



Proposed Plan Change No.15:
Takanini Structure Plan Area 6

to the Operative Papakura District Plan 1999

Section 32 Report and Assessment of
Environmental Effects

August 2009

Proposed Plan Change No.15: Takanini Structure Plan Area 6

to the Operative Papakura District Plan 1999

CONTENTS

	Page
1.0 INTRODUCTION	7
1.1 BACKGROUND	7
2.0 SUMMARY OF CHANGE	9
2.1 RURAL PLAN CHANGE – PROPOSED PLAN CHANGE 13	10
2.2 PROPOSED PLAN CHANGE 4 AND 11	11
3.0 PURPOSE OF THE PLAN CHANGE	11
4.0 REASONS FOR THE PLAN CHANGE	11
5.0 STATUTORY CONSIDERATIONS	12
5.1 THE FIRST SCHEDULE TO THE RESOURCE MANAGEMENT ACT 1991	12
5.2 THE OPERATIVE PAPA KURA DISTRICT PLAN	12
6.0 LAND DESCRIPTION AND CONTEXT	13
6.1 BROAD SITE CONTEXT	13
6.2 HISTORICAL USE OF THE LAND	13
6.3 THE SUBJECT SITES AND THEIR BOUNDARIES	13
6.4 TRANSPORT NETWORK AND INFRASTRUCTURE	15
6.4.1 Transport Network	15
6.4.2 Infrastructure	16
6.5 CURRENT USE OF THE LAND	17
6.6 CURRENT ZONING	17
6.6.1 Rural Takanini/Drury Zone	17
6.6.2 Proposed Plan Change 13 - Future Urban	18
7.0 RELEVANT STATUTORY PUBLICATIONS	19
7.1 AUCKLAND REGIONAL POLICY STATEMENT INCORPORATING PROPOSED PLAN CHANGE 6 (2005)	19
7.2 AUCKLAND REGIONAL GROWTH STRATEGY 1999	22
7.3 AUCKLAND REGIONAL LAND TRANSPORT STRATEGY 2005	24
7.4 SOUTHERN SECTOR AGREEMENT 2001 (SSA)	25
7.5 PROPOSED AUCKLAND REGIONAL PLAN: AIR, LAND AND WATER 2001	26
7.6 THE AUCKLAND REGIONAL ECONOMIC DEVELOPMENT STRATEGY 2002	27
7.7 THE AUCKLAND REGION BUSINESS LAND STRATEGY 2006	28
7.8 OPERATIVE PAPA KURA DISTRICT PLAN 1999	29
7.8.1 Plan Change 3 – Takanini Structure Plan: Area 1B	30
7.8.2 Plan Change 4 – Section One: General Papakura	30
7.8.3 Proposed Plan Change 10 – Local Government (Auckland) Amendment Act 2004 Changes to the Operative Papakura District Plan	31
7.9 TAKANINI STRUCTURE PLAN 2000	31

7.10	PAPAKURA DISTRICT COUNCIL EMPLOYMENT STRATEGY AND GUIDELINES 2002	33
7.11	PAPAKURA DISTRICT EMPLOYMENT CHARACTERISTICS AND BUSINESS LAND CAPACITY ANALYSIS 2006	34
7.12	THE PAPAKURA DISTRICT LONG TERM COUNCIL COMMUNITY PLAN 2009 - 2019	34
7.13	THE PAPAKURA DISTRICT OPEN SPACE STRATEGY 2003	35
7.14	DRAFT WALKING AND CYCLING STRATEGY 2006	37
7.15	PAPAKURA STREAM – TAKANINI CATCHMENT COMPREHENSIVE CATCHMENT MANAGEMENT PLAN	37
8.0	RESIDENTIAL VERSUS BUSINESS REZONING	39
8.1	SOUTHERN SECTOR PROJECTED POPULATION FIGURES	39
8.1.1	Area 6 Residential Population	39
8.1.2	Remaining Growth Areas Residential Population	39
8.1.3	Projected Employment Figures	41
8.2	GEOTECHNICAL ASPECTS	41
8.3	DEMAND FOR BUSINESS ZONED LAND	42
9.0	SUMMARY – PLAN CHANGE DOCUMENTS	43
10.0	RESOURCE MANAGEMENT ISSUES	43
10.1	THE ISSUES	44
PART B 47		
1.0	DESCRIPTION OF THE PLAN CHANGE	47
1.1	PRIMARY FEATURES OF THE PLAN CHANGE	47
2.0	ZONING APPROACH	47
2.1	INDUSTRIAL ZONES	47
2.1.1	Objectives and Policies of the Industrial Zones	47
2.1.2	Strategy for the Industrial Zones	48
2.1.3	Activities in the Industrial 1 Zone	48
2.1.4	Activities in the Industrial 3 Zone	50
2.1.5	Subdivision Standards within the Industrial 1 and 3 Zones	51
2.1.6	General Performance Standards for Industrial Zones	51
2.2	RESIDENTIAL 8 ZONE	54
2.2.1	Objectives and Policies of the Residential 8 Zone	54
2.2.2	Activities in the Residential 8 Zone	54
2.3	RESIDENTIAL 1 ZONE	54
2.4	RESERVE ZONE	55
3.0	CONVERSION OF ZONES	55
4.0	INTEGRATING THE PROPOSED PLAN CHANGE WITHIN THE DISTRICT PLAN	56
4.1	AMENDMENT TO SECTION ONE, PART 5B STRUCTURE PLAN AREAS	56
4.2	AMENDMENT TO PLANNING MAPS C2, C3, D2 AND D3	56
4.3	RULES APPLYING TO THE PLAN CHANGE AREA	56
4.3.1	Industrial 1 Zone	56
4.3.2	Industrial 3 Zone	57
4.3.3	Industrial 1 and Industrial 3 Zones	57
4.3.4	Residential 8 Zone	58
5.0	ASSESSMENT OF EFFECTS	58
5.1	STATUTORY CONSIDERATIONS	58
5.1.1	The Fourth Schedule to the Resource Management Act 1991	58

5.1.2	Meaning of Environment	59
5.1.3	Meaning of Effect	59
5.2	ALTERNATIVE LOCATIONS OR METHODS FOR UNDERTAKING THE ACTIVITY	59
5.3	ASSESSMENT OF ENVIRONMENTAL EFFECTS	60
5.4	GEOTECHNICAL ENGINEERING	60
5.4.1	Geotechnical Assessment Report on Takanini Structure Plan Area 6	61
5.4.2	Geotechnical Assessment of Proposed Stormwater Pond	67
5.5	CONTAMINATION EFFECTS	68
5.5.1	Methodology	68
5.5.2	Site History	69
5.5.3	Site Walkover	69
5.5.4	Conclusion	70
5.5.5	Recommendations	70
5.5.6	Remediation Action Plan	70
5.6	EFFECTS ON INFRASTRUCTURE	71
5.6.1	Proposed Stormwater System	71
5.6.2	Recharge of Stormwater	71
5.6.3	Piped Reticulation System and Overland Flowpaths	72
5.6.4	Stormwater Pond	74
5.6.5	Flood Risk	75
5.6.6	Sanitary Sewer	75
5.6.7	Roading	76
5.6.8	Water Supply	77
5.6.9	Electricity	77
5.6.10	Gas	77
5.6.11	Telecommunications	77
5.6.12	Conclusion	78
5.7	TRAFFIC IMPACT ASSESSMENT	79
5.7.1	Executive Summary	79
5.7.2	Transport Related Proposed Plan Change Rules	83
5.7.3	ITA Conclusion	85
5.8	VEGETATION, LANDSCAPE AND VISUAL EFFECTS	87
5.8.1	Constraints and Opportunities	87
5.8.2	Visual Assessment	89
5.8.3	Conclusion	89
5.8.4	Addendum	89
5.9	ARBORICULTURAL EFFECTS	91
5.10	ARCHAEOLOGICAL EFFECTS	93
5.10.1	Archaeological Findings	93
5.11	EFFECTS ON THE ECONOMY	94
5.12	NOISE EFFECTS	95
5.13	EFFECTS ON THE NEIGHBOURHOOD	96
5.14	EFFECTS ON THE WIDER COMMUNITY	97
5.15	REVERSE SENSITIVITY	97
5.16	MITIGATION MEASURES	98
5.17	AFFECTED PERSONS AND CONSULTATION	98
5.18	MONITORING	99
5.19	ASSESSMENT OF EFFECTS CONCLUSION	99
6.0	CONSULTATION	99
6.1	PAPAKURA DISTRICT COUNCIL	100
6.2	AUCKLAND REGIONAL COUNCIL/AUCKLAND REGIONAL TRANSPORT AUTHORITY	103
6.3	UTILITY SERVICE PROVIDERS	104

6.4	NZ TRANSPORT AGENCY (FORMERLY TRANSIT)	104
6.5	GOVERNMENT DEPARTMENTS	104
6.6	TANGATA WHENUA	105
6.6.1	Cultural Values Assessment	105
6.6.2	Implementation	110
6.7	SURROUNDING COMMUNITY	110
6.7.1	Sandra E McLean – 118 and 148A Manuroa Road, Takanini	111
6.7.2	Public Open Day	111
6.7.3	Revision of Plan Change as a Result of Feedback Received	115
6.8	MANUKAU CITY COUNCIL	116
6.9	NEW ZEALAND HISTORIC PLACES TRUST	117
6.10	CONSULTATION SUMMARY	117
7.0	IMPLEMENTATION AND COMPLIANCE	117
PART C		118
1.0	ANALYSIS OF ALTERNATIVES UNDER SECTION 32 OF THE ACT	118
1.1	STATUTORY CONSIDERATIONS	118
1.2	OBJECTIVES OF THE PLAN CHANGE	119
1.3	PROPOSED NEW DISTRICT PLAN RULES	119
1.4	ALTERNATIVE MEANS OF ACHIEVING OBJECTIVES	119
1.4.1	Alternative 1: Plan Change Application	120
1.4.2	Alternative 2: Alternative Zonings for the Land	121
1.4.3	Alternative 3: Do Nothing	124
1.4.4	Alternative 4: Resource Consent Applications	124
1.4.5	Alternative 5: District Plan Review	125
1.5	BENEFITS AND COSTS OF ALTERNATIVE MEANS	125
1.5.1	Alternative 1: The Proposed Plan Change	125
1.5.2	Alternative 2: Alternative Zonings	126
1.5.3	Alternative 3: Do Nothing	126
1.5.4	Alternative 4: Resource Consent Applications	126
1.5.5	Alternative 5: District Plan Review	127
1.6	RISK OF NOT ACTING IF INFORMATION IS INSUFFICIENT	127
1.7	APPROPRIATENESS, EFFICIENCY AND EFFECTIVENESS OF THE PLAN CHANGE	128
1.8	SECTION 32 ANALYSIS CONCLUSION	128
1.9	CONCLUSION	128
DOCUMENTS		129

APPENDICES

Appendix 1	Land Holdings Subject to Plan Change
Appendix 2	Copies of Certificates of Title
Appendix 3	Site Location Plan
Appendix 4	Proposed District Plan Change
Appendix 5	N/A
Appendix 6	N/A
Appendix 7	Extent of the HIRB Recession Plane Plan
Appendix 8	Geotechnical Investigation Reports
Appendix 9	Contamination Assessment Report
Appendix 10	Remediation Action Plan
Appendix 11	Infrastructure Servicing Assessment Report
Appendix 12	Transportation Assessment Report
Appendix 13	Visual and Landscape Effects Assessment Report
Appendix 14	Landscape Concept Plan
Appendix 15	Arboricultural Assessment Report
Appendix 16	Archaeological Assessment Report
Appendix 17	Economic Impact Assessment Report
Appendix 18	Noise Assessment Report
Appendix 19	Consultation Correspondence
Appendix 20	Consultation Strategy
Appendix 21	Cultural Values Assessment
Appendix 22	Proposed Designation Plan

1.0 INTRODUCTION

This document comprises three parts:

- Part A – The introduction, background, statutory and non-statutory context and identified resource management issues.
- Part B – Description of the Plan Change, including proposed changes to the planning provisions, an Assessment of Effects on the Environment (pursuant to the Fourth Schedule of the Resource Management Act 1991), and a description of the consultation undertaken to date.
- Part C – An analysis of the Plan Change proposed under Section 32 of the Resource Management Act.

PART A

1.1 BACKGROUND

Takanini Structure Plan Area 6 Limited formed as a limited liability company in 2005, with the aim to achieve the rezoning of their land from a rural to a predominantly industrial urban use.

There are six landowners in Takanini Structure Plan Area 6, which collectively occupy some 53 hectares of land. The land holdings, which are the subject of this Plan Change, are listed in Appendix 1. Copies of Certificate of Titles are attached as Appendix 2 and a Site Location Plan is attached as Appendix 3.

Takanini Structure Plan Area 6 Limited lodged a private plan change application with Papakura District Council (PDC) on 28 April 2008. Several requests for further information were exchanged culminating in an amended application being provided to PDC on 3 April 2009 (a further updated landscape plan was provided on 14 May 2009).

Several matters were not able to be resolved with the applicant and on 26 May 2009 the private plan change was reported to a meeting of Council where it was resolved:

"2. THAT PURSUANT TO CLAUSE 25(2)(A) OF THE FIRST SCHEDULE OF THE RMA 1991, COUNCIL ADOPT IN PRINCIPLE THE REQUEST FOR A PRIVATE PLAN CHANGE BY TAKANINI STRUCTURE PLAN AREA 6 LIMITED TO REZONE AREAS 6A AND 6B OF THE TAKANINI STRUCTURE PLAN TO INDUSTRIAL 1, INDUSTRIAL 3, RESIDENTIAL 8, AND RESIDENTIAL 1.

3. THAT EDITORIAL CHANGES ARE MADE TO THE LODGED PLAN CHANGE DOCUMENTS AND THAT THE AMENDED PLAN CHANGE BE FINALISED AND BROUGHT BACK TO THE COUNCIL FOR CONFIRMATION.

SPECIFIC AREAS REQUIRING CONSIDERATION / MODIFICATION ARE:

- *STORMWATER POND AND PAPAURA DISTRICT COUNCIL DESIGNATION*

-
- RECREATION RESERVE PROVISION
 - FLOODING NOTATION REMOVAL
 - PLAN CONSISTENCY.

4. ADVICE NOTE: WITH THE NOTIFICATION OF THE PROPOSED PLAN CHANGE, PAPAURA DISTRICT COUNCIL WILL CONCURRENTLY NOTIFY A NOTICE OF REQUIREMENT FOR DESIGNATION OF THE STORMWATER POND AND ASSOCIATED AREA REQUIRED FOR CONSTRUCTION AND MAINTENANCE.

5. ADVICE NOTE: PAPAURA DISTRICT COUNCIL WILL NEED TO MAKE A MUL SHIFT APPLICATION TO THE AUCKLAND REGIONAL COUNCIL. THAT APPLICATION HAS BEEN DRAFTED AND AWAITS FINALISATION OF THE PLAN CHANGE CONTENT. IT WILL IDEALLY ALSO BE NOTIFIED CONCURRENTLY WITH THE PLAN CHANGE AND NOTICE OF REQUIREMENT”

On 21 July 2009 an amended plan change was presented to Council which resolved:

“2. THAT COUNCIL ADOPT PROPOSED PLAN CHANGE NO.14 [15]– TAKANINI STRUCTURE PLAN AREA 6 AS ATTACHED TO THIS REPORT FOR THE PURPOSES OF NOTIFICATION PURSUANT TO THE FIRST SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991.

3. THAT COUNCIL CONFIRM THE DETAILS OF THE NOTICE OF REQUIREMENT FOR DESIGNATION OF A STORMWATER POND AND ASSOCIATED AREA FOR CONSTRUCTION, OPERATION AND MAINTENANCE AS ATTACHED TO THIS REPORT AND DELEGATE AUTHORITY TO CLR CONROY AND THE CHIEF EXECUTIVE TO FINALISE NOTICE OF REQUIREMENT DOCUMENTS (BASED ON THE CONFIRMED DETAILS) FOR THE PURPOSES OF NOTIFICATION PURSUANT TO PART 8 OF THE RESOURCE MANAGEMENT ACT 1991.

4. THAT PLAN CHANGE NO.14 [15] AND THE FINAL NOTICE OF REQUIREMENT AS IDENTIFIED IN 2 AND 3 ABOVE BE PUBLICLY NOTIFIED FOLLOWING THE AUCKLAND REGIONAL COUNCIL’S DECISION ON PAPAURA DISTRICT COUNCIL’S APPLICATION TO AMEND THE AUCKLAND REGIONAL POLICY STATEMENT.”

On 11 August 2009 a minor correction pursuant to Clause 16(2) of the First Schedule was presented to Council which resolved:

“2. THAT PURSUANT TO CLAUSE 16(2) OF THE FIRST SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991 COUNCIL APPROVE THE REPLACEMENT OF FIGURE 3 – ROAD CROSS SECTION (PORCHESTER ROAD) CONTAINED WITHIN PLAN CHANGE NO.14 [15] (ADOPTED 21 JULY 2009) WITH A NEW CROSS SECTION AS ATTACHED TO THIS REPORT.”

A Notice of Requirement for the Stormwater Pond required to service the plan change area has been prepared and is the subject of a separate set documentation.

The final Plan Change for notification is attached as Appendix 4.

2.0 SUMMARY OF CHANGE

This Plan Change introduces new urban planning provisions in relation to Takanini Structure Plan Area 6A/6B, which is bounded by the Papakura Stream to the north, Porchester Road to the east, existing residential properties along Manuroa Road to the south and Takanini School Road to the west.

The Plan Change proposes to rezone land from an operative zoning of Rural Takanini/Drury zone to an Industrial 1, Industrial 3, Residential 8 and Reserve zone. The total area to be rezoned is some 53.5 hectares.

The approximate areas of the main proposed zonings are:

- Industrial 1 zone: 16.6 hectares
- Industrial 3 zone: 24.8 hectares
- Residential 8 zone: 5.0 hectares
- Reserve zone: 4.7 hectares (Esplanade reserve area, Stormwater pond area, Recreational Reserve)

In addition, two properties 118 and 148A Manuroa Road, which have an area of 2,680m² and currently have a split zoning of Residential 1 and Rural Takanini / Drury are proposed to have the Residential 1 zoning extended over the entirety of both properties.

Amended Industrial 1, Industrial 3 and Residential 8 zone provisions, and the current Reserve zone are proposed to apply. In the Industrial 1 zone subdivision and development is controlled through resource consent with particular regard to amenity and interface considerations. Subdivision to create additional lots requires resource consent and shall comply with the Structure Plan. No changes to the Reserve Zone are proposed.

The Structure Plan for Area 6 depicts the important infrastructural elements that will guide subdivision and development within the land to be rezoned. This Structure Plan will be inserted into Appendix 16A to Section Three of the District Plan.

A Notice of Requirement for a designation to construct and operate a stormwater pond to service the land uses will be notified concurrently with Plan Change No.15 (PC15). The proposed stormwater management area comprises approximately 2.2 hectares; the Reserve zone is proposed to be the underlying zone.

The Plan Change proposes amendments to:

- i) Planning Map No. C2, C3, D2 and D3 to show the proposed Industrial 1, Industrial 3, Residential 8 and Reserve rezoning (refer Appendix 4).

-
- ii) Planning Map No. D3 by rezoning parts of 118 and 148A Manuroa Road, Takanini which currently have a split Rural Takanini / Drury and Residential 1 zoning to an Residential 1 zoning. This will ensure that the entirety of 118 Manuroa Road and 148A Manuroa Road, Takanini has a Residential 1 zoning.
 - iii) Part 5B Structure Plan Areas of Section One, to include reference to the rezoning of Takanini Structure Plan Area 6.
 - iv) Part 10 Definitions of Section One, to include a new definition for Network Utility Yards.
 - v) Part 6 Industrial Zones of Section Three to add reference to a Structure Plan for Area 6, and to provide new planning provisions of specific relevance to Area 6.
 - vi) Part 9 Subdivision of Section Three to reflect the rezoning of Structure Plan Area 6.
 - vii) Part 16 – Takanini Structure Plan Area of Section Three by inserting new front yard rule for roads fronting the Industrial 1 zone in Takanini Structure Plan Area 6.
 - viii) Part 16 – Takanini Structure Plan Area of Section Three by inserting a new structure plan for Takanini Structure Plan Area 6 (Appendix 16A).
 - ix) Part 16 – Takanini Structure Plan Area of Section Three by inserting new roading standards (Appendix 16D).
 - x) Part 16 – Takanini Structure Plan Area of Section Three by inserting a new landscape concept plan (Appendix 16E).

A copy of the zoning map is attached as Appendix 4, the Structure Plan as Appendix 5 and the proposed changes to the District Plan as Appendix 6.

2.1 RURAL PLAN CHANGE – PROPOSED PLAN CHANGE 13

Proposed Plan Change 13 (PC13) introduces objectives, policies and methods that recognise a changing rural environment in Papakura, including potential future expansion of urban areas into rural areas. PC13 seeks to rezone land within the Takanini Structure Plan area, including the plan change area, as a Future Urban Zone. This zone recognises that the land may in the future be rezoned for urban activities, and therefore, introduces rules that protect these areas from inappropriate subdivision and landuse that could compromise future land use.

PC13 was publicly notified on 7 November 2007, with hearings held in February and March 2009. A Decision has recently been released (5 August 2009).

The zoning proposed in PC15 is more appropriate than the Future Urban zone proposed by PC13 because it applies a comprehensive technical basis for specific existing urban zones (with amendments) to the Plan Change area allowing for a range of industrial and business activities to develop with appropriate management.

Should PC15 become operative prior to PC13 then PDC should seek to withdraw / delete that part of PC13 seeking to rezone the Takanini Structure Plan Area 6 land to the Future Urban zone.

2.2 PROPOSED PLAN CHANGE 4 AND 11

Proposed Private Plan Change 4 (PPC4) and Proposed Plan Change 11 (PC11) proposes to rezone three areas within Takanini, being Area 2A (Cosgrave), Area 2B (Kirikiri) and Area 2C (Dominion Road). In addition, a consequence of the proposed Plan Change is the introduction of a Residential 8A and 8B zone. This proposed Plan Change was notified on 17 October 2007 with the submission period closing on 23rd November 2007. The further submission period was between 13 February 2008 and 20 March 2008. Hearings were held for this Plan Change in August 2008 and an interim decision released on 23 December 2008. A final decision was notified on 15 July 2009 but will be subject to appeals before the Environment Court given the Auckland Regional Councils rejection of PDC's application to amend the Auckland Regional Policy Statement to extend the Metropolitan Urban Limits.

PC15 proposes to apply the existing Residential 8 zone to part of the Takanini Structure Plan Area 6 as outlined in the zoning plan attached as Appendix 4. PC15 is drafted to reflect the decision versions of PPC4, PC11 and Proposed Plan Change 12 which include amendments to Part 5B of Section One and Part 16 of Section Three.

3.0 PURPOSE OF THE PLAN CHANGE

The primary objective of this Plan Change is to introduce appropriate zoning for the land in accordance with the purpose and principles of the Resource Management Act 1991. The proposed zones have been selected because they:

- Are consistent with Council's District Plan; and
- Give effect to the Auckland Regional Growth Strategy 1999, Southern Sector Agreement 2001, Proposed Plan Change No.10 to the Papakura District Plan, Proposed Change No.6 to the Auckland Regional Growth Strategy; and
- Enable the Council to fulfil its functions under Section 31 of the Resource Management Act 1991.

4.0 REASONS FOR THE PLAN CHANGE

The reasons for the Plan Change are explained in detail in the Section 32 analysis contained in Section 8 of Part C in this report. In summary, the reasons for the Plan Change are as follows:

- a) To enable more efficient use of an existing land resource in accordance with an approved Structure Plan.
- b) To provide the opportunity to undertake a comprehensive and co-ordinated planning, design and engineering approach to development of a valuable land resource.

-
- c) To provide for comprehensive and integrated land use and transport planning within the Takanini area.
 - d) To enable the Papakura District Council and Auckland Regional Council to fulfil their respective growth planning obligations articulated in the Takanini Structure Plan 2000, Southern Sector Agreement 2001, Regional Growth Strategy 1999, Proposed Plan Change 10, Auckland Regional Policy Statement and Proposed RPS Change 6 and associated supporting strategies (e.g Business Land and Land Transport Strategies).
 - e) The rezoning and concurrent MUL extension will provide important additional industrial/business land in a suitable location to meet the needs and well being of the District's and Region's inhabitants.

5.0 STATUTORY CONSIDERATIONS

5.1 THE FIRST SCHEDULE TO THE RESOURCE MANAGEMENT ACT 1991

The Plan Change for Takanini Structure Plan Area 6 was initiated as a Private Plan Change request. The procedure for requesting a Plan Change is set out in Part 2 of the First Schedule to the Act – *"Preparation and Change of Policy Statements and Plans by Local Authorities."* Clause 22, *"Form and Request"* requires that a request made to a local authority to change its District Plan shall:

- "(1) Explain the purpose of, and reasons for, the proposed plan or change to a policy statement or plan [[and contain an evaluation under section 32 for any objectives, policies, rules, or other methods proposed.]]."*
- "(2) Where environmental effects are anticipated, the request shall describe those effects, taking into account the provisions of the Fourth Schedule, in such detail as corresponds with the scale and significance of the actual and potential environmental effects anticipated from the implementation of the change..."*

5.2 THE OPERATIVE PAPA KURA DISTRICT PLAN

Part 4.7.2 Future Development of the Operative District Plan provides that:

"Provisions introduced into the District Plan will also seek to ensure that urbanisation of Takanini and Hingaia takes place in a manner which enables community wellbeing, while managing environmental effects."

The information necessary to support the proposed Plan Change and to demonstrate that the proposal enables community wellbeing, while providing appropriate provisions to ensure that environmental effects are well managed, are set out in Plan Change provisions and associated documentation.

6.0 LAND DESCRIPTION AND CONTEXT

6.1 BROAD SITE CONTEXT

Takanini Structure Plan Area 6 (6A and 6B) comprise a total of eight titles, which are bordered by the Papakura Stream to the north, Porchester Road to the east, Manuroa Road and a row of established residential housing to the south, and Takanini School Road to the west. A portion of Popes Road bisects the overall site area. The area is a rectangular shaped block of land, with the northern boundary being defined by the heavily modified Papakura Stream channel. It is mostly flat, with some natural dips and hollows and is relatively low-lying, with a gradual slope down towards the Papakura Stream.

The Papakura Stream boundary to the north is also the territorial authority boundary with Manukau City Council. Prior to the Local Government amalgamations in 1989 Takanini Structure Plan Area 6 used to also be part of Manukau City. A reserve associated with the residential subdivision of Manurewa East is adjacent to this boundary.

Porchester Road is located to the east of the block, which is a busy north-south transport corridor linking Manukau City to the north with Papakura District to the south. Established residential housing is located to the south of the site (along the northern side of Manuroa Road). A Rest Home is included in this residential strip.

Takanini School Road forms the western boundary of the site. The majority of the properties to the west of the site have been developed and are predominantly used for manufacturing and industrial purposes, with the exception of a Sikh Temple which is located on the south-western edge with Takanini Structure Plan Area 6. On the Residential 1 zoned land further to the south of this temple, a 68 lot residential subdivision has been approved.

The Takanini Structure Plan was approved in draft form in May 2000 and adopted by PDC in November 2000. It identified the preferred area to accommodate future growth and development within Papakura at Takanini. For the purposes of implementation, the Takanini Structure Plan has been divided into sub-areas, which are proposed to be implemented on a staged basis. Area 1B (Glenora) and 3 (McLennan) is currently being developed, and parts of Areas 1A, 2A, 2B and 2C are currently the subject of Plan Changes to facilitate the development of land in accordance with the Takanini Structure Plan. PC15 relates to Areas 6A and 6B, which together compromise approximately 53 hectares of land located at the north-western end of the Takanini Structure Plan area.

6.2 HISTORICAL USE OF THE LAND

The general environment of the site is still characterised by rural activities, which was the predominant land use in the area. The entire area has strong links to the racing industry, and market gardening.

6.3 THE SUBJECT SITES AND THEIR BOUNDARIES

The application site comprises eight individual titles bisected by Popes Road, with three lots located to the north of Popes Road, and four lots located to the south. The properties located at 118 and 148A Manuroa Road are not part of Takanini 6A and 6B but form part of

the Plan Change. A list of the properties subject to the Plan Change is as follows and is replicated in Appendix 1:

Table 1: Land Holdings Subject to Plan Change				
Address (If Any)	Legal Description	Certificate-of-Title	Lot Size	Owner
2 Popes Road	Lot 2 DP 136772	NA80C/590	11.5571 ha	L.C.F Chan
3 Popes Road	Lot 1 DP 363854	275793 331278	8.5700 ha	TLI Limited
55 Takanini School Road	Lot 2 DP 363854	275794 331277	8.5719 ha	Takanini Industrial Limited
22 Popes Road	Lot 1 DP 163055	NA98B/472	4.1552 ha	Mellviews Limited
354 Porchester Road	Lot 2 DP 163055	NA98B/473	4.1960 ha	Zabeel Investments Limited Goldstein Company Limited
296 Porchester Road	Pt Lot 3 DP 36684	NA9B/356	14.0016 ha	B.J & S.J Wallace Victoria Street Trustees Limited
122 Manuroa Road	Lot 2 DP 346037	188817	2.2653 ha	Suvarno Holdings Limited
118 and 148A Manuroa Road	Lot 1 DP 346037 Lot 2 DP 190143	188816	2680m ²	Sandra E McLean

There are interests listed on these titles however none are considered to inhibit the proposed rezoning for business purposes. The interests are as identified below:

- A Caveat is registered against Lot 2 DP 163055 (CT 98B/473).
- A Consent Notice is registered against Lot 2 DO 346037 (CT 188817), which requires that all accessways, residential buildings, garages, swimming pools and paved tennis courts (excluding lawn tennis courts and gardens) be restricted to an area identified on the title plan. It is further required that recommendations made by a Geotechnical report prepared by Chambers Consultants Limited dated 11 November 1998 be adhered to with regard to site development and the construction of buildings. It is noted that a Geotechnical report has been prepared by Foundation Engineering Limited in support of the Plan Change, and this new comprehensive Geotechnical report will supersede the Geotechnical report referred to in this Consent Notice.
- A Right-of-Way is also registered against CT 188817, which provides for right-of-way access to the site from Manuroa Road over DP 346037.

-
- Lots 1 and 2 DP 363854 (CTs 331277 and 331278) are both subject to a Consent Notice, which notes that service connections shall be provided to the site prior to the construction of any buildings. The Consent Notice also recognises that the sites are intended for future urban development and are identified as Areas 6A and 6B on the Takanini Structure Plan. The Notice advises that the final plan for the area will reflect the needs of the community and may propose such land uses as arterial and collector roads, as well as local parks etc, along with private land uses such as residential, commercial or industrial activities. The Consent Notice further advises that the site is recognised by PDC as being within a possible flood hazard area and any application for resource consent should comment on the propensity of the site to flood and the location of overland flowpaths, and prescribe a minimum floor level for any habitable building or building storing hazardous substances. The Consent Notice also requires that any development of the site shall be undertaken having regard to the Geotechnical report prepared in support of the subdivision consent application, although further geotechnical/engineering investigation will be required specific to any proposed development of this lot. It is noted that an Infrastructure and Geotechnical assessment have been prepared in support of the Plan Change and address these matters.
 - Lots 1 and 2 DP 363854 are subject to lease agreements for 21 years commencing 22 December 2006. The lessor and lessee on these agreements are the same parties, and therefore it is not considered that this lease arrangement will have any effect in terms of this Plan Change.
 - A Consent Notice is registered against Lot 1 DP 346037 and Lot 2 DP 190143 (CT 188816). This consent notice states *“that no further buildings other than accessory buildings are permitted on that part of the Lot 2 zoned Rural Papakura.”*
 - A Consent Notice is registered against Lot 1 DP 346037 and Lot 2 DP 190143 (CT 188816) under section 221 of the Resource Management Act 1991. This notice describes that Lot 1 must not be disposed of separately unless the consent of Council is given, and this may require a reserve contribution to be paid.
 - A Certificate Pursuant to Section 37(2) of the Building Act affects CT 18816 which describes that neither allotment be transferred or leased except in conjunction with the other allotment.

These Certificate of Titles and the relevant interests are attached as Appendix 2.

6.4 TRANSPORT NETWORK AND INFRASTRUCTURE

6.4.1 Transport Network

The Plan Change area has direct frontage to Porchester Road, Takanini School Road and Popes Road. The form and function of the various roads surrounding the site area differs greatly, as parts of the surrounding network are urban in nature while others are distinctly rural. The site is located approximately 800 metres from Great South Road (via Manuroa Road), and the State Highway 1 motorway system is located approximately 650 metres from the intersection of Manuroa Road and Great South Road.

Great South Road, Manuroa Road and Porchester Road are all classified as Arterial Roads in the District Plan, and as such are major links in the City's road network and carry significant volumes of traffic.

Great South Road is also a Regional Arterial Road, with the main function of providing for the through movement of traffic between Manukau City in the north and Papakura and beyond in the south. In the general vicinity of the site, Great South Road also provides access to numerous and varied commercial and residential activities located either side of the road. The major intersections along Great South Road are traffic signal controlled that cater for large numbers of vehicles.

Manuroa Road and Porchester Road are both District Arterial Roads and provide important east-west and north-south links respectively. Manuroa Road provides for one traffic lane in each direction together with some on-street parking and provides access for a number of residential properties. Porchester Road has a rural type cross-section with a seven metre sealed width and drainage channels on both sides of the road. The speed limit on Porchester Road is currently 80km/hr.

The intersection of Great South Road and Manuroa Road is controlled by traffic signals, while a roundabout is located at the intersection of Manuroa Road and Porchester Road.

Takanini School Road and Popes Road are classified as Local Roads under the District Plan. The predominant function of these roads is to provide for vehicle access to adjoining properties. Takanini School Road serves a combination of commercial and rural properties and provides one traffic lane in each direction, together with on-street parking on its western side. A rural drainage channel is located on the eastern side of Takanini School Road. Popes Road provides one traffic lane in each direction and has a rural type cross-section, which currently provides access to rural type properties.

All other streets in the immediate area of Takanini Structure Plan Area 6 are classified as Local Roads.

6.4.2 Infrastructure

The following infrastructure networks currently exist for the Plan Change area:

- **Stormwater:** The site is underlain by peat soils, which slope gently toward the Papakura Stream at the northern edge of the site. This provides a natural groundwater and surface water drainage environment. A Comprehensive Catchment Management Plan (Takanini North Catchment Management Plan) was prepared for the Papakura Stream-Takanini Catchment in 2000 by Fraser Thomas Ltd, and this has been approved via discharge consent to the Papakura District Council from the Auckland Regional Council in 2003.
- **Sanitary Sewer:** Wastewater lines currently exist at the southern and western periphery of the site. A further extension to the Mahia Branch sewer, which terminates at Rangī Road adjacent to the western boundary of the subject site will be required to support the future development of the Plan Change area for 'wet' industries.

-
- **Water Supply:** Water supply lines currently exist along Takanini School Road and Popes Road, which have significant strength to support future development of the area.
 - **Electricity, Gas and Telecommunications:** The area is currently reticulated with electricity networks owned and operated by Vector Limited (“Vector”) which are located along existing public roads (Porchester, Popes, Takanini School and Manuroa Roads). Vector has advised that the existing overhead supply can be extended (and undergrounded) along existing road frontages as required to provide suitable supply connections to all sites. Vector has also confirmed that local supply lines are present in Spartan and Rangi Roads to the west of the area, which have sufficient strength to be extended to serve this development. Telecom New Zealand has advised that existing networks within the area have capacity to be extended to serve this development, which will be aligned with the major existing and proposed additional road alignments.

6.5 CURRENT USE OF THE LAND

The Plan Change area is currently characterised by predominantly rural activities. The northern end of the north-western quadrant appears to have been largely used for horse grazing, while the central section contains a horse training track. A significant portion of the far north-eastern section of the site is currently used by a nursery/plantation and a firewood storage yard. The south-eastern property of the application site is currently utilised as a horse training unit, with stables, trainer accommodation and a training track. The south-western property appears to have been mainly used for horse grazing.

The site has been significantly modified over time for farming activities, and has been completely stripped of its original vegetation. Hedges, shelterbelts and informal amenity plantings have been established throughout the site. Buildings that are present on the application site are predominantly rural in character, but include a number of residential dwellings, stables, workers accommodation and farm sheds.

6.6 CURRENT ZONING

6.6.1 Rural Takanini/Drury Zone

The Plan Change area is currently zoned Rural Takanini and outside the Metropolitan Urban Limits defined within the Auckland Regional Policy Statement. The main purpose of the Rural Takanini/Drury zone is to make provision for the horse training industry and for part time hobby farming. The zone recognises that both of these activities require relatively small areas of land. The zone rules therefore reflect the existing settlement and subdivision patterns, but contain rules which are designed to maintain the rural character of the area and to provide for a range of rural lifestyles. The sites must be capable of being self-sufficient in terms of water supply, sewerage treatment and stormwater disposal.

In general, Permitted Activities in the zone include: farming, forestry, horticulture, farmstay accommodation, plant nurseries/garden centres, staff quarters and stalls, single household units and accessory buildings. General subdivision in this zone is a Discretionary Activity.

Current impediments to the development of the land as a result of the Operative District Plan provisions include the entire site being located within a Possible Flood Hazard area, with the northern portion of the site, adjacent to the Papakura Stream, being located in a Flood Hazard area.

There are specific provisions in the Operative District Plan relating to filling, the construction of buildings/structures and the placement or storage of materials in areas that are subject to flooding. In some cases, it is necessary to obtain resource consent to carry out the above activities in this area.

6.6.2 Proposed Plan Change 13 - Future Urban

Plan Change 13 introduces objectives, policies and methods that recognise a changing rural environment in Papakura. It introduces subdivision and land use rules which reflect current issues, while ensuring that future options are not compromised by inappropriate use and development. Plan Change 13 introduces new zones, including the Future Urban Zone.

The Future Urban Zone identifies those areas of the District that have been identified as growth areas by the Regional Growth Strategy, and for which Structure Plans have been prepared by the Council. The zone applies to the Hingaia Peninsula and to that part of the Takanini Structure Plan to the west of Mill Road (including Area 6).

Plan Change 13 recognises that some of the areas of the Hingaia and Takanini Structure Plans have already undergone a Plan Change to rezone the land from rural to urban. For those parts of the Structure Plan areas which have not been rezoned for urban development, the Future Urban Zone will generally be sought.

Proposed rules within Rural Plan Change 13 provide scope for the development of some 'urban activities' outside the Metropolitan Urban Limit reflecting the transitional land use nature of these areas. Land fragmentation is identified as a significant constraint for the future urbanisation of these areas and as a result, subdivision is only provided for where a significant natural feature, or land alongside a Priority Riparian Linkage, is suitably protected.

Council notes that it is important subdivision and land uses in the Future Urban Zone are appropriately managed to ensure the integrity of Structure Plans is not eroded, and the viability of these areas (as future urban areas) is not compromised. Consequently, subdivision within the Future Urban Zone is restricted. This is proposed to maintain a pattern of land parcels, which ultimately enables future development in a manner that is appropriate for the zone as described in the Structure Plan, or any subsequent zoning changes.

A number of development standards are specified throughout the proposed Rural Plan Change (contained within various rural zones). The standards include bulk and location rules, maximum impermeable surfaces, minimum distances for works, lighting, noise, wastewater, and other standards. The application of these rules is intended to help achieve the objectives in relation to mitigating and avoiding the adverse effects of activities and protecting amenity values.

The decision on PC13 was notified on 5 August 2009 and is currently subject to appeal.

7.0 RELEVANT STATUTORY PUBLICATIONS

The proposed Plan Change must be consistent with the hierarchy of plans above it, such as the Auckland Regional Policy Statement 1999 ("ARPS") and the Operative Papakura District Plan 1999, including both recent and proposed changes to these documents. Various statutory documents address the territorial authorities' responsibilities under the Act. Other non-statutory statements and strategies have also been prepared by these local authorities and other organisations to act as guidelines, such as the Regional Land Transport Strategy ("RLTS"), amongst others.

An overview of the relevant documents follows, providing context to the proposed Plan Change. The planning and design response for the Plan Change also has regard to these documents, and is discussed below.

7.1 AUCKLAND REGIONAL POLICY STATEMENT INCORPORATING PROPOSED PLAN CHANGE 6 (2005)

The Auckland Regional Policy Statement ("ARPS") is a statement about managing the use, development and protection of the natural and physical resources of the region. It sets out the policy for promoting the sustainable management of these resources. It also clarifies the respective roles of the agencies with responsibilities under the RMA in the Auckland Region. Its aim is to achieve integrated, consistent and co-ordinated management of the region's resources.

It also aims to provide greater certainty over the way that natural and physical resources are managed and hence create an awareness of the constraints and opportunities in this region.

The Local Government Amendment Act 2004 ("LGA(A)A"), required all Councils in the Auckland Region to make changes to their respective planning documents for the purposes of giving effect to an integrated approach to the growth concept outlined in the ARG. Proposed Plan Change No. 6 to the ARG gives effect to the Regional Growth concept and requires the integration of land use and transport planning within the ARPS.

An overview of the key strategic resource management issues in the Auckland region indicates that the majority of the issues stem from pressures and impacts of development on the region's natural and physical resources. The following issues are those matters considered to be the most relevant to this application.

Issue 2.4.1: states that the region will need to accommodate continued population growth and provide for economic development in the foreseeable future. It identifies three key factors currently influencing Auckland's continued growth and development, namely: population dynamics (aging population), migration and economic activity.

Issue 2.4.2: states that urban development in the region threatens environmental qualities and thresholds. It identifies the need for land to be managed in an integrated manner as development can result in a wide range of environmental effects. These result from:

- destruction of valued natural resources through land clearance and associated development. This includes a loss of amenity and fragmentation post development.

-
- earthworks and land disturbance resulting in erosion and the generation of sediment, eventually ending up in the adjoining water bodies.
 - impervious surfaces generate more intense stormwater runoff which is exacerbated through inappropriate urban design and unmitigated stormwater runoff. Furthermore, new roads and industry increase the amount of contaminants carried by stormwater to water bodies, reducing the life supporting capacity of these sensitive receiving environments.
 - uncoordinated urban intensification places pressure on the capacity of existing wastewater and stormwater networks.
 - changes to stream and groundwater flows influence stream habitat availability and the ongoing impacts on water quality and the health of freshwater ecosystems.
 - air emissions from industry increase concentrations of toxic pollutants, and in turn degrade visibility and exacerbate health issues; hence the need to ensure appropriate separation distances between pollutant sources and sensitive activities.
 - urban expansion encroaching on to prime agricultural land resulting in the loss of productive soils.
 - expansion of the urban area onto rural land and the location of urban activities on rural land diminishes the visual separation between rural and urban areas and adversely impacts on both urban and rural amenity.

Issue 2.4.3: states urban redevelopment occurring in an ad hoc manner can result in the loss of urban amenities and consequently can result in incompatible land uses on adjacent sites, poor development layout and inefficient use of land at densities which are not supported by increases in infrastructure and open space. Comprehensive, well-planned urban redevelopment has the potential to remedy past adverse effects, improve urban form and design outcomes and increase employment and transport choices.

Issue 2.4.6: states that it is important that Auckland's transportation system and its land use are well integrated. Without a high level of integration it will be difficult for the region to meet its social and economic needs and this will result in an inefficient use of resources and increase the adverse effects that the transport system has on the environment. It is therefore essential that future investments in regional transport are designed to maintain an efficient and effective transport system and to support a land use pattern of containment and comprehensive intensification within selected high density centres and corridors.

The ARPS also provides objectives, policies and methods to enable the resources of the region to be managed in a sustainable and integrated manner. The strategic direction for the Auckland Region is one of containment of urban development within defined limits and accommodating future growth within and around high density centres and corridors linked by an effective public transport system. The Strategic Direction comprises a number of objectives and policies contained in Section 2.6.1 of the ARPS. The relevant strategic objectives and policies of the ARPS, to this Plan Change, are summarised below to:

-
- Accommodate the Region's growth in a manner which gives effect to the purpose and principles of the RMA and Section 40 of the LGAAA.
 - Contain expansion of Auckland's urban development while still providing for population and economic growth;
 - Require that town centres and transport nodes and corridors within the metropolitan urban limits are the focus for accommodating urban growth intensification;
 - Provide restricted opportunities for greenfields development through limited movement of the metropolitan urban limits;
 - Direct urban, rural and coastal settlement development and countryside living to areas in a form which is efficient in terms of travel patterns and energy use, supports infrastructure investment and avoids, remedies or mitigates adverse effects on the region's natural and physical resources, including existing infrastructure;
 - Guide the providers of urban infrastructure and transport facilities or services so that they can plan and programme their facilities or services so as to support urban development being contained within urban limits and growth being accommodated through intensification at selected locations;
 - Remedy or mitigate degraded natural resources which are life-supporting (air, water, soils and ecosystems), and to protect those significant natural and physical resources which provide for the foreseeable needs of future generations;
 - Guide Council to plan for the regeneration of existing sub-regional and Town Centres to maximise opportunities for public and private investment;
 - Protect amenity values, rural character and landscape values of rural areas;
 - Enable sustainable economic development to occur through business activities in appropriate locations.

This intensification is also being promoted by PDC through proposed Plan Change No.10. Proposed Change 6 to the ARPS and Proposed Plan Change 10 are currently subject to appeals.

The ARPS provides restricted opportunities for greenfield development through limited movement of the Metropolitan Urban Limits (MUL) for those areas already identified for intensification. Takanini Areas 6A and 6B are listed in Proposed Plan No. 6 to the ARPS and Proposed Plan Change No.10 to the Papakura District Plan as anticipated future urban areas occurring between 2005 – 2010. The proposed zoning intends to maximise the efficient use of the land, and ensure high quality development adjacent to public transport corridors. All necessary infrastructure can be provided to develop this urban area, as outlined in the infrastructure assessment in Section 5.6 of Part B and within Appendix 11 of this report.

An application to the Auckland Regional Council will be required to extend the MUL to include Takanini Structure Plan Area 6.

This MUL extension will also resolve an existing anomaly within the MUL where currently 112-160 Manuroa Road is located within the MUL while 82-110 Manuroa Road and 49-53 Takanini School Road are located outside the MUL. This is despite both areas being zoned Urban Residential 1 and containing existing dwellings.

The Plan Change is consistent with the issues of the ARPS and its strategic direction, as outlined in Section 2.6, because:

- It provides for business and employment opportunities within appropriately zoned industrial land where there is a district and region wide shortage of such land;
- It has been identified within the Takanini Structure Plan 2000 as a development area;
- Although located outside the MUL, the area is located immediately adjacent to it and to existing Industrial and Residential zoned land. Further, the extension of the MUL is logical and consistent with the relevant criteria used to consider such extensions;
- It appropriately manages the interface between Industrial and Residential zonings. Potential conflicts between incompatible land uses are avoided, remedied or mitigated through the use of buffer zones between more sensitive residential areas to the north and south, and rural land located to the east of the site.
- Takanini Structure Plan Area 6 has been designed to provide for a diversity in lot sizes within each zone.
- The expected urban environmental outcome will be of high quality and will be connected for all modes of transport, including the provision of safe and attractive walking and cycling environments.

This Plan Change is therefore considered to be consistent with the operative ARPS and ARPS Change No. 6.

7.2 AUCKLAND REGIONAL GROWTH STRATEGY 1999

In 1999, the Regional Growth Forum prepared the Regional Growth Strategy ("ARGS") looking ahead to the year 2050, when the regions population is expected to increase by 85 percent from a 1996 population of 1,066,000 to a projected 2050 population of 1,956,000. The purpose of the ARGS was to ensure growth is accommodated in a way that meets the best interests of the inhabitants of the Auckland region. The strategy provides a vision for what Auckland could look like in 50 years with a population of 2 million people, if growth is managed according to the vision, outcomes and principles identified in this strategy. Based on latest census figures, Auckland's population is predicted to reach 2 million by the year 2035.

The vision of the ARGS is to sustain:

- Strong supportive communities;
- A high quality living environment;
- A region that is easy to get around; and

-
- Protection of the coast and surrounding natural environment.

One of the key features of the strategy is that the growth will be managed by promoting quality, compact urban environments. Outside the existing urban area, specific new Greenfield areas are earmarked for growth, such as Takanini.

The ARGS envisages more mixed use development in and along centres and corridors. The strategy aims to ensure that the region will continue to be an attractive place to live and invest in.

It provides a framework to reduce uncertainty, create partnerships and opportunities, and to improve longer term planning for business. Maintaining and improving access to jobs and between businesses is also important.

This will mean that future greenfield development will need to be designed:

- To encourage passenger transport, walking and cycling, as well as use of the private motorcar.
- To enable the provision of a range of housing types (in both more intensive centres as well as suburban areas).
- To support the efficient use of land resources.
- To enable the provision of a range of business, retail, recreational and employment opportunities.
- To mitigate environmental impacts such as impacts on water quality.
- To ensure sufficient population to enable the provision of appropriate social and community services, such as schools and health facilities.
- To provide integration (with neighbouring areas and networks) and a sense of identity or a place for each community (e.g. clustering of business and community facilities, schools, parks, shops etc).
- To provide quality living and work environments.

The ARGS seeks more walking and cycling opportunities instead of car travel, by encouraging employment, retail, business and community facilities close to residential areas. These guidelines rely on establishing enough people in one area to support a good range of activities.

An efficient transport system is vital to the prosperity of the Auckland region and to the wellbeing of Aucklanders. Transport and land use are closely interrelated. Transport systems can both service growth and development and also facilitate future development patterns.

The strategy sees a shift in land-use patterns toward a more compact urban form, which focuses growth in more intensive mixed-use centres along the northern, western and southern passenger transit corridors, as well as near main arterial roads. More intensive

development can support a greater range of local services and facilities, increase the opportunity for safe walking and cycling and help support passenger transport, by bringing people closer to the main routes. Careful design is still needed to ensure good urban amenity.

The proposed Plan Change will be consistent with the vision of the ARGs by providing for business and employment opportunities in a sensitive manner, and in a location which is within close proximity to good transport links and an existing population base, which potentially could fulfil some of the labour needs of future businesses.

7.3 AUCKLAND REGIONAL LAND TRANSPORT STRATEGY 2005

The Regional Land Transport Strategy ("RLTS") maps the way forward for the region's transport system for the next 10 years. The RLTS outlines what is needed to achieve an integrated, safe, responsive and sustainable land transport system that can cope with the demands of many more people. The 2005 document results from a substantive review of the previous RLTS, which was published in July 2003 in order to realign the RLTS with major changes in transport policy since mid 2003. These changes include the introduction of a new national policy framework (New Zealand Transport Strategy), increased funding for transport in the Auckland region, as well as changed governance at the regional level with the creation of the Auckland Regional Transport Authority ("ARTA").

ARTA is now responsible for the integrated planning, funding and development of land transport in Auckland, with the exception of State Highway management which is administered by New Zealand Transport Agency (formerly Transit New Zealand).

The Auckland Regional Land Transport Strategy's goal is:

"A transport system which enhances the Auckland region as a great place to live, work and play."

The goal requires a proactive and integrated role for the transport system in the future development of the Auckland region. It is hoped that it will result in Aucklanders being proud of their transport system where:

- People and goods are able to move when necessary.
- Transport supports vibrant town centres.
- Streets are also community places.
- Getting around by all modes of transport is integrated, safe and effective.
- People have choices which enable them to participate in society.
- The environment and human health are protected.
- Transport resources are used efficiently.

The RLTS identifies the region's land transport needs and outlines how those needs are met and implemented in the context of achieving the strategy's vision and objectives. The

integration of land use and transport is critical to meeting the objectives of the RLTS. At a strategic level, the RLTS is aligned to the ARGS, which proposes accommodating a large part of the region's future growth through selective intensification around urban nodes and corridors.

The outcomes of the RLTS have been developed to support the broader land use patterns envisaged under the ARGS. The ARGS aims to concentrate a larger proportion of the region's population and employment in growth centres along the major transport corridors that are identified in the ARGS and sector agreements. This will improve the efficiency and convenience of passenger transport and increase opportunities to walk and cycle.

A comprehensive Integrated Transport Assessment (ITA) of the proposed Plan Change has concluded that the traffic and transportation effects of the proposal can be provided for in an appropriate manner, subject to the specific improvements proposed to the road network. The Plan Change area has reasonable access to public transport and there is potential in the future for these to be improved, and walking and cycling are viable transport options. This is elaborated on in Section 5.7 of Part B of this report and within the ITA which is enclosed as Appendix 12. Therefore it is considered that the Plan Change achieves the goal of the RLTS.

7.4 SOUTHERN SECTOR AGREEMENT 2001 (SSA)

In order to respond to the ARGS growth issues, the Auckland region was divided into four sectors (northern, central, southern and western), which cover the seven local authorities in the region. Each sector was to take responsibility for its share of the overall regional growth. The southern sector includes Manukau City, Papakura District and Franklin District to the Bombay Hills, and is expected to accommodate 31 percent of the increase in growth, or 275,000 more people by the year 2050.

It was estimated in the Growth Strategy that in the south, this increase will be accommodated by 169,000 (or 61 percent) in the existing urban areas and 85,000 (or 30 percent) in the future growth areas. The remaining 9% will be accommodated as part of the existing capacity within the rural sector. Based on predicted growth rates, the southern sector must accommodate an average of 5,500 additional people per year (based on a total of 275,000 additional people as stated above) to meet this target.

As part of the implementation process for the ARGS, each local authority in the Auckland region, as well as the Auckland Regional Council ("ARC"), has signed a Memorandum of Understanding ("MOU") to define and agree upon the responsibilities of the main stakeholders responsible for the implementation of the ARGS. The scope of the southern sector MOU (Southern Sector Agreement) broadly covers the key growth issues between the local authorities of the southern sector and outlines the means by which these issues will be jointly resolved.

The southern sector Councils, ARC and Transit New Zealand are also participants in the Southern Sector Strategic Corridor Project, which has been established to investigate and make recommendations on the provision of transport system improvements and future requirements to assist integration in line with the ARGS and the RLTS.

The ARGS predicts that providing for future growth within Papakura District means that the current population of approximately 42,000 people is expected to grow to approximately 94,000 by 2050. The ARGS and SSA propose that this growth be accommodated in the following manner: 12,000 (23 percent) in existing rural and urban areas, 5,000 (10 percent) in the Papakura central area, and 35,000 (67 percent) in the identified growth areas.

The SSA expects that at least 20,000 additional people will be accommodated in the Takanini greenfield area by 2050. The table that is shown in the SSA was updated in 2005, by way of Plan Change 10 to the Operative District Plan, whereby the timing for the notification of changes to release of land for development was revised. Changes to enable development within Takanini Structure Plan Area 6 are now scheduled to occur between 2005-2010 (previously it was pre 2020). The timing of this Plan Change is consistent with both the previous and revised timeframes.

Takanini Structure Plan Areas 6A and 6B is expected to achieve densities of 10-20 household units per gross hectare in those areas identified for residential use. The potential residential occupancy for this proposed Plan Change is discussed in Section 8 of Part A of this report.

7.5 PROPOSED AUCKLAND REGIONAL PLAN: AIR, LAND AND WATER 2001

The Proposed Auckland Regional Plan: Air Land and Water ("ALWRP") addresses the management of air, soil, rivers and streams, lakes, groundwater, wetlands and geothermal water and is necessary to ensure integrated and sustainable management of natural resources within the Auckland Region.

Urban growth of the Auckland Region is considered to be one of the most significant issues facing the region. This growth is placing increasing pressure on natural resources, particularly through the discharge of stormwater, wastewater overflows, discharges of industrial contaminants to water, discharges of contaminants to air, the abstraction of water, and the modification and disturbance of beds of rivers and lakes.

People and communities within urban Auckland will continue to utilise these resources to enable them to provide for their social, economic and cultural wellbeing and their health and safety. However, this utilisation needs to be undertaken in such a way that promotes urban sustainability.

A resulting objective is to manage the use and development of natural and physical resources in a manner that is not inconsistent with the strategic growth management provisions of the ARPS and the ARGS. The development of Takanini Structure Plan Area 6 (an identified growth area in Takanini) is clearly consistent with the ARPS and the ARGS.

The ALWRP introduces a number of management areas to the region. The Industrial Air Quality Management Area applies to specific industrial areas within the Metropolitan Urban Limits. The area tends to overlay the larger industrial areas catering for the heavier industrial activities, such as the Industrial 3 zone in the Papakura District Plan.

This management area seeks to limit the establishment of activities sensitive to heavy industry within these areas, such as residential or retail premises. The Regional Council will

need to consider extending the Urban Air Quality Management Area to the portion of Area 6 that is proposed to be rezoned as Industrial 3, should the MUL be moved to incorporate Takanini Structure Plan Area 6.

With the extension of the Urban Air Quality Management Area, it is considered that the proposed Plan Change will be consistent with the provisions of the ALWRP. The amendment of the Urban Air Quality Management Area is considered to be a consequential amendment that would need to be initiated by the Auckland Regional Council on any extension to extend the Metropolitan Urban Limit within the ARPS.

7.6 THE AUCKLAND REGIONAL ECONOMIC DEVELOPMENT STRATEGY 2002

The Auckland Regional Economic Development Strategy ("AREDS") outlined a vision for the Auckland region to be:

"An internationally competitive, inclusive and dynamic economy."

It provides a framework for building alignment, collaboration and a common direction for people, communities, businesses and agencies that can make a difference to the quality of the region's economy.

The Strategy was developed using the principles of sustainable economic development, and aims to achieve cultural, environmental and economic outcomes including:

- More economic opportunities
- More participation in the economy
- High quality economic activity
- Safe and healthy communities
- Reduced inequalities
- A maintained and enhanced natural environment
- Good urban amenity

The AREDS has been utilised by the Growth Forum in developing the Auckland Regional Business Land Strategy to set a land and infrastructure framework to assist in achieving these outcomes and ensure land availability is not an impediment to competitiveness or sustained economic growth.

The proposed Plan Change will achieve the vision and principles of the AREDS by providing for additional business zoned land, which is in high demand throughout the Auckland region. Rules within the Plan Change will seek to ensure that development is of a high quality, with good amenity and sensitive to surrounding land uses. In addition, the land is in close proximity to existing business and residential areas (labour force) with good transport connections.

7.7 THE AUCKLAND REGION BUSINESS LAND STRATEGY 2006

The Auckland Region Business Land Strategy ("BLS") is a sub-set of the ARG. It seeks to provide a strategic framework for future business growth in the Auckland region to 2031, that is consistent with the overall direction provided in the ARG.

Further detail on the BLS predictions is provided within Section 8 of Part A of this report.

The primary purpose of the BLS is:

"To provide a strategic framework that enables Auckland local government to plan and provide for sufficient, appropriate business land in the Auckland region to accommodate future business growth to 2031."

The additional goals of the BLS are to:

- Align business growth policies with Regional Growth Strategy outcomes.
- Ensure that future business growth is supported by appropriate transport infrastructure and, in turn, supports transport outcomes identified in the Regional Land Transport Strategy.
- Provide policy guidance to the ARC to inform future decisions on applications to move the metropolitan urban limits for business purposes.
- Provide overarching regional policy direction for the location of future business land.

In 2004, the Auckland region had a total of approximately 1,551 hectares of vacant business zoned land available. In addition to this land, the existing sector agreements developed as part of the implementation of the growth strategy have identified an additional 576 hectares of new greenfield land across the region, which is proposed to be rezoned for business purposes. This equates to a total of 2,127 hectares of business zoned land.

At the current rate of up-take of approximately 129 hectares a year (the rate has significantly increased), the existing vacant business land resource is likely to exhaust the current vacant business land resource between 2011 and 2020.

Key regional outcomes that have been derived in response to this threat to continued business growth in the Auckland region include:

- Encouraging economic development throughout the region;
- Encouraging growth in town centres, high density centres and corridors;
- Integrating transport and land use;
- Maximising local employment opportunities;
- Enabling land extensive business sectors to grow in appropriate areas that are serviced by road and adequately separated from sensitive activities; and
- Re-using and/or redeveloping underutilised brownfield business land.

The most important locational issue for businesses in the Auckland region is accessibility. Further, accessibility of labour is a more pressing issue than access for freight delivery. Increasingly, businesses are recognising the costs associated with commuting and are seeking to locate close to their primary source of labour. In recent years, the development of new business areas has been concentrated in the south of the region, particularly in Manukau City. This has led to a strong north/west to south commuting pattern. It is therefore important to advance a comprehensive approach that seeks to grow local employment through intensification of existing business areas.

The land extensive business sectors, such as manufacturing, construction, transport and storage also seek sites which have good road and motorway access in order to maximise freight transport. Land extensive businesses have the additional constraint of requiring large allotments located away from residential or other activities so as to avoid potential reverse sensitivity issues. For many businesses leasing commercial buildings, the quality of the building is another important component in determining where they will locate.

Takanini Structure Plan Area 6 (6a and 6b) was identified for business growth in the Southern Sector Agreement. The area contains 53 hectares, most of which is now being proposed to be rezoned for Industrial purposes. A small band of land at the southern end of the site is proposed to be rezoned Residential 8, to provide a buffer between the existing residential lots and the proposed industrial land. Area 6 will form part of the Spartan Road employment area as outlined in the Takanini Structure Plan, which will effectively provide an extension of the existing Industrial 3 zoning for Takanini.

A band of Industrial 1 and Reserve zoned land is proposed around the Industrial 3 zone to buffer sensitive adjoining land uses from the medium industrial activities provided for by the Industrial 3 zone. This Plan Change is therefore catering for the land extensive business sector, such as manufacturing, with the ability to provide some local support services.

The area is located along an important transport corridor, being Porchester Road, which along with Popes Road and Takanini School Road are proposed to be widened in association with development following the Plan Change. The site is also in close proximity to the southern motorway via the Takanini interchange.

The site will be supported by public passenger transport, so that in time more local employment opportunities should become integrated with this identified employment zone. Area 6 is also in close proximity to existing rail infrastructure, which has the potential to cater for freight in the future.

7.8 OPERATIVE PAPA KURA DISTRICT PLAN 1999

The Papakura District Plan 1999 (*"the District Plan"*) was founded on the following vision:

"Papakura is seen as continuing to evolve as a coherent rural-urban district with high standards of amenity characterised by pastoral farming, horticulture and vigorous rural settlement centred on a strong and vibrant urban heart with its own cohesive base of residential, business and recreational development."

This document sets out the resource management strategy, objectives, policies and rules for the management of the natural and physical resources of the Papakura district. It has been prepared in accordance with the provisions of the RMA and recognises the purpose and principles of the Act.

The Papakura District Plan is made up of three sections. Section One – General contains matters of district-wide significance and application. Section Two – Rural Papakura, contains the objectives, policies and rules which apply specifically to the rural area of the district. Section Three – Urban Papakura contains the objectives, policies and rules which apply to the urban area of the District and includes Ardmore Aerodrome and the quarries in Hunua Road and Quarry Road, Drury.

The Papakura District Plan became operative on 16 June 1999, prior to the release of the Auckland Regional Growth Strategy and the associated documents that arose from this. As a result, the following plan changes were introduced into the District Plan to take in account the Growth and Land Transport Strategy objectives.

7.8.1 Plan Change 3 – Takanini Structure Plan: Area 1B

Plan Change 3 represented the first stage in implementing part of the outcomes of the Takanini Structure Plan and Southern Sector Agreement obligations, including ARGs and RLTS objectives. It promoted opportunities for more intensive residential development (medium density housing) and environmentally sound urban development approaches.

The Plan Change introduced a resource management strategy comprising of six significant resource management issues, objectives, policies, methods and anticipated environmental results for the Takanini Structure Plan area.

This strategy, now represented in Section One, Part 5 of the Operative District Plan provides the overarching approach to specific resource management of growth areas such as Area 6.

7.8.2 Plan Change 4 – Section One: General Papakura

The purpose of this Plan Change was to ensure that the pertinent parts of Section One of the Operative District Plan, which contain matters of District-wide resource management strategy and its application are consistent with and reflect the current planning environment introduced by the ARGs and RLTS as at November 1999.

Policy directions identified under the ARGs require District Plan objectives, policies and methods to manage the use and development of land in a way which ensures that land use and transport systems are mutually supportive, will encourage measures which lead to a better balance between jobs and workforce and encourage the development of a mixture of land uses which decrease the need for private vehicle travel.

The benefits of undertaking a review of Section One were that greater clarity of Papakura's position within the regional context was achieved and the District's future development direction became consistent and in accordance with the outcomes and principles of the ARPS, the ARGs and the RLTS. Enhancements or amendments to this section of the

District Plan were required, and have been subsequently refined by Proposed Plan Change No. 10.

7.8.3 Proposed Plan Change 10 – Local Government (Auckland) Amendment Act 2004 Changes to the Operative Papakura District Plan

Proposed Plan Change No. 10 modifies Parts 4 and 5 in Section One of the Operative District Plan. The Plan Change has been prepared in response to the requirements of the Local Government (Auckland) Amendment Act 2004. This Act requires that planning documents in the Auckland Region be modified to incorporate the growth concept in the ARPS, and to give effect to changes in the ARPS that promote the integration of transport and land use (refer to ARPS Proposed Plan Change No. 6).

Proposed Plan Change No. 10 makes some adjustments to the District Plan to reflect the intent of the LG(A)AA, particularly in relation to the timing of proposed growth. The document now emphasizes its intention to integrate the management of urban development required pursuant to the LG(A)AA, the ARPS and the ARGs.

The proposed rezoning of Takanini Area 6 is considered to be consistent with these changes. For example, the production of a Structure Plan for the new urban area will assist with the provision of open space corridors and vehicle and pedestrian linkages, and it will promote integration and achieve alignment with urban form and function. The urbanisation of Area 6 is also considered to be consistent with the updated timing schedule, being between the years 2005 – 2010.

7.9 TAKANINI STRUCTURE PLAN 2000

Takanini has been identified as one of the greenfield areas on the Growth Concept Map contained within the ARGs. The Takanini greenfield area is identified in the ARGs as future urban land, with an area of 1100 hectares. The area is generally bounded by the railway line to the west, the Papakura district boundary to the north (common boundary with Manukau City), following a line south-west to Mill Road, along Mill/Cosgrave Roads in the east and Walters/Grove/Old Wairoa Roads in the south.

The vision for Takanini as stated in the Structure Plan is:

"To ensure that the future urban development in Takanini will create a sustainable environment for 20,000 people and 3,000 jobs."

As a result of community consultation through a charrette process, the following broad design concepts were developed:

- The two proposed rail stations in the RLTS should form the focus for higher intensity mixed use core development;
- In general, the density of residential development should decrease as one moves further from the core areas;
- Sufficient through routes and motorway access should be provided;

-
- Cycle routes and footpaths should be provided through the study areas with sufficient facilities;
 - Bus feeder systems should be provided;
 - An open space network that incorporates stormwater management and water quality systems should be provided.

Takanini Areas 6A and 6B were identified for a mixture of uses in the Structure Plan, including employment, mixed use and residential uses. The predominant use was for an employment zone (the Spartan Road area) in Area 6B and in the northern portion of Area 6A. The Spartan Road area is a mixed-use nodal area situated around the proposed Spartan Road rail station.

This node consists of the existing Spartan Road industrial area, forming the main employment area in Takanini and a surrounding medium density residential nodal zone, also with some mixed uses forming a neighbourhood node. This was seen as logical as the Spartan Road area is already zoned for industrial uses and this is an opportunity for the area to develop to its full potential.

A neighbourhood mixed-use centre was identified in the north-eastern corner of Area 6B. A mixture of uses was identified for this centre including industrial, residential, retail and commercial. The mixed-use centre was seen to be important to provide local shopping and social services to the surrounding residents. It was also stated in the Structure Plan that the centre could also act as a buffer in the employment zone and provide a transition between the industrial and residential uses. Landscaping and diverse building styles in the mixed-use areas were seen as opportunities to provide buffer areas between the employment zone and adjacent residential areas. It is noted that the Structure Plan anticipates a further study be undertaken to confirm the location and marketability of the local centre.

A pocket of low density residential use (500 – 1000m²), was identified for the south-east of Area 6A because of the potential geotechnical limitation arising from the technical information obtained at that time.

The Structure Plan identified several arterial routes and proposed alignments for upgrading. The Popes Road alignment shown on the Structure Plan was introduced to create a link to Great South Road to the west. The realignment was proposed to enhance traffic flow, ensure that key destinations are linked by major routes, increase accessibility, avoid traffic congestion in problem areas and ensure safety improvement. The Structure Plan notes that a further study of the Popes Road alignment should be undertaken together with the New Zealand Transport Agencies investigation of the Takanini interchange requirements, as well as the Council's assessment of the options for the Spartan Road/Great South Road intersection.

Porchester Road was identified as a major north-south arterial route in the Structure Plan. Again, the document identified the need to investigate the option for creating a transit link between Papakura and East Tamaki. This route is seen as essential to enhance accessibility, avoid through traffic in residential neighbourhoods and define the character of the area. A study of these options will be undertaken jointly by Manukau City Council and Papakura District Council and is foreshadowed in the Southern Sector Agreement.

The provision of a well developed public transport system with good accessibility should also encourage people to make more use of public transport. As a result, two passenger transport modes were identified, namely the rail corridor with the two proposed stations, and bus feeder systems. The bus routes would mainly be along the Takanini Straight and arterial routes will link all key activity areas such as the Spartan Road employment zone and the proposed rail stations.

The importance of an integrated open space network was also relevant, with the need for the network to be combined with well designed flood management and water quality systems, as well as footpaths, cycle ways and bridle paths. Papakura Stream in particular was identified as a feature to be developed and re-vegetated. It is noted that the stormwater detention areas shown on the Structure Plan were seen as indicative only, with the exact location and design to be determined in accordance with an approved catchment management plan.

Design guidelines were also suggested to achieve the aims of the Structure Plan, but none were specified for Area 6A or 6B.

Decisions made externally and as part of the implementation of the Takanini Structure Plan have resulted in divergences in detail, from the Takanini Structure Plan. Overall, it is considered that the proposed Plan Change is consistent with the intention of the Takanini Structure Plan because it will facilitate the establishment of an appropriate extent and nature of industrial and residential uses within an area which has been identified within the structure plan as appropriate for this location.

7.10 PAPAURA DISTRICT COUNCIL EMPLOYMENT STRATEGY AND GUIDELINES 2002

Papakura District Council initiated an employment strategy project to gain an understanding of its existing and future industrial and employment land requirements. The key finding of this analysis was that there is a net outflow of 3000 workers every workday from the Papakura District (2006 Census). These workers predominantly commute to Manukau and Central Auckland.

Despite its already high level of self containment (82% in 2006 Census) Papakura District Council has expressed a goal to increase the district's self-sufficiency, and therefore there will be a need for more land to be acquired and/or rezoned for industrial and commercial activities, in order to provide more businesses and jobs in the District to employ more residents in their local environment.

Papakura has many attributes that make it an attractive place for business activities, including its location within the southern corridor, direct motorway access from a number of locations, a number of large undeveloped sites, competitive land prices, access to the North Island Main Trunk railway line, proximity to major international and local airports, and a large catchment of residents to supply a potential workforce.

The Strategy notes that in order to support the sustainability of existing employment nodes, future allocation of industrial and commercial zoned land, where practical, should be based around the existing employment nodes.

The Strategy also notes the importance of not providing for mixed use developments, which compromise the availability of commercial and industrial zoned land in the future. In particular, the provision for residential activity, within industrial or commercial zoned land, should not affect the District's long-term ability to provide for its commercial and industrial needs. The Spartan Road area was identified in the Strategy as an existing employment node which has the potential to expand its employment base, given its proximity to State Highway 1 and the Takanini interchange.

7.11 PAPAKURA DISTRICT EMPLOYMENT CHARACTERISTICS AND BUSINESS LAND CAPACITY ANALYSIS 2006

Papakura District Council has recently undertaken a district-wide examination of business zoned land and employment characteristics, which can be used to assist with its decision-making about future business land requirements.

The study demonstrates that a total of 16,940 people work in Papakura District, as at February 2005. The largest industrial employer was the manufacturing industry, which employed 22.1% of the total number of people employed in the District. This evaluation confirms the findings of a previous study, that industrial manufacturing is a significant employer in the District.

It was concluded that the vacant business zone land supply in the District is reducing, and while approximately 80 hectares of business zoned land is currently vacant, once constraints to land development such as the potential for flood hazards, the residual amount of vacant business land could be as low as 10 hectares.

Further detail on this study is provided within Section 8 of Part A of this report.

7.12 THE PAPAKURA DISTRICT LONG TERM COUNCIL COMMUNITY PLAN 2009 - 2019

Under the Local Government Act 2002 ("*LGA*"), all local authorities were required to produce a Long-Term Council Community Plan ("*LTCCP*"), and to consult with the communities on the future direction of the District. Under the LGA, the Council has a responsibility to ensure that future plans incorporate the community's vision, and encourages Council to promote the social, economic, environmental and cultural wellbeing of their communities.

Papakura District Council's LTCCP outlines the Council's priorities for growth and development over the next ten years, and the estimated costs of administering the District from 1 July 2009 through to 30 June 2019. The outcome of the LTCCP has been largely based upon community feedback, and these community outcomes are summarised in the Plan. Also identified in the Plan are key issues for consultation, which identify areas of Council spending in the future. The items within the LTCCP that are relevant to Takanini Area 6 include:

-
- District planning
 - Reserve acquisitions
 - Development contributions policy
 - Public transport programme
 - Roading; and
 - Stormwater

The proposed Plan Change is consistent with Council's LTCCP because it will help to promote the economic wellbeing of the Papakura community by establishing business and employment opportunities within the District.

7.13 THE PAKURA DISTRICT OPEN SPACE STRATEGY 2003

The Papakura District Open Space Strategy ("POSS") was developed to support the needs of growth identified by the ARGS, which allocated considerable growth to Papakura District. Until the publication of the POSS, the Council had no formal public open space policy or spatial plan to guide the development of an open space system and the acquisition of reserve land.

In total, there is approximately 250 hectares of reserves and open space in the Papakura District, resulting in a supply ratio of 6 hectares of land for every 1000 head of population. This figure is not an accurate reflection of effective areas of open space however, as a large number of the areas of public open space are not currently accessible to the general public.

An analysis of the provision of the current open space also shows that the various types of reserves are not evenly spread throughout the District.

The POSS provides a district-wide integrated open space strategy, based on an environmental assessment and user needs. The aim of the strategy is to reflect the recreational needs of the community and to protect sensitive ecological areas and significant historic sites in an integrated manner. The POSS guides the development of an open space system, the acquisition of reserves and the provision of recreational facilities over a timeframe of up to 50 years.

The identified growth area in Takanini encompasses approximately 110 hectares of land, and it is expected to accommodate an additional 20,000 people over the next 50 years. The Takanini Structure Plan ("TSP") suggests an open space network, combined with well designed flood management and water quality systems, as well as footpaths, cycleways and bridle paths. The TSP further suggests that the Papakura Stream be developed and re-vegetated as a major open space feature to include footpaths, cycle routes and bridle paths along the stream edges.

One of the goals applicable to rezoning at Takanini Area 6 is the development and maintenance of an integrated open space network. The objectives of this goal include:

"To enhance the role of walkways, cycle ways and bridle tracks as links between different open spaces and community facilities."

"To enhance the role of esplanade reserves, waterways and habitat corridors as links between different conservation areas, the open space system and surrounding Districts."

"To link different open spaces together in such a way as to provide enjoyable and varied routes for pedestrians and, where appropriate, cyclists."

The Open Space Plan (refer to Figure 9 of the POSS) provides a summary of the recommendations and strategies which can be graphically expressed. The northern boundary of Takanini Area 6 identifies a multi-purpose green corridor, making provision for walking, cycling and a bridle path. The Papakura Stream edge is also shown as the primary bridle trail for the area. This corridor provides a link between the conservation areas and the different open spaces in Papakura District and Manukau City.

The required amount of local neighbourhood parks identified by the POSS is a standard of 1.4 hectares per 1000 people for a 50 year timeframe. The POSS currently shows a guideline of 0.5 hectares of reserve to be provided in Area 6A and 0.6 hectares to be provided in Area 6B. It is noted that the assumed population for 6A/6B is 820 in the POSS whereas the TSP and SSA assumes 620.

The landuse assumptions that formed the POSS are now different for the site. The rezoning of the land has a primary industrial focus with a strip of residential land at the southern end of the site, proposed to be zoned Residential 8.

Councils Community Services officers have determined that a recreation reserve is still required within Takanini Structure Plan Area 6 to provide for the recreational and amenity needs of the local population (residents and workers) and those utilising the future walking and cycling network.

The area of land to the west of the proposed stormwater pond, north of the future local road (extension of Marphona Crescent), east of Takanini School Road, and south of the future esplanade reserve has been identified as the most suitable. This area is proposed to be zoned Reserve.

This location was selected because it:

- Reinforces a single coherent node of open space in the north part of Area 6.
- Leverages off the amenity and recreational facilities (cycling and walking) to be provided by the future esplanade reserve and stormwater area.
- Creates a safer reserve environment by opening up sightlines to the esplanade reserve. An industrial landuse on this site would close off sightlines and inevitably create 'backs' to the Papakura Stream.

This future reserve area will also provide an additional amenity buffer between the residential land to the north of Papakura Stream and the future industrial uses to the south.

7.14 DRAFT WALKING AND CYCLING STRATEGY 2006

Papakura District Council's Draft Walking and Cycling Strategy ("WCS") outlines the Council's commitment to walking and cycling as important modes of transport and recreation. The long-term vision is for a District where people from all sectors of the community walk and cycle for transport and enjoyment.

Three strategic goals support Papakura's vision:

1. Community environments and transport systems that support walking and cycling;
2. More people choosing to walk and cycle more often; and
3. Improved safety and security for pedestrians and cyclists.

The majority of journeys within the District are between 1 and 5 kilometres in trip distance, and include travel to public transport terminals, the Town Centre, work and local business/industry. The number of walking and cycling trips to work within the Papakura District has declined between 1996 and 2001 however, it is hoped that with increasing employment opportunities within the District, and in particular in the Takanini area, this may assist to reverse this trend.

A number of actions have been developed to address the key principles of the WCS. An example of this is to encourage land use planning and design which supports walking and cycling as alternative modes of transport to the private motorcar. Walking and cycling can contribute to a more connected and liveable community, as people have greater opportunities for intimate engagement with their environment than when they travel by car. It is proposed that this will be achieved within Takanini Area 6 by ensuring that subdivision and development will create new roads and existing roads will be upgraded to provide for multi-modal transport and in particular for cyclists and pedestrians, with particular emphasis being placed on intersection treatments to enable multi-modal transport opportunities.

In addition, specific rules are proposed as part of the Plan Change (within Section 6.15 – General Requirements for Industrial Zones), which require all industrial sites within Area 6 to provide parking facilities for bicycles and motorcycles. As a consequence it is considered that the Plan Change is consistent with this strategy.

7.15 PAPAKURA STREAM – TAKANINI CATCHMENT COMPREHENSIVE CATCHMENT MANAGEMENT PLAN

The Takanini catchment to the west of Porchester Road covers an area totalling 182 hectares. To the west, the catchment is bounded by the North Island Main Trunk railway line, and to the east it is bordered by Porchester Road. The northern boundary of the catchment is formed by the Papakura Stream. The southern boundary is approximately parallel to Airfield Road.

The southern part of the catchment south of Manuroa Road is currently used for residential purposes, with single dwellings on lots varying mainly between 400m² and 1600m² in area. The northern part of the catchment to the west of Takanini School Road comprises primarily industrial sites. Between Spartan Road and Manuroa and west of Takanini School Road, the catchment mainly has a rural character. To the east of Takanini School Road and north of Manuroa Road, the catchment is rural, with horse training tracks and pasture.

The Operative District Plan identifies three main zonings in the catchment – Industrial 3, Residential 1 and Rural Takanini/Drury. The Industrial 3 zone comprises the northern part of the catchment west of Takanini School Road, between the Papakura Stream and approximately 220 metres south of Spartan Road. Large parts of this area are currently not in any productive use.

The southern part of the catchment from south of Manuroa Road to approximately 260 metres north of Manuroa Road and west of Takanini School Road is located in the Residential 1 zone. The main potential for residential development lies in the area immediately to the north of Manuroa Road and in the block east of Takanini School Road, south of Manuroa Road.

The area between Porchester and Takanini School Road, north of Manuroa Road is currently located in the Rural Takanini/Drury zone, which limits the potential for urban development.

The Catchment Management Plan notes that this land has been identified in the ARGS as a rural area that is likely to be rezoned for urban purposes. The Catchment Management Plan is set to regulate stormwater management in any future development, and therefore the current rural zone has been assumed to have a future zoning of Industrial 3. Notably, this is a zone proposed in the Plan Change for Takanini Area 6.

The catchment is relatively flat, with a gentle slope in a north-western direction towards the Papakura Stream. There are a total of 18 sub-catchments identified in the Catchment Management Plan, and sub-catchments K, L, M, N, O and P are identified as being located within Takanini Area 6.

There are some capacity constraints within sub-catchment K, notably the capacity of the open channel along Takanini School Road, which is limited by vehicle crossings and a 760mm road culvert under Popes Road.

An overland flow path is also required to be established along Takanini School Road in order to convey the 100 year flood from some surrounding sub-catchments, including K and M.

Sub-catchments N, O and P are currently not developed. It is noted that development concepts need to incorporate overland flowpaths through the catchments, which are currently provided by gullies in the catchments. One of the gullies should be partially maintained and incorporated into a water quality improvement strategy along the Papakura Stream, which will provide some amenity value. It is further noted that floor levels should be maintained 1 metre above the Papakura Stream flood level.

For the post-development scenario, the culvert which conveys flows from sub-catchment L to the Porchester Road open drain is under capacity by approximately 83 percent. This culvert obviously needs to be upgraded as part of the development of the catchment.

The pond at the base of the catchment east of Takanini School Road will treat stormwater from the sub-catchments I, J, K, M, N, O and P. The Catchment Management Plan suggests a possible location for the pond at the base of sub-catchment N, near the

Papakura Stream, where an existing gully could be converted into a pond. It is noted that the pond could be unlined, to increase soakage into the ground.

Recommendations from previous studies state that existing open drains should be retained to assist with the recharge and soakage systems should be utilised where soil conditions are appropriate. Further, it may be necessary to allow for settlement due to future lowering of groundwater levels in the design of new buildings and other structures.

Section 5.6 in Part B of this report outlines the proposed Stormwater Management response for the area.

8.0 RESIDENTIAL VERSUS BUSINESS REZONING

Outlined below is an assessment of the proposal against the requirements of the Southern Sector Agreement, and a discussion around the figures being generated by the other growth areas in Takanini.

8.1 SOUTHERN SECTOR PROJECTED POPULATION FIGURES

8.1.1 Area 6 Residential Population

The area in the proposed Plan Change shown as being zoned Residential 8 comprises approximately 5.0 hectares (gross). The Southern Sector Agreement (SSA) assumes residential densities of between 10 - 20 households per hectare in this location or 620 persons. This provides a range in yield of 50 to 100 households.

Using an assumed average yield of 15 households per gross hectare, a total of 75 households would be achieved. Assuming 3 persons occupy each of the 75 residential units; this results in a potential population of 225 within the proposed Residential 8 zone of the Plan Change. Three persons per household is used in the Southern Sector Agreement as the Papakura average and is comparable with 2006 Census statistics. If the full Area 6a was used for Residential purposes then a population of approximately 620 would be expected. Despite being 'short' 395 people the appropriate density (population per hectare) is still provided on that land still to be used for residential purposes.

8.1.2 Remaining Growth Areas Residential Population

Area 6 is one of the last areas in the initial planning period of the Takanini growth area to be progressed. It is apparent that the figures coming out of the other growth areas are in part, on track towards meeting their anticipated population targets, such as Area 2A, 2B and 2C. This can be seen in the table below. However, some other areas, such as Areas 1A and 3 are 'short' in terms of the population figures anticipated in the Southern Sector Agreement.

Takanini Growth Area	SSA Projected Population (2000-2020)	Approximate Area in Hectares	Actual area being developed	Anticipated Population Resulting
1A	2,270	27	12.5	845
1B	6,790	97	97	4,958
2A/2B	3,580	121	100	3,514

Takanini Growth Area	SSA Projected Population (2000-2020)	Approximate Area in Hectares	Actual area being developed	Anticipated Population Resulting
2C	220	7	6.5	240
3	4,020	67	24	1,643
6A/6B	620	23	5	225

These 'shortfalls' have occurred because the area of land being developed for medium density housing is less than that envisaged in the SSA. Specifically, the Southern Sector Agreement figures are based on a conservative 30% allowance for roads and reserves when in reality, medium density development is more accurately represented with a 40% allowance for roads and reserves in order to provide sufficient amenity for medium density housing, and for losses to other land uses such as stormwater infrastructure, churches, schools and early childhood centres (which are needed to support the residential growth).

In Area 1B, the developer has been typically achieving a density of 18 - 20 household units a hectare. By contrast that portion of Area 2B between Old Wairoa Road and Cosgrave Road, is yet to be put forward for a Residential rezoning.

In the case of Area 3 the original land area identified in the Southern Sector Agreement was 67 hectares. This area was inflated by the complete inclusion of the Papakura Military Camp land within the total, where instead the Defence Force decided to retain 28 hectares for defence use. Area 3 also incorporated a portion of land which now forms as McLennan Park in the south, as well as a small portion of Housing New Zealand owned land which contains established housing to the south-east, which will not be (re)developed. In addition, 12 hectares of Area 3 was sold to the Ministry of Education for a future high school on Walters Road. The result being that the remaining land within Area 3 available for medium density development is 24 hectares.

The effects of a residential shortfall in Area 6 (compared to that contemplated in the SSA) are considered to be minor for two main reasons. Firstly, the balance of the population is able to be accommodated in other areas of Takanini, such as the future growth areas, as well as throughout the wider Papakura District.

The remaining Takanini Growth Areas are anticipated to involve residential densities ranging from approximately 2-3 household units a hectare to 10-35 household units a hectare, over an approximate area of land of 777 hectares. These future stages have a projected population of 9,760 between the years 2020 and 2050. There is ample capacity in these areas to accommodate higher densities of residential population to reach the overall target of 20,000 people in Takanini by the year 2050.

Secondly, a reduced population accommodated within Area 6, will reduce reverse sensitivity effects for industry developing in the area. It is generally not good planning practice to locate large amounts of residential population within an industrial area as it creates direct impacts on these residents. The quality of their living environment will be compromised to some extent from the generation of noise, vibration, traffic, dust, as well as odour and fumes from the existing and new industrial area. The more people that are accommodated in Area 6, the closer they will be located to the industry and the existing Industrial 3 zone operating

in the Spartan Road area. There is also potential for amenity and well being issues for new residents, located in a predominately industrial environment.

A third of the projected residential figure in the SSA for Area 6 is proposed to be accommodated in a strip of Residential 8 zoned land to the immediate south of the industrial area. This strip of land will act as an additional buffer between the Industrial 1 zone (a buffer itself between the Industrial 3 zone and residential zoned land) and the existing Residential 1 zoned land to the south. The residents living in this area will potentially be subject to the effects discussed in the above paragraph. However, the proposed planning approach reduces the propensity for significant adverse effects by being located adjacent to the Industrial 1 zone, with all activities and structures being a Controlled Activity and with road and front yard buffers proposed.

8.1.3 Projected Employment Figures

The vision for the Takanini Structure Plan Area was to accommodate an additional 3,000 additional jobs for the area to serve some of the needs of the intended 20,000 residents. Transit orientated development was the planning approach with the focus of growth based around the two rail stations. The existing Spartan Road Employment Zone was also identified as an area which could be developed to its full industrial potential. An extension of the industrial zoning within the northern portion of Area 6A, formed part of the vision as well.

Ten years have now passed since the TSP was formulated and during that time a number of decisions have directly affected the outcomes of this overarching structure plan. Specifically, there is not going to be a train station at Glenora anymore, but there will be an upgrade to the Takanini Station, so opportunities for commercial/office use around Area 1A have declined. This is consistent with Council's revised Plan Change 12 approach to the area.

This Plan Change request however involves the rezoning of the majority of the site for industrial purposes. The Economic Impact Assessment Report (Appendix 17) has identified the possibility of some 2,900 jobs (on average) within Area 6. This would result in a 20% increase in employment for the Papakura District, above the current level of approximately 14,000 jobs. The rezoning of Area 6 for industrial purposes will assist in meeting the desired employment target of 3,000 jobs in the Takanini Structure Plan Area supporting improved self-sufficiency for Papakura.

8.2 GEOTECHNICAL ASPECTS

During the Structure Planning phase for Takanini, employment (ie Industrial zones) were envisaged to extend from the existing areas in Spartan and Rangī Roads into the land now known as Area 6A and 6B. However, preliminary soil testing highlighted potential problems for establishment of business structures (see Figure 4 of the Takanini Structure Plan 2000). The most stable land became known as 6B and was then set apart for future employment. The balance land that became 6A was identified as being more suitable for residential activity.

The geotechnical constraints were also the basis for the placement of the proposed road dividing Areas 6A and 6B in the 2000 Structure Plan document. This road was to provide a buffer between the activities as well as to provide the link from Great South Road through to Popes Road and on to Porchester and Mill Roads. This road link is illustrated on Figures 5 and 6 of the Takanini Structure Plan 2000 document.

In compiling this proposed Plan Change, the geotechnical constraints were revisited, with the geotechnical conditions suitable for Industrial development to be located at the northern end of Area 6A. Thus, the current Plan Change reflects the original intent of the TSP to extend the Industrial zones further west. A full discussion of the findings of the Geotechnical Report is discussed in Section 5.4 of Part B of this report.

8.3 DEMAND FOR BUSINESS ZONED LAND

The ARC's document: The Auckland Region Business Land Strategy, released in October 2006, confirms the need for more business zoned land close to transport route links.

This strategy has confirmed that there were 69 hectares of business zoned land within Papakura in 2005. This was a decrease of 33 hectares on the 2004 figures within Papakura. Modelling work has established that employment growth in the Auckland region is expected to grow by 15%. Furthermore on page 19 of the Strategy, the following statement has been highlighted:

"The forecast for future business land take-up may be optimistic, and the timeframe out to 2020 should be treated as the best possible scenario. In reality, the Auckland region may be facing a shortfall of useable business zoned land well before 2021."

The strategy conclusion includes the statement that:

"This Business Land Strategy provides a stock take of how much vacant business zoned land remains in the region and the rate at which it is being used up. It projects that vacant business land capacity will last somewhere between 2011 and 2020."

The Papakura District Council's document entitled "Papakura District Employment Characteristics and Business Land Capacity Analysis 2006" confirms the reduction in the quantity of vacant business zone land. This analysis was undertaken in late 2005 and early 2006 and used the 2001 census information. The study establishes a different quantity of vacant business zoned land in the Papakura district (80.3 hectares) than in the ARC study. Although further detail is provided in the Papakura District Council study which outlines the constraints or characteristics of this vacant land; these are identified in the table below:

Constraints or Characteristics of Vacant Business zoned land	Area (Hectares)
Development under construction	4.1
Used as Council carparking	0.5
Esplanade Reserve with Business Zoning	2.4
Park	0.5
Road widening designation	0.2
In possible / flood hazard area (excluding land in above)	39.4
Designations 12 and 222/223: Ardmore Aerodrome	23.0
Estimated Residue of Unconstrained Vacant Land	10.2

The Economic Impact Assessment Report (attached as Appendix 17) reiterates this demand for, and lack of supply of, industrial zoned land in Papakura. The first paragraph of the executive summary of this report states:

“The market for industrial land in the Papakura District, surrounding South Auckland areas, and Auckland Region, has witnessed strong growth in demand coupled with a fall in availability.”

It is therefore apparent that this land should be rezoned predominantly for industrial use. Given the Regions’ shortage of business zoned land, the (now confirmed) geotechnical stability of the land (to be developed for industrial purposes), its proximity to major roading networks, including the Southern Motorway and the Main Trunk Line, Areas 6A and 6B are ideal for this Industrial rezoning as proposed.

9.0 SUMMARY – PLAN CHANGE DOCUMENTS

Overall, and for the reasons given above, it is considered that the proposed Plan Change will be complementary to and consistent with the relevant statutory planning documents as evaluated above.

There is a conflict between providing for the full residential expectations of the Southern Sector Agreement in rezoning less of the land to residential (the projected population for the Takanini 6A and 6B area) and providing the business land needs identified in the Auckland Region Business Land Strategy and Council’s recent Business Land Study 2006 (as referenced above). This is because providing additional land for residential usage will impact on the amount of land available for business purposes.

The analysis above has confirmed that there is considerable demand for and a lack of supply of Industrial zoned land within the Papakura District and the Auckland Region generally. This lack of supply of Industrial zoned land in Papakura will be alleviated somewhat by the rezoning of the site to Industrial 1 and Industrial 3 as proposed.

Therefore while this Plan Change does not meet the earlier expected outcomes for Area 6, as outlined in the Southern Sector Agreement, in terms of anticipated population/ quantity of land for residential purposes, the reduced residential provision is offset by the proposed increase in Industrial zoned land within the area and the subsequent provision of employment land. This will support the growing surrounding residential areas by providing local employment opportunities. With the opportunity to achieve improved residential densities elsewhere within the TSP area; the proposed zoning approach is nonetheless consistent with higher order goals of improved balance of local residential and employment provision, improving District wide self-sufficiency and supporting landuse planning and transport integration.

10.0 RESOURCE MANAGEMENT ISSUES

A number of resource management issues have been identified as being relevant to the proposed Plan Change. These issues are described below.

10.1 THE ISSUES

(a) Quantity of Business Land within the Auckland Region

Both statutory and non-statutory documents prepared by local and regional government and associated agencies have identified that there is a shortage of land available in the Auckland Region for future business activity.

As such it is important that Takanini Structure Plan Area 6, as an area of land identified as being suitable for future business use in the Takanini Structure Plan and Southern Sector Agreement is developed as efficiently and effectively as possible in order to maximise its development potential, whilst avoiding, remedying or mitigating potential adverse effects on adjacent residential and rural environments.

(b) Historic Use of Potentially Hazardous Substances/Activities

A history of the use of the land subject to this Plan Change is provided in Section 6.2 of Part A of this report. The land has historically been used predominantly for rural purposes, and a contamination assessment has identified that there is only one potential contamination “*hot spot*” in the area. This makes the area a versatile piece of land for future development.

(c) Proximity of Residential Activities

The site is located adjacent to existing residential properties to the north and south of the site, and land which has been earmarked for future urban activities to the east in the Takanini Structure Plan. Business and industrial activities have the potential to adversely affect adjacent and nearby residential uses. It is therefore important that the rezoning of the land to predominantly industrial zones gives consideration to its potential effects in relation to site design and layout, air quality and odour, noise, traffic, dust, glare, vibration and visual character, scale and intensity and hours of operation. Such factors can affect both amenity and environmental quality for adjoining land uses. The proposed Plan Change incorporates a Structure Plan and modified planning controls, including Controlled Activity status in the Industrial 1 zone for activities and buildings to ensure adverse effects on residential amenity and environmental quality are avoided, remedied or mitigated.

(d) Amenity within Business Areas

The amenity values of an area can be adversely affected by the location and design of buildings and other structures and by activities that can generate noise, dust and odour. Personal safety and convenience are also relevant issues.

Onsite amenity for other business activities located within an area of business activity can also be affected, for example the character of the streetscape, external design and appearance of buildings and their relationship to public spaces and each other. It is considered that the Structure Plan, Plan Change provisions and Controlled Activity resource consent applications within the Industrial 1 zone will assist to achieve a high quality business/industrial environment.

(e) Reverse Sensitivity

It is important that sensitive land uses, such as residential activities do not preclude or prejudice the use or availability of land for future use by industry. Conversely, it is important that adequate separation distances and appropriate planning controls are implemented to mitigate potential effects of business activity on nearby established residential neighbourhoods.

The proposed Plan Change provides for a carefully considered zoning approach to buffer existing residential neighbourhoods. Specific planning provisions for Takanini Structure Plan Area 6 also limits residential activity within the Industrial zones to reduce the potential for future reverse sensitivity issues to arise.

(f) Traffic, Access and Safety

The comprehensive development of an area of land such as that proposed at Takanini Structure Plan Area 6 is likely to introduce more traffic, alter traffic flows and volumes, both during the site works and construction phase and arising from new development.

This can affect factors such as traffic and pedestrian safety, the capacity of the road and travel times. The proposed upgrading and consequential redesign of roads and intersections in the vicinity of the site and by requiring resource consent for restricted access frontages upon development or subdivision will assist in managing these effects.

(g) Opportunity Cost

Redevelopment of the area for business/industrial activity will over the long term preclude the use of the land for other activities, such as ongoing agricultural/pastoral use, or other urban activities. Appropriate consideration has therefore been given to the future zoning of this limited land resource. A discussion of alternatives to the rezoning of this land to Industrial/Residential/Reserve zones is included in the assessment of alternatives under Section 32 of the Act.

(h) Stormwater/Flooding and Geotechnical Issues

The Plan Change area and surrounding land is identified as a general flood risk. In addition, Geotechnical investigation within the area has identified that there are geotechnical limitations associated with the site.

The stormwater, flooding and geotechnical constraints of the site have been investigated fully by relevant experts and are appropriately recognised and managed within the Plan Change application or through the consenting process. This includes the proposed stormwater pond adjacent to the Papakura Stream, providing for overland flow paths through the Structure Plan area and appropriate rules within the Plan Change to ensure that stormwater, flooding and geotechnical issues are appropriately responded to at subdivision or development stage.

Once the stormwater management network is in place following the development of Takanini Structure Plan Area 6 it will be appropriate to review the extent of the current flood hazard notation. The controls imposed as a result of the land being identified as

being subject to a flood hazard are required in the interim, pre-final development period.

PART B

1.0 DESCRIPTION OF THE PLAN CHANGE

1.1 PRIMARY FEATURES OF THE PLAN CHANGE

The primary objective of the Plan Change is to introduce an appropriate Business/Industrial zoning for the land area concerned in accordance with the purpose and principles of the RMA. The proposed statutory provisions (i.e. the Plan Change and rezoning) is included in Appendix 4.

The primary features of the Plan Change are:

- i) To rezone the seven land parcels identified as Areas 6A and 6B in the Takanini Structure Plan, bordered by the Papakura Stream to the north, Porchester Road to the east, residential properties facing Manuroa Road to the south, Takanini School Road to the west and bisected by Popes Road, subject to this request, to part Industrial 1 zone, part Industrial 3 zone, part Residential 8 zone and part Reserve zone in accordance with Appendix 4.
- ii) To implement a Structure Plan for the land, including new intersection and proposed roading layout, site access restrictions, and stormwater management measures.
- iii) Amend Zoning Map D3 by rezoning 118 and 148A Manuroa Road, Takanini, which currently has a split zoning, to a Residential 1 zoning.
- iv) To provide amendment to the operative rules of the Industrial 1 zone, Industrial 3 zone and Residential 8 zone to provide specifically for development at Takanini Structure Plan Area 6, and ensure that adverse environmental effects of subdivision or development are avoided, remedied or mitigated.

2.0 ZONING APPROACH

2.1 INDUSTRIAL ZONES

2.1.1 Objectives and Policies of the Industrial Zones

General objectives and policies set out in Part 5B.2.2 of Section One of the Plan also apply to the land located in Takanini Structure Plan Area 6 and some specific changes have been made to the strategic objectives and policies to provide for employment and industrial activities within the Takanini Structure Plan Area.

Part 6 of the District Plan sets out the objectives and policies for the Industrial Zones of the City. It is proposed to adopt these objectives and policies with some minor amendments, which provide for Takanini Structure Plan Area 6 as well. In addition, a new objective and related policies are proposed specifically for Area 6 encouraging a high standard of amenity, which will contribute towards the creation of a positive sense of place and identity and provide for pedestrian safety and convenience.

New objectives and policies have been introduced to the Industrial 1 and Industrial 3 zones, which reflect the above, as well as the requirement for subdivision and development to provide appropriate details of geotechnical investigations and proposals for stormwater management measures.

2.1.2 Strategy for the Industrial Zones

The strategy of the District Plan for the industrial business areas of the City is summarised in Section Three, Part 6.4 of the District Plan. A number of changes are sought to this strategy to recognise and provide for additional land for industrial activities, and to specifically recognise and provide for industrial zones at Takanini Structure Plan Area 6. The strategy in the District Plan, as relevant to this Plan Change proposal, is summarised as follows:

“To enable a range of activities to become established where environmental quality within and beyond the zone of industrial activity is not adversely affected.”

The Plan Change proposes to alter the second operative strategy statement from *“To continue the current distribution and amount of land zoned for industrial purposes.”* to:

“to provide sufficient land zoned for industrial purposes to meet local demands and assist in meeting regional business demands and provide employment opportunities for an increasing population”

Three new strategy statements are also proposed as part of the Plan Change which state:

“to require development in Takanini Structure Plan Area 6 to have a high level of amenity “

“To facilitate a variety of transport modes within Takanini Structure Plan Area 6 to reduce reliance on the private motorcar.”

“The provision of subdivision and development within Takanini Structure Plan Area 6 in a manner which will provide for the areas stormwater management and geotechnical constraints.”

2.1.3 Activities in the Industrial 1 Zone

The Industrial 1 zone is a light industrial zone, which provides opportunities for small, localised activities. The zone provisions are designed to protect environmental quality by controlling a number of matters, including traffic generation. The zone is specifically designed to be applied in localities which are located near and adjoin sensitive, non-industrial activities such as residential development.

A wide range of activities are permitted in the Industrial 1 zone as it applies throughout Papakura District, although it is proposed to limit the range of activities in the Industrial 1 Zone within Takanini Structure Plan Area 6.

Resource consent is required to undertake any activity or construct any building in the Industrial 1 zone in Takanini Structure Plan Area 6. The proposed activity status of activities is summarised below:

Activity	Activity Status within the Industrial 1 Zone (Within Takanini Structure Plan Area 6 only)
Unless identified as a Restricted Discretionary, Discretionary or Non-Complying Activity, any industrial activity or industrial building complying with Rule 6.9.8.2.	Controlled
Retail activities ancillary to, and part of, a Controlled Activity on the same site provided that retail activities do not occupy more than 30% of the gross floor area of the industry and retail premises combined or 200 square metres, whichever is the lesser.	Controlled
Office activities ancillary to, and part of, a Controlled Activity on the same site provided that office activities do not occupy more than 30% of the gross floor area of the industry and office premises combined.	Controlled
Any controlled activity complying with Rule 6.9.8.2, with vehicle access from road frontages marked as Restricted Access in the Takanini Structure Plan Area 6 Structure Plan (refer to Section Three, Part 16, Appendix 16A).	Restricted Discretionary Refer to Part 6.15.2.1 for the matters to which Council has restricted its discretion and assessment criteria.
Any activity not complying with Rule 6.9.8.4, Mahia Branch Sewer Line Network Utility Yard.	Restricted Discretionary Refer to Part 6.15.2.3 for the matters to which Council has restricted its discretion and assessment criteria.
Unless identified as a Permitted, Controlled, Restricted Discretionary or Non-Complying Activity, any industrial activity and industrial building complying with Rule 6.9.8.3.	Discretionary
Any service station complying with Rule 6.9.8.3.	Discretionary
Any studio warehousing development complying with Rule 6.9.8.3 and Rule 6.15.3 Specific Activity Criteria 6) Studio Warehousing	Discretionary
Any residential activity complying with Rule 6.9.8.3 and is in accordance with the criteria set out in Rule 6.15.3.	Discretionary
Any activity not provided for as a Permitted, Controlled, Restricted Discretionary or a Discretionary Activity.	Non-Complying

2.1.4 Activities in the Industrial 3 Zone

The Industrial 3 zone is the main industrial zone within Papakura District, and enables the establishment of a wide range of light to medium industrial and related activities. The Industrial 3 zone is designed to be the focal point of manufacturing, processing, warehousing and distribution activities.

Some modifications have been made to the types of activities facilitated in the Industrial 3 zone as it applies specifically to Takanini Structure Plan Area 6. The proposed activity status of activities is summarised below:

Activity	Activity Status within the Industrial 3 Zone (Within Takanini Structure Plan Area 6 only)
Any industrial activity or service station, except in the Industrial 3 Zone at Drury, complying with Rule 6.11.7.2.	Permitted
Retail activities ancillary to a permitted activity on the same site provided that retail activities do not occupy more than 30% of the gross floor area of the industry and retail premises combined or 200 square metres, whichever is the lesser.	Permitted
Retail activities with a gross floor area less than 200 square metres and offering only food and beverages.	Permitted
Any building on a lot created under Rule 6.11.7.7 (3).	Permitted
Any building constructed and serviced in accordance with the requirements of Rule 6.15	Permitted
Any industrial activity, retail activity or service station complying with Rule 6.11.7.3.	Discretionary
Retail activities having a gross floor area greater than 400 square metres other than those offering food, beverages or clothing.	Discretionary
Any commercial activity complying with Rule 6.11.7.3	Discretionary
Activities involving Schedule 6A uses or Schedule 6C processes	Non-Complying
Any activity not provided for as a Permitted, Restricted Discretionary or a Discretionary Activity.	Non-Complying

2.1.5 Subdivision Standards within the Industrial 1 and 3 Zones

The Plan Change proposes standards relating to subdivision within the Industrial 1 and Industrial 3 zones of the Takanini Structure Plan Area 6, respectively Rule 6.9.8.8 and 6.9.8.9 (Industrial 1) and Section 6.11.7.8 and 6.11.7.9 (Industrial 3).

These standards require:

- Minimum net site area
- Minimum road frontages
- Minimum shape factor
- Road widening for Porchester Road, Popes Road and Takanini School Road to be in accordance with Figures 1, 2, 3 and 4 of Section Three, Part 16 Appendix 16D of the proposed Plan Change
- Geotechnical Assessment Matters
- Network Utility Yard for the Mahia Branch Trunk Wastewater Line

The District Plan contains other rules that are also relevant to the use, development and subdivision of land located within the Industrial zones. These include for example, rules relating to landscaping design, signage, parking and loading.

Subdivision that does not comply with the Structure Plan is a non-complying activity.

2.1.6 General Performance Standards for Industrial Zones

Section 6.15 of the Operative District Plan also describes general performance standards applying to all Industrial zones. A number of these standards are variable, depending on the zone in which they apply. General performance standards have been formulated in relation to the following matters:

- Noise
- Glare
- Air Pollution and Odour Control
- Hazardous Substances
- Bulk and Location
- Landscaping and Visual Amenity
- Conservation of Landscape

-
- Traffic

The Plan Change proposes additional and/or altered rules to apply to Takanini Area 6, which include rules relating to:

- Height in Industrial 1
- Height in Relation to Road and Reserve Boundary for Industrial 1 and 3
- Landscaping and Visual Amenity
- Restricted Access Requirements for High Vehicle Generating Activities
- Multi-modal Transport Provisions
- Stormwater Servicing requirements
- Front Yard Landscaping within Overland Flow Paths
- Geotechnical Matters
- Servicing of Infrastructure

One of the more significant changes proposed in this Plan Change involves an increase in height from 9m to 15m in the Industrial 1 zone to provide for an appropriate development envelope to accommodate Group 1 industries. The existing 9 metre height limit is considered to be extremely restrictive in an Industrial zone, even if it is a light industrial zone. The nature of Group 1 business, such as: manufacturing, storage, construction and wholesale trade, require a height limit greater than 9 metres to accommodate the nature of the activity. If the existing height limit were to remain in Area 6 then it may discourage Group 1 businesses from entering the area or generate additional costs and time delays through applications for resource consent to extend the height limit.

The Industrial 1 zone in Area 6 forms a buffer between the Industrial 3 zone (with a maximum height limit of 24 metres) and the adjacent residential zones. This is still achieved through a transition in height from 24 metres down to 15 metres down to 9 metres. The nature of the zone remains unchanged. It will still perform as a buffer between the Industrial 3 zone and the residential zone because of the nature of the activities which will be controlled within it. In addition to this, modified yard and height in relation to road boundary recession plane rules introduced into the area will assist in reducing any potential dominance effect ensuring an appropriate height transition within the streetscape.

Appendix 7 to the Plan Change demonstrates the extent of the land which will benefit from this additional height, together with cross-sections illustrating the relationship of buildings to the street or reserve. A significant area of land will remain unaffected by the yard and height in relation to road and reserve boundary rules.

The visual effects of the increased height are not considered to result in more than minor effects on the environment. Having a height limit specific to this area will manage the visual impact of industry on the adjacent Residential 8 zone. The Residential 8 land will be developed as a result of this Plan Change and is not an established land use. Further, the

Residential 8 zone contemplates a building height up to 12 metres as a Restricted Discretionary Activity.

All buildings will be subject to geotechnical investigation and design to determine their appropriateness for the site and the underlying soil conditions.

2.2 RESIDENTIAL 8 ZONE

2.2.1 Objectives and Policies of the Residential 8 Zone

Section 16 of the Operative District Plan sets out the planning approach as it applies to the Residential 8 zone. The Residential 8 zone applies specifically to the Takanini Structure Plan area. A decision on Plan Change No.12, (subject to appeal) makes amendments to the Residential 8 zone. This Plan Change reflects the decision version of Plan Change No.12 (and also Private Plan Change No.4 and Plan Change No.11)

The Residential 8 zone is proposed to be applied on the southern portion of the Takanini Structure Plan Area, adjacent to existing Urban Residential 1 zoned sites. General objectives and policies set out in Part 5B.2.2 of Section One of the Plan apply to the proposed Residential 8 zone, as well as specific objectives and policies outlined in 16.1.1.1 but with a modified Rule relating to Road Frontage setback.

2.2.2 Activities in the Residential 8 Zone

The proposed Plan Change does not alter the status of activities within the Residential 8 zone.

Subdivision is provided for in the zone as either a Permitted, Controlled, Restricted Discretionary or Discretionary Activity. Specific subdivision standards apply to new lots created in the Residential 8 zone.

Refer to the decision version of Plan Change No.12 for the Residential 8 zone provisions that will apply in the southern part of Takanini Structure Plan Area 6.

2.3 RESIDENTIAL 1 ZONE

The Residential 1 zone covers significant and established urban areas of the District and is the standard residential zone in Papakura.

The resource management issues within the Operative Plan which relate to the zone are:

- The retention and enhancement of local environmental qualities and amenity.
- The establishment of a range of residential activities.
- The provision of a limited range of non-residential activities.

The resource management strategy of the zone is:

“To enable a wide range of residential activities and a limited range of non-residential activities to develop subject to controls on environmental effects.”

2.4 RESERVE ZONE

The Reserve zone is the standard reserve / open space zone in Papakura and is applied to a range of reserve types.

The resource management issues within the Operative Plan which relate to the zone are:

- The need to provide adequate space for active and passive recreation and community uses within reasonable distance from the population.
- The need to maximise the opportunities for recreation and community uses where this does not compromise the quality or amenity of either the reserve land or that of the adjoining activity areas.
- The provision and protection of appropriate reserves, including scenic or historic reserves, as areas of passive amenity in the District.
- The need to provide for a wide range of recreational opportunities within each area of reserve land.
- The need to provide land for the establishment of facilities by public and community organisations and clubs and to provide sites for particular commercial facilities to serve the needs of residents in the area.

The resource management strategy of the zone is:

“to enable a range of activities to become established where environmental quality is not adversely affected.”

“to protect amenity values in all reserve land through controls on noise, traffic generation, landscaping and site development.”

“to enable the development of activities within the Community Services zone in accordance with the needs of the community”

3.0 CONVERSION OF ZONES

The Plan Change request proposes applying existing zonings, with specific modifications to the land at Takanini Structure Plan Area 6, which is currently zoned Rural Takanini/Drury, to part Industrial 1 zone, part Industrial 3 zone, part Residential 8 zone, part Residential 1 zone and part Reserve zone as proposed in the Plan Change (refer to Appendix 4).

Additional controls have been proposed within the Industrial 1 and 3 zones as it applies to Takanini Structure Plan Area 6 to avoid, remedy or mitigate the effects of industrial development within the zones on surrounding established residential land uses and also future residential land uses anticipated in the proximity of the site.

The additional controls have also been proposed to improve the environmental outcomes delivered by the zones. A Structure Plan is to be applied to the land to guide development, including new roading design and layout, and provision for a stormwater management pond and reserve area at the northern end of the site.

The existing Rural Takanini/Drury zone is considered to be inappropriate for the proposed future land uses, which has already been identified in the Takanini Structure Plan as land which is to be developed for urban purposes. The use of the Industrial 1, Industrial 3 and Residential 8 and Reserve zonings, together with the creation of some additional planning provisions specific to the subject land is considered to be a relevant, efficient and effective method by which to manage the development of the land for urban purposes.

To establish a specific new zone for the site is not considered desirable or necessary as this may create potential difficulties in administration of the District Plan and may not be the most effective resource management response.

4.0 INTEGRATING THE PROPOSED PLAN CHANGE WITHIN THE DISTRICT PLAN

4.1 AMENDMENT TO SECTION ONE, PART 5B STRUCTURE PLAN AREAS

Amendments are required to Section One, Part 5B Structure Plan Areas to make reference to and provide for development of Takanini Structure Plan Area 6.

4.2 AMENDMENT TO PLANNING MAPS C2, C3, D2 AND D3

Amendments are required to Planning Maps C2, C3, D2 and D3 to depict the change of zoning of the land from Rural Takanini/Drury to Industrial 1 zone, Industrial 3 zone, Residential 8 zone and Reserve zone.

In addition, amendments are required to Zoning Map D3 to rezone parts of 118 and 148A Manuroa Road, Takanini (which currently have a split Rural Takanini / Drury and Residential 1 zoning) to an Urban Residential 1 zoning. This will ensure that the entire land area of 118 Manuroa Road and 148A Manuroa Road, Takanini will have a Residential 1 zoning.

4.3 RULES APPLYING TO THE PLAN CHANGE AREA

For the reasons described in Section 3 of Part B of this report, a number of Takanini Structure Plan Area 6 specific rules have been developed to improve the efficiency and use of the finite land resource and to ensure an enhanced level of amenity within these proposed new zone areas, while avoid remedying or mitigating any adverse environmental effects. These rules have been discussed in detail in Section 2 of Part B and they are summarised below.

4.3.1 Industrial 1 Zone

Additional rules are proposed in Part 6.9 of Section Three the Plan that require a minimum of a Controlled Activity resource consent application to be obtained for activities and new development within Takanini Structure Plan Area 6. Retail and office activities ancillary to Controlled activities also require consideration as a Controlled activity. Any activity with road access marked as Restricted in the Takanini Structure Plan Area 6 Structure Plan is a Restricted Discretionary Activity.

Residential activities are provided for in the Industrial 1 zone within Takanini Structure Plan Area 6 as a Discretionary Activity. This is in contrast to the Operative Plan where any

residential activity ancillary to permitted or discretionary activities and where they are part of a consented studio warehousing development is a Permitted Activity.

A Network Utility Yard is required to protect the alignment of the future Mahia Branch Sewer Line.

Performance standards have also been developed relating to subdivision within Takanini Structure Plan Area 6, which are designed to set minimum standards to guide development within the area.

Within Section 6.15 of the Plan it is also proposed to increase the minimum height rule in the Industrial 1 zone from 9 metres to 15 metres within Takanini Structure Plan Area 6, with the addition of a height in relation to boundary rule, which will apply to road and reserve frontages.

4.3.2 Industrial 3 Zone

The Permitted Activity provisions of the Plan largely apply with the exception of an additional control within Section 6.11.7 of the Plan. This requires that construction of a building on a lot is a permitted activity if it has been or will be constructed and serviced in accordance with Rule 6.15 (General Requirements).

Additional rules are proposed in Chapter 6.11 of the Plan relating to subdivision activities in the Industrial 3 zone within Takanini Structure Plan Area 6, which are designed to set minimum standards to guide development within the area.

Within Section 6.15 of the Plan it is also proposed to introduce a height in relation to road and reserve boundary rule, which will apply to all other road and reserve frontages providing for less building dominance of the public domain.

4.3.3 Industrial 1 and Industrial 3 Zones

It is proposed as part of the Plan Change to add new rules within Section 6.15 of the Plan, which apply to development in both the Industrial 1 and the Industrial 3 Zones within Takanini Structure Plan Area 6. These rules are:

- The addition of a new rule requiring that all parking and loading spaces, and accessway and manoeuvring areas be formed, drained and maintained with permanent seal or a paved all-weather dust free surface;
- The addition of a new rule requiring additional controls on high vehicle generating activities within specified distances to intersections;
- The addition of a new rule which requires the provision of parking facilities for bicycles and motorbikes;
- The addition of a new rule requiring that groundwater recharge of stormwater be provided;

-
- The addition of a new rule requiring the control of front yard landscaping within overland flow paths to ensure that appropriate amenity planting is provided that does not impede the flow of stormwater;
 - The addition of a new rule that requires specific Geotechnical or Structural measures to be provided with a proposal;
 - The addition of a new rule that requires all development to be adequately serviced for stormwater, wastewater, water supply and utilities.

4.3.4 Residential 8 Zone

A site-specific rule is also recommended for the Residential 8 zone, which has been proposed to provide for increased separation distance from road boundary to dwelling. The proposed rule requires that a minimum front yard setback of 3 metres be increased to 6 metres where the Residential 8 zone fronts onto a road with the Industrial 1 zone on the opposite side.

No other modifications to the zone are proposed, although it is noted that an overland flowpath is located as part of the Southern boundary of the zone, within the Structure Plan.

5.0 ASSESSMENT OF EFFECTS

This section of the report contains an Assessment of Effects on the Environment, which has been carried out in accordance with the Fourth Schedule to the Resource Management Act 1991, using the following headings:

- Statutory considerations
- Alternative locations or methods for undertaking the activity
- Assessment of environmental effects
- Mitigation measures
- Affected persons and consultation; and
- Monitoring

5.1 STATUTORY CONSIDERATIONS

5.1.1 The Fourth Schedule to the Resource Management Act 1991

The procedure for requesting a Plan Change is set out in Part 2 of the First Schedule to the Act. Clause 22 Form of Request requires that a request made to a local authority to change its District Plan shall:

"(2) Where environmental effects are anticipated, the request shall describe those effects, taking into account the provisions of the Fourth Schedule, in such detail as corresponds with the scale and significance of the actual or potential effects anticipated from the implementation of the change..."

Subsection 1 of the Fourth Schedule of the Act sets out matters that should be included in an Assessment of Effects on the Environment. Subsection 3 of the Schedule sets out matters that should be considered when preparing an Assessment of Effects on the Environment.

5.1.2 Meaning of Environment

The Fourth Schedule requires that an Assessment of Effects on the Environment shall include an assessment of the actual and / or potential effects on the environment of the proposed activity. The Act defines "Environment" as:

"Environment includes:

- (a) Ecosystems and their constituent parts, including people and communities, and*
- (b) All natural and physical resources; and*
- (c) Amenity values; and*
- (d) The social, economic, aesthetic, and cultural conditions which affect the matter stated in paragraphs (a) to (c) of this definition or which are affected by those matters."*

5.1.3 Meaning of Effect

The Resource Management Act 1991 defines "Effect" to include:

- a) any positive or adverse effect; and*
- b) any temporary or permanent effect; and*
- c) any past, present or future effect; and*
- d) any cumulative effect which arises over time or in combination with other effects, regardless of the scale, intensity, duration or frequency of the effect, and also includes:*
- e) any potential effect of high probability; and*
- f) any potential effect of low probability which has a high potential impact.*

5.2 ALTERNATIVE LOCATIONS OR METHODS FOR UNDERTAKING THE ACTIVITY

The Fourth Schedule requires that where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity is included.

For the reasons set out in this AEE report and in the analysis of alternatives under Section 32 of the Act (refer to Part C of this report) in support of this Plan Change.

5.3 ASSESSMENT OF ENVIRONMENTAL EFFECTS

The Fourth Schedule sets out matters to be considered when preparing an Assessment of Effects on the Environment. With respect to this request, relevant resource management issues have been identified within Part A, above, and the following matters have been considered:

- Geotechnical Engineering
- Contamination Effects
- Effects on Infrastructure
- Traffic Impact Assessment
- Landscape and Visual Effects
- Arboricultural Effects
- Archaeological Effects
- Effects from Hazardous Substances
- Effects on Economy
- Effects on the Neighbourhood
- Effects on the Wider Community
- Reverse Sensitivity

An assessment of each of these effects is carried out below.

5.4 GEOTECHNICAL ENGINEERING

Foundation Engineering Limited ("FEL") (now called Coffey Geotechnics) was commissioned by Takanini Structure Plan Area 6 Limited to undertake a geotechnical investigation into the adequacy of land for future development. The objectives of the report were to:

- Review the existing Woodward Clyde (NZ) Limited report dated March 2000, which was prepared to assess the geotechnical conditions of the greater Takanini Structure Plan area, which also encompasses Takanini Area 6, as well as other reports relating to projects in the vicinity of the subject site prepared by Foundation Engineering Consultants Limited (FECL) and Tonkin and Taylor Limited (T&T).
- Undertake further preliminary geotechnical investigations to confirm the results and limitations of the Takanini Structure Plan in respect of Takanini Area 6.

After a review of the initial Geotechnical report Council still had concerns about the viability, from a Geotechnical point of view, of establishing industrial scale buildings within the

Takanini 6 area and of establishing the proposed stormwater pond. As a consequence two revised geotechnical reports have been completed.

The first report dated 11 November 2008, is titled 'Geotechnical Assessment Report on Takanini Structure Plan Area 6' and assesses the geotechnical conditions of the entire Plan Change area. The second Geotechnical report dated 13 August 2008 and titled 'Proposed Stormwater Treatment Pond at Area 6a and 6b Takanini', assesses the geotechnical conditions associated with the proposed stormwater pond. Notably however, revised plans dated March 2009 accompany this second report, to take into account the plans produced in the Infrastructure Report (March 2009), relating to the stormwater pond design.

A summary of the content and the findings of both of these reports is outlined below, although to obtain a full understanding of the geotechnical aspects of the proposed Plan Change these reports themselves should be read in their entirety. These reports are both attached as Appendix 8.

5.4.1 Geotechnical Assessment Report on Takanini Structure Plan Area 6

Geology

This report outlines the geology of the site which *“comprises Pleistocene age Tauranga Group alluvial deposits, typical organic clayey silts and silty clays, overlying inorganic clays, silts and sands to considerable depth.*

Review of Findings of Geotechnical Reports for Surrounding Developments

As part of this geotechnical assessment there is also a review of the findings of a series of geotechnical reports undertaken for developments on the following sites within the vicinity of the subject site:

- Sikh Temple, 70 Takanini School Road

This review found that surface rib raft type foundations were recommended for all structures provided that finished ground floor levels did not exceed 300mm height above the existing ground level and the main temple building structure was piled to bedrock at approximately 8 metres depth.

- Arthur Lydiard House, Bruce Pulman Park, Walters Road

Subsurface investigation showed inorganic raft across the site to depths of between 1.0 and 1.6 metres with soft organic / peaty clays to depths of up to 27 metres. The make up of this soil indicates that it is not suitable to support piled foundations. Presumably for this reason the site is currently undergoing a preloading programme to induce settlement prior to construction. The latest results show that the maximum settlement over the six month monitoring period is 160mm under approximately 1.0 metre of filling.

- Gymnasium and Multi-Sports Centre, Bruce Pulman Park, Walters Road

Subsurface conditions are similar to Arthur Lydiard House. Preloading was proposed with Stage 1 comprising 1400mm of material over a 120 day period, with an average consolidation of 142mm recorded. Stage 2 comprised the 2 storey portion of the proposed

building and was preloaded with 1700mm of material over 926 days, an average settlement of 500mm was recorded.

- Mitre 10 Centre, 238 Great South Road

The building comprises tilt slab walls with a lightweight roof. Driven timber pile foundations were recommended and were piled to 8 to 10 metres in depth and were designed assuming an ultimate bearing capacity of 2800 kPa. It was recommended that the perimeter walls be founded on strip footings limited to 1 metre width and constructed on a minimum of 500mm of hard fill.

Woodward Clyde Limited Geotechnical Investigation of Takanini Structure Plan Area

Woodward Clyde Limited (WCL) completed a report for the Papakura District Council dated 29 March 2002 to assess the geotechnical conditions of the greater Takanini Structure Plan Area. Field investigations as part of this report involved a total of 66 shallow hand auger boreholes over the entire structure plan area, with approximately 16 within or near the confines of Area 6.

Based on the thickness of the identified competent soil raft, WCL nominated three building zones within Area 6, as follows:

Zone 1: Raft of inorganic soils up to 1 metre thick. Zone 1 was encountered over the south-eastern section of the site.

Zone 2: Raft of inorganic soils between 1 and 2 metres thick. Zone 2 was apparent over the majority of the study area.

Zone 3: Raft of inorganic soils over 2 metres thick. Zone 3 was apparent over parts of the central and northern portions of the study area.

Due to the thin cover of raft materials in Zone 1, WCL considered that there was increased risk from:

- Changes to the water table
- Higher levels of settlement
- Bearing capacity limitations
- Instability in the organic materials in the form of natural migration of large bodies of wood.

WCL borehole records are contained within Appendix 6 of the Geotechnical Report which is enclosed as Appendix 8 of the Plan Change documentation.

5.4.1.1 Coffey Geotechnics Fieldwork

Fieldwork by Foundation Engineering (which is now called Coffey Geotechnics) commenced on 3 March 2006 and involved the drilling of 31 hand auger boreholes to depths of up to 5 metres in the positions indicated on the site plan appended to the Geotechnical Report.

Descriptions and depths of strata encountered during the drilling of the boreholes were also appended to the report. Borehole spacings were at approximately 100 metre intervals.

The Foundation Engineering borehole records are contained within Appendix 7 of the Geotechnical Report. In addition, plans showing the location of the WCL and Foundation Engineering boreholes and the locations of Zone 1, 2 and 3 building zones are also located within Appendix 7 to the Geotechnical Report.

5.4.1.2 Summary of Site Conditions

Topsoil

The depth of topsoil typically ranged from 0.1 to 0.3 metres.

Inorganic Soils

All boreholes encountered a mantle (raft) of inorganic soils comprising soft to stiff sometimes sandy silts, clayey silts and silty clays. The deposits were sometimes organic stained and hard to distinguish from the overlying topsoil. Shear vane dial readings measured in situ ranged from 25 to 140, indicating that these deposits display wide variations in strength.

The findings of Coffey Geotechnics supports the Zone 1, 2 and 3 building zones identified by WCL above. As identified above The Soil Zonations Plan attached as Appendix 7 of the Geotechnical Report, in Appendix 8 of the Plan Change information shows these three zones. It is noted that these three zones are indicative only.

Organic Deposits

Beneath the raft of inorganic materials, all boreholes except 17, 18, 26, 27, 28 and 31 encountered very soft organic (muddy) clayey silts and silty clays, often containing large amounts of decayed wood/twigs and inclusion of amorphous organic matter (peat). The organic deposits were present to at least the depths drilled in most cases.

Cross sections appended as Appendix 8 of the Geotechnical Report indicate that the thickness of the inorganic soils varies over the site ranging from approximately 1 metre adjacent to Popes Road to approximately 11 metres adjacent to Manuroa Road.

Groundwater

The standing water levels range in depth from 1.0 to 3.2 metres in depth, averaging approximately 1.6 metres. No groundwater was detected in boreholes 6, 10, 18, 21, 22, 23, 25, 27 and 29 during the time of the site visit. The Geotechnical Report notes that if standpipes were installed and groundwater monitoring was undertaken, they would anticipate that equilibrium levels will be similar to those displayed elsewhere on the site. The depth of groundwater detected in each borehole is labelled on the site plan attached to the Geotechnical Report.

5.4.1.3 Discussion on Ground Conditions

Below is a discussion on the geotechnical issues, which need to be considered, as a result of the geotechnical findings identified above.

Organic Deposits

As the organic deposits are susceptible to irreversible consolidation settlements which may be induced from lowering the groundwater table or imposed surcharge loads, planning development of the site must consider the following key points:

1. Applied bearing pressures from shallow foundations associated with buildings should be minimised on account of varying, but generally low strength, ground conditions.
2. Light-weight, flexible structural designs are desirable to accommodate potential differential settlement rates.
3. Floor live loads for industrial/commercial developments (particularly in Zones 1 and 2) may be limited. Heavily loaded areas/foundations may require piling, and/or other methods of ground improvement.
4. Careful stormwater management should allow for artificial groundwater recharge to ensure that existing water table levels are maintained.
5. Diligent landscaping/vegetation and earthworks designs must minimise potential adverse effects (such as induced settlements) for the reasonably foreseeable future.

Raft Soils

Within the area of Zone 1, the raft is generally less than 1 metre thick. There is a greater degree of risk in this area of higher levels of settlement from changes in groundwater level and the importance of artificial groundwater recharge becomes paramount, as do the limitations on bearing capacity, landscaping and earthworks. The thickness of the raft increases in Zones 2 and 3, effectively lowering the risks associated with fluctuations in groundwater, landscaping and earthworks.

Coffey Geotechnics have noted that the highly variable shear strength of the inorganic (raft) soils within all zones places greater limitations on bearing capacity. This is a site specific investigation and design issue, which will need to be addressed at the relevant consent stages.

Preliminary Foundation Types

Coffey Geotechnics anticipates either shallow strip and pad foundations or piles for industrial type buildings within the Plan Change area. Piles would be expected to extend to depths of up to approximately 15 metres in the southern parts of the site with anticipated depths reducing to the north to approximately 5 to 8 metres. These pile depths are not unusual and many developments in Auckland have been built using pile foundations to depths well beyond 15 metres.

Communication by Coffey Geotechnics with Davis Langdon Limited has established that deeper pile foundations would be in the order of 15% of total construction cost and shallower piling in the order of 10% of total construction cost.

The need for preloading is dependent on the ground conditions present at a specific site as well as the expected loadings and/or settlement sensitivity. This is typically assessed at the specific investigation and foundation design stage. In addition, preloading and piled foundations have been successfully undertaken on many sites in the Auckland area without rendering the developments unviable.

Communication by Coffey Geotechnics with HEB Contractors has anticipated the cost of importing and placement of aggregate for preloading to be in the order of \$65 per m³, for a 10Pa preload this equates to \$32.5 per m² of area. This does not take into account the holding costs of land with Coffey Geotechnics expecting any preloading would need to be in place for 6 to 12 months.

Groundwater Recharge

As the organic soils present within the Plan Change area are likely to be subject to significant irreversible settlement if the groundwater table is drawn down beyond the normal seasonal fluctuations, it is important to ensure that groundwater recharge is achieved.

Coffey Geotechnics suggest that groundwater recharge would be achieved through the use of rain gardens and disposal trenches or similar. Rain gardens would collect runoff from paved areas before distributing the water through a network of groundwater recharge trenches beneath the paved area in order to allow for an even dispersion. Any overflow would simply be piped through the stormwater drainage network.

Water from the roofs may be able to be disposed of directly into the ground beneath the building floor slabs via a specifically designed disposal trench system.

Within Appendix 9 of the Geotechnical Report is an indicative Groundwater Recharge Layout Plan and Indicative Recharge Trench Schematic which shows how groundwater recharge may be achieved for Industrial type developments. Although specific groundwater recharge design is required for each lot.

5.4.1.4 Conclusion

The findings by Coffey Geotechnics were comparable to those presented in the Woodward Clyde report. Notwithstanding the identified geotechnical limitations, with applications of appropriate engineering provisions within the District Plan, Coffey Geotechnics considers that industrial development over the Plan Change area is considered (in principle) to be geotechnically feasible with individual development requiring specific site investigation and foundation design.

It is apparent that relatively high density residential developments border the southern and northern boundaries of Area 6. Commercial and industrial developments are located to the west. It is inferred that WCL Zone 1, 2 and 3 soils encroach into these established areas with no obvious adverse effects on development.

With appropriate engineering measures, Coffey Geotechnics is of the opinion that the identified geotechnical conditions alone should not constrain the expected density of commercial and residential development envisaged by the Plan Change upon the zonations described above. In addition, appropriate engineering techniques are available in regards to foundation design, preloading and groundwater recharge to ensure that this envisaged commercial and residential development can be successfully established in a manner which is economically viable.

Coffey Geotechnics further consider that future subdivision plans and building proposals will need to be the subject of further site specific geotechnical investigations, to ensure that potential adverse geotechnical effects are avoided, remedied or mitigated.

To facilitate the outcome and recommendations of this further site specific investigation, the Plan Change has imposed a rule in the General Requirements For Industrial Zones in Section 6.15 of the Plan which requires that all resource consent applications within the Industrial 1 and Industrial 3 zone (within Takanini Structure Plan Area 6) are to be considered against the following rule:

“13. Geotechnical matters

All development shall be accompanied by a site specific Geotechnical Investigation Report, prepared by a suitably qualified Geotechnical Engineer, confirming that the land will be suitable for development of the proposed building(s).

The Geotechnical Investigation Report shall:

- (a) Make recommendations for future site development in respect of the following matters:
 - 1. Consolidation settlement*
 - 2. Differential settlement*
 - 3. Foundation bearing pressure*
 - 4. Maintaining groundwater equilibrium*
 - 5. Service lines.**
- (b) Include a site specific groundwater recharge system design prepared by a suitably qualified Stormwater Engineer; and*
- (c) recommend appropriate specific structural and civil engineering design measures to be undertaken. These measures shall make provision for site specific geotechnical and groundwater recharge requirements, for example foundation design and preloading, if required.*
- (d) Measures or works necessary to guarantee the long term geotechnical stability of the site.”*

This rule varies slightly in wording but is consistent in meaning to what was recommended in the Geotechnical Report. The rule has been amended slightly to aid in the clarity of its interpretation only. In addition, this rule, with the exception of matters 4 and 5, is similar to that which applies for subdivision within the Residential 8 zone, Section 16.1.3.5 of the Operative Papakura District Plan.

5.4.2 Geotechnical Assessment of Proposed Stormwater Pond

This assessment was carried out in accordance with the Auckland Regional Council Publication TP109 “*Dam Safety Guidelines*”. The pond is proposed to be located within the northern part of the site, adjacent to the Papakura Stream. An indicative location of the stormwater pond is shown on the structure plan attached as Appendix 4 of this report and within Appendix 3 of the Geotechnical Report. Furthermore a proposed Designation Plan is shown in Appendix 22 to this Plan Change Request.

The pond is expected to be constructed from cuts of up to approximately 2.5 metres, however fill batters of up to approximately 2.5 metres will need to be constructed to form the northern pond batter.

Fieldwork and Findings

Borehole records from WCL and Coffey Geotechnics indicate soil conditions of soft to clayey silts and silty clays with occasional organic inclusions at depth within the vicinity of the proposed pond location. In addition, the borehole records indicate groundwater in the immediate vicinity of the proposed pond varies from 1.1 metres to 3.3 metres below ground level.

Slope Stability

An analysis has been undertaken in the Geotechnical Report of the pond slope stability under 4 worst case scenarios. Under these scenarios factors of safety of <1 to >2 were found. Factors of safety of between 1.2 and 1.5 were considered undesirable in the long term, although they would be acceptable in the Plan Change area under temporary extreme groundwater conditions.

Project Evaluation and Recommendations

General

Coffey Geotechnics findings indicate that the site is generally suitable for the proposed stormwater treatment pond provided that specific comments and recommendations contained in the Geotechnical report are adhered to. These have been summarised below.

North Berm Construction

Engineering techniques discussed in regards to the construction of the northern berm of the pond include:

- A seepage control (cut off) key of engineer certified fill 1 metre below pond invert, 3 metres in width and extending the length of the ponds northern boundary
- Toe drainage at the base of the external toe slope to minimise the risk of piping failure
- Minimum width of crest 3 metres or 4 metres if used as a crossing and suitably protected using hardfill

-
- Maximum internal gradient 1 in 4 (14 degrees) and maximum external batter gradient approximately 1 in 3 (18 degrees)
 - Temporary groundwater control measures during pond construction
 - Clay or synthetic liners on internal batters and base of pond
 - Precautions to ensure that the embankment is not over-topped by an appropriately designed spillway / structure.

Earthworks

Vegetation and topsoil should be cleared and kept well clear of proposed pond cut and fill areas. It is expected that cut materials will be suitable for use as fill for the northern pond berm although if unsuitable material is discovered (e.g organics) they should be disposed of elsewhere.

Compaction Control

Compaction of fill material is discussed in the Geotechnical Report and should be carried out to certifiable standards and under engineering control.

Outlet Conduits

Outlet conduits running beneath the pond should be kept to a minimum and where provided should be provided with seepage collars and carefully compacted and backfilled.

Plan Review and Inspections

Coffey Geotechnics also recommends a review of any final plans of the proposed stormwater pond, monitoring during construction of the pond and the preparation of a Geotechnical Completion Report once the pond has been constructed.

Conclusion

As outlined above and in Section 4.1 of the Geotechnical Report the geotechnical investigations undertaken by Coffey Geotechnics have established that the construction of the proposed stormwater pond is feasible from a Geotechnical perspective. The detailed design of the pond will follow a Notice of Requirement process as an Outline Plan of Works.

5.5 CONTAMINATION EFFECTS

Harrison Grierson Consultants Limited (“HGCL”) was engaged to assess the likelihood of soil contamination within the Structure Plan Area. All work was carried out in accordance with the requirements set out in the Ministry for the Environment document *Contaminated Land Management Guidelines 1 – Reporting on Contaminated Sites in New Zealand (2003)*. The guidelines set out the scope of work required for a Stage 1 – Preliminary Site Investigation. A copy of the Investigation report is attached as Appendix 9.

5.5.1 Methodology

HGCL has undertaken the following tasks for this project:

-
- Review of information held by Papakura District Council concerning the site;
 - Review of Papakura District Council's contaminated sites policy;
 - Review of historical aerial photographs;
 - Historical land titles search;
 - Discussions with former land owners;
 - Site walkover, including shallow excavations.

No chemical sampling or testing was undertaken for this Stage 1 assessment. Further, no work was undertaken on any of the adjoining sites and no groundwater contamination assessment has been carried out.

5.5.2 Site History

A review of the Councils' records (Papakura District Council and Auckland Regional Council) indicated that there is no evidence of contamination on the properties that together form the subject site. A summary of the information contained in each file is provided in the site investigation report (refer to Appendix 9).

A number of aerial photographs were also reviewed as part of this investigation. Details of the photographs are described in the site investigation report and explain how the land has altered over an approximately 30 year period. An historic land title search of the site was also performed using the Landonline titles register provided by Land Information New Zealand. The records give details of previous landowners and their occupations, which are summarised in the site investigation report. Discussions were also held with representatives of four of the sites – 22 Popes Road, 354 Porchester Road, 296 Porchester Road and 55 Takanini School Road to clarify aspects of the property histories. These discussions reconfirmed the use of the land in recent times.

It is clear from these results that the land has been farmed extensively over the years, either for horticultural use (market gardening) or in association with the horse training industry. A number of buildings are located across the land which support these two land uses (stables and implement sheds). Hedges have been used historically to divide the land into land use areas and to provide shelter to paddocks. There are few indications of chemical usage associated with the farming of the land.

5.5.3 Site Walkover

The majority of the site was subject to an investigative walkover on 10 March 2006. Particular attention was given to tracks, troughs, gateways and areas where potential contaminants may have been stored. Details of the findings on each site are discussed at length in the site investigation report (refer to Appendix 9).

One "hotspot" site was found during the walkover at 296 Porchester Road, in the form of an above-ground diesel storage tank, presumably used to fuel machinery used on the site. The fuel tank is located at the rear of the main stables and is not located on a concrete pad. Diesel from the fuel tank appears to have spilt onto the ground, either as a result of the use of the tank or through a spill. Photographs of the fuel tank are attached in the site investigation report. The area visually affected by the diesel spill is approximately 6 metres

long and 3 metres wide. It is possible that the diesel may have seeped beneath the stables and possibly into the groundwater, which is thought to be 1-2 metres beneath the ground surface.

5.5.4 Conclusion

The site investigation report notes that a key concern regarding greenfield sites is the potential for contamination to have taken place as a result of market gardening operations. In particular, the chemicals that were used to control weeds or pests prior to 1975 are now known to be persistent in the soil and potentially present risks to human health and the environment.

Soil on two of the properties, 55 Takanini School Road and 22 Popes Road, was previously used for horticulture. It is noted that 55 Takanini School Road has only been used for horticulture since 1997 however, and the types of chemicals used during this time, coupled with the results of the site investigations carried out, has led to the conclusion that there is no evidence of soil contamination at that site.

In terms of 22 Popes Road however, the site history is less clear. The present site owners are aware that the site was used to grow raspberries, beans and gooseberries, but it is not known when this activity commenced, the duration over which the activities were carried out or when they ceased.

A photograph taken in 1980 shows the property in pasture, and on this basis, it can be assumed that the property was not used for horticulture prior to 1980. Therefore, it is considered unlikely that soil contamination has occurred as a result of the historic use of the property.

The contamination “hotspot” described above, as a result of leakage/spillage from a diesel storage tank at 296 Porchester Road is understood to have occurred in the last 10 years.

No evidence of potential soil contamination was identified on any of the other properties in this investigation.

5.5.5 Recommendations

The site investigation report recommends that soil sampling occur in the vicinity of the above ground diesel storage tank on 296 Porchester Road, to determine the horizontal and vertical extent of any soil contamination.

5.5.6 Remediation Action Plan

A Remediation Action Plan Report dated 12 June 2007 was prepared by URS New Zealand Limited, for Takanini Structure Plan Area 6 Limited, and is enclosed as Appendix 10 to this report.

Following on from the recommendations of the Harrison Grierson Consultants Limited (“HGCL”) contamination assessment that soil sampling and testing be undertaken on 296 Porchester Road, this was done and the Remediation Action Plan Report written to provide recommendations of a methodology to remedy the soil contamination on the site.

The Executive Summary of the Remediation Action Plan Report provides a suitable summary of the findings of the report, the relevant parts of which state:

“The primary driver for soil sampling at the site was the potential for petroleum hydrocarbon contamination associated with the above ground diesel storage tank, however, for completeness heavy metal analysis were also carried out on the soil samples.

Soil contamination at the site is associated with the spilling of diesel from an above ground diesel storage tank situated adjacent to the horse stables. Analysis of soil samples from the vicinity of this tank show the presence of arsenic, lead and petroleum hydrocarbons at concentrations that exceed the adopted soil guideline values.”

The Executive Summary of the Remediation Action Plan Report also states that:

“The proposed remedial strategy involves classifying the soils on site into two categories relating to the concentrations of contaminants in the soil. The soil will be classified either as “Contaminated” or “Acceptable”. Contaminated soils will be excavated and disposed of off site at a licensed disposal facility. Acceptable soils can remain onsite and may be reused in landscaping. Site management practises will be employed to ensure there is minimal disturbance to the surrounding environments and community during the remedial works.”

Following the recommendations of this Remediation Action Plan Report will effectively remedy the identified contamination ‘hotspot’ at 296 Porchester Road, Takanini.

5.6 EFFECTS ON INFRASTRUCTURE

Infrastructure Report has been prepared in support of the rezoning application by Fraser Thomas Limited. A copy of this report is attached to the application as Appendix 11. This report evaluates the existing and potential requirements for infrastructure servicing to serve a development comprising a combination of Industrial 1 and 3 zoned properties, and a small strip of Residential 8 zoned property within Takanini Structure Plan Area 6.

5.6.1 Proposed Stormwater System

The proposed stormwater system for Areas 6A and 6B has been designed, taking into account the approved catchment management plan and studies for the area, site constraints and specific development needs. The assessment of effects is based on the use of on-site soakage for groundwater recharge, a piped reticulation network, a water quality wetland pond for stormwater treatment and dedicated overland flowpaths for Papakura Stream, which flow along the site’s northern boundary.

5.6.2 Recharge of Stormwater

Rules are proposed to ensure that all new buildings within the area recharge the peat layers (where present) with roof water flows, via recharge pits, which have an overflow to the piped system. The Proposed Auckland Regional Council Air, Land and Water Plan already requires that roof construction shall be of non-leaching type materials, and may not be of uncoated galvanised steel or other materials which will require runoff quality treatment prior to discharge.

Surface water runoff from sites will need to be treated to ensure that water quality is not degraded. The requirements in relation to this treatment are as specified in the proposed Air, Land and Water Regional Plan.

The Plan Change proposes to include the following rule under 6.15 'General Requirements For All Industrial Zones' within Takanini Structure Plan Area 6 only.

"11. Stormwater

- (a) All development of sites is to provide for groundwater recharge by providing for soakage disposal of stormwater runoff from buildings and other impervious surfaces.*
- (a) A soakage pit providing temporary storage for the runoff is required. Soakage pits are to be designed in accordance with the Code of Urban Subdivision, and storage volume is to be provided between 1.5 metres below ground level and 0.5 metres below ground level. The design soakage pit requirements are based on a design storm of 15mm of rainfall over a 1 hour period.*
- (b) Overflow from the soakage system is to be provided for with a piped connection to the public stormwater drainage system.*
- (c) The required volume of soakage pit in relation to the buildings and other impervious surface area for each development is shown in Figure 16.4 – Soakage Pit Requirements (Refer Rule 16.1.6.6).*
- (d) No development shall preclude the achievement of the recommendations of an approved Catchment Management Plan or related Discharge Consent or be inconsistent with the Structure Plan (Appendix 16A).*
- (e) Alternative soakage techniques from those identified in (a)-(e) above, (for example trenches) may be appropriate in certain circumstances. The specific technique(s) proposed and corresponding design parameters will be determined as part of a detailed site specific stormwater and/or geotechnical investigation."*

This rule with the exception of subsection (f) is consistent with the rule that applies to the Residential 8 zone within Section 16.1.6.6 of the Operative Plan. In addition, apart from minor changes it is also the same as the rule recommended in Appendix 3 of the Infrastructure Report by Fraser Thomas.

This rule will require the recharge of ground water levels to be considered as part of any development in the Industrial 1 and Industrial 3 zones of the Structure Plan Area.

5.6.3 Piped Reticulation System and Overland Flowpaths

Fraser Thomas has confirmed within their infrastructure report that stormwater flow which is in excess of the design requirements for recharge will be managed via a piped drainage system, which conveys flows up to the 10% AEP to the water quality pond, for treatment and eventual discharge to the Papakura Stream.

The report states that:

"The location of two defined stormwater paths for overland flow in extreme events, (flows in excess of the 10% AEP) supported by piped systems, have been confirmed to lie along the

eastern side of Takanini School Road and also the western side of the proposed internal north-south road, each discharging to the Papakura Stream.”

In addition, the report states that:

“At time of detailed subdivision design, flow paths adjacent to building sites will be evaluated to determine if minimum floor level restrictions are required. As the flowpaths cross Popes Road on their way to the Papakura Stream, additional piped capacity is to be provided at these locations to convey flows below the road surface, exiting to an open channel beyond.”

Within the Plan Change a rule is proposed (6.15(12)), which restricts landscaping within an overland flowpath. This rule is referenced in Appendix 3 of the Infrastructure Report and is set out below:

“12. Front Yard Landscaping within Overland Flow Paths

The following requirements apply to land zoned Industrial 1 or Industrial 3, which has been identified as containing an overland flowpath on the Structure Plan for Takanini Area 6:

(a) Landscaping within the overland flowpath shall be undertaken in such a manner as to not impede the flow of stormwater. As such landscape planting in accordance with the recommended species in the following Table shall:

- Consist of grass or low lying shrubs which lie flat in flood conditions, and / or,
- Specimen trees with foliage a minimum of 0.5m above ground level at the time of planting.”

Indicative species for swale/overland flowpath planting for Takanini 6A & 6B

(Based on ARC TP10 Design Guideline Manual & TP148 Riparian Zone Management Manual)

Botanical name	Common Name	Form	Location	Spacings	Size
Sedges/Grasses					
Carex lessoniana	Rautahi	Rush or sedge	Flat	0.4m	PB2
Carex secta	Purei	Rush or sedge	Flat	1.0m	PB2
Carex virgata	Small swamp sedge	Rush or sedge	Flat	0.4m	PB2
Cortaderia fulvida	Toetoe	Large grass	Flat/Slope/Bank	1.0m	PB5
Cyperus ustulatus	Giant umbrella sedge	Rush or sedge	Flat, swampy areas	1.0m	PB2
Trees/Shrubs					
Carpodetus serratus	Putaputaweta	Tree	Slope/Bank	-	PB95
Coprosmma repens	Shining karamu	Shrub	Slope/Bank	1.5m	PB5
Cordyline australis	Cabbage tree	Small tree	Slope/Bank	-	PB28
Melicytus ramiflorus	Mahoe	Tree	Slope/Bank	-	PB95
Phormium cookianum	Mountain flax	Shrub	Slope/Bank	0.5m	PB5

Note:

Grasses and sedges should be mass planted in swathes or groups of 5 and 7.
Trees and large shrubs need a minimum of 1m³ soil in which to grow.

5.6.4 Stormwater Pond

The Fraser Thomas report contains the following discussion on the water quality pond:

“A minimum area of approximately 1.44ha was initially defined as required for the water quality pond. As a result of further modelling and preliminary design of the pond shape, volume and bench requirements to address ARC’s TP10, the pond area has been increased to 1.66ha, plus a margin surrounding for planting, a footpath and a mowable edge for public access. The pond design parameters include the provision of a wetland, containing the permanent water quality volume (WQV) with two inlets and a single outlet and overflow weir to the Papakura Stream. We have provided a design layout of the pond to show its function, which is summarised below. In future, these specific elements will be subject to detailed design and evaluation for geotechnical and hydraulic constraints, which may result in minor changes within the extent shown.

The proposed pond at the base of the catchment east of Takanini School Road will treat stormwater from the Area 6 site and contributing upgradient catchments (i.e. sub-catchments I, J, K, L, M, N, O and P) so as to remove 75% of total suspended solids on a long term average basis, provide for capture and release of the extended detention volume over 24 hours, and provide for passage of peak flows from storm events up to and including the 10 year event through it, whilst maintaining 300mm freeboard, while allowing for backwater effects from flood flows in the Papakura Stream. As a result, the pond shape and area diagram show the 10-year event, which is agreed to be the largest storm to flow into and through the pond itself.

The design parameters indicate that the required storage for permanent water quality volume (WQV) is 6,100m³, which can be accommodated in a wetland with forebays and alternating shallow and deep sections of surface area 9,170m² and average depth 0.72m, giving a permanent water surface level of 10.72m RL. The required top of the pond is at 13.03m RL, giving a required variable volume of 26,440m³ and corresponding required pond surface area of 13,800m². The estimated maximum water depth temporarily reached in the pond in the 10 year event is 2.02m (12.73m RL), resulting in a freeboard height of 300mm. Discharges from the variable volume portion are controlled by a large diameter manhole with a number of small orifices to release the extended detention volume over 24 hours, while the crest of the manhole and a dedicated spillway in the side of the pond are provided for the passage of more extreme events.

A CivilCAD analysis summarised that pond areas and volumes shown on the AutoCAD drawings are 15-20% greater than the required values quoted above, which are in turn calculated values from TP10/HEC-HMS analysis. This contingency allows for the construction of pond benches, forebays, berm to prevent short-circuiting, etc. These parameters will be revised during the detailed design stage.”

In terms of maintenance and access to the pond, a minimum margin of 4.5 metres has been provided around the pond for planting, a footpath and a mowable edge for public access. The pond slope of 1:4 for ease of excavator access has been agreed to (refer letter dated 17 March 2009). It is therefore considered that there is an adequate amount of space for maintenance purposes. The specific details of this access will form a part of the designation process for the stormwater pond.

5.6.5 Flood Risk

The planning maps show a general flood risk across the area and surrounding land.

An analysis of the effects of flooding on the Plan Change area has been undertaken by Fraser Thomas and is articulated in their Infrastructure Report. Fraser Thomas has stated that:

“The general flood risk notation which currently is shown across the Takanini 6A/6B should be removed and replaced with localised overland flow paths as shown in our drawings. Within those flow paths, rules restricting planting regimes are attached in Appendix 3.”

The lodged private plan change proposed to delete the flood hazard notation affecting Area 6 as, when fully developed, there would be a new stormwater management network (stormwater pond and overland flow).

Until such time as development determines formalised functioning overland flowpaths there is a risk that building work done ahead of subdivision and the completion of works required for the final stormwater network will not adequately address overland flow matters and the risks of potential flooding.

The proposed plan change now retains the flood hazard notation. Following completion of the development Council should initiate a review of the necessity and/or extent of the flood hazard notation based on the final stormwater network and amend the District Plan accordingly

5.6.6 Sanitary Sewer

Existing Services

Takanini Structure Plan Area 6 is currently rural in nature. Fraser Thomas has confirmed that the dwellings in the northern part are served by private septic tanks and do not have a connection to the public sewer. The report notes that two properties at the southern end of the area, close to Manuroa Road are understood to have connection to the existing sewer system.

Fraser Thomas has plotted the existing wastewater lines, as indicated on the Council/United Water records at the southern and eastern periphery of the Plan Change area on plans which accompany its report (refer to Appendix 11). In addition, in liaison with Council and United Water, Fraser Thomas has established that:

“Existing sewer lines as indicated on Council / United Water records at the western edge of zone, are confirmed to have capacity for the connection of dry industry at this time.”

Proposed Development

In regards to the proposed development of Takanini Structure Plan Area 6 for Industrial and Residential uses, Fraser Thomas has noted in their infrastructure Report that:

“United Water has received confirmation from WaterCare Services that the Mahia Branch sewer line, which currently terminates at the western end of Rangi Road, will be extended to

and through the site in line with the expected Area 6 project completion dates, (a copy of the letters are enclosed).

Preliminary information from WaterCare Services design team confirm that the Mahia Branch Sewer extension provides suitable depth for the Area 6 land to connect using conventional sewer reticulation. We have provided an indicative alignment through the site making best use of grade and directness.

WaterCare designers will confirm the route, grade and depth in the next few months. A corridor will be reserved at this time, 10m each side of the possible pipe route until it is finalised. Once the pipe is laid, normal WaterCare build over / in close proximity rules will apply.

Once the design of the branch sewer extension is complete, the detailed subdivisional design can be completed for approval, confirming the depth and location of connections for each development lot. This will provide for sewer flows from commercial uses and dry industry, while specific design and liaison with United Water and WaterCare will be required for the approval of a wet industry as per normal trade waste procedures.

UWI modelling results have confirmed that a total of 32 litres per second discharge is available at specific points without compromising the existing network. We propose to make connection to the UWI sewer lines, in advance of the Mahia Branch (if required) at three locations (as indicated on the Fraser Thomas drawing set numbered 22482) to serve all existing titles. The discharge by cumulative area and discharge rates are within the above maximum flows.

The Structure Plan shows the preferred location of the proposed extension to the Mahia Branch Sewer Line. This is The Mahia Branch Sewer Line is defined in more detail by the "Mahia Branch Sewer, Sewer Extension, Feasibility Report" February 2009, prepared by Opus Consultants for Watercare.

Watercare has informed Council that they will not be designating this route. A network utility yard has been included within the plan change to protect the preferred alignment. These rules are required for route protection; following the construction of the pipeline the Auckland Metropolitan Drainage Act 1960 will provide legal protection.

5.6.7 Roding

The overall site is generally bounded by existing public roads, which form a primary route for heavy freight transport. No access to the site is proposed from Manuroa Road. The proposed development will involve the construction of local roads within the site, and upgrading of existing public roads to achieve Council Development Code requirements.

Additional evaluation of the effects of the proposal on the roading network and associated roading upgrades will be made in the traffic impact assessment, attached as Appendix 12.

It is noted that the traffic investigations have assumed a 4-lane cross section for Porchester Road. The cross section for Porchester Road has been amended to be consistent with the 2-lane cross section design for the southern portion of Porchester Road within Takanini

Structure Plan Area 1B. The 2-lane design will suitably provide for the transportation needs of the future development, the intersection designs will still need to provide for multiple lanes and provide for a transition to the 2-lane road.

5.6.8 Water Supply

Fraser Thomas has confirmed with United Water (UWI) that significant water strength exists in existing water supply lines which run along Takanini School Road and Popes Road. The existing services are suitable for the design of extension lines to support industrial development on all sites in the Plan Change area.

Fraser Thomas has noted in their infrastructure Report that:

“The presence of trunk mains of 300 and 375mm diameter on Spartan and Takanini School Roads respectively, provide capacity for all anticipated demand for wet and dry industry, and all expected fire demands with extensions and interconnections.

Fraser Thomas plan set numbered 22482 show an indicative layout, to upgrade existing supply lines to provide domestic, commercial and fire capacity to that required for the zone.”

When designs are progressed for the subdivisional layout, the size of new watermains, their location and potential interconnection with current watermains will be confirmed with United Water.

5.6.9 Electricity

The area is currently reticulated with electricity networks owned and operated by Vector Limited, which are located along the existing public roads. Vector has advised that the existing overhead supply can be extended (and under grounded) along existing road frontages as required to provide suitable supply connections to all sites. At the time of individual site development specific items will be confirmed in relation to proposed occupiers of sites, such as the connection capacity for major users, new underground plant laid subsequent to the Plan Change and local proposals for users as they are identified. A copy of a letter from Vector is enclosed as Appendix 2 to the Infrastructure Report.

5.6.10 Gas

Vector Limited has confirmed that local supply lines are present in Spartan and Rangī Roads to the west of the site, which have sufficient strength to be extended to serve this development. Vector has confirmed that adequate capacity exists for normal expectations of gas usage within and industrial/commercial development. If a major user with significant demand requirements were proposed within the site, specific design would be required to ensure that the connected capacity for the site can be provided.

A copy of a letter from Vector is enclosed as Appendix 2 to the Infrastructure Report.

5.6.11 Telecommunications

Telecom New Zealand Limited have advised that existing networks in the area have capacity to be extended to serve this development, which will be aligned with the major

existing and proposed additional roading alignments, with cabling upgrades on specific streets and networks along proposed roads.

A copy of a letter from Telecom is enclosed as Appendix 2 to the Infrastructure Report.

5.6.12 Conclusion

Fraser Thomas have provided the following conclusion within the Infrastructure Report:

“An engineering assessment has been completed of the proposed development of the combined sites within the Takanini area of Papakura District, named Areas 6A & 6B, to determine that this area is suitable for the proposed development.

A significant effort has been made to prove the adequacy of this area of land to support the location, scale and type of development. On the basis of these inputs and other data, we conclude that, after local reticulation, drainage, infrastructure, and roading elements are evaluated and/or upgraded, all expected industrial, commercial and residential development can be served on this site.

As the Takanini area is largely founded upon peat soils, stormwater recharge remains an important method of disposal and a requirement to maintain peat soil groundwater levels, while restrictions on planting within the overland flowpaths are attached as Appendix 3. Generalised flooding notation is to be removed and replaced by localised overland flowpaths along specific routes as shown on plans attached.

Once the assessment of stormwater rainfall-runoff rates (the resultant flows are proposed to be delivered to on-site private recharge pits) and their interconnection to a secondary piped system and also overland flow paths for runoff from extreme events, we can confirm that the site can be served for the intended use, by the facilities described.

The definition of the esplanade reserve using the provisions of the RMA, has confirmed that the area of land required to set aside for a water quality pond to be located to the south of an esplanade reserve to be vested, is that shown on the attached drawing set. Minor land modification may be required to the buildable lots themselves, to accommodate overland flow paths, road alignment and widening of boundaries at intersections, which can all be confirmed during the detailed design phase.

United Water officers have confirmed that water supply and sanitary sewer services are suitable for development of the site, and with planned upgrading by WaterCare Services, service can be provided to all sites for normal discharge rates, (letters are enclosed). In the initial period, until the WaterCare Mahia Branch sewer is extended, sewer discharge rates are restricted to specific flows at three locations, while still providing for anticipated “dry” industry uses.

The physical timing and cost of project elements such as major road improvements, stormwater quality pond construction and trunk utility services will need to be confirmed during the design of servicing for each site, along with financial arrangements between Council and the developer to jointly provide improvement funding. Utility providers have confirmed that suitable infrastructure exists at the periphery of the development site, and that this can be extended to adequately serve all proposed sites, (letters from Vector for power & gas, and Telecom are enclosed).

We recognise that during the detailed design phase of the future subdivisional development, liaison will be required with Papakura District Council technical and regulatory staff, in association with discussions with United Water and others as the project progresses.

It is our recommendation that the Papakura District Council gives support to this application for a change to the Operative District Plan, to provide certainty as to the timing for release of industrial and residential land.”

5.7 TRAFFIC IMPACT ASSESSMENT

An Integrated Transport Assessment (ITA) has been prepared by Traffic Planning Consultants Limited (“TPC”) on behalf of Takanini Structure Plan Area 6 Ltd. Extensive comment was provided by the Auckland Regional Transport Authority (ARTA) and Papakura District Council on the traffic effects of the proposal.

After consideration of the issues raised, the ITA was amended to address concerns raised. The assessment is attached to this report as Appendix 12.

The assessment evaluates the existing transport conditions in the area and the surrounding network, the relevant characteristics of the proposed development, the level of additional trips generated by the development and where these trips are travelling to and from, including associated travel times. The assessment then evaluates the impact of the additional trips on the roading network, and outlines improvements that could be implemented to influence travel and proposed provision for alternative modes of transport to access the development area. The traffic impacts are then discussed.

The executive summary and conclusion sections within the ITA provide an effective overview of the findings of the ITA. For this reason these sections of the ITA have been reproduced in 5.7.1 and 5.7.3 below. Overall it is considered that the ITA has comprehensively assessed the transport effects of the proposed rezoning and any adverse traffic and transportation effects of the Plan Change can be appropriately managed. Further detail of the traffic effects of the proposal is outlined in the ITA itself.

5.7.1 Executive Summary

“Introduction

This Integrated Transport Assessment has been prepared in accordance with the Auckland Regional Transport Authority “Integrated Transport Assessment” guidelines and describes the traffic engineering and transportation planning aspects of a proposal by Area 6a/6b Ltd to rezone a 54 hectare site bounded by Porchester Road, Takanini School Road and Popes Road from Rural to Industrial 1, Industrial 3 and Residential 8.

Policy Context

Flowing out of the Regional Growth Strategy the Auckland Regional Council (ARC) has developed the “Auckland Regional Land Transport Strategy” (ARLTS) document to accompany the Regional Growth Strategy and give focus to the future transportation needs of the region. The fourth strategy document was published in June 2005.

The ARTA document "Auckland Passenger Transport Network Plan 2006-2016" outlines strategies and works required to develop an effective and efficient Rapid Transport Network (RTN). An RTN involves providing a passenger transport system with a high frequency, high quality service operating on "transport spines" that does not get held up by road traffic congestion. The Takanini Rail Station will be upgraded as part of the program to improve all train stations within the Auckland Region to make them more attractive to rail users. Additionally, ARTA has been working on a proposed Takanini Passenger Transport Plan with Papakura District Council since 2006. The Takanini Passenger Transport Plan proposes a new Local Connector bus route providing a service between Papakura Transport Centre and Manurewa Transport Centre through to Manukau City and includes providing a link with Takanini Station.

Concurrent Transport Studies / Improvements

The Papakura District Council is currently progressing a number of transport related studies and projects for the Takanini area and the Papakura District as a whole. These include:

1. Takanini Growth / Takanini Motorway Interchange Traffic Modelling
2. Manuroa Road / North Island Main Trunk Line Grade Separation
3. Great South Road / Manuroa Road Intersection Improvement Study
4. District Road Hierarchy Papakura
5. Great South Road / Spartan Road

Plan Change Proposal

The proposal involves re-zoning 54.24 hectares of designated Areas 6a and 6b within the Takanini Structure Plan area from Rural to Industrial 1, Industrial 3 and Residential 8 to provide for a range of employment and residential opportunities. Three traffic generation scenarios have been developed for the plan change area:

1. Low Traffic Generation

The traffic generating potential of developments under the low traffic generation scenario is in the range of 4,000 to 6,300 traffic movements per day with peak hour traffic generation in the order of 700 traffic movements per hour.

2. Medium Traffic Generation

The traffic generating potential under the medium traffic generation scenario is in the range of 7,700 to 11,600 traffic movements per day with peak hour traffic generation in the order of 1,200 traffic movements per hour.

3. High Traffic Generation

The traffic generating potential under the high traffic generation scenario is in the range of 10,500 to 18,100 traffic movements per day with peak hour traffic generation in the order of 2,210 traffic movements per hour.

For the purpose of the assessment, the high traffic generation scenario has been used. At critical locations in the road network, the low and medium traffic generation scenarios have also been assessed.

Transportation Improvements to Support Plan Change

Improvements to pedestrian amenity and safety are proposed through the provision of a network of footpaths and traffic signal controlled pedestrian crossings at key locations through the area. These improvements are consistent with the Papakura Walking and Cycling Strategy.

Improvements to the public transport network in the area have been suggested particularly consideration to extending a future bus route through the 6a/6b area on the upgraded sections of Takanini School Road and Popes Road.

The analysis described in the assessment suggests that the following intersection improvements are required to adequately provide for the levels of traffic generated by the proposed rezoning:

- 1. Improvements to the intersection of Manuroa Road and Great South Road including road widening to provide an additional right turn lane from Manuroa Road onto Great South Road,*
- 2. The installation of traffic signals and associated road widening at the following intersections:*
 - Manuroa Road and Takanini School Road,*
 - Porchester Road and Popes Road,*
 - Porchester Road and Manuroa Road.*

Improvements will also be required to the Takanini Interchange to accommodate future levels of traffic generated by the developments in Takanini including Area 6a/6b. These improvements consist of road widening to provide additional through traffic lanes and additional turning lanes for key turning movements.

Additionally, Manuroa Road between Great South Road and Takanini School Road will need to be widened to two traffic lanes in each direction together with a painted flush median. The need to widen Manuroa Road from two to four lanes has implications for the design of the proposed grade separation of Manuroa Road and the North Island Main Trunk Rail line with the associated bridge needing to be increased from two to four lanes. The provision of a painted flush median along Manuroa Road between Takanini School Road and Popes Road is also desirable.

In respect of the widening of Manuroa Road between Great South Road and Takanini School Road from two lanes to four lanes, Papakura District Council officers have not confirmed that four lanes are required and a separate corridor management study will be carried out to confirm the requirements.

The transportation related improvements for the proposed Plan Change are consistent with the Papakura District Council's Walking and Cycling Network's 10 Year Implementation Plan as adopted by the Council in August 2008.

Staging of Improvements

The identified transport improvements are based on the ultimate development for Area 6a/6b being completed. In terms of potential timeframes for the development to be fully completed, if a two year consent period is assumed, a one year infrastructure site works development and a five year development period, then the full effect of a development of the Plan Change area will occur by 2016. The following table provides an indicative timeframe of when the various transportation improvements identified within this assessment are likely to be required together with the timeframe of known Papakura District Council projects.

Infrastructure Completion Timeframes

Year	6a/6b Progress	PDC Projects	6a/6b Transport Requirements
2009	Consent process	-	-
2010	Consented	-	-
2011	Infrastructure works including internal roads	Porchester Road upgrade	Manuroa Road / Takanini School Road traffic signals Popes Road / Porchester Road traffic signals
2012	20% developed	Manuroa Road grade separation Porchester Road upgrade	Great South Road / Manuroa Road upgraded
2013	40% developed	-	Manuroa Road widened to 2 traffic lanes in each direction
2014	60% developed	-	Manuroa Road / Porchester Road traffic signals
2015	80% developed	-	-
2016	100% developed	-	-

In respect of the timeframes for Papakura District Council projects, the grade separation of the Manuroa Road rail crossing and the upgrades to Porchester Road will be largely

completed by the time that Area 6a/6b may start generating significant levels of additional traffic in this area.

The Papakura District Council development contributions model includes a sum for a road widening project of \$2,530,800 on Manuroa Road below 2016 and 2026. The traffic generated by the 6a/6b project would require this work to be brought forward to approximately 2013 / 2014 in terms of the traffic generating potential of Area 6a/6b.

In addition to the local roading and transportation infrastructure improvements, regional transport related improvements by ARTA, ONTRACK and the New Zealand Transport Agency are also required to support the proposed Plan Change. These are shown in the following table:

Regional Transport Related Improvements

Year	6a/6b Progress	ARTA	ONTRACK	NZTA
2009	Consent process	-	-	-
2010	Consented	-	-	-
2011	Infrastructure works including internal roads	Confirmation of future bus routes through the Takanini area	-	-
2012	20% developed	Implementation of future bus routes	-	-
2013	40% developed	Takanini train station upgraded	Electrification of Auckland region rail lines completed and increased service frequency commences.	-
2014	60% developed	-	-	Takanini Interchange upgraded
2015	80% developed	-	-	-
2016	100% developed	-	-	-

5.7.2 Transport Related Proposed Plan Change Rules

As part of the ITA assessment, consideration was made about whether it was necessary to add to the existing Industrial 1 and 3 zone rules relative to Takanini Structure Plan Area 6, in order to mitigate the transport effects of the Plan Change.

As a result of this assessment the following rules are proposed to be added to the General Requirements for Industrial Zones in Takanini Structure Plan Area 6, within Section 6.15 of the Plan:

Access Requirements for High Vehicle Generating Activities

For the purposes of these criteria a high vehicle generating activity shall be any activity that generates more than 200 vehicle manoeuvres per day.

Any high vehicle generating activity shall be assessed against the following criteria:

- (a) *The extent to which the minimum separation distance of crossings from intersections complies with the following:*
- (i) *For a crossing providing for left turns only:*
 - *25 metres on any arterial frontage*
 - *15 metres on any collector or local road frontage*
 - (ii) *For a driveway providing for any right turns:*
 - *30 metres on any arterial frontages*
 - *25 metres on any collector or local road frontage*

This control is proposed in order to ensure appropriate locations of vehicle access points to sites within the Plan Change area. The above control ensures that the traffic safety implications of proposed vehicle access locations that fall within the above distances can be appropriately assessed.

Multi-Modal Transport Provisions

- (a) *Parking areas provided for individual developments (excluding car parking buildings) shall provide stands to accommodate bicycles on the site at the following rates:*
- *5 bicycles for car parks of 40 to 100 car parking spaces; and*
 - *one additional bicycle per 20 car parking spaces over 100 spaces.*
- (b) *Parking areas shall provide space specifically identified for motorcycle parking, as part of the overall parking space requirement, at the following rates:*
- *space for 3 motorcycles (one car space equivalent) in car parks of 20 to 100 spaces;*
 - *space for one additional motorcycle per 40 car spaces over 100 spaces.*

The intention of the above provision is to specifically require the provision of facilities to encourage the use of transport modes other than the private motorcar, as a means of travel to and from the Plan Change area.

Restricted Access to the Road Network

In addition to this, resource consent is required as a Restricted Discretionary Activity for any controlled activity with vehicle access from road frontages marked as Restricted Access in the Takanini Structure Plan Area 6 Structure Plan in Rule 6.9.8.3 of the proposed Plan Change. The rule states:

In Takanini Structure Plan Area 6, the following activity is a Restricted Discretionary Activity where it complies with the requirements for a Controlled Activity set out above:

(a) Any controlled activity with vehicle access from road frontages marked as Restricted Access in the Takanini Structure Plan Area 6 Structure Plan (refer to Section Three, Part 16, Appendix 16A).

Council has restricted the exercise of its discretion to the following matters, and may impose conditions of consent in relation to these:

- (a) Sight Distance*
- (b) Effect on Intersections*
- (c) Effect on Operation of Roding Network*
- (d) Internal Conflicts On Site*
- (e) Impact on Utility Services*

Except as provided for by section 94C of the Resource Management Act 1991 applications will be considered without notification or the need to obtain approval from affected persons.

Refer to Rule 6.15.2 for Restricted Discretionary Activity Assessment Criteria.

5.7.3 ITA Conclusion

The ITA from Traffic Planning Consultants Limited, attached as Appendix 12 has concluded the following, this is reproduced below.

“Based on the analyses described in this report, the following conclusions can be made in respect of the proposed rezoning of Areas 6a & 6b within the Takanini Structure Plan to Industrial 1, Industrial 3 and Residential 8:

Three traffic generation scenarios have been assessed for the proposed rezoning of Area 6a & 6b to Industrial 1, Industrial 3 and Residential 8. For the purpose of the assessment, the high traffic generation scenario has been used while the low and medium traffic generation scenarios have also been assessed at critical locations in the transport network.

Improvements to pedestrian amenity and safety are proposed through the provision of a network of footpaths and traffic signal controlled pedestrian crossings at key locations through the area. The pedestrian improvements are consistent with the Papakura District Council Walking and Cycling Strategy.

The assessment suggests that improved bus services will be required to service this area in the future as both the residential and worker population increases. Improvements to the passenger transport services in the area will need to be appropriately assessed by ARTA. To support the proposed Plan Change, these improvements should be confirmed and be in place by about 2012.

The Takanini train station is the nearest station to Area 6a/6b. the train station and environs are to be upgraded by ARTA in the future. To support the proposed plan Change and to enhance the attractiveness of rail travel by future employees in Area 6a/6b, the station should be upgraded by about 2013 or when Area 6a/6b is approximately 40 percent developed.

The analysis described in this assessment suggests that the following intersection improvements are required to adequately provide for the levels of traffic generated by the proposed rezoning:

- 1. Providing additional traffic lanes on the Manuroa Road approach to the Great South Road intersection,*
- 2. The installation of traffic signals and associated road widening at the intersection of Manuroa Road and Takanini School Road,*
- 3. The installation of traffic signals and associated road widening at the intersection of Porchester Road and Popes Road,*
- 4. The installation of traffic signals and associated road widening at the intersection of Porchester Road and Manuroa Road.*
- 5. Improvements to the southbound on and off-ramp intersection at the Takanini Interchange.*

The analysis described in this assessment suggests that the following mid-block improvements are required to adequately provide for the levels of traffic generated by the proposed rezoning:

- 1. Widening Manuroa Road between Great South Road and Takanini School Road to two traffic lanes in each direction together with a painted flush median,*
- 2. Provision of a painted flush median along Manuroa Road between Takanini School Road and Popes Road,*
- 3. Increasing the number of lanes on Great South Road south of Manuroa Road from two to four.*

The analysis described in this assessment suggests that the Takanini Interchange will need to be upgraded to accommodate the level of traffic likely to be using it in 2016 irrespective of whether any traffic associated with the rezoning is added to it.

Overall, it is considered that the traffic and transportation effects of the proposal can be provided for in an appropriate manner, subject to the improvements outlined above, and can be accommodated on the road network without compromising its function, capacity or safety.”

Furthermore, Traffic Planning Consultants Limited is confident that the analysis undertaken as part of this ITA is consistent with the matters outlined in Appendix J of Proposed Change 6 to the Auckland Regional Policy Statement, and the relevant requirements for ITA's of the Auckland Regional Transport Authority (ARTA).

5.8 VEGETATION, LANDSCAPE AND VISUAL EFFECTS

Boffa Miskell Limited has prepared a Vegetation, Landscape and Visual Assessment in support of the proposed rezoning of Takanini Structure Plan Area 6. A copy of this evaluation is attached to this application as Appendix 13. The assessment involved an analysis of the site, including a visual assessment of the existing environment. Much of the assessment of the existing site features is canvassed in the Site Description in Section 6 of Part A of this report. The report further identifies constraints and opportunities for the potential development of the site.

Boffa Miskell prepared an addendum to this report in February 2009, in response to some queries raised by Council concerning the shelterbelts within Takanini Structure Plan Area 6. A summary of the conclusions of this additional piece of work is discussed in Section 5.8.4.

5.8.1 Constraints and Opportunities

The Boffa Miskell assessment notes that the topography, soils and surface water environment do not pose constraints to developing the site. The report does note however, that the site falls gradually towards the north-east and that the soil type indicates its limitation as a building development area and suitability as a stormwater detention and management area. The maturing vegetation on the site in the form of shelterbelts was also seen as an opportunity to structure the development through the creation of linear divisions across the site. The existing buildings on the site were not considered to be significant landscape features, and therefore are not considered to be constraints to the rezoning and development of the site for urban purposes.

The site has a number of existing features, which have the potential to be used as ordering elements to provide a site responsive structure to any new development. These features include the topography, as it is related to the surface water environment, the stream and the established vegetation, especially the shelterbelts.

Surface Water Environment

The site has a number of dips and hollows, which act as natural ponding areas. These could be enhanced to maximise soakage and water quality treatment as 'in development' swales for on-site stormwater management, and link with the key stormwater detention area in the north-west corner of the site as indicated on the Takanini Structure Plan.

There is an opportunity to enhance, naturalise and make a feature of swales and drains with indigenous planting to respond to the character of the site as having a streamside link to

open space areas. The management of stormwater from the catchment and eventual site development is considered in more detail as part of the infrastructure assessment.

Streamside Environment

The Papakura Stream creates a strong edge to the site with a northern aspect, and there is an opportunity to accentuate and enhance the natural landform of the river terrace and the streamside environment as a valuable amenity asset for the surrounding area. Along with providing a "green" edge to the development, a streamside reserve could provide a passive recreation area for the manufacturing firms along Takanini School Road and those within the new development.

A quality pedestrian/cycle route could be developed along the river as an alternative to vehicle movement to and from the new development and across the stream into the adjoining residential sites in Manurewa East. Riparian planting along the edges of the stream could create a buffer between the new development and the existing residential subdivision and create opportunities to establish a wildlife corridor.

A proposed stormwater management area of 2.2 hectares is shown adjoining the Papakura Stream on the Structure Plan. In addition, Appendix 22 shows the proposed Designation Plan. Final confirmation of the design of the stormwater pond and stormwater reserve area will be determined as part of an Outline Plan of Works following the Notice of Requirement.

Mature Vegetation – Shelter Belts and Trees

Many of the existing established trees are considered to have landscape amenity value, both as shelterbelts, groups of trees and as individual specimen trees. Established primary shelterbelts within the site could act as cues for ordering the layout of development. Consideration should be given to retaining parts of the shelterbelts on edges of the main roads surrounding and through the development, to buffer the effects of built development.

Since the shelterbelts generally run in a north-south direction through the site, parallel to the existing grid of the north-south roading pattern, they could provide a suitable alignment for new roads within the site, providing some legibility to the pattern of development. The retention of parts of these shelterbelts (rather than clearance) could assist to provide a backdrop and some scale for the new development and retain some of the historical references to the site's earlier rural land use.

Apart from the shelterbelts, established trees appear within the site as individual exotic specimen trees, but also in groups of two or three specimens. Selected established trees could be retained on the site for their amenity value, as part of the development proposals.

Palms

A number of tall phoenix palm trees are located around the site, with the bulk of them clustered in the south-eastern corner of the site, around the existing stables and farm buildings. Apart from a couple of palms, their general layout and alignment on the site is random. The report suggests that these particular specimens could be re-used in future developments on the site, as they are easily relocated.

Final determination about which trees are proposed to be retained will be determined at the subdivision stage of development.

5.8.2 Visual Assessment

The Boffa Miskell assessment notes that the site is visually accessible from a limited number of viewpoints and locations. Further, developing the site will generate substantial change from the existing character of the site, as a sheltered semi-rural enclave to a developed industrial/mixed-use built area. The visual effects of this change are likely to be experienced most strongly by the residential subdivision across the Papakura Stream. The assessment also notes that visual effects are likely to be experienced by the residential properties to the south of the site and to a lesser extent, from the properties to the west of the site, most notably the Sikh temple.

The assessment reinforces the importance of the shelterbelts as a strong feature of the site because they already act as buffers to the edges of the site.

5.8.3 Conclusion

The Boffa Miskell report concludes that while no major constraints have been identified to the development of the site, there are a number of visual and landscaping considerations that should be accounted for, including:

- The Papakura Stream to the north of the site can be developed as a significant amenity and ecological area with pedestrian paths and cycle ways (refer preliminary landscape plan).
- The existing vegetation provides structure, shelter and buffering of the site and should be retained in part to give form, identity, shelter and screening to the prospective development.
- New planting of the edges and throughout the site can assist with the integration of prospective development into the site and surrounding environment.
- The flat nature of the site means that audiences from a range of viewpoints along the edges of the proposed development have the potential to be affected with respect to their views being changed making generous buffer planting of the transitional areas necessary as mitigation to provide some relief.

5.8.4 Addendum

After undertaking an interpretation of the Arborist's Assessment, Boffa Miskell remained of the opinion *"that some of the existing vegetation may be worth retaining. While we would prefer to see existing vegetation of value retained, it may also be possible to remove this vegetation as long as the essence / quality of the existing vegetated framework is responded to in replanting associated with the Plan Change."*

Boffa Miskell concluded that *"their original advice remains"*. The *"existing shelterbelts and trees have value in terms of structuring, buffering and wildlife opportunities and these qualities should be acknowledged within the Plan Change proposal."*

Their addendum recommends, *“an initial landscape concept plan be prepared based on a survey of the arborist’s tree schedule of vegetation, particularly ‘protected trees’ and the HG Structure Plan. This landscape concept plan should accompany the Plan Change proposal documentation.”*

This landscape concept plan should:

- *Indicate which existing vegetated elements and tree species should be retained, based on the proposed roading pattern and land use indicated in the HG Structure Plan;*
- *Highlight opportunities to respect the landscape character and identity of the site;*
- *Maximise opportunities to provide visual buffers on boundaries with busy roads;*
- *Provide landscape buffering between industrial and residential sites;*
- *Maximise opportunities for increasing the ecology and amenity of the Papakura Stream environment with pedestrian paths and cycleways;*
- *Provide edge / transitional landscape treatments to assist with the integration of the prospective development into the mixed environs; and*
- *Provide appropriate plant buffering and visual relief to assist in minimising potential adverse visual effects for a range of viewing audiences into the site.”*

Boffa Miskell were of the opinion that this approach will *“provide some assurance regarding the appropriateness of retaining components of the existing vegetation as part of an overall vegetated framework. The plan will illustrate how these landscape elements can inform the design by providing structure to the future development.”*

In response to this addendum, Hosken Associates prepared a landscape concept plan in March 2009. The concept plan takes into account Boffa Miskell’s recommendations, while balancing them with the need to provide for roads, road widening and overland flowpaths to facilitate the development of Takanini Structure Plan Area 6. The landscape concept plan is attached as Appendix 14 to this report. It also forms as Appendix 16E to the Plan Change document in Appendix 4. Final determination on which trees will be retained or removed will be made at the subdivision / and or resource consent stage of development when the necessity for their removal or otherwise is more readily known.

In order to give effect to the landscape concept plan, the restricted discretionary subdivision assessment criteria for Industrial 1 and Industrial 3 zoned land in Takanini Structure Plan Area 6 include the following matter for discretion:

“4) Design and Layout

...

The extent to which the proposed subdivision complies with the landscape concept plan in Appendix 16E and takes into account the overland flowpath requirements, so as not to impede the flow of stormwater (refer rule 6.15(12)). This shall be demonstrated by a comprehensive landscape concept plan provided at the time of subdivision detailing plant species, size, spacing and location. “

5.9 ARBORICULTURAL EFFECTS

An Arboricultural Assessment has been undertaken in support of the proposal by Independent Arboricultural Consultants Ltd (“IAC”). A copy of this assessment is attached to the application as Appendix 15.

Policy 3.6.2.2 of the Operative Papakura District Plan lists the following criteria for the scheduling of any tree or stand of trees under Schedule 3B of the Operative Plan as follows:

a. Notable Trees and Stands of Trees

- (i) *any tree outstanding in the District for its large diameter, height or canopy spread.*
- (ii) *any trees of a species rare in the District, especially outstanding specimens.*
- (iii) *any tree that has value through its unique location or outstanding functional, strategic or aesthetic significance.*
- (iv) *any tree that has a significant association with other objects and places of scientific interest such that the preservation of the tree will aid the protection of the associated place or objects.*
- (di) *a stand of trees conforming to the above.*

b. Historic Trees and Stands of Trees

- (i) *any tree commemorating an important local event, either in Maori history or legend, or in European settlement and development.*
- (ii) *any tree that is regarded as an important landmark and has been acknowledged as such for a significant period of time.*
- (iii) *any tree that has historic association with a well-known public figure or has had strong public association for some reason.*
- (iv) *any tree that is strongly associated with a local historic feature and which now forms a significant part of that feature.*
- (v) *a stand of trees conforming to the above.*

The Arboricultural Assessment states that *“the area does not include any sites of Special Wildlife Interest listed in Schedule 2A, or any Notable Trees or Stands of trees listed in Schedule 3B.”* None of the trees in Area 6 are of the size and quality which might justify their inclusion on Schedule 3B. Few trees, if any, would exceed 50 years of age so none are associated with early occupation of the site. They therefore fail to meet the assessment criteria outlined in Section 3.6.2.2.”

IAC has noted however that there are a number of trees on the site, which would be protected in terms of Schedule 3E of the Operative District Plan. These include all of the tree species listed, which stand higher than 6 metres or which have a trunk girth exceeding 0.5 metres. Resource consent would be required for their removal, significant trimming, or for works within their dripline. These trees are identified in the Arboricultural Assessment and marked on the attached plan. The majority of the trees are located in the central eastern part of the site.

The identified protected trees are as follows:

Location 8

Sweet Gum (*Liquidambar styraciflua*) – 12 metres in height; good general condition.

Location 25

Sweet Gum (*Liquidambar styraciflua*) - 6 metres in height; good health, poor form.

Location 27

Totara (*Podocarpus totara*) – 6 metres in height; good health, average form.

Golden Elm (*Ulmus CV*) – 8 metres in height; good health, average form.

Location 29

Totara (*Podocarpus totara*) – 6 metres in height; good general condition.

Golden Elm (*Ulmus CV*) – 8 metres in height; good health, average form.

Location 30

Totara (*Podocarpus totara*) – 6 metres in height; average condition.

Sweet Gum (*Liquidambar styraciflua*) – 8 metres in height; good health, poor form.

Sweet Gum (*Liquidambar styraciflua*) – 6 metres in height; poor condition.

Location 31

Pin Oak (*Quercus pallustrus*) – 7 metres in height; average condition.

Sweet Gum (*Liquidambar styraciflua*) – 7 metres in height; average condition.

Location 33

Totara (*Podocarpus totara*) – 6 metres in height; average form.

Location 38

Bull Bay Magnolia (*Magnolia grandiflora*) – 9 metres in height; good condition.

Location 42

Golden Elm (*Ulmus procera* 'Louis van Houtte') – 6 metres in height; good health, average condition.

Location 45

Sweet Gum (*Liquidambar styraciflua*) – 9 metres in height; poor condition.

Location 46

Sweet Gum (*Liquidambar styraciflua*) – 8 metres in height; average condition.

The assessment further states that “*unprotected individual trees which would warrant retention if they can be incorporated within the design, include the Washington Palms (#5), Gum (#23), Macrocarpa (#28), Claret Ashes (#34), groups #35 and #45 and the Phoenix Palms (#36, #37 and #39). The palms could also be considered for relocation, if desired.*”

Final determination on which trees will be retained or removed will be made at the subdivision and / or resource consent stage of development when the necessity for their removal or otherwise is more readily known.

5.10 ARCHAEOLOGICAL EFFECTS

Clough and Associates were engaged to prepare an Archaeological Assessment of the site in April 2006. A copy of the archaeological assessment is attached to the application as Appendix 16. The assessment was to identify any constraints or limitations on the development of the site. The report included a review of the existing archaeological data and the Takanini Structure Plan documentation pertaining to cultural heritage sites as well as identification of any cultural or archaeological matters specifically pertaining to Takanini Structure Plan Area 6.

5.10.1 Archaeological Findings

No archaeological or heritage sites had been previously recorded within Takanini Structure Plan Area 6. The banks of the Papakura Stream were examined for any cultural heritage remains, including possible remains of a flax mill that is believed to have been located in the vicinity of the site. The area to the south of the stream, particularly along Porchester Road was also searched.

No indications of cultural heritage remains were observed in any of these areas, although it is noted that the area has been considerably modified by horticultural practices, particularly in the east of the development block. Further, no cultural heritage indicators were found among the houses and stables located along Popes Road, the area to the west of the training track, or further to the north, up to the Papakura Stream.

5.10.1 Archaeological Recommendations

The report makes a number of recommendations in relation to the archaeological and historic heritage of the site, which are summarised as follows:

- There should be no constraints on the proposed Plan Change relating to heritage, as no archaeological or other heritage sites are known to be present within Takanini Structure Plan Area 6 and it is considered unlikely that any will be exposed during further development of the site.
- If sub-surface archaeological evidence is unearthed during future development of the site (e.g. intact shell midden, hangi, storage pits relating to Maori occupation, or cobbled floors, brick or stone foundation and rubbish pits relating to 19th century

European occupation), work should cease in the immediate vicinity of the remains and the New Zealand Historic Places Trust should be contacted immediately.

- If an archaeological site is identified and modification is necessary, an Authority to Modify must be applied for under Section 11 of the Historic Places Act 1993 (it is noted that this is a legal requirement).
- In the event of a koiwi (human remains) being uncovered, work should cease in the immediate vicinity and tangata whenua, the New Zealand Historic Places Trust and New Zealand Police should be contacted so that appropriate arrangements can be made.
- Since archaeological survey cannot always detect sites of significance to Maori, such as waahi tapu, tangata whenua should be consulted regarding the possible existence of such on the property.

5.11 EFFECTS ON THE ECONOMY

A report prepared by Covec Limited together with Phil McDermott Consultants Limited has been prepared that evaluates the economic effects of the proposed rezoning. This report is attached to the application as Appendix 17.

The research into and drafting of the Covec Economic Report was undertaken principally in late 2006 and early 2007. A wide variety of economic information was reviewed as part of the research into this report which included information from the Papakura District Council, Auckland Regional Council, NZIER, Bayleys Research, Colliers International, Statistics New Zealand and Motu Economic and Public Policy Research. Included in this information was material from the Draft Papakura Business Zoned Land Use Survey and the final report of the Papakura Economic Development Strategy. The findings of this report and resulting Plan Change are therefore consistent with the Papakura District Council's Economic Development Strategy 2007.

The findings of the Covec Limited report shows that the market for industrial land in the Papakura District, surrounding South Auckland areas, and the wider Auckland Region, has witnessed strong growth coupled with a fall in land availability. This has led to a substantial increase in the price of industrial zoned land.

This dwindling supply and correspondingly high price of industrial land raises the costs to businesses of investing in productive enterprises in these areas. The fall in suitable land available and the increased cost of acquiring premises raise a barrier to investment in the district and the region. This reduction in investment has negative consequences for an area in terms of lower output and fewer jobs.

These consequences can in turn have negative social impacts, for instance fewer local job opportunities lead to high levels of unemployment, especially for lower skilled individuals, underemployment, and increased commuting. If the capacity to sustain jobs locally does not grow, expectations for increased local population may need to be revised downward.

This is especially problematic in Papakura, which is seen as a target for significant population growth over the next 10 to 20 years according to the Auckland Regional Growth Strategy. The Auckland Regional Business Land Strategy, a subset of the Growth Strategy,

seeks to enable local employment opportunities across the region to support existing and projected population growth to allow residents to live, work, invest and play locally.

One method of addressing this situation is to allow currently non-industrial zoned land to be rezoned for industrial use. This should occur where such land is most suitable and where rezoning would lead to sufficient benefits to the community as a whole.

Rezoning Takanini Structure Plan Area 6 provides an opportunity to alleviate the diminishing supply of industrial land in Papakura and south Auckland. Takanini Structure Plan Area 6 is located next to an existing industrial area and has a number of characteristics that make it well suited to industrial use. These include proximity to major transport infrastructure, other industrial facilities and a large, and growing, local population.

Rezoning much of this land for industrial use would favour increased investment in Papakura and the establishment and expansion of a number of businesses. The largest group of potential businesses are those involved in manufacturing and construction. Other significant users are likely to be warehousing and transportation businesses.

Takanini Structure Plan Area 6 could also accommodate a range of person and business service firms, including limited retail and office based activities. Because the southern end of the area borders an existing residential area, this portion of the site could be rezoned to allow for residential use, which would ensure that there is a buffer zone of residential uses between the existing residential properties. The benefit of this approach is that it should remove the potential for existing residents to be adversely affected by the enabled industrial land uses.

The Covec report concludes that based on their analysis they expect that the investment that would result from the rezoning of Takanini Structure Plan Area 6 would facilitate the creation of nearly 3,000 new jobs in the Papakura District once the land is developed. Development may take two years and occupancy to its full employment capacity is anticipated to take longer. When it occurs however, this level of job creation would be equivalent to a 20 percent increase in the current level of full time jobs within the District.

This would generate approximately \$250 million of output per year at capacity, and just over \$100 million in wages and salaries.

In summary, rezoning the majority of the land at Takanini Structure Plan Area 6 for industrial use would meet a regional and district economic need for increased industrial and business capacity, in a favourable locality in terms of transport efficiencies. The rezoning would be an important contributor to the Auckland Regional Growth Strategy by providing for employment growth in an area targeted for residential expansion. It would also play an important part in providing a range of employment opportunities to cater for a diverse local workforce.

5.12 NOISE EFFECTS

A Noise Assessment was prepared in relation to the proposed rezoning by Hegley Acoustic Consultants. A copy of this assessment is attached to this application as Appendix 18.

The assessment notes that while the noise rules can be used to control the effects of noise from the proposed land rezoning on surrounding activities, there are a number of features

that could be considered for the proposal that will improve the amenity of the local environment. These include:

- **Buffer Zones:** The report recommends that adjoining residential and rural-residential land uses be separated from the heavier and noisier industrial activities by buffers, such as the use of the lighter Industrial 1 zone and open spaces.
- **Staged Zoning:** The report recommends that high noise levels be provided for in the Industrial 3 zone rather than the Industrial 1 zone, and that the less intensive Industrial 1 zone be used as a buffer between the noisier Industrial 3 zoned sites and the noise sensitive residential and rural-residential zones.
- **Screening:** The report further notes that physical screens such as a fence or an earth bund can assist to control noise.

Hegley Acoustic Consultants Limited have also evaluated the existing noise rules in the District Plan to consider whether they were appropriate to be applied to development at Takanini Structure Plan Area 6, or whether changes are required.

It was recommended by Hegley Consultants Limited that the noise standard in relation to the proposed Industrial 3 zone be revised upward, from 55dBA within the Operative Plan to 65dBA. This was because Hegley Consultants Limited considered that the existing rule was too restrictive for industry and compliance would require expensive mitigation. Notwithstanding, the existing noise standard has been retained and any modification to these noise controls should be the subject of a general review of noise standards in Papakura.

5.13 EFFECTS ON THE NEIGHBOURHOOD

Effects are likely to be felt by adjacent residents, and these include effects that are short, medium and long term. Short term effects would include such matters as the effects of earthworks and construction activity. Over the medium and long term, effects may arise from the location and design of buildings and infrastructure on the land, and from the end use of the land.

It is considered that effects such as noise can be adequately controlled by District Plan rules as they relate to the business/industrial use of land in close proximity to residential land uses; and in particular by rules relating to the type of activities that will be able to establish on the land.

Other effects, such as visual effects can be mitigated by appropriate building design, bulk and location. Rules specific to Takanini Structure Plan Area 6 have been recommended to mitigate effects on surrounding properties in other zones, and in particular the Residential zones. Measures include provision for a minimum of a Controlled Activity status for all development in the Industrial 1 zone, which has been developed in response to feedback from the surrounding community and in recognition of the Council's desire not to create a new zone to apply to the proposed industrial land within Takanini Structure Plan Area 6.

Overall, it is considered that appropriate measures can be put in place to mitigate any potential adverse effects on adjoining neighbours, by the imposition of appropriate planning controls (through a consent or performance standard compliance) for activities.

5.14 EFFECTS ON THE WIDER COMMUNITY

Overall, positive effects on the wider community are anticipated to accrue through the controlled release of additional business land within the region. This in turn will provide for wider employment opportunities for people from the local community, potentially providing an estimated 3,000 jobs in the area, based upon contemplated gross floor area figures. This is consistent with the Auckland Regional Growth Strategy and Takanini Structure Plan requirement that 3000 job opportunities be provided for in Takanini. It is considered that this Plan Change will therefore enable people and communities to provide for their social, economic and cultural wellbeing in accordance with the purpose of sustainable management.

Other effects on the wider/local community could include to a certain extent changes in the pattern and volume of traffic in the local area. However, it is considered that these changes are, in part, cumulative from growth in the adjacent business area. The traffic changes arising as a direct result of the proposed Plan Change can largely be mitigated through the design of intersection upgrades, in and around the site area.

5.15 REVERSE SENSITIVITY

It is possible that industrial development of the land will create reverse sensitivity effects from the proximity of the existing neighbouring and nearby residents. This is because the use of the land for industrial development may create externalities that are different from those that are generated at present; such as noise, lighting, traffic and built form.

In most instances it is considered that such reverse sensitivity effects are likely to arise not because the industrial activity is generating adverse effects per se, but because the effects are likely to be somewhat different to those that are generated at present.

It is important to minimise the potential for reverse sensitivity effects through adequate consultation with the surrounding community so that people are well informed of the change in land use and the process and timing through which this will occur; and by the adoption of an appropriate planning regime that fairly protects the rights and interests of all parties, such as through the adoption of appropriate setbacks and landscaping. It is also important that effective maintenance programmes are put in place for the ongoing management and maintenance of the landscape buffers and fencing.

Such processes and controls would assist to successfully integrate the development with its surroundings and reduce potential reverse sensitivity effects. It may also, consequently, reduce the Council's administrative costs associated with addressing complaints and queries generated by reverse sensitivity effects.

It is considered that potential reverse sensitivity effects associated with this proposed Plan Change are addressed in the following ways:

- Provision for a band of Industrial 1 zoned land at the northern end of the site, separated from the existing residential zoned land to the north by the Papakura Stream, esplanade and recreation reserve.

-
- Additional rules applying to the Industrial 1 zone, whereby all industrial activities and buildings are considered at a minimum as Controlled Activities, to enable evaluation of mitigation mechanisms, design and external appearance and hours of operation, amongst other things.
 - Provision for a band of Industrial 1 zoned land along Porchester Road, to provide separation between the Industrial 3 zone at the core of the area and potentially sensitive future land uses to the east of the area.
 - Provision for a band of Residential 8 zoned land at the southern end of the site, to provide separation between the immediately adjoining residential properties to the south of the area.
 - Provision for a band of Industrial 1 zoned land to the north of the Residential 8 zoned land proposed at the south of the site, to provide a buffer between this proposed new Residential 8 zone and the medium Industrial 3 zone.

It is considered that these measures will assist to address reverse sensitivity effects.

5.16 MITIGATION MEASURES

The Fourth Schedule requires that an assessment of effects shall include a description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce actual or potential effects. Many such measures have been comprehensively addressed in the technical reports and supporting information set out in the original Private Plan Change request. In summary, mitigation measures are incorporated into such matters as:

- infrastructure design (including the provision of a stormwater management pond);
- roading layout;
- zoning layout and the provision of relevant objectives, policies and rules within the proposed Plan Change
- remediation of ground contamination;
- geotechnical design solutions;
- landscaping measures; and
- preparation of a detailed Structure Plan.

5.17 AFFECTED PERSONS AND CONSULTATION

The Fourth Schedule requires that an Assessment of Environmental Effects shall include identification of the persons affected by the proposal, the consultation undertaken, if any, and any response or views of any person consulted.

Persons/parties identified as being potentially affected by the proposed Plan Change include:

-
- People currently residing and/or working on the subject land;
 - Adjoining and adjacent residents and landowners;
 - Persons who work on properties adjoining and adjacent to the land;
 - The surrounding neighbourhood;
 - Users of the adjacent road network;
 - Persons who work, reside, own properties overlooking the land from the northern side of the Papakura Stream (located within Manukau City), and on the southern side of the sites (Manuroa Road and surrounds); and
 - Persons who utilise the adjacent and nearby reserves and parks.

Consultation undertaken in relation to the proposed Plan Change is summarised in Section 6.0 of Part B of this report. The comments of persons who have responded to the consultation have been summarised, while full copies of their responses are attached to this report in Appendix 19.

5.18 MONITORING

The Fourth Schedule to the Act requires that where the scale and significance of an activity's effects are such that monitoring is required, a description of how, once the proposal is approved, effects will be monitored and by whom, shall be provided.

Monitoring and compliance with the provisions of the District Plan and the suitability and effectiveness of the provisions can be monitored by Council in accordance with its standard practices.

5.19 ASSESSMENT OF EFFECTS CONCLUSION

Overall, the anticipated outcomes arising from the proposed Plan Change include positive socio-economic benefits to the region, new employment opportunities and an efficient and effective redevelopment of the land, which will be undertaken in a comprehensive manner that is consistent with the sustainable management purpose of the Resource Management Act and related territorial authority plans.

This will consequently encourage the establishment of a high quality business environment, which respects the environmental and amenity qualities of the neighbouring residential and business environments and which will also not compromise the safe and efficient functioning of the adjacent transportation network.

6.0 CONSULTATION

Consultation is a requirement under the RMA when preparing a Plan Change. Consultation includes providing information to people considered to be affected or interested by the proposal in order to obtain feedback/responses and ideally improve the overall project outcomes.

It is a statutory requirement to consult with the Minister for the Environment, other relevant Ministers of the Crown, local authorities and tangata whenua under Clause 3 of the First Schedule of the RMA.

However, even when it is not mandatory to consult with certain people, it is still a good means of identifying/clarifying issues and potentially resolving them early in the process.

The original consultation strategy was prepared in November 2006, a copy of which is attached as Appendix 20. The strategy was divided into five groups of people who are considered to be potentially affected by the proposed Plan Change. These groups include: Key Interested Parties, First Schedule Responsibilities, Directly Affected Persons/Groups, Potentially Affected Persons/Groups and Immediately Adjoining/Surrounding Property Owners/Occupiers.

Consultation for this project began in 2006 and has been ongoing since May 2007. It will continue throughout and the statutory process of the proposed Plan Change. Copies of formal correspondence both sent and received during this timeframe are also attached as Appendix 19. Pre-notification consultation has been undertaken by Takanini Structure Plan Area 6 Ltd as the initiator of the original Private Plan Change application, these records of consultation have not been amended and remain from the perspective of the applicant.

6.1 PAPAKURA DISTRICT COUNCIL

“Many discussions have occurred with several officers on a number of occasions since April 2006. An initial meeting was held on 6 April 2006 with six Council officers to introduce the project. The Council noted then that it would prefer to see all six landowners involved in the proposed Plan Change, and it was of a view that all the land included in the proposed Plan Change would need to be considered as part of an application to shift the Metropolitan Urban Limit to ensure that the entire site was included.

The Council advised that the location of the stormwater pond should be in accordance with the approved Catchment Management Plan for the site. It was also noted that the infrastructure evaluation should provide a programme for the extension of the Mahia Branch sewer line. Representatives of the client were advised that the Council was undertaking some preliminary work planning the future form and function of Porchester Road, and the Plan Change should be cognisant of that and make appropriate provision for road widening, if it was required in the vicinity of the site.

A second meeting was held with the Council in June 2006, during which a concept plan for Area 6 was presented. The Council advised at this meeting that it had updated its analysis of business land availability, and advised that a single stormwater pond was considered to be a preferable solution to multiple ponds located on the site. It also advised that the Council’s Open Space Strategy required the provision of a walkway adjacent to the Papakura Stream.

A joint meeting with Papakura District Council and the Auckland Regional Council was held in July 2006. A Concept Structure Plan was presented at this meeting. The potential for the proposal to be considered by the Growth Forum was discussed, and it was concluded that the development of the site was anticipated in the Southern Sector Agreement and Regional Policy Statement, and therefore consideration by the Growth Forum was not considered to

be necessary. The Council advised that there was a need to provide industrial land for manufacturing, building and construction, a balance of land uses and in particular, some land available for smaller businesses and appropriate buffers. The importance of ensuring that the proposal facilitated additional employment opportunities was emphasised, as was the need to ensure that an appropriate level of amenity for adjoining residential land uses is maintained.

In August 2006 a further meeting was held with Papakura District Council to discuss potential changes to the existing Industrial 1 and 3 provisions, including provision for yards adjacent to existing residential sites adjoining Area 6, general front yards, site coverage, carparking requirements, and site shape factors. The potential for enabling residential and retail land use within the zone was also discussed.

The Council indicated that it would consider planning provisions to enable retail activities along Porchester Road or for residential activities to be mixed with Industrial activities within the Industrial zones. It was agreed that the existing Industrial 1 and Industrial 3 provisions could be altered to contain provisions specifically applying to Takanini Structure Plan Area 6.

A separate meeting was also held in August with the Council's Roading Engineer to address transport effects and in particular, the need to co-ordinate the management of traffic within the Council's wider transportation network. The Council advised during this meeting that the speed limit along Porchester Road is likely to be lowered to 50-60km an hour in the future as a result of projected population growth. Further enhancements to the road are also planned, including the inclusion of a central median, two traffic lanes in each direction and the introduction of a cycling lane and upgraded footpaths.

The wider transport environment was also discussed, including the upgrade of the Takanini Interchange, the intersection of Manuroa and Porchester Roads and the widening of Manuroa Road.

A meeting was held between Harrison Grierson and the Council in September 2006 to discuss performance standards, including the management of noise through the positioning of openings in buildings, loading zones, glare and the provision of a 7.5 metre landscaped yard along Popes Road.

In January 2007 representatives of Takanini Structure Plan Area 6 Limited and Hosken Associates met with the Council to present an alternative concept Structure Plan, which was accepted by the officers of Papakura District Council as a scheme that provided for a range of industrial lot sizes. The Council advised that a buffer interface with the southern boundary was still desirable and that rear lots, through lots or other alternative connections between sites and public roads should be avoided.

In May 2007 a further meeting was held with the Council to discuss and consider the effects of the proposed Plan Change, and to arrange a public open day for the purposes of community consultation. The Council indicated that as it has not yet had an opportunity to fully develop its transportation plans for the surrounding area, it would be important to keep open lines of communication on this aspect of the Plan Change and for appropriate provision to be made for road widening along Porchester Road.

The Council also noted that it was keen to ensure that the Plan Change fully addressed potential stormwater and geotechnical effects, and that provisions drafted for the District Plan managed a full range of actual and potential effects occurring as a result of industrial development.

A further meeting was held on 10 July 2007 with the Council's Policy Planners and Roading Engineers to discuss how best to provide for future roading upgrades in and around Area 6, and also to discuss numerous issues arising from the public open day. During this meeting it was agreed that the land use approach in the draft structure plan was considered to be unacceptable by the surrounding community, and changes are required to address their concerns.

The roading engineers also indicated that significant roading upgrades are likely to be required in and around the site to cater for additional growth even without considering the effects of industrial use at Area 6. The main roading upgrades that needed to be considered included upgrades of the rural roads within the sites to industrial / commercial standards, providing for sufficient width to construct new roads to local road standards and providing for a 6 metre building line setback along the eastern boundary of the site to provide sufficient room for a roading upgrade to Porchester Road. This in turn, will have an enhanced function as a district arterial road. It was agreed during this meeting that the proposed land use plan should be re-evaluated to provide for a proposal that more fully addressed the concerns of the community.

On 31 July 2007 a further meeting was held with the Council's Policy Planners to update them on the changes to the land use approach that were currently being considered by the landowners. One alternative was to continue to pursue a land use which was only Industrial 1 and 3, and the alternative approach was one that incorporated a Residential 8 component along the southern boundary of the site. Both approaches were considered to be feasible by the Council, but the Policy Planners cautioned that the planning approach should address the edges of the development well and ensure that appropriate buffers were achieved.

On 19 November 2007 a meeting was held with the Council's Policy Planner, Asset Manager and Parks Officer to outline the updated planning approach, on the basis of the alternative approach incorporating a Residential 8 zoning at the southern end of the site.

During this meeting, the proposed zoning and associated changes to the planning provisions were discussed, and in particular amendments to provide for greater flexibility within the Industrial 1 zone in Area 6 were outlined. The Council agreed to consider the proposed amendments to the Industrial 1 zone provisions and provide some feedback on them.

A meeting was held on the 17th of March 2008 between Harrison Grierson, Hosken Associates, a Council officer and ARC officers on the progress of the draft Plan Change. A meeting was also held on the 17th of March 2008 between the directors of Takanini Structure Plan Area 6 Limited and the Mayor of Papakura District Council.

Extensive further discussions and meetings with Council have followed the initial lodgement of the Plan Change request on the 28th of April 2008. These discussions and meetings have centred on a series of further information requests by Council. The further information

sought has focussed on traffic, stormwater, wastewater and geotechnical issues. Amendments to technical reports, planning documentation and Plan Change text have been made where appropriate and are included in this Plan Change documentation. Takanini Structure Plan Area 6 Limited is of the opinion that this amended Plan Change documentation effectively addresses all further information requested by Council on the Plan Change application.”

6.2 AUCKLAND REGIONAL COUNCIL/AUCKLAND REGIONAL TRANSPORT AUTHORITY

“The Auckland Regional Council (“ARC”) attended a joint meeting with Harrison Grierson and the Papakura District Council in July 2006. The details of this meeting are discussed in part 6.1 above. A key outcome of this meeting was the decision that the proposal would most likely not need to be evaluated by the Council’s Growth Forum for the purposes of the shift of the Metropolitan Urban Limit as the urbanisation of the site is provided for in both the Southern Sector Agreement and the Regional Policy Statement.

A second meeting was held with the ARC and Auckland Regional Transport Authority (“ARTA”) on 13 June 2007 to update officers on progress with the preparation of the Plan Change since July 2006. The meeting considered the provision for a residential component within Takanini Area 6, and where that residential land use could be displaced to as a consequence of not providing for residential activities within the rezoning proposal. The potential for reverse sensitivity effects from mixed use developments that conformed with the mixed use model for development were also discussed.

The ARC noted that stormwater management and water quality were important issues which should be addressed through the Plan Change. The ARC expressed a preference for the development of planning provisions that catered to the 1 in 100 year flood level anticipated on the site.

ARTA were interested in the transport issues surrounding the proposed rezoning and in particular provision for alternative modes of transport. Porchester Road is anticipated to become a public transport corridor as population levels in the area increase and the establishment of a feeder system to the Takanini railway station was raised as an important aspect of the Plan Change proposal.

A further meeting was held with Policy Planners from the ARC on Wednesday 5 December 2007. During this meeting, the lodgement of the draft Plan Change was discussed, and an update was provided on materials required to facilitate a shift to the Metropolitan Urban Limit.

The officers indicated that they were comfortable with the proposed zoning and revisions incorporated to address concerns raised by the surrounding community. It was indicated that the effects of the Plan Change on surrounding residential properties would be a key consideration in relation to the Plan Change proposal.

A meeting was held on the 17th of March 2008 to discuss the draft Plan Change between Harrison Grierson, Hosken Associates, and Papakura District Council and Auckland Regional Council officers.

Further discussions and meetings with Auckland Regional Council and ARTA respectively have followed initial lodgement of the Plan Change request on the 28th of April 2008. These discussions and meetings have centred on the further information requested on the stormwater and traffic issues associated with the Plan Change request.

Amendments to technical reports, planning documentation and Plan Change text have been made where appropriate and are included in this Plan Change documentation. Takanini Structure Plan Area 6 Limited is of the opinion that this amended Plan Change documentation effectively addresses all further information requested by the Auckland Regional Council and ARTA on the Plan Change request.”

6.3 UTILITY SERVICE PROVIDERS

“Consultation was undertaken with relevant utility service providers (United Water, Watercare Services, Vector and Telecom) as part of the preparation of the Infrastructure Assessment. Feedback from these various organisations is discussed in further detail in the Infrastructure report, which is attached to this application as Appendix 11.”

6.4 NZ TRANSPORT AGENCY (FORMERLY TRANSIT)

“A preliminary meeting was held with then Transit New Zealand (“Transit”) in 2006. This was followed by a second meeting in June 2007. Transit was concerned with the effect of the broader Takanini Structure Plan on the motorway network, and noted that it wished to better understand the effects of the Structure Plan so that it could provide considered feedback on the specific effects of the Area 6 proposal. Transit advised that it has no plans to upgrade the Takanini interchange in its current 10 year forecast and therefore it was interested in the effects of the Area 6 proposal on the interchange.

Transit has not provided committed feedback on its position in relation to the Plan Change proposal. It noted with regard to the requirement for a shift to the Metropolitan Urban Limit that it would consider the ARC and ARTA response and format its response using guidance from these organisations.

Transit has indicated that it would seek a review of the Integrated Transport Plan from MWH Consultants Limited, and would report to its general management team and potentially the Transit board before providing feedback to the proposal.”

6.5 GOVERNMENT DEPARTMENTS

“There are a number of government departments that may have an interest in the proposed Plan Change. The following government departments/health boards have been advised of the proposed Plan Change:

- Ministry for the Environment (12 June 2007)*
- Ministry of Education (12 June 2007)*
- Housing New Zealand Corporation (3 July 2007)*
- Auckland District Health Board (26 June 2007)*

A letter was sent to each of the above departments on the dates specified next to them. The letter enclosed a copy of the draft Structure Plan to assist with understanding how the area may be developed in the future. Copies of these letters are attached to this report as Appendix 19.”

6.6 TANGATA WHENUA

“There are a number of Iwi groups within the Papakura District who have an interest in the wider area. The groups include representatives from the following:

- *Ngati Te Ata*
- *Ngati Tamaoho Trust*
- *Huakina Development Trust*
- *Pukaki Te Akitai Trust*
- *Ngati Paoa Whenua Trust*
- *Te Uri Karaka O Ngati Paoa Trust*
- *Ngai Tai Ki Tamaki Tribal Trust*
- *Te Waka Totara Trust (Umupuia Marae)*
- *Hauraki Maori Trust Board*

A site meeting was held with Selwyn Shaw of the Huakina Development Trust on 15 June 2007. At that meeting the nature of the Plan Change was described and Mr Shaw requested a copy of the archaeological report, which was sent to the Trust. No specific concerns in relation to the rezoning proposal were raised at this meeting.

A second site meeting was held with Karl Flavell, representing Ngati Te Ata and Laurie Beamish representing Te Waka Totara Trust (Umupuia Marae). The public open day material was presented, and a discussion was held about the types of industry proposed, landowners involved, groundwater, the existing trees on the site, archaeology and the proposed reserve area.

Both Mr Flavell and Mr Beamish considered that a Cultural Values Assessment would be required. They also indicated that they were interested to know if any Kauri stumps are found on the site; they were also interested in riparian planting, ecology generally, groundwater maintenance, the impact of water quality from the site on stormwater runoff to the Papakura Stream, and the spiritual importance of the place.”

6.6.1 Cultural Values Assessment

A Cultural Values Assessment was undertaken subsequently to ascertain the cultural significance of the site to Iwi to assist in the overall decision-making regarding the Plan Change process. The assessment was carried out by Papakura Iwi through Te Roopu

Kaitiaki O Papakura, and this was provided to the directors of Takanini Structure Plan Area 6 on 6 December 2007.

The Cultural Values Assessment states that the collective known as Te Roopu Kaitiaki O Papakura consists of 5 iwi, which are:

- Ngati Tamaoho
- Ngati Te Ata
- Ngai Tai ki Umupuia
- Te Akitai
- Ngati Paoa

Within Section 3.0 titled “*Background to the Report*” of the Cultural Values Assessment it is noted that:

“After positive discussions, Takanini Structure Plan Area 6 Limited have agreed that a cultural values assessment should be undertaken to identify and capture in the development (design) cultural values and traditional ties that iwi have to the site location.”

Te Roopu Kaitiaki O Papakura have agreed that they will SUPPORT the Takanini Structure Plan Change Area 6 given that opportunity is provided for a cultural values assessment to be undertaken to ascertain the cultural significance of the site to iwi and assist in the overall decision making regarding the resource consent process and any other related issues.”

Within Section 4.0 entitled “*Purpose of a Cultural Values Assessment*” reference is made to the requirements of the Fourth Schedule of the Resource Management Act in regards to matters, which should be considered when preparing an Assessment of Environmental Effects, these matters include:

1. *Any effect on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects.*
2. *Any physical effect on the locality, including any landscape and visual effects.*
3. *Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, **spiritual, or cultural, or other special value** for present or future generations (Emphasis added).*

Reference is also made to the limitations of archaeology to locate the history and associations of a particular area.

Within this section of the Cultural Values Assessment it also noted that:

“Te Roopu Kaitiaki O Papakura believe that:

all sites are protected until the appropriate information relating to the site has been researched. These sites link us to the past... We must be given the opportunity to research these sites of significance to learn more about our history...

In summary, primary reasons for undertaking a cultural values assessment are to ensure three key factors:

- *That the mana of Te Roopu Kaitiaki O Papakura is upheld, acknowledged and respected;*
- *That Te Roopu Kaitiaki O Papakura assert [their] rangatiratanga over [their] ancestral Taonga; and*
- *That as kaitiaki, Te Roopu Kaitiaki O Papakura fulfil [their] obligation and responsibility to our people [and future generations] as custodians, protectors and guardians of the tribe's interests, its Taonga and the various resources it owns."*

Within section 5.0 of the Cultural Values Assessment is outlined the Iwi concepts of Mana, Rangatiratanga, Kaitiakitanga, Mauri and Whenua and within Section 6.0 is outlined the statutory considerations within the Resource Management Act, Historic Places Act and Papakura District Plan relating to Iwi.

Section 7.0 of the Cultural Values Assessment outlines the findings of a 2001 report by ARC archaeologist Kim Tatton titled "*Cultural Heritage in the Auckland Region: Priority Areas for Survey and Assessment.*" This report has described that the Papakura District would have been intensively settled by Maori.

Section 8.0 of the assessment outlines the colonial impacts of early European settlers, which resulted in the dispossession of land from Iwi, including reference to the Fairburn purchase. This matter is further discussed in Section 9.0 relative to the Manukau Harbour Claim 1985. Within Section 10 of the assessment is a brief history from an Iwi perspective of the area subject to this proposed rezoning.

Section 11 is the conclusion of the Cultural Values Assessment. As part of this conclusion it is noted that:

"The Takanini Structure Plan Area 6 site and neighbouring properties are of high cultural, traditional, historical, environmental and spiritual significance and value to Te Roopu Kaitiaki O Papakura. There has been a long and rich history of Maori settlement, trade and activity within the site, surrounds and wider region."

Within the last two paragraphs of the assessment it is also stated that:

"As Kaitiaki we are charged with not only the preservation of the Taonga around us but also to identify and pursue opportunities for the betterment of our people. In doing so we seek to promote the advancement and retention of our histories, our culture, our traditions and customs so that greater understanding and appreciation of these taonga spreads throughout the community.

It would be great to have this reflected in the design, landscape and development of the Takanini Structure Plan Area 6, and provide an opportunity to redress past losses and to provide a platform for future betterment of our people and thus the district."

Within Section 12 of the Cultural Values Assessment, 15 recommendations have been made, and are included below:

1. *That Takanini Structure Plan Area 6 Limited, including their agents and consultants, respect and accommodate [in their actions] that the site is of high cultural, traditional, historical, environmental and spiritual significance to Te Roopu Kaitiaki O Papakura.*
2. *That the following Auckland Regional Council requirements and guidelines are adhered to regarding the development and related resource consents:*
 - *The Air, Land and Water Plan.*
 - *Auckland Regional Plan: Sediment Control [particularly effects of sediment on matters of significance to Tangata Whenua 4.2e]*
 - *TP10 Guidelines for Stormwater Treatment Devices*
 - *TP58 On-Site Wastewater Systems: Design and Management Manual*
 - *TP90 Guidelines for Land Disturbing Activities*
 - *TP148 Riparian Zone Planting Guide Strategy*
3. *That Te Roopu Kaitiaki O Papakura are fully informed of the results of all monitoring and consent-related assessments undertaken on the site.*
4. *If koiwi (human remains) and/or artefacts are exposed, all work in the immediate vicinity of the discovery shall cease and iwi collective contacted immediately so that appropriate arrangements can be made. Such work shall not continue until iwi appropriately deals with such remains. Refer to the Protocol and Sites of Significance section of the document.*
5. *All persons and organisations who are either in possession of, or who have the ability to secure the return of, or who are involved in any endeavours which impact on iwi taonga and intellectual property shall:*
 - *Ensure the return of all such taonga and intellectual property to the guardianship of the iwi; and*
 - *Ensure that the ownership and management of iwi cultural heritage as defined by iwi [including intellectual property, folklore, music, oral history, artefacts, and designs] remains with iwi.*
6. *We advocate the use of native species wherever possible that provide food source and habitat for native birds and fauna. We advocate the use of plants that have important traditional uses for both rongoa and providing materials for building, arts and other cultural expression. In this large-scale residential development we seek to identify opportunities to use fruit trees, herbs and other kai planting to enhance and sustain community involvement and the whenua and provide bird habitat and feeding resource.*

Native tree considerations [for use on the site] should include alluvial and harbour coastal flatland species, and also lowland species, such as Kauri, Pukatea, Karaka, Puriri, Taraire, Raupo, Totara, Kahikatea, Titoki, Kowhai, Harakeke, Kohekohe, Maire, Nikau, Matai and Ti Kouka.

7. *Te Roopu Kaitiaki O Papakura would like the opportunity to name Streets, Roads, Avenues and other roadways related to the development after ancestors and names of major significance to the region.*
8. *We would like to also name any Reserves set aside for community use. This would allow Te Roopu Kaitiaki O Papakura to realign our ancestral linkages to the region.*

Please note: That the use of historic-cultural names keeps alive the history of these places for all New Zealanders, it is in effect the history of both Papakura and the country in general. With so many names used in developments [that erode away our history], it is, in our opinion, of vital importance that we highlight, recognise and acknowledge the past historical land use of these newly developed areas, so that the history of the area is not forgotten.

9. *We concur with the recommendations in the archaeological assessment by Mr. Russell Foster.*
10. *Te Roopu Kaitiaki O Papakura would like the opportunity to work in conjunction with Takanini Structure Plan Area 6 Limited in designing and constructing artistic art and craft works which outline the history and significance of the area to iwi. The development [in design] should acknowledge and reflect aspects of the once ancient Kauri forest, swamps, wetlands and water resources like the Papakura River and old waka transport water routes.*
11. *Te Roopu Kaitiaki O Papakura are given the opportunity to design and erect a Tohu [monument/cultural marker] acknowledging and commemorating the tupuna [ancestor] relevant to the immediate area.*
12. *That no adverse impact on the Papakura Stream including ecosystems occurs as a result of this development, and that all attempts are made to ensure safe fish passage is paramount and wetlands as these areas provide valuable breeding grounds for fish species.*

We agree with the Vegetation, Landscape and Visual Assessment that there is an opportunity to accentuate and enhance the natural landform of the river terrace and streamside environment as a valuable amenity asset for the surrounding area. Riparian vegetation planting and native restoration planting should be done to:

- *Help to secure the stream banks against erosion and slips*
- *Help to keep invasive weeds under control*
- *Reduce pollution and flooding as plants slow down the water flow in times of heavy rainfall and help filter out pollutants, and*

-
- *Provide a home, food source and shade for stream wildlife and other native animals and birds*
13. *Te Roopu Kaitiaki O Papakura would like to be involved, on a regular basis, with monitoring the proposed works from a kaitiaki perspective. This will allow iwi the opportunity to apply and undertake their kaitiaki role and obligation to their people.*
 14. *That Karakia [prayer] is provided for, and undertaken by Te Roopu Kaitiaki O Papakura prior to any earthwork and/or streamwork activity of the development.*
 15. *Should there be any significant changes to the Takanini Structure Plan Change 6, Te Roopu Kaitiaki O Papakura are to be notified immediately and reserve the right to reconsider our decision regarding the Plan Change application.*

Within section 13 of the Cultural Values Assessment titled “*Protocols for Waahi Tapu / Sites of Significance*” it is outlined that:

- A process for dealing with Koiwi, Taonga or Waahi Tapu should be developed and agreed upon by both parties and that a contact person for Te Roopu Kaitiaki O Papakura be provided from within Takanini Structure Plan Area 6.
- If a co-worker dies on site through unforeseen circumstances, Te Roopu Kaitiaki O Papakura should be contacted so that arrangements can be made for the area to be blessed.
- A recommended procedure should be followed in the event of an inadvertent discovery of koiwi, waahi tapu, cultural material or artefacts and deaths occurring on the site, as outlined on pages 29-30 of the Cultural Values Assessment.

6.6.2 Implementation

Many of the above recommendations require good faith implementation by Takanini Structure Plan Area 6 Limited. Notwithstanding this, the landowner entity wishes to work with Te Roopu Kaitiaki O Papakura and Council at the subdivision and development stages to create a mutually beneficial outcome for all parties.

As a result, a landowner representative of Takanini Structure Plan Area 6 Limited met with Karl Flavell on 10 October 2007. During the meeting it was agreed that Takanini Structure Plan Area 6 Limited would liaise with Te Roopu Kaitiaki O Papakura prior to construction. Te Roopu Kaitiaki O Papakura would then carry out a blessing on the site before any works are commenced. It was also agreed that Te Roopu Kaitiaki O Papakura would receive regular feedback on the site’s development progress. Correspondence confirming Te Roopu Kaitiaki O Papakura’s support for the Plan Change, on the condition that the recommendations and stipulations as outlined in the Cultural Values Assessment Report are provided for, is attached as Appendix 21.

6.7 SURROUNDING COMMUNITY

A Public Open Day was held on Saturday 23 June 2007 from 10.00am – 2.00pm. The open day was advertised in the Manukau Courier and Papakura Courier and also in the New

Zealand Herald, and properties in the immediate vicinity of the site were also sent individual invitations to the public open day.

The proposal presented at the public open day provided for Industrial 3 zoning across the northern part of the site, and Industrial 1 zoning at the southern end of the site.

6.7.1 Sandra E McLean – 118 and 148A Manuroa Road, Takanini

148A Manuroa Road, Takanini (Lot 2, DP 190143) and 118 Manuroa Road, Takanini (Lot 1, DP 346037) are comprised in one Certificate of Title NA 188816 and have site areas of 2171m² and 509m² respectively.

These sites access Manuroa Road via a right of way and are both owned by the same person. Currently both 118 and 148A Manuroa Road have an operative split zoning of Rural Takanini / Drury and Urban Residential 1. The applicant seeks to alter this zoning so that the entire area of both of these sites is zoned Urban Residential 1. If the Plan Change as proposed becomes operative without this happening these sites will be the only sites within the immediate area with a rural zoning.

Therefore it is logical and displays best planning practice to rezone 118 Manuroa Road and 148A Manuroa Road from an operative split zoning of Rural Takanini / Drury and Urban Residential 1 to a proposed zoning of Urban Residential 1.

Within Appendix 19 of the plan change documentation is the consultation correspondence, this correspondence shows that the owner and occupier of 148A Manuroa, Sandra McLean attended the public open day on the 23rd of June 2007 and was sent the Plan Change documentation.

In addition, the rezoning of 118 and 148A Manuroa Road has been specifically discussed with Sandra Elizabeth McLean and she has given written approval to the rezoning. This written approval is also included in Appendix 19.

The Plan Change proposes to rezone this site to Urban Residential 1 because this zone is more consistent with the character of the site and surrounding sites to the south. The rezoning of this site to Residential 8 would be less consistent with the existing amenity of the area, which generally comprises detached housing on single sites.

6.7.2 Public Open Day

A number of issues were raised at the public open day, which are summarised below.

2b Sheriff Place, Porchester Park

Feedback was received that this local resident is totally opposed to the proposed Industrial 1 and 3 zoning. The reasons given for this are the potential for air pollution, increased traffic on Porchester Road, potential adverse visual effects and the potential for devaluation of property values. The preferred alternative land use is for recreation, a single level office for clerical operations or further residential development, cafes, retail, or walking tracks. It has been emphasised that such an alternative development would need to be done tastefully.

160 Manuroa Road, Takanini

Feedback was received from the above local residents, which also noted total opposition to the Plan Change proposal. Reasons given for this position included the potential for increased graffiti, which will lower the tone of the neighbourhood, increase in noise levels and in particular industrial noise increase in traffic, which in turn will result in increased vibration owing to heavy vehicle movements, lack of direct motorway access from the proposed industrial area, potential for use of the area by boy-racers, and the devaluation of residential properties.

The preferred alternative land uses described include maintaining the area as a rural zone, developing the area into a park and greenbelt zone, upgrading the footpath along Porchester Road and lowering the speed limit along the road, or developing the area into lifestyle blocks. The residents have further commented that they believe that the land owners have chosen this Plan Change to take advantage of the rentals that will be generated by industrial businesses, rather than having any genuine interest in providing an opportunity for investment and employment. The residents consider that there is already sufficient vacant industrial land in the Spartan Road area, and Papakura is not attracting reputable businesses.

33 Sheriff Place, Porchester Park

This resident has stated that they object to the proposed rezoning. The reasons given for this are because the proposal will devalue the existing residential properties in Porchester Park, any industrial zoning will increase the number of vehicles using Porchester Road and add to noise pollution, the current road condition is insufficient to handle further heavy vehicle traffic, the Porchester and Popes Road intersection already has traffic accident problems, the land proposed for development is peat swamp, the potential for industrial type buildings and fencing will conflict with the current rural/residential outlook and would give the area a “prison wall” atmosphere, the proposed Industrial 3 zoning will enable tall buildings which would probably operate 24 hours a day, 7 days a week giving residents no peace and causing noise, smell and air pollution for existing residents.

Overall, this resident considers that the proposed rezoning is flawed as it conflicts with the rights of existing residential ratepayers in the area and therefore should not proceed.

40 Sheriff Place, Porchester Park

This local resident considers that to have any industrial zoning, let alone Industrial 3 within metres of a high class residential suburb is unsupportable and must be without precedent, and would have a drastic effect on the quality of life of residents and on property values. It is also noted that an industrial area with a straight, flat road through it will be a boy-racer paradise and would attract undesirables from a wide area having a large impact on residents. This resident has noted that they look forward to the opportunity to protest against this proposal in far greater depth in the future.

A second comment was received from this resident reiterating concerns about the potential for boy racers and the effect of the proposed development on property values.

46 Sheriff Place, Porchester Park

This local resident has particular concerns with odour effects from the existing industrial area, and the increase in this effect as a result of extending the industrial zoning into Area 6. Concerns have also been raised in relation to the reduction in property values, and the proposed stormwater pond being an environmental disaster waiting to happen. The potential for adverse traffic effects has also been raised, particularly in relation to the turn from Sheriff Place onto Porchester Road.

2 Sheriff Place, Porchester Park

This local resident considers that the existing industrial areas need to be consolidated before considering further industrial land. If industrial land is to be contemplated near existing residential zoned land it needs to blend in with the residential areas with no noise, smell, toxic fumes, night operations etc. This resident considers that the area needs a green belt and notes that instead of prime land being used for ad hoc industrial use, a good quality residential development would be of much more long term benefit to the area.

8B Sheriff Place, Porchester Park

This local resident strongly objects to the proposed rezoning owing to traffic effects from the rezoning, noise and pollution.

26 Sheriff Place, Porchester Park

This local resident has raised concerns about the use of the area by boy-racers. Concerns have also been raised about the potential for factory workers consuming alcohol after work out of their car boots, which will have a direct safety impact on all residents. This resident has indicated that they would prefer learning and educational facilities ahead of industrial zoning.

44 Sheriff Place, Porchester Park

This resident has raised strong objections with the proposal, noting that a large portion of the residents here in Sheriff Place are retired people and local employment is of no interest to them but peace and clear air are. It has also been noted that the resident considers that the Papakura District Council does not require more industrial land and residents do not want it as neighbours.

34 Sheriff Place, Porchester Park

This resident also objects to the rezoning proposal, and is concerned about the increased noise and air pollution that will occur and increased heavy traffic flow on roads in the area.

A preferred alternative development is office blocks and green spaces and more residential development in keeping with the houses in Porchester Park. This resident has also requested the planting of trees to screen the industrial area on Takanini School Road, which they consider to be an eyesore.

50 Sheriff Place, Porchester Park

This resident is not in favour of the proposed rezoning and noted that the semi-rural aspect was a major attraction when they moved to the area, which is a nice retreat after working in the Central Business District during the day. They would prefer development to be more in line with the Committee's suggestions.

S Pritchard – Essents Co.

This local business operator considers that the proposed land is more suitable for either small industrial units or residential. Concerns have also been raised that the local roads will not handle heavy trucks, Manuroa Road is also already congested and it is already virtually impossible to exit Spartan Road under the bridge on to Great South Road at peak times safely. Other issues raised are potential pollution (noise, smell and light) on neighbouring residents, and the effect of an industrial park on property values.

Committee of Residents – Sheriff Place, Porchester Park

Comments from a Committee of residents living at Sheriff Place have been received following the public open day. Matters raised by this Committee note that there is considerable conjecture over the effect of having primarily Industrial 3 zoned land so close to existing Residential zoned land.

The principal concerns are increased noise pollution, increased air pollution, increased heavy vehicle traffic movement, deterioration of roads as a consequence of heavy vehicle usage, degradation of current lifestyle, and a potential reduction in property values. The residents further consider that there has never been any suggestion of any expansion of the existing industrial area to virtually their back doorsteps. The Committee notes that overall there has been strong objection to the proposed rezoning, with 83 signed objections received to date.

Issues with the existing industrial land at Spartan Road have also been raised, including that blocks of undeveloped land exist in the area, there are existing buildings that are not occupied, the overall appearance of the area is not aesthetically pleasing, some buildings are due for refurbishment or demolition, the area has attracted boy-racers, and it has an ugly sky line with buildings up to 30 metres in height.

The residents consider that it can be reasonably assumed that these problems will be carried over to Area 6A and 6B, which will cause further problems for local residents. Alternative land uses suggested by the Committee include developing the land for learning/educational institutions, development of offices (clerical operations, technology companies, cafes etc), and dedicated green areas to complement business activities. The Committee considers that there is an abundance of land on the eastern side of Porchester Road and near Clevedon that can house industry away from residential zonings, and warns that combining industry with residential zonings can be fraught with problems.

6.7.3 Revision of Plan Change as a Result of Feedback Received

Subsequent to the receipt of this feedback, two alternative zoning scenarios were developed. Scenario one involved providing solely for Industrial zoning over the area, but provided for a band of Industrial 1 zoning along the northern end of the site. It also considered what amenity controls could be provided in the Industrial 1 zone at the southern end of the site to manage any effects on the immediately adjoining residential properties along Manuroa Road.

Scenario two also provided for a band of Industrial 1 zoning at the northern end of the site, but instead provided for a band of Residential 8 zoning, further buffered by a band of Industrial 1 zoning to the north of that Residential 8 zone, at the southern end of the site. Scenario Two has been selected as the preferred zoning approach by the Directors of Takanini Structure Plan Area 6, and the development of the Plan Change has been advanced on this basis (this was amended by Council on 21 July 2009 to rezone the future esplanade area, stormwater pond designation area Reserve and to introduce an additional area in the North West corner of the site for Reserve .)

A letter was sent on 29 November 2007 to all persons who attended the public open day and also all of the above people who provided feedback on the preliminary planning provisions on 29 November 2007, a copy of which is attached as Appendix 19. This letter outlined the updated planning approach, developed in response to public feedback and provided copies of the updated preliminary zoning and structure plan, and also a scenario evaluation examining possible design outcomes as a result of the proposed changes to the planning provisions. This letter also invited feedback on the revised zoning scenario, and invited residents to meet with representatives of Takanini Structure Plan Area 6 Limited to discuss the zoning proposal if desired.

Correspondence was received on behalf of the Sheriff Place Residents Committee on 5 December 2007 inquiring as to why this correspondence has not been sent to all households along Sheriff Place and Horlicks Place. A response was forwarded reiterating that the letter was sent to all persons who attended the public open day and all persons who provided feedback to the previous proposal, and inviting any other resident who wished to receive the documentation to contact Harrison Grierson directly.

A meeting was held on the 25th of February 2008, which included representatives from Harrison Grierson, Hosken Associates, as well as representatives of the Manukau residents, namely Manukau City Councillor Daniel Newman (by telephone conference), Manukau City Council Consultant - Peter Rayburn, Denise Mahay, Captain Row Robinson (Horlicks Place) and Maralyn Stevens (Sheriff Place).

During this meeting there were several matters discussed. There was confusion between the implications of this subject Plan Change and the wording in proposed Plan Change 13 to the Operative Papakura District Plan. A Harrison Grierson representative took time to explain the difference, including providing background information to the regional growth issues facing the wider Auckland area. The background to the Takanini Structure Plan was also highlighted in terms of what it was trying to achieve, in meeting these higher level documents. The issues around the movement of the Metropolitan Urban Limit and the importance of the provision of land for industrial use were also explained to the residents.

Harrison Grierson advised that despite several attempts to engage with Manukau City Council to gain their feedback on the proposed Plan Change that no response had been received to date. The MCC Councillor stated that officer comments would be provided once they had an understanding of the residents' interface issues.

The MCC Councillor had queries regarding the possible geotechnical limitations of the site, and the potential financial difficulties that this could have on the development of the land.

The residents explained their concerns around the interface issues and their opposition to rezoning the land for industrial use. In response, the specific provisions of the Plan Change were discussed, in terms of the nature of the activities contemplated in the area and the proposed control over these, including details of their bulk, location and design. It was relayed that the Industrial 1 Zone has very similar rules to the Business 5 zone in the Manukau City Operative District Plan.

The MCC Councillor explained the residents concerns over lost opportunities around the Papakura Stream, and the potential impact on the quality of the water.

Timeframes for the notification of the Plan Change were also discussed and the residents indicated that they would be making a submission on the proposed Plan Change document.

The MCC Councillor stated that a collaborative approach is desirable, with the landowners working together with Council to achieve quality outcomes.

6.8 MANUKAU CITY COUNCIL

A letter was sent to the Manukau City Council in June 2007, advising and inviting them to attend the public open day. A meeting was also arranged with the Council's Environment Director, Ree Anderson, but this was subsequently cancelled by the Council and not rescheduled. Harrison Grierson was contacted by the Council's Policy Manager, Brigitte de Ronde following the receipt of complaints from residents living near the site and within the jurisdiction of Manukau City Council.

An email outlining the consultation undertaken on the proposal was sent to the Council on 18 July 2007, and this was accompanied by an offer to meet with the Council to discuss the proposal.

During a meeting on another matter with Ree Anderson and Peter Reaburn on 3 August 2007, Takanini Structure Plan Area 6 was briefly discussed, and a copy of the land use options was provided to the Council. An invitation was extended to the Council to discuss the proposal in more depth.

On Friday 30 November 2007 a copy of the preliminary zoning plan, structure plan and a summary of the Plan Change provisions was provided to the Council, together with an invitation to discuss the proposal in further depth. A response was received to this letter on 7 December 2007, noting that Manukau City Council were not happy with receiving a summary of the Plan Change only as part of the update and indicating an understanding that the Plan Change was to be formally lodged in mid-December 2007. This letter requests on behalf of the Manukau City Council that Takanini Structure Plan Area 6 Limited defers formal lodgement of the Plan Change until after a meeting with interested parties is able to be held early in 2008, and following the provision of more detailed information.

A meeting was undertaken in late March / early April 2008 between the directors of Takanini Structure Plan Area 6 Limited and the Mayor of Manukau City Council on the draft Plan Change documentation.

No formal response has been received from Manukau City Council to date.

6.9 NEW ZEALAND HISTORIC PLACES TRUST

A letter was sent to the New Zealand Historic Places Trust advising of the proposed Plan Change, in order to establish dialogue, gain feedback on the proposal and to address any concerns in relation to the proposed Plan Change. The letter enclosed a copy of the Structure Plan to assist with the Trust's understanding of how the area may be developed in the future. A copy of this letter is attached with the consultation documentation in Appendix 19.

6.10 CONSULTATION SUMMARY

The consultation undertaken thus far has been valuable to identify issues specifically related to the layout of the rezoning proposal. Consultation with the surrounding community in particular has led to an amendment to the layout of the proposed zones from Industrial 3 zone at the northern end of the site and Industrial 1 zone at the southern end of the site to a mixture of Industrial 1, Industrial 3, Residential 8 and Reserve zones, depending on the location of the site boundaries and proximity to residential properties. The requirement for a Resource Consent for activities and buildings within the Industrial 1 Zone and inclusion of new planning provisions overall for both Industrial Zones will better manage the actual and potential adverse effects of the proposed rezoning on nearby residential areas.

It has also led to the introduction of a Residential 8 zoning on the southern portion of the site to provide a buffer between immediately adjoining existing residential areas and the proposed industrial zones. An Urban Residential 1 zoning is proposed to be applied to those parts of 118 and 148A Manuroa Road which are currently zoned Rural Takanini / Drury.

Extensive consultation has also been undertaken under the First Schedule of the RMA with tangata whenua, the Auckland Regional Council, as well as other First Schedule parties.

7.0 IMPLEMENTATION AND COMPLIANCE

Implementation of the Plan Change and Structure Plan for the land would be in accordance with the standard Council practice as for Plan Changes previously introduced to the District Plan of a similar size and nature to that proposed with the proviso that implementation commencing is contingent on a successful resolution of the designation for stormwater purposes.

Monitoring and compliance with the provisions of the District Plan and the suitability and effectiveness of the provisions would be monitored by the Council in accordance with its standard practices.

PART C

1.0 ANALYSIS OF ALTERNATIVES UNDER SECTION 32 OF THE ACT

The original Private Plan Change request provided an evaluation of the rezoning options for the land in accordance with the requirements of Section 32 of the Resource Management Act 1991, consideration of alternatives, benefits, and costs.

The report provides a summary of the manner in which the proposed Plan Change has been prepared and evaluated in accordance with Section 32, using the following headings:

- Statutory considerations
- Objectives to be sought by the Plan Change
- Alternative means of achieving the objectives
- Benefits and costs of alternative means of achieving the objectives
- Risks of acting or not acting if insufficient information; and
- Appropriateness, efficiency and effectiveness of the Plan Change.

1.1 STATUTORY CONSIDERATIONS

Section 32(3) of the Resource Management Act 1991 requires that before a proposed Plan Change is publicly notified, an evaluation must be carried out which examines:

- (a) *The extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
- (b) *Whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

Section 32(4) states that for the purposes of this examination, an evaluation must take into account:

- (a) *The benefits and costs of policies, rules, or other methods; and*
- (b) *The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

The procedure for requesting a Plan Change is set out in Part II of the First Schedule to the Act, "Requests for Changes to Policy Statements and Plans of Local Authorities." Clause 22 "Form of Request" requires that a request made to a local authority to change its District Plan shall:

"(1)...explain the purpose of, and reasons for, the proposed plan or change to a policy statement or plan [[and contain an evaluation under section 32 for any objectives, policies, rules or other methods proposed]]."

1.2 OBJECTIVES OF THE PLAN CHANGE

The objectives of the Plan Change are to achieve sustainable management in accordance with the purpose and principles of the Resource Management Act 1991.

Consistent with this approach, the Plan Change has given due regard to both the regional and local level resource management strategies, including the application of general objectives and policies contained within the relevant documents discussed in Section 7 of Part A of this report.

In particular, the Plan Change has given due regard to the Resource Management strategy of the Operative Papakura District Plan and the application of general objectives and policies. This includes application of the provisions of the present Chapter 6 (Industrial Zones) as they pertain to the subject land. In this regard, there are relatively few new or amended provisions that have been identified which are necessary in meeting the sustainable management objectives.

1.3 PROPOSED NEW DISTRICT PLAN RULES

This proposed Plan Change introduces site specific objectives, policies and rules to the Operative District Plan by way of amendment to the existing provisions of the Part 5B Section One – Takanini Structure Plan, Chapter 6 – Industrial zones and the Industrial 1 zone and Industrial 3 zone. A copy of the specific proposed Plan Change provisions is attached to this report as Appendix 4.

Additional objectives and policies have been proposed to provide specific statements about the need to adequately mitigate potential adverse effects and specify the outcomes sought within Takanini Structure Plan Area 6.

Additional rules, including activity status, have been proposed to improve the outcomes achieved in the Industrial 1 zone, in particular as it applies to Takanini Structure Plan Area 6, and to address the interface between the Industrial zones and nearby Residential zoned land. New rules have also been proposed to improve the environmental outcomes achieved in the Industrial 1 and Industrial 3 zones. An additional specific front yard setback has also been proposed in the Residential 8 zone, as it applies to the portion of the land in Takanini Structure Plan Area 6 where it fronts the Industrial 1 zone, to reduce the potential for reverse sensitivity effects from the proximity of residential land uses.

As a Structure Plan has also been prepared specifically for Takanini Structure Plan Area 6, additional rules are proposed to be added to the District Plan that require implementation of the intended development layout. Performance standards have also been developed for subdivision activities within the Structure Plan area, to facilitate specific environmental outcomes intended for the area.

1.4 ALTERNATIVE MEANS OF ACHIEVING OBJECTIVES

In determining the most appropriate method for managing the future use and development of the land subject to the proposal, consideration was given to the following alternative means:

- Alternative 1: Plan Change Application
- Alternative 2: Alternative zoning of the land

-
- Alternative 3: Do nothing
 - Alternative 4: Resource consent applications
 - Alternative 5: District Plan review

Each of these alternatives is discussed below. A comparison of the costs and benefits of each of the alternatives against the preferred zoning approach is also provided.

1.4.1 Alternative 1: Plan Change Application

Alternative 1 a proposed Private Plan Change.

The District Plan provides a range of industrial zones, catering for a variety of industrial needs for the District. A number of factors need to be considered in determining the type of industrial zone that may be suitable for an area.

Such factors include the nature of anticipated activities, capacity of the roading network, effects on amenity values for surrounding uses, externalities such as noise and air emissions, effects on established industrial activities within the District of a similar nature and reverse sensitivity effects. Having considered all the relevant factors, including relevant statutory and non-statutory documents, the nature of the land itself, and the character and context of the neighbourhood in which it is situated, it is considered that the Industrial 3 zone with some modifications to provide for the improved management of externalities, buffered by the Industrial 1 zone, with changes to ensure that amenity effects are avoided, remedied or mitigated, are the most appropriate industrial zones for the subject land.

As discussed in Section 8 of Part A of this report, there is a significant shortage of business zoned land in the wider Auckland region. Accessibility is a significant impediment to the location of business zoned land. It is not only important for freight delivery, but also the location of the primary labour source. It is considered that this site is ideally located for business rezoning, because it is located adjacent to an existing industrial zone and close to primary transport corridors, including State Highway 1. The land has been identified previously as being suitable for business purposes in the Takanini Structure Plan, and the zoning will facilitate its use for suitable activities such as warehousing, offices and industry not requiring air discharge permits.

Details of the proposed Industrial 1 zone and Industrial 3 zone have already been discussed in Section 2 of Part B of this report.

The proposed Residential 8 zone will provide an appropriate buffer between the existing Urban Residential 1 zone and generally residentially occupied land to the south of the Structure Plan Area. This will provide effective mitigation to these existing residential areas of the effect of industrial activities within Takanini Structure Plan Area 6.

The Plan Change also proposes to alter the existing split zoning of 118 and 148A Manuroa Road from Rural Takanini / Drury and Urban Residential 1 to an Urban Residential 1 zone only. This is the most efficient and effective method because:

- if the Plan Change as proposed becomes operative without this happening these sites will be the only sites within the immediate area with a rural zoning; and

-
- this zone is more consistent with the character of the site and surrounding sites to the south. The rezoning of this site to Residential 8 would be less consistent with the existing amenity of the area, which generally comprises detached housing on single sites.

In addition, the rezoning of 118 and 148A Manuroa Road has been specifically discussed with the landowner and she has given written approval to the rezoning. This written approval is included in Appendix 19 of this report.

The Plan Change amends and adds to a number of objectives, policies, rules and assessment criteria of the Industrial 1 and 3 zones. These new and altered objectives are considered to be the most appropriate way to achieve the purpose of the Act.

The proposed new or revised policies, rules and assessment criteria are considered to be the most appropriate way to achieve the objectives, because:

- They reflect the unique location of the area and appropriately address the interface issues between industrial activities and the neighbouring residential and rural land uses.
- They control the location and design of buildings and activities to ensure that they are appropriate, well designed and relate well to the road and surrounding land uses.
- They allow for a variety of business activities within the locality, while appropriately mitigating the effects of these activities on surrounding land uses.
- They appropriately manage the environmental effects of industrial development which include potential geotechnical, stormwater, contamination, amenity and traffic effects.

1.4.2 Alternative 2: Alternative Zonings for the Land

In considering alternative zoning which may be appropriate for the land, primary consideration was given to:

- The sustainable management purpose and principles of the Resource Management Act 1991.
- The relevant strategies of the Auckland Regional Council for the Auckland Region.
- The relevant strategies of the Papakura District Council for the District.
- Current environmental constraints and considerations for the land.
- The zoning of properties adjacent and surrounding the land, including objectives, policies, rules and development controls; and
- Established activities on properties within the immediate vicinity.

Zones within the District Plan given consideration include:

Other Industrial Zone(s):

It is not considered that the remaining industrial zones are suitable for the rezoning of the land due to their specific purpose, location, contemplated use and the resultant potential adverse effects. This is elaborated on in summaries of the remaining business zones below.

The Industrial 2 zone lies adjacent and generally to the west of the central business area. It contains a similar range of uses to the Industrial 1 zone, but fringe commercial activities are also provided for in recognition of the proximity of this zone to the central business area.

The Industrial 4 zone enables the establishment of those activities which require physical separation from adjoining sensitive activities but lies within a buffer created by the Industrial 3 zone. This zone is completely inappropriate for this location.

The Extractive Industry zone covers the two areas of quarrying at Hunua Road and Drury. The provisions enable the continuation of quarrying and related uses within the zone while imposing strict development and operational controls to ensure high standards of operation and protection of sensitive water courses and streams.

The Ardmore Aerodrome zone makes provision for the aviation industrial and related uses at Ardmore Aerodrome. The site is designated as an aerodrome and for aerodrome purposes in the District Plan by Ardmore Airport Limited.

A Commercial Zone: The District Plan contains zoning provisions providing for a range of commercial activities, which are divided into a total of four commercial zones and two mixed use zones. The commercial zones are designed to provide for a number of small neighbourhood centres throughout the district, or to cover the Central Business Area. Two additional specific commercial zones are provided for non-retail commercial activities such as taverns, and on a site specific basis covering land that is inconsistent with the overall commercial strategy for Papakura, but would otherwise result in procedural difficulties unless the specific zoning was provided. The mixed use zones provide for future planned residential areas where it is expected that the zones will differ in scale, mix and type of activities.

It is considered that the land at Takanini Structure Plan Area 6 is too large in area to be rezoned for a neighbourhood centre or for commercial activity, given its distance from the heart of Papakura, to be considered as part of the Central Business Area. Further, the purpose of the Plan Change is to provide for further land in a manner that is consistent with the overall Industrial Strategy for Papakura. It is noted that the land is earmarked in the Takanini Structure Plan for business use such as industrial activities.

A Residential Zone: The District Plan contains zoning provisions providing for a range of residential housing types and densities depending on location, which are divided into a total of nine residential zones. A portion of the site at Takanini Structure Plan Area 6 has been identified as being appropriate for residential land use, to provide a buffer between the existing residential properties immediately adjoining the southern end of the site and the proposed Industrial land uses.

The Residential 8 zone has been proposed to assist with achieving the housing densities anticipated in Takanini Structure Plan area 6. It is the only operative medium density zone, suitable to the Takanini locality.

It is appreciated that the subject land has certain amenity values, such as a flat profile and soils which are relatively free of contaminants, which lends itself to residential living or mixed use opportunities. Furthermore, the land is bordered by established residential housing to the north and south and rural land which is earmarked for future residential zoning in the Takanini Structure Plan. Therefore the amenity values of the area are somewhat established. These amenity values are already compromised however, by the Industrial 3 zoning on sites immediately adjoining the land to the west, as well as through the proximity of the land to a major arterial road (Porchester Road) which is to be further upgraded to accommodate additional population growth.

It is acknowledged that there is a shortage of residential zoned land not only in Papakura but also across the greater Auckland area with which to provide residential housing to accommodate Auckland's growing population. This is documented in a number of publications produced by the Auckland Regional Council, including most importantly the Auckland Regional Growth Strategy. The development of new residential zones within the Takanini Structure Plan area, such as Addison, and new residential zones in the Hingaia Structure Plan Area is providing for the majority of the District's growing residential population. It is also noted that further land within the Takanini Structure Plan area is proposed to be rezoned Residential in the next 5 – 15 years.

It is considered that a residential zoning over the entirety of this area is not the most appropriate use of the land owing to its specific site characteristics, including:

- Proximity to the existing Industrial zone located to the west of the site, which will potentially result in reverse sensitivity effects.
- The need to provide for additional business land to ensure that live-work-play objectives are achieved in the Takanini Structure Plan Area.
- The suitability of the site, owing to its predominantly flat characteristics and proximity to major transport routes, for an industrial land use.

A Rural Zone: Given that the land is currently the subject of Plan Change 13, which changes its zoning from Rural Takanini/Drury to Future Urban zone, and coupled with its location immediately adjacent to the Metropolitan Urban Limit, it is considered to be more appropriate, efficient and sustainable that the land be developed for urban purposes.

The urbanisation of this land is already anticipated by virtue of the Takanini Structure Plan and its proposed Future Urban zoning, and it was scheduled to be urbanised from 2005 onwards.

An Alternative Zone Not Currently Provided for in the District Plan: For the reasons discussed in Part B of this report (Assessment of Effects) it is considered that the creation and application of an entirely new zone not already provided for in the District Plan is not necessary. Such an approach would not be the most efficient and effective means of providing for development of the land in accordance with the sustainable management

principles of the RMA, especially given the existence of suitable zones (Industrial 1, Industrial 3 and Residential 8 zones) within the District Plan, albeit in a slightly modified form.

1.4.3 Alternative 3: Do Nothing

Under this option, rather than proceeding with the proposed Plan Change, the applicant would rely on the existing District Plan provisions of the Rural Takanini/Drury zone to develop the land.

Part 7 of the District Plan sets out the activities that are permitted in the Rural Takanini/Drury zone subject to all other relevant performance standards, rules and development controls set out in the District Plan (and any other statutory planning documents applicable).

It is noted that the site is currently proposed to be rezoned to Future Urban Zone, and proposed Plan Change 13 sets out the range of activities which are permitted under that zoning. Only a limited range of activities are permitted, and include for example, Bed and Breakfast Accommodation, Farm Forestry, Farming, Home Enterprises, and Horticulture. Such activities are required to comply with the relevant development controls and performance standards for the zone. Proposed Plan Change 13 introduces further limitations on the land, in the form of a prohibition of further subdivision until such time as a rezoning proposal for the urbanisation of the land is received and accepted by the Council.

General development and performance standards for the zone include in particular:

- Standards and limitations on cleanfilling activities.
- Special provisions relating to temporary household units.
- Specific provisions relating to the operation of home enterprises.

The "do nothing" option is clearly not the preferred option as the existing Rural Takanini/Drury Zone does not provide the opportunities to develop the land. The proposed Future Urban zoning of the land provides a clear statement of intention by the Council that the land should be developed for urban purposes, in accordance with the approved Takanini Structure Plan.

1.4.4 Alternative 4: Resource Consent Applications

Under this option, rather than proceeding with a Plan Change or relying on the District Plan provisions for permitted activities within the Rural Takanini/Drury zone or the proposed Future Development zone, the landowners would rely on the resource consent process to be able to redevelop the land.

This option is not considered to be the most appropriate method to develop the land, particularly because the proposed Future Development zone proposes significant restrictions on further subdivision of the land ahead of rezoning to urban land uses. This would be a significant constraint to the development of the land, and also signals the Council's intent that Plan Changes are the most appropriate way of addressing the urbanisation of land within the Takanini Structure Plan Area.

Further, almost all activities would be considered to be Non-Complying Activities and would be outside the metropolitan urban limits, which would significantly increase both application and compliance costs. There is also additional risk of development proceeding in an ad hoc, uncoordinated manner if development is to be considered via resource consent applications. There is a further risk that development themes and quality urban design outcomes will not be able to be achieved, owing to the Council not being able to make a clear statement on the expected design outcomes for development within the area.

It is for this reason that reliance on resource consent applications, and not proceeding with a Plan Change, is not considered to be appropriate to implement the urbanisation of Takanini Structure Plan Area 6.

1.4.5 Alternative 5: District Plan Review

Under this alternative the Council would seek to include the rezoning of the properties in its statutory review of the Operative Papakura District Plan. Section 79 of the Act determines that this process should occur no later than 10 years after the Plan became operative.

The District Plan became operative in 1999; and Council are presently commencing scoping of issues associated with the review. In response to the review of Auckland's local governance, Council has discontinued work on its District Plan review. Any full review will be undertaken by the Auckland Council.

1.5 BENEFITS AND COSTS OF ALTERNATIVE MEANS

1.5.1 Alternative 1: The Proposed Plan Change

The reasons for and against adopting the proposed Plan Change are:

Benefits

- It permits the Papakura District Council to fulfil its obligations in terms of the Auckland Regional Growth Strategy.
- It provides the opportunity to undertake a comprehensive and co-ordinated planning, design and engineering approach to the redevelopment of the Takanini Area 6A and 6B.
- It provides for comprehensive and integrated land use and transport planning within the Takanini area, rather than a series of ad hoc resource consent applications.
- It provides more certainty for landowners, for neighbouring property owners and the local community as to the future intended land uses for the area.
- Use of the existing Industrial 1 and Industrial 3 zone provisions (subject to additional site specific controls) reduces administrative costs, and unnecessary duplication and complication of District Plan provisions.
- Provides for additional Industrial 1 and Industrial 3 zoned land, which is in short supply within Papakura and the Auckland Region generally.

Costs

- Consequential changes to the District Plan.
- The potential for increased activity and traffic movements through the area.
- Adjoining and surrounding residential landowners may experience some loss of rural or residential amenity and short-term uncertainty related to process and outcomes.
- Cost of preparing and processing the Plan Change.

1.5.2 Alternative 2: Alternative Zonings

The reasons for and against adopting the 'alternative zonings' option relative to the Plan Change are:

Benefits

- Other activities may have the opportunity to establish within the area.

Costs

- Will not achieve the most efficient or 'best' use of the land.
- Some uses may not be suitable for the land and may be contrary to community expectations and the expected outcomes of the Takanini Structure Plan.

1.5.3 Alternative 3: Do Nothing

The reasons for and against adopting the 'do nothing' option relative to the Plan Change are:

Benefits

- No costs involved in the preparation of the Plan Change.
- No change in expectation of amenity values for adjoining landowners.

Costs

- Papakura District Council will not fulfil its obligations, in terms of the Auckland Regional Policy Statement, the Auckland Regional Growth Strategy principles, the Operative Papakura District Plan and the relevant environmental outcomes associated with these documents.
- Continued shortage of business/industrial zoned land available in Papakura District.

1.5.4 Alternative 4: Resource Consent Applications

The reasons for and against adopting the 'Resource Consent Process' option relative to the Plan Change are:

Benefits

- Will not utilise the Council's resources involved in a Plan Change process.
- Developers will have flexibility to pursue their own resource consent applications/carry out their own development in their own time.

Costs

- Development may be carried out in an ad hoc manner that will not achieve the expected amenity outcomes, or infrastructure requirements that can be achieved in a formalised integrated approach.
- More costly for the landowner to develop the land.
- Additional risk and compliance costs to the applicant and the Council.
- Uncertainty for the landowner and adjoining neighbours as to what might reasonably be expected for the land.

1.5.5 Alternative 5: District Plan Review

The reasons for and against adopting the option of 'rezoning the land as part of a comprehensive review of the entire Operative Papakura District Plan' by the new Auckland Council are:

Benefits

- Council will eventually fulfil its obligations, in terms of the Auckland Regional Policy Statement, the Auckland Regional Growth Strategy principles, the Operative Papakura District Plan and the relevant environmental outcomes associated with these documents.

Costs

- The landowners would need to wait or rely on the resource consent process to develop the land until such time as the District Plan review is undertaken. This creates uncertainty and may promote inefficient use of the resources on the property in the interim. There have been significant delays (opportunity cost) associated with the preparation of the plan change to date and further delays may deter investment due to uncertainty.
- In the meantime, there will continue to be a shortage of business/industrial zoned land available in Papakura District.

1.6 RISK OF NOT ACTING IF INFORMATION IS INSUFFICIENT

It is considered that sufficient information has been gathered to justify proceeding with this proposed Plan Change and that the risk of acting on this information is less than not acting.

It is considered that there is sufficient information to enable processing of the Plan Change.

1.7 APPROPRIATENESS, EFFICIENCY AND EFFECTIVENESS OF THE PLAN CHANGE

It is considered that the provisions and amendments proposed to the District Plan as part of this Plan Change request are appropriate and necessary. They will assist the Council with its responsibilities of integrated and sustainable management of the City's resources as required under the Resource Management Act 1991.

1.8 SECTION 32 ANALYSIS CONCLUSION

Pursuant to Section 32 of the Act, an evaluation has been undertaken of the alternatives, benefits and costs in relation to the proposed Plan Change for the land described herein.

The analysis contained in this report confirms that the proposed zoning, being part Industrial 1 zone, part Industrial 3 zone, part Residential 8 zone and part Reserve zone is the preferred zoning, meeting the requirements of the Act and is the most efficient and effective means of facilitating the use and management of the subject land into the foreseeable future.

1.9 CONCLUSION

A new zoning is required for the land described herein, as the current Rural Takanini/Drury and proposed Future Urban zoning for the land is not considered to be appropriate to meet the desired land use of the applicant, and there is a significant shortage of Industrial zoned land in the District.

A proposed regime of Industrial 1, Industrial 3, Residential 8 and Reserve zoning with a corresponding Structure Plan is appropriate for the land, having satisfied the relevant statutory tests. It is considered that this:

- Is consistent with the purpose and principles of the Resource Management Act 1991;
- Will enable the Council to fulfil its functions under section 31 of the Resource Management Act 1991; and
- Is the most efficient resource management response having regard to the statutory tests of Section 32 of the Resource Management Act 1991.

DOCUMENTS

The following documents, plans and technical reports are submitted in support of this request to rezone the land described herein.

Appendix 1	Land Holdings Subject to Plan Change
Appendix 2	Copies of Certificates of Title
Appendix 3	Site Location Plan
Appendix 4	Proposed Zoning Maps and Proposed Overlay Plan
Appendix 5	N/A
Appendix 6	N/A
Appendix 7	Extent of the HIRB Recession Plane Plan
Appendix 8	Geotechnical Investigation Reports
Appendix 9	Contamination Assessment Report
Appendix 10	Remediation Action Plan
Appendix 11	Infrastructure Servicing Assessment Report
Appendix 12	Transportation Assessment Report
Appendix 13	Visual and Landscape Effects Assessment Report
Appendix 14	Landscape Concept Plan
Appendix 15	Arboricultural Assessment Report
Appendix 16	Archaeological Assessment Report
Appendix 17	Economic Impact Assessment Report
Appendix 18	Noise Assessment Report
Appendix 19	Consultation Correspondence
Appendix 20	Consultation Strategy
Appendix 21	Cultural Values Assessment
Appendix 22	Proposed Designation Plan

