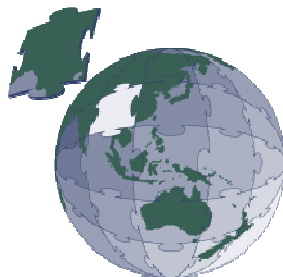


# **Auckland Central – Western Bays Area School Roll Trends and Projected Future School Accommodation Demand**

*A Report to the Auckland Regional Office of the  
Ministry of Education*

by James Newell

**MERA**



*Monitoring and Evaluation Research Associates Ltd*

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All statistics from the Census of Population and Dwellings sources have had the corresponding random rounding, small domain filtering and other then current confidentialising protocols applied.

Monitoring and Evaluation Research Associates Limited, Wellington, New Zealand

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## **Summary and Conclusions**

This report summarises results from a study of school enrolment trends and future projections and likely implications for school accommodation focussing on lower primary (years 1 to 6) as well as flow on effects to intermediate and secondary education for the Western Bays area of Auckland Central.

### ***Is the primary school age population larger than predicted?***

One part of the brief was to determine whether the primary school age population of the study area was larger than predicted. This was answered by integrating the results from the 2007 TFEA (Targeted Funding Educational Achievement) survey with the geocoded 2008, 2009 and 2010 student address data for Auckland City schools. These results were compared with Statistics NZ projected area unit level change in primary school age population between 2007 and 2009. It was estimated that between 2007 and 2009 there was a net increase of 75 in the number of lower primary aged children in the Western Bays area compared with the expected medium Statistics NZ projected increase of only 17. Nevertheless, the Statistics NZ medium area unit projection correctly predicted that most of the increase in this subpopulation would occur in the Westmere area unit.

### ***Analysis of in enrolment zone and in study area enrolments at study area schools***

The proportion of each school's roll arising from enrolments in and out of each school's enrolment zone and from in and outside of the study area was estimated. The proportion of enrolments arising from the enrolment zone increased for five of the seven state lower primary schools. The only school with a significant increase in out of zone enrolments was Newton Central School. This increase was a result of the number of enrolments in a special Maori programme offered by the school.

### ***Exploration of other indicators of change in the population of the study area***

Recent building consents and enrolments of 4 year olds at study area kindergartens were assessed as predictors of new entrant numbers in study area schools. For this area building permits were not a very useful indicator of the location of changes in local school rolls. Enrolments of 4 year olds at study area kindergartens were a crude indicator that was roughly correlated with new entrant numbers for the study area in the following year. Projected births for NZ for Auckland were analysed in the light of the most recent Local authority level births trends including data for the most recent 2010 June year. External migration trends and intra-regional and inter-regional migration rates by age were also estimated and analysed to gain an insight into long term population dynamics at area unit, local authority and regional level. Another possible indicator identified but not explored was statistics on births from the NZ Plunket Society. This could provide a useful indicator of the distribution of births within a local authority, a statistics not available from Statistics NZ.

### ***Extension of Statistics NZ area unit projections into a form suitable for projections***

Statistics NZ area unit projections prepared for the Ministry of Education were grouped into 5 to 10 year, 11 to 12 and 13 to 17 year age ranges. These were

converted into a single year of age projection series for use in preparing enrolment projections. Census statistics for the base year and recent births at local authority level and area unit start year estimates were used in estimating the single year of age projection series.

### ***Study area resident aggregate roll projection***

A projection of the number of enrolments of study area residents at lower primary (years 1 to 6), intermediate (years 7 to 8) and secondary school (years 9 to 13) levels was prepared using a simple proportionate method based on the base year enrolments and projected change in resident population by age. This projected a school accommodation deficit of about 80 in the short term (2015) under a medium growth rate projection from an estimated 2009 base year accommodation surplus of 200, indicating a large increase in enrolments arising from the projected change in the study area population. The short term projection under a low growth rate projection was an estimated surplus of 110 as compared with a large deficit of 290 under a high growth rate projection. The projection indicated a medium term (2020) accommodation deficit of 110 (surplus of 270 under a low growth or deficit of 380 under a high growth rate assumption. For the long term (2031), the projected medium growth rate deficit was 130 (410 surplus under a low growth rate and deficit of 380 under a high growth rate). This projection indicates that there is likely to be a significant future accommodation deficit at local schools but does not recognise properly the distribution of available capacity at local schools, nor does it take account of the out of zone and out of study area enrolments at local schools.

Projection of study area resident upper primary (intermediate school level) enrolments under the base case sees demand fluctuating around current levels until 2013 but increasing by 25 places by the end of the short term horizon (2015). Upper primary level enrolments from study area residents is projected to rise between 2013 and 2017 reaching a peak in the medium term (2020) 105 places above 2009 base year levels under a base case. This level of additional demand is projected to be sustained under the long term base case (2031).

Projection of study area resident secondary school (excluding intermediate school level) enrolments under the base case sees demand fluctuating around current levels between 2009 and 2015 meaning that no increase above current levels is projected in the short term horizon (2015). Secondary school level enrolments from study area residents are projected to rise from 2015 reaching a peak in 2022 which results in 190 additional enrolments on 2009 levels by 2020 (the medium term) under the base case. This level of additional demand is projected to increase to 270 additional enrolments on 2009 levels in the long term (2031) under the base case.

### ***Methods for projecting individual future rolls***

Two alternative school roll level projection methods were developed to prepare school roll projections for lower primary schools informed by Statistics NZ projections. The method considered most reliable for short and medium term projections can be characterised as a new entrant roll progression model. The method has three components. New entrant (5 year olds for projection purposes) were projected for each school based on 2009 “market share” by area unit and Statistics NZ

projections estimated as a single year of age series. This was used to estimate future year 5 year old new entrants as a ratio of those for the 2009 base year. Secondly, the number of those at age group T enrolled at the school was estimated as those for the previous year aged T-1 multiplied by a between year retention rate by age estimated using 2007 to 2009 school roll history for the study area as a whole. The retention rate component of the model was a provision for net migration losses from the study area which are a feature of the study area and Auckland City as a whole. The 2009 base year roll by age for each school provided the base for each school's projection. Another more simple projection was prepared estimating the roll for each school as a ratio of the base year on the basis of each school's "market share" of enrolments in each area unit in 2009 and projected change in the population of each area unit over time. This second method does not use the information inherent in the existing roll composition of the school at the start of the projection and so is not considered to be as reliable in projecting the short term and to a lesser extent the medium term roll for each school.

### ***Enrolment Projections and Accommodation Needs for Individual Study Area Primary Schools***

Lower primary school level enrolments in the study area increased by 17.5% between 2004 and 2009. The aggregate medium growth rate projection for the 2009 to 2015 period for study area schools is expected to see an increase of a further 13.7% (10% under a low and 18% under a high growth rate) in their rolls. This is projected to result in a short term accommodation deficit of 266 student places (261 in net) at study area state schools. As at 2015, the largest accommodation deficits are projected for Grey Lynn (98), Richmond Road (59), Ponsonby Primary (43) and Pt Chevalier (42) schools. Newton Central is also expected to have an accommodation deficit of 21 but roll growth for this school is projected to be more significant in the medium and long term. The only significant accommodation surplus in the study area in 2015 is projected to be at the state integrated St Joseph's School (Grey Lynn) which is projected to have a surplus of 106 places. The demands of specialist programmes such as the Maori programme at Newton Central are not projected in this analysis but may increase the roll demand at Newton Central and possibly Richmond Road and Westmere Schools. Much of this excess demand over capacity is in the east of the study area.

The aggregate medium growth rate projection for the 2015 to 2020 period for study area schools is expected to see an increase of a further 0.5% (11.2% decrease under a low and 11% increase under a high growth rate) in their rolls. This is projected to result in a medium term accommodation deficit of 359 student places (278 in net) at study area state schools. This is in net a small increase on the 2015 accommodation deficit but uneven distribution of demand by school sees deficits grow in some schools but disappear in others. As at 2020, the largest accommodation deficits are projected for Grey Lynn (132, an increase of 34), Richmond Road (81, an increase of 22), Ponsonby Primary (72, an increase of 29) and Newton Central (66, an increase of 45). Westmere and Bayfield Primary Schools are expected to have accommodation surpluses of 46 and 35 respectively. The excess demand over capacity is projected for the east of the study area.

The aggregate medium growth rate projection for the study area schools is expected to see the lower primary roll in 2031 remaining the same as in 2020 (a 6.7% decrease under a low and a 2.6% decrease under a high growth rate). This is projected to result in a medium term accommodation deficit of 485 student places (291 in net) at study area state schools. This is in net sees a very small increase on the 2020 accommodation deficit but uneven distribution of demand by school sees deficits grow in some schools but disappear in others. As at 2031, the largest accommodation deficits are projected for Grey Lynn (171, an increase of 39), Newton Central (163, an increase of 97), Richmond Road (84, an increase of 3) and Ponsonby Primary (67, a decrease of 5). Westmere, Bayfield Primary and Pt. Chevalier Schools are expected to have accommodation surpluses of 105, 55 and 34 respectively. The excess demand over capacity is projected for the east of the study area with excess capacity opening up in the central and west of the study area.

The state integrated primary schools in the study area have a very distinctive and different ethnic composition of their rolls than the study area as a whole, including variously by individual school a high proportion of enrolments from Samoan, other Pasifika, Indian, Chinese and other Asian students. It appears that St. Joseph's School in Grey Lynn may have unused enrolment capacity through the projection period and this may offer some scope for catering for some of the excess demand from other local schools. The contribution to catering for overspill from other local schools may be constrained by the focus of these schools on ethnic communities inside and drawing on a large extent catchment outside the study area.

The total quantum of excess demand at study area schools is probably not sufficient to justify a new school and may be best accommodated by adding additional capacity at individual schools and perhaps some demand management by amendment to enrolment zones for individual schools. The scope for demand management by zoning is limited by the apparent stratification of accommodation surpluses in the west and centre of the study area in the medium and long term. Careful monitoring and updating of the school level picture over the next few years of high roll growth will help to adapt provision to the detail of future accommodation demand.

### ***Enrolment Projections for Individual Study Area Intermediate and Secondary State Schools***

The projections for these schools are prepared using an average catchment market share roll projection method which is not as sensitive and robust for short term projections as the new entrant roll retention method applied to primary school roll projections.

Roll projections at intermediate level suggest that their rolls are likely to drop in the short term but bounce back around 2017 or 2018 with most of the roll growth occurring at Ponsonby Intermediate. Pasadena Intermediate is projected to stabilise at around 290-300, well below the level of its roll in the early 1990's. The roll of Ponsonby Intermediate is projected to grow steadily and strongly from 2014 until at least 2031 reaching 680, a level of much higher than historical levels and creating a large accommodation deficit at that school.



Western Springs College is the only state secondary school in the study area. Its roll has grown every year since 2002 reaching 1052 in 2009. The roll to remain steady and probably dropped slightly in 2015 but to start to grow again from 2016 with high growth to 2023 and slower but continuing growth for the remainder of the projection period, reaching 1100 by 2031.

### ***Uncertainty and Risk***

Uncertainty and risk is found at all layers of assumptions, starting with the underlying population projections, including assumptions about catchment market share, net migration gains or losses in progressing from the roll for one year and the next for each school etc. The provision of low and high projections indicates the broad range of possible future outcomes for each school. Projections assume that catchment market shares remain constant over the projection period, but the experience of past school roll histories is that from time to time many schools are affected by changes in relative popularity due to a change of principal, an unfavourable ERO report or some event at a school which affects public perception and confidence at a school.

Projections are made on a best guess basis assuming average assumptions. This study has shown that between 2007 and 2009 the actual change in the enrolled population for the Westmere, St. Mary's and Ponsonby East area units in the study area were much higher than Statistics NZ had projected. On this basis the inclination would be to suggest that the likelihood is that the projected increase in the school age population and consequently school roll projections and accommodation deficits for the study area will be higher than the medium projection.

Errors and uncertainties are lower for the study area schools as a whole than for individual area units and schools. Higher rates of growth for one or other school or area unit will to an extent be balanced out by lower rates of growth for others.

A review of the robustness of Statistics NZ area unit population projections beyond that carried out to analyse the contributors to 2007 to 2009 roll trends is beyond the scope of this study.

Preparation of school roll projections using two alternative methods provides some validation for the conclusions on future enrolment trends. Where the two methods provide the same result this provides greater confidence. Where the two results differ, the new entrant roll progression method is considered the more reliable in the short and medium term.

The effect of specialist programmes offered by individual schools on their future rolls is beyond the scope of this study. Programmes catering to Maori, Pasifika or Asian ethnic communities are likely to boost a schools future roll above what may otherwise be expected since the number of Auckland children in these ethnic communities is expected to increase at a higher rate than for the NZ European population. However, the details of this will depend on the local distribution of these ethnic communities within the City now and in the future, beyond the scope of this study.

### ***Issues for later work and consolidation of methods***

This study has explored a wide range of sources in investigating the contributors to recent high growth in the rolls of Auckland Central West primary schools. The most useful source has been the geocoded student records by residence for each school for 2008 to 2010 and secondly the 2007 TFEA survey data which enabled a crude time series to be developed. Without this localised monitoring data it would not have been possible to deconstruct the local population changes that actually occurred between 2007 and 2009 / 2010.

This study shows that the short term period until 2015 can be expected to result in substantial further growth in the rolls of some study area primary schools and more modest growth in others. Managing capacity to meet this future demand will likely involved some strategic decisions on additional capacity at some schools as well as fine tuning through more modest interventions at others. Good monitoring of trends against projections will be important in making good decisions.

To support this, it is recommended that the practise of annual collection and geocoding of student address data linked to age, ethnicity and other variables be continued and refined. It provides a unique information base for tracking changes in numbers, preferences etc. for individual schools and can be useful in a wide range of applications to inform management of capacity. This study has demonstrated some but not all of these applications. It would be especially useful to collect this information in 2011 to synchronise with statistics collected as part of the 2011 population census.

The data collected in this annual student address collection actually provides greater depth on some dimensions and other information not available from the census. The student address data can be used in ways that haven't been explored in this study, namely to better understand localised internal migration of students and trends in consumer preferences between schools. This could be used to better informed the planning of specialist programmes going beyond the summary analysis of Maori enrolments in the last section of this report.

A more comprehensive strategic study across the City would better inform the development of specialist Maori and other programmes, something beyond the scope of this study.

One simple and sensitive technique for monitoring trends for primary and secondary schools would be to make projections of new entrant rolls (perhaps use enrolments of 5 year olds as at July as a proxy for primary school new entrants) and check new entrant rolls against those projections. As has been shown extensively in this report for all schools in the study area, the new entrant rolls are a very good predictor of future primary school rolls – since children remain at a primary school after joining as a new entrant unless their families move somewhere too distant for convenient attendance.

It would be useful to ask Statistics NZ to provide the annualised birth assumptions by area unit corresponding to their area unit level projections. It would also be useful to ask for the projections to be further broken down by age, at minimum into those 5 and those 6 to 10 years of age to support the new entrant roll progression type projection method prototyped in this report.

# 1 Introduction

## 1.1 The Brief

The purpose of this research is to assist the Ministry of Education in making informed decisions about future school property requirements to accommodate future roll demand in the “Western Bays” area of Central Auckland. The “Freeman’s Bay” area unit (# 514000) is left out of this analysis as it is included in another parallel study focussing on the Auckland Central CBD area.

The analysis framework is focussed in the main on the “lower primary” (years 1 to 6) school investment but explores the future implications for state funded intermediate and secondary schools. The levels of analysis include :

- school enrolment demand and future projections for the geographic area defined in Figure 1 comprising specific 2006 statistical area units;
- the catchment residential distribution and trends for state funded schools;
- the contribution of individual state funded schools towards meeting this study area demand; and
- existing capacity in the fully state funded primary schools in the study area.

This report extends and refines results of an interim study area report. That earlier analysis has been extended down to the level of each individual state funded school expanding on the interim study area overview.

Figure 1.1 shows the names of intermediate and secondary fully state funded schools in the study area in blue while state funded primary school names are in black. The names of other schools are shown in red. All of the schools in the study have an enrolment zone and analysis includes consideration of demand within and from outside of each school’s enrolment zone as well as demand arising from outside of the study area. Note that in some cases the enrolment zones of individual schools extend outside of the study area.

The state funded primary schools included in this study include :

- Bayfield School
- Grey Lynn School
- Newton Central School
- Pt Chevalier School
- Ponsonby Primary School
- Richmond Road School
- Westmere School (Auckland)

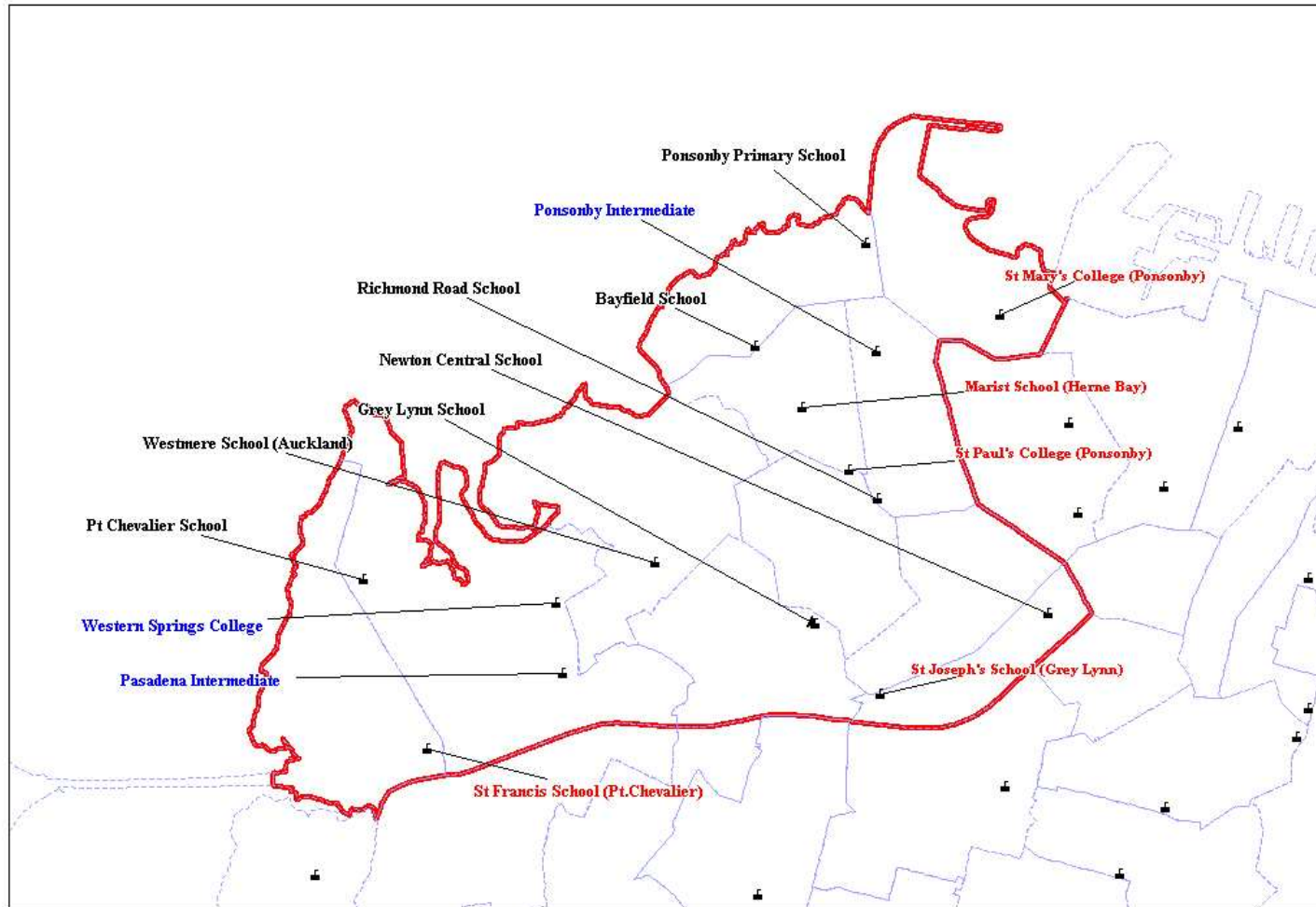
A customised geographic breakdown of Auckland City is used to put the results for the Western Central Auckland study area into perspective. The study area itself departs slightly from that used in Auckland City’s “It’s My Backyard” project as the “Freeman’s Bay” area unit (# 514000) is excluded from the analysis. The focus of this study is the “Western Bay’s” study area. The residual Auckland Central CBD (including Freeman’s Bay) is a second area. The remaining area units of Auckland City are grouped in a best fit to the 2006 Ward boundaries within the City. A 2006 census statistical area unit key to these customised areas is included in Appendix 1.

## **1.2 Sources and approach**

A range of sources of information have been integrated in assessing the base year estimated and actual enrolled population by age living in the study area. These include :

- the geocoded 2008, 2009 and 2010 records of addresses (with birth dates in the 2009 and 2010 data) for students enrolled in Auckland schools;
- the geocoded 2007 TFEA survey results for students enrolled in Auckland schools;
- July School roll return statistics for all schools back to 1992;
- Early Childhood Care and Education Statistics returns for the study area to 2002;
- Statistics NZ 2008 release of the 2006 census based area unit projections;
- 2006 Census statistics on the single year of age composition of Auckland City and Statistics NZ adjusted June 2006 projection starting year population by 5 year age group;
- Birth statistics for Auckland City by June year for 2006 to 2009 and extrapolated births for the June 2010 year.

**Figure 1.1 : Western Bays of Central Auckland Study Area and location of schools included in this study**



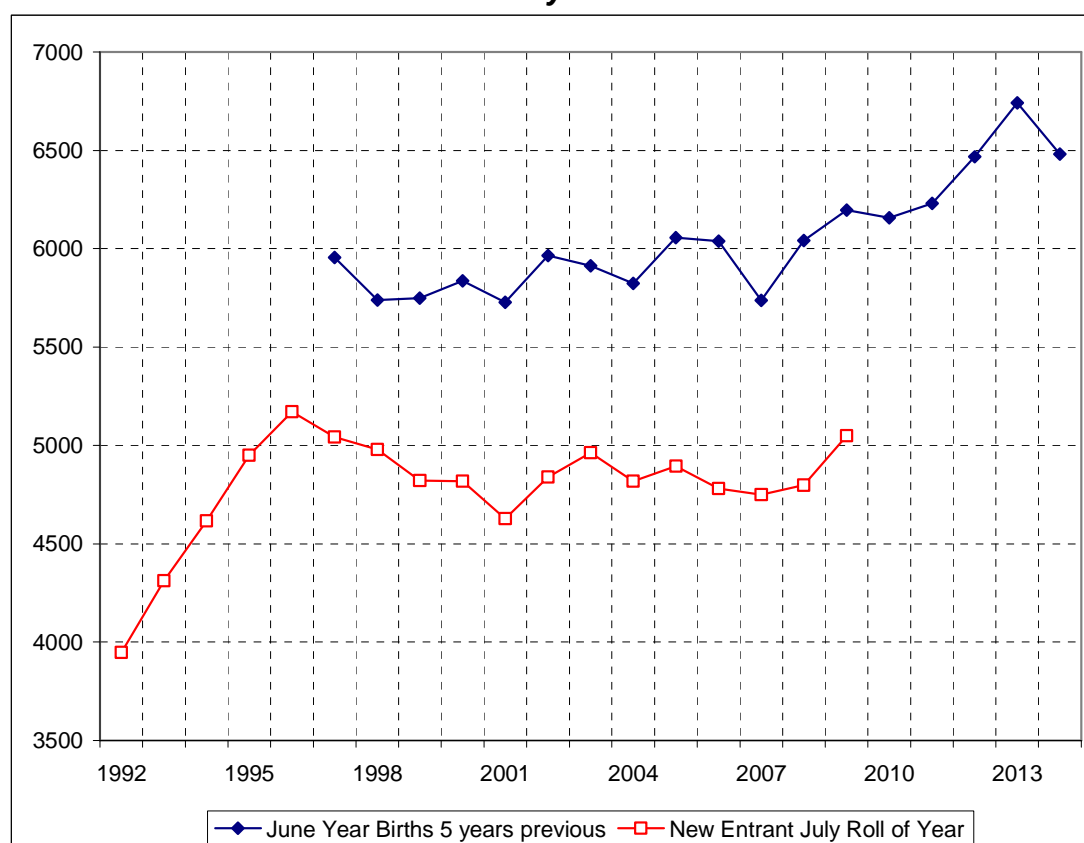
## 2 Regional Context : births and migration

### 2.1 Annual births and new entrant roll trends in Auckland City

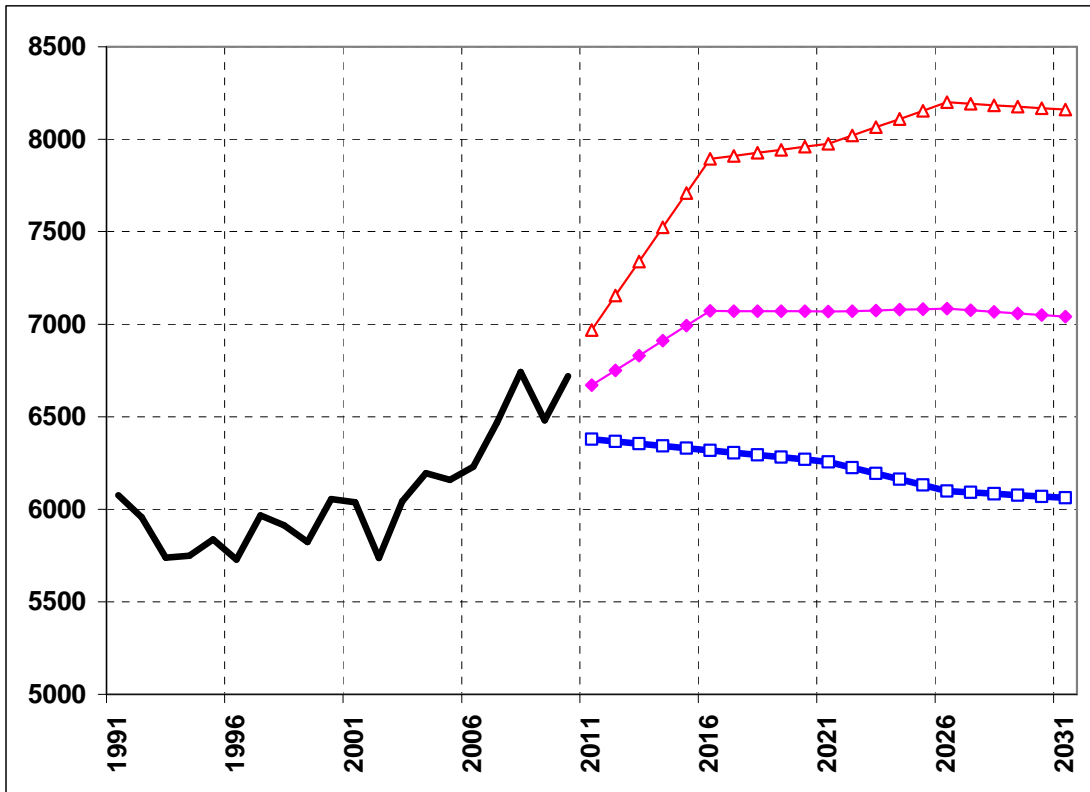
The number of children born annually in Auckland City has grown from a recent historical low of 5,740 in the year to June 2002 to the most recent peak of 6,791 in the year to June 2010. As shown in Figure 2.1, this means that when the births to June of each year are lagged five years, they reflect roughly the subsequent new entrant roll trends across Auckland schools. Rolls started to rise substantially over the 2007 to 2009 in Auckland City (Figure 2.2) as they have done for New Zealand as a whole. On the basis of births since 2004, the expectation is that there may be a slight dip in the new entrants roll in the 2010 year, but that they will rise for the following three years with a drop in the 2014 year. The 2010 Statistics NZ “medium” population projection for Auckland City envisages the recent birth wave accelerating over the 2011 to 2016 period – although this may not pick up speed until after 2011. Note that New Zealand births for the year to June 2010 match Statistics NZ 2009 population projection “high” birth rate assumptions (Figure 2.3).

The Statistics NZ 2010 revision of the Auckland City population projection increased the projected births only by a small margin (Table 2.1). A reasonable expectation would be that the next few years will see a rise in lower primary rolls in the city as a whole, with births in the Western Bays Auckland Central study area replicating the trend for the city as a whole.

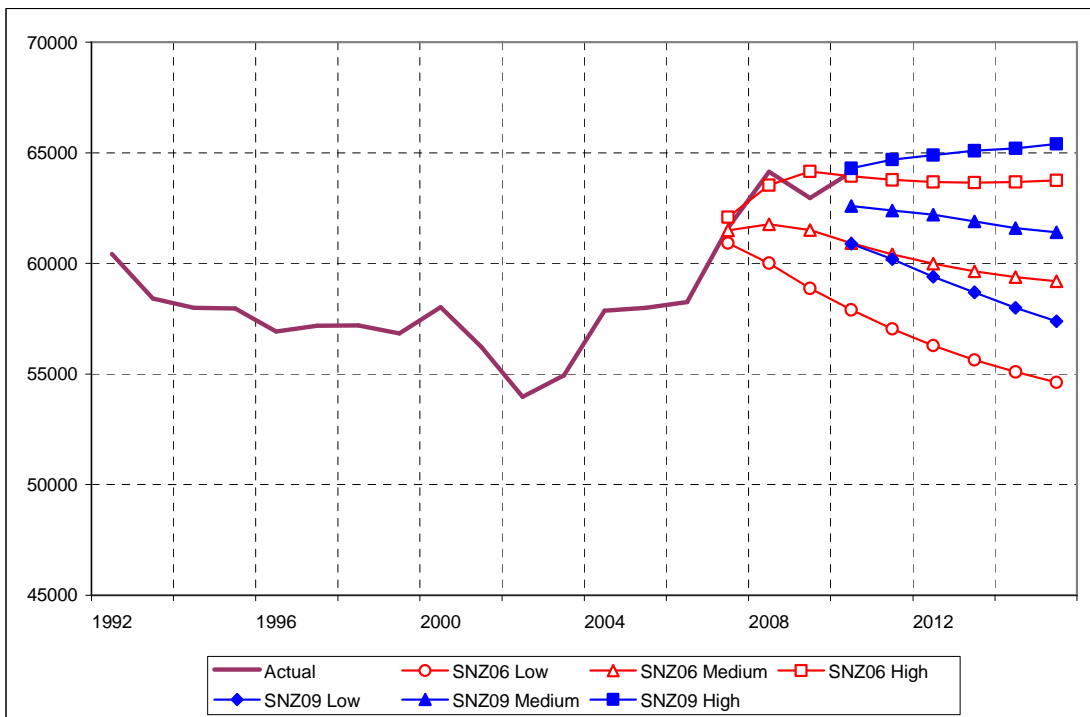
**Figure 2.1 : 5 year old July roll trends versus lagged June year births in Auckland City 1992 to 2009**



**Figure 2.2 : Projected 2011 to 2031 Auckland City births**



**Figure 2.3 : Actual 1992 to 2010 and projected 2007 to 2015 New Zealand births**



**Table 2.1 : Comparison of birth assumptions for Auckland City in the 2010 versus previous 2007 Statistics NZ projection**

Period	Low		Med		High	
	2007	2010	2007	2010	2007	2010
2006-2011	30,600	31,700	32,900	33,100	35,100	34,600
2011-2016	31,400	31,700	34,000	34,600	36,600	37,600
2016-2021	31,700	31,400	34,600	35,400	37,500	39,700
2021-2026	31,100	30,800	34,300	35,400	37,600	40,600
2026-2031	30,400	30,400	34,000	35,300	37,800	40,900



## **2.2 Intra-regional, inter-regional and international migration flows of under 5's**

After birth mortality of under 5's is relatively small, but migration has a larger and significant impact. On estimates<sup>1</sup> made from historical births and census population counts (without making allowance of deaths and net differences in census undercount) there is a consistent historical pattern of net out migration of under 5's from the Auckland region as well as net migration movement of under 5's from Auckland City to Rodney District, Waitakere and North Shore Cities. This is demonstrated by the estimates in Table 2.2. This migration movement consists of a net gain due to permanent long term international migration (as illustrated using March year statistics for 1991 to 2010 in Figure 3.3) cancelled out by a larger net interregional internal migration loss of under 5's from the region (Table 2.3). The Statistics NZ 2006 census based area unit projection envisages a similar pattern of net outward migration of under 5's from Auckland City to the other local authorities of the Auckland region in future.

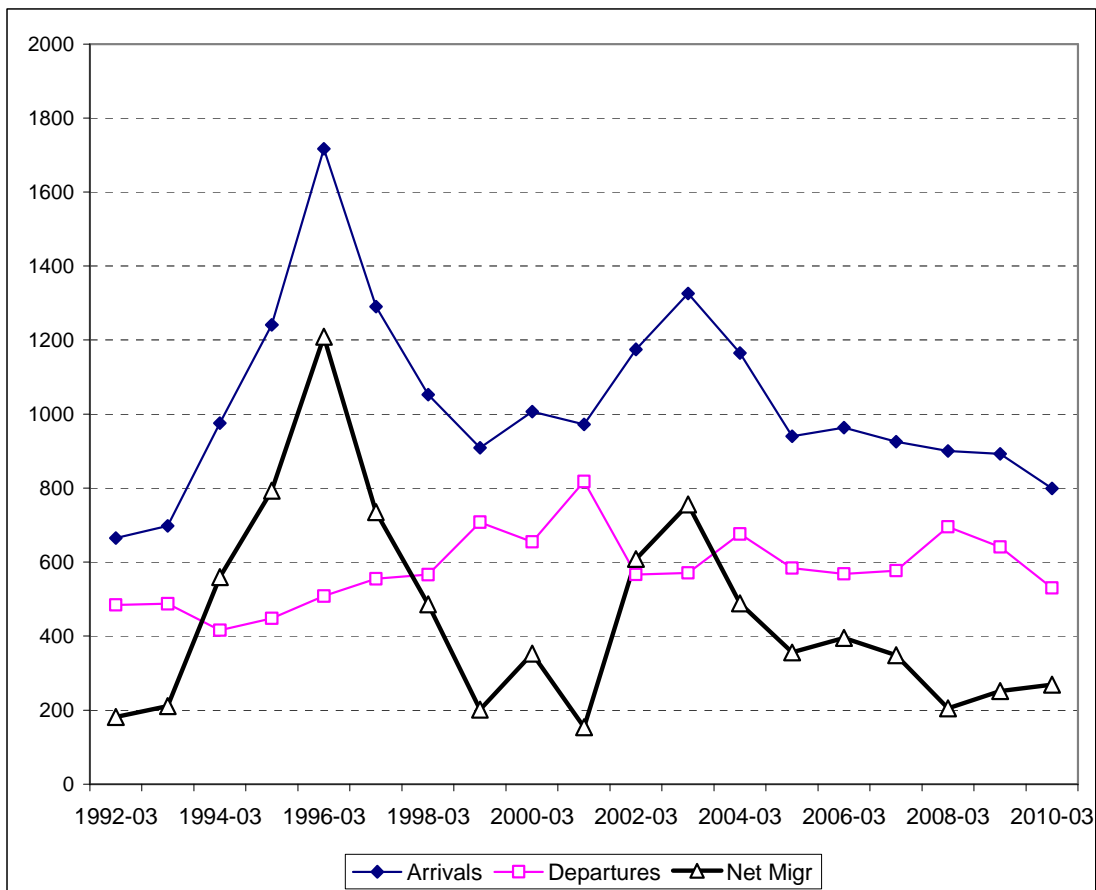
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<sup>1</sup> The estimates don't factor in intercensal deaths of under 5's after birth and net differences in census net undercount between successive census

**Table 2.2 : Estimated 1991 to 2006 intercensal net migration of under 5's by Auckland Locality**

Locality	1991-1996	1996-2001	2001-2006
Rodney District	12.4	4.4	8.5
North Shore City	2.6	-1.9	-3.6
Waitakere City	-4.5	-5.4	-6.8
Auckland City	-14.6	-14.9	-14.1
Manukau City	-7.3	-7.3	-6.1
Papakura District	-6.9	-10.3	-2.7
Franklin District	5.8	3.0	8.3
Auckland Region Cities and Districts sum	-6.5	-7.8	-6.8

**Figure 2.4 : Net permanent long term external migration of under 5's Auckland City for 1991 to 2010 March years**



**Table 2.3 : Projected 2011 to 2031 net migration of under 5's by Auckland Locality**

Locality	2006-2011	2011-2016	2016-2021	2021-2026	2026-2031
Rodney District	7.3	7.2	6.6	6.9	6.0
North Shore City	1.1	1.2	1.3	1.5	1.3
Waitakere City	-1.2	-1.5	-1.2	-1.3	-1.2
Auckland City	-9.2	-8.7	-8.6	-8.5	-8.3
Manukau City	-2.2	-1.9	-1.9	-1.6	-1.6
Papakura District	0.1	-0.9	0.4	-0.2	-0.1
Franklin District	8.0	7.6	7.6	7.0	6.5
Auckland Central West Study Area	-12.9	-12.2	-11.6	-12.5	-11.4
<i>Pt Chevalier North</i>	-6.3	-4.9	-5.0	-6.6	-6.3
<i>Western Bays North</i>	-11.3	-11.5	-11.7	-12.4	-12.4
<i>Western Bays South East</i>	-19.7	-17.5	-15.4	-16.0	-13.3
Auckland Region Cities and Districts sum	-2.7	-2.6	-2.5	-2.3	-2.2

### 3 Recent lower primary school roll change in the Western Bays study area

#### 3.1 Recent versus projected change in lower primary enrolments

The number of students aged 5 to 10 years enrolled at schools in the “Auckland Central West” study area grew by 6.2% or 183 between 2006 and 2009. This is higher than expected under the 2006 census based Statistics NZ 2008 ‘medium’ population projection for the study area (which was based on the 2007 local authority projection release). The number of 5 to 10 year old children in the study area was projected to grow by only 1.8% (Tables 3.1, 3.2).

Across Auckland City as a whole, the medium population projection predicted a 1.7% drop in the lower primary roll but there was actually a 0.9% increase in the number of students aged 5 to 10 between 2006 and 2009. On average, the lower primary roll change over 2006 to 2009 suggests a 2.6% higher rate of change in the 5 to 10 year old resident population of Auckland City than expected under the Statistics NZ “medium” projection.

**Table 3.1 : Statistics NZ projection of 2006 to 2009 percent change in population compared with % change in students aged 5 to 10 years enrolled at local schools by area for the Auckland City area**

Parts of Auckland City	Low Projection	Medium Projection	High Projection	Actual July Roll Change	Difference : Medium vs Rolls
1 Auckland Central West	0.6	1.8	2.9	6.2	+4.4
2 Auckland Central CBD	11.4	12.3	13.2	14.7	+2.4
3 Avondale-Roskill	-5.1	-4.3	-3.4	-5.6	-1.3
4 Eden-Albert	-7.0	-6.4	-5.7	-1.6	+4.8
5 Hobson	-3.2	-2.0	-1.2	2.6	+4.6
6 Eastern Bays Auckland	2.2	3.2	3.9	4.9	+1.7
7 Tamaki-Maungakiekie	-0.7	0.1	0.9	4.3	+4.2
8 Hauraki Gulf Islands	-8.6	-8.0	-7.2	-4.0	+4.0
9 Auckland City	-2.6	-1.7	-0.9	0.9	+2.6

**Table 3.2 : Statistics NZ projection of 2006 to 2009 of change in population compared with change in number of students aged 5 to 10 years enrolled at local schools by area for the Auckland City area**

Parts of Auckland City	Low	Medium	High	Roll Change	Difference : Medium vs Rolls
1 Auckland Central West	13	42	67	183	+141
2 Auckland Central CBD	38	41	44	64	+23
3 Avondale-Roskill	-382	-324	-257	-444	-120
4 Eden-Albert	-307	-281	-249	-69	+212
5 Hobson	-119	-73	-44	130	+203
6 Eastern Bays Auckland	75	110	136	172	+62
7 Tamaki-Maungakiekie	-58	8	71	272	+264
8 Hauraki Gulf Islands	-56	-52	-47	-25	+27
9 Auckland City	-796	-529	-279	283	+812

The geocoded enrolments provide a rich window on the current linkages between each school and its community and also make it possible to monitor and analyse changes over time. They have been collected and geocoded for most schools and students for the years 2008, 2009 and 2010. They are collected as at the end of February / early March. They identify the residential location of more than 90% students, limited by the fact that some of the addresses are incomplete or inaccurate. The geocoding is likely to improve over time as experience and systems mature. The 2007 TFEA survey carried out to identify the meshblock location of all students in the Auckland region for equity funding purposes have also been analysed for this study. This has made it possible to estimate the changes in number of 5 to 10 year old children in each area unit of the study area between 2007 and 2009/2010 providing a check on the population projection assumptions.

The data collected and rolls estimated using the geocoded enrolments are as at the end of February, compared with the July for the main school roll return statistics. Those who start school between the end of February and end of June when the July roll statistics are collected are missed out – leaving out new entrants whose birthdays fall in the March to June period. This has adjusted for here by scaling up the estimated number of students aged 5 years for the proportion of estimated birthdates between the beginning of March and end of June. The 2008 geocoded records also leave out many schools, mainly not state funded private schools.

Using the geocoded student records, it is estimated that the enrolled 5 to 10 year aged student population resident in the Western Bays area is 3.6% larger than expected under the medium Stats NZ projection (Table 3.3). This represents 85 more enrolled locally resident 5 to 10 year old students living in the Auckland Central West area than expected under the Statistics NZ medium projection. As 4.4% more students were enrolled at the local schools (but not necessarily resident in the area) between 2006 and 2009. Ignoring the slight difference in the periods for these two statistics (2007 to 2009 versus 2006 to 2009) this would indicate that 3.6% is accounted for by larger local area population growth and a residual of approximately 0.8% due to net gain in students living outside the study area but attending local schools.

**Table 3.3 : 2009 Stats NZ (June) medium projection and raw and adjusted estimates of the West Central Auckland resident enrolled student population**

Age as at end of June	Extrapolated from Stats NZ Medium Projection	Geocoded Enrolments	Adjusted Geocoded Enrolments	Difference – adjusted enrolments and population projection	Percent difference
005 yrs	414	332	443	29	7.0
006 yrs	403	431	431	28	6.9
007 yrs	392	411	411	19	4.8
008 yrs	390	406	406	16	4.1
009 yrs	385	396	396	11	2.9
010 yrs	382	365	365	-17	-4.5
5-10 yrs	2,367	2,341	2,452	85	3.6

The area unit level change in geocoded roll of enrolled students aged 5 to 10 in 2007 and 2009 matches some of the major features of the “medium” projected change in the 5 to 10 year resident population by area unit (Table 3.4). Both the projection and the actual roll agree that the largest increase in student numbers is for the Westmere area unit and the largest decrease is the Surrey Crescent area unit. The roll growth in the Westmere area unit is roughly double that projected in the Statistics NZ projection and makes up a large proportion of the higher than projected roll growth. Most of the higher than expected roll growth in the Western Bays study area is therefore accounted for by higher than expected growth in the locally resident student population with differences concentrated in a small number of area units, most notably Westmere but also significantly in St Mary’s, Ponsonby East and Surrey Crescent.

**Table 3.4 : Statistics NZ projection of 2007 to 2009 of “medium” projected change in population compared with change in number of resident geocoded students aged 5 to 10 years by area unit**

2006 Area Unit	Estimated 5 to 10 year olds by Area Unit in 2009			Est. Change 2007 to 2009		
	Stats NZ projection	Adjusted geocoded enrolment est.	Difference	Geocoded roll	Stats NZ projection	Diff
Point Chevalier West	289	275	14	5	0	5
Point Chevalier East	394	369	25	-3	7	-10
Westmere	442	470	-28	83	43	40
Herne Bay	220	185	35	5	9	-4
St Marys	107	107	0	11	-7	18
Ponsonby West	203	195	8	-11	-6	-5
Ponsonby East	140	144	-4	15	-3	18
Grey Lynn West	200	220	-20	-11	-6	-5
Grey Lynn East	168	143	25	2	10	-8
Surrey Crescent	166	187	-21	-13	-25	12
Arch Hill	38	48	-10	-8	-5	-3
<b>Western Bays Area</b>	<b>2,367</b>	<b>2,342</b>	<b>25</b>	<b>75</b>	<b>17</b>	<b>58</b>

Management of demand and supply on the school’s network is assisted through the use of enrolment schemes. As shown in Table 3.5, the trend has been towards increased shares of the student roll for most schools being located in their respective enrolment zones. A notable exception is Newton Central School. Much of its catchment and enrolment zone are outside the study area. This is a result of recent growth in a specific Maori language programme drawing on students from a wide area across central Auckland, extending outside its enrolment zone and the study area.

**Table 3.5 : Percent of the rolls of Western Bay area primary schools in the study area and in each school's enrolment zone : 2008 to 2010**

School	% in Study Area			% in Enrolment Zone		
	2008	2009	2010	2008	2009	2010
Bayfield School	90.9	90.8	88.4	57.5	62.7	61.0
Grey Lynn School	75.4	76.5	79.9	56.5	58.9	62.6
Newton Central School	26.3	22.3	18.5	40.0	36.8	32.3
Pt. Chevalier School	83.4	85.5	83.4	82.2	84.5	82.4
Ponsonby Primary School	86.0	88.7	89.7	49.2	61.6	57.8
Richmond Road School	66.5	61.4	60.3	43.6	42.8	45.0
Westmere School	92.8	94.0	93.9	78.4	80.5	81.6

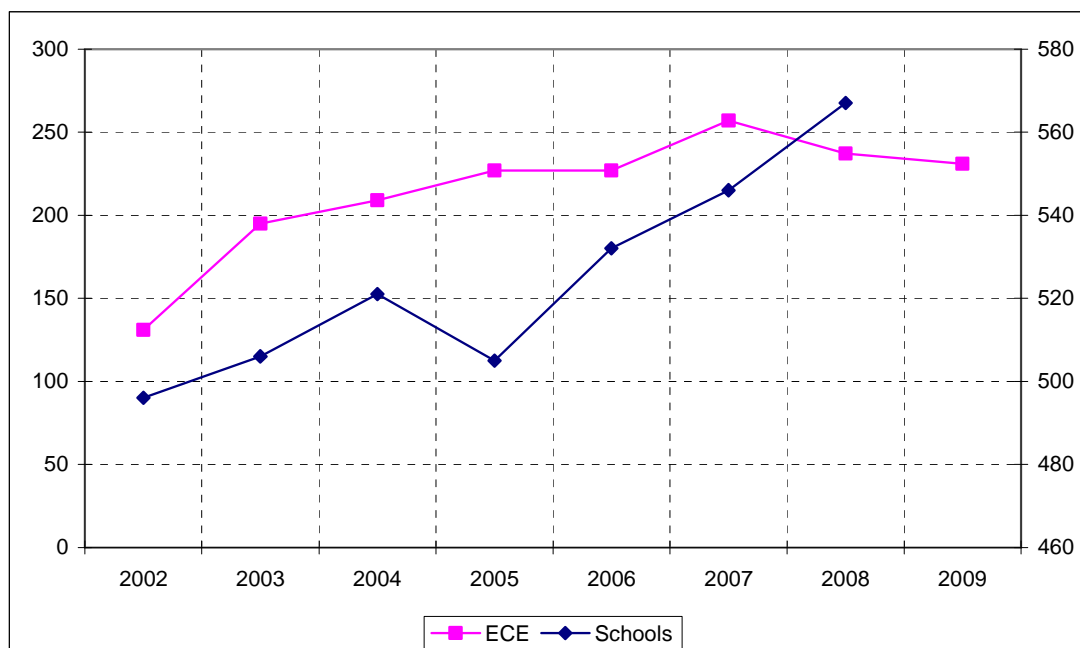
### 3.2 Early Childhood Enrolment Trends in the Study Area

Study area enrolments of 4 year olds in early childhood services by type for 2002 to 2009 show a rough relationship with subsequent July school rolls aged 5 in the study area (Table 3.6). Selection of the kindergarten enrolments at age 4 years in this comparison recognises that enrolments in ECE types are not mutually exclusive. Children can enrol in more than one type of service and may well need to do so in order to fit in with full time employment commitments of many parents. Kindergarten roll counts are selected on the reasoning that most children would have a core enrolment in that service and only at one kindergarten – so there is not expected to be any double counting. One problem is that the data suggests that not all study area 4 year olds enrol in a kindergarten. It is also likely that many pre-schoolers resident in the study area will be attending ECE services closer to one or other parental workplaces which are likely to be outside the study area – and are thus excluded from the study area ECE statistics. To unravel these inconsistencies it would be necessary to analyse ECE and school trends over a much larger area – at Auckland City and/or regional level.

**Table 3.6 : Study Area Early Childhood Enrolments of 4 year olds by ECE Type and July school roll aged 5 years : 2007 to 2009**

Early Childhood Service Type	2007	2008	2009
Kindergarten	257	237	231
Playcentre	3	2	5
Education & Care Service	256	293	267
Homebased Service	26	23	28
Licence-exempt Playgroups / ECD Playgroups	27	69	53
Nga Puna Kohungahunga		1	
<b>ECE Subtotal</b>	<b>569</b>	<b>625</b>	<b>584</b>
<b>Study area July Enrolments aged 5</b>	<b>458</b>	<b>473</b>	<b>473</b>

**Figure 3.1 : Study Area Kindergarten Enrolments of 4 year olds by ECE Type versus July school roll (subsequent year) aged 5 years : 2002 to 2009**



**Table 3.7 : Enrolments of 4 year olds in Study Area Kindergartens : 2002 to 2009**

Kindergarten	2002	2003	2004	2005	2006	2007	2008	2009
Ponsonby Kindergarten	7	63	64	74	67	71	65	72
Pt Chevalier Kindergarten	45	45	43	60	69	71	74	71
St James Kindergarten	33	34	49	38	35	45	39	33
Westmere Kindergarten	46	53	53	55	56	70	59	55
<b>Sub Total</b>	<b>131</b>	<b>195</b>	<b>209</b>	<b>227</b>	<b>227</b>	<b>257</b>	<b>237</b>	<b>231</b>

### 3.3 Recent versus projected change at the school level

Overall, the lower primary roll for schools in the Western Bays area increased by 6.2% between 2006 and 2009. The largest change in terms of both numbers and rate of growth was the 23.6% growth in the Westmere School roll, but the rolls of Newton Central (18.6%), Grey Lynn (10.7%) and Pt. Chevalier schools also increased very sharply (Table 3.6).

The enrolled 5 to 10 year aged student population of the Western Bays area is 4.4% larger than expected on the basis of Stats NZ projections. This represents 85 more enrolled locally resident 5 to 10 year old students living in the Auckland Central West area than expected under the Statistics NZ medium projection (Table 3.2). The rate of roll growth between 2006 and 2009 was also very fast at the state integrated Marist (Herne Bay) (12.5%) and St Francis (Pt. Chevalier) (5.9%) schools. Many of the schools have growth in one area unit of their catchment countered by a reduction in enrolments from other areas. Westmere School is the most notable exception, with very large growth in Westmere area unit and no countering reduction from elsewhere in its catchment.



**Table 3.8 : Change in number of students aged 5 to 10 years enrolled at local state primary schools in Auckland Central West study area**

Auckland Central West Schools	Enrolments aged 5 – 10 years				2006 - 2009	
	2006	2007	2008	2009	Change in Nos	% Change
<b>State Schools</b>						
Bayfield	333	331	314	315	-18	-5.4
Grey Lynn	281	301	314	311	30	10.7
Newton Central	237	256	281	281	44	18.6
Pt Chevalier	578	597	607	612	34	5.9
Ponsonby Primary	344	345	339	347	3	0.9
Richmond Road	333	335	335	321	-12	-3.6
Westmere (Auckland)	408	422	474	504	96	23.5
<b>Subtotal</b>	<b>2,514</b>	<b>2,587</b>	<b>2,664</b>	<b>2,691</b>	<b>177</b>	<b>7.0</b>
<b>State Integrated</b>						
Marist (Herne Bay)	128	125	132	144	16	12.5
St Francis (Pt.Chevalier)	205	210	205	217	12	5.9
St Joseph's (Grey Lynn)	105	87	81	83	-22	-21.0
<b>Subtotal</b>	<b>438</b>	<b>422</b>	<b>418</b>	<b>444</b>	<b>6</b>	<b>1.4</b>
<b>All Schools</b>	<b>2,952</b>	<b>3,009</b>	<b>3,082</b>	<b>3,135</b>	<b>183</b>	<b>6.2</b>

### **3.4 Conclusions - reasons for the higher than expected roll growth in the study area**

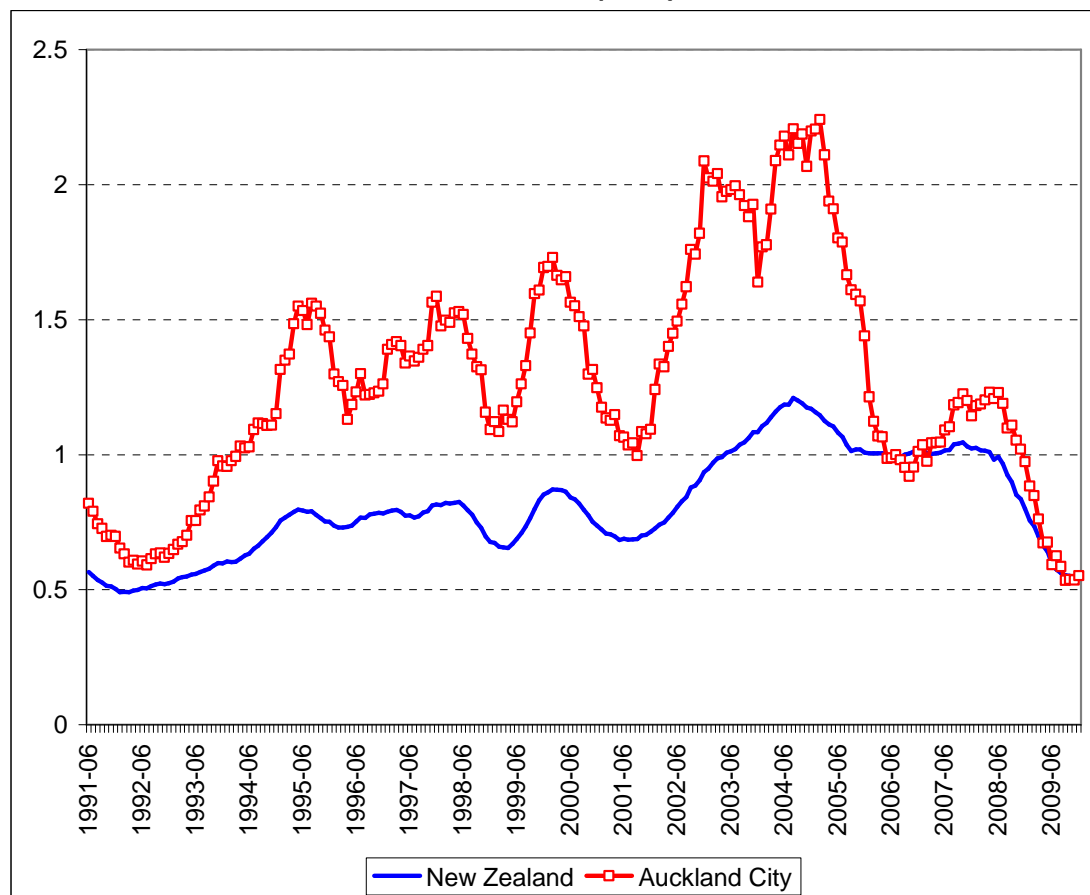
- Most of the excess of roll growth above that projected for study area schools is a result of a more rapid increase in the lower primary aged population of the study area than expected under the Statistics NZ medium projection.
- Very rapid growth of Westmere School roll is the result of very high and sustained growth in the lower primary aged population of Westmere area unit which more than made up for a small reduction in the enrolments from Surrey Crescent, which is the other main area unit in its enrolment zone.
- Newton Central School was the other school experiencing the next highest roll growth over the 2006 to 2009 period. In its case, this growth was gained from enrolments outside the study area and much of it outside its enrolment zone arising from development of a Maori specialty programme providing for the needs of a wider catchment across central Auckland.
- The share of enrolments 'in zone' at other schools was stable or increased between 2006 and 2009.

## 4 Demographic characteristics and projections for the study area

### 4.1 Auckland City Council Building Consent Trends and Western Bays Area Plan

As is shown in Figure 4.1.1, new residential building consents by floor area for Auckland City and New Zealand were at a 20 year low as at December 2009. On a crude seasonally adjusted peaked in February 2005 for Auckland City and August 2004 for New Zealand. 2007 to 2010 Residential building consents data by year collected by the Auckland City Council for the Western Bays area by suburb are shown in Table 4.1.1. The Pt. Chevalier area has quite a large share of the multi-storey and multi-unit consents and the balance are mainly in the Ponsonby and Grey Lynn area. The peak year for consents in this Council data is in 2008 with numbers of consents for 2010 dropping to 20% of 2008 levels with no multi-unit consents issued.

**Figure 4.1.1 : Floor Area of New Residential Building Consents issued 12 months moving average for Auckland City and NZ indexed to a 1 July 2006 base (=1.0)**



**Table 4.1.1 : Building Consents Issued by the Auckland City Council by Suburb for the Western Bays Area 2007 - 2010**

Type	Suburb	2007	2008	2009	2010
Multi-storey	Grey Lynn		31		
	Point Chevalier		36		
	Ponsonby			3	
	Subtotal	0	67	3	0
Multi-unit	Point Chevalier				1
	Subtotal	0	0	0	1
New dwellings 1 or 2 storey	Grey Lynn			2	2
	Herne Bay	4	4		0
	Point Chevalier	6	12	9	7
	Ponsonby	7	6	2	1
	Westmere	1	2	4	5
	Subtotal	18	24	17	15
New dwelling 3 storey or more	Herne Bay	7	0	0	
	Point Chevalier		0	1	
	Ponsonby		1		
	Subtotal	7	1	1	0
<b>All Types</b>	<b>All Suburbs</b>	<b>25</b>	<b>92</b>	<b>21</b>	<b>16</b>

As is shown in Table 4.1.2, the proportion of Auckland Central Western Bays private households made up of families with children or multi-family groups has changed little in the last 25 years to 2006, increasing between 2001 and 2006 after a period of gradual decline between 1986 and 2001. The proportion of families with children in the study area is below the average for Auckland City but more than three times the rate for the Auckland Central CBD area. The proportion of households made up of a family with children or a multi-family unit increased most sharply in Pt Chevalier West and Westmere between 2001 and 2006 (Table 4.1.3). Of all Western Bays suburbs, Westmere area unit had the highest proportion of families with children or multi-family households in 2006, a shift from 2001 when Ponsonby West has the highest rate. This result is consistent with a goes some way to explain the large increase in the number of children in the Westmere area unit and the large recent increase in the roll of Westmere Primary School.

**Table 4.1.2 : Percent of Occupied Private Households made up of a family with children or a two or three family household for parts of Auckland City 1981 to 2006**

Locality	1981	1986	1991	1996	2001	2006
Auckland Central West	37.6	38.0	37.4	36.7	34.7	36.4
Auckland Central CBD	24.2	25.8	24.5	20.8	14.0	12.2
Avondale-Roskill Ward	51.1	49.5	48.0	50.7	50.8	54.0
Eden-Albert Ward	34.9	35.9	36.7	40.3	40.2	42.9
Hobson Ward	37.5	38.3	40.4	41.7	41.0	44.5
Eastern Bays Ward Auckland	41.3	40.1	39.8	43.1	41.6	43.8
Tamaki-Maungakiekie Ward	43.7	44.2	45.6	47.3	45.7	47.5
Hauraki Gulf Islands Ward	35.1	45.3	42.0	43.6	39.1	43.5
<b>Auckland City</b>	<b>42.8</b>	<b>42.9</b>	<b>43.3</b>	<b>44.7</b>	<b>43.3</b>	<b>44.4</b>

**Table 4.1.3 : Percent of Occupied Private Households made up of a family with children or a two or three family household by area unit for the Western Bays area 1981 to 2006**

Locality	1981	1986	1991	1996	2001	2006
Point Chevalier West	35.0	37.4	32.6	35.2	37.3	42.0
Point Chevalier East	37.7	39.9	40.1	40.8	41.2	44.1
Westmere	40.3	39.3	39.6	41.9	42.8	47.1
Herne Bay	25.8	26.6	30.4	31.5	30.7	31.5
St Marys	23.3	24.0	26.2	27.0	27.9	24.9
Ponsonby West	35.2	38.6	40.0	36.8	43.7	41.3
Ponsonby East	38.6	37.6	34.1	29.8	25.1	27.9
Grey Lynn West	48.2	48.5	46.1	42.0	34.0	35.3
Grey Lynn East	48.1	43.9	43.6	40.8	31.0	31.1
Surrey Crescent	40.4	42.8	42.3	42.1	36.0	38.2
Arch Hill	44.7	37.7	32.5	23.9	18.0	19.4
<b>Western Bays Total</b>	<b>37.6</b>	<b>38.0</b>	<b>37.4</b>	<b>36.7</b>	<b>34.7</b>	<b>36.4</b>

As is shown in Table 4.1.4, the proportion of Auckland Central Western Bays private households living in a separate house is higher than average for Auckland City. The only areas with a higher rate are the Avondale-Roskill Ward and the Hauraki Hulf Islands. The proportion of residents of the Western Bays area living in a separate house increased slightly between 2001 and 2006, against the overall trend of the City as a whole. Within the Western Bays area, the Westmere area unit again stands out with 84.6%, the highest proportion of residents living in a separate house in 2006 (Table 4.1.5). Other area units with a high proportion living in a separate house included Ponsonby West and Pt. Chevalier West. Only 50.5% of residents of Herne Bay and 46.2% of those living in St Mary's lived in a separate house in 2006.

**Table 4.1.4 : Percent of Occupied Private Households living in a separate house for parts of Auckland City 1981 to 2006**

Locality	1981	1986	1991	1996	2001	2006
Auckland Central West	65.0	67.9	69.1	71.5	69.8	69.9
Auckland Central CBD	27.7	29.5	30.0	24.9	24.7	26.1
Avondale-Roskill Ward	73.7	74.4	75.6	76.2	77.1	78.1
Eden-Albert Ward	53.0	55.4	58.2	58.7	63.8	61.4
Hobson Ward	51.2	54.8	58.4	59.0	60.7	58.0
Eastern Bays Ward Auckland	58.7	60.8	63.3	65.5	69.2	69.3
Tamaki-Maungakiekie Ward	57.8	58.8	62.4	63.0	67.9	65.7
Hauraki Gulf Islands Ward	89.2	83.7	84.8	91.0	80.5	93.2
<b>Auckland City</b>	<b>60.0</b>	<b>62.0</b>	<b>64.8</b>	<b>65.5</b>	<b>67.1</b>	<b>65.1</b>

**Table 4.1.5 : Percent of Occupied Private Households living in a separate house by area unit for the Western Bays area 1981 to 2006**

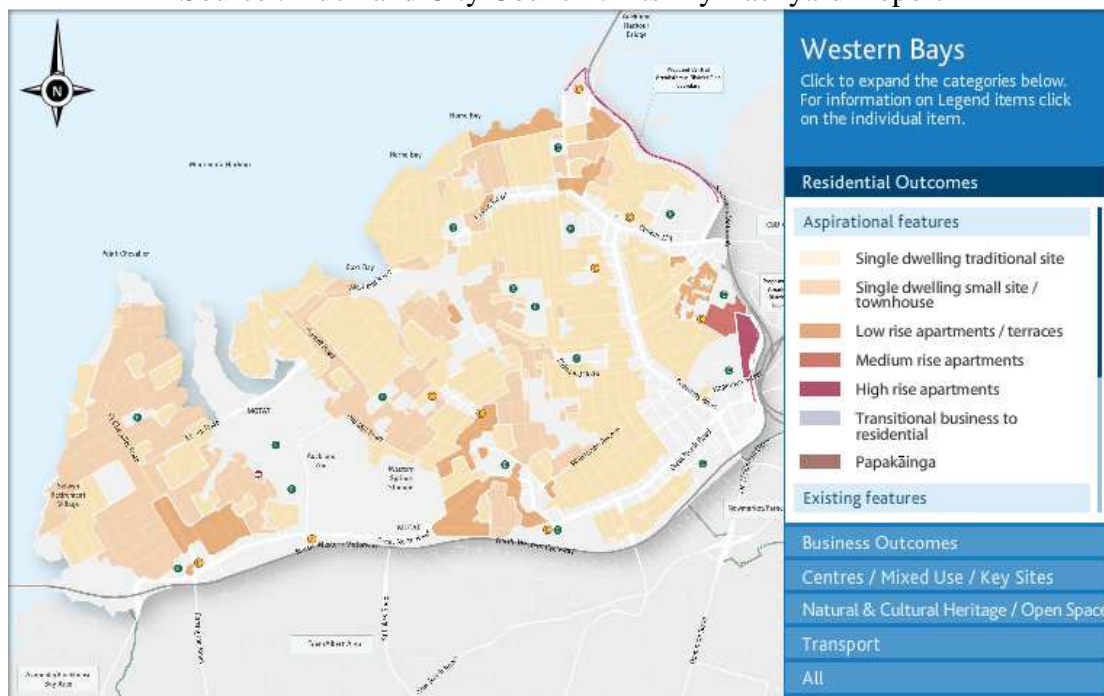
Area Unit	1981	1986	1991	1996	2001	2006
Point Chevalier West	72.5	76.6	72.3	75.8	76.6	74.3
Point Chevalier East	74.6	74.4	76.0	83.3	77.9	80.9
Westmere	82.3	83.8	83.9	85.1	82.9	84.6
Herne Bay	35.0	39.1	41.4	44.1	47.8	50.5
St Marys	36.6	44.2	45.6	41.7	51.1	46.2
Ponsonby West	70.1	70.8	75.9	76.6	77.2	80.2
Ponsonby East	70.8	73.8	75.3	75.1	70.2	71.1
Grey Lynn West	71.2	75.7	75.9	74.6	69.0	70.6
Grey Lynn East	63.4	67.6	68.5	70.1	66.5	62.5
Surrey Crescent	58.5	60.7	63.8	71.3	69.1	71.3
Arch Hill	77.1	72.4	73.1	79.7	62.1	63.8
<b>Western Bays Area</b>	<b>65.0</b>	<b>67.9</b>	<b>69.1</b>	<b>71.5</b>	<b>69.8</b>	<b>69.9</b>

Aspirationally, the Auckland City Council’s “Its My Backyard” strategy for the Western Bays area envisages that high rise residential apartments will be concentrated in parts of Pt. Chevalier East, Surrey Crescent, St. Mary’s and Freeman’s Bay, accentuated patterns already evident in the 2006 pattern (Figure 4.1.2).

Growth nodes for future residential growth in the Western Bays area as envisioned in the ‘Its My Backyard’ report by the City Council envisage a major residential intensification around Freeman’s Bay / Ponsonby East as well as lesser growth nodes in parts of St Mary’s, Ponsonby East, Grey Lynn West and East as well as Pt. Chevalier East (Figure 4.1.3).

**Figure 4.1.2 : Aspirational Residential Outcomes for the Western Bays Area**

Source : Auckland City Council : “Its My Backyard” report



**Figure 4.1.3 : Auckland City Council Residential Growth Focus Points for the Western Bays Area**

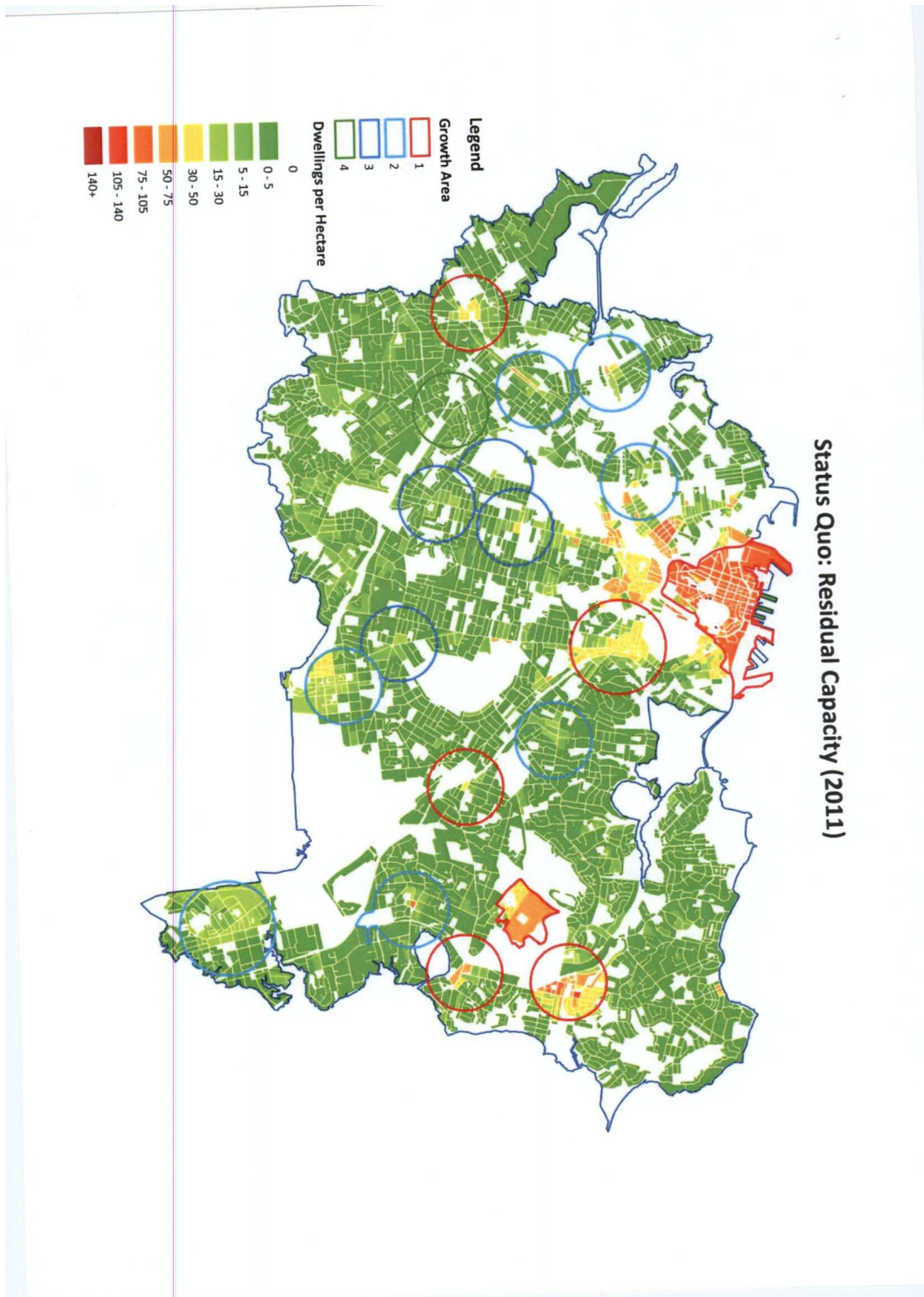
Source : Auckland City Council : “Its My Backyard” report



Estimates of the distribution of residual residential capacity in the Auckland City area (including Western Bays) as at 2011, 2016 and 2021 are shown in Figures 4.1.4, 4.1.5 and 4.1.6 respectively. Under the future development controls and vision for the City, residual capacity in Western Bays is very projected to be very limited in 2011 and confined to less than five additional dwellings per hectare where available. By 2016 most of this remaining capacity is expected to be used up under a status quo scenario. By 2021 no capacity is expected to remain in the Western Bays area.

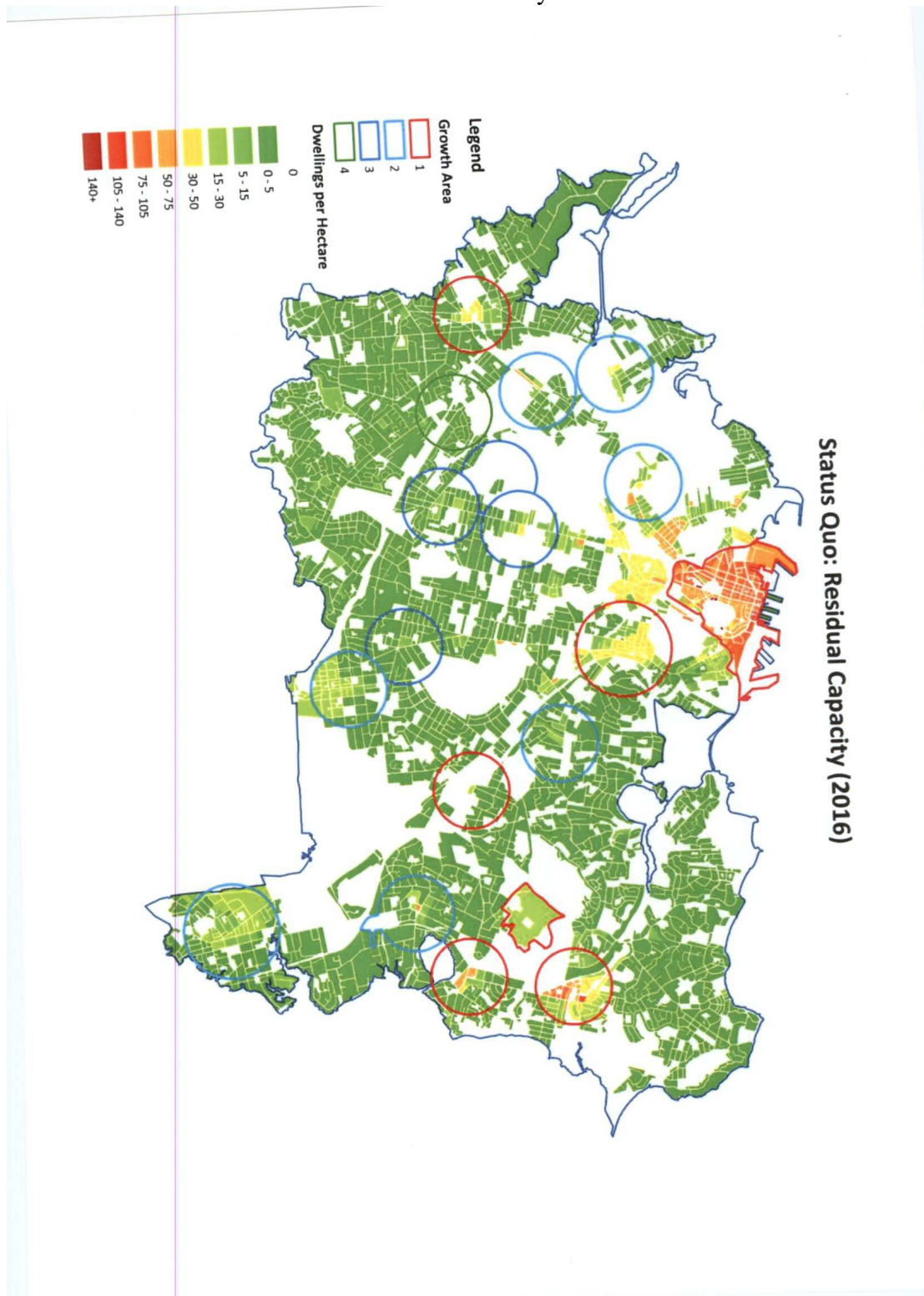
**Figure 4.1.4 : Auckland City Council estimates of residual residential capacity as at 2011**

Source : Auckland City Council

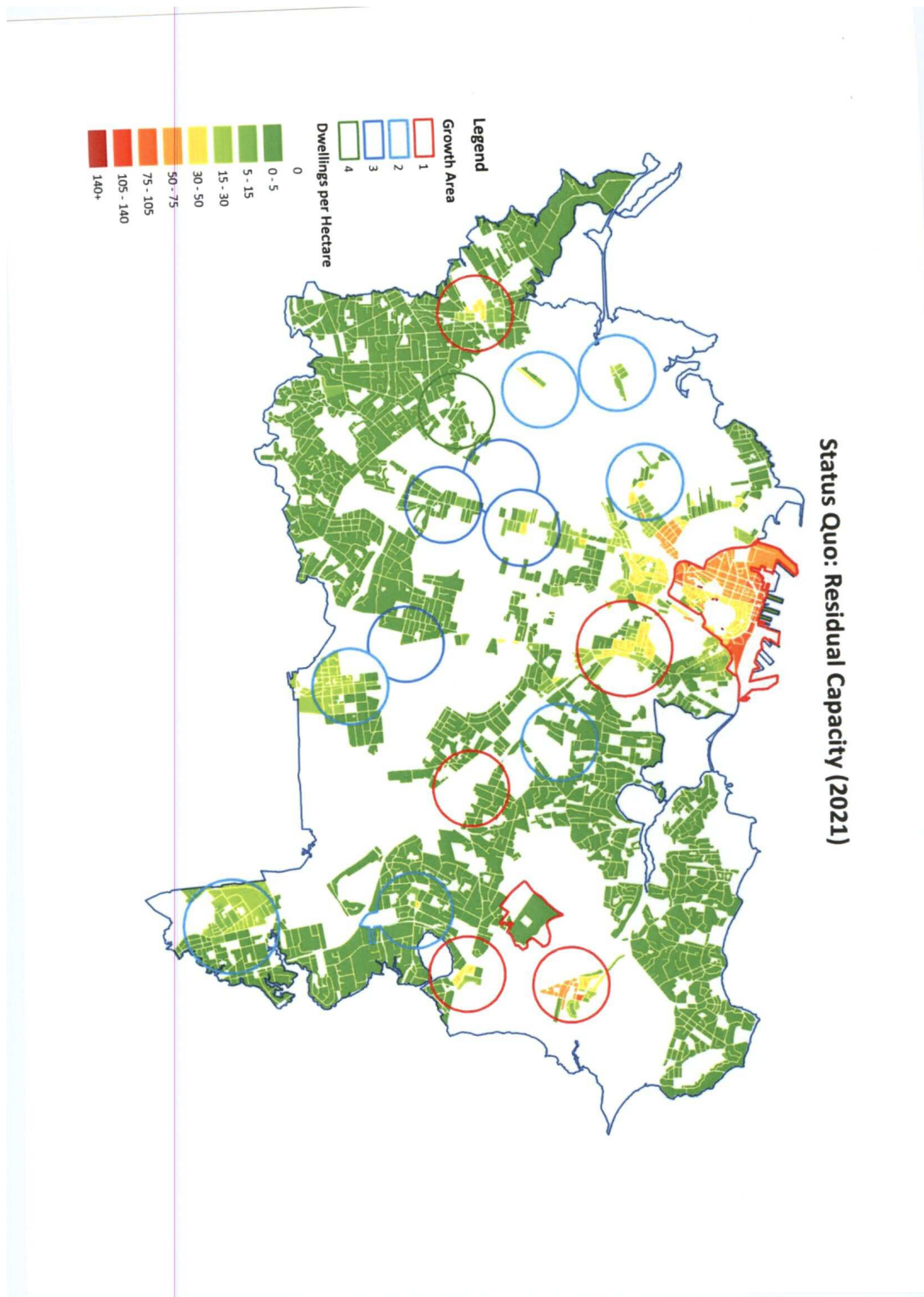




**Figure 4.1.5 : Auckland City Council estimates of status quo residual residential capacity as at 2016**  
 Source : Auckland City Council



**Figure 4.1.6 : Auckland City Council estimates of status quo residual residential capacity as at 2021**  
 Source : Auckland City Council



## 4.2 Population Projections for the study area

The Statistics NZ area unit level projections for the study area were released in 2007 based on the 2006 census results and have not yet been updated for consistency with the updated local authority projections as released in February 2010. The projection of change in the 5 to 10 year old population of the Western Bays study area implied modest growth of about 40 students in schools arising from the growth in the primary school age population (Table 4.2.1). As analysed and documented in Table 3.7, it is estimated that the 2007 to 2009 period saw the number of primary school age population resident in the Western Bays study area increased by about 60 more than Stats NZ had estimated (based on geocoded and adjusted rolls). This is 150% of that projected by Stats NZ for the period. The projection of primary school age residents of the study area for the period 2009 to 2013 is for a much more substantial increase of 110, 195 or 300 under low, medium and high growth rate assumptions respectively. Given that this projection is based on the 2007 rather than the higher growth rate revised 2010 local authority projection the likelihood is that the projection would be intermediate between the medium and high growth increment. This view is reinforced by the review of the performance of the 2007 to 2009 period of the projection. If that evidence is a guide, there is a significant probability that the growth in the number of primary school age residents of the study area could be 300 over the 2009 to 2013 period.

The growth rate of primary school age residents of the Western Bays study area is then projected to slow down for the 2013 to 2019 period but still grow by 99, more than double the number that had been projected for 2006 to 2009. Given the evidence presented in Section 2 on recent and projected births in the Auckland City area which are at their historical peak in the March 2010 quarter indicates that the new entrants rolls for primary schools will probably not peak until at least 2015, but possibly as late as 2021 based on a projected peak of city wide births in 2016. The effect of this is less dramatic that it may seem as by that time the later year of study levels above new entrant levels will have already been populated with relatively large birth cohorts from earlier periods and the effect of rising new entrants rolls on the overall roll is difference between the new entrants cohort size and the number of students graduating from lower primary from the previous year divided by 6 (the number of age groups represented fully at the lower primary level).

**Table 4.2.1 : Projected change in the 5 to 10 year old resident population of the Western Bays area overall**

Period	Change in residents aged 5-10 yrs			Annualised % rates of change in residents aged 5-10 yrs		
	Low	Medium	High	Low	Medium	High
2006-2009	13	42	67	0.2	0.6	1.0
2009-2013	110	195	300	1.2	2.0	3.0
2013-2019	-149	99	264	-1.0	0.6	1.6
2019-2025	-101	5	-15	-0.8	0.0	-0.1
2025-2031	-62	23	18	-0.5	0.1	0.1

The major difference between the 2009 to 2013 period is that the major increments of new lower primary age residents of the student area are projected to be in areas to the

east and south-east of the study area concentrated in Ponsonby and Grey Lynn East but with growth in Westmere continuing as was observed between 2006 and 2009 (Table 4.2.2).

**Table 4.2.2 : Projected 2009 to 2013 change in the 5 to 10 year old resident population of area units in the Western Bays area**

Area Unit	Annualised % rates of change in residents aged 5-10 yrs			Change in residents aged 5-10 yrs		
	Low	Medium	High	Low	Medium	High
Point Chevalier West	0.0	0.7	1.4	0	8	16
Point Chevalier East	-0.3	0.4	1.2	-5	6	20
Westmere	1.7	2.3	3.0	30	42	55
Herne Bay	-1.4	-0.8	0.5	-12	-7	4
St Marys	-0.7	0.2	1.6	-3	1	7
Ponsonby West	-1.7	-0.6	0.1	-13	-5	1
Ponsonby East	10.6	11.5	12.1	68	76	83
Grey Lynn West	-1.2	0.1	1.7	-9	1	14
Grey Lynn East	6.8	8.2	9.3	50	62	73
Surrey Crescent	-0.5	0.2	1.6	-3	1	11
Arch Hill	4.4	6.0	9.2	7	10	16
Western Bay Area	1.2	2.0	3.0	110	195	300

Looking beyond 2013, the 2013 to 2019 period is projected to see contraction in the primary school age population of Westmere as children in that area age, but significant growth in the primary school age resident populations of St Mary's, Grey Lynn West and Surrey Crescent as well as sustained growth in the Grey Lynn and Ponsonby West area units (Table 4.2.3). This appears broadly consistent with the expectations of the Auckland City Council's residential development strategy as outlined in section 4.1. The medium Statistics NZ projection envisages only very low growth between 2007 and 2013 and contraction between 2013 and 2025 in the primary school age resident population of Pt Chevalier West and East combined.

**Table 4.2.3 : Statistics NZ “medium growth rate” projected annualised change and net change increments of 5-10 year old resident population in the Western Bays area: 2007 to 2031**

Locality	2007 - 2009	2009 - 2013	2013 - 2019	2019 - 2025	2025 - 2031	2007 - 2009	2009 - 2013	2013 - 2019	2019 - 2025	2025 - 2031
<i>Point Chevalier West</i>	0.0	0.7	-1.3	-1.1	0.3	0	8	-23	-18	4
<i>Point Chevalier East</i>	0.6	0.4	0.0	-0.3	0.1	7	6	1	-6	3
<i>Westmere</i>	3.5	2.3	-2.2	-1.2	0.0	43	42	-60	-30	0
<i>Herne Bay</i>	1.4	-0.8	-0.2	-0.5	-0.1	9	-7	-3	-6	-1
<i>St Mary's</i>	-2.1	0.2	4.5	1.2	0.4	-7	1	33	10	4
<i>Ponsonby West</i>	-1.0	-0.6	-1.5	-0.4	0.2	-6	-5	-17	-4	2
<i>Ponsonby East</i>	-0.7	11.5	2.2	-0.9	-0.7	-3	76	30	-13	-10
<i>Grey Lynn West</i>	-1.0	0.1	1.9	-1.3	-2.6	-6	1	24	-17	-30
<i>Grey Lynn East</i>	2.1	8.2	2.7	3.1	1.7	10	62	40	55	34
<i>Surrey Crescent</i>	-4.6	0.2	2.6	-0.2	-0.7	-25	1	28	-2	-8
<i>Arch Hill</i>	-4.0	6.0	11.9	5.6	3.0	-5	10	46	36	25
<b>Western Bays Area</b>	<b>0.2</b>	<b>2.0</b>	<b>0.6</b>	<b>0.0</b>	<b>0.1</b>	<b>17</b>	<b>195</b>	<b>99</b>	<b>5</b>	<b>23</b>
<i>Freemans Bay</i>	-0.7	4.4	5.2	-0.1	-0.6	-3	27	61	-2	-8
<i>Newton</i>	18.6	11.6	10.7	7.1	4.5	8	11	26	29	26
<i>Eden Terrace</i>	-1.9	5.5	9.2	4.0	1.1	-3	12	43	28	9
<i>Kingsland</i>	-0.7	0.4	1.8	3.0	-0.3	-4	3	20	39	-4
<i>St Lukes</i>	0.0	3.2	0.3	-0.6	-3.9	0	28	4	-8	-49

## **5 Projected future growth of lower primary enrolments in the study area**

### **5.1 Recent and projected future sustained increase in local births**

Figures 2.1 and 2.2 show a sharp increase in births in Auckland City. Most of this increase has yet to enter as new entrants at primary schools. The most up to date Statistics NZ projection of future births envisages a further increase in the level of local births which would push primary and later intermediate and secondary school rolls even higher. Net migration of under 5's from Auckland City to other parts of the Auckland region as well as migration to other regions is offset by smaller net gains of under 5's from international migration. This net outward migration from the Western Bays and other parts of Auckland City reduces the number of local under 5's retained to primary school age. Assuming that the rate of net migration loss between birth and starting school is constant, the future increase in new entrants arising from this "births wave" will increase future primary and later intermediate and secondary school rolls in Auckland City. This general picture is complicated by variation in the concentration of under 5's and the primary school age population within Auckland City.

The Western Bays study area has experienced higher than the Auckland City average roll growth in the city over recent years. This is probably a reflection of the fact that the Western Bays study area has a slightly higher proportion (6.7) of its 2006 resident population aged under 5 than Auckland City as a whole (6.4%). In 2006, the Western Bays study area had a slightly lower than average proportion of households made up of a couple with children than Auckland City as a whole.

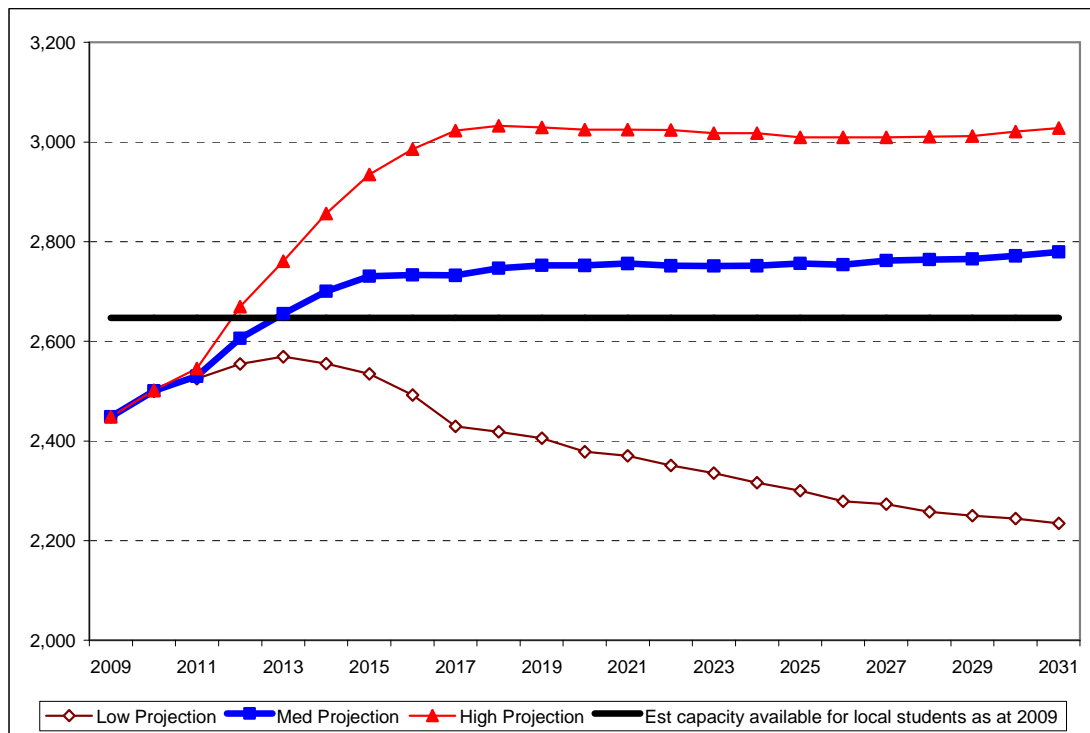
The most recent area unit Statistics NZ population projection is applied here to explore the status quo expectations of future growth in school enrolments arising from changes in the study area resident population. Status quo roll projections for study area schools will be explored later in the report.

To assist in making roll projections, the Statistics NZ 2006 area unit projection provided in age groupings of 5 to 10 years, 11 to 12 years and 13 to 17 years have been extrapolated to a single year of age format. This was done using city wide births trends and proportional shares within 2006 base year age ranges as a base for estimates of the corresponding single year of age projection. The projection of enrolled students resident in the study area was then made by applying proportional changes from the Stats NZ projection to the end of June adjusted 2009 enrolled students base.

## 5.2 Projected study area resident lower primary school level demand and available capacity

Projected lower primary level enrolments of locally resident students for the period to 2031 on a 2009 July roll base are illustrated in Figure 5.1. The implications of this in terms of available capacity or capacity deficit are illustrated in Table 5.1. In summary, there is expected to be a deficit of around 80 students above current 2009 capacity arising to 80 students by 2015, the end of the short term planning horizon. Looking further out to the medium term, there is expected to rise to a deficit of 110 student capacity by 2020. By the end of the long term planning horizon, this is expected to rise slightly more to a deficit of 130 student places in local study area schools.

**Figure 5.1 : Projected local resident lower primary school level enrolment demand and estimated 2009 capacity for the Western Bays of Central Auckland Study Area**



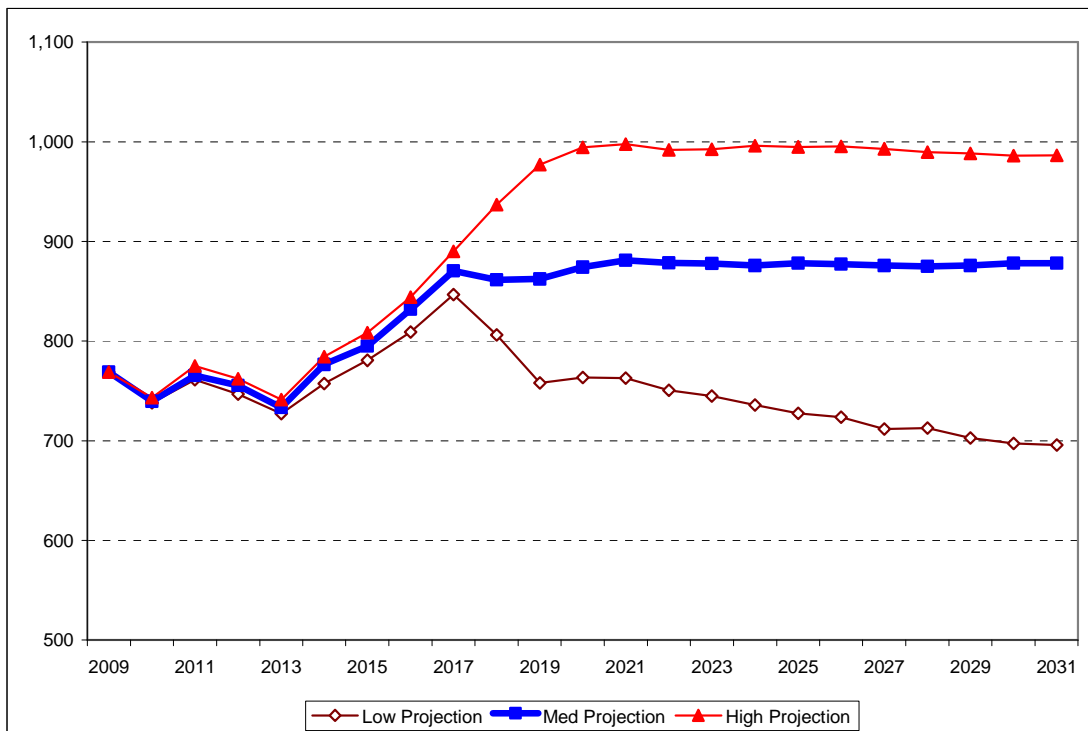
**Table 5.1 : Estimated surplus lower primary level student available capacity after allowing for projected demand from study area residents : 2009 to 2031**

	Low Projection	Med Projection	High Projection
Existing Base (2009)	200	200	200
Short term (2015)	110	-80	-290
Medium term (2020)	270	-110	-380
Long Term (2031)	410	-130	-380

### 5.3 Projected study area resident upper primary school level demand

Projected upper primary level enrolments of locally resident students for the period to 2031 on a 2009 July roll base are illustrated in Figure 5.2 and summarised in Table 5.2. Under the medium projection, enrolments in upper primary education by locally resident students are expected to fluctuate around current levels between 2009 and 2013 before rising steadily between 2013 and 2017 and then stabilising at this higher level of demand, which represents around 100 more enrolments in local schools than in the 2009 base year.

**Figure 5.2 : Projected local resident upper primary school level enrolment demand for the Western Bays of Central Auckland Study Area**



**Table 5.2 : Estimated projected upper primary level student demand from study area residents : 2009 to 2031**

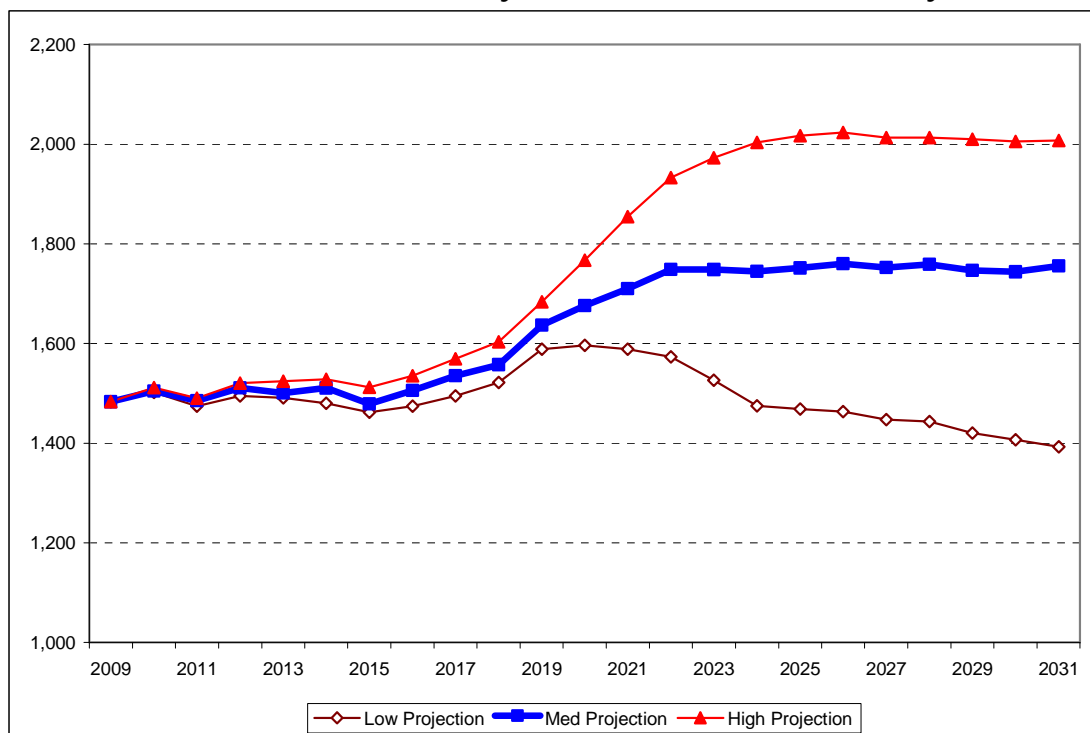
	Low Projection	Med Projection	High Projection
Existing Base (2009)	769	769	769
Short term (2015)	781	795	809
Medium term (2020)	764	874	994
Long Term (2031)	696	878	986



## 5.4 Projected study area resident secondary school level demand

Projected secondary school level enrolments of locally resident students for the period to 2031 on a 2009 July roll base are illustrated in Figure 5.3 and summarised in Table 5.3. Under the medium projection, enrolments in secondary school education from locally resident students are expected to fluctuate around current levels between 2009 and 2015 before rising steadily between 2015 and 2022 and then stabilising at this higher level of demand under the medium base case projection. This means that no additional demand above current levels is projected in the short term. In the medium term, the base case is expected to result in 190 additional enrolments to be accommodated by 2015, peaking at an additional 270 places by 2022 with the long term base case being an additional 270 students in 2031.

**Figure 5.3 : Projected local resident secondary school level enrolment demand for the Western Bays of Central Auckland Study Area**



**Table 5.3 : Estimated projected secondary school (excluding intermediate) level student demand from study area residents : 2009 to 2031**

	Low Projection	Med Projection	High Projection
Existing Base (2009)	1,483	1,483	1,483
Short term (2015)	1,462	1,478	1,512
Medium term (2020)	1,596	1,676	1,767
Long Term (2031)	1,392	1,756	2,007

## 6 Individual Primary School Projections

### 6.1 School Level Projection Methods and Assumptions

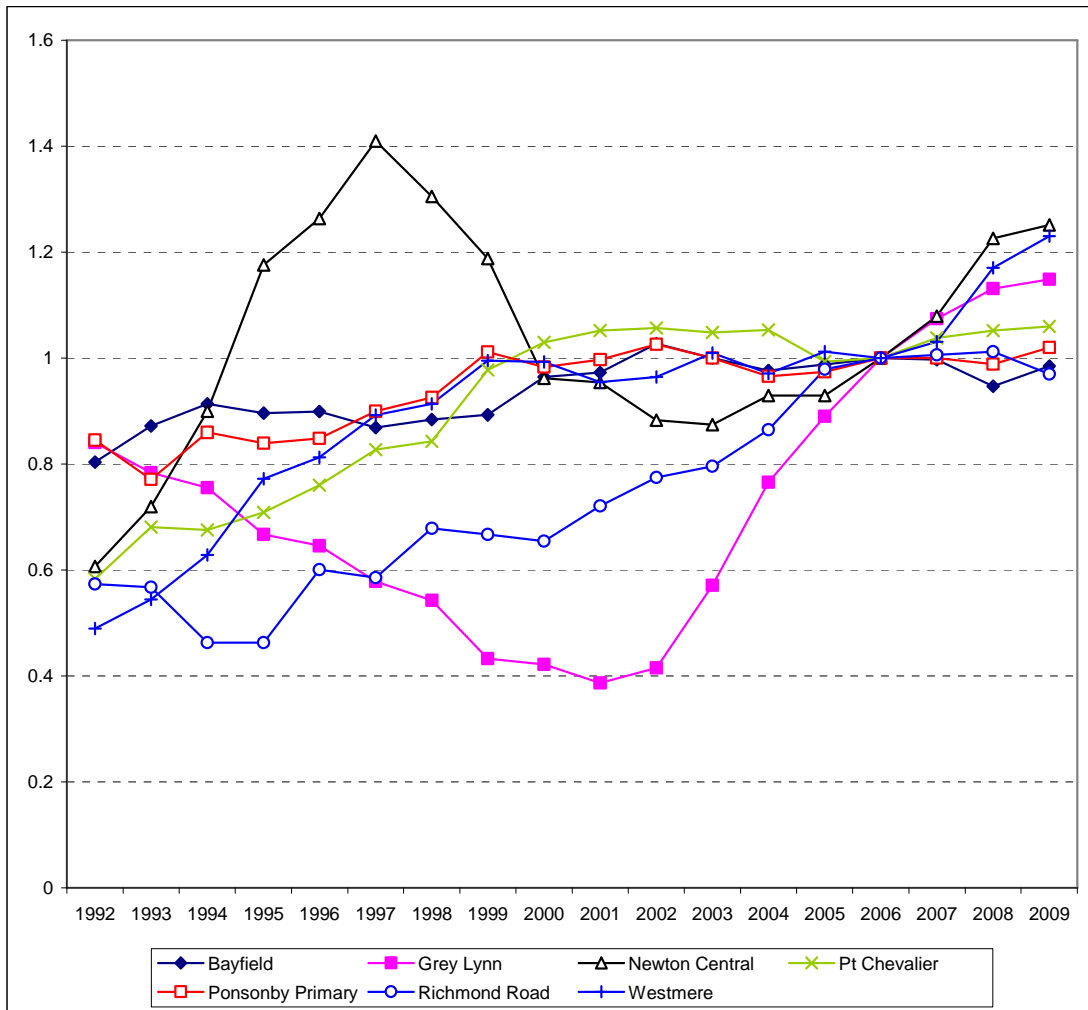
#### *Study Area Schools*

The estimated available roll capacity at each state primary school included in the study area is listed in Table 6.1. There is very limited capacity remaining in the study area state primary schools. The previous section concluded that future change of 5-10 year old residents of the Western Bays would exceed the capacity of study area schools in the short term and this demand would be sustained into the long term. This section focuses in on the details of roll trends and future projections for all state primary schools in the study area. Study area schools draw some of their students from outside the study area and in the case of Newton Central School much of its enrolment zone is located outside the study area.

**Table 6.1.1 : Comparison of July 2009 rolls and enrolment capacity for lower primary schools in the study area**

School	2009 Capacity	2009 July roll	Residual Capacity	Roll increment 2006 - 2009
Bayfield School	375	331	44	-18
Grey Lynn School	307	324	0	30
Newton Central School	305	299	6	44
Pt. Chevalier School	603	615	0	34
Ponsonby Primary School	380	356	24	3
Richmond Road School	313	323	0	-12
Westmere School (Auckland)	600	513	87	96
<b>Total</b>	<b>2,883</b>	<b>2,761</b>	<b>161</b>	<b>177</b>

**Figure 6.1.1 : Index of Auckland Central West 1992 to 2009 state lower primary school rolls relative to their 2006 roll (=1.0)**



### **Roll Projection Methods**

This section summarises the future roll projection for each primary school in the study area using two alternative methods. The effect of ethnicity and language related preferences for particular schools is discussed in interpretation of the “status quo” generic projection. There are specialty programmes offered by some schools targeted at meeting the language and culture needs of Maori, Pasifika peoples and French language programmes which make projections for those schools more difficult.

Results for two projection method are considered together for comparison. One method recognises the predictive power of the number of new entrants starting school for future class numbers in a school. The second method is a much more aggregate one driven by changing aggregate numbers of children aged 5 to 10 years in the catchment area of each school. These two alternative methods are summarised below.

### ***New entrant progression method***

This method recognises that the number of new entrants starting school for the first time is highly predictive of roll numbers by year of schooling in a school. Those starting school are “aged” and progressed through the school with a small averaged correction made for net migration loss from schools based on recent historical trends in the study area. The number of those attending school for the first time is estimated from population estimates which in theory should be reasonably robustly estimated using recent historical birth statistics and census data and incorporated in Statistics NZ population estimates and projections. This method is likely to be more able to take into account recent history incorporated in the starting year roll by age for each school and recent recorded births.

This method has three components.

- (1) New entrants (5 year olds) for each year, projection and school are estimated.
  - a. the 2009 catchment profile of each school is estimated as the share of all 5 and 6 year olds in each area unit from the geocoded 2009 school enrolments data.
  - b. This is applied to the estimated 2009 base year area unit medium projection estimate and to each future projection and year and expressed as a ratio.
  - c. This ratio is applied to each school’s 2009 base year new entrant’s count to estimate each future year’s new entrant’s count.
- (2) The base year roll by age is “aged” one year and scaled up or down by a ratio which reflected the average roll transition ratio for that age group over the Western Bays study area for 2004 to 2009. The resulting ratio used in these projections are
  - a. an increase of 1% of the five year of age roll count for each school in the transition to the following year six year of age school roll.
  - b. A decrease of 0.5% in the six year olds enrolments in progression to seven year olds on the roll.
  - c. Decreases of 2% on the roll of seven, eight and nine year olds in progression to the roll for each school for the next year.
- (3) A few lower primary schools retain more than one or two students beyond age 10. The historical retention / roll size beyond age 10 is estimated for each school from 2007 to 2009 roll data. This post age 10 retention rate is applied to estimate the number of students aged over 10 at each school, year and projection based on the preceding years roll projection.

### ***Averaged Catchment Population Change method***

This method applies the 2009 catchment market share for each school to Statistics NZ population projection by area unit to estimate ratio of the roll in any future year to that of the 2009 base year. This is simply applied to the total 2009 base year July roll for each school to arrive the estimated future roll for each school. This method has the property that it is wholly consistent with the population projections at all times but the weakness that it doesn’t incorporate information on existing age structure and new entrant cohort sizes for each school.

## Ethnicity of Enrolments by School

Some of the study area schools cater for a distinctive mix of children from different ethnicities (Tables 6.1.2a and 6.1.2b) reflecting in the case of Newton Central, Westmere and Richmond Rd schools specialty Maori programmes, a French language programme at Richmond Rd School and Samoan language programme at Richmond Rd schools and other factors. The integrated private schools St Joseph's (Grey Lynn) and Marist School (Herne Bay) cater distinctively for children from Pasifika families. St Joseph's (Grey Lynn), St Francis School (Pt Chevalier) and Marist School (Herne Bay) cater particularly for children of Indian ethnicity.

**Table 6.1.2a : (Prioritised) Ethnicity Composition (%) of 2009 July Rolls by School**

School	All Study Area Schools	Bayfield School	Grey Lynn School	Marist School (Herne Bay)	Newton Central School	Pt Chevalier School
NZ European/Pakeha	58.7	79.4	62.4	38.2	30.0	69.6
Other European	5.4	5.7	1.9	3.5	4.3	3.4
NZ Maori	13.3	7.3	6.8	10.4	41.8	10.0
Samoan	8.2	1.9	11.6	19.4	7.5	2.9
Other Pacific Island	1.7	0.6	3.9	2.1	3.2	0.7
Indian	3.9	1.9	3.5	18.1	4.6	2.3
Chinese	2.3	0.0	6.4	0.7	2.9	1.0
Other Asian	3.2	1.6	1.0	4.9	2.9	2.5
Other	0.8	0.6	0.0	3.5	0.0	0.7
% of all Schools	100.0	10.1	9.9	4.6	8.9	19.5

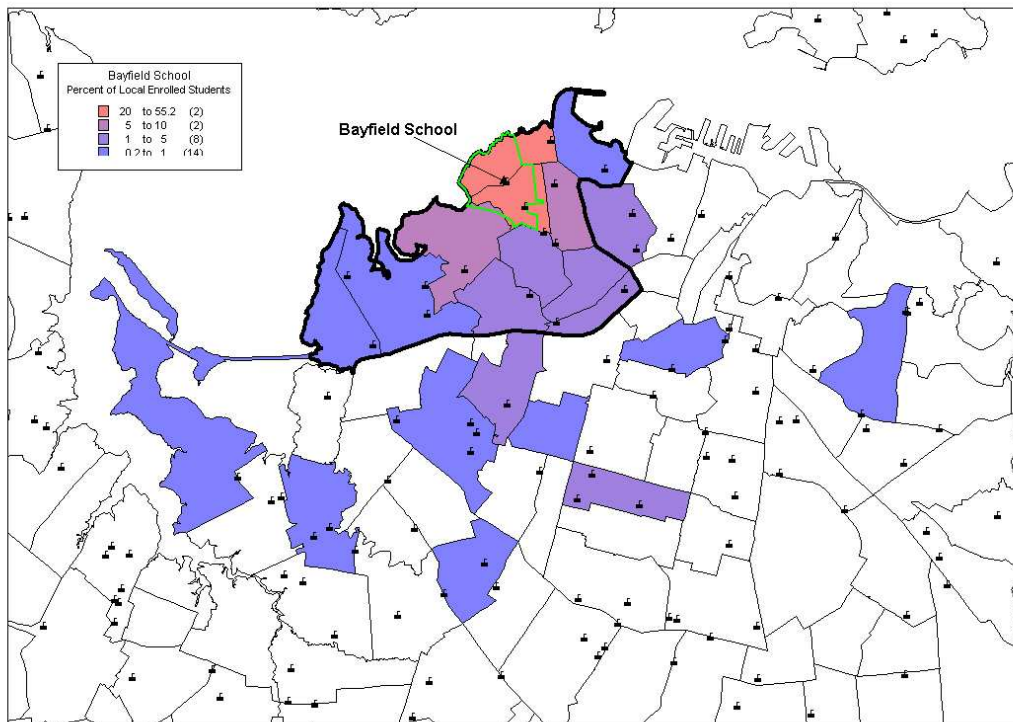
**Table 6.1.2b : (Prioritised) Ethnicity Composition (%) of 2009 July Rolls by School**

School	All Study Area Schools	Ponsonby Primary School	Richmond Road School	St Francis School (Pt.Chevalier)	St Joseph's School (Grey Lynn)	Westmere School (Auckland)
NZ European/Pakeha	58.7	77.5	26.5	57.1	1.2	69.6
Other European	5.4	3.2	19.3	6.5	1.2	3.8
NZ Maori	13.3	9.8	20.9	4.6	1.2	13.7
Samoan	8.2	1.4	20.9	6.9	56.6	2.8
Other Pacific Island	1.7	0.0	2.2	0.5	8.4	1.8
Indian	3.9	1.2	2.5	10.1	18.1	0.4
Chinese	2.3	0.6	4.7	1.8	6.0	2.2
Other Asian	3.2	2.9	2.8	7.4	6.0	4.2
Other	0.8	0.3	0.3	3.2	4.8	0.0
% of all Schools	100.0	11.1	10.2	6.9	2.6	16.1

## 6.2 Bayfield School

Bayfield Primary School is situated in the north of the study area with an enrolment scheme contained within but extending over only parts of the Herne Bay and Ponsonby West area units (Figure 6.2.1). Students are highly concentrated in its enrolment zone (Table 6.2.1). The proportion of enrolments sourced from Bayfield's enrolment zone ranged between 57.5 and 61.0% over 2008 to 2010 (Table 3.5). In 2009, it had a much higher proportion of students of European ethnicity (79.4%) than the study area as a whole (58.7%) (Table 6.2.2).

**Figure 6.2.1 : Bayfield Primary School and its share of 2009 enrolments in nearby area units**



**Table 6.2.1 : Estimated distribution of 2009 Bayfield School geocoded enrolments by area (summarised)**

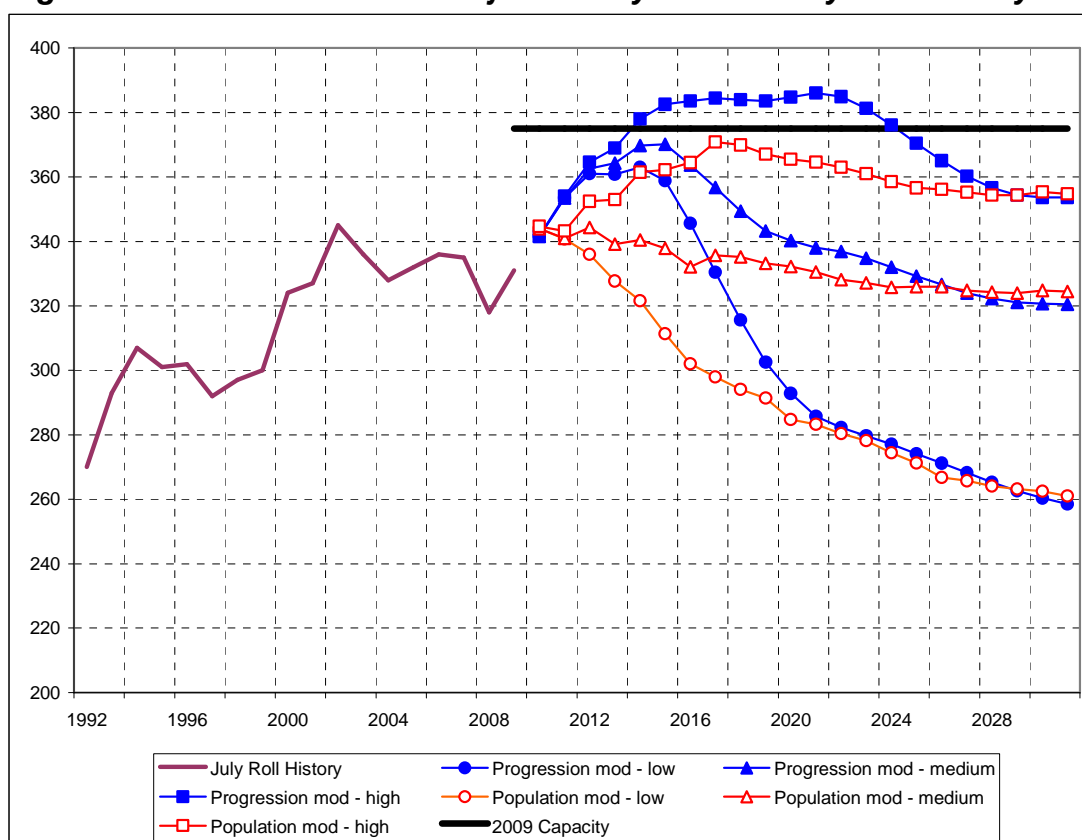
Locality	Geocoded School Enrolments	All Enrolments	% Share of Area	% of School Roll
<i>Ponsonby West</i>	107	194	55.2	34.4
<i>Herne Bay</i>	104	207	50.2	33.4
<i>Ponsonby East</i>	14	157	8.9	4.5
<i>Westmere</i>	36	460	7.8	11.6
Auckland Central West	280	2,392	11.7	90.0
Other Areas	31			10.0
<b>Auckland City</b>	<b>311</b>	<b>7,059</b>	<b>197.7</b>	<b>100</b>

**Table 6.2.2 : Bayfield Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Bayfield School	Difference
NZ European/Pakeha	58.7	79.4	20.7
Other European	5.4	5.7	0.3
NZ Maori	13.3	7.3	-6.0
Samoan	8.2	1.9	-6.3
Other Pacific Island	1.7	0.6	-1.1
Indian	3.9	1.9	-2.0
Chinese	2.3	0.0	-2.3
Other Asian	3.2	1.6	-1.6
Other	0.8	0.6	-0.2
% Of Area Total	100	10.1	

As shown in Table 6.2.3 and illustrated in Figure 6.2.2, the roll of Bayfield Primary School has fluctuated in the range of 320 to 340 over the last few years compared with its estimated roll capacity of 375 students. New entrants and the school roll have been fairly stable since 1992. As at the July 2009 roll the school retained residual capacity of around 44 students.

**Figure 6.2.2 : Historical and Projected Bayfield Primary School July Roll**



The number of 5 to 9 year olds in the Herne Bay and Ponsonby West area units was projected to grow by 37 and 15 respectively between 2006 and 2009. Evidence from geocoded enrolments of 5 to 10 year olds for all schools for these area units suggests that the primary school age population of these key area units actually decreased

between 2007 and 2009. As a result, there was no net roll growth at Bayfield Primary School between 2006 and 2009.

Looking forward, the more short term trend sensitive age progression based roll projection result anticipates some short term increase in the roll of Bayfield Primary School in the years to 2015 to a level slightly below capacity under a medium projection (Figure 6.2.2). That projection reflects the low numbers aged 10 (39) enrolled at the school in 2009 compared with typical new entrant cohorts and the above average new entrants count for the 2009 base year of the projection. By contrast, the averaged population change roll projection method would suggest that the roll of Bayfield Primary School will gradually drop down towards 320 by 2031, reflecting static trending to a drop in the primary school age population of the two area units which together contain its enrolment zone.

The roll projections suggest that it is unlikely that the July roll will exceed the available capacity at this school during the time that the “baby wave” flows through this school.

**Table 6.2.3 : Bayfield Primary School 2002 to 2009 July roll by age**

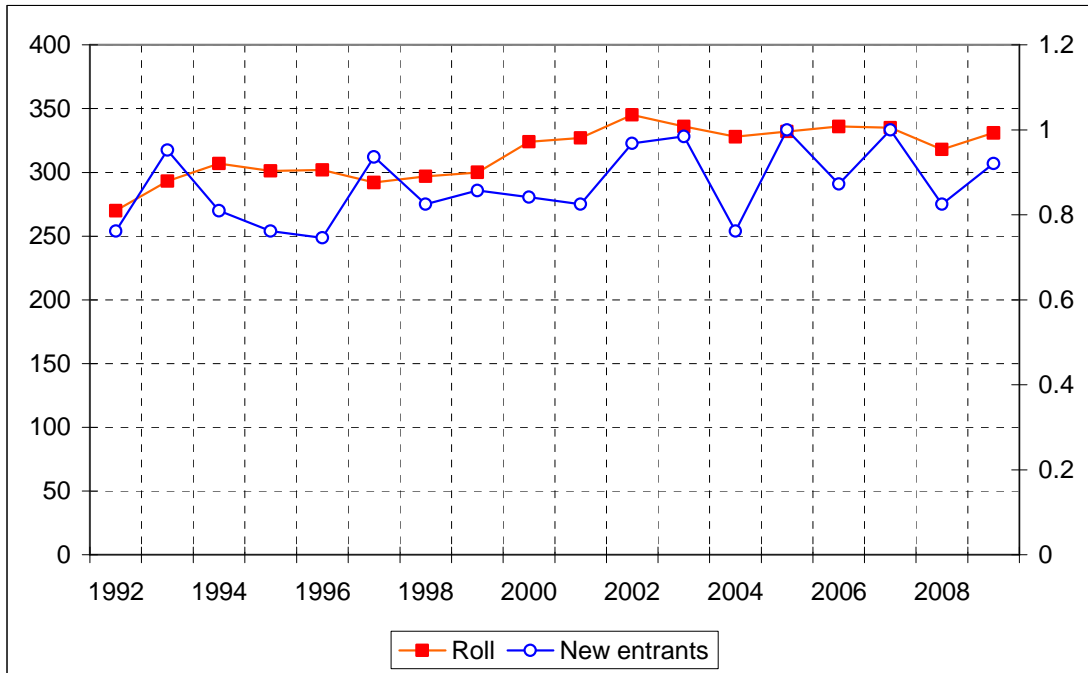
YEAR	5	6	7	8	9	10	11	All
2003	62	58	52	54	54	48	8	336
2004	48	65	59	50	52	48	6	328
2005	63	43	65	59	50	50	2	332
2006	55	59	45	63	60	51	3	336
2007	63	53	55	43	61	56	4	335
2008	52	60	52	52	38	59	5	318
2009	58	51	62	54	51	39	16	331

**Table 6.2.4 : Bayfield Primary School July roll age cohort annual transitions by end of period age group 2004-2005 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
2003-2004	3	1	-2	-2	-6
2004-2005	-5	0	0	0	-2
2005-2006	-4	2	-2	1	1
2006-2007	-2	-4	-2	-2	-4
2007-2008	-3	-1	-3	-5	-2
2008-2009	-1	2	2	-1	1



**Figure 6.2.3 : Bayfield Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



### 6.3 Grey Lynn School

Grey Lynn Primary School is situated in the southeast of the study area with an enrolment scheme contained within but extending over parts of the Surrey Crescent, Grey Lynn West, Grey Lynn East and Arch Hill area units (Figure 6.3.1). Students are highly concentrated in its enrolment zone (Table 6.3.1). The proportion of enrolments sourced from Grey Lynn Primary's enrolment zone rose from 56.5 to 62.6% over 2008 to 2010 (Table 3.5). In 2009, it had a slightly higher proportion of students of European ethnicity (62.4%) than the study area as a whole (58.7%), but also a higher proportion of enrolments from children of Chinese, Samoan and "other" ethnicity than the study area as a whole (Table 6.3.2).

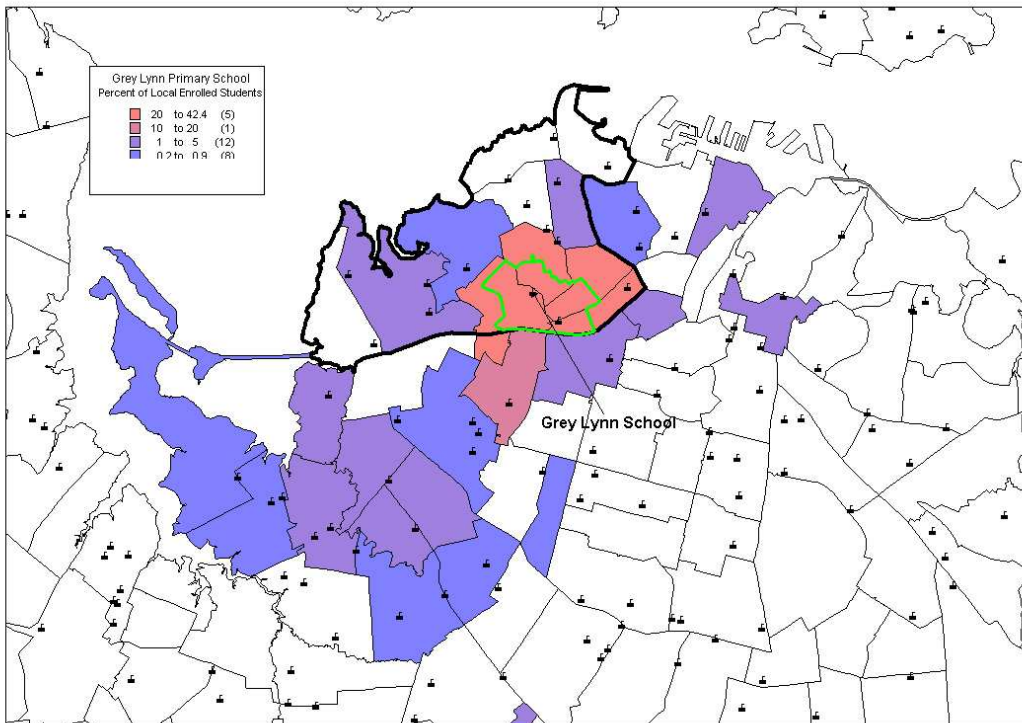
**Table 6.3.1 : Estimated distribution of 2009 Grey Lynn School geocoded enrolments by area (summarised)**

Locality	Geocoded School Enrolments	All Enrolments	% Share of Area	% of School Roll
<i>Grey Lynn East</i>	64	151	42.4	19.9
<i>Surrey Crescent</i>	72	186	38.7	22.4
<i>Grey Lynn West</i>	78	230	33.9	24.2
<i>Arch Hill</i>	14	48	29.2	4.3
<i>Ponsonby East</i>	4	157	2.5	1.2
<i>Point Chevalier East</i>	7	362	1.9	2.2
Auckland Central West subtotal	242	1,594	149.3	75.2
Avondale-Roskill Ward	18	1,993	7.1	5.6
<i>St Lukes North</i>	8	28	28.6	2.5
<i>St Lukes</i>	21	154	13.6	6.5
Eden-Albert Ward Subtotal	48	1,700	50.7	14.9
Other	14			4.3
<b>Auckland City</b>	<b>322</b>	<b>7,428</b>	<b>4.3</b>	<b>100.0</b>

**Table 6.3.2 : Grey Lynn Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Grey Lynn School	Difference
NZ European/Pakeha	58.7	62.4	3.7
Other European	5.4	1.9	-3.5
NZ Maori	13.3	6.8	-6.5
Samoan	8.2	11.6	3.4
Other Pacific Island	1.7	3.9	2.2
Indian	3.9	3.5	-0.4
Chinese	2.3	6.4	4.1
Other Asian	3.2	1.0	-2.2
Other	0.8	0.0	-0.8
% Of Area Total	100.0	9.9	

**Figure 6.3.1 : Grey Lynn Primary School and its share of 2009 enrolments in nearby area units**



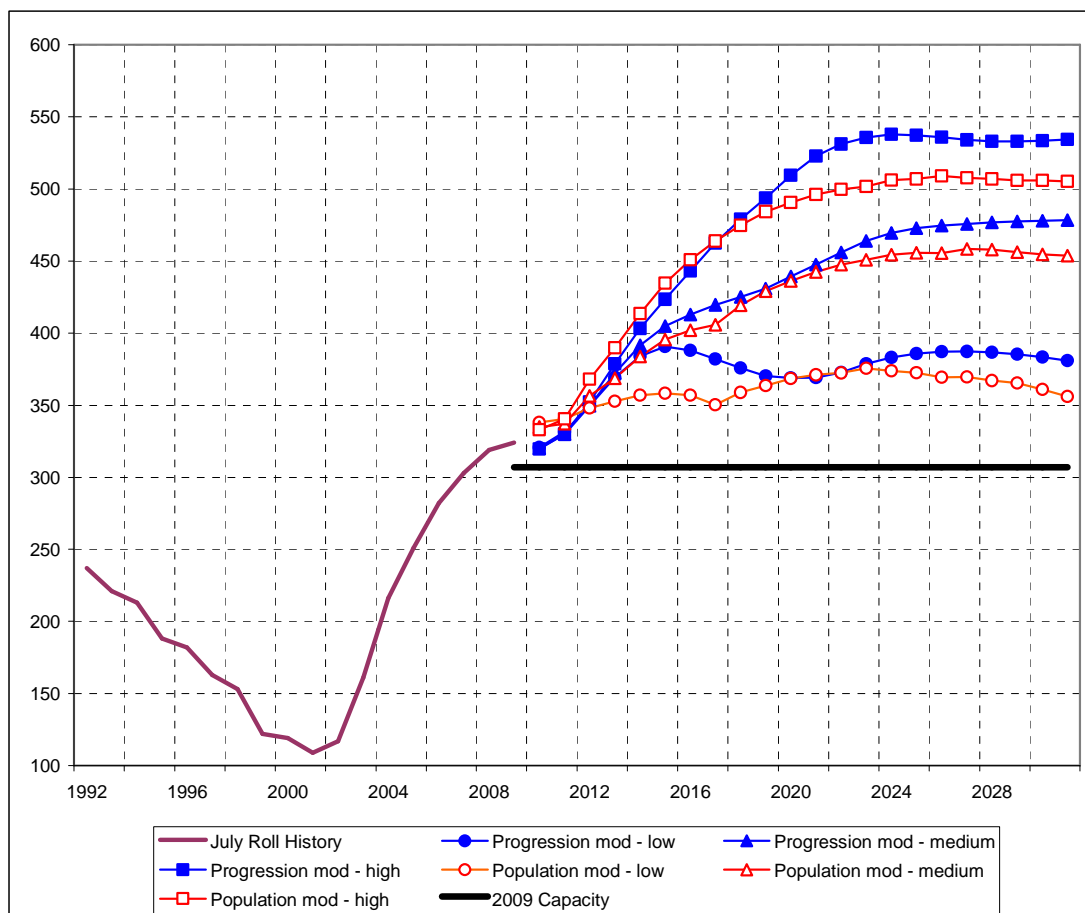
As shown in Table 6.3.2 and illustrated in Figure 6.3.2, the roll of Grey Lynn Primary School increased rapidly over the 2002 to 2007 period driven by a recovery of new entrant numbers to earlier historical levels after a period of decline that bottomed out in 2001. The school roll continued to grow more slowly over 2007 to 2009 and is now well above its estimated 2009 roll capacity of 307 students. The number of 5 to 9 year olds living in the Surrey Crescent, Grey Lynn West, Grey Lynn East and Arch Hill area units was projected to drop by 23, 12, 2 and 7 respectively and a net 44 overall between 2006 and 2009. Evidence from geocoded enrolments of 5 to 10 year olds for all schools for these area units suggests an overall decrease of 30 in these area units between 2007 and 2009. Nevertheless, while slowing down from earlier rapid growth, the July roll growth at Grey Lynn Primary School increased by 42 between 2006 and 2009. It seems that Grey Lynn was bouncing back from recovery of its more “natural” position in catering for a particular segment of primary school accommodation demand after resolving whatever issues had driven down its roll in the late 1990’s.

Looking forward, the more short term trend sensitive age progression based roll projection result anticipates considerable potential future growth in the short term for the school’s roll in the years up to 2024 followed by a period of roll stability – far exceeding the current roll capacity of the school (Figure 6.3.2). This result is robust using both projection methodologies but is dependent on the underlying Statistics NZ area unit population projection assumptions. The Statistics NZ projection assumptions for the 2007 to 2009 period have matched fairly well estimated changes derived from the geocoded school roll data. The projection assumes quite a sharp increase of 62 in the number of 5-9 year olds resident in the Grey Lynn East area unit and modest increase (10) in the Surrey Hill area unit between 2009 and 2013. An even larger net increase of 108 in 5 to 9 year old residents summed across the four

key area units in the school's catchment is projected between 2013 and 2019. Further net increase of 74 is projected between 2019 and 2025.

The roll projections suggest that it is inevitable that Grey Lynn Primary School will further exceed its July roll capacity in the short term with continuing growth in the medium term up until 2024. Urgent action to manage this will be required in the short term.

**Figure 6.3.2 : Historical and Projected Grey Lynn Primary School July Roll**



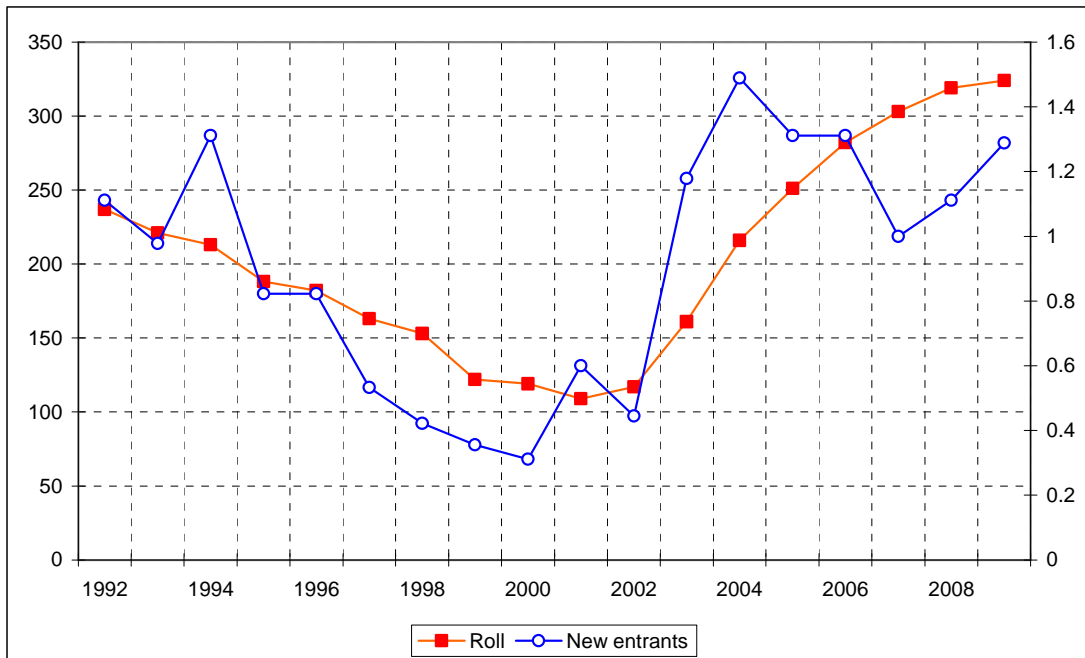
**Table 6.3.3 : Grey Lynn Primary School 2002 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	All
2000	14	22	20	20	20	20	3	119
2001	27	13	19	18	13	18	1	109
2002	20	25	17	20	20	15	0	117
2003	53	27	29	13	19	19	1	161
2004	67	61	24	28	16	17	3	216
2005	59	68	59	22	25	18	0	251
2006	59	55	64	57	20	26	1	282
2007	45	57	57	60	59	23	2	303
2008	50	47	50	53	58	56	5	319
2009	58	49	48	47	52	57	13	324

**Table 6.3.4 : Grey Lynn Primary School July roll age cohort annual transitions by end of period age group 2004-2005 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1999-2000	6	-2	4	-2	-5
2000-2001	-1	-3	-2	-7	-2
2001-2002	-2	4	1	2	2
2002-2003	7	4	-4	-1	-1
2003-2004	8	-3	-1	3	-2
2004-2005	1	-2	-2	-3	2
2005-2006	-4	-4	-2	-2	1
2006-2007	-2	2	-4	2	3
2007-2008	2	-7	-4	-2	-3
2008-2009	-1	1	-3	-1	-1

**Figure 6.3.3 : Grey Lynn Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 6.4 Newton Central School

Newton Central Primary School is situated right on the edge of and in the southeast corner of the study area. Much of its enrolment zone is outside the study area and because its special role as a provider of a specialty (Maori) programme, it draws on a wider catchment than is typical for a primary school. Its enrolment zone is contained within and extends over parts of the Grey Lynn East and Arch Hill area units in the study area as well as Kingsland, Eden Terrace, Newton, Grafton West and a very small sliver of Mt Eden North outside the study area (Figure 6.4.1). The proportion of enrolments sourced from Newton Central Primary's enrolment zone dropped sharply from 40.0 to 32.3% over 2008 to 2010 (Tables 3.5 and 6.4.1), reflecting the expansion of its specialty Maori programme. In 2009, it had a much lower proportion of students of European ethnicity (30.0%) than the study area as a whole (58.7%), reflecting the very high proportion of enrolments from children of Maori ethnicity (41.8%) compared with the study area as a whole (13.3%) (Table 6.4.2).

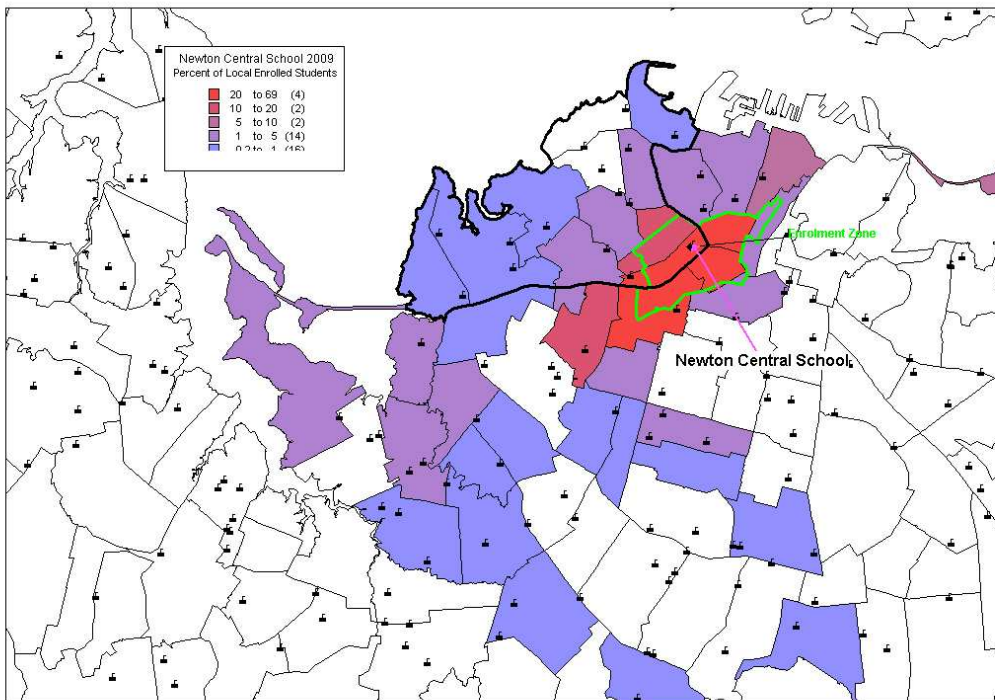
**Table 6.4.1 : Estimated distribution of 2009 Newton Central Primary School geocoded enrolments by area (summarised)**

Locality	Geocoded School Enrolments	All Enrolments	% Share of Area	% of School Roll
<i>Grey Lynn West</i>	8	230	3.5	2.9
<i>Grey Lynn East</i>	19	151	12.6	7.0
<i>Arch Hill</i>	19	48	39.6	7.0
Auckland Central West subtotal	60	1,991	3.0	22.0
Auckland Central CBD subtotal	13	397	3.3	4.8
<i>Kingsland</i>	55	180	30.6	20.1
<i>St Lukes</i>	20	154	13.0	7.3
Eden-Albert Ward subtotal	96	2,328	4.1	35.2
<i>Newton</i>	5	16	31.3	1.8
<i>Eden Terrace</i>	29	42	69.0	10.6
Hobson Ward subtotal	34			12.5
<i>Orakei North</i>	16	317	5.0	5.9
Eastern Bays Ward subtotal	16			5.9
Other	54			19.8
<b>Auckland Region</b>	<b>273</b>	<b>18,683</b>		<b>100.0</b>

**Table 6.4.2 : Newton Central Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Newton Central School	Difference
NZ European/Pakeha	58.7	30.0	-28.7
Other European	5.4	4.3	-1.1
NZ Maori	13.3	41.8	28.5
Samoan	8.2	7.5	-0.7
Other Pacific Island	1.7	3.2	1.5
Indian	3.9	4.6	0.7
Chinese	2.3	2.9	0.6
Other Asian	3.2	2.9	-0.3
Other	0.8	0.0	-0.8
% Of Area Total	100.0	8.9	

**Figure 6.4.1 : Newton Central Primary School and its share of 2009 enrolments in nearby area units**



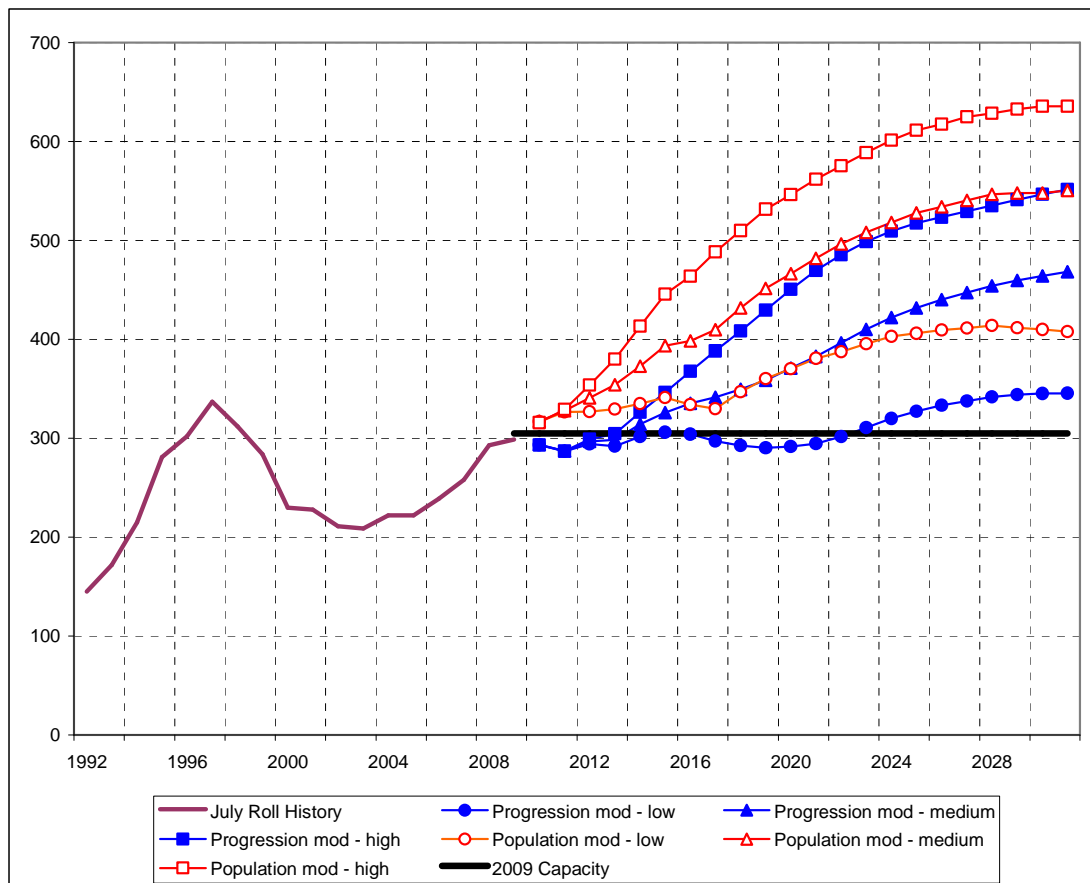
As shown in Table 6.4.2 and illustrated in Figure 6.4.2, the roll of Newton Central Primary School increased rapidly between 2005 and 2008. The roll history shows that this has been the result of increased new entrant numbers and significant numbers of students joining the school part way through their primary schooling. The number of Maori enrolled at the school increased by 12 between 2008 and 2009 while the total July roll only increased by 6. This indicates that the market demand by Maori students for places at the school rather than demographic pressure from its catchment is the major driver of its recent roll growth. The 2009 school roll was close to the limit of its estimated 2009 roll capacity of 305 students.

The averaged Statistics NZ projection applied to the schools area unit level market share suggests rapid and sustained growth in the school's roll in the foreseeable future might be expected. However, applying a roll progression projection driven from the 2009 roll and estimated future new entrant cohort sizes across its catchment would suggest that the roll will stay stable for three years and then grow strongly to a level well in excess of its 2009 capacity. Neither of these methods is capable of projecting forward the specialist demand represented by the speciality Maori programme which is becoming a growing focus for the school. Anecdotal evidence suggests that increase of new entrants and other age levels of the school's roll are currently constrained by capacity. More significantly, the school's specialty Maori programme has momentum and is driving increase in the roll. Other schools in the study area and elsewhere also offer specialty Maori programmes. The number of students of European but most notably Maori ethnicity have both increased at a rate higher than the overall rate of roll growth at the school since 2004.

It seems realistic to roll growth pressures exist at the school both driven by the growth in the local primary school age population and the popularity of its specialty Maori

programme. The evidence supports the view that the roll would grow if accommodation capacity was expanded. The popularity and growth of the Maori programme at the school indicates that this sort of specialty Maori programme is needed and that need needs to be addressed locally and strategically at an area level. Action to manage shortfall of capacity will be required in the short term and is linked with how best to cater for future demand for this sort of specialty Maori programme. This need is reinforced by the expectation that ethnic population projections by Statistics NZ. A 2006 census based projection indicates that the proportion of residents under 15 of Maori ethnicity will increase from 53,500 in 2006 to 72,000 in 2021 compared with a decrease from 171,000 to 164,600 for children of European ethnicity and that the proportion of Maori ethnicity would increase from 18 to 21.4% in spite of a dilution effect from more rapid expansion the number of residents of Pasifika or Asian ethnicity.

**Figure 6.4.2 : Historical and Projected Newton Central Primary School July Roll**





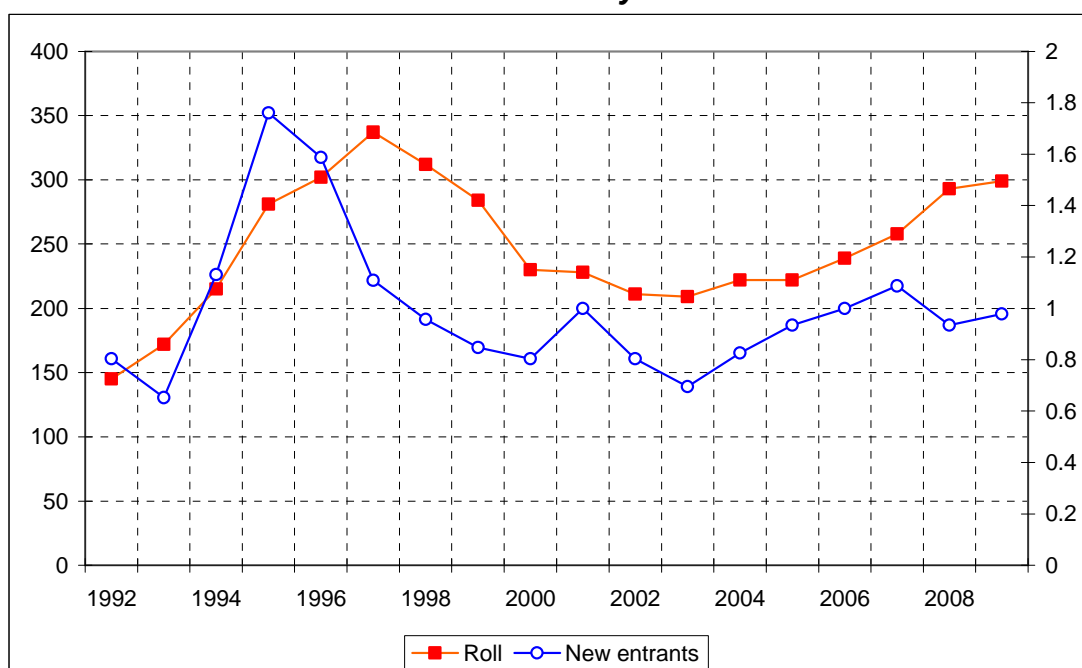
**Table 6.4.3 : Newton Central Primary School 2002 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	12	All
2000	37	31	28	37	51	44	2	0	230
2001	46	41	28	30	35	44	3	1	228
2002	37	45	38	26	28	34	3	0	211
2003	32	32	49	36	31	28	1	0	209
2004	38	32	32	49	36	33	2	0	222
2005	43	39	30	32	45	29	4	0	222
2006	46	46	36	32	33	44	2	0	239
2007	50	46	52	44	32	30	4	0	258
2008	43	53	46	58	45	35	8	5	293
2009	45	37	56	42	57	43	11	8	299

**Table 6.4.4 : Newton Central Primary School July roll age cohort annual transitions by end of period age group 2004-2005 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
2000-2001	4	-3	2	-2	-7
2001-2002	-1	-3	-2	-2	-1
2002-2003	-5	4	-2	5	0
2003-2004	0	0	0	0	2
2004-2005	1	-2	0	-4	-7
2005-2006	3	-3	2	1	-1
2006-2007	0	6	8	0	-3
2007-2008	3	0	6	1	3
2008-2009	-6	3	-4	-1	-2

**Figure 6.4.3 : Newton Central Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 6.5 Pt. Chevalier School

Pt. Chevalier Primary School is situated in the southeast of the study area with an enrolment scheme which contains Pt. Chevalier East and West area units plus very small parts of Westmere and Surrey Crescent (Figure 6.5.1). Students are highly concentrated in its enrolment zone (Table 6.5.1). The proportion of enrolments sourced from Pt. Chevalier Primary's enrolment zone has remained in the range of 82.2 to 84.5% between 2008 and 2010 (Table 3.5). In 2009, the school had a much higher proportion of students of European ethnicity (69.6%) than the study area as a whole (58.7%) (Table 6.3.2).

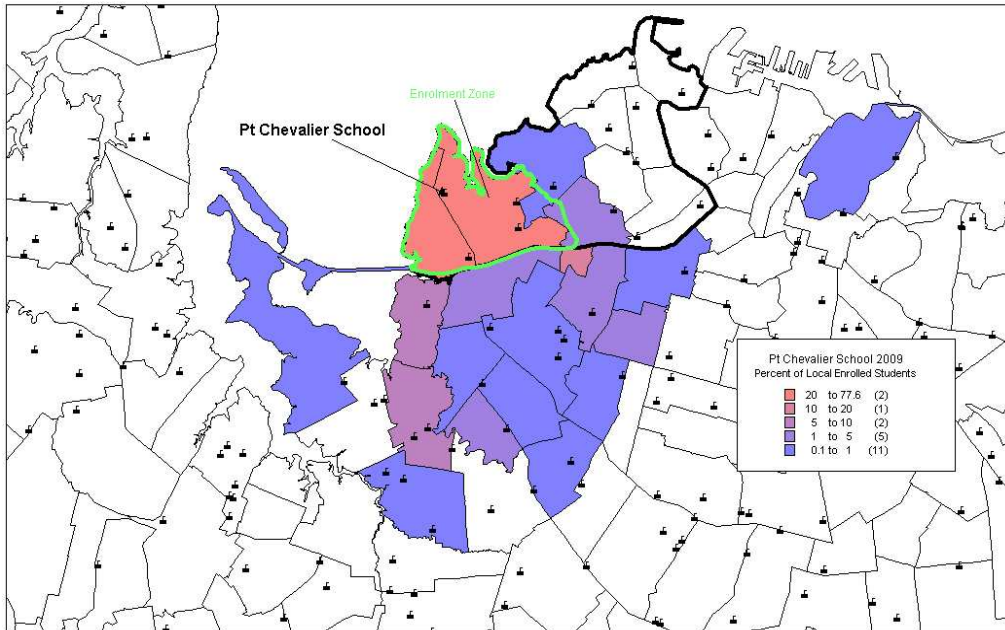
**Table 6.5.1 : Estimated distribution of 2009 Pt. Chevalier School geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Point Chevalier East</i>	281	362	77.6	48.6
<i>Point Chevalier West</i>	205	271	75.6	35.5
<i>Surrey Crescent</i>	3	186	1.6	0.5
<i>Westmere</i>	3	460	0.7	0.5
Auckland Central West	492			85.1
<i>Waterview</i>	19	237	8.0	3.3
<i>Roberton</i>	15	303	5.0	2.6
Avondale-Roskill Ward	40			6.9
<i>St Lukes North</i>	4	28	14.3	0.7
<i>Owairaka West</i>	8	215	3.7	1.4
<i>Point Chevalier South</i>	4	131	3.1	0.7
<i>St Lukes</i>	4	154	2.6	0.7
Eden-Albert Ward	30			5.2
Other	16			2.8
Auckland City	578	13,071	4.4	100.0

**Table 6.5.2 : Pt. Chevalier Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Pt Chevalier School	Difference
NZ European/Pakeha	58.7	69.6	10.9
Other European	5.4	3.4	-2.0
NZ Maori	13.3	10.0	-3.3
Samoan	8.2	2.9	-5.3
Other Pacific Island	1.7	0.7	-1.0
Indian	3.9	2.3	-1.6
Chinese	2.3	1.0	-1.3
Other Asian	3.2	2.5	-0.7
Other	0.8	0.7	-0.1
<b>% Of Area Total</b>	<b>100.0</b>	<b>19.5</b>	

**Figure 6.5.1 : Pt. Chevalier Primary School and its share of 2009 enrolments in nearby area units**

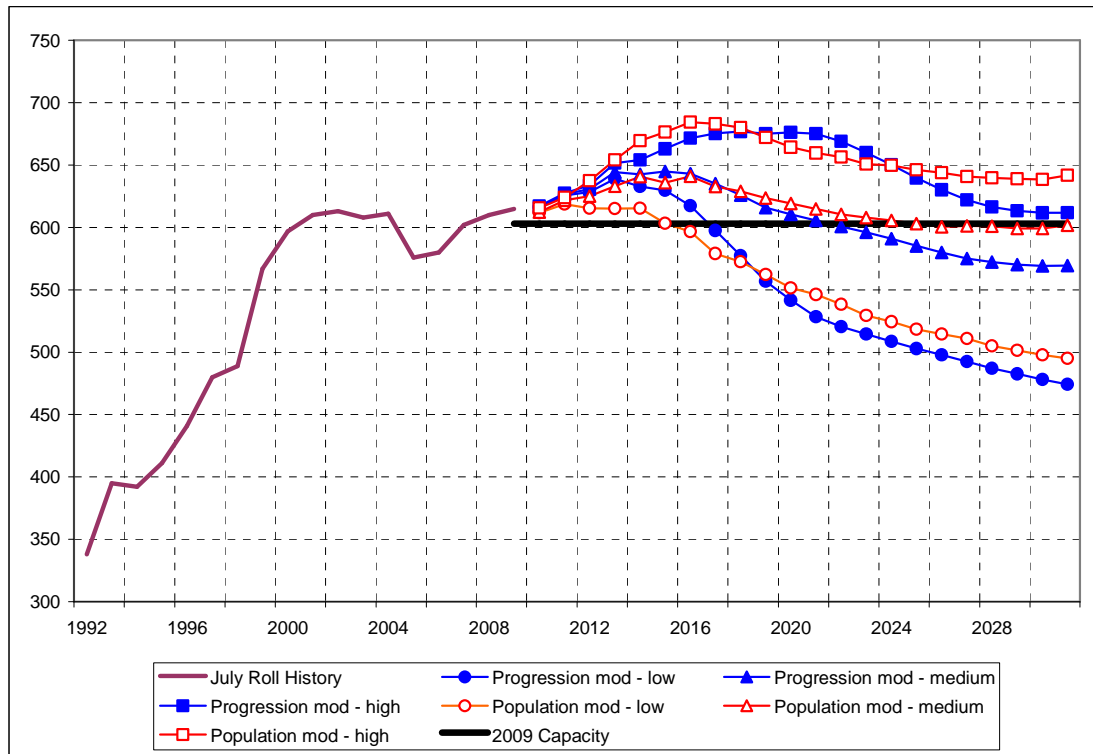


As shown in Table 6.5.2 and illustrated in Figure 6.5.2, the roll of Pt. Chevalier Primary School grew slowly between 2006 and 2009 with sustained high new entrant intakes making up for lower than average new entrants intakes in 2001, 2003 and 2005. The July 2009 school roll of 615 was above its estimated capacity of 603 students. The number of 5 to 9 year olds Pt Chevalier East and West area units is estimated to have increased by 2 in line with but slightly less than the modest net increase of 7 projected for 2007 to 2009. Looking ahead, a lightly higher but still fairly low net increase of only 14 primary school age children is projected for 2009 to 2013. The primary school age population is projected to drop subsequent to that.

These demographic expectations and the momentum of the larger new entrant cohorts of the last few years driving the rolls significantly above current capacity in the short term to 2016 and then dropping down to a level similar to that of 2009.

This means that action is likely to be needed to manage expansion beyond the school's current capacity to a July roll of about 640-645 in 2016 compared with the 615 July 2009 roll and 603 capacity, but that pressure is projected to ease with a falling roll in the medium term.

**Figure 6.5.2 : Historical and Projected Pt. Chevalier Primary School July Roll**



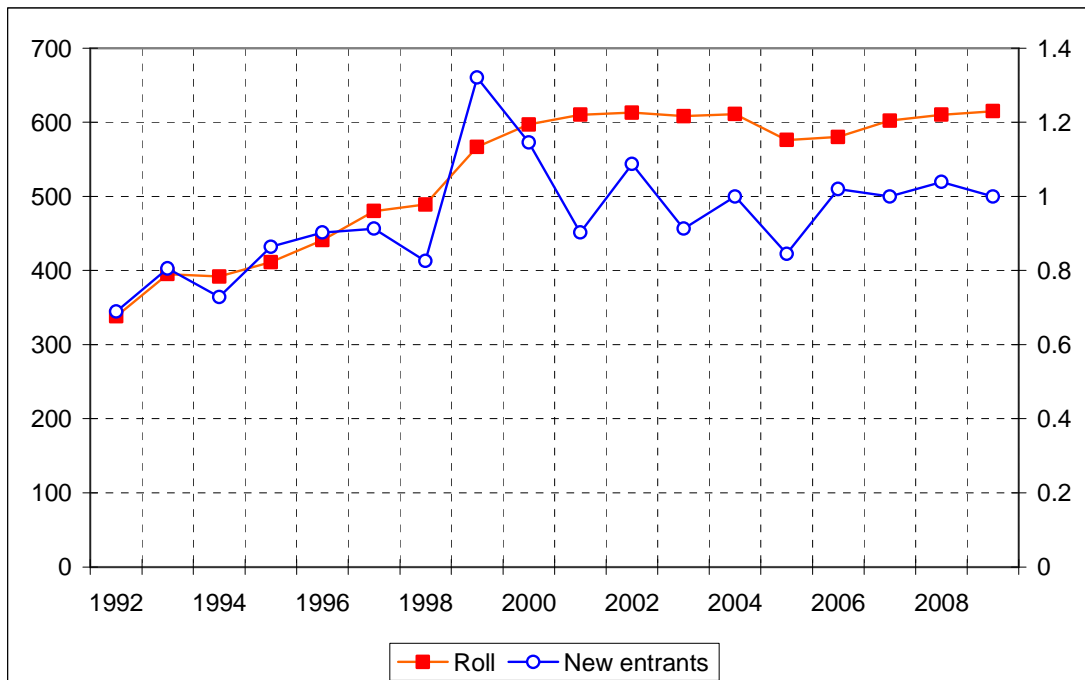
**Table 6.5.3 : Pt. Chevalier Primary School 2002 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	All
1999	136	88	92	99	74	76	2	567
2000	118	132	81	93	100	73	0	597
2001	93	133	118	80	89	96	1	610
2002	112	97	115	118	75	92	4	613
2003	94	110	94	116	116	72	6	608
2004	103	87	108	91	110	109	3	611
2005	87	104	85	103	88	105	4	576
2006	105	88	98	92	103	92	2	580
2007	103	107	92	100	96	99	5	602
2008	107	101	108	97	95	98	4	610
2009	103	110	99	106	97	97	3	615

**Table 6.5.4 : Pt. Chevalier Primary School July roll age cohort annual transitions by end of period age group 2004-2005 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1999-2000	-4	-7	1	1	-1
2000-2001	15	-14	-1	-4	-4
2001-2002	4	-18	0	-5	3
2002-2003	-2	-3	1	-2	-3
2003-2004	-7	-2	-3	-6	-7
2004-2005	1	-2	-5	-3	-5
2005-2006	1	-6	7	0	4
2006-2007	2	4	2	4	-4
2007-2008	-2	1	5	-5	2
2008-2009	3	-2	-2	0	2

**Figure 6.5.3 : Pt. Chevalier Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 6.6 Ponsonby Primary School

Ponsonby Primary School is situated in the north central of the study area with an enrolment scheme contained within but extending over parts of the Ponsonby East, Herne Bay, St Mary's and a thin wedge of the Ponsonby West area units (Figure 6.6.1). Students are majority of its students live in its enrolment zone (Table 6.6.1). The proportion of enrolments sourced from Ponsonby Primary's enrolment zone rose from 49.2% in 2008 to 57.8% in 2010 (Table 3.5). In 2009, it had a much higher proportion of students of European ethnicity (77.5%) than the study area as a whole (58.7%), associated with a much lower proportion of enrolments from children of Chinese, Indian Samoan and Pasifika ethnicity than the study area as a whole (Table 6.6.2).

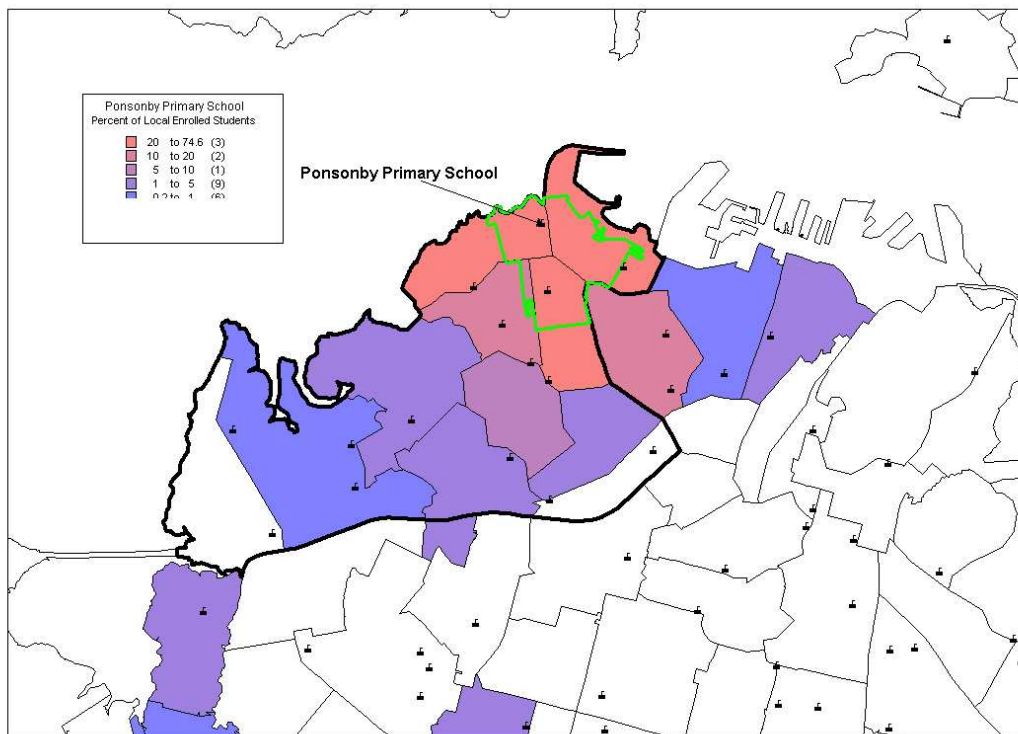
**Table 6.6.1 : Estimated distribution of 2009 Ponsonby School geocoded enrolments by area (summarised)**

Locality	Enrolments	AU Enrolments	% Share of AU	% of Schl Roll
<i>St Mary's</i>	94	126	74.6	27.2
<i>Ponsonby East</i>	65	157	41.4	18.8
<i>Herne Bay</i>	67	207	32.4	19.4
<i>Ponsonby West</i>	34	194	17.5	9.9
<i>Grey Lynn West</i>	14	230	6.1	4.1
Auckland Central West	305	2,073	14.7	88.4
<i>Freemans Bay</i>	19	164	11.6	5.5
Auckland Central CBD	21	368	5.7	6.1
Other	19			5.5
Auckland City	345	10,445	3.3	100.0

**Table 6.6.2 : Ponsonby Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Ponsonby School	Difference
NZ European/Pakeha	58.7	77.5	18.8
Other European	5.4	3.2	-2.2
NZ Maori	13.3	9.8	-3.5
Samoan	8.2	1.4	-6.8
Other Pacific Island	1.7	0	-1.7
Indian	3.9	1.2	-2.7
Chinese	2.3	0.6	-1.7
Other Asian	3.2	2.9	-0.3
Other	0.8	0.3	-0.5
<b>% Of Area Total</b>	<b>100.0</b>	<b>11.1</b>	

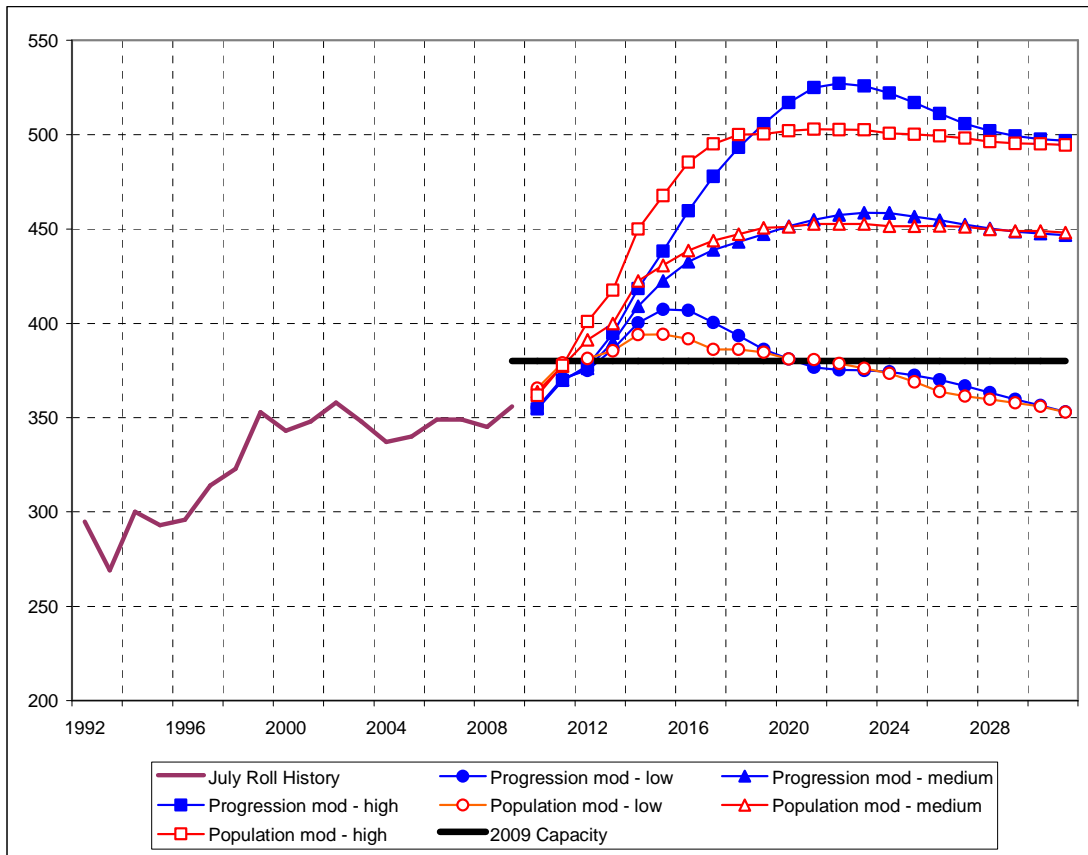
**Figure 6.6.1 : Ponsonby Primary School and its share of 2009 enrolments in nearby area units**



As shown in Table 6.6.2 and illustrated in Figure 6.6.2, the roll of Grey Lynn Primary School shown no sustained upward or downward momentum over the 1999 to 2008 period but did increase significantly between 2008 and 2009 driven by the largest new entrant intake over the 1998 to 2009 period and some net gains at other levels of the primary roll. The number of 5 to 9 year olds living in the Ponsonby East and St Mary's area units was projected to drop by 10 in net between 2007 and 2009 but is estimated to have increased by 26. The 5 to 10 year old resident population of Ponsonby East is projected to increase sharply by 76 between 2009 and 2013 sustained into a further increase of 30 over 2013 and 2019 with added growth of 33 from St Mary's (Figure 6.6.2). These demographic pressures are projected to drive an increase in the Ponsonby Primary School roll to 390-400 by 2013 and 450 by 2019, well above its 2009 July roll of 356 and capacity of 380.

The roll projections suggest that it is inevitable that by 2012/2013 the July roll of Ponsonby Primary School will pushing above its 380 capacity at 390-400 and by 2019 it will be well above its capacity at 450. This higher roll level would then be sustained until 2021 at least.

**Figure 6.6.2 : Historical and Projected Ponsonby Primary School July Roll**



**Table 6.6.3 : Ponsonby Primary School 1998 to 2009 July roll by age**

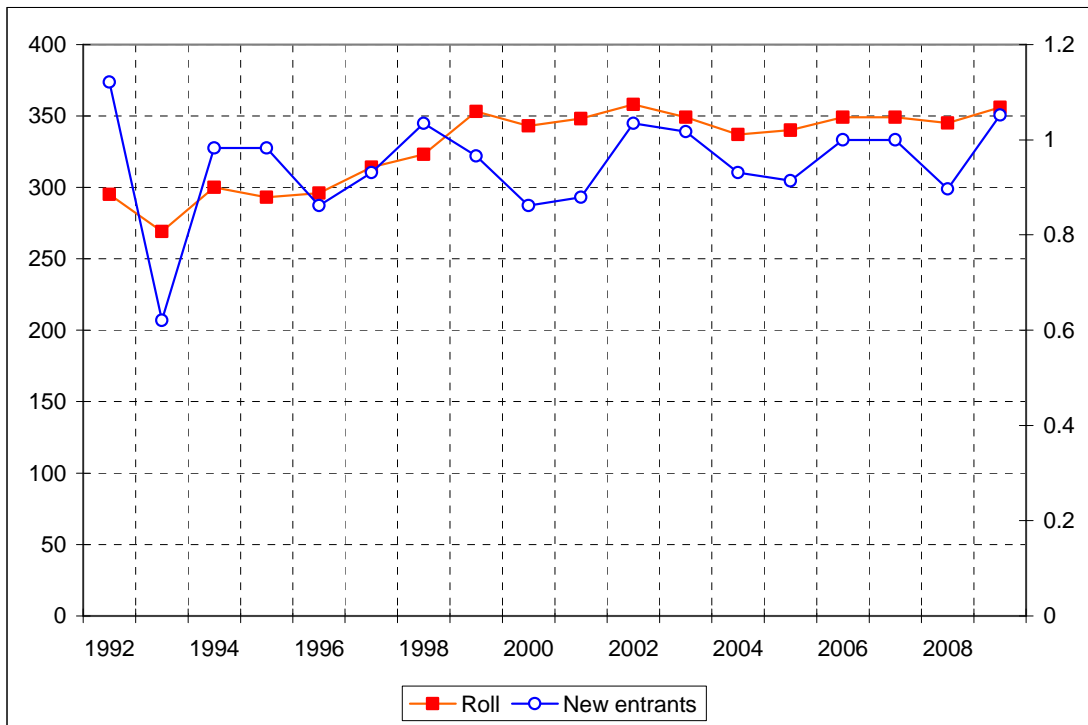
YEAR	5	6	7	8	9	10	11 or more	All
1998	60	57	60	59	52	30	5	323
1999	56	66	54	60	60	49	8	353
2000	50	55	63	50	63	54	8	343
2001	51	53	61	63	57	58	5	348
2002	60	57	55	55	63	57	11	358
2003	59	59	59	52	53	59	8	349
2004	54	62	59	57	50	51	4	337
2005	53	57	61	56	54	52	7	340
2006	58	52	61	62	59	51	6	349
2007	58	63	50	58	59	57	4	349
2008	52	61	62	50	55	57	8	345
2009	61	53	59	66	51	57	9	356



**Table 6.6.4 : Ponsonby Primary School July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1998-1999	6	-3	0	1	-3
1999-2000	-1	-3	-4	3	-6
2000-2001	3	6	0	7	-5
2001-2002	6	2	-6	0	0
2002-2003	-1	2	-3	-2	-4
2003-2004	3	0	-2	-2	-2
2004-2005	3	-1	-3	-3	2
2005-2006	-1	4	1	3	-3
2006-2007	5	-2	-3	-3	-2
2007-2008	3	-1	0	-3	-2
2008-2009	1	-2	4	1	2

**Figure 6.6.3 : Ponsonby Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 6.7 Richmond Rd School

Richmond Rd Primary School is situated in the southeast of the study area with an enrolment scheme contained within but extending over parts of the Ponsonby East, Grey Lynn West and Grey Lynn East area units (Figure 6.7.1). In 2010, 45% of its Students resident in its enrolment zone, up slightly from 43.6% in 2008 (Table 3.5). However, Richmond Rd operates three specialty programmes catering to Maori, Samoan and French language speakers respectively. In 2009, only 26.5% of its students were of European ethnicity compared with 58.7% for the study area as a whole (Table 6.7.2).

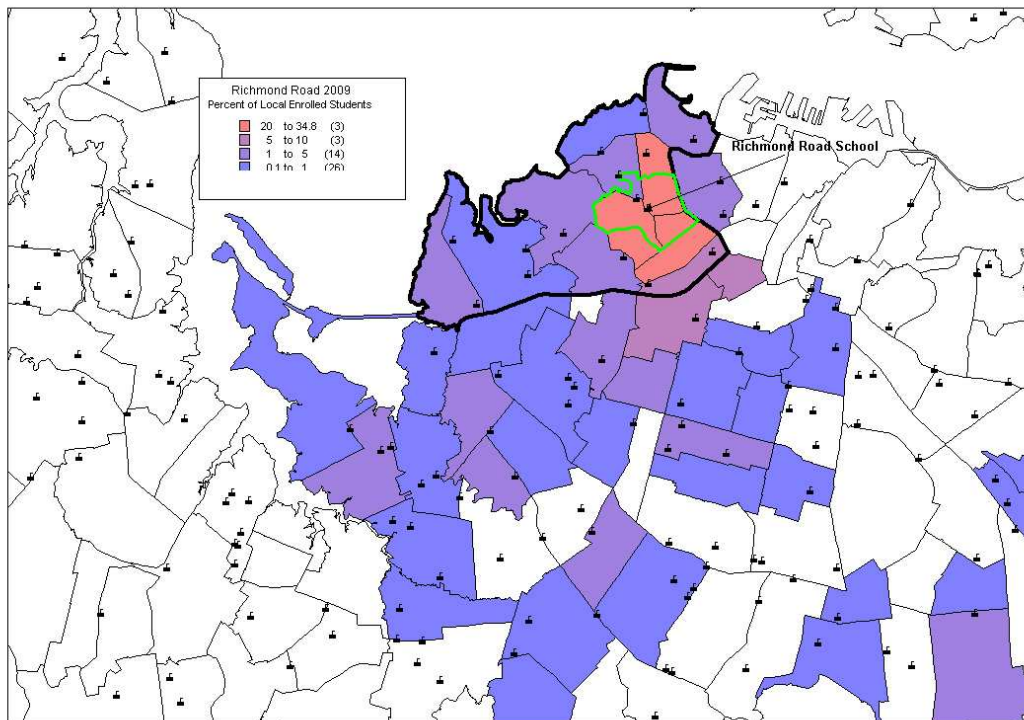
**Table 6.7.1 : Estimated distribution of 2009 Richmond Rd School geocoded enrolments by area (summarised)**

Locality	School Enrolments	All Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Grey Lynn West</i>	80	230	34.8	24.9
<i>Grey Lynn East</i>	34	151	22.5	10.6
<i>Ponsonby East</i>	33	157	21.0	10.3
<i>Arch Hill</i>	3	48	6.3	0.9
<i>Ponsonby West</i>	9	194	4.6	2.8
<i>Surrey Crescent</i>	8	186	4.3	2.5
<i>Point Chevalier West</i>	9	271	3.3	2.8
<i>Westmere</i>	8	460	1.7	2.5
<i>Auckland Central West</i>	190	2,392	7.9	59.2
<i>Avondale-Roskill Ward</i>	21	3,399	0.6	6.5
<i>Kingsland</i>	10	180	5.6	3.1
<i>Maungawhau</i>	3	101	3.0	0.9
<i>St Lukes</i>	4	154	2.6	1.2
<i>Sandringham North</i>	3	210	1.4	0.9
<i>Eden-Albert Ward</i>	33	3,152	1.0	10.3
<i>Eden Terrace</i>	3	42	7.1	0.9
<i>Hobson Ward</i>	5	489	1.0	1.6
<i>Te Papapa</i>	5	246	2.0	1.6
<i>Tamaki-Maungakiekie Ward</i>	16	2,439	0.7	5.0
<i>Other</i>	56	5,964	2.5	17.4
<b>Total</b>	<b>321</b>			<b>100.0</b>

**Table 6.7.2 : Richmond Rd Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

<b>Ethnicity</b>	<b>Area Schools</b>	<b>Richmond Rd School</b>	<b>Difference</b>
NZ European/Pakeha	58.7	26.5	-32.2
Other European	5.4	19.3	13.9
NZ Maori	13.3	20.9	7.6
Samoan	8.2	20.9	12.7
Other Pacific Island	1.7	2.2	0.5
Indian	3.9	2.5	-1.4
Chinese	2.3	4.7	2.4
Other Asian	3.2	2.8	-0.4
Other	0.8	0.3	-0.5
<b>% Of Area Total</b>	<b>100.0</b>	<b>10.2</b>	

**Figure 6.7.1 : Richmond Rd Primary School and its share of 2009 enrolments in nearby area units**



As shown in Table 6.7.2 and illustrated in Figure 6.7.2, the July roll of Richmond Rd Primary School stayed fairly stable between 2005 to 2008, but dropped slightly in 2009 as a result primarily of a drop of 14 in the number of Samoan students. The number of primary age students living in the Grey Lynn West, Grey Lynn East and Ponsonby East area is estimated to have increased by 6 slightly above the net increase of 1 projected by Stats NZ over 2007 to 2009. As at 2009 the school had a July roll of 323, slightly above its capacity of 313.

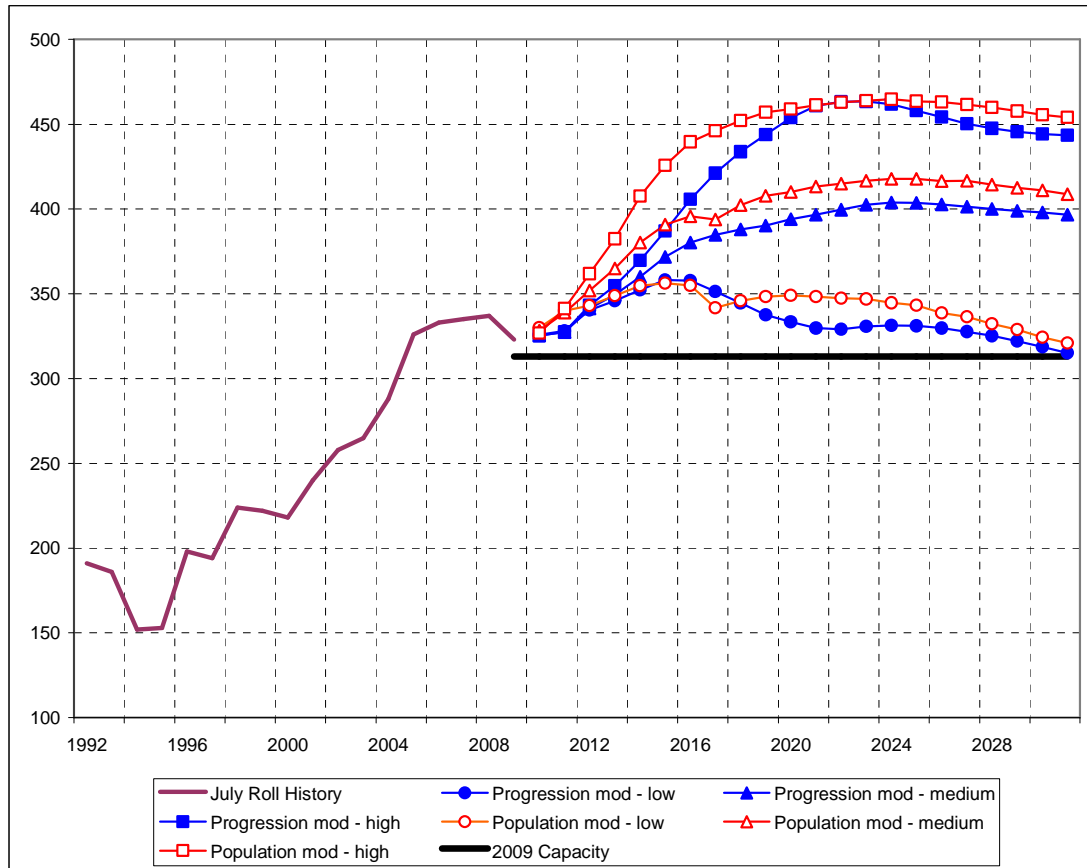
Looking ahead, the projections suggest that the school's roll will increase to 350-370 by 2013 and 390-410 by 2019 which level would be sustained till at least 2031. This roll growth is driven by sustained and significant growth in the primary school age resident populations of Grey Lynn East and West and Ponsonby East in the period 2009 to 2019. Looking further ahead to 2019 to 2031, sustained growth in Grey Lynn East between 2019 and 2031 balances out a decrease in Grey Lynn West and Ponsonby East.

Those assumptions take no account of the role of future specialist demand arising from the three specialty programmes run by the school. These can not be predicted easily or factored into this projection. There are signs of a drop in demand for both the Maori and Samoan specialty programmes but an increase in the demand for the French language programme.

The roll projections suggest that it is inevitable that Richmond Rd Primary School will further exceed its July roll capacity of 313 in the short term up to a level of 350-370 by 2013 but those growth expectations are likely to be reduced by a lower level of growth or no growth in the demand for specialty programmes provided by the school.

However, conclusions about the specialty programmes can't be reached without a wider strategic picture of demand for those types of programmes. This would need to include an assessment of the future contribution likely to be made by the Richmond Rd programmes within that wider picture.

**Figure 6.7.2 : Historical and Projected Richmond Rd Primary School July Roll**



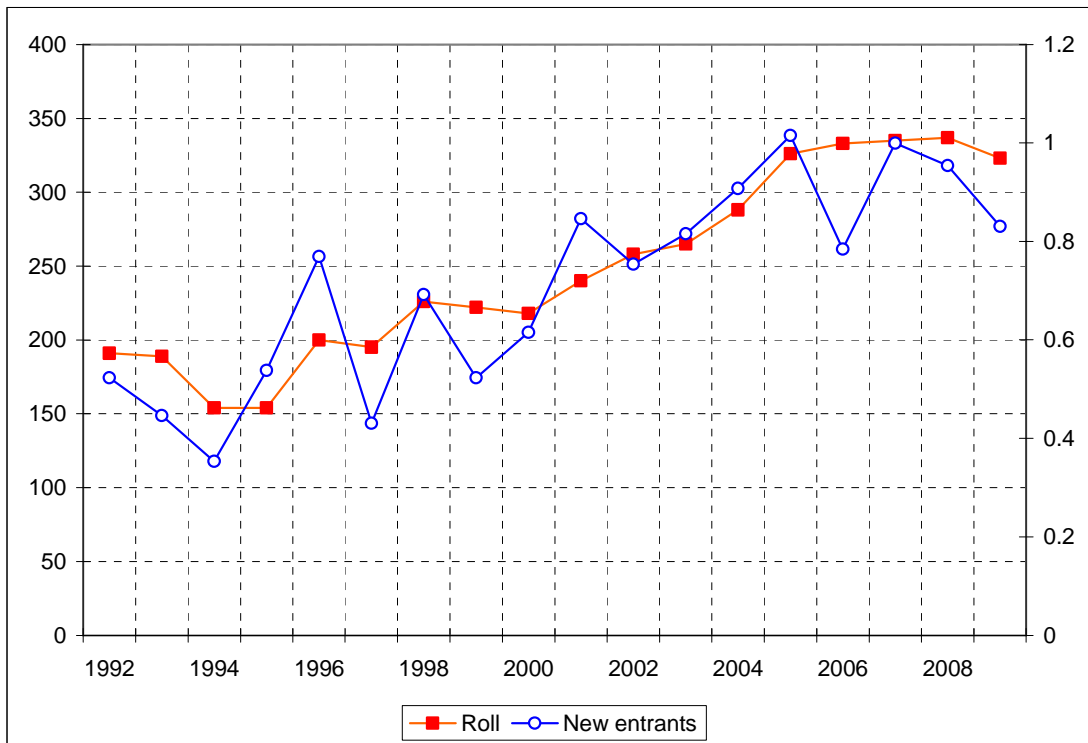
**Table 6.7.3 : Richmond Rd Primary School 1998 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11 or more	All
1998	45	35	44	34	29	22	17	226
1999	34	43	38	39	31	25	12	222
2000	40	35	35	38	39	31		218
2001	55	37	38	37	36	36	1	240
2002	49	57	49	29	42	32		258
2003	53	53	52	36	30	40	1	265
2004	59	59	52	49	41	26	2	288
2005	66	63	55	51	50	40	1	326
2006	51	68	63	51	52	48		333
2007	65	51	70	56	47	46		335
2008	62	66	52	61	53	40	3	337
2009	54	54	58	48	57	50	2	323

**Table 6.7.4 : Richmond Rd Primary School July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1998-1999	-2	3	-5	-3	-4
1999-2000	1	-8	0	0	0
2000-2001	-3	3	2	-2	-3
2001-2002	2	12	-9	5	-4
2002-2003	4	-5	-13	1	-2
2003-2004	6	-1	-3	5	-4
2004-2005	4	-4	-1	1	-1
2005-2006	2	0	-4	1	-2
2006-2007	0	2	-7	-4	-6
2007-2008	1	1	-9	-3	-7
2008-2009	-8	-8	-4	-4	-3

**Figure 6.7.3 : Richmond Rd Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 6.8 Westmere School (Auckland)

Westmere Primary School is situated in the north central part of the study area with an enrolment scheme primarily consisting of almost all of the Westmere area unit but also some small parts of the Surrey Crescent area unit (Figure 6.8.1). Students are highly concentrated in its enrolment zone (Table 6.8.1). The proportion of enrolments sourced from Grey Lynn Primary's enrolment zone rose from 78.4% to 81.6% between 2008 and 2010 (Table 3.5). In 2009, it had a slightly higher proportion of students of European ethnicity (69.6%) than the study area as a whole (58.7%) and a lower proportion of students of Samoan or Indian ethnicity (Table 6.8.2). The school operates a significant specialty Maori programme but with the size of the school this is able to be sustained despite the fact that the proportion of its roll of Maori ethnicity at 13.7% is only slightly higher than for the study area as a whole.

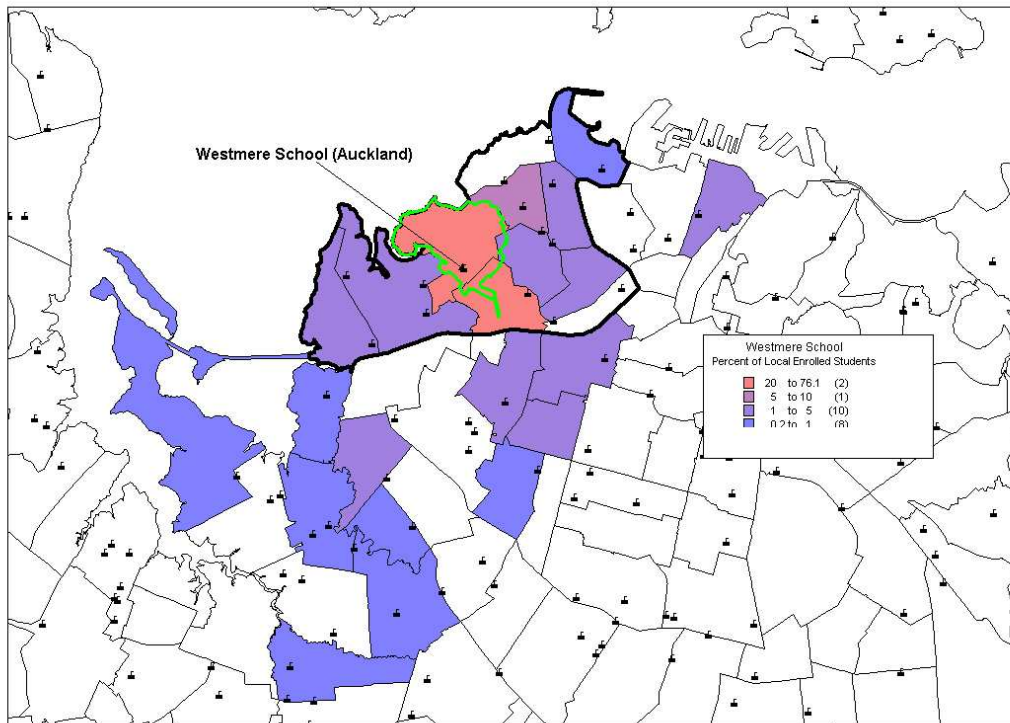
**Table 6.8.1 : Estimated distribution of 2009 Westmere Primary School geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Westmere</i>	350	460	76.1	73.8
<i>Surrey Crescent</i>	55	186	29.6	11.6
<i>Ponsonby West</i>	11	194	5.7	2.3
<i>Grey Lynn West</i>	8	230	3.5	1.7
<i>Point Chevalier East</i>	10	362	2.8	2.1
<i>Point Chevalier West</i>	4	271	1.5	0.8
<i>Ponsonby East</i>	2	157	1.3	0.4
<i>Grey Lynn East</i>	2	151	1.3	0.4
<i>St Mary's</i>	1	126	0.8	0.2
Auckland Central West	443	2,137	20.7	93.5
Avondale-Roskill Ward	5	1,499	0.3	1.1
Eden-Albert Ward	12	1,257	1.0	2.5
Other	14			3.0
Total	474			100.0

**Table 6.8.2 : Westmere Primary School – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Westmere School	Difference
NZ European/Pakeha	58.7	69.6	10.9
Other European	5.4	3.8	-1.6
NZ Maori	13.3	13.7	0.4
Samoan	8.2	2.8	-5.4
Other Pacific Island	1.7	1.8	0.1
Indian	3.9	0.4	-3.5
Chinese	2.3	2.2	-0.1
Other Asian	3.2	4.2	1.0
Other	0.8	0	-0.8
<b>% Of Area Total</b>	<b>100.0</b>	<b>16.1</b>	

**Figure 6.8.1 : Westmere Primary School and its share of 2009 enrolments in nearby area units**



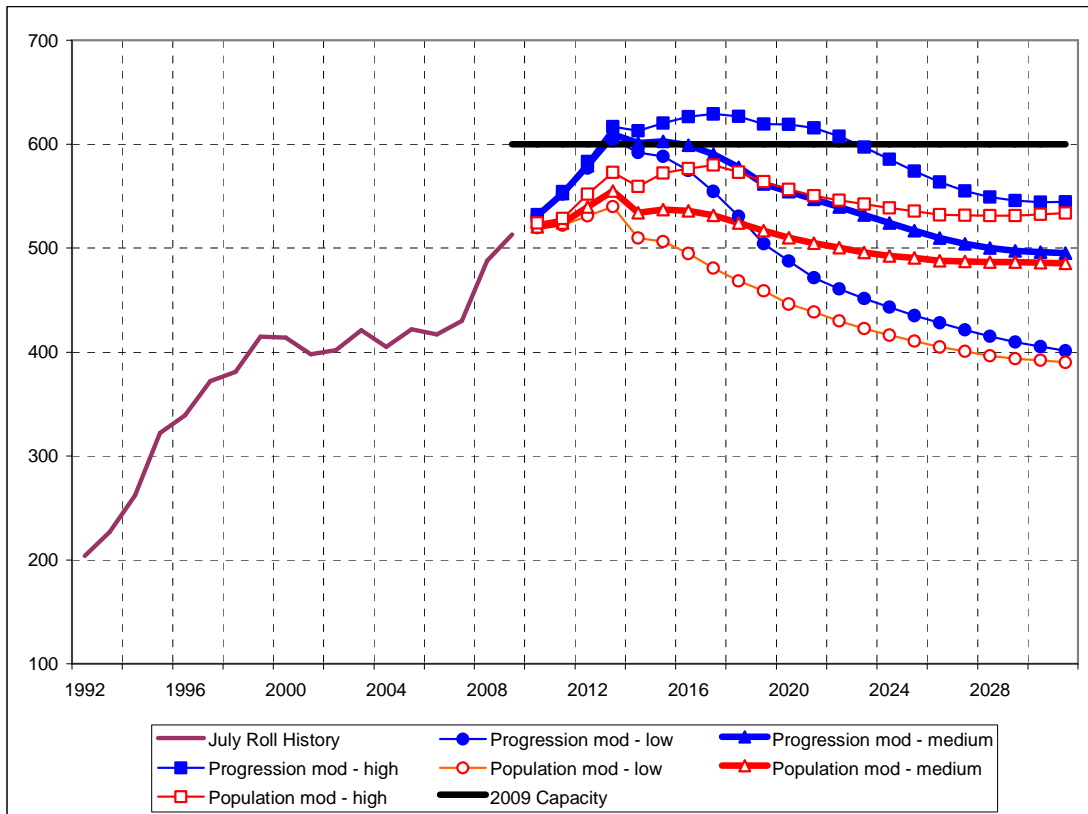
As shown in Table 6.8.2 and illustrated in Figure 6.8.2, the roll of Westmere Primary School increased rapidly over the 2007 to 2009 period driven by a large increase in new entrant numbers and some smaller net gains at other age groups. With recent expansion it had a capacity of 600 in 2009 above its 2009 July roll of 513. As has been discussed elsewhere and notably shown in Table 3.4, the roll of the school has been driven up sharply by rapid growth in the number of 5 to 10 year olds living in the Westmere area unit. Significant growth in the primary school age resident population of this area unit over the 2007 to 2009 was projected by Stats NZ but the growth increment is estimated to be double that projected.

Looking forward, the more short term trend sensitive age progression based roll projection result anticipates continued roll growth in the short term reaching 560 to 610 dropping down slightly by 2017 but in the long term dropping to about 500 by 2031. The two projection methods produced quite different results in the short term but the higher projection produced by the roll progression method is likely to be more robust and reliable as it captures and carries forward the high new entrant recruitment of the 2007 to 2009 period.

Given the rapid and unforecast growth in the local primary school age population of the area over recent years and its counterpart in very high new entrant recruitment, the situation will need to be monitored. The roll projections suggest that it is most likely that Westmere Primary School will be able to manage within its 2009 capacity in the short, medium and long term on the basis of its July roll. However, around 2013 it may briefly pushes up against its 2009 capacity.



**Figure 6.8.2 : Historical and Projected Westmere Primary School July Roll**



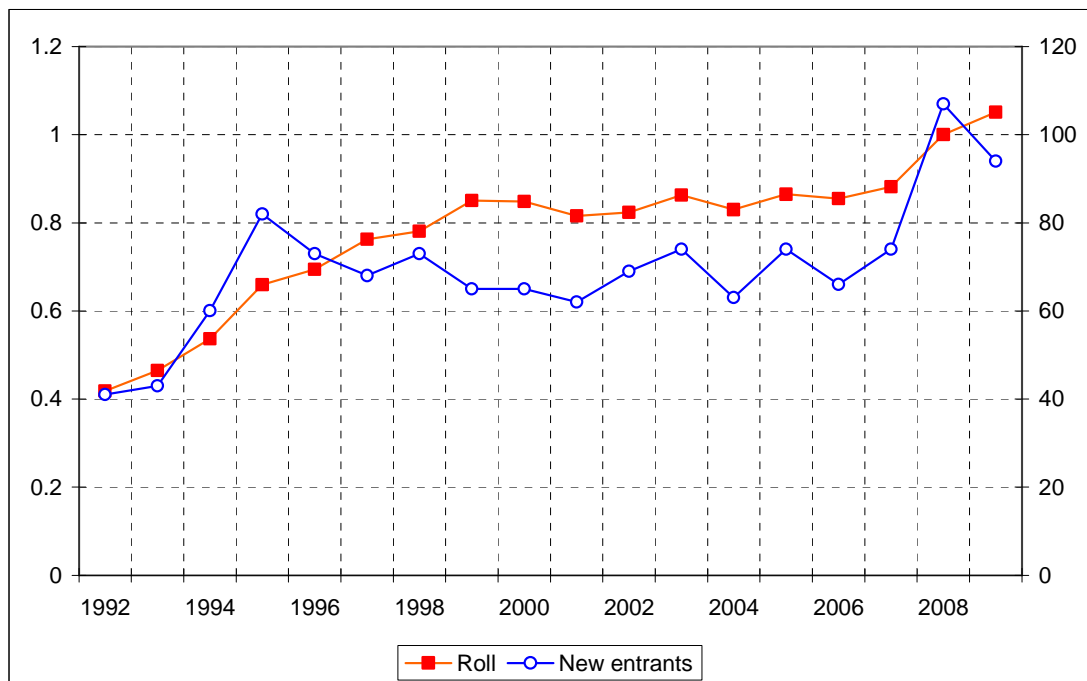
**Table 6.8.3 : Westmere Primary School 1998 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11 or more	All
1998	73	69	66	64	56	46	7	381
1999	65	82	72	66	71	52	7	415
2000	65	68	74	63	64	73	7	414
2001	62	72	63	72	59	63	7	398
2002	69	63	69	66	66	63	6	402
2003	74	70	60	73	70	65	9	421
2004	63	75	71	56	70	64	6	405
2005	74	76	76	66	54	68	8	422
2006	66	76	75	72	64	54	10	417
2007	74	69	78	73	68	60	8	430
2008	107	77	77	74	72	69	12	488
2009	94	108	77	76	78	71	9	513

**Table 6.8.4 : Westmere Primary School July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1998-1999	9	3	0	7	-4
1999-2000	3	-8	-9	-2	2
2000-2001	7	-5	-2	-4	-1
2001-2002	1	-3	3	-6	4
2002-2003	1	-3	4	4	-1
2003-2004	1	1	-4	-3	-6
2004-2005	13	1	-5	-2	-2
2005-2006	2	-1	-4	-2	0
2006-2007	3	2	-2	-4	-4
2007-2008	3	8	-4	-1	1
2008-2009	1	0	-1	4	-1

**Figure 6.8.3 : Westmere Primary School : trends in starting school new entrants versus total July rolls : 1992 to 2009**



## 7 Individual Integrated Primary School Projections

This section looks at the market positioning, recent trends and future roll projections for three integrated co-educational primary schools in the study area. St Joseph's school (Grey Lynn) and Marist School (Herne Bay) are both full primary schools but St Francis School (Pt Chevalier) is a contributing (lower primary) school. The projection method used for these schools is an averaged population catchment market share approach and the new entrant driven roll transition projection method, more sensitive to start year roll structure and recent roll trends has not been used.

### 7.1 St Joseph's School (Grey Lynn)

St Joseph's School (Grey Lynn) is a state integrated full primary co-educational school. The school is in Arch Hill at the south eastern corner of the study area (Figure 7.1.1). In 2009 it a majority (65%) of Pasifika students, 56.6% of whom were Samoan, 8.4% of other Pasifika ethnicities and 18.1% Indian in 2009. This contrasts sharply with ethnic profile of the Western Bays study area as a whole (Table 7.1.2). In 2009, only 1.2% of the school's students were NZ European/Pakeha and 1.2% NZ Maori compared with 58.7% and 5.4% respectively for the Western Bay's study area as a whole. Students were drawn from a wide catchment including from the Avondale-Roskill (20%) Eden-Albert (22.7%) wards to the south west and south of the study area (Table 7.1.1). Only 40% of 2009 enrolments were from the study area.

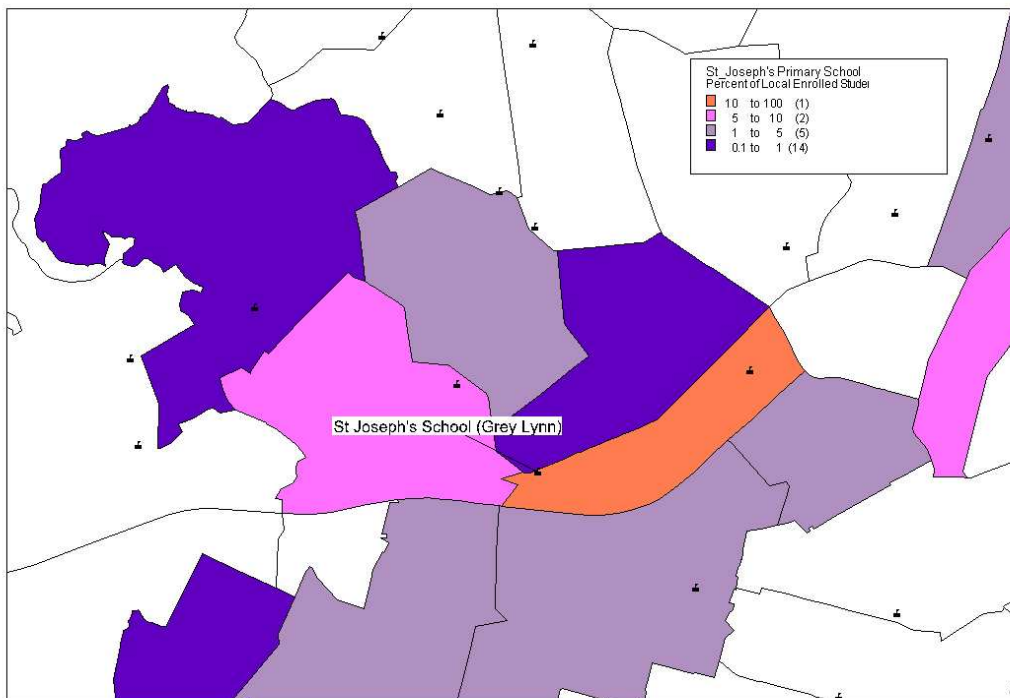
**Table 7.1.1 : Estimated distribution of 2009 St Joseph's Primary School (Grey Lynn) geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Arch Hill</i>	6	48	12.5	8.0
<i>Surrey Crescent</i>	14	186	7.5	18.7
<i>Grey Lynn West</i>	7	230	3.0	9.3
Auckland Central West	30	1075	24.1	40.0
Auckland Central CBD	3	109	8.2	4.0
New Lynn Ward	6	1270	3.7	8.0
Avondale-Roskill Ward	15	2218	4.5	20.0
<i>Kingsland</i>	8	180	4.4	10.7
<i>St Lukes</i>	4	154	2.6	5.3
Eden-Albert Ward	17	1589	8.6	22.7
Other	4			5.3
Total	75			100.0

**Table 7.1.2 : St Joseph's Primary School (Grey Lynn) – (Prioritised)  
Ethnicity of 2009 July roll compared with all Western Bay area primary  
schools**

Ethnicity	Area Schools	St Joseph's School	Difference
NZ European/Pakeha	58.7	1.2	-57.5
Other European	5.4	1.2	-4.2
NZ Maori	13.3	1.2	-12.1
Samoan	8.2	56.6	48.4
Other Pacific Island	1.7	8.4	6.7
Indian	3.9	18.1	14.2
Chinese	2.3	6	3.7
Other Asian	3.2	6	2.8
Other	0.8	4.8	4.0
<b>% Of Area Total</b>	<b>100.0</b>	<b>2.6</b>	

**Figure 7.1.1 : St Joseph's Primary School (Grey Lynn) and its share of  
2009 enrolments in nearby area units**

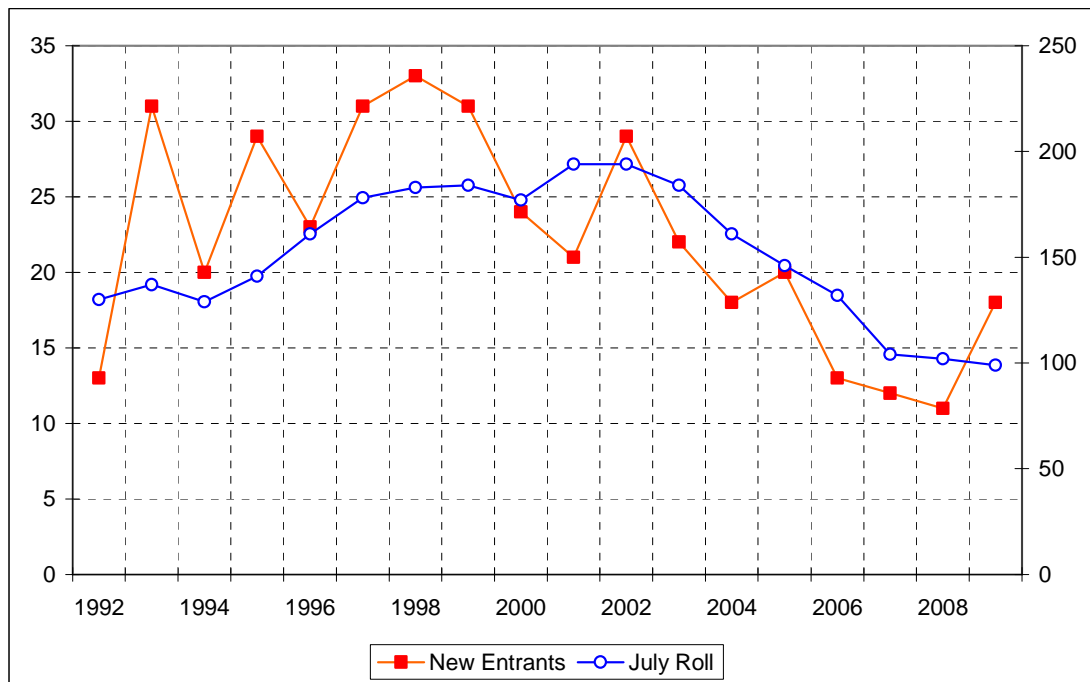


As shown in Table 7.1.3 and illustrated in Figure 7.1.2, the roll of St. Joseph's School was at a historical peak in 2002 but then dropped sharply between 2002 and 2007 due to a drop in new entrant numbers and decreasing retention from lower primary to intermediate level. The roll decreased slowly between 2007 and 2009, but new entrant numbers in 2009 were the highest since 2005 and the net age transitions by year and age (Table 7.1.4) hint that the roll may grow in the immediate future. The current capacity of the school is 225, considerably above its 2009 July roll of 99.

**Table 7.1.3 : St Joseph's Primary School (Grey Lynn) 1998 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	12	13	Total
1998	33	30	26	27	23	24	9	8	3	183
1999	31	29	31	25	26	26	7	7	2	184
2000	24	23	30	27	20	27	19	5	2	177
2001	21	26	28	29	30	21	23	16		194
2002	29	19	27	29	30	32	11	16	1	194
2003	22	32	20	25	28	26	19	10	2	184
2004	18	18	27	14	25	30	16	12	1	161
2005	20	16	17	31	10	23	15	11	3	146
2006	13	23	16	17	25	10	14	11	3	132
2007	12	7	17	14	15	22	7	9	1	104
2008	11	12	12	14	17	15	10	6	5	102
2009	18	11	14	13	13	14	9	5	2	99

**Figure 7.1.2 : St Joseph's Primary School (Grey Lynn): trends in starting school new entrants versus total July rolls : 1992 to 2009**



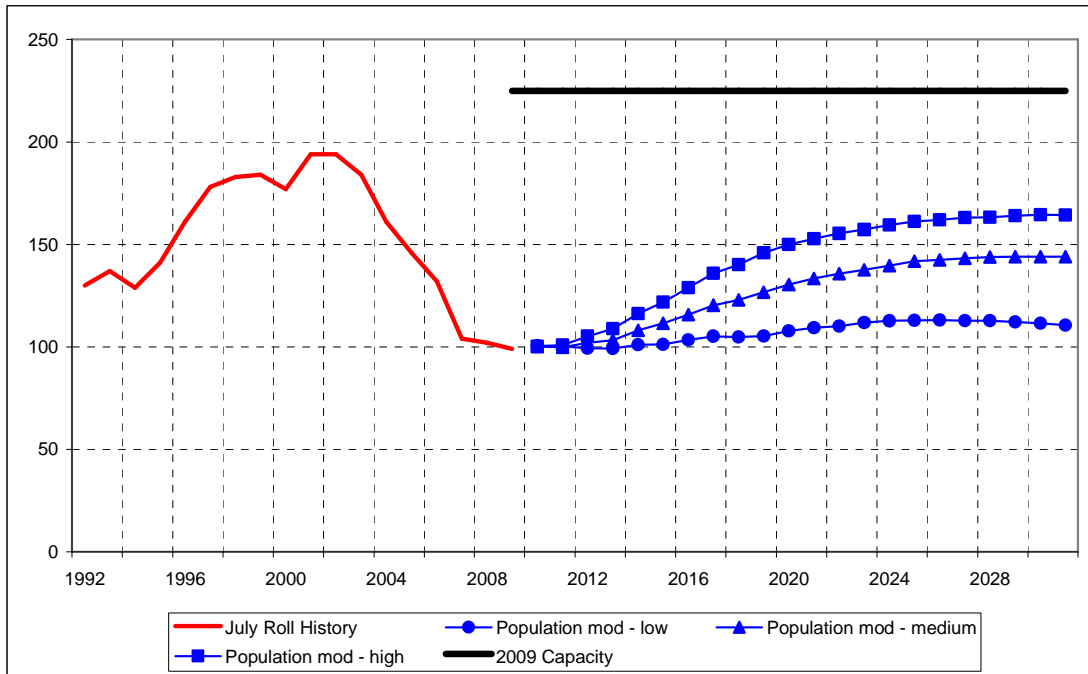
**Table 7.1.4 : St Joseph's Primary School (Grey Lynn) July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs	011 yrs	012 yrs
1998-1999	-4	1	-1	-1	3	-17	-2
1999-2000	-8	1	-4	-5	1	-7	-2
2000-2001	2	5	-1	3	1	-4	-3
2001-2002	-2	1	1	1	2	-10	-7
2002-2003	3	1	-2	-1	-4	-13	-1
2003-2004	-4	-5	-6	0	2	-10	-7
2004-2005	-2	-1	4	-4	-2	-15	-5
2005-2006	3	0	0	-6	0	-9	-4
2006-2007	-6	-6	-2	-2	-3	-3	-5
2007-2008	0	5	-3	3	0	-12	-1
2008-2009	0	2	1	-1	-3	-6	-5

Looking forward, a population catchment market share based projection would indicate a static roll of around 100 until 2013 followed by slow growth to reach a peak of about 140 by 2024. However, this type of projection does not take into account the majority Samoan and large Indian component to the school roll amongst other ethnic differences from the majority population of its catchment area. This makes a population averaged projection of little value. An ethnic based model would be required to provide a more reliable forward projection for the school roll. As will be discussed later, ethnic projections for the Auckland Region suggest that Pasifika and Asian children will increase as a proportion of the future child population. This would suggest that the projections based on the school choices of a majority European ethnic mix are conservative and that the roll of this school will increase faster than the averaged population projection used. However, such a prediction does not take

account of the localised distribution of future children of Samoan, Indian and Pasifika children within the region – an issue beyond the scope of this analysis.

**Figure 7.1.3 : Historical and Projected St Joseph’s School (Grey Lynn) July Roll**



## 7.2 Marist Catholic School (Herne Bay)

Marist Catholic School (Herne Bay) is a state integrated full primary co-educational school. The school is in Ponsonby West at the north east of the study area (Figure 7.2.1). In 2009 it had an ethnic mix which included a much higher proportion of students of Samoan (19.4%) and Indian (18.1%) than the study area as a whole (8.2% and 3.9% respectively). In this respect it had similarities to St. Joseph's School, but also included a 10.4% Maori on its roll, much more than St Joseph's (1.2%) and only slightly less than the study area as a whole (13.3%). In 2009, 38.2% of the school's students were NZ European/Pakeha compared with 58.7% for the Western Bay's study area as a whole. Significant numbers of its students were drawn the Avondale-Roskill (8%), Eden-Albert (11.6%) and Henderson (7.2%) wards and a small number from the Auckland Central CBD (5.8%) (Table 7.2.1). However, a majority (58.7%) of 2009 enrolments were from the study area.

**Table 7.2.1 : Estimated distribution of 2009 Marist School (Herne Bay) geocoded enrolments by area (summarised)**

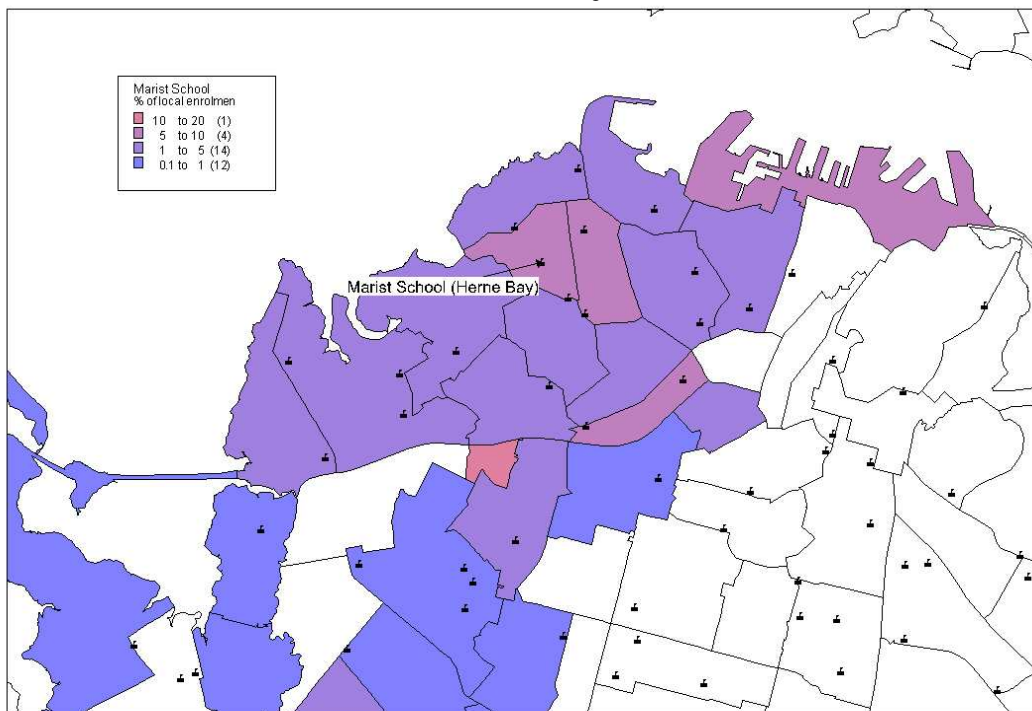
Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Ponsonby West</i>	18	194	9.3	13.0
<i>Ponsonby East</i>	14	157	8.9	10.1
<i>Arch Hill</i>	3	48	6.3	2.2
<i>Grey Lynn West</i>	11	230	4.8	8.0
<i>Grey Lynn East</i>	6	151	4.0	4.3
<i>St Mary's</i>	4	126	3.2	2.9
<i>Westmere</i>	10	460	2.2	7.2
<i>Point Chevalier West</i>	5	271	1.8	3.6
Auckland Central West	81	2392	3.4	58.7
Auckland Central CBD	8	325	2.5	5.8
Massey Ward	1	342	0.3	0.7
Waitakere Ward	2	200	1.0	1.4
Henderson Ward	10	1019	1.0	7.2
Avondale-Roskill Ward	11	1632	0.7	8.0
Eden-Albert Ward	16	1617	1.0	11.6
Hobson Ward	1	42	2.4	0.7
Tamaki-Maungakiekie Ward	4	990	0.4	2.9
Other	4			2.9
<i>Subtotal</i>	<i>138</i>			<i>100.0</i>



**Table 7.2.2 : Marist School (Herne Bay) – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	Marist School (Herne Bay)	Difference
NZ European/Pakeha	58.7	38.2	-20.5
Other European	5.4	3.5	-1.9
NZ Maori	13.3	10.4	-2.9
Samoan	8.2	19.4	11.2
Other Pacific Island	1.7	2.1	0.4
Indian	3.9	18.1	14.2
Chinese	2.3	0.7	-1.6
Other Asian	3.2	4.9	1.7
Other	0.8	3.5	2.7
% Of Area Total	100.0	4.6	

**Figure 7.2.1 : Marist School (Herne Bay) and its share of 2009 enrolments in nearby area units**

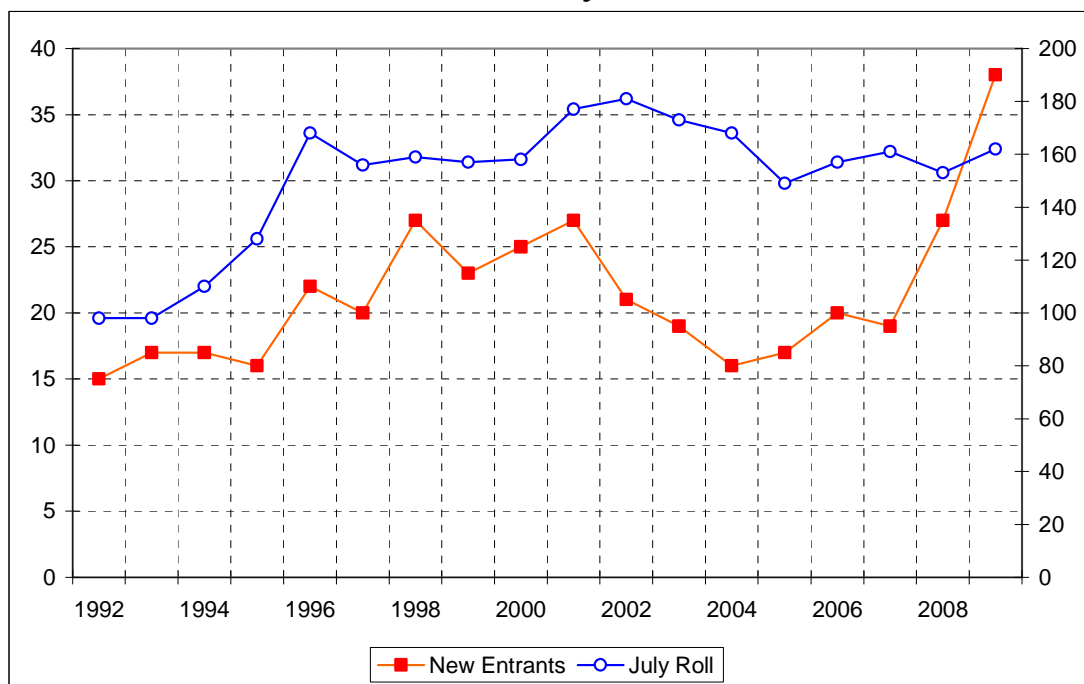


As shown in Table 7.2.3 and illustrated in Figure 7.2.2, the July roll of Marist School was at a historical peak of 181 in 2002 but then dropped sharply between 2002 and 2005 to 149 due to a drop in new entrant numbers and decreasing retention from lower primary to intermediate level. The roll has since recovered and oscillated around 160. New entrant numbers were high in 2008 and reached a historic high in 2009 (Table 7.7.4). Retention between lower primary and intermediate levels was also high in 2009. If these new entrant numbers are sustained, the roll will grow substantially over the next few years. However, the current capacity of the school is 210, considerably above its 2009 July roll of 162.

**Table 7.2.3 : Marist School (Herne Bay) 1998 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	12	13	Total
1998	27	20	21	22	18	22	11	15	3	159
1999	23	27	20	18	25	16	17	10	1	157
2000	25	24	25	22	20	22	8	12	0	158
2001	27	27	23	25	25	21	20	7	2	177
2002	21	29	23	23	26	26	15	16	2	181
2003	19	25	27	23	26	27	13	12	1	173
2004	16	22	25	26	23	25	17	12	2	168
2005	17	17	18	25	27	23	10	11	1	149
2006	20	20	17	18	26	27	16	10	3	157
2007	19	24	20	19	16	27	19	15	2	161
2008	27	18	27	22	17	21	9	12	0	153
2009	38	27	16	28	16	19	12	5	1	162

**Figure 7.2.2 : Marist School (Herne Bay): trends in starting school new entrants versus total July rolls : 1992 to 2009**

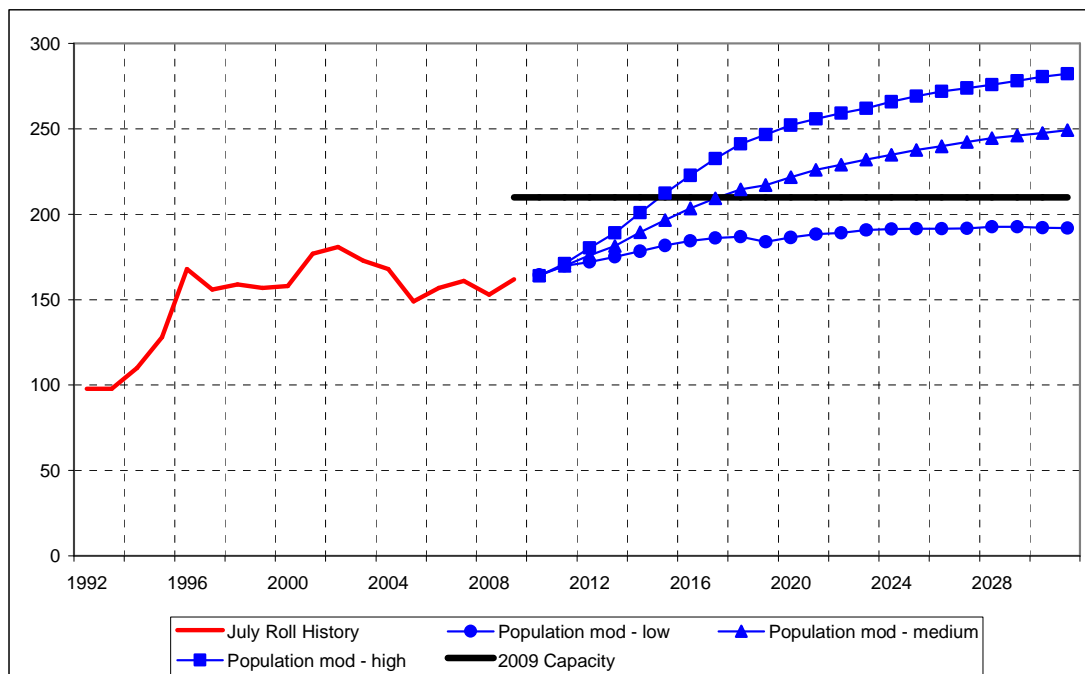


**Table 7.2.4 : Marist School (Herne Bay) July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs	011 yrs	012 yrs
1998-1999	0	0	-3	3	-2	-5	-1
1999-2000	1	-2	2	2	-3	-8	-5
2000-2001	2	-1	0	3	1	-2	-1
2001-2002	2	-4	0	1	1	-6	-4
2002-2003	4	-2	0	3	1	-13	-3
2003-2004	3	0	-1	0	-1	-10	-1
2004-2005	1	-4	0	1	0	-15	-6
2005-2006	3	0	0	1	0	-7	0
2006-2007	4	0	2	-2	1	-8	-1
2007-2008	-1	3	2	-2	5	-18	-7
2008-2009	0	-2	1	-6	2	-9	-4

Looking forward, a population catchment market share based projection would indicate a gradual increase in the school's roll exceeding its 2009 capacity by 2018 and reaching 250 by the end of the projection period in 2031. However, this type of projection does not take into account the majority Samoan and large Indian component to the school roll amongst other ethnic differences from the majority population of its catchment area. Moreover, the recent high new entrants recruitment at the school suggests that the school's roll will increase much faster than the averaged population based projection would suggest.

**Figure 7.2.3 : Historical and Projected Marist School (Herne Bay) July Roll**



An ethnic based model would be required to provide a more reliable forward projection for the school roll. As will be discussed later, ethnic projections for the Auckland Region suggest that Pasifika and Asian children will increase as a

proportion of the future child population. The school's ethnicity mix and high new entrants both indicate that the indicative projection is most likely to be conservative and that the roll of this school will increase faster and possibly higher than projected here. A better understanding of this would require insight into the factors behind the recent increase in new entrants, likely changes in the Samoan, Indian and Pasifika population in the school's catchment. Both Marist and St Joseph's Schools cater to children from Samoan and Indian families. Predicting their respective future rolls will require a better understanding of how future enrolment demand from these communities is divided between the two schools.

### 7.3 St Francis School (Pt Chevalier)

St Francis School (Pt. Chevalier) is a state integrated contributing primary co-educational school. The school is in Pt Chevalier West very close to the south west boundary of the study area (Figure 7.3.1). In 2009 it had an ethnic mix which included a higher proportion of students of Indian (10.1%) than the study area as a whole (3.9%) and only 4.6% Maori on its roll, much slightly less than the study area as a whole (13.3%). Only 33% of 2009 enrolments were from the Western Bays Auckland Central study area. A very large proportion (32.5%) were drawn from the Avondale-Roskill Ward and 17.2% from the Eden-Albert Ward.

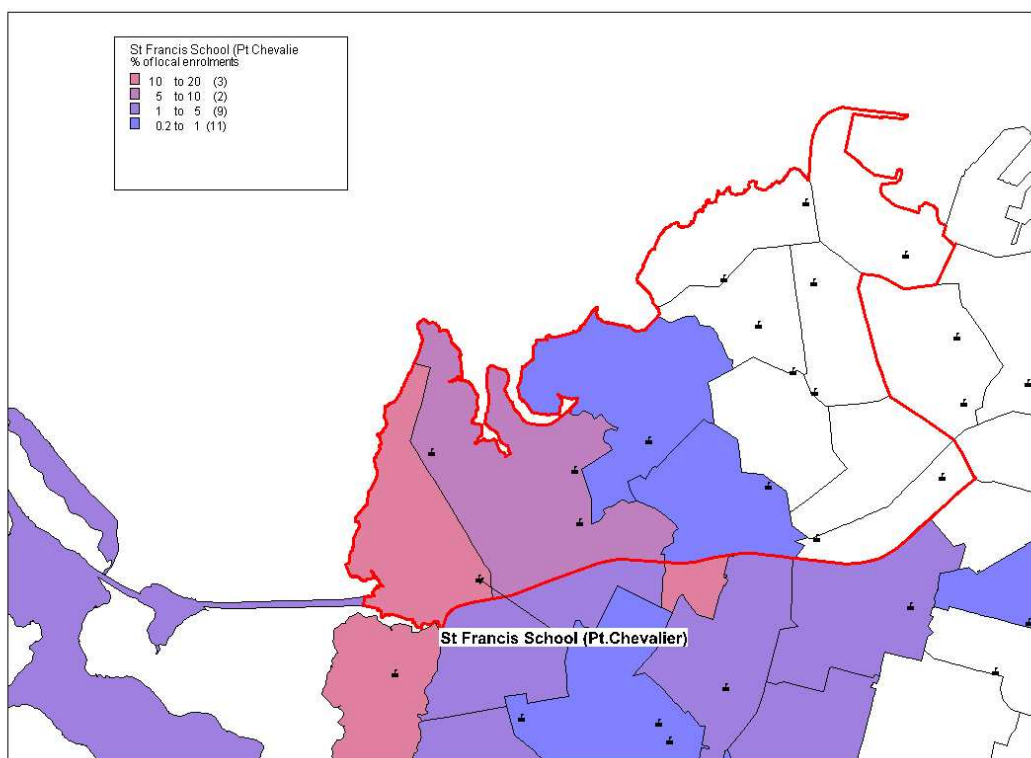
**Table 7.3.1 : Estimated distribution of 2009 St Francis School (Pt Chevalier) geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
Point Chevalier West	32	271	11.8	15.3
Point Chevalier East	33	362	9.1	15.8
Westmere	3	460	0.7	1.4
Auckland Central West	69	1279	5.4	33.0
Massey Ward	3	614	0.5	1.4
Henderson Ward	14	2310	0.6	6.7
New Lynn Ward	12	2223	0.5	5.7
Waterview	26	237	11	12.4
Roberton	19	303	6.3	9.1
Avondale-Roskill Ward	68	3171	2.1	32.5
St Lukes North	4	28	14.3	1.9
St Lukes	6	154	3.9	2.9
Eden-Albert Ward	36	2264	1.6	17.2
Subtotal	209			100.0

**Table 7.3.2 : St Francis School (Pt Chevalier) – (Prioritised) Ethnicity of 2009 July roll compared with all Western Bay area primary schools**

Ethnicity	Area Schools	St Francis School	Difference
NZ European/Pakeha	58.7	57.1	-1.6
Other European	5.4	6.5	1.1
NZ Maori	13.3	4.6	-8.7
Samoan	8.2	6.9	-1.3
Other Pacific Island	1.7	0.5	-1.2
Indian	3.9	10.1	6.2
Chinese	2.3	1.8	-0.5
Other Asian	3.2	7.4	4.2
Other	0.8	3.2	2.4
% Of Area Total	100.0	6.9	

**Figure 7.3.1 : St Francis School (Pt Chevalier) and its share of 2009 enrolments in nearby area units**



As shown in Table 7.3.3 and illustrated in Figure 7.3.2, the July roll of St Francis School has been grown from 140 in 1992 to 221 in 2009. This overall roll growth has occurred in spite of the drop in roll due to what appears to be a change from full primary to contributing school around 1997 (dropping intermediate students) and a period of static roll between 2001 and 2004. Roll growth over most years since 2004 has been the result of high new entrants recruitment for most years. The 2009 enrolment capacity of the school was 235, only slightly above the 2009 July roll of 221.

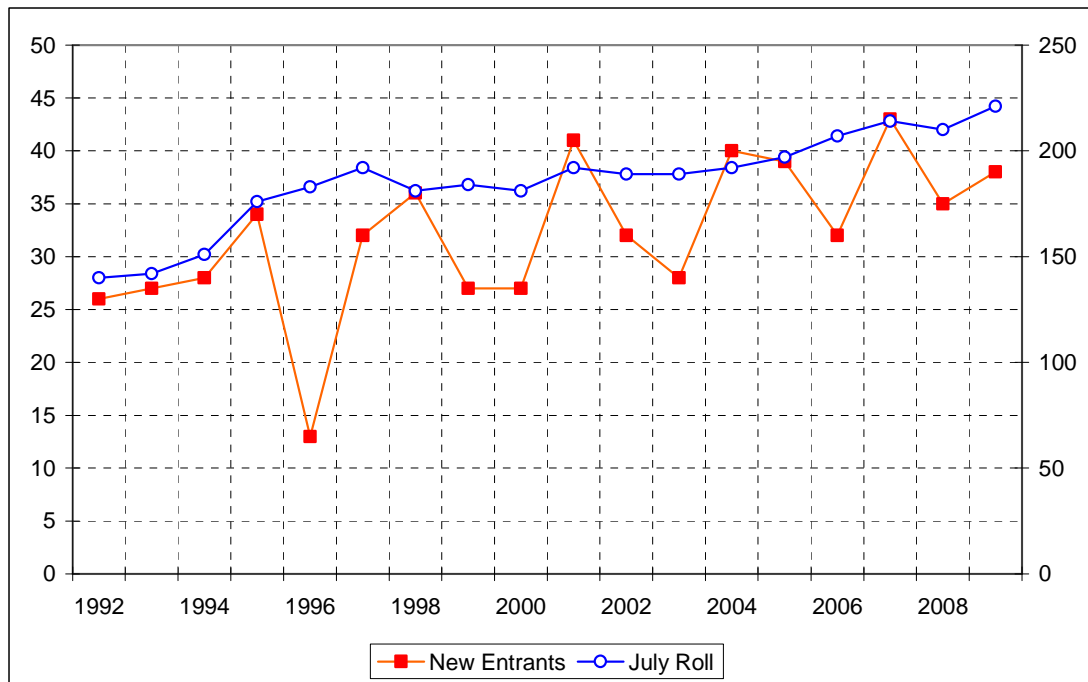
**Table 7.3.3 : St Francis School (Pt Chevalier) 1998 to 2009 July roll by age**

YEAR	5	6	7	8	9	10	11	Total
1998	36	20	35	41	21	27	1	181
1999	27	29	27	33	39	28	1	184
2000	27	28	28	27	31	39	1	181
2001	41	29	31	29	25	28	9	192
2002	32	44	25	30	28	26	4	189
2003	28	32	41	25	30	30	3	189
2004	40	30	28	41	23	26	4	192
2005	39	40	26	29	38	23	2	197
2006	32	39	37	28	30	38	3	207
2007	43	33	37	37	25	33	6	214
2008	35	43	31	36	37	23	5	210
2009	38	36	40	31	36	36	4	221

**Table 7.3.4 : St Francis School (Pt Chevalier) July roll age cohort annual transitions by end of period age group 1998-1999 to 2008-2009**

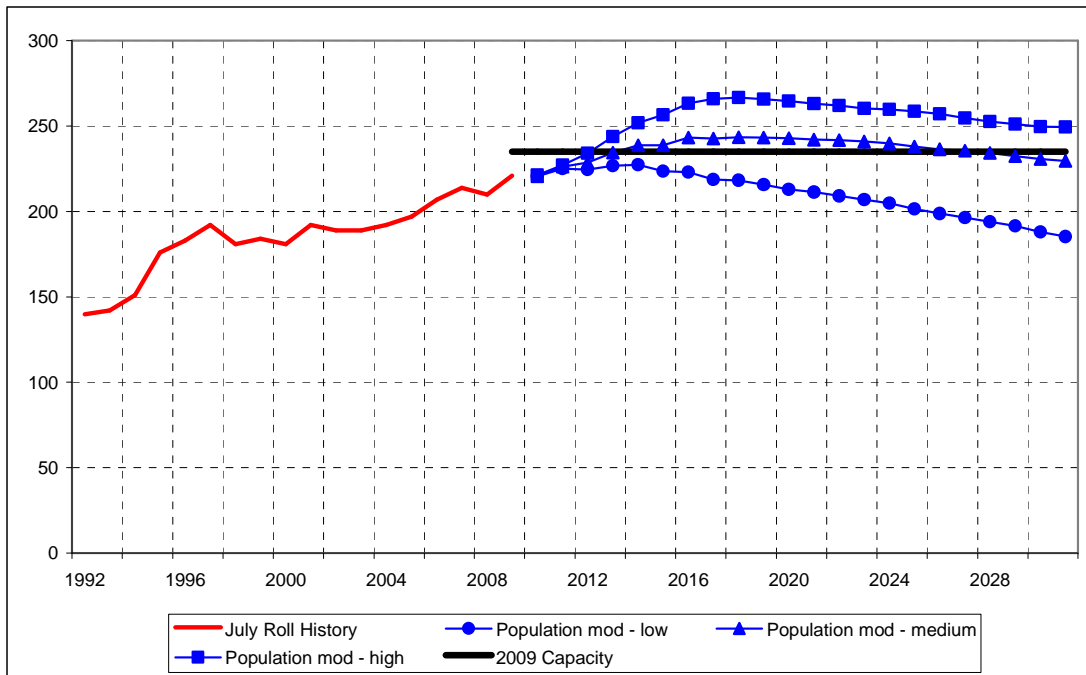
Period	006 yrs	007 yrs	008 yrs	009 yrs	010 yrs
1998-1999	-7	7	-2	-2	7
1999-2000	1	-1	0	-2	0
2000-2001	2	3	1	-2	-3
2001-2002	3	-4	-1	-1	1
2002-2003	0	-3	0	0	2
2003-2004	2	-4	0	-2	-4
2004-2005	0	-4	1	-3	0
2005-2006	0	-3	2	1	0
2006-2007	1	-2	0	-3	3
2007-2008	0	-2	-1	0	-2
2008-2009	1	-3	0	0	-1

**Figure 7.3.2 : St Francis School (Pt Chevalier) : trends in starting school new entrants versus total July rolls : 1992 to 2009**



Looking forward, a population catchment market share based projection would indicate a gradual increase in the school's roll exceeding its 2009 capacity by 2014 but remain up to 10 above 2009 capacity through to the end of the projection period in 2031. However, the roll has a slight specialisation toward Indian and other Asian students (although below study area average for Chinese) and this may have implications for the size of the future roll.

**Figure 7.3.3 : Historical and Projected St Francis School (Pt Chevalier) July Roll**





## **8 Individual Post Primary School Projections**

### **8.1 Projection Methods and Assumptions**

The Western Bays Auckland Central area includes two state funded schools intermediate schools (Pasadena and Ponsonby Intermediates) and one state funded secondary school (Western Springs College, catering to Forms 3 to 7). The recent trends and indicative population catchment based projections for these schools are outlined here.

## 8.2 Pasadena Intermediate

Pasadena Intermediate is a state integrated co-educational school in the central south of the study area (Figure 8.2.1). In 2009 it had an ethnic mix very close to that of 11 to 12 year olds in the study area as a whole, but with under-representation of children of “other european” ethnicity (Table 8.2.2). 66.5% of 2009 enrolments were from the Western Bays Auckland Central study area. A further 13.1% were drawn from the Avondale-Roskill Ward and 13.1% from the Eden-Albert Ward.

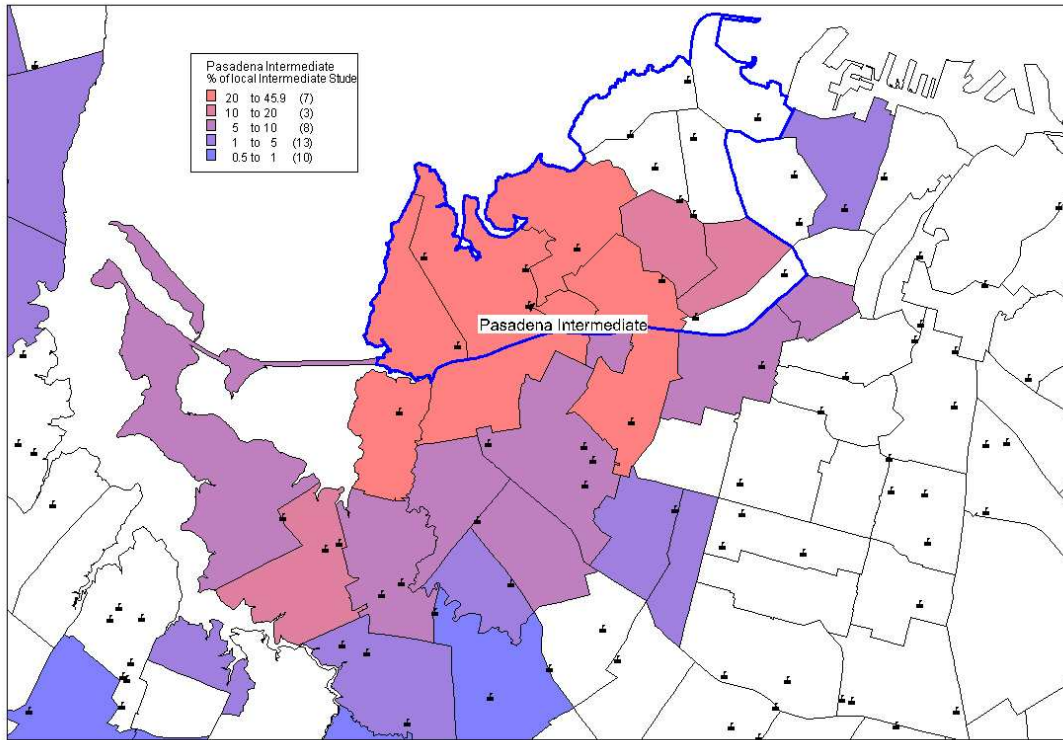
**Table 8.2.1 : Estimated distribution of 2009 Pasadena Intermediate geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Surrey Crescent</i>	28	61	45.9	10.2
<i>Point Chevalier East</i>	53	120	44.2	19.3
<i>Point Chevalier West</i>	40	93	43.0	14.5
<i>Westmere</i>	29	116	25.0	10.5
<i>St Lukes</i>	14	70	20.0	5.1
<i>Grey Lynn East</i>	8	49	16.3	2.9
Auckland Central West	183	638	28.7	66.5
<i>Waterview</i>	21	52	40.4	7.6
<i>Avondale West</i>	3	28	10.7	1.1
Avondale-Roskill Ward	36	782	4.6	13.1
<i>Point Chevalier South</i>	5	21	23.8	1.8
<i>St Lukes North</i>	1	11	9.1	0.4
<i>Springleigh</i>	6	68	8.8	2.2
<i>Mt Albert Central</i>	13	156	8.3	4.7
<i>Owairaka East</i>	6	104	5.8	2.2
Eden-Albert Ward	36	570	6.3	13.1
Other	20			7.3
Total	275			100.0

**Table 8.2.2 : Pasadena Intermediate – (Prioritised) Ethnicity of those aged 11-12 yrs on 2009 July roll compared with enrolled Western Bay area residents of the same age**

Ethnicity	Area Residents	Pasadena Intermediate	Difference
NZ European/Pakeha	50.5	52.5	2.0
Other European	7.4	2.3	-5.1
NZ Maori	12.4	13.5	1.1
Samoan	6.8	8.1	1.3
Tongan	4.8	4.2	-0.6
Other Pacific Island	5.0	6.9	1.9
Indian	2.7	2.3	-0.4
Chinese	3.2	3.1	-0.1
Other Asian	2.9	0.8	-2.1
Other	2.6	3.9	1.3

**Figure 8.2.1 : Pasadena Intermediate and its share of 2009 enrolments in nearby area units**



**Table 8.2.3 : Pasadena Intermediate 1998 to 2009 July roll by age**

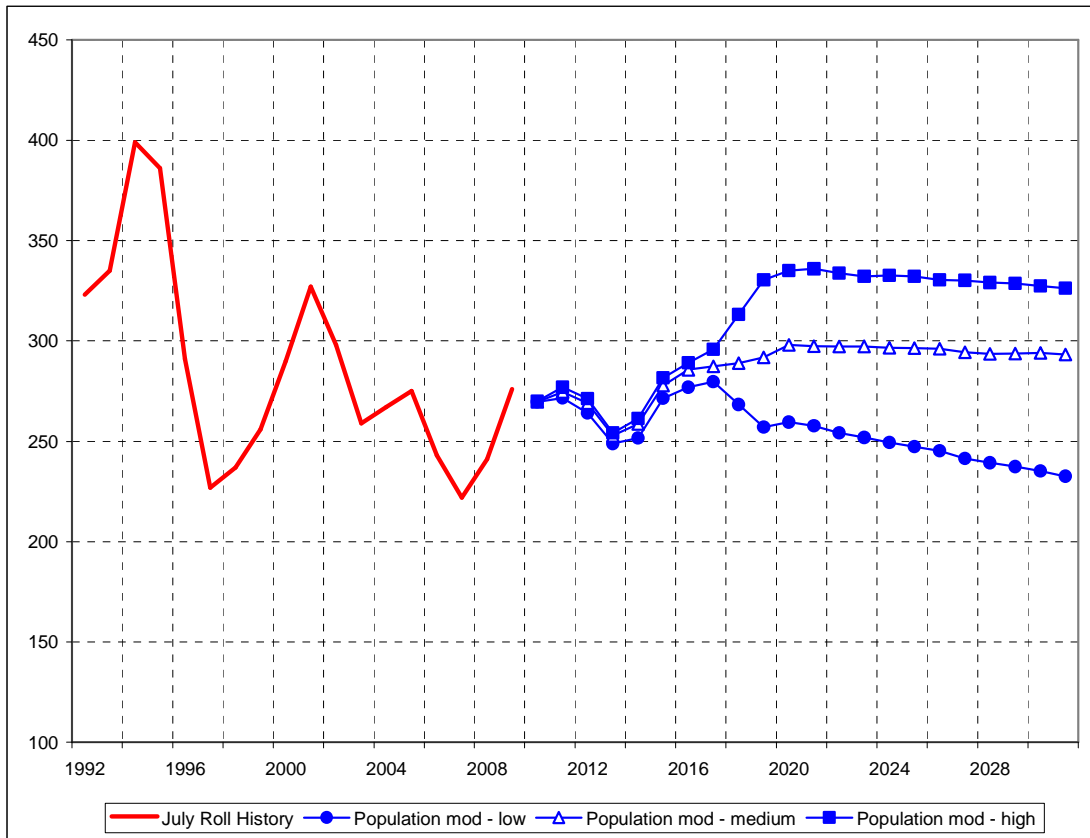
YEAR	10	11	12	13+	Total
1998	5	101	113	18	237
1999	1	110	114	31	256
2000	0	141	130	19	290
2001	3	148	145	31	327
2002	1	126	162	9	298
2003	0	97	144	18	259
2004	4	123	116	24	267
2005	0	130	130	15	275
2006	1	95	131	16	243
2007	0	107	102	13	222
2008	1	115	119	6	241
2009	3	129	130	14	276

As shown in Table 8.2.3, the July roll of Pasadena Intermediate has been on an upward spike over the 2007 to 2009 period. The July 2009 roll of 276 is considerably lower than earlier peaks of 275 in 2005, 327 in 2001 and 399 in 1994.

Looking forward, a population catchment market share based projection suggests that the school's roll is likely to drop down to around 250 in 2013 before bouncing back up to around 290 by 2016 – remaining in the range of 290-300 for the remainder of the projection period. The short term drop in the intermediate roll is a result of the 2003 low birth year reaching intermediate school age. The medium term recovery in

the school's roll reflects the rising wave of local births since 2004 reaching intermediate school age.

**Figure 8.2.2 : Historical and Projected Pasadena Intermediate July Roll**



### 8.3 Ponsonby Intermediate

Ponsonby Intermediate is a state integrated co-educational school in the north east of the study area (Figure 8.3.1). Only 55.9% of 2009 enrolments were from the Western Bays Auckland Central study area (Table 8.3.1). A further 14.9% were drawn from the Eden-Albert Ward, 13.5% from Harbour Ward on the North Shore and 6.9% from Auckland Central CBD area. In 2009 it had an ethnic mix very close to that of 11 to 12 year olds in the study area as a whole, but with over-representation of children of “other european” ethnicity (Table 8.3.2).

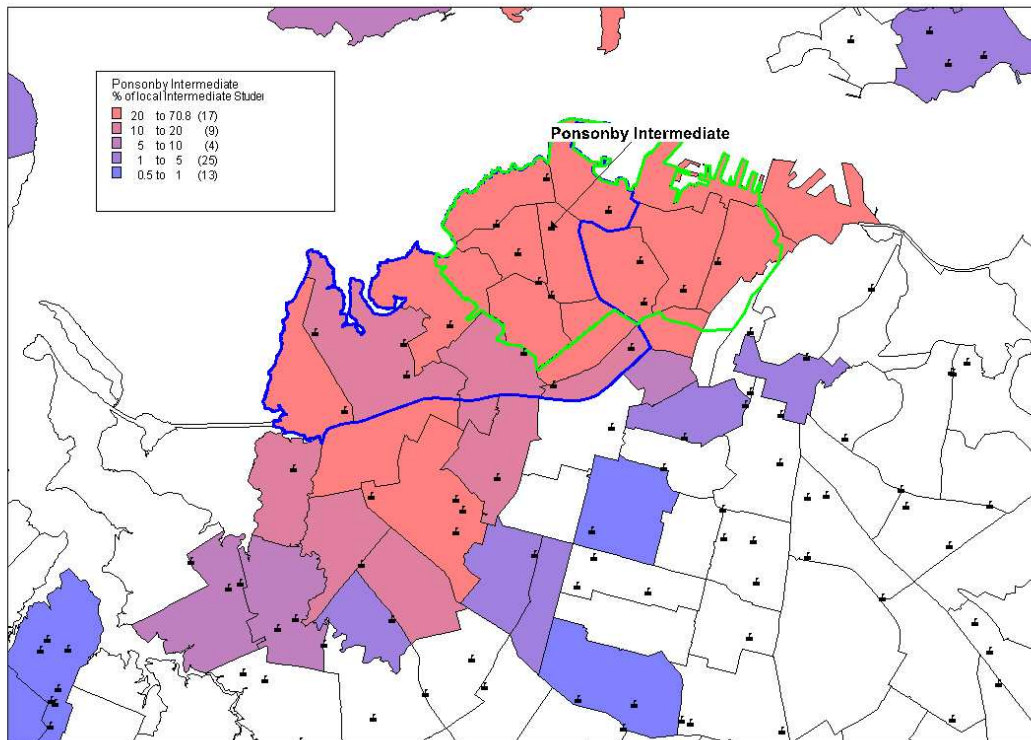
**Table 8.3.1 : Estimated distribution of 2009 Ponsonby Intermediate geocoded enrolments by area (summarised)**

Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Ponsonby East</i>	34	48	70.8	6.7
<i>Freemans Bay</i>	31	50	62.0	6.1
<i>Ponsonby West</i>	35	66	53.0	6.9
<i>Newton</i>	2	4	50.0	0.4
<i>Grey Lynn West</i>	31	67	46.3	6.1
<i>St Mary's</i>	14	33	42.4	2.7
<i>Herne Bay</i>	20	49	40.8	3.9
<i>Grey Lynn East</i>	20	49	40.8	3.9
<i>Westmere</i>	38	116	32.8	7.5
<i>Point Chevalier West</i>	19	93	20.4	3.7
<i>Point Chevalier East</i>	23	120	19.2	4.5
Auckland Central West	285	851	33.5	55.9
<i>Auckland Central West</i>	20	29	69.0	3.9
<i>Auckland Central East</i>	11	27	40.7	2.2
<i>Auckland Harbourside</i>	4	11	36.4	0.8
Auckland Central CBD	35	67	52.2	6.9
<i>Northcote South</i>	19	65	29.2	3.7
<i>Birkenhead East</i>	21	87	24.1	4.1
Harbour Ward North Shore	69	1126	6.1	13.5
Henderson Ward	5	493	1.0	1.0
New Lynn Ward	6	674	0.9	1.2
Avondale-Roskill Ward	13	255	5.1	2.5
<i>Point Chevalier South</i>	5	21	23.8	1.0
<i>Mt Albert Central</i>	34	156	21.8	6.7
<i>Springleigh</i>	13	68	19.1	2.5
<i>St Lukes North</i>	2	11	18.2	0.4
<i>Owairaka East</i>	15	104	14.4	2.9
Eden-Albert Ward	76	773	9.8	14.9
Other	21			4.1
Total	510			100.0

**Table 8.3.2 : Ponsonby Intermediate – (Prioritised) Ethnicity of those aged 11-12 yrs on 2009 July roll compared with enrolled Western Bay area residents of the same age**

Ethnicity	Area Residents	Ponsonby Intermediate	Difference
NZ European/Pakeha	50.5	48.0	-2.5
Other European	7.4	13.4	6.0
NZ Maori	12.4	10.6	-1.8
Samoan	6.8	3.5	-3.3
Tongan	4.8	2.8	-2.0
Other Pacific Island	5.0	4.9	-0.1
Indian	2.7	3.7	1.0
Chinese	3.2	4.9	1.7
Other Asian	2.9	5.5	2.6
Other	2.6	1.6	-1.0

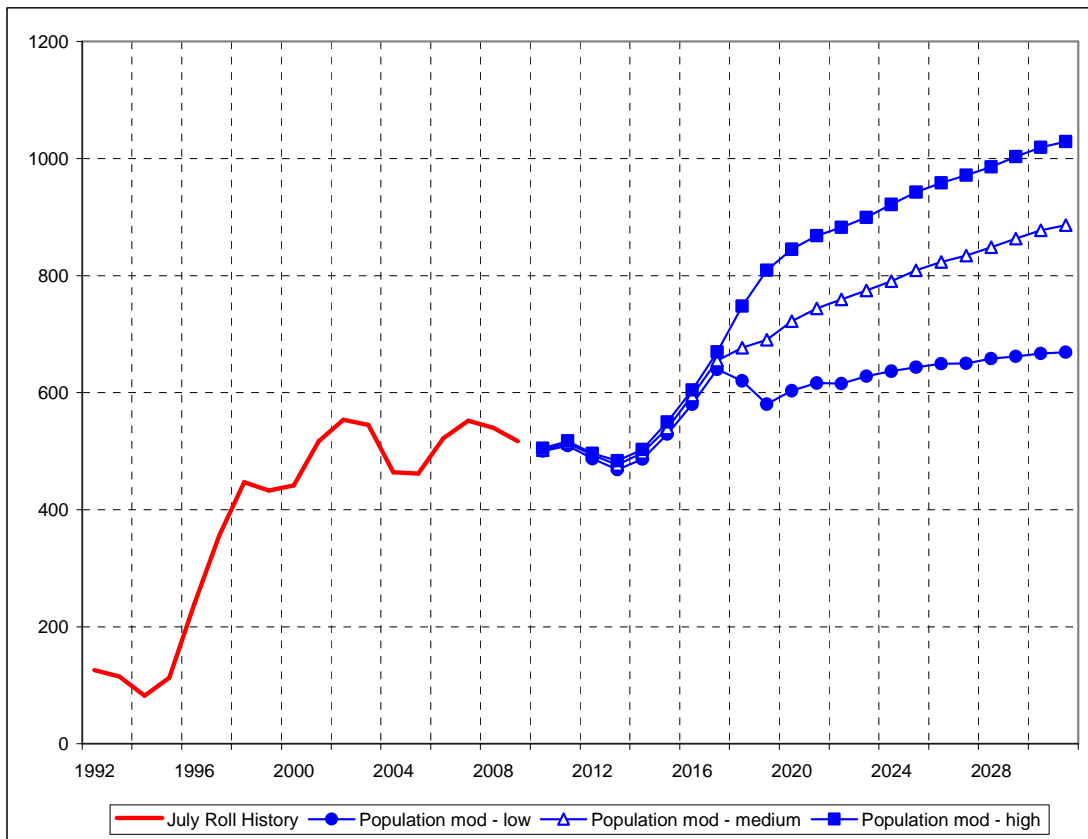
**Figure 8.3.1 : Ponsonby Intermediate and its share of 2009 enrolments in nearby area units**



As shown in Table 8.3.3, the July roll of Ponsonby Intermediate has cycled with the range of 460 and 550 between 2001 and 2009. The July 2009 roll of 517 is only lower than historic peaks of 554 in 2002 and 552 in 2007.

Looking forward, a population catchment market share based projection suggests that the school’s roll is likely to drop down to around 480 in 2013 before bouncing back sharply between 2013 and 2018 to reach 680 around 2018. For the remainder of the projection period the July roll is expected to continue growing at a slower rate reaching 890 by 2031.

**Figure 8.3.2 : Historical and Projected Ponsonby Intermediate July Roll**



**Table 8.3.3 : Ponsonby Intermediate 1998 to 2009 July roll by age**

YEAR	10	11	12	13 +	Total
1998	10	229	177	31	447
1999	1	191	218	23	433
2000	3	228	197	14	442
2001	3	241	247	26	517
2002	2	275	261	16	554
2003	6	217	292	30	545
2004	3	201	229	31	464
2005	4	200	231	27	462
2006	3	267	222	30	522
2007	1	235	287	29	552
2008	2	251	257	30	540
2009	1	223	269	24	517

## 8.4 Western Springs College

Western Springs College is a state integrated co-educational secondary school in the central west of the study area (Figure 8.4.1). Only 57.9% of 2009 enrolments were from the Western Bays Auckland Central study area (Table 8.4.1). A further 16.2% of students were drawn from the Eden-Albert Ward, 5.4% from New Lynn Ward, 4.9% from Avondale-Roskill Ward and 4.2% from Auckland Central CBD area. In 2009 it had an ethnic mix with a higher representation (64.2%) of NZ European/Pakeha students than 13 to 17 year olds in the Western Bays study area as a whole (Table 8.4.2).

**Table 8.4.1 : Estimated distribution of 2009 Western Springs College geocoded enrolments by area (summarised)**

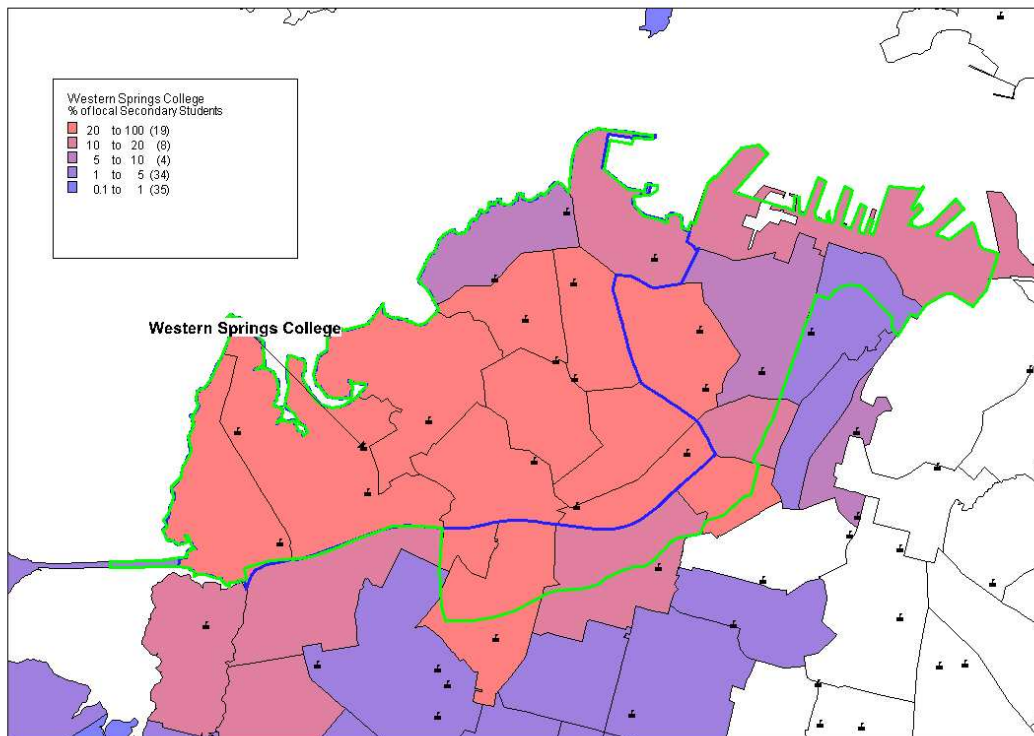
Locality	School Enrolments	Locality Enrolments	% Share of Locality	% of Schl Roll
<i>Point Chevalier East</i>	124	212	58.5	12.0
<i>Point Chevalier West</i>	92	167	55.1	8.9
<i>Surrey Crescent</i>	67	140	47.9	6.5
<i>Grey Lynn West</i>	67	142	47.2	6.5
<i>Westmere</i>	125	270	46.3	12.1
<i>Grey Lynn East</i>	44	118	37.3	4.2
<i>Ponsonby East</i>	28	91	30.8	2.7
<i>Arch Hill</i>	7	28	25.0	0.7
<i>Ponsonby West</i>	28	113	24.8	2.7
Auckland Central West	600	1485	40.4	57.9
<i>Freemans Bay</i>	27	101	26.7	2.6
<i>Auckland Harbourside</i>	5	30	16.7	0.5
Auckland Central CBD	44	366	12.0	4.2
Waitakere Ward	23	1635	1.4	2.2
Henderson Ward	22	2619	0.8	2.1
New Lynn Ward	56	3307	1.7	5.4
<i>Waterview</i>	17	145	11.7	1.6
<i>Roberton</i>	10	268	3.7	1.0
Avondale-Roskill Ward	51	2952	1.7	4.9
<i>St Lukes North</i>	10	35	28.6	1.0
<i>St Lukes</i>	43	209	20.6	4.2
<i>Kingsland</i>	19	150	12.7	1.8
<i>Point Chevalier South</i>	9	74	12.2	0.9
<i>Springleigh</i>	15	130	11.5	1.4
Eden-Albert Ward	168	2836	5.9	16.2
<i>Eden Terrace</i>	11	40	27.5	1.1
Hobson Ward	16	89	18.0	1.5
Other	56			5.4
Total	1036	24036		100.0



**Table 8.4.2 : Western Springs College – (Prioritised) Ethnicity of those aged 13-17 yrs on 2009 July roll compared with enrolled Western Bay area residents of the same age**

Ethnicity	Bay Area Residents	Western Springs College	Difference
NZ European/Pakeha	53.8	64.2	10.4
Other European	1.5	0.9	-0.6
NZ Maori	13.0	16.2	3.2
Samoan	7.8	3.0	-4.8
Tongan	6.0	1.6	-4.4
Other Pacific Island	6.7	5.8	-0.9
Indian	2.2	2.0	-0.2
Chinese	1.3	1.0	-0.3
Other Asian	1.5	1.6	0.1
Other	3.9	3.4	-0.5

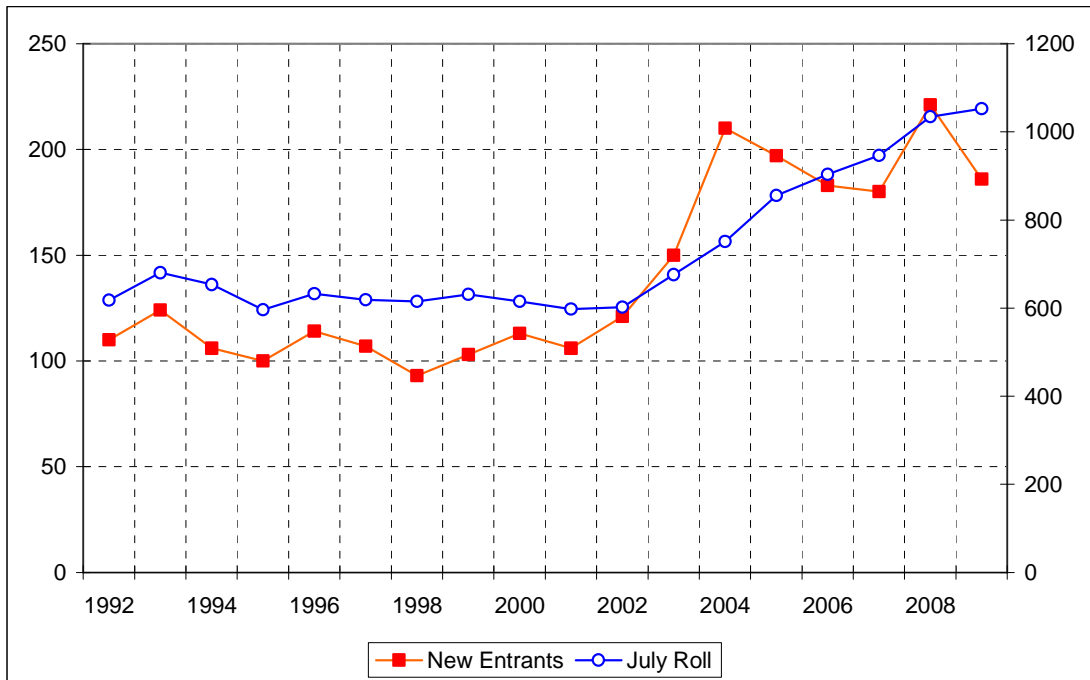
**Figure 8.4.1 : Western Springs College and its share of 2009 enrolments in nearby area units**



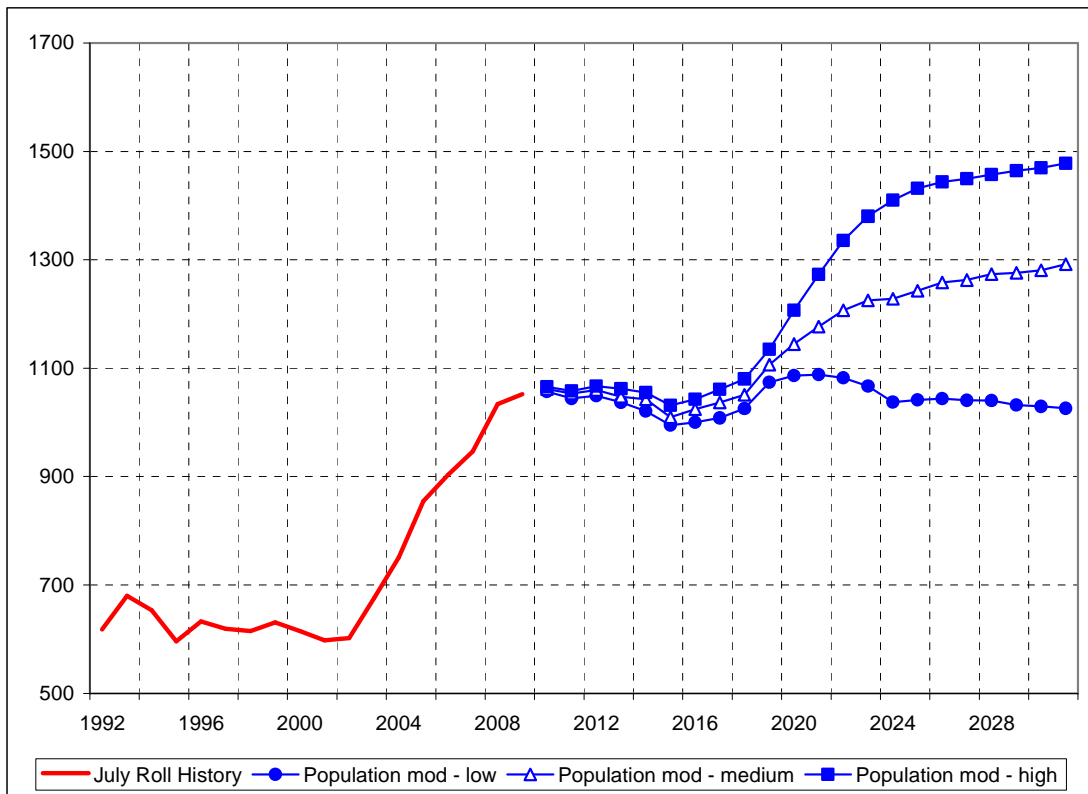
As shown in Table 8.4.3 and Figure 8.4.2, the July roll of Western Springs College grew rapidly between 2002 and 2005 driven by a sharp increase in new entrants. It has continued to grow more slowly since with lowest growth between 2008 and 2009 due to a low new entrant intake in the 2009 year.

Looking forward, a population catchment market share based projection suggests that the school's roll is likely remain relatively static and may even drop slightly between 2009 and 2015. The July roll is then expected to grow in the medium to long term, especially between 2017 and 2022. The July roll is expected to pass 1100 by 2019 and reach about 1300 by 2031.

**Figure 8.4.2 : Western Springs College : trends in new entrants (enrolments aged 12 and 13) versus total July rolls : 1992 to 2009**



**Figure 8.4.3 : Historical and Projected Western Springs College July Roll**



**Table 8.4.3 : Western Springs College 1998 to 2009 July roll by age**

YEAR	12	13	14	15	16	17	18	19+	Total
1998	4	89	141	151	119	80	27	4	615
1999	5	98	138	134	142	93	16	5	631
2000	4	109	121	119	126	100	24	12	615
2001	0	106	135	119	108	88	32	10	598
2002	1	120	133	127	93	84	28	12	602
2003	2	148	153	131	112	91	24	15	676
2004	4	206	167	133	117	92	24	8	751
2005	4	193	228	181	119	98	26	6	855
2006	1	182	206	222	158	103	25	6	903
2007	2	178	205	205	205	130	17	4	946
2008	1	220	213	196	199	176	26	3	1034
2009	1	185	247	225	193	168	29	4	1052

## **9 Western Bays Schools Overview**

### **9.1 Recent and projected future demographic trends**

#### ***Recent Roll Growth***

The study was motivated in part by pressures on primary school capacity over the last few years in the Western Bay Auckland Central area. Westmere, Newton Central and Grey Lynn Schools have all shown substantial roll growth over the 2006 to 2009 period. Westmere, Newton Central, Grey Lynn and Pt Chevalier Schools have all exceeded capacity, although some future proofing has been made at Westmere School with recent expansion of its capacity. This study shows that the recent roll growth in the study area schools has been boosted by a rate of growth in the local residential lower primary aged population that has significantly exceeded the Statistics NZ projection for the area over this period. Using the geocoded student enrolments data for 2009 and the TFEA survey data of 2007 it is estimated that the lower primary school aged population of the study area increased by 75 between 2007 and 2009 rather than only 17 as projected.

The growth in the Westmere Primary School roll between 2007 and 2009 was particularly large and is due to much higher than projected growth in the lower primary aged population of the Westmere area unit. Statistics NZ had projected a very substantial increase of 43 students in the lower primary aged residential population of the area unit between 2007 and 2009. In fact, it is estimated that the growth in the lower primary aged population of the area unit was about 83 students. It is encouraging that Statistics NZ had got right its prediction that this area unit within the study area would experience the most substantial increase in the lower primary aged residential population over 2007 to 2009, but the growth increment observed was double that projected.

Growth in the roll of Newton Central Primary school is shown to have been the result of its special role as a host for a specialist Maori language programme drawing on students in the main from outside the study area. The school's enrolment zone is in the main outside the study area, but the growth in roll has been gained from enrolments of students of Maori ethnicity outside both its enrolment zone and the study area. The school has clearly successfully met the aspirations of a wider dispersed community of interest for a specialist Maori programme.

#### ***Recent Births Trends***

On a national basis, an increase of births between the historical low births of June 2002 and June 2004 should have seen new entrant numbers of lower primary increase around 7.2% over roughly the 2007 to 2009 period. On the basis of only very small increase in annual births over the following June 2005 and June 2006 periods new entrant numbers would be expected to hold with little net increase (excluding any increment due to net international migration). Annual births increased rapidly over the 2007 to 2010 June years to an annual level 10% higher in the June 2010 year than in the year to June 2006. This can be expected to be reflected in corresponding increase in the new entrants rolls in the years up to 2015 propagating upwards into the school rolls as these new entrants cohorts age replacing smaller preceding cohorts.

The current 2009 based national population projection envisaged a gradual reduction in the numbers of annual births from June 2009. However, the experience for the first year of that projection has been for a “bounce back” in births to higher numbers than for the June 2009 year – exceeding the birth assumptions for a “high fertility” projection. It remains to be seen whether this rate of births will drop down sharply to better match the “medium fertility” projection in subsequent years.

For the Auckland City area the recent trend has been similar. There was an 8% increase in births between the historical low in the year to June 2002 and the year to June 2004. Births stayed flat at this higher rate for the following two years to June 2006. Births then increased 8.2% from the year to June 2006 and June 2008. These births can be expected to start to arrive as an increased new entrant cohort between 2011 and 2013. Auckland City births then dropped down slightly in the year to June 2009 but have now bounced back in the year to June 2010 to just slightly below those for the June 2008 year. Putting 2006 to 2011 births in Auckland City into perspective, it appears that they are likely to be fairly close to those assumed in the Statistics NZ 2007 and updated 2010 2006 census “medium” growth rate projection. This contrasts with the national picture where births have been and continue to be above the highest fertility rate scenario. Under the Statistics NZ medium projection for Auckland City, the recent increase in births in the city is projected to be the leading edge of a further substantial increase in annual births in the upcoming 2011 to 2016 period. This high rate is then projected to be sustained for the remainder of the project up to 2031.

The Statistics NZ area unit level projection for the study area reflects the same general picture as for the City as a whole and this underlies school roll projections for the study area. Put simply, the recent increase in roll numbers in the study area are a leading edge of the increase in lower primary enrolments to be expected in the next few years. The degree of future roll growth in individual schools is related to the mix of projected growth in the area units in each school’s catchment.

### ***Early Childhood Enrolments as a predictor of future lower primary new entrant cohort size***

Comparison of the numbers of enrolments of 4 year olds in study area kindergartens is roughly but not reliably correlated with subsequent new entrants enrolments in Western Bay Auckland Central schools over the 2002 to 2009 period..

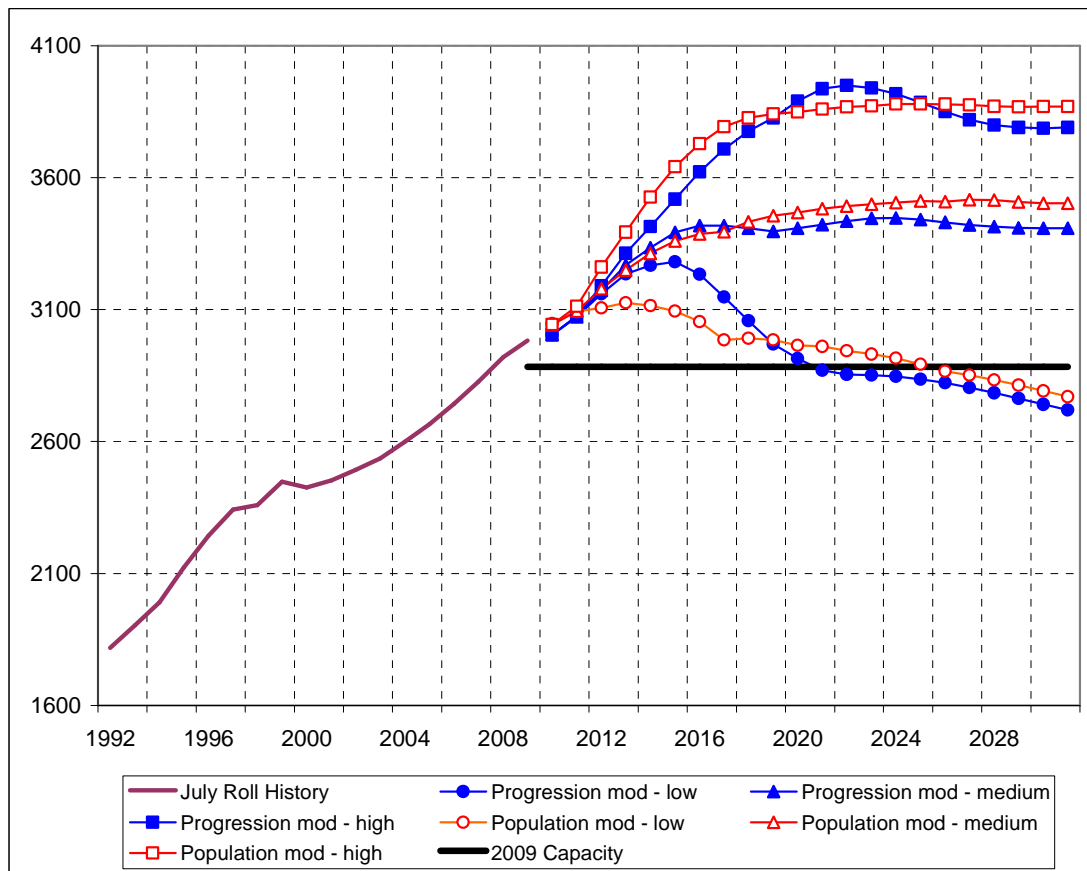
## **9.2 Projected Lower Primary Schools Network Roll Demand and Capacity**

The aggregate area analysis presented in section 5.2 suggested that growth in lower primary age residents of the Western Bays study area is likely to exceed capacity at local schools in the short, medium and long term. This result is confirmed by detailed analysis at the individual school level but the deficit appeared amplified by distributional effects across schools and by consideration of the wider network linkages to local study area schools.

Analysis at the school level shows that deficits as at 2009 are minor although this has been avoided by incremental addition of classrooms over the last few years at some local schools. As the recent birth wave starts to arrive at local primary schools capacity limits are likely to be exceeded at a range of local schools. Although the net capacity deficit across the study area is estimated to be only 260 across State primary schools in the short term (2015), unequal distribution of the increase in rolls in relation to available capacity means that the deficits that are likely to arise in the short term (2015) are likely to be 266 (but with a net of 265), in the medium term (2020) 359 (but with a net of 278) and in the long term (2031) 485 (but a net of 291). While it is tempting to focus on the net shortfall in capacity, demand often can't automatically be redirected from one school site to another.

As shown in Figure 9.1, both the “medium” and “high” projections produce almost identical aggregate results for the sum of Western Bay Auckland Central schools but diverge sharply in the short term under a “low” projection. The “new entrant increment ratio and roll progression” method acknowledges the start year age structure and is thus likely to produce a more reliable short term projection than a simple “area unit catchment market share” model .

**Figure 9.1 : Sum of Projections for Western Bays State Lower Primary Schools (comparing two methods)**



The aggregate roll for the state lower primary schools in the study area has been increasing for most years since 1992. As would be expected from local births trends to date and suggested by projected future trends, it is likely that the aggregate roll for the study area state schools will continue to grow until 2015 / 2016 and then stabilise with perhaps some modest roll growth.

The pressures on individual school's are summarised in Table 9.1 and 9.2 and Figure 9.2. While in theory there was a net available capacity of 122 places across individual study area state lower primary schools in 2009, the pressures on individual schools vary significantly and available capacity is unevenly distributed. Projections are difficult for those schools that offer specialised programmes and cater to specialised ethnicity groups (e.g. Newtown Central and, Richmond Rd.) and these represent a significant part of projected capacity deficits.

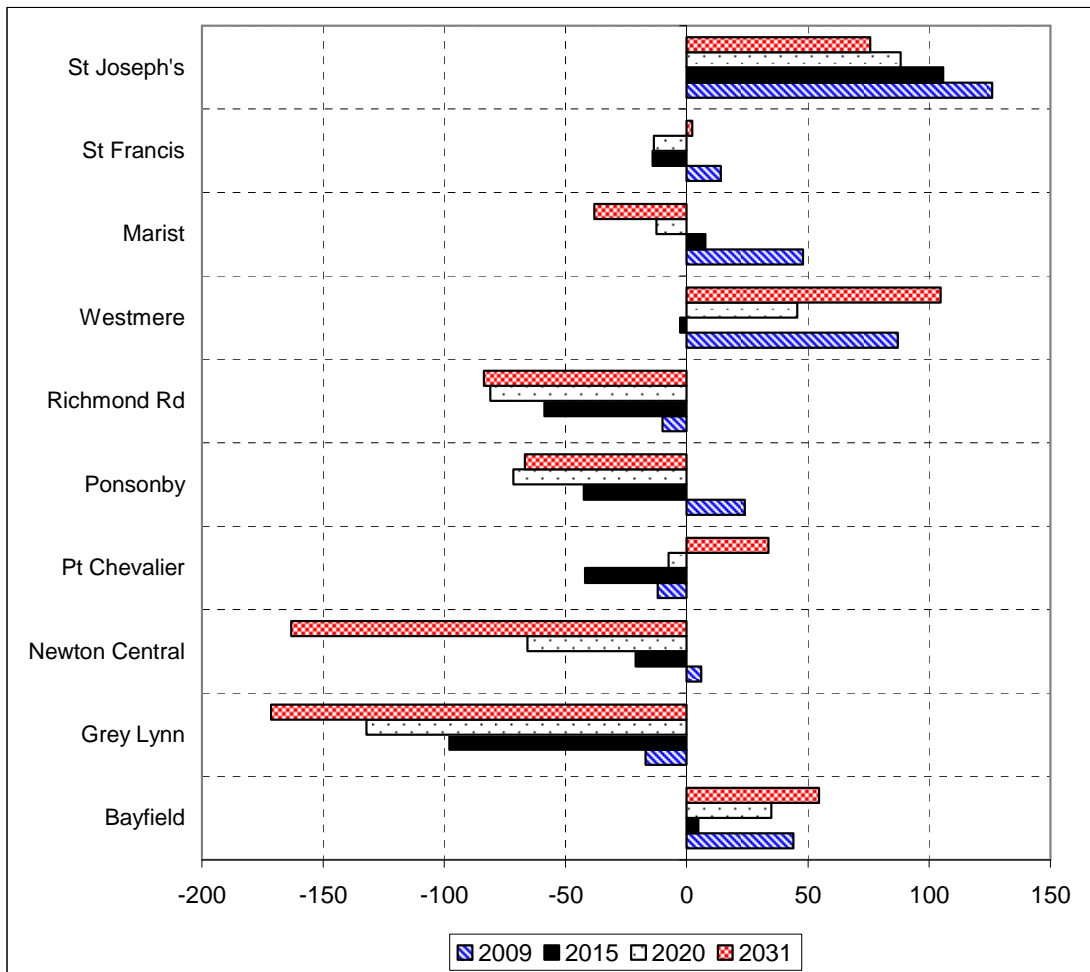
Looking forward, capacity constraints appear to be most acute at Grey Lynn Primary school with a projected roll capacity deficit of about 100 by 2015 up from about 20 deficit in 2009. This is projected to rise to about 130 by 2020 and 170 by 2031. Ponsonby Primary, Richmond Rd., Newton Central and Pt Chevalier primary schools are also likely to come under capacity constraints and require additional capacity. Westmere Primary school has a buffer of recent increases in capacity which should meet roll demand in the short term and pressures on that school are likely to ease in the medium and long term.

**Table 9.1 : Western Bays Lower Primary School deficit summary under a 'medium' projection 2009, 2015, 2020 and 2031**

School	2009		July Accommodation Deficit			
	Capacity	July Roll	2009	2015	2020	2031
Westmere School	600	513	87	-3	46	105
Richmond Road School	313	323	-10	-59	-81	-84
Pt Chevalier School	603	615	-12	-42	-8	34
Ponsonby Primary School	380	356	24	-43	-72	-67
Newton Central School	305	299	6	-21	-66	-163
Bayfield School	375	331	44	5	35	55
Grey Lynn School	307	324	-17	-98	-132	-171
<b>State School Available Capacity Sum</b>	2,883	2,761	<b>122</b>	<b>-261</b>	<b>-278</b>	<b>-291</b>
<b>State Capacity Deficits Sum</b>			<b>-39</b>	<b>-266</b>	<b>-359</b>	<b>-485</b>
St Francis School	235	221	14	-14	-14	2
St Joseph's School	210	99	126	106	88	76
Marist Catholic School	225	162	48	8	-12	-38



**Figure 9.2 : Estimated Capacity Surplus (deficit) for a medium projection by school for Western Bays State Lower Primary Schools 2009, 2015, 2020 and 2031**



**Table 9.2 : Western Bays Lower Primary School deficit summary under a 'medium' projection 2009, 2015, 2020 and 2031**

School	Projection Assessment	Ethnicity	Commentary	Actual	Spare Capacity medium (low, high)			Decile
				2009	2015	2020	2031	
Bayfield School	Contradictory	Very NZ European	Excess capacity - unlikely to be needed	44	5 (16,-8)	35 (82,-10)	55 (116,21)	10
Grey Lynn School	High growth	Slightly NZ European, slightly Samoan	Already over capacity	-17	-98 (-14,-116)	-132 (-62,-203)	-171 (-74,-227)	7
Newton Central School	Contradictory - Static roll progression, High growth population Catchment	<i>Very high NZ Maori, very low NZ European **</i>	Already over capacity	6	-21 (-1,-41)	-66 (13,-146)	-163 (-40,-247)	7
Pt Chevalier School	Moderate growth, then decrease	High NZ European	Already over capacity, exceed for decade	-12	-42 (-27,-60)	-8 (61,-73)	34 (129,-9)	8
Ponsonby Primary School	High growth, then steady	Very NZ European	Capacity exceeded by 2013	24	-43 (-27,-58)	-72 (-1,-137)	-67 (27,-117)	10
Richmond Road School	High growth, then steady	<i>Very high NZ Maori, very high Other European, very high Samoan, high Chinese, very low NZ European **</i>	Already over capacity	-10	-59 (-45,-74)	-81 (-21,-141)	-84 (-2,-130)	8
Westmere School (Auckland)	Contradictory - Medium roll progression, Low growth population catchment	High NZ European, high Samoan, low Indian	New capacity, future growth within to capacity	87	-3 (12,-20)	46 (112,-19)	105 (199,55)	10
<b>Summary of Capacity Deficits for State Schools</b>		<b>** Schools with ethnic specialisation hard to predict</b>	<b>Capacity constraints expected in S/T and sustained in L/T</b>	<b>-39</b>	<b>-265</b>	<b>-358</b>	<b>-485</b>	
Marist Catholic School (Herne Bay)	Strong roll growth projected on a population catchment basis	<i>Very high Samoan, very high Indian, very low NZ European **</i>	Capacity adequate until 2018	48	8 (26,-11)	-12 (23,-41)	-38 (19,-69)	7
St Francis School (Pt.Chevalier)	Modest roll growth on population catchment basis	High Indian and other Asian, very low NZ Maori	Capacity limited – may last till 2013	14	-14 (-7,-22)	-14 (17,-44)	2 (44,-19)	7
St Joseph's School (Grey Lynn)	Modest roll growth on population catchment basis but strong ethnic specialisation means 'averaged' projection not robust	<i>Very high Samoan and other Pasifika, very high Indian, very low NZ European, high Chinese and other Asian **</i>	Excess capacity - unlikely to be needed	126	106 (119,92)	88 (112,69)	76 (111,56)	4

## 10 Network Capacity Demand and Supply Overview

### 10.1 Lower Primary Level (Years 1 – 6)

#### *Estimated 2009 Position*

**Table 10.1 : Western Bays Area : State Lower Primary Schools Capacity summary as at July 2009**

Capacity Surpluses		Capacity Deficits	
Westmere	87	Grey Lynn	-17
Bayfield	44	Pt Chevalier	-12
Ponsonby Primary	24	Richmond Rd	-10
Newton Central	6		
<b>Subtotal</b>	<b>161</b>	<b>Subtotal</b>	<b>-39</b>
<b>Net Surplus</b>	<b>122</b>		

**Table 10.2 : Western Bays Area : State Integrated Lower Primary Schools Capacity summary as at July 2009**

2009 Capacity Summary	
<b>Surplus</b>	
St Francis	14
St Joseph's	126
Marist Catholic	48
<b>Subtotal</b>	<b>188</b>
<b>Net</b>	<b>188</b>

#### **Short Term Outlook (2009 – 2015)**

- The recent *2004 to 2009 period* saw aggregate **lower primary level July enrolments for state schools** in the *study area* grow by **17.5%**.
- Using the new entrants roll progression composite projection method study area state lower primary level July enrolments are expected to increase by
  - **13.7% under the “medium” (best guess);**
  - **10% under a low;** and
  - **18% under a high growth rate,** Statistics NZ population projection based scenario.
- **This level of roll growth is likely to exceed current capacity in a number study area schools** and result in a **short term deficit of 266 student places** (261 in net) under the medium “best guess” projection across the state lower primary schools in the study area.

#### School Level Summary under a “best guess” medium roll growth rate scenario

- Between 2009 and 2015, an additional 230 student places are projected to be needed on a July roll basis in State Schools in the Western Bays area at Lower Primary level.
- All state primary schools in the study area are projected to experience a substantial increase in their July rolls between 2009 and 2015.

- Of these 7 schools, significant capacity issues are projected for 5 schools as follows.
- A projected increase of 81 in the Grey Lynn school roll on 2009 capacity is estimated to result in the largest capacity deficit adding to an estimated 2009 July roll deficit of 17 for that school to a total capacity deficit of 98..
- The largest net increase in July roll of 90 is projected for Westmere School, but the estimated spare capacity of 87 as at 2009 should be provide for most of this increase in its roll resulting in a July roll capacity deficit of 3.
- A projected increase of 67 in the Ponsonby Primary school roll on its 2009 capacity is expected to use up much more than the school's estimated 2009 July roll surplus of 24 resulting in an estimated capacity deficit of 43.
- An increase of 49 in the Richmond Rd. school roll is projected to add to an estimated July 2009 capacity deficit of 10 resulting in an estimated capacity deficit of 59.
- An increase of 30 in the Pt. Chevalier school roll is projected to add to an estimated July 2009 capacity deficit of 12 resulting in an estimated capacity deficit of 42.
- An increase of 27 in the Newton Central school roll is projected to negate an estimated July 2009 capacity surplus of 6 resulting in an estimated capacity deficit of 21.
- Although the Bayfield school roll is projected to increase by 39 on the estimated July 2009 capacity surplus of 44 is expected to leave an estimated capacity surplus of 5.
- Modest growth in the rolls of the three state integrated schools is projected to leave St Francis with a small capacity deficit of 14 but Marist Catholic school with a residual capacity of only 8 and St Joseph's school with a large capacity surplus of 106.
- The projections for the state schools with special programmes which contribute a large part of their roll (Richmond Road and Newton Central) are subject to high uncertainty and ideally need to be considered in the context of a strategic view of the demand and supply of the specialty programme in question.
- The state integrated schools have a dramatically different ethnic mix than the state schools and draw on extended catchments compared with the state schools – this means that the projections made for those schools are not likely to be reliable. An ethnic based model is needed to project these schools more satisfactorily.

### ***The Short to Medium Term Transition (2015 – 2020)***

- Using the new entrants roll progression composite projection method, study area state lower primary level July enrolments are expected to change from their 2015 base with
  - an increase by **0.5% under the “medium” (best guess)**;
  - **a decrease by 11.2% under a low**; and
  - **an increase by 10.6% under a high growth rate** scenario based on the Statistics NZ population projection.

- ***This level of roll growth is likely to result in a net decrease of 17 in the net capacity in the study area state schools*** but unequal distribution of changes in the student load will increase capacity deficits in some schools but decrease them in others. On this basis, on status quo assumptions on school catchment distribution, unequal distribution of change in rolls is projected to result in an increase in school level deficits of 93 between 2015 and 2020.

School Level Summary for changes between 2015 and 2020 under a “best guess” medium roll growth rate scenario

- On status quo assumptions on school enrolment catchments, unequal distribution of change in rolls is projected to result in an increase in school level deficits of 93 in lower primary state schools of the Western Bays area.
- The July rolls of Westmere, Pt. Chevalier and Bayfield are projected to decrease by 49, 34 and 30 respectively.
- The July rolls of Newton Central, Grey Lynn, Ponsonby Primary and Richmond Road are projected to increase by 45, 34, 29 and 22 respectively increasing capacity deficits at these schools on those projected for 2015.
- Westmere and Bayfield are projected to have capacity surpluses of 46 and 35 respectively. Pt. Chevalier is projected to have a small capacity deficit of 8.
- The largest accumulated projected capacity deficit as at 2020 is 132 at Grey Lynn school. Richmond Road, Ponsonby Primary and Newton Central are projected to have accumulated capacity deficits of 81, 72 and 66 respectively.
- A projected increase of 81 in the Grey Lynn school roll on 2015 capacity is estimated to result in the largest capacity deficit adding to an estimated 2009 July roll deficit of 17 for that school to a total capacity deficit of 98..
- Amongst the state integrated schools, modest growth in the roll of Marist Catholic and a static roll at St. Francis school are projected to result in capacity deficits of 14 and 12 respectively. Despite modest roll growth St Joseph’s school is projected to retain a capacity surplus of 88.
- These state integrated schools have high uncertainty given each school’s distinctive ethnic mix which is a lot different than the overall “average” population on which the catchment projections are based.

### ***The Medium to Long Term Transition (2020 – 2031)***

- Using the new entrants roll progression composite projection method, study area state lower primary level July enrolments are expected to change from their 2020 base with
  - A net static roll ***under the “medium” (best guess)***;
  - **a decrease by 6.7% under a low**; and
  - **a decrease by 2.6% under a high growth rate** scenario based on the Statistics NZ population projection.
- ***This level of roll growth is likely to result in a net decrease of 12 in the net capacity in the study area state schools*** but unequal distribution of changes in the student load will increase capacity deficits in some schools but decrease them in others. On this basis, on status quo assumptions on school catchment distribution, unequal distribution of change in rolls is projected to result in an increase in school level deficits of 126 between 2020 and 2031.

School Level Summary for changes between 2020 and 2031 under a “best guess” medium roll growth rate scenario

- On status quo assumptions on school enrolment catchments, unequal distribution of change in rolls is projected to result in an increase in school level deficits of 126 in lower primary state schools of the Western Bays area.
- The July rolls of Westmere, Pt. Chevalier, Bayfield and Ponsonby Primary are projected to decrease by 59, 42, 20 and 5 respectively.
- The July rolls of Newton Central, Grey Lynn and Richmond Road are projected to increase by 97, 39 and 3 respectively increasing capacity deficits at these schools on those projected for 2020.
- Westmere, Bayfield and Pt. Chevalier are projected to have capacity surpluses of 105, 55 and 34 respectively.
- The largest accumulated projected capacity deficit as at 2031 is 171 at Grey Lynn school closely followed by a deficit of 163 at Newton Central. Richmond Road and Ponsonby Primary are projected to have accumulated capacity deficits of 84 and 67 respectively.
- A projected increase of 97 in the Newton Central school roll on 2020 capacity is the largest resulting in the second largest accumulated capacity deficit of 163.
- A projected increase of 39 in the Grey Lynn school roll on its 2020 capacity is estimated to result in the largest capacity accumulated deficit of 171.
- Amongst the state integrated schools, an averaged population catchment share model projects small changes in rolls between 2020 and 2031 leaving St Joseph’s school with a projected capacity surplus of 76.

### ***School by School Summary Conclusions***

**Grey Lynn Primary school** is projected to grow considerably and progressively throughout the projection period, rapidly increasing its estimated capacity deficit of 17 students as at July 2009. On these status quo assumptions it is estimated to be above current capacity by 17 students on its July 2009 roll and is projected to exceed capacity by 98 students by 2015 (14 under a low projection and 116 under a high), 132 by 2020 and 171 by 2031. The July 2009 roll was 324. Additional capacity will be needed most critically in the short term with incremental expansion expected to be needed in a staged manner to cope with increasing roll demand reaching 469 in 2024 with very slow but continuing roll growth reaching 478 in 2031.

**Ponsonby Primary school** had spare capacity of about 24 students as at its July 2009 roll but is projected to exceed capacity by 43 students by 2015 (27 under a low projection and 60 under a high), 72 students by 2020 dropping down slightly to 67 students by 2031. The July 2009 roll was 356. Additional capacity will be needed most critically in the short term with incremental expansion expected to be needed in a staged manner to cope with increasing roll demand up to a peak of 459 in 2024. From that time the roll size is projected to be sustained close to the peak till 2031 when the roll is projected to be 447. The roll has an above average proportion of NZ European students.

**Richmond Road Primary school** also appears likely to be constrained by capacity in the short term, but its focus on specialist programmes results in high uncertainty in making projections. It is estimated to be above current capacity by 10 students on its July 2009 roll and is projected to exceed capacity by 59 students by 2015 (45 under a low projection and 74 under a high), 81 students by 2020 and slightly more at 84 in 2031. The July 2009 roll was 323. The roll is projected to peak at 404 in 2024 with a small drop to 397 by 2031. Special factors make this result subject to high uncertainty. The school offers specialist French, Maori and Samoan programmes and this is reflected in a specialised ethnic composition. Therefore, future roll growth may not mirror the rate of growth of its catchment population. On a regional basis, these specialist market segments will probably grow faster than the rate of the overall and especially the NZ European population but much will depend on the relative popularity of the specialist programmes offered by different schools with the communities they cater to.

**Pt. Chevalier Primary school** also appears likely to be constrained by capacity in the short term. It is estimated to be above current capacity by 12 students on its July 2009 roll and is projected to exceed capacity by 42 students by 2015 (27 under a low projection and 60 under a high), easing to a capacity deficit of only 8 in 2020 with rolls dropping further to a projected small capacity surplus of 34 in 2031. The school is relatively large with a July 2009 roll of 615. The roll is projected to peak at 645 in 2015 with a small drop to 615 by 2020 and ease back to 569 by 2031. The roll has an above average proportion of NZ European students whose numbers are projected to increase at a slower rate on a regional basis than the population as a whole.

**Westmere Primary school** has gained a lot of extra capacity in recent years and on 2009 July rolls was estimated to have spare capacity of 87. On current projections it is projected to use up and slightly exceed this capacity by 3 students by 2015 (12 spare capacity under a low projection and 20 deficit under a high), but ease back to a capacity surplus of 46 in 2020 and a larger capacity surplus of 105 in 2031. The roll is projected to peak at 610 in 2013, with a small drop to 603 by 2015, a further drop in the roll to 554 by 2020 and 495 by 2031. The roll has an above average proportion of NZ European students whose numbers are projected to increase at a slower rate on a regional basis than the population as a whole but has cultivated a numerically successful specialist Maori programme. Given that this school has been relatively popular, experiencing some of the highest rates of roll growth over the last several years, this projection needs to be treated with caution as perhaps a conservative scenario and monitored carefully in the short to medium term.

**Newton Central Primary school** has expanded rapidly since 2004 and its 2009 July rolls was estimated to have spare capacity of only 6. The school has expanded on the basis of its specialist Maori programmes. On the basis of the “new entrant progression composite model” projection the school is projected to use up and slightly exceed its July enrolment capacity by 21 students by 2015 (1 under a low projection and 41 under a high), with the capacity deficit projected to reach 66 by 2020 and 163 by 2031. A population catchment market share roll projection suggests that the school’s roll will increase much faster, arriving at a capacity deficit of 88 by 2015. The roll is projected to reach 468 by 2031 using the new entrant progression composite model and 550 using the population catchment market share method. These roll projections are driven by projected growth in the lower primary aged

population in Newton Central's catchment area. The popularity of the school's specialist Maori programme would seem likely to result in further roll growth given the projected growth in the proportion of Maori children in the regional population and high interest in types of Maori language programme aside from roll growth expectations based on projected catchment demographics and averaged market share. These issues are beyond the scope of this study and need to be analysed on a local and regional network basis.

**Bayfield Primary school** has experienced a net decrease in its roll (but a lot of fluctuation in this trend) since 2002. As at July 2009 it is estimated to have spare roll capacity of 44. Different projection methods and associated assumptions project a very different short term roll. A "new entrant roll progression" type model projects high roll growth in the short term but an averaged catchment population market share model would suggest a static or slightly declining roll. The "new entrant roll progression" model that capacity of 5 places will remain under a medium projection in 2015 (16 under a low projection and a deficit of 8 under a high), a surplus of 35 by 2020 and 55 by 2031. The "new entrant roll progression" model projects that from the 2009 July roll base of only 331 the roll of this school will briefly peak at 370 before dropping below 2009 base. Both projection methods envisaged that the 2031 roll will be around 320, below that of the 2009 base. This school has a very high proportion of NZ European on its 2009 roll. Given the contradiction between the projections using different methods the short term projection is uncertain but it does not appear that capacity will be constrained in the short term and it appears likely to offer some limited capacity to cater to excess demand in nearby schools.

**Within the state integrated primary schools** in the study area special factors relating to the ethnic composition of their 2009 rolls are very significant and make it difficult to project future roll demand.

**Marist Catholic School in Herne Bay** has had little net increase in roll over the last four years, was estimated to have spare capacity of 48 students in 2009 and very high proportion of Samoan and Indian students and a correspondingly low proportion of NZ European students. On a population catchment market share basis its roll might be expected to increase steadily in the short term with most of its residual capacity used up leaving spare capacity of only 8 students by 2015 under a medium projection (26 under a low and a deficit of 11 under a high projection), a capacity deficit of 12 by 2020 and deficit of 38 in 2031. This result is not robust however given the specialist demand reflected in the ethnic makeup of its roll. Special study of the future growth of the Samoan and Indian communities and the relative popularity of different schools in catering to the preferences of these communities would help alleviate some of this uncertainty.

Similarly, **St Francis School in Pt. Chevalier** caters to a specialist niche with a very high proportion of Indian and "other Asian" (not Chinese) students and a correspondingly low proportion of NZ Maori students. The roll of the school has grown slowly since 2004 and was estimated to have a capacity of 14 students in 2009. On a "population catchment market share" basis its roll is expected to increase steadily in the short term with its residual capacity used up resulting a capacity deficit only 14 students by 2015 under a medium projection (7 under a low and 22 under a



high projection), the capacity deficit also at 14 in 2020 but revert to a nominal capacity surplus of 2 by 2031.

**St Joseph's School** in Grey Lynn caters to a specialist niche with a very high proportion of Samoan and other Pasifika, very high Indian, Chinese and “other Asian” and very low proportion of NZ European students. The roll of the school has dropped very sharply since 2002 but the rate of decline appears to have “bottomed out in the last two years. It is possible that its low decile rating has some relationship to recent roll history – as its decile rating of 4 is the lowest by far of all of the local schools. The school has a considerable unused roll capacity of 126 as at its July 2009 roll. On a “population catchment market share” basis its roll is expected to increase slightly in the short term but residual capacity of 106 students is expected to remain by 2015 under a medium projection (119 under a low and 92 under a high projection), a surplus of 88 in 2020 and 76 in 2031..

## ***Network Summary for Specialist Maori Programmes***

Specialist programmes have implications for school enrolment demand which can't easily be captured in projection models. Newton Central, Richmond Road and Westmere Primary schools all offered specialist Maori programmes in 2009. There are differences in the type of programme offered at the three schools, they make different proportionate contributions to overall school enrolments and the schools overall also give different roles of Maori culture. This section takes an overview at Maori enrolments across the study area and considers implications Maori specialist programmes may have for school accommodation demand and supply in the "Western Bays" study area.

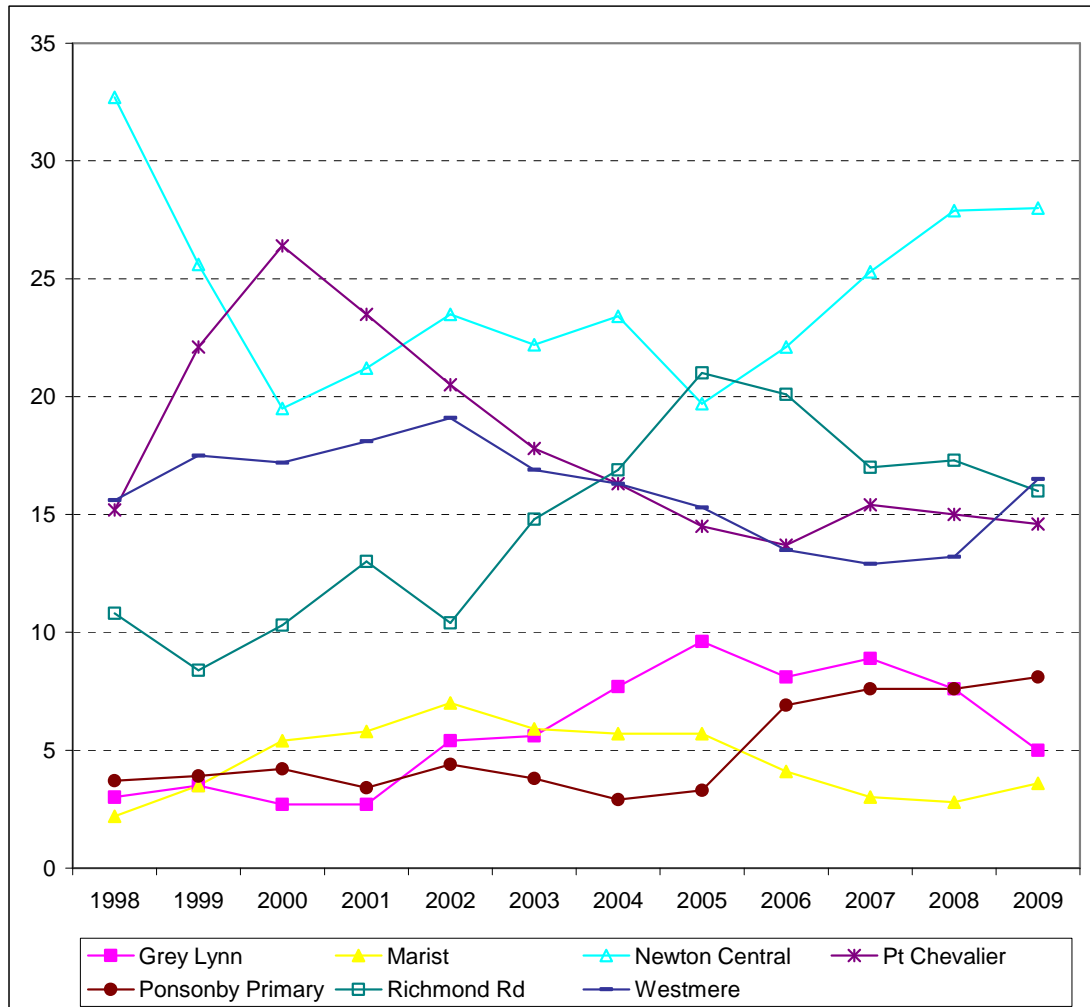
Post 2002, the number of Maori enrolments at Western Bay study area schools have increased 5% per annum on average. This has involved roll increases at different schools and different times and a proportion of the increase is likely to be from enrolments from outside the Western Bays study area (Appendix 4, Figure 10.1, Tables 10.4 and 10.5). The number of Maori enrolments at the Newton Central School increased rapidly from 2005 to 2009 although the rate of increase slowed each year. Newton Central's share of Maori enrolments at study area schools also increased between 2005 and 2008. Maori enrolments at Westmere saw its share of Maori enrolments at study area schools decrease sharply from 2005 to 2006 and continued to fall between 2006 and 2007. However its share of study area Maori enrolments has since increased, jumping from 13.2 to 16.5% between 2008 and 2009. Richmond Road saw its share of study area Maori enrolments increase from between 2004 and 2005, but its Maori roll dropped between 2006 and 2007 coincident with a corresponding increase in the Newton Central Maori roll. The Maori roll at Richmond Road has remained constant since although proportionately its share of all Maori enrolments in study area schools has decreased. Maori enrolments at Ponsonby Primary school jumped between 2005 and 2006 and have increased slowly since as has that school's share of the Maori enrolments in the study area.

One consideration in looking at how best to expand supply of specialist Maori programmes is how much overlap there is between the distribution of Maori across the enrolment catchments of any two schools. An index of dissimilarity can be calculated to measure this based on difference in the percent distribution of enrolments by suburb for any two schools. Results for Western Bay study area state schools are shown in Appendices 5A to 5H. This shows that there are several clusters of schools with fairly similar Maori enrolment catchments. Bayfield and Ponsonby Primary had the most similar Maori enrolment catchments at 0.664 in 2008. This means that their Maori enrolment distribution catchments overlap by about a third (1-0.664). Westmere and Bayfield also overlap about the same amount as does Westmere with Marist and Ponsonby Primary with Bayfield. The other cluster of overlaps is between Newton Central, Grey Lynn and Richmond Road. Pt Chevaliers Maori enrolment catchment shows highest similarity amongst the study area schools. For example, this would suggest that Richmond Road would be more likely to gain any Maori enrolment overflows from Newton Central.

The number and proportion of children of Maori and other non-European ethnicity (total response) in the Auckland region is projected to increase at rates much higher than that of European total response (Table 10.3). This suggests that consideration of

the scale and distribution of specialist Maori language and other programmes will be needed to provide for the aspirations of different ethnic communities of the Auckland region in the short, medium and long term. Ethnicity based population projections were not available at the suburb level to guide this analysis although the high quality ethnicity coding of the geocoded student address records provides a very useful base on which to do some of the strategic analysis of the residential distribution of demand and current location of enrolments and specialty courses.

**Figure 10.1 : Percent of Maori enrolments at selected Western Bays State Lower Primary Schools by School 1998 to 2009**



**Table 10.3 : Auckland Region : Historical and Projected population aged under 15 by 'total response' ethnicity (2006 base)**

YEAR	European	Maori	Asian	Pacific Peoples	Total Population
1996	166,800	50,500	30,300	57,000	255,300
2001	170,100	52,000	39,200	66,300	277,500
2006	171,800	53,500	54,900	72,800	297,700
2011	170,800	60,600	66,700	84,000	309,000
2016	168,600	67,100	83,800	94,000	323,300
2021	164,600	72,100	100,600	103,300	337,500
% Change 2006-2016	-1.9	25.4	52.6	29.1	8.6
% Change 2006-2021	-4.2	34.8	83.2	41.9	13.4

**Table 10.4 : Maori Students as a Percent of July Rolls of Lower Primary Schools in the Western Bays area 1998 to 2009**

School	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bayfield	6.8	7.7	6.2	5.3	3.8	7.3	5.6	6.4	6.6	7.3	6.7	7.3
Grey Lynn	5.5	8.5	6.0	7.4	13.7	11.9	12.7	13.9	11.4	11.6	9.6	6.8
Marist	4.6	7.8	10.1	11.5	14.2	13.6	14.6	16.5	12.5	9.6	8.3	10.4
Newton Central	28.3	25.8	22.4	27.7	33.7	36.1	37.3	33.0	36.7	39.4	39.3	41.8
Pt Chevalier	8.4	11.2	11.6	11.3	10.0	10.0	9.4	9.3	9.3	10.2	9.7	10.0
Ponsonby Primary	3.1	3.2	3.3	2.9	3.7	3.8	3.0	3.6	7.9	8.7	8.9	9.8
Richmond Rd	13.9	11.4	12.4	15.9	12.0	18.9	20.6	23.7	23.7	20.0	20.4	20.9
St Francis	7.2	7.7	6.7	7.7	5.4	7.0	7.4	6.2	5.4	3.4	3.9	4.6
St Joseph's	5.5	3.6	3.3	3.2	3.6	3.3	3.8	4.3	8.7	8.0	6.2	1.2
Westmere	11.2	12.3	11.1	13.6	14.4	13.8	14.3	13.5	13.0	12.1	10.9	13.7
<b>All Western Bays</b>	<b>10.1</b>	<b>10.4</b>	<b>9.7</b>	<b>10.7</b>	<b>10.7</b>	<b>12.0</b>	<b>12.3</b>	<b>12.7</b>	<b>13.3</b>	<b>13.1</b>	<b>12.8</b>	<b>13.3</b>

**Table 10.5 : July Maori Roll by School as a percentage of Maori enrolments across all lower primary schools in the Western Bays area 1998 to 2009**

School	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bayfield	7.4	8.1	7.7	5.8	4.4	7.1	5.1	5.7	5.6	6.1	5.3	5.5
Grey Lynn	3.0	3.5	2.7	2.7	5.4	5.6	7.7	9.6	8.1	8.9	7.6	5.0
Marist	2.2	3.5	5.4	5.8	7.0	5.9	5.7	5.7	4.1	3.0	2.8	3.6
Newton Central	32.7	25.6	19.5	21.2	23.5	22.2	23.4	19.7	22.1	25.3	27.9	28.0
Pt Chevalier	15.2	22.1	26.4	23.5	20.5	17.8	16.3	14.5	13.7	15.4	15.0	14.6
Ponsonby Primary	3.7	3.9	4.2	3.4	4.4	3.8	2.9	3.3	6.9	7.6	7.6	8.1
Richmond Rd	10.8	8.4	10.3	13.0	10.4	14.8	16.9	21.0	20.1	17.0	17.3	16.0
St Francis	4.8	4.9	4.6	4.8	3.4	3.8	4.0	3.3	2.8	1.8	2.0	2.4
St Joseph's	3.3	2.1	1.9	1.7	2.0	1.5	1.4	1.4	2.3	1.8	1.3	0.2
Westmere	15.6	17.5	17.2	18.1	19.1	16.9	16.3	15.3	13.5	12.9	13.2	16.5
<b>All Western Bays</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

## 10.2 Intermediate Level (Years 7 – 8)

### **Short Term Outlook (2009 – 2015)**

- The recent *2004 to 2009 period* saw aggregate **intermediate level July enrolments for state schools** in the *study area grow by 8.5%* representing an increase of 62 students.
- Using the catchment market share projection method study area state intermediate level July enrolments are expected to increase over 2009 to 2015 by
  - **3% under the “medium” (best guess) representing 24 additional enrolments;**
  - **1% under a low;** and
  - **4.8% under a high growth rate**, Statistics NZ population projection based scenario.
- On catchment distribution and past choice behaviour this medium growth rate roll increase scenario is expected to be distributed unevenly between the two state intermediate schools in the study area, with Ponsonby Intermediate gaining in net 22 and Pasadena Intermediate only 2 students.

### **The Short to Medium Term Transition (2015 – 2020)**

- The July rolls at Western Bay area state intermediate schools are expected to increase substantially between 2015 and 2020 as the birth wave of recent years reaches intermediate schools. The increase in the intermediate roll between 2015 and 2020 is projected to be
  - **24.8% under the “medium” (best guess) representing 203 additional enrolments;**
  - **7.8% under a low;** and
  - **42% under a high growth rate**, Statistics NZ population projection based scenario.
- From recent trends, the projected 2015 to 2020 roll increase under the medium scenario is expected to be distributed unevenly with Ponsonby Intermediate gaining in net 183 and Pasadena Intermediate only 20 students.

### **The Medium to Long Term Transition (2020 – 2031)**

- The July rolls at Western Bay area state intermediate schools are expected to continue to increase between 2015 and 2020 but at a slower annual rate than between 2015 and 2020. The increase in the intermediate roll between 2015 and 2020 is projected to be
  - **15.7% under the “medium” (best guess) representing 160 additional enrolments;**
  - **4.5% under a low;** and
  - **14.9% under a high growth rate**, Statistics NZ population projection based scenario.

- From recent trends, the projected 2020 to 2031 roll increase under the medium scenario is expected to be distributed unevenly with Ponsonby Intermediate gaining in net 165 increased roll and the Pasadena Intermediate roll dropping by 5.

### **10.3 Secondary Level (Years 9 – 13)**

#### ***Short Term Outlook (2009 – 2015)***

- There is only one state funded secondary school in the Western Bays area, Western Springs College. The recent **2004 to 2009 period** saw that College's July roll **increase by 40.1%** representing an increase of 301 students.
- Using the catchment market share projection method the school's July roll is expected to drop over 2009 to 2015 by
  - **4% under the "medium" (best guess) representing 42 fewer on its roll;**
  - **5.4% under a low;** and
  - **2% under a high growth rate,** Statistics NZ population projection based scenario.

#### ***The Short to Medium Term Transition (2015 – 2020)***

- The July roll of Western Springs College is expected to increase between 2015 and 2020 as the birth wave of recent years reaches secondary school level. The increase in the school's roll between 2015 and 2020 is projected to be
  - **13.3% under the "medium" (best guess) representing 135 additional enrolments;**
  - **9.2% under a low;** and
  - **17% under a high growth rate,** Statistics NZ population projection based scenario.

#### ***The Medium to Long Term Transition (2020 – 2031)***

- The July roll of Western Springs College is expected to continue to increase between 2020 and 2031, especially between 2018 and 2023 as the birth wave of recent years continues to feed through into the school. The change in the school's roll between 2020 and 2031 is projected to be
  - **an increase of 12.9% under the "medium" (best guess) representing 148 additional enrolments;**
  - **a decrease of 5.6% under a low;** and
  - **an increase of 22.9% under a high growth rate,** Statistics NZ population projection based scenario.

## APPENDICIES

### ***Appendix 1 : Key to the customised geographic breakdown used in Table 3 and other locations based on 2006 area units***

AU2006TL	Educ_StudyAreas1TL
515001 Point Chevalier West	01 Auckland Central West
515002 Point Chevalier East	01 Auckland Central West
515100 Westmere	01 Auckland Central West
515201 Herne Bay	01 Auckland Central West
515202 St Marys	01 Auckland Central West
515301 Ponsonby West	01 Auckland Central West
515302 Ponsonby East	01 Auckland Central West
515410 Grey Lynn West	01 Auckland Central West
515420 Grey Lynn East	01 Auckland Central West
515431 Surrey Crescent	01 Auckland Central West
515500 Arch Hill	01 Auckland Central West
514000 Freemans Bay	02 Auckland Central CBD
514101 Auckland Harbourside	02 Auckland Central CBD
514102 Auckland Central West	02 Auckland Central CBD
514103 Auckland Central East	02 Auckland Central CBD
514301 Grafton West	02 Auckland Central CBD
617903 Auckland City-Marinas	Western Bays Ward Auckland
514401 Roberton	03 Avondale-Roskill
514402 Glenavon	03 Avondale-Roskill
514500 New Windsor	03 Avondale-Roskill
514600 Avondale South	03 Avondale-Roskill
514700 Blockhouse Bay	03 Avondale-Roskill
514801 Rosebank	03 Avondale-Roskill
514802 Avondale West	03 Avondale-Roskill
514900 Waterview	03 Avondale-Roskill
518500 Three Kings	03 Avondale-Roskill
518600 Royal Oak	03 Avondale-Roskill
518701 Hillsborough West	03 Avondale-Roskill
518702 Hillsborough East	03 Avondale-Roskill
518801 Walmsley	03 Avondale-Roskill
518802 Wesley	03 Avondale-Roskill
518803 Akarana	03 Avondale-Roskill
518901 Lynfield North	03 Avondale-Roskill
518902 Lynfield South	03 Avondale-Roskill
519001 Waikowhai West	03 Avondale-Roskill
519002 Waikowhai East	03 Avondale-Roskill
617902 Tidal-Waitemata Harbour	03 Avondale-Roskill
515003 Point Chevalier South	04 Eden-Albert
515432 St Lukes North	04 Eden-Albert
517500 Kingsland	04 Eden-Albert
517600 St Lukes	04 Eden-Albert
517701 Sandringham North	04 Eden-Albert
517702 Sandringham West	04 Eden-Albert
517703 Sandringham East	04 Eden-Albert



517800 Mt Albert Central	04 Eden-Albert
517901 Springleigh	04 Eden-Albert
517902 Owairaka West	04 Eden-Albert
517903 Owairaka East	04 Eden-Albert
518101 Mt Eden North	04 Eden-Albert
518102 Sherbourne	04 Eden-Albert
518201 Balmoral	04 Eden-Albert
518202 Mt Eden East	04 Eden-Albert
518301 Maungawhau	04 Eden-Albert
518302 Mt Eden South	04 Eden-Albert
514200 Newton	05 Hobson
514302 Grafton East	05 Hobson
515600 Eden Terrace	05 Hobson
515700 Epsom North	05 Hobson
515801 Epsom Central	05 Hobson
515802 Epsom South	05 Hobson
515901 Parnell East	05 Hobson
515902 Parnell West	05 Hobson
516001 Mt Hobson	05 Hobson
516002 Remuera South	05 Hobson
516003 Abbots Park	05 Hobson
516101 Remuera West	05 Hobson
516102 Waitaramoa	05 Hobson
516201 Orakei South	05 Hobson
516202 Waiaata	05 Hobson
517400 Newmarket	05 Hobson
519200 Mt St John	05 Hobson
519300 One Tree Hill Central	05 Hobson
516301 Meadowbank North	06 Eastern Bays
516302 Meadowbank South	06 Eastern Bays
516400 Orakei North	06 Eastern Bays
516500 Mission Bay	06 Eastern Bays
516601 Kohimarama West	06 Eastern Bays
516602 Kohimarama East	06 Eastern Bays
516700 St Heliers	06 Eastern Bays
516800 Glendowie	06 Eastern Bays
516900 Glen Innes North	06 Eastern Bays
517200 St Johns	06 Eastern Bays
617400 Inlet-Hobson Bay	06 Eastern Bays
517001 Glen Innes West	07 Tamaki-Maungakiekie
517002 Glen Innes East	07 Tamaki-Maungakiekie
517100 Point England	07 Tamaki-Maungakiekie
519400 One Tree Hill East	07 Tamaki-Maungakiekie
519500 Penrose	07 Tamaki-Maungakiekie
519710 Onehunga North West	07 Tamaki-Maungakiekie
519720 Onehunga North East	07 Tamaki-Maungakiekie
519810 Onehunga South West	07 Tamaki-Maungakiekie
519820 Onehunga South East	07 Tamaki-Maungakiekie
519900 Oranga	07 Tamaki-Maungakiekie
520000 Te Papapa	07 Tamaki-Maungakiekie
520201 Ellerslie North	07 Tamaki-Maungakiekie
520202 Ellerslie South	07 Tamaki-Maungakiekie

520300 Mt Wellington North	07 Tamaki-Maungakiekie
520401 Ferndale	07 Tamaki-Maungakiekie
520402 Hamlin	07 Tamaki-Maungakiekie
520500 Mt Wellington South	07 Tamaki-Maungakiekie
520601 Tamaki	07 Tamaki-Maungakiekie
520602 Panmure Basin	07 Tamaki-Maungakiekie
521801 Otahuhu North	07 Tamaki-Maungakiekie
521802 Fairburn	07 Tamaki-Maungakiekie
521803 Otahuhu East	07 Tamaki-Maungakiekie
521901 Otahuhu West	07 Tamaki-Maungakiekie
617606 Tidal-Manukau Harbour North	07 Tamaki-Maungakiekie
617704 Tidal-Eastern Bays	07 Tamaki-Maungakiekie
520801 Waiheke Island	08 Hauraki Gulf Islands
520804 Tidal-Waiheke Island	08 Hauraki Gulf Islands
520900 Islands-Motutapu Rangitoto Rakino	08 Hauraki Gulf Islands
521000 Great Barrier Island	08 Hauraki Gulf Islands
615800 Mokohinau Island	08 Hauraki Gulf Islands
615900 Little Barrier Island	08 Hauraki Gulf Islands
616001 Kaikoura and Rangiahua Islands	08 Hauraki Gulf Islands
616200 Rakitu Island	08 Hauraki Gulf Islands
616300 Browns Island	08 Hauraki Gulf Islands
616400 Aiguilles Island	08 Hauraki Gulf Islands
617502 Tidal-Great Barrier Island	08 Hauraki Gulf Islands
617503 Tidal-Motutapu and Browns Islands	08 Hauraki Gulf Islands

**Appendix 2 : July Roll Projection Summary by School**

schl_label	2009	2015			2020			2031		
	Actual	Low	Medium	High	Low	Medium	High	Low	Medium	High
<b>New entrants driven roll progression model</b>										
Bayfield School	331	359	370	383	293	340	385	259	320	354
Grey Lynn School	324	391	405	423	369	439	510	381	478	534
Newton Central School	299	306	326	346	292	371	451	345	468	552
Pt Chevalier School	615	630	645	663	542	611	676	474	569	612
Ponsonby Primary School	356	407	423	438	381	452	517	353	447	497
Richmond Road School	323	358	372	387	334	394	454	315	397	443
Westmere School	513	588	603	620	488	554	619	401	495	545
St Francis School	221	242	249	257	218	249	279	191	233	254
<b>School area unit catchment population averaged market share model</b>										
Bayfield School	331	311	338	362	285	332	365	261	324	355
Grey Lynn School	324	358	396	435	369	436	491	356	454	505
Newton Central School	299	341	393	446	370	466	546	408	551	636
Pt Chevalier School	615	603	636	676	552	619	664	495	602	642
Ponsonby Primary School	356	394	431	468	381	451	502	353	448	494
Richmond Road School	323	356	391	426	349	410	459	321	409	454
Westmere School	513	507	537	572	446	510	556	390	486	534
Marist School	162	184	202	221	187	222	251	191	248	279
St Francis School	221	224	239	257	213	243	265	185	230	249
St Joseph's School	99	106	119	133	113	137	156	114	149	169

**Appendix 3 : Projected residual July roll capacity summary by school**

schl_label	2009			2015			2020			2031		
	Actual	Low	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
Bayfield School	44	16	5	-8	82	35	-10	116	55	21		
Grey Lynn School	-17	-84	-98	-116	-62	-132	-203	-74	-171	-227		
Newton Central School	6	-1	-21	-41	13	-66	-146	-40	-163	-247		
Pt Chevalier School	-12	-27	-42	-60	61	-8	-73	129	34	-9		
Ponsonby Primary School	24	-27	-43	-58	-1	-72	-137	27	-67	-117		
Richmond Road School	-10	-45	-59	-74	-21	-81	-141	-2	-84	-130		
Westmere School	87	12	-3	-20	112	46	-19	199	105	55		
Marist School	48	26	8	-11	23	-12	-41	19	-38	-69		
St Francis School	14	-7	-14	-22	17	-14	-44	44	2	-19		
St Joseph's School	126	119	106	92	112	88	69	111	76	56		

**Appendix 4 : July Maori enrolments at lower primary level in Western Bays Auckland Central Schools 1992-2009**

School	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Bayfield	20	23	20	17	13	24	18	21	22	24	21	23
Grey Lynn	8	10	7	8	16	19	27	35	32	35	30	21
Marist	6	10	14	17	21	20	20	21	16	12	11	15
Newton Central	88	73	51	62	70	75	82	72	87	100	110	117
Pt Chevalier	41	63	69	69	61	60	57	53	54	61	59	61
Ponsonby Primary	10	11	11	10	13	13	10	12	27	30	30	34
Richmond Rd	29	24	27	38	31	50	59	77	79	67	68	67
St Francis	13	14	12	14	10	13	14	12	11	7	8	10
St Joseph's	9	6	5	5	6	5	5	5	9	7	5	1
Westmere	42	50	45	53	57	57	57	56	53	51	52	69
<b>All</b>	<b>269</b>	<b>285</b>	<b>261</b>	<b>293</b>	<b>298</b>	<b>338</b>	<b>350</b>	<b>366</b>	<b>393</b>	<b>395</b>	<b>394</b>	<b>418</b>

**Appendix 5A : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Newton Central and other schools (0=same distribution, 1=no overlap)**

School	Index
Newton Central School	0
Richmond Road School	0.729
Marist School (Mt Albert)	0.779
TKKM o Nga Maungarongo	0.800
Grey Lynn School	0.813
Freemans Bay School	0.826
Westmere School (Auckland)	0.840
TKKM o Hoani Waititi	0.850
Kohimarama School	0.852
Orakei School	0.852
St Thomas School (Auckland)	0.857
Edendale School (Auckland)	0.863
Avondale Primary School (Auckland)	0.870
Edmonton School	0.887
Bayfield School	0.907
Pt Chevalier School	0.912
Don Buck School	0.917
Ponsonby Primary School	0.917

**Appendix 5B : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Grey Lynn and other schools (0=same distribution, 1=no overlap)**

School	Index
Grey Lynn School	0
Richmond Road School	0.714
Newton Central School	0.813
Westmere School (Auckland)	0.845
Bayfield School	0.864
Marist School (Herne Bay)	0.867
Glendene School	0.905
Freyberg Community School	0.905
TKKM o Nga Maungarongo	0.920
Freemans Bay School	0.927
Rosebank School (Auckland)	0.930
Ponsonby Primary School	0.935

**Appendix 5C : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Ponsonby Primary and other schools (0=same distribution, 1=no overlap)**

School	Index
Ponsonby Primary School	0
Bayfield School	0.664
Richmond Road School	0.809
Westmere School (Auckland)	0.871
Freemans Bay School	0.899
Edendale School (Auckland)	0.903
Good Shepherd School (Balmoral)	0.903
Marist School (Mt Albert)	0.909
Newton Central School	0.917
Onepoto School	0.935
St Mary's School (Northcote)	0.935
Northcote School (Auckland)	0.935
Grey Lynn School	0.935
Marist School (Herne Bay)	0.935

**Appendix 5D : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Bayfield and other schools (0=same distribution, 1=no overlap)**

School	Index
Bayfield School	0
Ponsonby Primary School	0.664
Westmere School (Auckland)	0.674
Richmond Road School	0.753
Marist School (Herne Bay)	0.776
Grey Lynn School	0.864
Newton Central School	0.907
Freemans Bay School	0.909
Balmoral School (Auckland)	0.909

**Appendix 5E : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Westmere and other schools (0=same distribution, 1=no overlap)**

School	Index
Westmere School (Auckland)	0
Bayfield School	0.674
Marist School (Herne Bay)	0.677
Richmond Road School	0.774
Newton Central School	0.840
Grey Lynn School	0.845
Marist School (Mt Albert)	0.868
Ponsonby Primary School	0.871
Freemans Bay School	0.877
TKKM o Hoani Waititi	0.879
TKKM o Nga Maungarongo	0.912
Tirimoana School	0.913
Pt Chevalier School	0.914

**Appendix 5F : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Richmond Road and other schools (0=same distribution, 1=no overlap)**

School	Index
Richmond Road School	0
Grey Lynn School	0.714
Newton Central School	0.729
Bayfield School	0.753
Westmere School (Auckland)	0.774
Marist School (Herne Bay)	0.787
TKKM o Nga Maungarongo	0.801
Ponsonby Primary School	0.809
Pt Chevalier School	0.889
Edendale School (Auckland)	0.891
Cornwall Park School	0.903
Marist School (Mt Albert)	0.905
TKKM o Hoani Waititi	0.911
Freemans Bay School	0.911
Owairaka District School	0.912

**Appendix 5G : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Pt Chevalier and other schools (0=same distribution, 1=no overlap)**

School	Index
Pt Chevalier School	0
Marist School (Herne Bay)	0.833
Richmond Road School	0.889
Newton Central School	0.912
Westmere School (Auckland)	0.914
Avondale Primary School (Auckland)	0.915

**Appendix 5H : Index of Dissimilarity of Catchment Distribution of Maori enrolments between Marist Catholic (Herne Bay) and other schools  
(0=same distribution, 1=no overlap)**

School	Index
Marist School (Herne Bay)	0
Westmere School (Auckland)	0.677
Freemans Bay School	0.770
Bayfield School	0.776
Richmond Road School	0.787
Peninsula Primary School	0.800
Pt Chevalier School	0.833
Rutherford School	0.846
Laingholm School	0.867
Parnell School	0.867
Waitakere School	0.867
Grey Lynn School	0.867
Oratia School	0.867
TKKM o Hoani Waititi	0.887
Marist School (Mt Albert)	0.888
Titirangi Rudolf Steiner School	0.909
Newton Central School	0.917
Newmarket School	0.933
Ponsonby Primary School	0.935



**Appendix 6 : 2006 Area Units of the Central and West of Auckland City**

