a front berm, a footpath and a rear berm. By splitting the berms the available space for the root growth of street trees is considerably reduced and has the potential to stunt growth.

Foot paths along boundaries without rear berms provide a good edge to the street, even if no fence or planting occurs on the private property. The use of hedges and fences along the front boundary can assist with unity and spatial definition even if the buildings don't.

Ideas: Review the engineering standards along with the street hierarchy and determine an appropriate alternative ways of accommodating services which might involve combining front and rear berms. Reinforce the minimum setback from the front boundary to a garage of 5m to allow parking in front of the garage or allow garaging hard on the boundary if there is adequate on-street parking.

Issue 28 - Lack of a coherent street environment due to a mix of building typologies. This occurs on streets such as Carlos Drive, where there is a mix of apartments, terraces, and adapted terraces. It lacks consistency and does not feel like a street.

Mix of building typologies on Carlos Drive

Ideas: Provide guidance and Council discretion with respect to appropriate relationships between buildings and the street context. (Design Code and Assessment Criteria, Urban Design Framework, and identification of neighbourhoods).

Issue 29 - Street trees planted at a small size will take years to assist with amenity of the street (if they survive).


Example with good sized trees at Addison, Takanini

Ideas: Council to take on responsibility for planting, establishment and maintenance of trees in main roads that currently exist, and receive contributions from developers upon start of construction for new roads. Revise the requirements for street tree size, planting details and ensure that adequate growing medium is provided for the tree species. Ensure that protection and supports are provided.

Issue 30 - Parking restrictions on streets increases the trafficable road width and are too wide. (e.g. Baverstock Road and Erica Road).

Illustrating excessive lane width due to parking restrictions


Erica Road (local road) existing with restrictions


Erica Road alternative solution with carriageway reduced and improved amenity

If restrictions are required on a street that would normally permit parking, then the carriageway will be too wide. This can facilitate higher speeds and reduce the amenity of the street. The street design should permit parking, with no reason to restrict it with lines or signs.

Ideas: Provide guidance and design options for different street typologies within a street such as providing wider berms to replace the parts of the road that are restricted. Consider design options for the hierarchy of street, which may include tree planting within the parking lanes to assist with low speed streets even when no cars are parked there for example.

Issue 31 - Parking restrictions on narrow roads

Kestev Drive illustrating narrow road without parking restrictions and unorganised parking.

Narrow roads generally require parking restrictions to maintain a travel lane. People are less likely to park on narrow roads where there is a high possibility of someone backing out of a driveway and hitting parked cars. The restrictions and the avoidance of people willing to park on narrow streets can result in parking occurring on private property in an unorganised way. This reduces the amenity of the street, and can make it difficult for visitors.

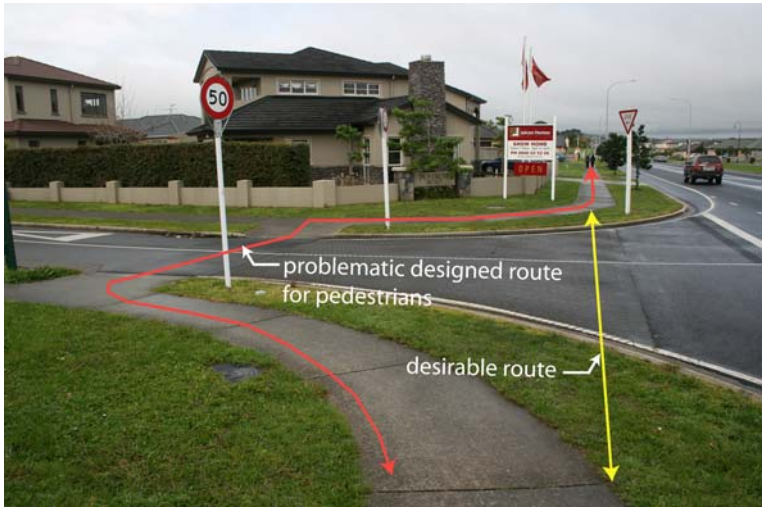
Ideas: Provide guidance on the neighbourhood design to ensure that the road configurations and building typologies are compatible. Provide a more detailed structure plan. Consider prohibiting 5.4m wide carriageways, and or develop a hierarchy of road configurations.

Issue 32 - Cycleways are poorly identified.

There does not appear to be opportunities for arterial roads or other main collector roads to provide for cycle lanes separate to the vehicle lane, although it is understood there is a route around the perimeter of Barry Curtis Park, but not identified in the cycleways and walkways masterplan.

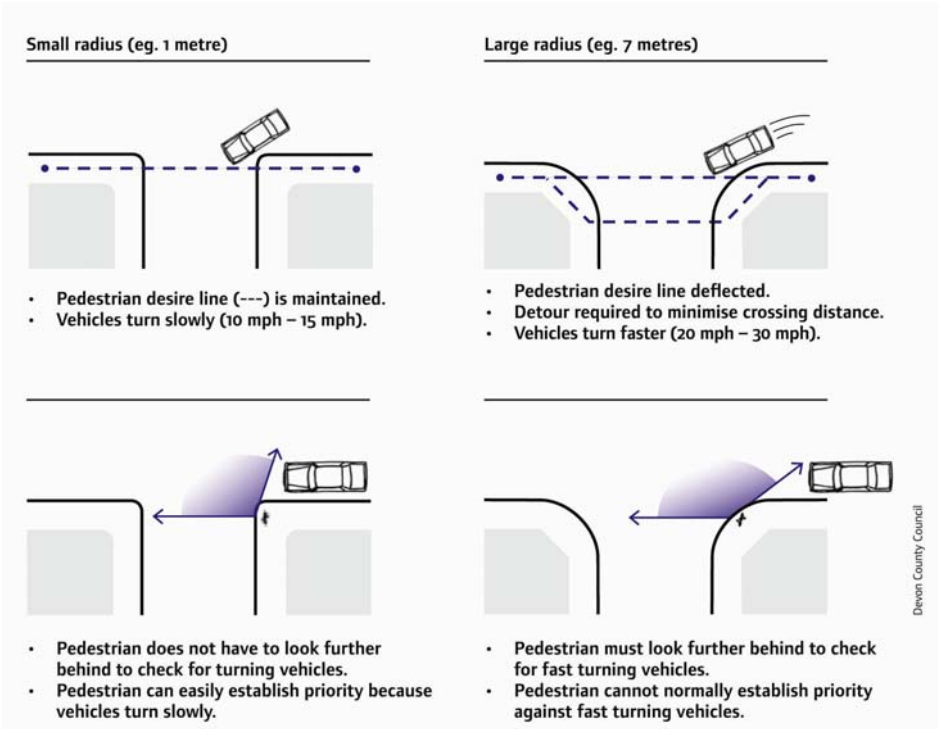
Ideas: The Flatbush Cycleways and Walkways Masterplan needs to include connections through and within Barry Curtis Park (as we assume there are these elements within) as they will play a big role in the circulation of people through the area. Design needs to be holistic to ensure appropriate links / crossings and routes are achieved by including them in a more detailed structure plan.

Issue 33 - Large radius corners at street intersections encourage faster vehicle movement and are not ideal for pedestrians. They are a car dominated solution and results in footpath positions and crossings not coinciding with pedestrian desire lines. Design should be specific for the type of street.



Large radius corners can be a result of narrow carriageway widths. It is important that service and emergency vehicles can access all streets but the kerb does not necessarily need to follow the turning circle. It is also important that vehicles do not damage the berms etc.

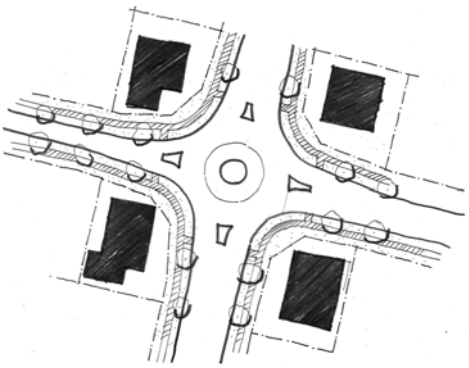
The Manual for Streets published in England illustrates their research into this issue as follows;



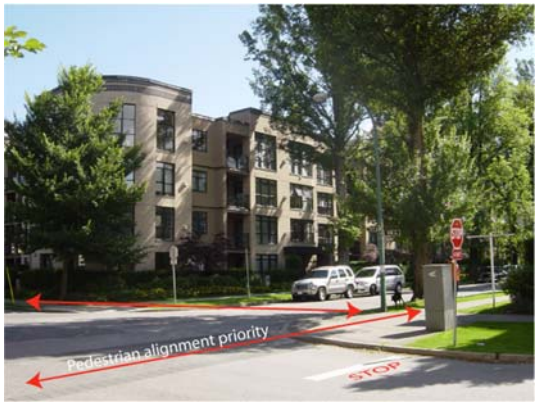
The effects of Corner radii on pedestrians (Thomas Telford Publishing (2007), Manual for Streets.)

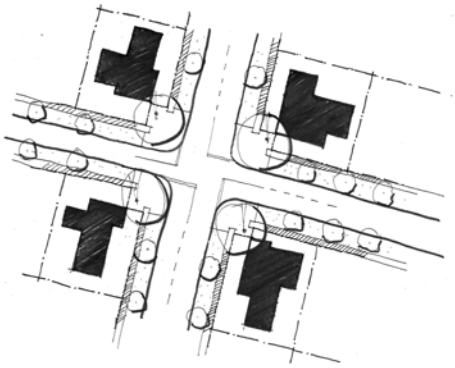
Ideas: Provide design guidance for intersections at different types of roads to ensure footpaths are aligned and functional for pedestrians in the design code and remove reference to the engineering quality standards. This includes giving pedestrians the best view of vehicles approaching, their path not being blocked by vehicles waiting at intersections etc. Provide a more detailed structure plan.

Issue 34 - Round-a-bouts in local streets reduce pedestrian accessibility and amenity due to pram ramps and footpaths not aligned for the desired direction of travel; they take up more land and reduce visibility/views along the street.



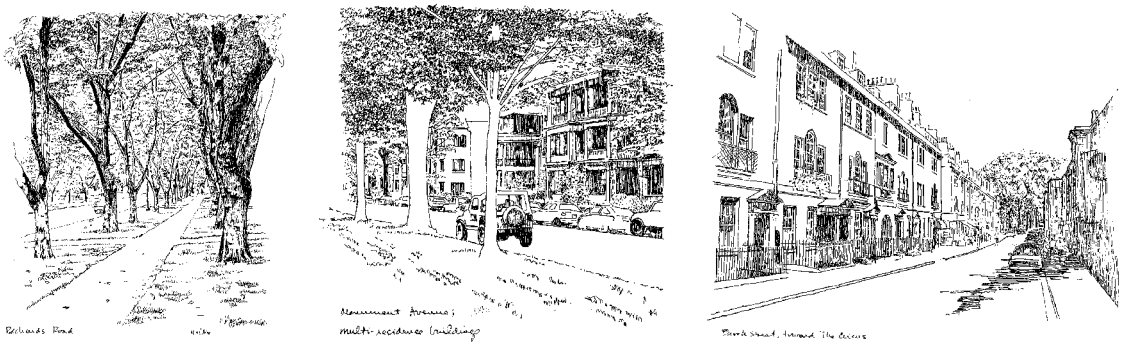
Existing round-a-bout at Erica Road with alternative simple intersection below





Ideas: If the intersection needs to be emphasised or used to slow traffic (or speed up traffic in case of a round-a-bout) then there are other design solutions that can achieve the same effect. Include alternatives in a design code such as creating spatial definition with the use of buildings, or creating intersections for pedestrians to indicate to or warn pedestrians of the potential hazard.

Issue 35 - Lack of street design that identifies a neighbourhood or precinct, or displays a level of community importance.



Images of streets with different identities from Great Streets, Allan B. Jacobs

Streets can be wide and be a beautiful and exciting place to be. Arterial streets do not need to be clear for the entire day/night. Long streets may need variation to indicate various precincts as one travels through (if they exist). Arterial streets have the opportunity to be great streets, interesting, dynamic and be more than the current

utilitarian response. They are usually straight and built on improved topography therefore removing the natural changes along its route. A range of experiences is required to be delivered by all streets. How does the streets provide for various modes of transport and are they equal in importance?

Ideas: Provide guidance in a design code, and provide a hierarchy of streets in a more detailed structure plan.

Issue 36 - Relationships of buildings with the main streets are tight and also provide little space for enhancing the amenity and desirability for people to use the street. Stancombe Road is an example where wider footpaths and berms could provide a more comfortable space for people whilst conveying vehicles appropriately. If higher densities of people are going to reside alongside this primary road, the environment needs to be improved for pedestrians.

Stancombe Road

Avenue des Champs-Elysees, Great Streets, Allan B. Jacobs (1995) Illustrating a pedestrian friendly access street adjacent to an arterial road

Arterial street in Melbourne with wide footpaths

Ideas: Require that streets are designed such that they consider all elements within the street space as one, not just the width of the elements. The street needs to be a setting for the buildings.

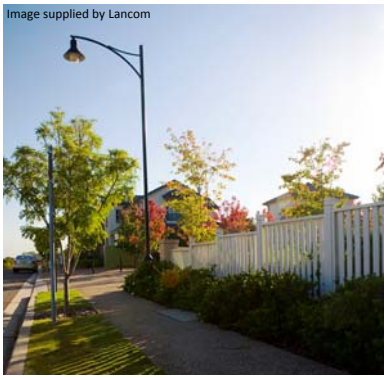
Issue 37 - Rule 9.9.2.11b) Street planting is too restrictive by excluding tree planting within certain distances from other elements. This does not achieve a good tree lined street with high amenity and environmental quality.

Ideas: Review this rule and required setbacks, and put focus on the elements that will enhance the quality of a street.

Issue 38 - Lack of transition between the road and residential buildings. No small shrub or ground cover planting occurs in the street berms. This can significantly enhance the quality of the street, especially when buildings abut the street boundary.

Apartment on Stancombe Road as existing

and simulated with rear berm planting & good street trees



Three variations of the theme

Ideas: Include options in a design code and allow planting to occur in public land or require a setback to allow this to occur in private land to integrate buildings with the street where appropriate. The road reserve widths need to be designed with the building typology and may need to be wider than standard to accommodate this planting.

Site Design Issues

Issue 39 - Some developments do not relate well to their contextual environment.

This large slab building currently being built next to the Fo Guang Shan Buddhist Temple does not have a positive relationship with the temple nor to the existing historic building behind. It is too high, dominating the temple and the historic building

Ideas: The various zones need to be well described for designers to understand the anticipated development form. Use an urban design framework and neighbourhood concept designs, and require contextual assessment of a proposal based on criteria developed in a design code.

Issue 40 - Poor activation and detail at the ground level fronting streets, with majority of frontages dominated by car parking.

The above photo is a new building on Stancombe Road which illustrates this issue. Only a small part of the frontage has the potential to be an office or retail unit, the rest is inactive to the street. The building does not extend the full frontage of Stancombe Road which further reduces activity and relies on a fence and planting to screen the parking behind.

Ideas: The District Plan needs to be clear on the intent for activation along the street frontage. If activation is required and this plays an important role to the social function of the street, then adjust the rules to provide active frontages and limit the amount of blank walls. An assessment of the amount of sustainable retail / commercial space may be required to support the desired uses and outcome on these roads. Use the urban design framework to identify the required active frontages. If residential uses are provided at the ground level, then a different edge treatment maybe required.

Issue 41 - In some cases the building typology does not suit the lot size or shape, for example the blocks on the north-west side of Carlos Drive. The lot size is inappropriate and further restricted by the Flat Bush buffer and the designers have struggled to make it work.

The maximum area is taken for vehicle circulation and the rear public courtyard is car and garaging dominated, therefore minimizing private outdoor space. Dark entry doors and no front yard creates a dead space. Window/wall size ratio is poor. Only modulation is where two units are stepped forward 500mm. Excessive down pipes and visible service connections are visually dominant. The trees planted in the centre of the court will (over time) create a good canopy over the courtyard and help to enclose this space, limiting overlooking.

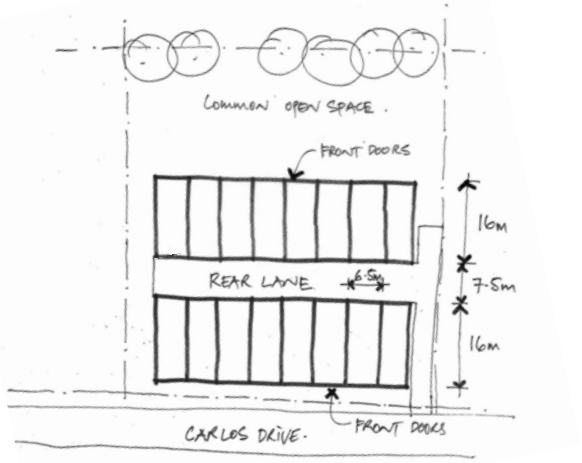
Ideas: Require holistic design and ensure that building and lot design are developed in parallel. Provide assessment criteria to assess developments with shared courtyards.

Issue 42 - Mock English Terraces developed not fronting a street as they were originally designed for, and have poor separation and outlook space to the rear due to the vehicle access lane. Design does not understand the typical terrace typology and how it works with the block and street/lane layout.

The front (not fronting a street)

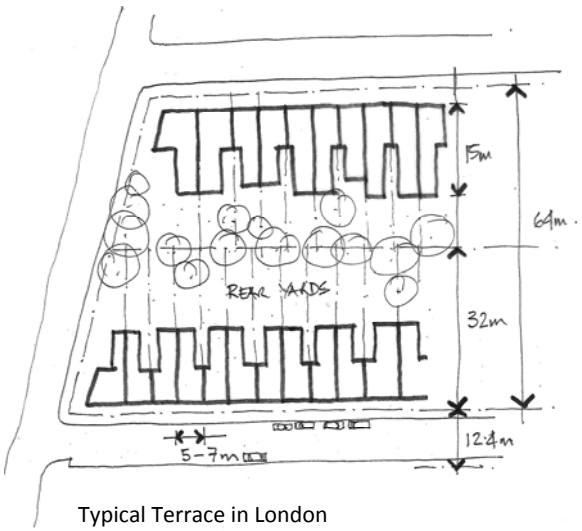
The side

This example eliminates the rear yard and reduces the size of the dwellings by locating garaging within. There is no privacy to outdoor areas.

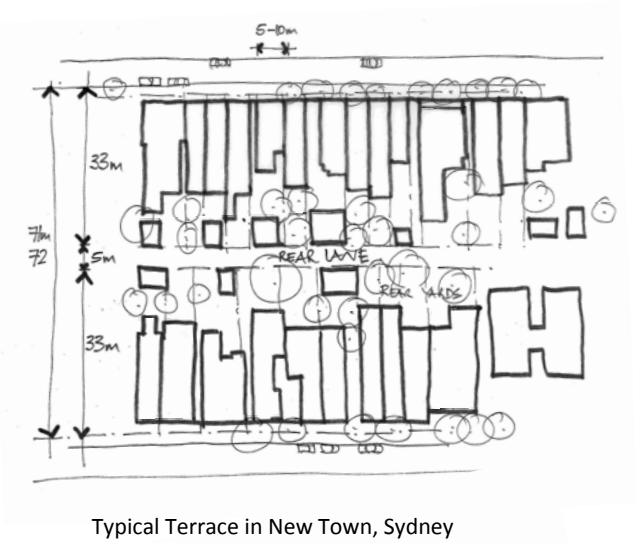


Plan of example illustrating the rear terrace not fronting a street for part with no rear yards.

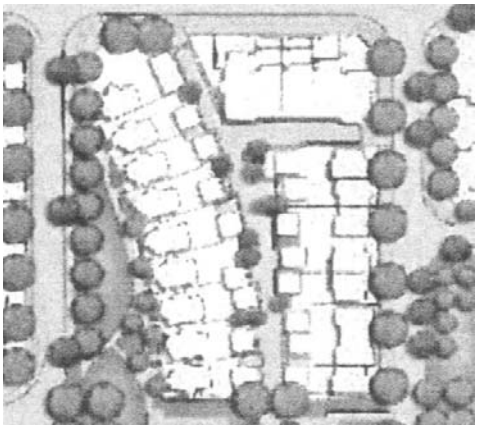
Traditional terraces front the street and have a small front yard with parking on the street. They have a rear yard, which when located back to back creates an open space through the length of the block. Outdoor privacy is achieved in rear courtyards created by building design and planting. The inclusion of garaging can be accommodated with the inclusion of a centre lane resulting in a deeper block and a reduced rear yard. The following diagrams illustrate the more traditional terraces.



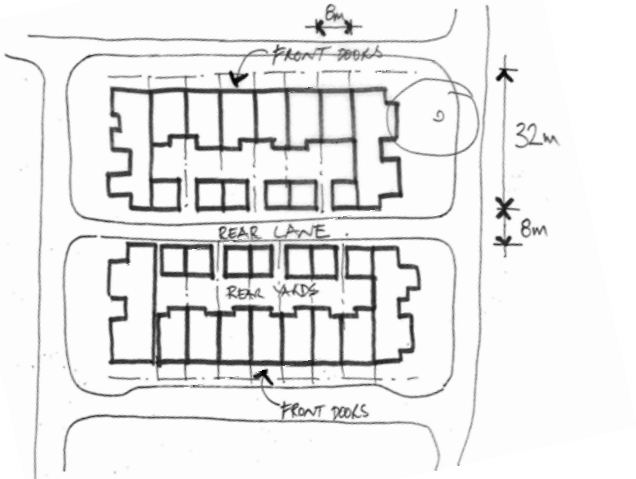
Typical Terrace in London



Typical Terrace in New Town, Sydney



Recent development at Addison, Takanini



Recent development Gungahlin, ACT Australia

Ideas: Require building typology to be appropriately related to the street and the block. Develop blocks within a more detailed structure plan to facilitate the various building typologies.

Issue 43 - Narrow side yards are inappropriate and an unsustainable use of land.

Inappropriate side yards

There is a requirement for a 1m side yard from each dwelling to the common side boundary. This has resulted with fencing delineating the lots as illustrated above. The side yard does allow limited access but does not enhance the amenity of the sites or of the street. Limited sun penetrates the space, limited planting can occur, and can result in buildings with windows that open on to this space, reducing privacy. The width also limits usable access to the rear yard. Site and building design should maximize the site so that small unusable spaces are avoided. Spaces should be designed with suitable dimensions for use by people, and/or for amenity planting.

Ideas: Provide options for site design including a side yard on one side only, and or a wider side yard which can provide access and amenity planting. Adjust the rules requiring 1m side yards, which may include allowing building to the side boundary.

Issue 44 - Front yards generally have minimal landscape treatment, and there is generally no tree planting on lots that will develop to large specimens.

Ideas: Require all developments to provide and implement a landscape plan with clear objectives.

Issue 45 - Double car garaging with single doors generally take up too much building frontage therefore dominating the front yard and street.

Single door double garage dominates the front yard

Recessed single garages reduces visual impact

Some garages exist in front of the main house façade (in the transition precinct) which can further dominate and reduce the amenity the street.

Ideas: Limit the width of garaging to a percentage of the site width, not to a percentage of the area of the front elevation of the building. This may result in only a single width garage on narrower sites. Reduce the visual impact of wide monolithic garage doors by integrating the design of these with the building architecture and in proportion with the building. This may result in two single doors such as the example above. Require all garages to be in line or behind the main building facade.

Issue 46 - large conventional houses on small square sites are not designed to suit the site.

Large houses on square sites in Flat Bush

Courtyards are provided in the middle two, but are not private. There is minimal permeable area on each site and limited planting.

Ideas: Encourage innovative design solutions to provide a building typology that suits square lots, so that courtyards are created with privacy, the permeable area complies with minimum requirements and planting occurs to enhance the amenity. Add minimum rear yard setbacks of 6 to 8m. Alternatively, allow only for appropriate house typology, i.e. courtyard houses.

Issue 47 - The design of properties that back onto a lane needs to facilitate a visual connection and relate to the lane.

Poor outcome in a rear lane in Flat Bush

Rear lane detail at Addison, note wider permeable fence

Garaging usually occurs on the lane and occupies most of the rear boundary, but some opportunities to overlook or have visual connection with the lane are required to assist with surveillance and safety of the lane.

Ideas: Limit solid fencing between the lane and the rear yard, require percentage of lane walls to have penetrations to rear yards, include / encourage habitable rooms or flats above the garages.

Issue 48 - Rear lanes are important spaces and should include trees, shrubs and lighting.

Rear lane at Flat Bush with poor amenity

Interesting lane with trees, lighting, and shrubs

Illustrates the importance of trees either in or adjacent to lanes.

Lanes need careful consideration and design to be successful. They need to be of an appropriate length that provides ease of use, permeability and promotes safety. The width needs to facilitate vehicle access but this should not necessarily dominate the space. The buildings and their alignment play an important role in defining the special character of the lane.

Ideas: Include design guidance in the design code for layout and configuration and tree and shrub planting. Consider assessment criteria for lanes. Require tree planting either within the lane or adjacent to which will enhance the amenity of the lane. Require adequate lighting to assist with a safe and comfortable space.

Issue 49 - Lack of sun orientated design responses.

Ideas: Encourage designing for the sun through a design code. Maximise orientation of habitable (lounge, dinning, kitchen) rooms to the north, east and west.

Issue 50 - Very few lots are designed for the occupants to sit in the front yard and be part of the street.

A good example of a front yard adjacent to the street where occupants have privacy but are still aware of the happenings in the street.

Ideas: introduce usable private space between the street and the house, eg. porch, verandah, pergola, courtyard.

Issue 51 - Lack of high quality onsite outdoor space for apartment occupants.

Existing onsite open space at Flat Bush

A good example of onsite facilities

Many of the apartments developed at Flat Bush to date have poor quality exterior common spaces that do not benefit the occupants. Many are large apartments with three or four bedrooms where you would expect children to reside. It is acknowledged that balconies associated with each apartment are of a good size as currently required, but additional outdoor spaces should be provided for children to get outside without the need to go to a park necessarily. Common spaces have been provided for access and outlook, but have minimal planting and do not provide opportunities for play or

recreation. The design needs to provide privacy to private open spaces where they abut common open space. The example above illustrates this problem where a steel fence provides the separation and no privacy.

Ideas: Require apartments to develop usable outdoor common space with high quality amenity, and that provides privacy and amenity to private outdoor spaces at similar levels. Consider the quantity of outdoor space required which would contribute to the amenity and character of the area in which the development is situated. This may vary from zone to zone and precinct to precinct.

Issue 52 - The change in ground level has been executed poorly between some sites.

Change in level at Flat Bush at site boundary

A good example where the change in level has been accommodated within the building

Ideas: Minimise the use of additional structures to provide a change in level between properties by providing guidance on appropriate methods and house design to overcome level change issues. Require developments to be specifically designed to suit the landform and provide guidance on design and materials for retaining walls.

Building Design Issues

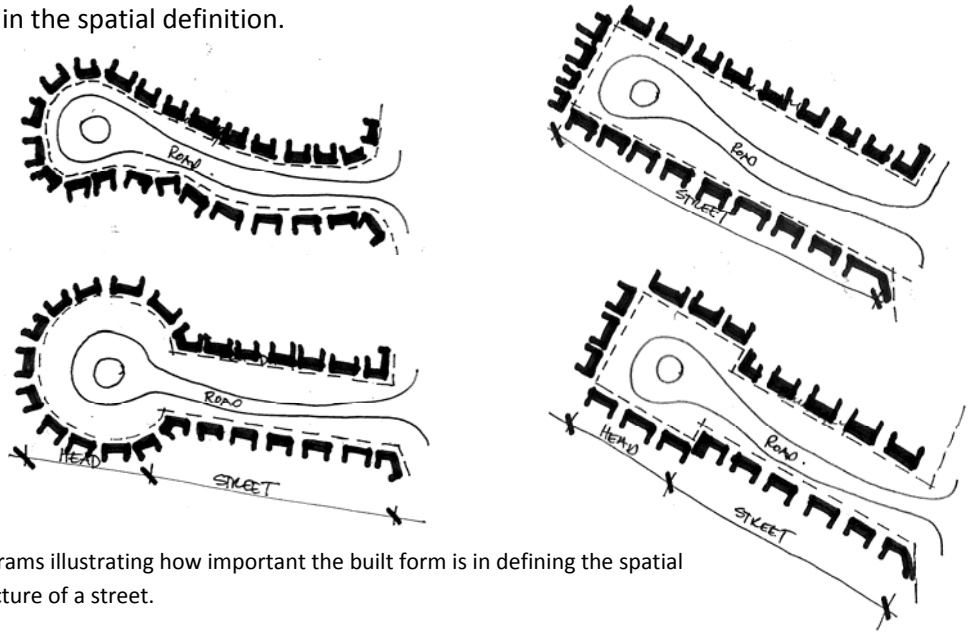
Issue 53 - Visually dominant built form due to the lack of appropriate open space and trees.

The design of each individual development should consider the context to ensure the building contributes positively to the environment. The example above illustrates the problem where no trees or other vegetation is visible to help to mitigate the effect of building development. Trees and other vegetation provide a sense of depth to a neighbourhood by screening some buildings, they break up the built form and provide a variety of colours, shapes and textures in contrast to the built form.

Ideas: Ensure that adequate street trees are planted and are of a suitable size that will contribute quickly. Ensure that site coverage is appropriate in the different zones, and that rear, side or front yards can accommodate mature trees. Consider requiring resource consent for all houses and require landscape plans.

Issue 54 - Spatial definition of the street by buildings is poor. Buildings don't follow the street alignment enhancing its form, nor do the buildings positively address cul-de-sac heads.

This issue is that buildings should define the space, which follows on from that above in the subdivision section, but focuses on the built form and how the built form plays a key role in the spatial definition.



Diagrams illustrating how important the built form is in defining the spatial structure of a street.

Ideas: Require buildings to contribute to the spatial structure of the street. Illustrate options in design code. Include assessment criteria in subdivision rules in the District Plan.

Issue 55 - Limited design response on corner sites that relates to both streets.

A poor example at Flat Bush

Good example at Flat Bush

Good example at Nelson Ridge, NSW, Australia

Ideas: Require buildings on corner sites to address both streets as a special type.

Issue 56 - Lack of a habitable room fronting streets.

Example where no habitable ground floor rooms front the street, Mayfield Crescent, Flat Bush

The photo illustrates a house design which has no habitable rooms at ground level fronting the street. The width of the lot is narrow but the design still includes a double

garage. There is a rule in the District Plan that requires a minimum 4m wide building frontage (not including a garage). This design has cheated the intent of this rule and the resulting room is approximately 3.5m wide which houses the front door and entrance, with a stair leading to the second level. Whilst the dwellings look like they are fronting the street, they could be facing a rear lane. Bedrooms at the second level assist with the perception of people overlooking the street but are mostly useful at night when there is someone in the bedrooms.

Ideas: Review the rules and test a variety of lot sizes to determine what rules are required to ensure that dwellings actively front streets. Include a rule to require at least one habitable room on the front building façade at ground level.

Issue 57 - Access to ground floor apartments is not direct

No access from the street frontage in Carlos Drive

Street frontage with individual access to ground floor apartments in Brisbane.

Individual access to ground floor apartments in Vancouver

Ideas: Require all ground floor apartments fronting the street to have front doors directly accessible from the street to provide legibility, street activation and interest.

Issue 58 - Lack of architectural response to locality, climate and culture (i.e. verandahs where people can sit outdoors while it is raining).

Example of front verandahs (supplied by Victor Dover, 2005)

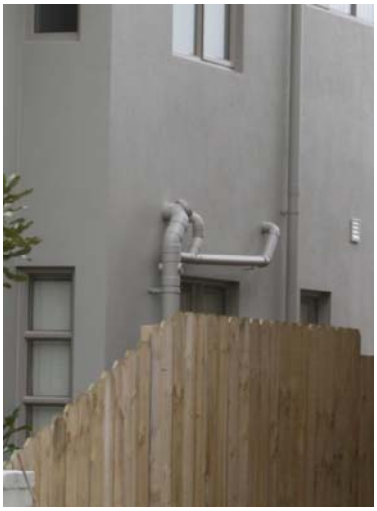
Ideas: Assessment criteria for assessing building design that is specific to New Zealand.

Issue 59 - Privacy issues through side windows and overlooking rear yards.

Windows in close proximity opposite one another can reduce the privacy of each dwelling. The example above has been designed such that windows to bedrooms are at a high level to allow light and bathroom windows are frosted, but there is the potential for audible privacy to be reduced, especially when windows are open.

Ideas: Encourage greater separation between buildings where windows are required, or limit windows on walls within a certain distance to another building. Provide guidance on screening between units, landscape treatment, longer lots, zero side yards, and assessment criteria.

Issue 60 - Lack of thought and attention to the detailing of services.



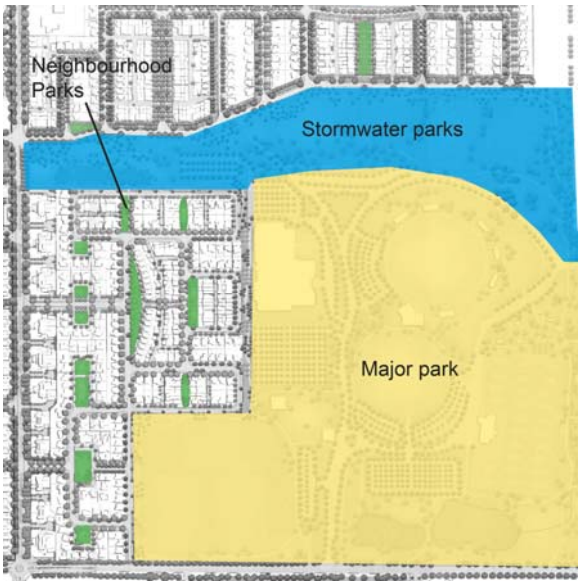
The degradation of the visual quality of the existing neighbourhoods is contributed by the poor location and design of services such as exposed waste pipes, power and telecommunication connection pillars and the like. The photos above illustrate this unnecessary clutter and poor outcome.

Ideas: Inclusion in design code.

Public Open Space and Recreation Issues

Issue 61 - Lack of small parks such as places to sit, tiny tots play grounds, etc within close proximity of all houses.

Parks in Flat Bush



Parks in Addison (note images are not at the same scale)

The Flat Bush example illustrates the location of parks which are evenly distributed and appear to achieve the requirements in the District Plan of within a 500m walk from dwellings, but they are not neighbourhood specific. Whereas the Addison example has a number of smaller parks with good accessibility from all houses and are more neighbourhood orientated. Children's play grounds need to be accessible by children without their parents and should not have to move out of their neighbourhood, or cross main roads to access them.

Ideas: Consider the size, use and location of parks which may vary from precinct to precinct depending on the development typology to ensure that residents have good access and encourages use. Revise the rules to accommodate and include desired parks in a more detailed structure plan.

Issue 62 - Lack of variety of community recreation facilities. The 'green fingers' are a valuable asset, but there are currently no playing fields, skate board bowls, tennis courts, swimming pools, etc.

Ideas: This needs Council and Community leadership to firstly stock take what exists, determine what is required and develop a strategy for implementation. This should discussions with Ministry of Education to hopefully include playing fields and gymnasiums at schools for use by the public.

Community Facilities Issues

Issue 63 - Lack of services such as shops, library, entertainment, healthcare providers etc within close proximity of neighbourhoods.

The Community feels well serviced but mostly by Botany Downs, Botany Town Centre and Botany Junction (Gravitas Survey 2008). More facilities will be provided once the Flat Bush town centre and the three proposed neighbourhood centres are developed, reducing the need to travel.

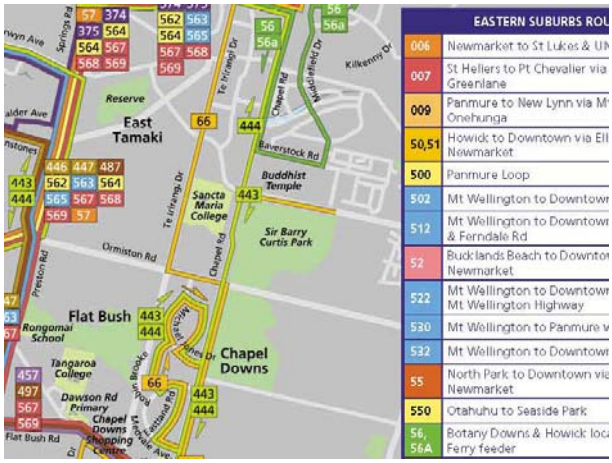
Ideas: More consideration is required for the inclusion of corner stores, video stores, pubs, cheap restaurants and the like on the edges of neighbourhoods. It may be appropriate to zone particular sites to encourage these activities.

Issue 64 - Access to and use of schools by the public is undetermined and unclear.

School facilities such as halls and car parking spaces etc could assist in mitigating the lack of other facilities in this area, if not; alternatives may need to be sought.

Ideas: Council to work with all schools and Department of Education to reach agreement.

Issue 65 - Bus services are not provided within convenient walking distance of all houses.



Current Bus routes within Flat Bush left. (New routes are proposed)

Existing bus stops in Cyril French Green Finger below

Ideas: This is an issue of timing to meet development and when the services are provided. There is a substantial population currently residing in Flat Bush and services need to be put in place to achieve the objectives of the plan. A public transport strategy should be in place and suggest additional funding required to subsidise lower patronage bus services. Land Transport New Zealand has contributed funding to the new Ormiston Road Bridge, but Flat Bush needs the services to move people across it, and other roads. The design and location is also an issue to ensure the appropriate locations of bus stops that are convenient. The example above provides good accessibility for people in the green finger, not the neighbourhood blocks either side.

Issue 66 - Limited choice of travel modes.

Objective 17.10.3.8 is *"to achieve a safe efficient, well connected and integrated transport system within and beyond the Flat Bush area that provides a choice of travel modes including pedestrian, cycling, passenger transport and motor vehicles".*

Currently some neighbourhoods have more travel choice than others due to the timing of bus services, development of walkways, and cycleways with safe connections, the location of facilities (such as shops) with respect to dwellings also allows some people to make a choice as to how to travel to these. Many of the neighbourhoods are still dominated by private motor vehicle transport.

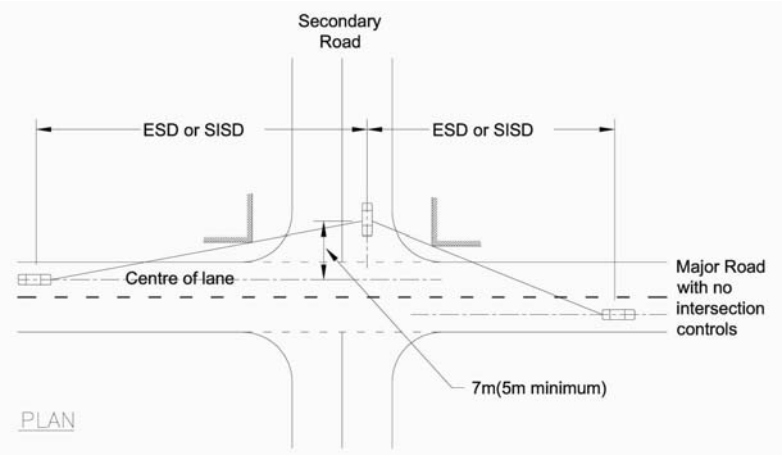
Ideas: The alternatives need to be part of the comprehensive transport network for moving people and the understanding of where people want/need to travel to. Consideration is also required as to the timing of services, shops and community facilities so that there is choice available to the establishing community. This may include subsidised bus services, or the use of smaller busses to while the demand is growing. It may be suitable to reduce the amount of parking and garaging required for the various uses if there is choice and alternatives for moving people.

The *Flat Bush Cycleways and Walkways plan* is one of the areas where Manukau City Council has taken the initiative to develop this part of the network, but it is **one part** and needs to interrelate with all other parts of the transport network. Do the bus stops align with these paths, how do people cross the roads, what alternative modes, how does the area link with the wider regional networks such as the train?

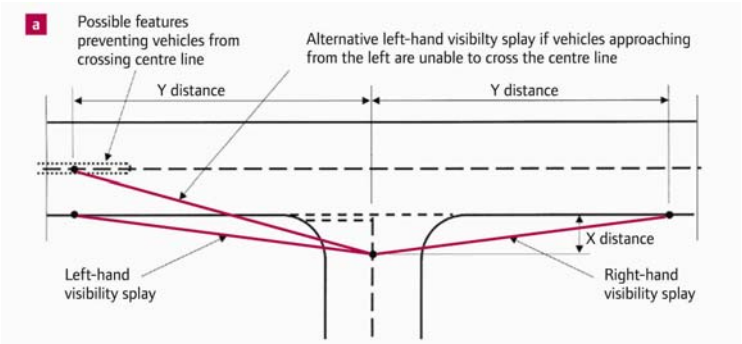
Engineering Issues

Issue 67 - The engineering standards require a clear sight triangle at intersections which does not necessarily assist with the creation of good streets. It is understandable to have a clear sight line when at the intersection, but not before it.

The current Council standards require intersection design to comply with the diagram to the right. The SISD distance (urban) = 80m at a speed of 50km/h . The position of the driver should be when they are stopped at an intersection.



The Manual for Streets published in England has a slightly different diagram which uses the kerb rather than the centerline of the lane. The follow diagram is from Manual for Streets where they recommend that the X distance = 2.4m in most built up situations (front of car to driver's eye, max) and that the Y distance is 45m for speeds of 50km/h.



When comparing the two it would appear that the later has a shorter Y distance, however please note the different positions where the measurements are taken from. For an 8m wide main road and a 4.8m wide secondary road, the Y distance is 4.2m shorter in the later example.

Ideas: Review standard to incorporate recent research and identify what is acceptable within this view cone. Include in the design code. Consider what elements are acceptable within this triangle (trees, signs, light posts etc).

Issue 68 - The engineering standards prescribe the configuration of the street (front berm, footpath, back berm, service placement, tree planting, corner radii etc). This is not suitable for all streets. Need flexibility to develop what is suitable to achieve good amenity.

Ideas: Incorporate into a design guide and propose solutions suitable for the type of street.

Issue 69 - Poor road design that creates undesirable sized blocks, connection issues and left over space such as the Murphys Road / Stancombe Road intersection. Splays on street corners, roads having to meet at ninety degrees to other roads, large radii on street corners, and round-a-bouts causing impediments for pedestrian movement as discussed in streetscape issues.

Current road pattern at Murphys Road with building figure ground (existing and anticipated)

Alternative simple intersection that provides good connectivity and appropriate block sizes, a strong spatial form and does not prioritise one movement.

The curved road alignment was designed to encourage traffic along Stancombe Road rather than using Grace Church Drive, and to maintain traffic flows. This intersection is now likely to be a signalized intersection and therefore could have been a simple 'T' intersection with good built form supporting it.

Ideas: Road design needs to be integrated with the other components of the environment. Alternatives are required for each type of street.

Planning Process Issues

Issue 70 - Lack of Council control over developments due to the permitted and controlled activity status provisions in the District Plan.

Many of the building developments to date are permitted activities, requiring only a building consent. This is a good approach to simplify the process and cost of development as long as a good built outcome is achieved. The issue arises when poor architecture and/or site design is proposed, Council has no control.

Ideas: Review the activity status provisions in the District Plan.

Issue 71 - The assessment of development and infrastructure proposals by different departments within Council.

Issues are assessed by different departments rather than by an interdisciplinary group.

Ideas: Develop a multidisciplinary Council Team for the assessment of proposals within Flat Bush. The team must include all disciplines and appreciate the common goal.

8.0 Recommendations:

There needs to be a concerted effort by Manukau City Council, property owners, developers, infrastructure providers, and the local community to lift the quality of Flat Bush to a higher level and not only bring the quality of the development into line with best practice solutions, but lead New Zealand in developing urban environments that are designed for local conditions. Manukau City Council led this challenge approximately 10 years ago through the Flat Bush Concept Plan and Variation 13, and it is now time to do it again to ensure that a better environment is achieved.

We recommend that development typologies be fostered that combine subdivision patterns, street typologies, building typologies and landscape concepts as integrated "wholes".

The approaches that can have a large influence in achieving this are:

1. Create an the interdisciplinary Flat Bush Council team to guide development where development proposals and infrastructure works are considered as a whole by that team, not broken down into elements and dealt with separately by various disciplines or departments.

2. Prepare a more detailed structure plan for Flat Bush to provide more guidance on the design of neighbourhoods, blocks, streets, and lots, perhaps called the Urban Design Framework Plan. This is to provide more detail than that on the "Development East Tamaki Concept Plan".

3. Compile a Design Code (for subdivision and development) to provide more guidance on the identified issues as appropriate for Flat Bush.

4. Review Councils Engineering Standards and include special standards in the above design code for Flat Bush as appropriate.

5. Prepare changes to the District Plan including more design-led specific visions, rules and assessment criteria for the various zones. Review and adjust the provisions for activity status as too many developments have been permitted activities resulting in poor outcomes. Introduce subdivision assessment criteria.

6. Use pilot schemes to test and illustrate concepts proposed in the design code.

7. Update the Flat Bush Cycleways and Walkways Master Plan and document.

8. Drive the development of the Community Plan and engage the community with the future of Flat Bush.

9. Encourage Council, ARTA, ARC, Landtransport NZ, Bus companies and other transport providers to lead the alternative transport modes that are desired.

10. Develop a strategy for public art.

9.0 References

Manukau City Council documents:

- The Development East Tamaki Concept Plan adopted 1999;
- Variation 13 to the District Plan (notified in 2001 made operative in 2006);
- Comprehensive Catchment Management Plan 2001;
- Flat Bush Community Plan 2006.
- Flat Bush Cycleways and Walkways Master Plan (2005)
- Engineering Quality Standards

Department for Transport (England), Manual for Streets, (2007).

Dover, Victor. ACNU Conference Presentation, (2005).

Gravitas Research and Strategy Ltd, Community Research in Flat Bush – Survey of Residents, (June 2008).

Google Earth (online 2008)

Jacobs, Allan B. Great Streets (1995)

Landcom NSW Australia. Online image library, (2008).

New Zealand Census 2006, Statistics New Zealand (2008).

Appendix 1 – Flat Bush Assessment Matrices

Flat Bush Study Areas and Context

Plan of the north area of Flat Bush with the study areas illustrated.

Seven study areas (A-G) have been identified as a good representation of the development in Flat Bush to date. Assessment criteria has been developed based on the aspirations for Flat Bush and used to assess each study area to identify issues. Appendix 1 includes this assessment.

Assessment Area A – Baverstock Road

Development typology

	Block A	Block B
Street typology	Local roads, half cul-de-sacs	Local roads, half cul-de-sacs
Street width	Baverstock Road = 20.6m Stornaway Drive = 14.5m Elwyn Close = 12.5m (varies)	
Block size	188 x 146m (including cul-de-sac)	
Block shape	Irregular – horse shoe	Irregular – horse shoe
Residential Density	19.9d/ha (net)	21.85d/ha (net)
Lot location		
• Front	27	18
• Corner	6	5
• Rear	6	2
Average lot area	509.4m2	469.9m2
Minimum lot area	331.3m2	331.6m2
Maximum lot area	645.4m2	650.2m2
Lot dimensions	15.4x24.8m, 19x28m, 17.9x34m, 23.6x24m	15x22m, 19.4x23m, 15x21m, 19x27.7m
Site coverage	40% (assumed as permitted)	40% (assumed as permitted)
Building typology	Detached dwellings (mostly 1 storey, some 2 storey)	Detached dwellings (mostly 1 storey, some 2 storey)
Garage	Double garage (mostly)	Double garage (mostly)
Off street parking	In front of garage	In front of garage
Front yard	3.5m ave, 2.3m min, 7.6m max	3.2m ave, 2.3m min, 4.8m max
Side yard	1.5m ave, 0.2m min, 5m max	1.4m ave, 0.6m min, 2.5m max
Rear yard	2.8m ave, 0.5m min, 8m max	3.7m ave, 1.0m min, 5.9m max
Activity status	Subdivision = RD, Dwellings = P	Subdivision = RD, Dwellings = P

Assessment of Area A

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes, roads have been created as per the structure plan plus additional ones to form blocks. It is a residential area designed generally in accordance with the guidelines set out in the DP such that lots generally front streets and there are minimal rear lots.
Are the densities being achieved with good amenity?	The development is approximately half of that permitted in the District Plan which works out to be a density of 40 dwellings per hectare (net & without limitations of other rules). Blocks A and B are at a density of 19.9ha, and 21.8ha (net) respectively. The DP allows lot sizes between 250-475m2 average. Block 1's average is 509.4m2, larger than 475m2 max and range from 331m2 to 645m2. The larger sites are generally rear lots. The amenity is average.
Does the area recognize and enhance the landscape character?	The development excluding the green fingers does not portray or continue the landscape character of the area. It is another residential subdivision that could be anywhere.
Does each development respond positively to the physical elements and relationships of the wider environs? (visual sense to link to green fingers etc) links to town centre and Barry Curtis Park, links to the reservoir hill.	The previous landform has to a large extent been retained (from what we can estimate) except for at the location of the retained tree (corner of Elwyn Close and Cyril French Dr) where the land has been unnecessarily lowered to accommodate a road. Native street trees have been included, but little other vegetation developed. Limited visual connection with green finger.
Have green fingers been developed to the extent as proposed? Are views to the green linkages maximized, from private property or from the street network?	Yes green fingers are very successful and a great asset. More views to the open space could have been achieved on streets and from dwellings with streets at right angles to the green fingers
Does each development fit with and enhance the surrounding area and adjoining block?	As a transition zone, the development does relate to the main residential zone to the north, however the layout, architecture, combination of materials, and lack of good established vegetation does not enhance the surrounding area. The subdivision generally provides positive back to back relationships.
Does the area contribute to, or enhance the social, cultural, and economic environment?	The area provides opportunities to educate children due to proximity to Baverstock School, and socialize within the neighbourhood at the green fingers (although no BBQ's or places to meet). The quantum of people living in the area will help to facilitate economic activity in the

	local commercial centres and in the town centre in the future. It does little to enhance the cultural identity or facilitate different cultural activities.
Does the development respond to the local climatic conditions?	The building layout is directed by the subdivision pattern, which does allow sun access to either the front or rear of properties in the morning and the reverse in the afternoon. This allows people to respond to this and design the site for different uses at different times of the day. There does not appear that there is any particular response to prevailing winds or elements. Generally private outdoor space is orientated to the north side of the dwelling.
Is there a mix of uses along main roads?	Generally there are no corner dairies, cafes, pubs, video stores or home occupations. Baverstock Road is a collector road and has only two activities along it, residential and a school.
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	There is little diversity within this area, but if viewed as an element within a wider catchment, then it contributes to a diversity of living environments. Due to the large house sizes on the land area, land is not maximized such as the narrow side yards which are not useable, and the resulting small yards don't assist with outdoor activities.

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	Generally front doors face the street, garaging and car parking is on the street side and therefore facilitates opportunities for neighbours to meet in the street. Generally there are no verandahs or outdoor spaces where people could sit and watch street life, so interaction is limited to the arrival and departure of occupants.
Do the developments contribute to creating a sense of place which may vary between neighbourhoods?	No.
Is it of locally appropriate and inspiring architecture, spaces and places	No, except for the green fingers
Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	There is no indication to the cultural identity of the people whom reside in this area. Monocultural, lack of identity, limited opportunity for personal or individual lot expression. There is little use of landscape or building typology to create different streets

	or spaces.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	No, architecture could be from Australia, or the USA, street names do not assist except for perhaps some historic reference to previous land owners.
Does the site and building design provide a high level of amenity and safety?	Amenity of the street is compromised by the location of garages & the use of the rear berm and front yards for parking. Limited planning in front yard. Some opportunities for informal surveillance is provided.
Does the design of buildings address corner locations	Mostly no.
Is there privacy and appropriate outlook for each dwelling?	The main outlook space is the street. Appears to have privacy, less at rear sites.
Is there sun access to main living areas and outdoor space?	Assume yes generally (without knowing dwelling layouts)
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	Mostly secure due to back to back configuration. The outdoor space is disjointed around the dwelling not providing large areas. Planting has occurred on some lots, but generally there is a lack of trees.

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	Generally the appearance is that the private motor car is still dominant. However there are good footpaths, but the road alignment favors vehicles. The area is permeable on foot and would easily support a good bus system that travelled along Baverstock Road. There didn't appear to be any cycle sheds at the school, or any positive route to them if they were within the school grounds. What age are the kids, is it appropriate for them to be biking to school?
Does the development provide a choice of routes?	Yes, for pedestrians, and a little less for vehicles, but does allow people to arrive/depart from a number of directions.
Is there housing choice and is it available to all people? (Healthy design?)	There is choice, but generally in the architecture and materials, not the size of houses. It is likely that families would reside in this area as the houses are too large for a couple. Does not contribute to choice in the wider area.
Is there a choice of community facilities?	No – only one park.
Are the neighbourhood parks / open space designed for safe use by children?	Yes they are designed to keep children safe. There are very few facilities within this area, with the focus being on the children's play ground and passive activities along the green finger.
Is there an appropriate range of physical and social infrastructure and facilities which address	No BBQ areas, skateboard parks, mountain bike tracks, playing fields. (the school does

adverse effects of urbanization. (schools, parks, play areas, skateboard parks, halls, sports fields etc)	have playing fields which in the past were used as public open space, but the design including fencing does not encourage this). Lack of small scale neighbourhood parks in the area.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	Yes, however it is difficult to understand. The design and naming of Cyril French Drive is confusing as it exists on the north west edge of the green finger and loops around to then exist on the south side. This does not assist with way finding or painting a mental picture of this area. The layout of the road network at the head of the green finger does not help to identify that the road user is crossing over the green finger and tries to combine both sides of the green finger into one. There could have been distinct north and south neighbourhoods.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	Blocks are defined, and permeability is good, especially for pedestrians and cyclists, however there are not many signals to guide you through this area if say you were on Baverstock Road. The streets do not align and have staggered intersection so views down the streets to the green finger are not possible.
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance?	Buildings generally front the street, but they do not front open space such as the pedestrian links at the end of cul-de-sac's or the small park at the end of Elwyn Close. The quality of these spaces are poor and do not encourage use.
Do children need to cross main roads to access open space?	The main green finger open space requires children to cross the streets either side of this park. Due to the connections with main roads it is likely that the number of vehicle movements would be higher than average for local roads and therefore could be a safety concern, but likely to be at peak periods. No pedestrian crossings exist.
Are cycle and pedestrian routes clearly identified and do they have priority?	No, the motor car has priority, with the use of large radii corners and set back pram ramps and footpath connections. There are no signs identifying cycle routes. Footpaths are generally provided for and are of a good quality material.
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Baverstock Road is a collector road and the buildings are generally two storeys with a strong built edge to the street, whereas on

	local streets the buildings are generally single storey. This does respect the hierarchy in that wider roads should have taller buildings adjacent to provide definition to a wider street. There is no higher density to Baverstock Road.
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Local roads are narrow and generally only allows for parking on one side to maintain a clear travel route. Large corner radii do not encourage reduced speeds. Parking on the street assists with the reduction of speed.
Are there good safe physical and visual connections to/from Barry Curtis Park and other green links?	Connections exist to the green finger, but could be better with more streets connecting with the green finger at ninety degrees allowing more views from streets and from more private properties. There is no continuum of open space that links this neighbourhood with Barry Curtis Park, nor is there any indication where it is. Access to Barry Curtis Park is via streets and requires crossing Stancombe Road, which is within walking distance and is reasonably direct. Crossing Stancombe Road is of major concern as there are no pedestrian crossings.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Double garages are generally incorporated with most dwellings. There is adequate parking on streets, however people are parking on their front yards rather than on the street if additional parking is required. It would appear that there is sufficient, if not more than sufficient.
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	The area is well connected with the wider context and is within easy walking distance of a bus route on Middlefield Drive, which links the north to the south. This should enable people to take a bus to the Flatbush town centre in the future and to Botany in the north.

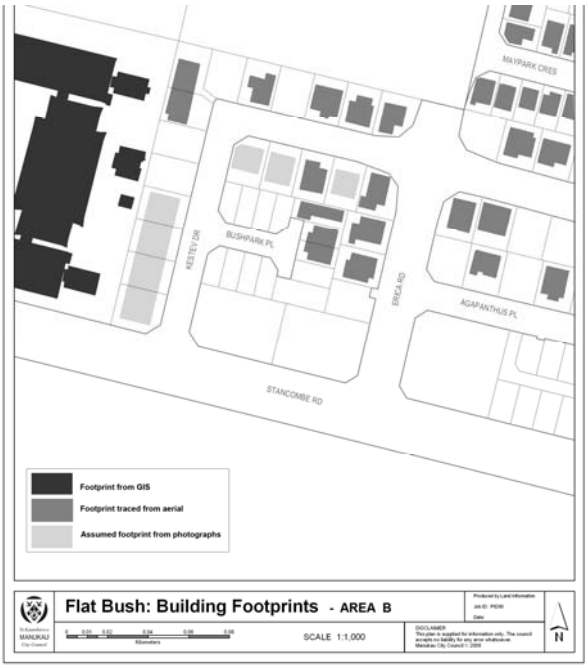
Creativity	Discussion
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	It doesn't
What process and design responses enhance the experience of the environment?	The introduction of the green fingers is, and will continue to be a major element enhancing this environment. The many options provided by the road network results in lower traffic numbers on any one road and helps to reduce noise. The streets themselves do not contribute positively in enhancing a person's experience.
How has art and creativity been included in the buildings, or spaces?	Poorly, road signs located on corners carved out of stone with stone pillars more appropriate in Queenstown or elsewhere. No other art or interpretive structures exist. Repetitive house designs do not assist with creativity.
How have different cultural experiences been included?	None evident
What innovative and/or imaginative solutions have been used?	None evident

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Due to the public / private space issues the private dominates the public reducing the importance of the public realm. Small street trees, lack of good planting within private spaces, and the use of land for parking reduces the quality of the street and public spaces. People with more than two cars feel that they need to park on their property rather than the street. This may be due to the width of the streets and/or the exclusion zones on some of the streets restricting parking to ensure vehicle thoroughfare is possible.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	Neutral
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes
Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural	Yes, there has been a large effort designing the stormwater system and locating roads along overland flow paths. This perhaps has

landform, treatment of stormwater and rate of discharge).	had a little too much attention and other UD elements have suffered.
Does the subdivision and building design maximise solar access, and provide shelter?	Not evident
Has 'green' technology been used in the building construction?	Not evident

Collaboration	Discussion
Has the decision making process involved community groups? Consultation	No. Developer driven rather than customer driven. Limited consultation with Council.

Assessment Area B



Development typology

	Barry Curtis Park Edge	General
Street typology	Arterial road – 2 main traffic lanes, 2 parking lanes and a turning lane	Local streets, narrow 4.5m carriageway
Street reserve width	27m varies (Stancombe Road)	14.5m (Kestev Drive) 12m (Bushpark Place)
Block size	107m x 86m	
Block shape	Rectilinear	
Residential Density (net)	25.5 d/ha (minimum – does not include number of apartments yet)	28 d/ha
Lot location		
• Front (#)	5	19
• Corner (#)	4	4
• Rear(#)	1	1
Average lot area	502m2	356m2
Minimum lot area	168m2	168m2
Maximum lot area	1,325m2	829m2
Lot dimensions	53.9mx23.9m, 43.4mx31.1m, 20mx8.8m, 27mx12m. [street frontage first depth second]	23.2x17.1, 24.4x16.4, 10x27, 10x20, 8.6x20
Site coverage	Appears to have higher than permitted	Assume 40% as permitted
Building typology	Apartment, duplex	Detached two storey houses, duplex, empty lots
Garage	Ground floor parking (no garages)	Two car
Off street parking (not garages)	Limited	In front of garages, & on grass front yard & berm
Front yard	Not available	Not available
Side yard	Not available	Not available
Rear yard	Not available	Not available
Activity status	Subdivision = RD, Apartments = RD	Subdivision = RD, Dwellings = P

Assessment of Area B

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes, the majority of the block is zoned Flatbush Residential 1 zone (general) with a strip fronting Stancombe Road zoned Barry Curtis Park Edge. Most of Barry Curtis Park Edge Zone is not built yet.
Are the densities being achieved with good amenity?	In the general zone the density is 28d/ha (assuming that one dwelling will be built on each lot that is undeveloped). This is over the permitted density for this zone of 23.3d/ha. In the Park Edge zone it is difficult to ascertain the density as it is not built.
Does the area recognize and enhance the landscape character?	No
Does each development respond positively to the physical elements and relationships of the wider environs?	No
Has green fingers been developed to the extent as proposed? Are views to the green linkages maximized, from private property or from the street network?	Barry Curtis Park has been developed and is establishing (not currently open to the public). Good views of this park are gained down Kestev Drive and Erica Road, however the apartment developments will block any possible views from properties directly to the north. The apartments along Stancombe Road will have good views over the park to the town centre.
Does each development fit with and enhance the surrounding area?	The apartment building under construction adjacent to the Temple site on Stancombe Road is inappropriate and unsympathetic to the existing Temple as it turns its back on the temple, and the bulk and scale of this building dominates the temple and reduces its importance. The front of the building is on Kestev Drive and has little activity on Stancombe Road. Blank blade walls front Stancombe Road. The western side of the building is mainly car park and circulation space which will only be screened by a fence along Stancombe Road, where it should be a building. The temple site has been designed with the service yard directly adjacent to the apartment building site, and therefore the orientation and focus of the apartment building is appropriate, however boundary planting could screen this service yard and make more use of the north western sun. The majority of the street level walls are blank with car parks behind & with no activity to the street. The other apartment

	buildings are not built yet but are likely to provide a strong edge to the park. The remainder of the block contains simple houses with little architectural merit, typical of dwellings in Botany with large pillars. They do not enhance the area.
Does the area contribute to, or enhance the social, cultural, and economic environment?	The sites turn their back on the school directly to the north. Rear yards of properties share a boundary with the school which reduces the potential for interaction and surveillance & security. The apartment developments will provide a population that will contribute to the social and cultural environment, especially at this northern end of Barry Curtis Park. There is a good opportunity to provide business and commercial opportunities along Stancombe Road which are seen as vital to the success of Stancombe Road and the park.
Does the development respond to the local climatic conditions?	Taller buildings to the south of the development will ensure that sun access to all properties will be maintained. House orientation and the creation of private outdoor living spaces have not considered sun access.
Is there a mix of uses along main roads?	The proposed developments must continue to provide the diversity, but there is a good start with a temple, park, and residential.
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	There is very little diversity at present, but this is soon to change with the completion of the apartment building under construction and development of the others proposed. At this stage the environment is of average to low quality, let down with the architecture and the lack of planting and respect for the street.
Compatibility of housing types	Generally the dwelling typologies are similar & relate to one another. The building design for a rear site is not compatible.

Check the design guidelines in the back of the DP

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	The street layout does assist with creating a neighbourhood and would be easy enough to close for a street party or the like. Generally front doors are accessible from the street, and windows allow occupants to over look the street.
Is it of locally appropriate and inspiring architecture, spaces and places	No. Dwellings are a basic architectural style, the school to the north is the most interesting building, appropriate to this location.

Do the developments contribute to creating a sense of place which may vary between neighbourhoods? Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	The apartment developments will help to provide a sense of place being different to other neighbourhoods, other than these, the architecture and building style is typical of other areas. No cultural identity is expressed; no messages provide an insight as to who lives there.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	No.
Does the site and building design provide a high level of amenity and safety?	Generally a lack of onsite and street amenity. Rear lots backing onto schools and the temple have safety concerns.
Does the design of buildings address corner locations	Half do
Is there privacy and appropriate outlook for each dwelling?	No
Is there sun access to main living areas and outdoor space?	Those on the southern side of Kestev Drive will have limited sun to the rear yards. Hard to tell what uses each room has.
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	No.

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	Yes, but the car is still dominant. It is the location rather than the development that will facilitate access to other modes of transport.
Does the development provide a choice of routes?	Yes.
Is there housing choice and is it available to all people? (Healthy design?)	At present there is little choice, but this will change upon completion of the apartments/townhouses. It will then be more affordable and appealing to different types of people
Is there a choice of community facilities?	Access to an excellent park, a temple, a church, a primary school and the Flatbush Town Centre in the future provides good access.
Are the neighbourhood parks / open space designed for safe use by children? Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields pubs, cafes, theatres, etc)	Barry Curtis Park is not open to the public, but it looks like there are many opportunities for good play and learning activities. The major concern is getting across Stancombe Road safely with no pedestrian crossings. This will be very difficult for a child to visit the park on their own safely.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	When Barry Curtis Park is open and the town centre is developed, people will be encouraged to be more active and walk through the park to go to town, or to recreate.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	The block is simple and clearly defined. It is easy to understand. The streets are very narrow so there will be a resistance by motorists to drive through this development as it is too hard, when a better option is to use Erica Road. This helps to provide a safe street in Kestev Drive (from traffic)
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance? Do children need to cross main roads to access open space?	Mostly, dwellings face the street, they have active uses and window to enable surveillance of the street, however properties back onto a school and therefore provide a security issue for both the school and the dwelling.
Are cycle and pedestrian routes clearly identified and do they have priority?	No. Vehicles have priority
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes, as long as residential apartments are well insulated for sound to mitigate the road noise of the arterial.
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Yes, depending on where people park as the Kestev Drive could become blocked with inappropriate parking.
Are there good safe physical and visual connections to/from Sir Barry Curtis Park and other green links?	Good visual / Poor physical but are possible.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Some dwellings have too many cars and there is not enough off street parking places so they park over the rear berm. This is a maintenance issue and reduces the quality of the street.
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	Integrates well and Erica Road provides an important link with the development to the north.

Creativity	
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	Generally nothing in the General zone & is unclear what parking provisions have been made in the apartment block.
What process and design responses enhance the experience of the environment?	The attraction is Barry Curtis Park.
How has art and creativity been included in the buildings, or spaces?	It hasn't
How have different cultural experiences been included?	Not present, except for views to the temple, only due to an empty site.
What innovative and/or imaginative solutions have been used?	nil

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	The rear berms are a problem due to the issue of private vrs public space. Poor quality trees at very small sizes do not contribute to the quality of the space.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	Yes the streets do, it is whether the developments can achieve this.
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	Yes, most sites have dwellings and are occupied. This does not restrict any adjacent activity.
Has commercial activity (supported by office, small business or institutional activities) developed along nominated roads?	Not as of yet, but there is the potential for one business unit to be developed in the building being constructed, and high potential for additional to be included in buildings that are yet to be designed and built fronting Stancombe Road.
Have good UD & sustainable management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	The location of the main connection (Kestev Drive) is ok but would have been better to front the school. Bushpark Place is inappropriate as it creates rear blocks and should have connected through to Erica Road, where a better development could have occurred with a better street. Standard stormwater devices have been used.
Does the subdivision and building design maximize solar access, and provide shelter?	No. There are areas where buildings infringe the BHRB rules therefore impacting on solar access to neighbouring properties. Outdoor spaces are not designed for the sun.
Has 'green' technology been used in the building construction?	Not apparent

Collaboration	Discussion
Does the area support the common vision?	Attempting to. Buildings along Stancombe road will have the ability to support the vision and hide to some degree the basic response to the north.
Has the decision making process involved community groups?	No

Assessment Area C

Street typology	Local roads
Street width	Baverstock Road – 14m Greenbrooke Drive – 18.2m Plantation Avenue – 18.2m Villarosa Lane – 14.5m Silverwood Drive – 18.2m
Block size	85 x 75m, 83 x 75m, 160 x 113m.
Block shape	Rectilinear
Residential Density (net)	31.5d/ha
Lot location	
• Front	26
• Corner	8
• Rear	4
Average lot area	287m2
Minimum lot area	181m2
Maximum lot area	671m2
Lot dimensions	22.5x8m, 24.5x15.1m, 25.25x15.1m, 32x21m
Site coverage	Appears high for duplexes, but the rear lane is privately owned.
Building typology	Two storey duplex, single detached houses
Garage	2 car
Off street parking (not garages)	1 in front of garages
Front yard	2.19m ave, 0.9m min, 4.4m max
Side yard	1.04m ave, 0.5m min, 4m max
Rear yard	3.7m ave, 0.2m min, 7.9m max
Activity status	Subdivision = RD, Duplexes = RD, Dwellings = P

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes
Are the densities being achieved with good amenity?	The densities are lower than that permitted and due to the mix if building typologies within the block there are poor spaces created such as the access lanes. Baverstock Road (adjacent to the green finger) has good amenity supported by the development of the duplexes which front the street, the lane is of poor amenity quality.
Does the area recognize and enhance the landscape character?	The preservation of the bush area associated with the stormwater reserve significantly contributes to the landscape character of this area. The street trees are native (cabbage tree, and Rewarewa) appropriate and continue elements of this natural landscape into the urban environment. Planting on private land is hardly noticeable, and due to the lot sizes and design, there is not a lot of room left to plant trees or provide gardens.
Does each development respond positively to the physical elements and relationships of the wider environs?	Generally the development respects the existing landform and is appropriate to have higher densities closer to the open space areas. The access from Stancombe Road is unpleasant due to the round-a-bout and the lane that is a continuum of the access road,
Has green fingers been developed to the extent as proposed? Are views to the green linkages maximized, from private property or from the street network?	Yes green fingers have been developed and are viewed from the dwellings along Baverstock Road, views are provided from Greenbrooke Road down Villarosa Lane and some of the dwellings on Greenbrooke Road, and good views are gained from Silverwood Drive. Good views to this green finger are also gained from Stancombe Road. Villarosa Lane could have extended further to the west through the next block providing more opportunities to view the reserve from further to the west. This would also provide better permeability.
Does each development fit with and enhance the surrounding area?	There is a poor relationship with the different typologies within the block. The west side of the block relates better to the rest of the development in this area which mainly consists of single detached houses. The duplex dwellings in a “terrace style” could significantly enhance the area but only if the design of the rear yard, garaging and rear lane can be resolved.
Does the area contribute to, or enhance the social, cultural, and economic environment?	The design of the duplexes facilitates social interaction as the front doors and yards are

	close together.
Does the development respond to the local climatic conditions?	Not particularly evident, although orientating the duplex sites east-west allows morning sun to access the front of the dwellings and afternoon sun to access the rear courtyard. The detached houses have not been designed to relate to sun access necessarily.
Is there a mix of uses along main roads?	N/A
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	As primarily a residential area, there are two types of dwellings, some existing on rear lots. There is diversity and the development is of reasonable quality, however single sided access off a rear lane is not a sustainable solution, nor are rear lots, or large houses on small lots. The side yards between the duplexes are not useable and are only about 2m wide. This is not a sustainable use of this land.

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	Yes, especially the duplexes. Their front doors are to the street, they are also close to the neighbouring front door allowing interaction. The lanes provide more open space that facilitates interaction with people in the neighbourhood.
Is it of locally appropriate and inspiring architecture, spaces and places	The duplexes north of Villarosa Lane are detailed better than those to the south, even though the same design. They are appropriate and a reasonable response to the location, however could be more inspirational. The detached houses are typical boxes without great architectural quality.
Do the developments contribute to creating a sense of place which may vary between neighbourhoods? Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it?	The only elements that set this development apart from others in the general zone are the design of the duplexes and the location on elevated land that has not been adjusted significantly.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	There is some cultural expression mainly in the type of planting that has occurred, being of New Zealand natives, which identifies a New Zealand culture. The use of weather boards also links with the architectural history of New Zealand.
Does the site and building design provide a high level of amenity and safety?	No, the duplex lots are too short. Poor change in level between sites resulting in high fences also of poor design quality.
Does the design of buildings address corner locations	Yes, the duplexes do, the detached don't.

Is there privacy and appropriate outlook for each dwelling?	Yes
Is there sun access to main living areas and outdoor space?	Can assume that some sun accesses the outdoor spaces / don't know the living areas.
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	No.

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	Each development has double garaging which does not necessarily encourage other modes. There are good connections to Stancombe Road which can provide bus services.
Does the development provide a choice of routes?	Yes there is a choice of routes but mainly within the area.
Is there housing choice and is it available to all people? (Healthy design?)	Two main types of houses are provided. They are likely to be priced out of reach of many people.
Is there a choice of community facilities?	No, only the green finger stormwater system is nearby and does not really provide for active recreation, however there is access to the reservoir to the north east of the development. No community facilities close by.
Are the neighbourhood parks / open space designed for safe use by children? Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields pubs, cafes, theatres, etc)	No. as above

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	Within the neighbourhood, there are good connections and footpaths that link with the wider context; however it is not clear as to the accessibility of various pieces of land for public use. Nor are there safe places for pedestrians to cross the arterial roads.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	Yes the neighbourhood is generally a grid layout but cul-de-sacs could have been avoided to increase permeability.
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance? Do children need to cross main roads to access open space?	Yes dwellings front the street and overlook it providing surveillance. This includes from second storey levels. Children would have little risk crossing roads within the neighbourhood, but would not be safe

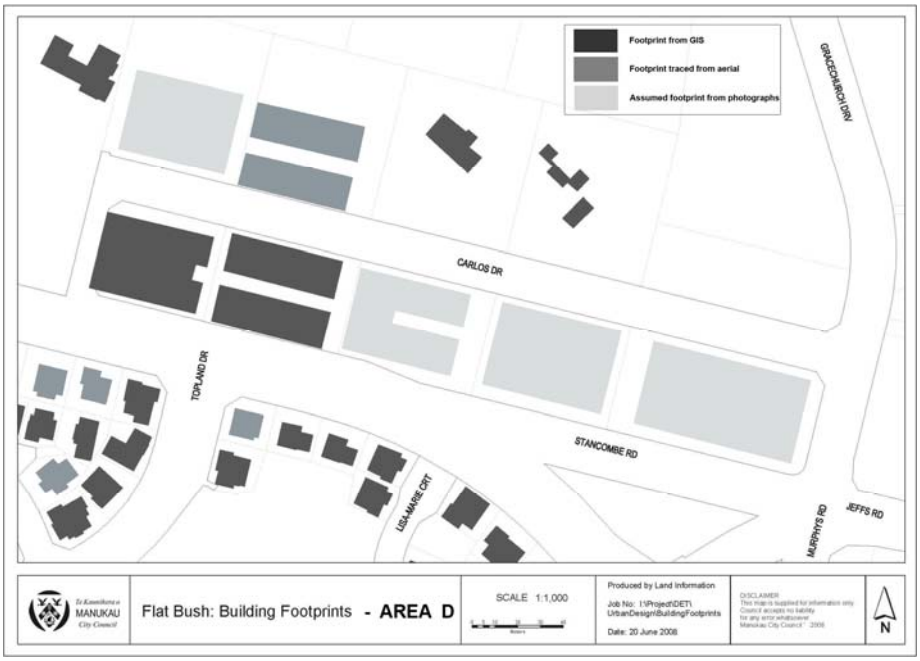
	crossing Stancombe Road due to no crossings or assistance.
Are cycle and pedestrian routes clearly identified and do they have priority?	No
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Yes, although most do not have many parked cars or activity so there is potential for people to speed, but is unlikely.
Are there good safe physical and visual connections to/from Sir Barry Curtis Park and other green links?	Currently access to Barry Curtis Park is poor for pedestrians and cyclists due to Stancombe Road and lack of development to connect Area C with the park. There are good connections with the green finger.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Yes, mostly in garages. There is ample of parking on the streets.
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	Not evident.

Creativity	
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	Nil
What process and design responses enhance the experience of the environment?	Good architecture and use of materials on duplexes north of Villarosa Lane. Enhancement and maintenance of the green finger. Native street tree planting (even if too small)
How has art and creativity been included in the buildings, or spaces?	Nil
How have different cultural experiences been included?	Nil
What innovative and/or imaginative solutions have been used?	Adapted a terrace design to a duplex and incorporated all elements on a small site.

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Yes, it feels as though there is pride in the streets, they are well kept, they have low front fences that help to define space.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	The rear lanes are not a good solution to prevent crime, due to the lack of visibility of these spaces. The sold fences and gates to each property does not allow occupants to see who is in the rear lane.
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes
Has commercial activity (supported by office, small business or institutional activities) developed along nominated roads?	No. The development fronting Stancombe Road does not include commercial activity, nor take advantage of additional height or density.
Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	Yes but could do more.
Does the subdivision and building design maximize solar access, and provide shelter?	For the duplexes it does, but could be better due to the position of garages and small rear yards. The others are a response to the subdivision not to solar or prevailing winds.
Has 'green' technology been used in the building construction?	Not evident

Collaboration	Discussion
Has the decision making process involved community groups?	unlikely

Assessment Area D



	Arterial	General
Street typology	Apartments, Arterial road	Mix of development types, local road
Street reserve width	24.6m	18.1m
Block size	323x46m (but does include lanes within)	
Block shape	Rectilinear	
Residential Density (net)	120d/ha	20.8d/ha
Lot location		
• Front (#)	0	4
• Corner (#)	2	1
• Through (#)	3	0
Average lot area	2,870m2	3,838m2
Minimum lot area	2,175m2	2,516m2
Maximum lot area	4,055m2	4,175m2
Lot dimensions	51.9 x 42.3m, 60.9 x 42.3m, 61 x 46m, 88.5 x 46m.	88.5 x 28.6m, 61 x 68.4m, 60.9 x 68.4m
Site coverage	High	High on developed blocks
Building typology	Apartments, terraces	Apartments, terraces
Garage	Underground or accessed off central lane	Accessed off central lane, directly off courtyard
Off street parking (not garages)	No visitor parks obvious	No visitor parks obvious
Front yard	2.26m ave, 0.9m min, 6m max	1.95m ave, 0.9m min, 3m max
Side yard	3.7m ave, 3.3m min, 4.4m max	3.7m ave, 3.3m min, 4.4m max
Rear yard	n/a	24m (estimate)
Activity status	Subdivision & buildings = RD	Subdivision & buildings = RD

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes, a higher density has been developed along the arterial road as desired, but fails to achieve a good transition to the lifestyle blocks to the north.
Are the densities being achieved with good amenity?	No. Densities within the arterial zone are 2.4 times higher that permitted to the detriment of the amenity. The density in the general zone is half that permitted but still does not have good amenity.
Does the area recognize and enhance the landscape character?	No, major earthworks required, mainly exotic plantings
Does each development respond positively to the physical elements and relationships of the wider environs? (visual sense to link to green fingers etc) links to town centre and Barry Curtis Park, links to the reservoir hill.	No, poor relationships to neighbouring open space (private), there would be some visual links to the park on Topland Drive from apartments fronting Stancombe Road, and from Carlos Drive through the private lanes. Some views to Barry Curtis Park might be possible from the upper levels.
Have green fingers been developed to the extent as proposed? Are views to the green linkages maximized, from private property or from the street network?	Closest is the park on Topland Drive to the south.
Does each development fit with and enhance the surrounding area and adjoining block?	The development on this block is out of place with the surrounding area as the only area that has tall apartment buildings. The building typologies are mixed within the block including single dwellings on large blocks through to apartments. The building typology does not suit the block especially north of Carlos Drive.
Does the area contribute to, or enhance the social, cultural, and economic environment?	Limited, there are open courts and some grassed area within developments. They are generally outlook space and of poor design and quality and do not provide for socialization, play, or BBQ's(except for grass area north of terraces). All spaces feel private, no commercial included.
Does the development respond to the local climatic conditions?	Limited, buildings facing Carlos Drive have taken advantage of the sun by providing good balconies, others take advantage of the view. The apartment design would provide some shelter to balconies.
Is there a mix of uses along main roads?	No, Stancombe Road is residential except for a child centre and show home offices. No idea where the local shop is.
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	There is little diversity within the study area, but if viewed as an element within a wider catchment, then it contributes to a diversity of living environments. The apartments are of reasonable quality, especially those to the

	west. The construction industry and teaching is the only employment opportunity

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch street activity, small shops, places to congregate)	Yes, many ground floor units have front doors and verandahs, porches to the street allowing interaction. Up to six apartments share the same stair well which is a great place to interact. There are no public parks or facilities nearby where people could meet.
Do the developments contribute to creating a sense of place which may vary between neighbourhoods?	Yes, the apartment design and the relationships to other residential areas is unique to Flat Bush.
Is it of locally appropriate and inspiring architecture, spaces and places	Yes, the apartment blocks on lots 1, 3 and 4 are appropriate with good balconies and privacy. A good mix of materials and modulation of the block form.
Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	There is no indication to the cultural identity of the people whom reside in this area. Monocultural, lack of identity, no individual lot expression due to typology. The identity changes from lot to lot from a contemporary urban street to an English terrace house street.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	Not necessarily, the majority of the architecture could be from Australia or elsewhere, and England. Street names do not assist except for some historic reference.
Does the site and building design provide a high level of amenity and safety?	The outdoor common spaces are of poor quality, but appear safe.
Does the design of buildings address corner locations	Yes.
Is there privacy and appropriate outlook for each dwelling?	Assume yes for the apartments, no for the terraces.
Is there sun access to main living areas and outdoor space?	Yes for those facing north.
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	No

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	Generally the appearance is that the private motor car is still dominant. The area is permeable on foot and would easily support good bus system that travelled along Stancombe Road.
Does the development provide a choice of	Yes, there are good connections in four

routes?	directions from the area.
Is there housing choice and is it available to all people?	There is choice, but it is limited and is mainly apartment style living. The developments do contribute to choice in the wider area. Suspect that the price is pitched at one level.
Is there a choice of community facilities?	No – one small park not even in the neighbourhood.
Are the neighbourhood parks / open space designed for safe use by children?	No, except for the open space behind the terraces on lot 9.
Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields etc)	There is very little in this area to cater for the number of people in this area.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	The neighbourhood is like an island, requiring transport to go anywhere. People could utilize the green finger adjacent to Area C by walking up Grace Church Drive if they know about it. There are limited visual links to the green finger.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	Blocks are defined, and permeability is good, especially for pedestrians and cyclists. Views through the block are gained through the lanes, which assists with visibility and safety. The internal lanes for garage access are less likely to be safe spaces due to limited activity and surveillance.
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance?	Buildings front streets and provide the potential for surveillance. The developments to the rear (north) of sites 9 and 10 are problematic as they are located around a court with no ground level active uses. Fronts that read like backs. The terraces do front open space, but this is internal to the block and not overlooked by many.
Do children need to cross main roads to access open space?	The open space that exists feels private and is unlikely to be used. The closest park requires crossing Stancombe Road, but there is access to the green finger to the west.
Are cycle and pedestrian routes clearly identified and do they have priority?	No, the motor car has priority, with the use of large radii corners and set back pram ramps and footpath connections. There are no signs identifying cycle routes. Footpaths are generally provided for and are of a good quality material.
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes, although front yard building and street relationships could be better.

Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Yes, although when construction is complete and the level of activity is reduced on the street, speed could increase on Carlos Drive.
Are there good physical and visual connections to/from Barry Curtis Park and other green links?	No.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Yes, most have parking on site and there is ample of parking on the streets.
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	The neighbourhood has no main through routes but, could support a bus system due to the close proximity of population. Stancombe Road is a key road for access.

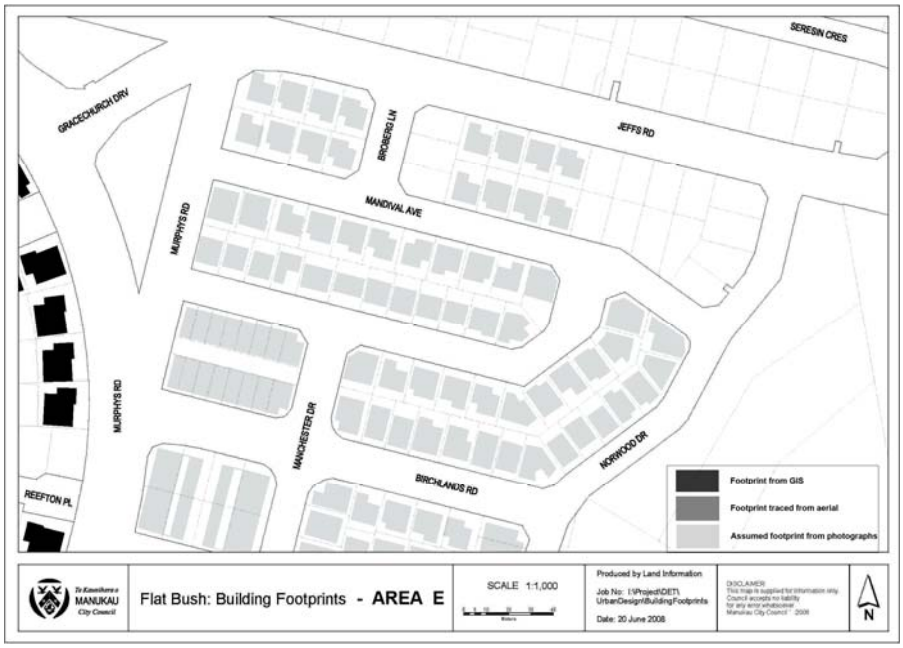
Creativity	Discussion
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	Underground communal parking not at the front door encourages people to walk as it is a hassle to get the car out; however there is a need to travel due to the lack of facilities nearby.
What process and design responses enhance the experience of the environment?	Good established planting to the front yards. Building form broken into many elements that are proportioned well to relate to a person. Front porches raised above the footpath with front doors accessible from the street. Visual linkages through developments to the wider area.
How has art and creativity been included in the buildings, or spaces?	Poorly, except for the detailing in the balustrades of the terrace houses.
How have different cultural experiences been included?	The English culture has been recognized through the terrace house design
What innovative and/or imaginative solutions have been used?	Making provision for garaging in terraces via a rear access lane which negates rear yards and changes the typology.

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Yes, the completed part of Carlos Drive is defined well by the development and front fences. It is clear what is public and private and there are good sized street trees and mown berms.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	Carlos Drive has a feeling of pride and would facilitate good community life. Stancombe Road has no ownership by people living alongside.
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes

Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	No. The natural land form was a south facing slope which has been significantly adjusted to create level platforms. This works when a building spans the change in level and uses it to its advantage such as lots 1 to 5 do. It is unnecessary to cut back a level change to develop terraces. There is no indication of stormwater capture in natural systems, and there has been limited native planting and permeable areas.
Does the subdivision and building design maximize solar access, and provide shelter?	Not evident
Has 'green' technology been used in the building construction?	Not evident

Collaboration	Discussion
Has the decision making process involved community groups? Consultation	Developer driven rather than customer driven. Limited consultation with Council.

Assessment Area E



	Arterial	General
Street typology	Arterial and local roads	Local roads
Street reserve width	22.4m	14.6m, 21.2m
Block size	62 x 40.8m, 161x40.8m, 58.5 x 40.6	
Block shape	Rectilinear (mainly)	
Residential Density (net)	67.9d/ha	34.43d/ha
Lot location		
• Front (#)	13	63
• Corner (#)	3	17
Average lot area	138m2	290m2
Minimum lot area	111m2	244m2
Maximum lot area	463m2	376m2
Lot dimensions	6.8m x 16.4m, 10.7m x 16.3m	15.3m x 19.5m, 14.7m x 20.4m, 13.4m x 22.3m
Site coverage		
Building typology	2 storey terrace	1 & 2 storey houses
Garage	Double	Double off rear lane
Off street parking (not garages)	Nil	One in front of garages
Front yard	Not available	Not available
Side yard	Not available	Not available
Rear yard	Not available	Not available
Activity status	Subdivision and terraces = RD, detached dwellings = P	

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes, roads are as per the structure plan, supported with additional local roads, however development is not as intended along Murphys Road.
Are the densities being achieved with good amenity?	No. The higher density development within the Arterial zone is 67d/ha, where the permitted is 49d/ha. The general zone is 34d/ha where permitted is up to 40d/ha. There is a poor relationship between the building typologies (terrace one side, single level houses on the other side of the street). Change in typologies within the street. Terraces have good front courtyards, good for north facing, not good for south facing ones.
Does the area recognize and enhance the landscape character?	Partly. It respects the landform but the selection of plant material and landscape design generally detracts from the landscape character. There are some good examples using native species.
Does each development respond positively to the physical elements and relationships of the wider environs? Are views to the green linkages maximized, from private property or from the street network?	No. The street layout is a grid in most part, but at the green finger straight roads kink so that it is not possible to see the green finger at the end of streets. The tops of trees within the green finger are visible. Views are gained to the ridge line to the east and south.
Have green fingers been developed to the extent as proposed?	Yes
Does each development fit with and enhance the surrounding area and adjoining block?	No.
Does the area contribute to, or enhance the social, cultural, and economic environment?	Garaging and front doors fronting the street does facilitate social interaction, there is nothing to suggest that the cultural and economic environment will be enhanced.
Does the development respond to the local climatic conditions?	No. development is subdivision driven
Is there a mix of uses along main roads?	No, all residential.
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	There is a diversity of house types and sizes and are of average quality.

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	yes
Do the developments contribute to creating a sense of place which may vary between neighbourhoods?	No
Is it of locally appropriate and inspiring architecture, spaces and places	Generally no, but there are some more interesting examples.
Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	It is too mixed. There is no identity, the building types provide stereotypical idea of who lives there (small single storey, houses with rock gardens and minimal planting = elderly people, large two storey houses with double garage = younger working couple with kids) The architecture displays a cultural identity mix of the Kiwi bach, contemporary NZ and new town America.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	No
Does the site and building design provide a high level of amenity and safety?	Some do, such as the front of the terrace houses on Mandival Ave, and the more traditional terraces with rear yards within this area but outside of the study area. Many of the lots have large houses on small lots and have poor relationships and lack outdoor amenity.
Does the design of buildings address corner locations	No, except for the terraces which provides windows along the second frontage?
Is there privacy and appropriate outlook for each dwelling?	Limited privacy within rear yards, but generally overlooked by neighbouring two storey houses, outlook from the terraces on Mandival Ave over the rear access lane is poor.
Is there sun access to main living areas and outdoor space?	Generally properties on the north sides of streets have a north facing rear yard and are designed to take advantage of the sun. Those on the southern side have south facing rear yards which will receive sun in summer, but have not designed the building to facilitate outdoor use on the northern side for winter sun.
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	There is a back to back relationship which provides security to rear yards, the planting is young and minimal

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	The road layout facilitates access to busses on Murphys Road. Pedestrian footpaths exist, but have poor linkages to other areas. Car dominates travel.
Does the development provide a choice of routes?	Yes, although the interface at Murphys Road limits access.
Is there housing choice and is it available to all people?	Yes there is choice, and suggest that there is a range of house prices.
Is there a choice of community facilities?	No.
Are the neighbourhood parks / open space designed for safe use by children?	Only the green finger exists which is suitable for older children, but could have issues due to the dense vegetation.
Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields etc)	New schools are being developed further along Jeffs Road, but there is no other facilities close by.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	Yes, within the neighbourhood, but links to the north and west are poor.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	The area has permeability and the blocks are defined.
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance?	Buildings front streets and have a mix of garaging and active uses. There appears to be a good level of surveillance over the streets.
Do children need to cross main roads to access open space?	No
Are cycle and pedestrian routes clearly identified and do they have priority?	No
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes, except for Murphys Road
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Yes
Are there good safe physical and visual connections to/from Barry Curtis Park and other green links?	Yes to the green finger alongside, poor connections to Barry Curtis Park and the town centre due to access over Murphys Road.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Yes, ample
Does the area contribute to or is part of an integrated roading and transportation system?	No, although the population could support a public transport service.

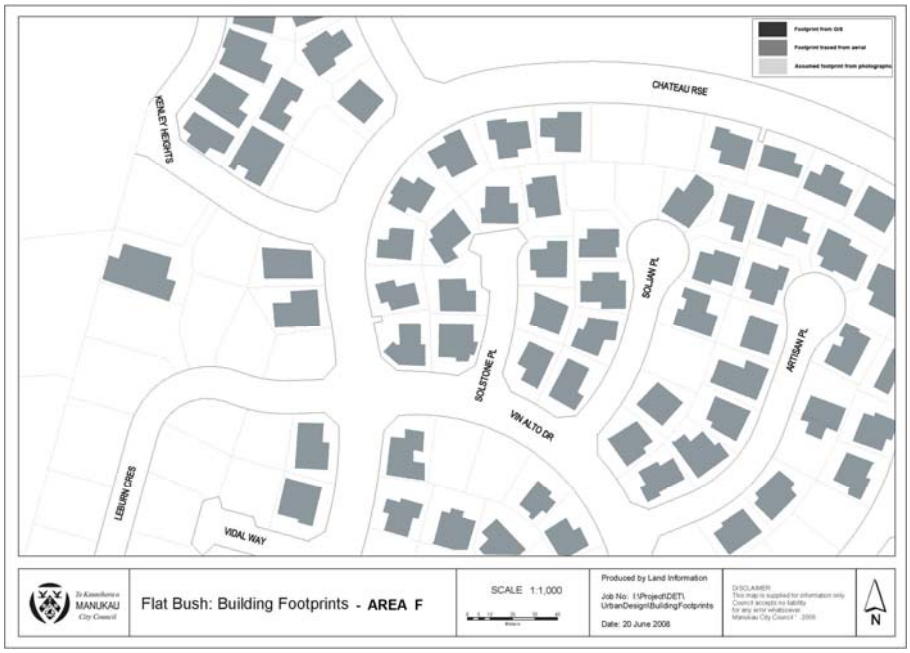
(pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	

Creativity	Discussion
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	It doesn't
What process and design responses enhance the experience of the environment?	
How has art and creativity been included in the buildings, or spaces?	There is no art, minimal colour used. Creative design responses have been developed for the terrace housing to create front courtyards. The architecture of some of the houses utilizes different roof forms, window positions and materials.
How have different cultural experiences been included?	Not evident, except links to the English history of terrace developments
What innovative and/or imaginative solutions have been used?	Not evident

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Yes, generally there is clear definition of public and private space. There has been some good street planting, but it is lacking in many areas. Focus has been on the built form not the street environment. Trees are too small.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	Yes
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes
Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	Landform appears to be similar to that which existed previously and displays changes of level throughout. Assumed that stormwater is managed via a typical piped system to the green finger. No opportunity to slow the rate of discharge from this area.
Does the subdivision and building design maximize solar access, and provide shelter?	No
Has 'green' technology been used in the building construction?	Not evident. No solar panels, rain water tanks or materials of green technology.

Collaboration	Discussion
Has the decision making process involved community groups? Consultation	No.

Assessment Area F



	Flat Bush Residential 2
Street typology	Curvilinear
Street reserve width	Chateau Rise = 18.2m Soljan Place = 16.2m
Block size	250 x 166m, 120 x 78m, 179 x 80m
Block shape	Ameba
Residential Density (net)	16.9 d/ha
Lot location	
• Front (#)	46
• Corner (#)	9
• Rear (#)	5
Average lot area	588m2
Minimum lot area	486m2
Maximum lot area	684m2
Lot dimensions	27 x 24m, 24 x 22m
Site coverage	40% assumed
Building typology	Two storey dwellings
Garage	Double fronting street
Off street parking (not garages)	In front of garages
Front yard	Not available
Side yard	Not available
Rear yard	Not available
Activity status	Subdivision = RD, Buildings = P

Assessment of Area F

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes
Are the densities being achieved with good amenity?	No. the density is 16.9d/ha, less than the 26d/ha permitted by the DP. Resulting in average site size of 588m2. The site coverage is within the 40% permitted, but the site configuration is not assisting with the amenity and appear that site coverage is higher then 40%.
Does the area recognize and enhance the landscape character?	The general landform is retained, however not all sites respect this requiring major retaining walls. There are some palms and exotic trees, and some cabbage trees on streets, but there is little continuation of the native and open landscape character of this area.
Does each development respond positively to the physical elements and relationships of the wider environs? Are views to the green linkages maximized, from private property or from the street network?	Views to the wider landscape are achieved. There are reasonable views to the green finger down streets, but also over the top of lower houses.
Have green fingers been developed to the extent as proposed?	yes
Does each development fit with and enhance the surrounding area and adjoining block?	All surrounding blocks are of a similar development typology so yes they fit, rightly or wrongly. The development does not necessarily enhance the area.
Does the area contribute to, or enhance the social, cultural, and economic environment?	It is likely that people know one another due to the low density.
Does the development respond to the local climatic conditions?	Development is subdivision driven.
Is there a mix of uses along main roads?	n/a
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	No diversity of living environments except lot position from upper to lower elevation, which offer different views and proximity. The over development of these sites is an unsustainable use of land due to the lack of high quality landscaped open space within the development.

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	The wide lot frontages increase the distances between front doors (i.e. places of regular activity) and reduces the opportunity to interact with neighbours. There are few dwellings that have outdoor spaces (verandahs, sitting areas) fronting the streets, most activity is internally focused. No small parks in addition to the green finger.
Do the developments contribute to creating a sense of place which may vary between neighbourhoods?	Yes, this area is very different to others in Flat Bush, mainly due to topography.
Is it of locally appropriate and inspiring architecture, spaces and places	There is diversity of architectural responses, however they are not particularly inspiring.
Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	There is an impression of an upper class community living in this area. The development of the identity is mainly from the building typology.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	No
Does the site and building design provide a high level of amenity and safety?	No. the quality of the amenity is significantly reduced due to the over development and lack of landscape and the extent of fencing.
Does the design of buildings address corner locations	Generally yes
Is there privacy and appropriate outlook for each dwelling?	Due to the location of some buildings there is overlooking issues into lower back yards. Street outlook and views are generally good.
Is there sun access to main living areas and outdoor space?	yes
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	The general back to back configuration facilitates secure rear yards. The site of outdoor space and planting is not appropriate.

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	No
Does the development provide a choice of routes?	Cul-de-sacs limit routes and the area does not have many route options to other areas.
Is there housing choice and is it available to all people?	No. it appears that the housing cost will restrict many people.
Is there a choice of community facilities?	No, although there are two schools being

	developed in close proximity.
Are the neighbourhood parks / open space designed for safe use by children?	Yes, especially of older children
Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields etc)	Street tree establishment will assist with the breakup of residential development aligned on notional drainage patterns. Too much focus has been placed on the green fingers.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	Due to the topography, only the reasonably fit will walk and cycle in this environment. It is a great environment to increase the fitness level of people due to the variety of slopes.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	The permeability is constrained due to the cul-de-sacs, but generally there is a reasonable block structure which responds to the topography.
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance?	Yes
Do children need to cross main roads to access open space?	No
Are cycle and pedestrian routes clearly identified and do they have priority?	No
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	yes
Are there good safe physical and visual connections to/from Barry Curtis Park and other green links?	Good connections to green finger, but are considerable distance from Barry Curtis Park and the town centre. There is direct vehicle access.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	yes
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	Effectively a large cul-de-sac area.
Creativity	Discussion
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	It doesn't

What process and design responses enhance the experience of the environment?	Maintaining changes in elevation and being able to understand the landform with the street layout, either along or across the contours.
How has art and creativity been included in the buildings, or spaces?	Very little art, but there is a range of architectural styles.
How have different cultural experiences been included?	unsure
What innovative and/or imaginative solutions have been used?	Not evident

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Yes, although poor quality of trees.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	The impression is a suburb with quite individual lifestyles, but is likely that neighbours will know one another and look out for others in the street.
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes
Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	No. cuts in landform not necessary, the collection and treatment of stormwater is via traditional systems and assumed discharge into the green finger. Ponding at the base of the finger will slow the discharge of stormwater.
Does the subdivision and building design maximize solar access, and provide shelter?	No, the area has a south eastern aspect and therefore sun access is important.
Has 'green' technology been used in the building construction?	Not evident.

Collaboration	Discussion
Has the decision making process involved community groups? Consultation	No.

Assessment Area G

	Flat Bush Residential 2
Street typology	Collector and local roads
Street reserve width	21.5m, 18.3
Block size	229x80m
Block shape	irregular
Residential Density (net)	22.8d/ha
Lot location	
• Front (#)	49
• Corner (#)	13
• Rear (#)	7
Average lot area	437m2
Minimum lot area	370m2
Maximum lot area	557m2
Lot dimensions	23x18.7m, 21.2x19.7m, 21.4x19.3m2, 15.5x26.6m
Site coverage	40% assumed
Building typology	Two storey houses
Garage	Double fronting street
Off street parking (not garages)	In front of garages
Front yard	Not available
Side yard	Not available
Rear yard	Not available
Activity status	Subdivision = RD, Buildings = P

Assessment of Area G

Context	Discussion
Does the area conform to the Flat Bush Structure Plan?	Yes, but the development has been designed according to lot boundaries rather than a holistic approach to the area. Future road connections are provided for to link with the unnamed road to the east but don't facilitate a park edge road along the green finger.
Are the densities being achieved with good amenity?	The density is just short of the permitted of 26d/ha, good street widths and berms provide a strong street space. Lots with west facing rear yards have good outdoor space even if a little sparse due to lack of vegetation. Lots on the east side of streets generally have small rear yards and limited outdoor space to the street. Some side

	yards are narrow and have a change in level with a poor relationship. Valderama Drive provides a good interface between the residential and School zones, providing views over the school from both residential properties and the street. The extension to Valderama Drive to the south will improve connections as the area is a large cul-de-sac currently.
Does the area recognize and enhance the landscape character?	No. The vegetation is sparse due to its young age, but also due to the lack of space for planting. There are good views to the vegetation that exists to the east, although the development does not address it or utilize it due to it existing on private land.
Does each development respond positively to the physical elements and relationships of the wider environs? Are views to the green linkages maximized, from private property or from the street network?	Generally the built form reflects the topography and the stepped nature of the housing down the slope allows views to the north and west which would include views to the green finger that extends down from Mission Heights. (Building design could respond better to slope).
Have green fingers been developed to the extent as proposed?	n/a
Does each development fit with and enhance the surrounding area and adjoining block?	Yes, but could be further enhanced with better design.
Does the area contribute to, or enhance the social, cultural, and economic environment?	There are no local parks or community facilities except for the two schools which could provide public open space for community use depending on the ownership and operation of the school. Connections into the school grounds need to be established from all directions, problematic due to the extensive excavations.
Does the development respond to the local climatic conditions?	The land is sloping down towards the north west and the building locations receive good solar access. Most houses have porches at the front door to provide shelter from the rain, but very few (if any) have covered outdoor space such as a verandah.
Is there a mix of uses along main roads?	The roads in the area are local or collector roads. There is only residential and schools in this area.
Does the area provide a diversity of living and working environments of high environmental quality, and is it a sustainable use of land?	No, there is no diversity in this area. All houses are of a similar size and shape. The use of retaining walls is not particularly sustainable due to the life span issues, and nor is the resultant land between houses.

Character	
Does the built environment allow residents to connect with one another, and encourage neighbourhood activity? (Main access is through front doors, walking, small parks or spaces for people to sit and watch the world go by, small shops, places to congregate)	Generally, front doors face the street as do garages which maximize daily activity on the street. There are no small parks nearby, however the schools could play an important role.
Do the developments contribute to creating a sense of place which may vary between neighbourhoods?	The smaller size of the lots and therefore resultant development provides a different neighbourhood. The topography contributes to providing a sense of place.
Is it of locally appropriate and inspiring architecture, spaces and places	No
Does each development contribute to the identity of the neighbourhood? Is that identity recognizable and what is it? Does the development enhance the cultural identity? Who lives there, is the cultural identity expressed in the architecture or site design?	Yes, identity is made up of large houses not designed for a sloping site. There is no indication of the type of person who lives there. Most windows are covered with white curtains so views into properties are not possible.
Does the area reflect and celebrate our unique New Zealand culture and identity and celebrates our multi-cultural society	Not evident
Does the site and building design provide a high level of amenity and safety?	Those lots on the western side of the street that have back yards could have a reasonable level of amenity especially once vegetation develops. Those on the east side have less onsite amenity and rely on the street to provide some of the amenity qualities. The streets are planted with maintained grass berms. There are limited rear lots, but there many rear yards that back onto a large neighbouring property which could provide safety and property security issues.
Does the design of buildings address corner locations	Yes in some cases
Is there privacy and appropriate outlook for each dwelling?	Windows on the sides of houses face one another and due to the proximity, privacy is reduced. Windows also allow people to overlook neighbouring yards (also due to the lack of screening by trees. Out look to the wider environs is good.
Is there sun access to main living areas and outdoor space?	Yes, mostly on the western side of the streets (without knowing the building layout)
Are there secure backyards, adequate and appropriate outdoor space, and appropriate planting on each lot?	Back yards are secure where there is a back to back relationship and are of an appropriate size, again on the western side of the streets. There are virtually no trees visible in private gardens

Choice	Discussion
Does the development provide/encourage/facilitate a choice of travel modes?	There is a good footpath network, but the main mode of travel would currently be by car. The nearest bus stop is near the corner of Erica Road on Stancome Road some 1.77km from the school site.
Does the development provide a choice of routes?	Limited, at this point of time the development is within a large cul-de-sac, but has the potential to connect to other areas as suggested by the structure plan.
Is there housing choice and is it available to all people?	no
Is there a choice of community facilities?	No, not in the immediate area
Are the neighbourhood parks / open space designed for safe use by children?	If the schools are to be used out of hours, then yes, the green fingers are generally suitable for older children
Is there an appropriate range of physical and social infrastructure and facilities which address adverse effects of urbanization? (schools, parks, play areas, skateboard parks, halls, sports fields etc)	Yes if schools are used out of hours (fields and halls), and once all the green fingers are developed with good paths/trails.

Connections	Discussion
Do connections, routes, pathways, transport options maximize accessibility to all people and encourage people to become more active?	No, not at this point of time, but links to the town centre through the green fingers network will encourage more people to walk, run, cycle when developed.
Are there good connections and permeability of the street system to promote convenience, social interaction, personal safety, and property security? Are there clearly defined blocks?	No
Do buildings front the street and open spaces / schools, and have active uses in these frontages that contribute to informal surveillance?	Properties generally front streets, but not open space. Most activity is within houses not in front of them. It is difficult to see what uses are in rooms that front the street due to curtains and mirror glass. Unsure.
Do children need to cross main roads to access open space?	Yes a collector road.
Are cycle and pedestrian routes clearly identified and do they have priority?	Good footpaths exist but are impacted by the road configurations, allowing smooth access for vehicles. No clue as to where cycle routes are.
Are developments compatible with the hierarchy of roads on which they are located? (noise, traffic generation)	Yes
Are local roads designed to ensure safe, low speed environs, whilst still allowing for emergency services?	Yes when cars are parked on each side of the street, otherwise the carriageway is wide and does not have any obstacles.

Are there good safe physical and visual connections to/from Barry Curtis Park and other green links?	There are good visual links to the green fingers, but unsure about the safety due to the current level of construction.
Is there safe secure parking in neighbourhoods, shopping centres, and adequate off street parking?	Yes
Does the area contribute to or is part of an integrated roading and transportation system? (pedestrians, cyclists, cars, buses, trams, trains, park n ride, and how do they integrate with the wider context)	Yes, in the future Valderama Road should be continued to Ormiston Road.
Creativity	Discussion
What ways has the development encouraged the reduction of the private motor car? (less garaging, bike stands/cages/lockers, motorbike parking, new walking shoes for all residents, locating facilities close by)	It doesn't, except for the location of the schools.
What process and design responses enhance the experience of the environment?	A mix of road alignments that follow and cross the contours assisting with the experience of elevation change.
How has art and creativity been included in the buildings, or spaces?	Limited.
How have different cultural experiences been included?	The desire for New Zealand residents to own their own separate house and land.
What innovative and/or imaginative solutions have been used?	Not evident.

Custodianship	Discussion
Does the development recognize the importance of the public realm? Does it assist with achieving healthy sustainable communities? (Good streets, parks, civic areas, natural systems).	Yes although street trees are small, and no small parks or civic space provided.
Does the design and layout of streets, spaces, and built form facilitate a strong central focus for community and civic life? (less crime, is safe, has interaction, pride)	Limited, as the streets are the only place to meet and socialize in public. There is no shop or café close by where people could meet (schools?).
Is the development responding to a level of demand and at a rate that ensures remaining areas can continue existing uses?	yes
Have good ecological management practices been used in creation of this area? (retaining existing natural landscape features and natural landform, treatment of stormwater and rate of discharge).	Many retaining walls have been used which alters the ecological system, but largely the topography is intact (except for development at Stamford Crescent which is outside the study area, but exists over a natural drainage system. Drainage appears to be traditional.
Does the subdivision and building design maximize solar access, and provide shelter?	Yes, but lacks shelter from the rain.
Has 'green' technology been used in the building construction?	Not evident

Collaboration	Discussion
Has the decision making process involved community groups? Consultation	No.