



Report of an investigation into defining a living wage for New Zealand

**Prepared by
Peter King and Charles Waldegrave
Family Centre Social Policy Research Unit**

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Executive Summary

Living Wage definition and explanation

The Living Wage Report provides the empirical basis for the \$18.40 threshold for the Living Wage (LW). The definition adopted by Living Wage Aotearoa New Zealand is as follows:

A living wage is the income necessary to provide workers and their families with the basic necessities of life. A living wage will enable workers to live with dignity and to participate as active citizens in society.

It is the second sentence that distinguishes the LW from the 'poverty' or 'income hardship' threshold. Participation refers to more than survival on the basic necessities, because it involves the ability to participate socially and even consider the future like a modest insurance policy. It embraces small but important things like being able to pay for children to enjoy a school trip, having a computer in the home and being able to mix with friends recreationally, albeit modestly.

In New Zealand the poverty threshold is generally accepted to be 60 percent of median household income¹. If a LW is to be effective, it needs to contribute adequately to the makeup of household income which would enable a household to earn an income considerably above the poverty threshold and at the same time well below the New Zealand household median income.

Family size and adults working

In order to calculate a LW, a household unit of two adults and two children (2A2C) was chosen because this is a common NZ family size and it is the minimum average sized 'family' required to ensure population replacement. It was considered a LW should at least be sufficient to support such a unit. The household is assumed to have two income earners, one working full time and the other half time. There are good grounds for assuming two incomes because the Statistics New Zealand Household Labour Force Survey (HLFS) results for June 2012 show that in 68.5 percent of households with two adults and two dependent children, both adults were income earners.

The wage of a full time earner

People live in households, but are paid in the market as individuals regardless of their household obligations. A living wage really has to be an individual market wage. Thus the position adopted in this report is that the LW is set at an hourly rate for a full time market wage, and that it in conjunction with the other adult's half time wage is sufficient to provide the level of after tax income to meet the household's reasonable needs.

Focus Groups

Five focus groups were held, three in the Wellington area and two in Auckland, with an average of 8 members in each. They were invited to estimate for a household of 2A2C, a list of household expenditure items that were much the same as those covered by the Household Economic Survey (Statistics New Zealand) that would reflect the LW definition. The results showed that the groups produced estimates that were considerably higher than what might in the end be agreed as a defensible and achievable level for the LW.

Independent data sources

The second way of estimating the budget items constituting necessary expenditure uses independent data sources. With the higher than expected estimations from the focus groups, this second estimate

¹ Perry, B. (2012) Household Incomes in New Zealand: Trends in Indicators of Inequality and Hardship 1982 to 2011, Wellington: Ministry of Social Development

was the one used in deriving the living wage. The following independent data sources were used to estimate budget items:

- The annual Food Cost Survey carried out by the University of Otago's Department of Human Nutrition was used to estimate a basic weekly food cost for a 2 adult/2 children family (2A2C) that would meet their nutritional needs.
- The Ministry of Business, Innovation and Employment's average lower quartile national rent figures were used to estimate weekly housing costs
- The Statistics New Zealand's Household Economic Survey average expenditure figures for income deciles 1-5 (the lower 50 percent of NZ household incomes) were used to estimate the remaining itemised costs apart from childcare.
- 10 hours were allowed for childcare costs, given one adult worked 20 hours a week and 3 and 4 year olds have access to 20 hours free early childhood education.
- Saving through Kiwi Saver at the minimum level of two percent of gross income was assumed.

The sum of the costs of the budget items provided a benchmark for the required household after tax income that was needed to cover those costs.

Household and individual disposable and gross income

Having identified a necessary level of disposable, after tax income, the next step was to calculate the 1.5 before tax market wages for two individuals necessary to provide that after tax household income. The calculation took into account the effects of income tax, Working for Families tax credits, Kiwi Saver deductions from wages, and financial support provided by the state through childcare support and the Accommodation Supplement. A spreadsheet was developed to enable gross income levels to be calculated for a range of disposable income levels.

The Living Wage benchmark

The calculations showed that a total gross annual income from 1.5 market incomes of \$57,432 was required to meet the estimation for the required household income. This in turn produced an hourly rate of \$18.41. That provides a household after tax income of \$53,976 which is 76.78 percent of median after tax household income and 63.78 percent of average after tax household income. This is where one would expect a living wage to sit, close to half way between the poverty line (60 percent of median after tax household income) and the median. In order to avoid creating a sense of 'false precision' when setting the final LW benchmark, the hourly rate of \$18.41 was expressed with one rather than two decimal places (i.e. 18.4) and thus rounded down a cent to \$18.40.

Two qualifications

This benchmark has been set with two qualifications. Firstly, regional variations in rent complicate matters considerably with Auckland having far higher rents than the rest of the country. A national figure for the LW is required, so the differences in Auckland would seem to have to be made up through increases in Accommodation Supplement entitlements. The evidence presented in the Report provides a strong case for that.

Secondly, the calculation of the hourly rate necessary to produce that level of disposable income is based on existing tax rates and income support entitlements such as Working for Families tax credits, Childcare support and the Accommodation Supplement. If any of these changed, the necessary hourly rate would change as well – either up or down. Clearly, then, the State already plays a significant role in mediating between market pay and disposable income through various transfers. It could be encouraged to extend this role by providing more of the conditions necessary to achieve a living wage.

Introduction

The campaign to promote a Living Wage for workers in New Zealand has been carried out on a number of fronts covering the fields of political advocacy and action, public education, and income research. This report discusses the income research carried out by the Family Centre Social Policy Research (FCSPRU) to provide an empirical basis for determining the level of a living wage for New Zealand.

Developing this empirical basis for the Living Wage required considering the question from two ends: (1) the output end, or the amount of disposable income a living wage should provide and (2) the input end, or the market wage necessary to provide that disposable income, taking into account the effects of income tax, Working for Families tax credits, and financial support provided by the state through childcare support and the accommodation supplement.

The disposable income question has been addressed using two sources of information: (1) Information about household expenditure available from secondary data sources such as the Statistics New Zealand Household Economic Survey, the annual food cost survey carried out by the University of Otago Department of Human Nutrition and rent levels from the Rent Bond database published by the Ministry of Business Innovation and Employment; and (2) Five focus groups carried out with low to middle income householders in Wellington and Auckland.

The market wage question has been addressed by calculating the effects of income tax, tax credits, childcare support and the accommodation supplement on the disposable income produced by a given level of gross income. These calculations and their results are contained in spreadsheets showing the correspondence between gross income and disposable income for a range of values. The procedures used to carry out these calculations are detailed in Section 2 and Appendix 1 to this report.

At an early stage in this work it was decided that the income research would focus on the requirements of a target household of two adults with two dependent children. There were two grounds for this decision based, respectively, on the need for simplicity and clarity, and on demographic considerations.

The two adult, two children household income and consumption unit has been adopted because from a demographic perspective it is the minimum average sized “family” required to ensure population replacement, and if there is to be a minimum Living Wage, it should be sufficient to support such a unit, at the very least.

Another factor that has been considered is whether the target household’s income derives from one or two income earners. For the purposes of this report the household is assumed to have two income earners, one working full time and the other half time. There are good grounds for assuming two incomes because the Statistics New Zealand Household Labour Force Survey (HLFS) results for June 2012 show that in 68.5 percent of households with two adults and two dependent children, both adults were income earners, 25.8 percent had only one income

earner, and 5.7 percent had none.² This shows that single income households are a minority in this category and supports selection of the two income household as the target for this project.

This leads on to the question of whether the Living Wage is to be defined in terms of household income, or, in the case of our target household, the income of the full time earner. A living market wage defined in terms of total household income would be difficult to promote, let alone implement. People live in households but are paid in the market as individuals regardless of their household obligations. A living wage really has to be an individual market wage. Thus the position adopted in this report is that the Living Wage be defined by the full time market wage of one of the household's earners that is, in conjunction with the other half time wage, sufficient to provide the level of disposable income to meet the household's reasonable needs.

This report contains two sections and two appendices discussing details of the methodologies used.

Section one discusses the output end of the question by considering the information obtained from the focus groups and the analysis of secondary data sources to arrive at a level of household expenditure sufficient to enable a family of two adults and two dependent children to meet their needs in terms of adequate housing, sufficiently nutritious food, clothing, education, recreation and social participation.

Section two discusses the correspondence between the sufficient disposable income and the gross income required to generate it, assuming one and one half household income earners. The calculation of this correspondence takes into account tax rates, tax credits, and income support, as outlined above.

Appendix 1 documents the procedures underlying the calculations and the data sources and other sources of information they use. Appendix 2 contains the guidelines for the focus groups.

² Household Labour Force Survey: June 2012 quarter, Table 10
(http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/HouseholdLabourForceSurvey_HOTPJun12qtr.aspx)

1. Defining a sufficient level of disposable income

This section of the report discusses and considers the information obtained from the focus groups and the analysis of secondary data sources. This enables the identification of a level of household expenditure sufficient to enable a family of two adults and two dependent children to meet their needs in terms of adequate housing, sufficiently nutritious food, clothing, education, and social participation.

Focus groups and Secondary sources

Five focus groups were held, three in the Wellington area and two in Auckland, with an average of 8 members in each. The group discussions followed a procedure adapted from the one used for many years for the budget setting focus groups carried out by the FCSPRU as part of the New Zealand Poverty Measurement Project. Those focus groups worked through a list of 15 household expenditure items that were also covered by the Household Economic Survey. A further item was added known as Exceptional emergency, to provide an estimate of what low income householders considered necessary to put aside each week to cover unexpected costs, such as medical costs or a need to travel to a funeral or tangihanga, for example, that could potentially destabilise the household if there was no money to cover them.

The Living Wage focus groups differed in two ways from the poverty measurement ones: some assumptions differed, and there were additional expenditure items to consider. The assumptions differed because the living wage focus groups were established to estimate levels of household expenditure that were sufficient to maintain a household of two adults and two children at a higher level of living standards than the very basic level associated with a poverty line. There were three new expenditure items: internet, holiday, and saving. These were added because they were all considered to be associated with essential aspects of life in contemporary New Zealand and should therefore be supported by a living wage. The guidelines for the focus groups are reproduced in Appendix 2

In order to avoid the groups feeling limited in the estimates they could arrive at, they were encouraged to be realistic while at the same time being aspirational, and they often had to consider estimates for things they did not necessarily spend money on themselves, such as holidays and saving. Estimates also often reflected local conditions and the particular experiences of the group members. The raw results of the focus groups are presented in Table 1, with averages in the right hand column.

The focus groups presented a challenge that was not faced by the poverty measurement focus groups on which they were based because they were less constrained. For the poverty measurement groups, the emphasis was on identifying a bare minimum adequate level of expenditure, whereas the living wage focus groups were more open ended. It was important that the facilitator did not place arbitrary limits on the estimates that focus group members agreed on, but facilitated an open discussion and environment in which limits were achieved by the group. As will be seen, the groups produced estimates that are high in relation to what might in the end be agreed as a defensible and achievable level for the Living Wage. Despite this, the estimates should not be regarded as extravagant in the greater scheme of

things but rather as representing the valid aspirations of low and middle income New Zealanders.

Overall, the focus groups produced a weekly expenditure estimate of \$1,881, which is very close to the average weekly expenditure reported for similar items by two adult two child households in deciles nine to ten of household income in the Household Economic Survey. These were much higher than the researchers expected probably reflecting difficulties participants had in estimating the less essential non-regularly billed items and a view that a living wage is more comfortable than it can currently afford to be in the New Zealand economic climate. As it is uncertain whether a minimum Living Wage could be set at an expenditure level aligning with that of those in the top tenth of incomes, the estimates produced by the focus groups require further examination with reference to other expenditure and cost estimates provided by the University of Otago Food Costs Survey, the Ministry of Business, Innovation and Employment (MBIE) Tenancy Bond database, and the Statistics NZ Household Economic Survey (HES). (Adjusted estimates are shown in Table 2.)

Looking first at food costs, the average estimate of \$313 is beyond the range suggested by the University of Otago estimated basic food costs shown in Table 10, the mean of which is \$226 per week for a household of two adults and two children. The housing cost estimates for a three bedroom house show a clear a difference between Wellington and Auckland. The average focus group estimate of \$378 is higher than the national average lower quartile rent of \$275 for a three bedroom house reported by the Tenancy Bond database and shown in Table 11.

Table 1

BUDGET ITEM	Hutt Valley	Porirua	Newtown	Mangere	Kingsland	Average
Food	260	400	330	300	275	313
Household operations	30	90	50	105	65	68
Housing	350	290	450	400	400	378
Power/Heating	100	100	100	160	45	101
Phone & internet	65	43	50	60	30	50
Transport	180	250	140	180	129	176
Activities/Recreation	60	250	50	100	60	104
Holiday	10	90	60	20	39	44
Insurances	33	40	15	9		24
Life insurance/Super	37	20	45	80	40	44
Saving	160	250	60	50	15	107
Exceptional Emergency	60	100	20	50	50	56
Appliances	20	30	15	30	33	26
Furnishings	15	40	15	40	6	23
Medical	20	35	20	5	7	17
Clothing/Shoes	60	115	50	110	60	79
Childcare	350	300	190	50	250	228
Education	21	60	60	30		43
TOTAL	1831	2503	1720	1779	1504	1881

The estimate for saving proved difficult for the groups and produced considerable variation. There were two broad views about the subject, one proposing something

like ten percent of income as a desirable savings target, and the other linked it to KiwiSaver. The average of \$104 per week might be unrealistically high for a basic living wage, and it is probably best to settle on a figure based on an agreed percentage of disposable income.³

Following the focus groups it was decided to deal with saving by limiting it to a two percent KiwiSaver deduction from gross income. This is allowed for in the calculation spread sheet(s) and is not included as an expenditure item in the later calculations.

In the focus groups, childcare costs were estimated on the basis of up to 50 hours per week, for which hourly fees of around \$7.00 are common. They did not take into account the first 20 hours free subsidy which is available to 3 and 4 year olds. A revised figure for the target household, in which one of the adults works half time and one child requires care for 10 hours per week in addition to the 20 hours free childcare if they are eligible, could reduce the childcare figure considerably. We assume here that the 20 hours free childcare could be taken during the greater bulk of the parent in part-time employment's hours of work and any additional childcare needs covered by 10 hours of paid but subsidised day-care. As hourly rates for childcare are subsidised at \$3.91 for incomes below \$62,400, the \$7 an hour could be reduced to \$3.09. 10 hours at those rates would come to \$30.90 (rounded to \$31).

Table 2

Focus Group Budget Item	Average	Alternative estimates
Food	313	226
Household operations	68	68
Housing	378	275
Power/Heating	101	101
Phone & internet	50	50
Transport	176	176
Activities/Recreation	104	104
Holiday	44	44
Insurances	24	24
Life insurance/Super	44	44
Saving	107	
Exceptional Emergency	56	56
Appliances	26	26
Furnishings	23	23
Medical	17	17
Clothing/Shoes	79	79
Childcare	228	31
Education	43	43
TOTAL	1,881	1,387

When the alternative food rent and childcare figures are substituted in Table 2, the total estimated expenditure falls to \$1,387, placing it within the expenditure levels

³ Saving was not itemised in the Household Economic Survey data we purchased.

reported by HES households in income deciles eight to nine, which is still on the high side for our purposes.

The next step is to look at other focus group estimates in relation to Household Economic Survey figures. This has been done with reference firstly to the overall average HES results and secondly to the averages of households in income deciles one to five, which should be a useful guide to the level of expenditure that might accord with a living wage.

To facilitate this comparison the 18 expenditure items used for the focus groups have been collapsed to coincide with those used by the Household Economic Survey (see Figure 4). The resulting correspondence between the focus group and HES categories is shown in Figure 1, and a range of alternative focus group and HES averages for these revised categories are shown in Table 3.

Figure 1

Focus group items	HES items
Food	Food
Clothing/Shoes	Clothing and footwear
Housing	Actual rentals for housing
Power/Heating	Household energy
Household operations + Appliances + furnishings	Household contents and services
Medical	Health
Transport	Transport
Phone + Internet	Communication
Activities/Recreation + holiday	Recreation and culture ⁴
Education	Education
Insurances + life insurance	Miscellaneous goods and services
Saving + Exceptional emergency	Other expenditure
Childcare	

The results presented in Table 3 are an attempt to moderate the focus group estimates and the HES averages. Column 2 reports the HES overall averages and Column 3 the focus group averages. Column 4 reports focus group averages revised by the substitution of the alternative food and rent estimates and a reduced childcare cost of \$31 for 10 hours per week, as discussed earlier. Column 5 reports the HES averages for income deciles one to five (incomes up to, but less than 50 percent of New Zealand incomes) and includes the alternative food, rent and childcare estimates. The average of the lowest five deciles was chosen as it provides a larger sample base than one decile alone, and the mean of this lower half of the income distribution is a more likely location for a living wage level than the average of all New Zealand incomes.

Saving estimates are only partially included as costs because they are based on the decision, noted earlier, to deal with saving mainly by limiting it to a two percent KiwiSaver deduction from gross income that is allowed for in the calculation spreadsheet(s) and not including it as an expenditure item. There is some provision for additional saving as explained below.

⁴ The HES category for alcohol and drugs has been included here.

The bottom four rows of Table 3 display, respectively: weekly expenditure; annual expenditure; the total gross household income required to produce the disposable income necessary to meet that expenditure taking into account tax, tax credits, and income support, where income is produced by 1.5 wages; and the hourly pay rate for the full time income earner in the household (which is the same as the rate for the half time worker in the calculations).

The procedures we have developed to identify the gross household income necessary to generate a given level of disposable income are explained in the next section of this report and further details are provided in Appendix 1

Table 3

Expenditure categories from HES plus childcare	HES Average	FG average	Revised FG average	Average of HES deciles 1- 5
Food	256	313	226	226
Clothing and footwear	34	79	79	18
Actual rentals for housing	90	378	275	275
Household energy	58	101	101	46
Household contents and services	64	117	117	33
Health	29	17	17	14
Transport	177	176	76	121
Communication	34	50	50	29
Recreation and culture	162	148	148	78
Education	32	43	43	37
Miscellaneous goods and services	125	68	68	64
Other expenditure	183	163	163	66 ⁵
Childcare		228	140	31
Weekly	1,245	1,880 ⁶	1,503	1038
Annually	64,722	97,760	78,156	53,976
Total Gross from 1.5 incomes	73,800	124,456	96,866	57,432
Hourly rate for fulltime worker	23.65	38.89	31.05	18.41

The estimates presented in Table 3 represent a range of possible expenditure levels to be met by a living wage. The challenge is to identify a level, or levels, that are both adequate and defensible. The figures contained in column 5 of Table 3 seem the most promising and defensible of any of those so far presented. The disposable income of \$53,976 is equal to 76.78 percent of the median disposable income and 63.78 percent of the mean disposable income for households with two adults and two children reported by the MSD for 2011, based on the 2011 HES.^{7 8}

⁵ This figure is reduced from the original HES figure of \$96 which is mostly comprised of mortgage interest, and does not apply to our target families. Instead, the \$66 is comprised of the estimated \$56 for Exceptional emergencies identified by the focus groups and an allowance of \$10 for non-mortgage interest payments. Other saving in addition to KiwiSaver is also allowed for here.

⁶ This figure differs by \$1 from the corresponding totals in Table 1 and Table 2 due to rounding.

⁷ Perry, B. (2012) *Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2011*. Wellington: Ministry of Social Development.

⁸ The 2011 HES median equivalised disposable before housing cost income for two adult and two child households was \$70,300 and the mean was \$84,630 (see Tables B1 and B2 in Perry, 2012).

The revised weekly food estimate above (\$226) was based on an average of a number of different combinations of two adult and two child households (see Table 10).⁹

The housing cost estimate used so far has been based on a national average which does not reflect the greater impact of housing costs in Auckland on disposable income. Consequently a further housing estimate has been added, based on the average of lower quartile market rents for the areas of Auckland City that are listed in the Tenancy Bond Database, for the period 1 June 2012 to 30 November 2012 (see Table 12).

Table 4

Expenditure categories from HES plus childcare	HES Decile 1-5 with National and Auckland Rents	
	National	Auckland
Food	226	226
Clothing and footwear	18	18
Actual rentals for housing	275	438
Household energy	46	46
Household contents and services	33	33
Health	14	14
Transport	121	121
Communication	29	29
Recreation and culture	78	78
Education	37	37
Miscellaneous goods and services	64	64
Other expenditure ¹⁰	66	66
Childcare	31	70
Weekly	1038	1,240
Annually	53,976	64,480
Total Gross from 1.5 incomes	57,432	75,213
Hourly rate for fulltime worker	18.41	24.11

These contrasting estimates based on national and Auckland rents are shown in columns 2 and 3. They demonstrate a higher hourly rate of \$24.11 for Auckland. It will be noted that the childcare costs in column 3 have increased from the original \$31 to the full \$70. This increase is due to the higher gross income which has reduced the hourly subsidy from \$3.91 to zero.

The estimates in Table 3 and Table 4 have considerable evidence to support them with the expenditure figures for Household Expenditure Survey income deciles 1-5, the Otago University Food Cost Survey estimates, the Ministry of Business, Innovation and Employment's average lower quartile national and Auckland rent figures and accurate childcare costs. These estimates are certainly not extravagant

⁹ The food cost estimate would be higher if the children were older than the average assumes them to be. For example, if one child was an adolescent (using the average between an adolescent girl and an adolescent boy) and the other a ten year old (using the Otago University Food Cost Survey, see Table 10), the food cost estimate would be \$261 per week and result in an hourly rate of \$19.10.

¹⁰ See Footnote 5.

or particularly generous as the foregoing text has illustrated. The lower national figure of \$18.41 would produce a disposable household income of \$53,976 which is equal to 76.78 percent of the median disposable income and 63.78 percent of the mean disposable income for households with two adults and two children respectively. This estimate (\$18.41) is \$4.91 above the current minimum wage, or \$196.40 per week.

The result of this investigation has led to a LW figure of \$18.41. However, in order to avoid creating a sense of 'false precision' when setting the final LW benchmark, the broader research group decided to apply only one decimal place (rather than two) leading to the figure of 18.4. Thus the hourly rate of \$18.41 was rounded down a cent to \$18.40 for the final LW benchmark.

Regional variations in rent do complicate matters, as the figures for Auckland clearly illustrate. On the basis of the rent estimates included in column 3 of Table 4, a considerably higher hourly rate of \$24.11 is indicated for Auckland households. However, a national figure is required for the living wage, so it would seem the differences in Auckland would have to be made up through increases in Accommodation Supplement entitlements. The evidence presented here provides a strong case for that.

It should be emphasised that the calculation of the hourly rate necessary to produce that level of disposable income is based on existing tax rates and income support entitlements such as Working for Families tax credits, childcare support and the Accommodation Supplement. If any of these changed, the necessary hourly rate would change as well – either up or down.

Clearly, then, the state already plays a significant role in mediating between market pay and disposable income through various transfers. It could be encouraged to extend this role by providing more of the conditions necessary to achieve a living wage.

It is significant that the gross incomes necessary to support the recommended levels of expenditure are too high for Accommodation Supplement eligibility. An appropriate loosening of eligibility criteria for the Accommodation Supplement is an obvious avenue for state participation.

2. Calculations

The calculations carried out to determine the correspondence between gross and disposable household income are based on information about income tax rates (including ACC levies), Working for Families Tax Credits, childcare subsidies, and the Accommodation Supplement. A KiwiSaver deduction of two percent from gross income is also included in the calculations to allow saving to be treated as a deduction from gross pay rather than an expenditure from net pay.

A straightforward and transparent spreadsheet approach has been used and is described below. There are two primary spreadsheets, one containing national calculations using a national average rent level of \$275, and the other containing Auckland specific calculations using an Auckland average rent level of \$438. In practice, however, the two spreadsheets produce identical results for the gross household incomes we are dealing with because they are too high to qualify for accommodation supplement assistance.

A third spreadsheet is included containing the same calculations (with a rent of \$275 per week) but without the KiwiSaver deduction.

The spreadsheets move from a range of gross income levels in the first column across to a range of corresponding disposable income levels. The spreadsheet column headings are listed below with accompanying explanations of their content. All values are annual.

Spreadsheet columns or fields

1. Annual gross

Contains a range of hypothetical gross household income levels.

2. KiwiSaver 2% deduction

Contains the values for a two percent of gross income contribution to KiwiSaver.

3. FTC

Contains the Family Tax Credit eligibility levels for the household income levels listed in column 1 for households with two dependent children. See Table 14.

4. IWTC

Contains the In Work Tax Credit eligibility levels for the household income levels listed in column 1 for households with two dependent children. See Table 14.

5. Total tax credits

Contains the total value of the tax credits from columns 3 and 4.

6. Full time gross

Contains values equal to two thirds of total annual gross household income in column 1, which is the income contributed by the household's full time earner.

7. Half time gross

Contains values equal to one third of total annual gross household income in column 1, which is the income contributed by the household's half time earner.

8. Full time net

Contains the net income values for the full time earner calculated using the formulas documented in Appendix 1, Tax calculation formulas.

9. Half time net

Contains the net income values for the half time earner calculated using the formulas documented in Appendix 1, Tax calculation formulas.

10. Total net excluding tax credits

Contains the total net income not including tax credits, in other words the sum of values recorded in columns 9 and 10, minus the KiwiSaver deduction in column 2.

11. Total net including tax credits

Contains the total net income including tax credits, in other words the sum values recorded in columns 5, 8 and 9, minus the KiwiSaver deduction in column 2.

12. Full time hourly rate

Contains the annual gross income of the fulltime earner expressed as an hourly rate for a 40 hour week and 52 week year. (As noted elsewhere this hourly rate is the same for the half time worker.)

13. Rent at \$275/week / Rent at \$438/week

Contains the annual value of a weekly rent of \$275 (for the national calculation) and \$438 for the Auckland calculation. (The figure in this column can be changed to represent different rent levels.)

14. Accommodation Supplement area 1

Values in this column are the results of the Accommodation Supplement eligibility calculations documented in Appendix 1, Work and Income Accommodation Supplement information for Area 1.

15. Accommodation Supplement area 2

Values in this column are the results of the Accommodation Supplement eligibility calculations documented in Appendix 1, Work and Income Accommodation Supplement information for Area 2.

16. Accommodation Supplement area 3

Values in this column are the results of the Accommodation Supplement eligibility calculations documented in Appendix 1, Work and Income Accommodation Supplement information for Area 3.

17. Total net including tax credits and Accommodation Supplement 1

Values in this column are the total disposable income produced by the annual gross income in column 1 after accounting for income tax, tax credits, and accommodation support for Area 1, if any.

18. Total net including tax credits and Accommodation Supplement 2

Values in this column are the total disposable income produced by the annual gross income in column 1 after accounting for income tax, tax credits, and accommodation support for Area 2, if any.

19. Total net including tax credits and Accommodation Supplement 3

Values in this column are the total disposable income produced by the annual gross income in column 1 after accounting for income tax, tax credits, and accommodation support for Area 3, if any.

Using the spreadsheets

In their present forms the spreadsheets are designed to read from right to left when finding the level of gross income required to generate a given level of disposable income. The important columns for this purpose are 17, 18 or 19 (alternative net amounts depending on rental location), 1 (Gross total household income) and 12 (hourly pay rate for the full time earner). The calculations originate with pre-set gross amounts which follow through to their disposable values, and it is not presently possible to work in the reverse direction from a pre-set disposable value. In order to determine the gross value of a given disposable amount which does not have an exact equivalent in column 17, 18 or 19 it is possible to approximate the gross value by splitting the difference between the two values that the disposable amount sits between. It is also possible to insert additional gross values in the spreadsheet to produce a disposable amount that more closely approximates the desired level.

In its present form the spreadsheet meets the needs of this work, but can provide the basis for the future development of a model that works in the opposite direction, from disposable to gross.

Appendix 1 Details: Databases, procedures and results

Introduction

The methodology developed for this investigation is in two broad parts.

Part one focuses on identifying the minimum level of net income that is required to fully meet the necessary living costs of a family of a specified size and also meet the costs of their reasonable participation in the social, cultural and recreational life of the wider society. Part two focuses on identifying the level of gross earned income that would provide the minimum level of net income identified in Part one, taking into account the impacts of PAYE deductions, Family Tax Credits, Childcare Assistance, and Accommodation Supplement payments. These stages of the work are discussed in more detail next.

Part one

The first component of the work involves the use and analysis of data from secondary sources and data from focus groups with low to medium income householders to identify the weekly expenditure levels necessary to fully meet necessary living costs and the costs of reasonable participation in the social, cultural and recreational life of the wider society, as indicated above.

Secondary data

The following data sources have been used for the estimation of a minimum level of net income:

1. The Household Economic Survey (HES).
2. The Estimated Food Costs information provided annually by the University of Otago Department of Human Nutrition.
3. The Market rents information available from the Tenancy Bond Database maintained by the Ministry of Business, Innovation and Employment.
4. The Statistics New Zealand Household Labour Force Survey for information about the workforce composition of households.

Focus groups

Five focus groups were held with low to medium income householders. Three were held in the Wellington area and two in Auckland. The guidelines for their conduct are contained in Appendix 2

Part two

The second stage of the work is to incorporate information about levels of PAYE deductions, Family Tax Credits, and Accommodation Supplement payments into the calculations in order to work back from the net amount arrived at in Part one to a before tax wage that an employer would pay as a living wage. This market wage

would, in conjunction with tax credits and Accommodation Supplement income, produce a net income equal to that specified in Part one. The following information sources have been used for the estimation the net impacts on disposable income of tax deductions, tax credits and accommodation cost support:

1. Inland Revenue Department eligibility criteria for Working for Families Tax Credits.
2. Inland Revenue Department income tax rates information.
3. Work and Income Accommodation Supplement information.
4. Childcare Assistance.

Target income unit

The analysis and use of data focuses on households comprising two adults with two dependent children. The reason for this is that, from a demographic perspective, this is the minimum average sized “family” required to ensure population replacement, and if there is to be a minimum Living Wage, it should be sufficient to support such a unit, at the very least.

While it is possible, in principle, to define different wage levels for different numbers of dependents, doing so would introduce a degree of complexity that would be unhelpful for a campaign to support the adoption of a Living Wage. Such a campaign needs a simple message, and will be best served by being based on one particular income receiving unit.¹¹

So far the potential living wage level has been calculated in several forms according to whether a household is assumed to have one income earner or two. At June 2012, 68.5 percent of households with two adults and two dependent children, both adults were income earners, 25.8 percent had only one income earner, and 5.7 percent had none.¹² As a significant majority of the target income units have two income earners, the living wage level has been calculated for a target income unit household in which one adult is employed full time and one employed half time.

¹¹ Meeting the minimum living income needs of families with more than two children could be considered separately from, or in parallel with, the four person (two adult and two children) unit.

¹² Household Labour Force Survey: June 2012 quarter, Table 10
(http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/HouseholdLabourForceSurvey_HOTPJun12qtr.aspx)

Description of the data sources

Household Economic Survey.

The Household Economic Survey (HES) sample originally contained about 4,700 private households from rural and urban areas throughout New Zealand. The sample was boosted by 380 households in the last quarter in the field with the final sample containing about 5,100 private households. The sample is statistically representative and information is obtained from each household member. The survey obtains and provides information on the range of things households of different compositions and income levels spend their incomes on, and is, therefore, one potential source of information upon which to base estimates of the levels of expenditure required to fully meet necessary living costs. Although HES doesn't really help, directly, with identifying minimum or adequate levels of expenditure for all items, it does provide useful information about the actual expenditure levels of households in the lower income deciles.

Information about the sub-sample size of two adult and two child households in the HES was requested from Statistics NZ and we were informed that the number was 302, or about 30 households per income decile.

Some HES data tables are freely available through the Statistics New Zealand Table Builder including ones providing household spending on individual items by household type and, separately by income decile. For the purposes of this work, a table combining household type and income decile was required and this was purchased from Statistics New Zealand as a special data run.

The HES output provides average weekly expenditure for the groups of household expenditure items shown in Figure 2:

Figure 2. HES Expenditure groups

01 Food
02 Alcoholic beverages, tobacco and illicit drugs
03 Clothing and footwear
04 Housing and household utilities
05 Household contents and services
06 Health
07 Transport
08 Communication
09 Recreation and culture
10 Education
11 Miscellaneous goods and services
13 Other expenditure
Total net expenditure

Expenditure is also recorded at a more detailed level as categories within those groups, as follows in Figure 3:

Figure 3. HES Expenditure categories

01.1 Fruit and vegetables
01.2 Meat, poultry and fish
01.3 Grocery food
01.4 Non-alcoholic beverages
01.5 Restaurant meals and ready-to-eat food
02.1 Alcoholic beverages
02.2 Cigarettes and tobacco
03.1 Clothing
03.2 Footwear
04.1 Actual rentals for housing
04.2 Home ownership
04.3 Property maintenance
04.4 Property rates and related services
04.5 Household energy
05.1 Furniture, furnishings and floor coverings
05.2 Household textiles
05.3 Household appliances
05.4 Glassware, tableware and household utensils
05.6 Other household supplies and services
06.1 Medical products, appliances and equipment
06.2 Out-patient services
07.1 Purchase of vehicles
07.2 Private transport supplies and services
07.3 Passenger transport services
08.3 Telecommunication services
09.1 Audio-visual and computing equipment
09.3 Other recreational equipment and supplies
09.4 Recreational and cultural services
09.5 Newspapers, books and stationery
09.6 Accommodation services
09.8 Miscellaneous domestic holiday costs
10 Education
11.1 Personal care
11.3 Personal effects nec
11.4 Insurance
11.5 Credit services
11.6 Other miscellaneous services
13.1 Interest payments
13.2 Contributions to savings
13.5 Expenditure incurred whilst overseas
Total net expenditure

This analysis uses expenditure data for households comprised of two adults and two dependent children.

Reported Housing and Household Utilities expenditures (04.1 to 04.5, in Figure 3) includes expenditure on the mutually exclusive categories of 04.1 Actual rentals for housing and 04.2 Home ownership. Rental cost information is used rather than home ownership costs because renting is the most likely housing tenure to be

available to those reliant on a Living Wage. Consequently, the expenditure estimates used in this analysis do not include any related to home ownership: 04.2 Home ownership; 04.3 Property maintenance; and 04.4 Property rates and related services. The housing cost categories included are 04.5 Household energy and 04.1 Actual rentals for housing. The expenditure groups and categories used in the analysis are listed in Figure 4.

Figure 4. HES Expenditure groups and categories used in this analysis

01 Food
02 Alcoholic beverages, tobacco and illicit drugs
03 Clothing and footwear
04.1 Actual rentals for housing
04.5 Household energy
05 Household contents and services
06 Health
07 Transport
08 Communication
09 Recreation and culture
10 Education
11 Miscellaneous goods and services
13 Other expenditure
Total net expenditure

The data purchased for this work are from the 2010 HES survey and have been inflation adjusted to estimated 2012 values using values calculated from figures reported in the Consumer Price Index: June 2012 quarter – supplementary tables. The calculated values are shown in Table 5.¹³

¹³ Statistics New Zealand (2012) *Consumers Price Index*
http://www.stats.govt.nz/browse_for_stats/economic_indicators/CPI_inflation/ConsumersPriceIndex_HOTPJun12qtr.aspx

Table 5

Expenditure group	Inflation percentage 2010 to 2012
Food group	6.6
Alcoholic beverages and tobacco group	13.7
Clothing and footwear group	-1.6
Actual rentals for housing	4.1
Household energy	11.0
Household contents and services group	0.2
Health group	8.8
Transport group	12.0
Communication group	-10.8
Recreation and culture group	-1.4
Education group	10.5
Miscellaneous goods and services group	6.9
All groups	6.4

Table 6

Expenditure Group and Subgroup Couple with two dependent children 2012 inflation adjusted	Decile 1 Under \$20,000	Decile 2 \$20,000- \$28,899	Decile 3 \$28,900- \$39,699	Decile 4 \$39,700- \$51,399	Decile 5 \$51,400- \$63,199	Total all incomes
01 Food	\$149.31	\$160.39	\$217.51	\$213.89	\$193.11	\$255.99
02 Alcohol, tobacco and illicit drugs	---- ¹⁴	\$20.25	----	\$11.94	\$19.79	\$32.98
03 Clothing and footwear	\$20.86	\$13.48	----	\$14.37	\$21.75	\$33.75
04.1 Actual rentals for housing	----	\$162.46	\$199.74	\$182.77	\$114.35	\$90.50
04.5 Household energy	\$67.63	\$39.98	\$40.09	\$39.87	\$42.20	\$58.08
05 Household contents and services	\$46.99	\$31.66	\$15.83	\$38.17	\$31.86	\$64.02
06 Health	\$8.92	\$15.46	\$26.56	\$8.49	\$13.06	\$29.17
07 Transport	\$98.11	\$107.86	\$124.32	\$184.35	\$89.38	\$176.85
08 Communication	\$41.85	\$31.41	\$18.29	\$22.84	\$32.84	\$34.00
09 Recreation and culture	\$66.09	\$37.19	\$57.61	\$79.01	\$63.13	\$129.02
10 Education	\$76.27	----	----	\$22.22	\$12.05	\$32.39
11 Miscellaneous goods and services	\$67.25	\$30.58	\$63.08	\$88.74	\$72.38	\$124.88
13 Other expenditure	\$114.54	\$150.38	----	\$45.41	\$75.09	\$183.03
Weekly	\$757.83	\$801.09	\$763.03	\$952.07	\$780.97	\$1,244.66
Annually	\$39,407	\$41,656	\$39,678	\$49,508	\$40,611	\$64,722

Table 6 shows the inflation adjusted average weekly expenditures on the selected expenditure items from the 2010 HES. The expenditures shown are for households with two adults and two dependent children with household incomes in deciles 1 to 5.

¹⁴ Data suppressed by Statistics New Zealand due to uncertainty about reliability.

Table 7

Expenditure Group and Subgroup Couple with two dependent children 2012 inflation adjusted with alternative food and rental estimates	Decile 1 Under \$20,000	Decile 2 \$20,000- \$28,899	Decile 3 \$28,900- \$39,699	Decile 4 \$39,700- \$51,399	Decile 5 \$51,400- \$63,199	Total all incomes
Food costs Nutrition Survey basic	\$226.00	\$226.00	\$226.00	\$226.00	\$226.00	\$255.99 ¹⁵
02 Alcohol, tobacco and illicit drugs	----	\$20.25	----	\$11.94	\$19.79	\$32.98
03 Clothing and footwear	\$20.86	\$13.48	----	\$14.37	\$21.75	\$33.75
Market rents tenancy bond database	\$275.00	\$275.00	\$275.00	\$275.00	\$275.00	\$90.50 ¹⁶
04.5 Household energy	\$67.63	\$39.98	\$40.09	\$39.87	\$42.20	\$58.08
05 Household contents and services	\$46.99	\$31.66	\$15.83	\$38.17	\$31.86	\$64.02
06 Health	\$8.92	\$15.46	\$26.56	\$8.49	\$13.06	\$29.17
07 Transport	\$98.11	\$107.86	\$124.32	\$184.35	\$89.38	\$176.85
08 Communication	\$41.85	\$31.41	\$18.29	\$22.84	\$32.84	\$34.00
09 Recreation and culture	\$66.09	\$37.19	\$57.61	\$79.01	\$63.13	\$129.02
10 Education	\$76.27	----	----	\$22.22	\$12.05	\$32.39
11 Miscellaneous goods and services	\$67.25	\$30.58	\$63.08	\$88.74	\$72.38	\$124.88
13 Other expenditure	\$114.54	\$150.38	----	\$45.41	\$75.09	\$183.03
Weekly	\$1,109.51	\$979.25	\$846.78	\$1,056.41	\$974.53	\$1,244.66
Annually	\$57,694.52	\$50,921.00	\$44,032.56	\$54,933.32	\$50,675.56	\$64,722.32

Table 7 shows the same results as Table 6, except for the food cost and house rent figures which are taken from the Food Costs Nutrition Survey (basic estimate) and the Market Rents Tenancy Bond Database. The figure of \$226 for food is the mean value of the range of expenditures for two adult two children households with different combinations of children's ages estimated by the Food Costs Survey (see Table 10). The figure of \$275 for rent is the national figure for the period 1 May 2012 to 31 October 2012 for the top of the first quartile level for a three bedroom house (\$275), which is the minimum number of bedrooms for a couple and two children aged 10 or more.

¹⁵ HES figure.

¹⁶ HES figure.

Estimated Food Costs information

Food cost information is published annually by the University of Otago Department of Human Nutrition.¹⁷ Three sets of estimates are produced to represent the costs of meeting basic, moderate and liberal diets for each of the following categories:

- One man
- One woman
- One adolescent boy
- One adolescent girl
- One 10 year old child
- One 5 year old child
- One 4 year old child
- One 1 year old child

Separate regional estimates are produced for

- Auckland
- Hamilton
- Wellington
- Christchurch
- Dunedin

The differences between the three levels of diet are explained in the following extract from the Department's information package which explains how the estimates are produced.

How the estimated family food costs are calculated¹⁷

The Estimated Family Food Costs are calculated using the specified amounts of the food categories (e.g. meat, bread, eggs, fruit, etc) needed for one week (see Table 1¹⁷). These are based on the New Zealand Food and Nutrition Guidelines¹⁸ and will meet the nutritional needs of most healthy people. While the food categories are the same for men, women and children, the amounts are appropriate for each age and sex group.

The costs are calculated assuming home preparation of meals and dishes, and purchased from supermarkets. Food preparation skills are assumed to be adequate, as are the use of standard serving sizes.

The **Basic** cost category assumes that all foods will be prepared at home. It includes the most commonly consumed fruits and vegetables and the lowest priced items within each food category.

The **Moderate** cost category allows for an increase in the variety of meats, fish, fruits and vegetables and the inclusion of some convenience foods. This

¹⁷ Department of Human Nutrition University of Otago (2012) *Information Package for users of the estimated food costs 2012*, Dunedin: University of Otago.
http://nutrition.otago.ac.nz/_data/assets/file/0017/6290/Informationpackage2012.pdf

¹⁸ *Healthy Eating for Adult New Zealanders*. Public Health Commission. Wellington, New Zealand, June 1995.

category is calculated from the basic cost by adding 30% to the basic cost figure.

The **Liberal** cost category allows for the use of more convenience and imported foods, some out of season fruits and vegetables, more expensive cuts of meat and some specialty foods. This is calculated from the moderate cost by adding 20%.

Student dieticians of the Department of Human Nutrition carry out the data collection exercise in five main centres – Auckland, Hamilton, Wellington, Christchurch and Dunedin. This work is supervised and is a part of their course work.

For each food category a variety of specified foods are priced e.g. the bread category includes white and brown sandwich and toast sliced bread, multigrain bread, white bread rolls, and crumpets. For each individual food, prices are recorded at four different supermarkets in each city. The supermarkets are selected on a 'through-put' basis, (i.e. the supermarkets with the greatest volume of sales) so that a good representation is made. The same supermarkets are used each year, where possible, to ensure that the results of the survey can be compared. Shelf prices only are used (not specials or coupon prices) and the lowest priced alternative is recorded when more than one brand is available. These four prices, (one from each store), are then averaged for each food and all foods in each category are averaged to calculate a cost per gram or kilogram for that food category (i.e. meat, fish, fruit, vegetables, etc). These unit costs are then used in the calculation that estimates the food cost for a week for an adult man and woman, an adolescent boy and girl, school age children of 10 and 5 years, and preschool children of 4 and 1 years of age.¹⁷

The resulting food cost estimates for each type of person, for each of the three cost levels are shown for each of the five main centre in Table 8. National averages are shown in Table 9, and various combinations of two adults and two children, based on children's ages, are shown in Table 10 along with mean and median values. The mean national figure of \$226 has been used in this report.

Table 8

Food Cost Estimates for 2012		Basic \$	Moderate \$	Liberal \$
Auckland	Man	\$66	\$86	\$103
	Woman	\$63	\$81	\$98
	Adolescent Boy	\$84	\$109	\$131
	Adolescent Girl	\$70	\$91	\$109
	10 yr old	\$54	\$70	\$84
	5 yr old	\$37	\$47	\$57
	4 yr old	\$34	\$44	\$53
	1 yr old	\$29	\$38	\$45
Hamilton	Man	\$67	\$87	\$105
	Woman	\$63	\$82	\$98
	Adolescent Boy	\$83	\$108	\$130
	Adolescent Girl	\$69	\$90	\$108
	10 yr old	\$52	\$68	\$81
	5 yr old	\$35	\$46	\$55
	4 yr old	\$33	\$43	\$52
	1 yr old	\$28	\$36	\$43
Wellington	Man	\$68	\$88	\$105
	Woman	\$64	\$83	\$100
	Adolescent Boy	\$85	\$111	\$133
	Adolescent Girl	\$71	\$93	\$111
	10 yr old	\$57	\$74	\$88
	5 yr old	\$37	\$49	\$58
	4 yr old	\$35	\$46	\$55
	1 yr old	\$31	\$40	\$48
Christchurch	Man	\$66	\$86	\$103
	Woman	\$62	\$81	\$97
	Adolescent Boy	\$83	\$108	\$129
	Adolescent Girl	\$69	\$90	\$108
	10 yr old	\$55	\$71	\$85
	5 yr old	\$36	\$47	\$57
	4 yr old	\$34	\$45	\$53
	1 yr old	\$30	\$38	\$46
Dunedin	Man	\$67	\$87	\$104
	Woman	\$63	\$81	\$98
	Adolescent Boy	\$84	\$110	\$132
	Adolescent Girl	\$70	\$91	\$109
	10 yr old	\$55	\$72	\$86
	5 yr old	\$37	\$48	\$57
	4 yr old	\$35	\$45	\$54
	1 yr old	\$30	\$39	\$47

Table 9

Food Cost Estimates for 2012		Basic \$	Moderate \$	Liberal \$
National Average	Man	\$67	\$87	\$104
	Woman	\$63	\$82	\$98
	Adolescent Boy	\$84	\$109	\$131
	Adolescent Girl	\$70	\$91	\$109
	10 yr old	\$55	\$71	\$85
	5 yr old	\$36	\$47	\$57
	4 yr old	\$34	\$45	\$53
	1 yr old	\$30	\$38	\$46

Table 10

Household composition	2012 National Average figures		
	Basic \$	Moderate \$	Liberal \$
Two Adults + Two Adolescents	\$283	\$369	\$442
Two Adults + One 5 yr old & One 10 yr old	\$221	\$287	\$344
Two Adults + One 4 yr old & One 1 yr old	\$194	\$251	\$301
Two Adults + One Adolescent boy & One 10 yr old	\$268	\$349	\$418
Two Adults + One Adolescent girl & One 10 yr old	\$254	\$330	\$396
Two Adults + One Adolescent boy & One 5 yr old	\$250	\$325	\$390
Two Adults + One Adolescent girl & One 5 yr old	\$236	\$307	\$368
Two Adults + One 10 yr old & One 4 yr old	\$219	\$284	\$340
Two Adults + One 10 yr old & One 1 yr old	\$214	\$278	\$333
Two Adults + One 5 yr old & One 1 yr old	\$196	\$254	\$305
Two Adults + Two 10 yr olds	\$239	\$310	\$372
Two Adults + Two 5 yr olds	\$203	\$263	\$316
Two Adults + Two 4 yr olds	\$198	\$258	\$309
Two Adults + Two 1 yr olds	\$189	\$245	\$294
Mean	\$226	\$294	\$352
Median	\$221	\$287	\$344

Market rents information

This information is available from the Tenancy Bond Database maintained by the Ministry of Business, Innovation and Employment. Information is provided on a Ministry website¹⁹ at district/suburb level, regional level and national level. Table 11 shows the national averages for different types of dwelling for the period 1 June 2012 to 30 November 2012. Table 12 shows the average rental rates for different parts of Auckland City along with the overall Auckland average, mean, maximum and minimum figures.

The lower quartile figures represent the highest rent paid in the lowest quarter of the rent range.

¹⁹ <http://www.dbh.govt.nz/market-rent>

Table 11²⁰

Bed-rooms	Dwelling	Bonds Received	Average Rent	Standard Deviation	Lower Quartile	Median Rent	Upper Quartile
5+	Apartment	80	\$688	228.43	\$625	\$680	\$840
4	Apartment	159	\$533	236.1	\$390	\$490	\$650
3	Apartment	1030	\$492	213.14	\$360	\$450	\$560
2	Apartment	4157	\$413	131.06	\$330	\$400	\$480
1	Apartment	3406	\$335	91.12	\$280	\$330	\$380
2	Boarding House	7	\$290	70.47	\$255	\$300	\$350
1	Boarding House	178	\$180	44.78	\$150	\$170	\$200
5+	Flat	201	\$640	188.27	\$550	\$630	\$750
4	Flat	201	\$396	173.11	\$258	\$400	\$495
3	Flat	1136	\$345	124.65	\$260	\$340	\$405
2	Flat	8915	\$278	91.76	\$215	\$265	\$330
1	Flat	4611	\$230	86.21	\$170	\$220	\$280
5+	House	1659	\$574	235.95	\$425	\$550	\$680
4	House	8239	\$456	180.97	\$350	\$430	\$540
3	House	27161	\$351	123.34	\$275	\$335	\$400
2	House	8965	\$303	126.26	\$240	\$290	\$350
1	House	832	\$253	113.86	\$180	\$230	\$300
1	Room	2805	\$198	107.49	\$140	\$175	\$210

The three bedroom house is highlighted because this is the most appropriate minimum number of bedrooms necessary for our target household to avoid crowding. There are several measures of household crowding in use and the one most commonly used in New Zealand (by Statistics New Zealand) is the Canadian crowding measure which is one of a number of such measures that are based on comparing numbers of people living in a house with numbers of bedrooms.

Table 12

Parts of Auckland City as listed in the rent bond database	3 Bedroom Houses			
	Average Rent	Lower Quartile	Median Rent	Upper Quartile
Auckland	624	550	610	700
Franklin	342	305	342	372
Manukau	432	401	430	456
North Shore	523	465	509	554
Papakura	368	340	365	397
Rodney	426	376	415	465
Waitakere	406	372	399	432
Mean	488	438	481	524
Median	461	420	460	495
Max	736	650	730	800
Min	320	291	325	350

²⁰ <http://www.dbh.govt.nz/Utilities/marketrent/market-rent.aspx?CategoryId=258&SubCatId=6&SubCat1Id=63&SubCat2Id=71&SubCat3Id=72&ArticleId=53&Version=1.2>

Under such measures, a household is classified as crowded if it does not have enough bedrooms for its occupants based upon set criteria for the sharing of bedrooms. Measures of this type are distinguished from one another primarily by differences between their bedroom sharing criteria, but what is common among the measures is that decisions about acceptable and unacceptable bedroom sharing are based upon combinations of age, gender, and relationship status.

The Canadian crowding measure is based on the Canadian National Occupancy Standard which specifies the following:

1. there should be no more than two people per bedroom
2. parents or couples share a bedroom
3. children under five years, either of the same or of the opposite sex, may reasonably share a bedroom
4. children under 18 years of the same sex may reasonably share a bedroom
5. a child aged 5-17 years should not share a bedroom with one under five of the opposite sex
6. single adults 18 years and over and any unpaired children require a separate bedroom

It follows that children aged from five to 17 years should not share a bedroom with one of the opposite sex from the same age group – in addition to not sharing with a child of the opposite sex aged below five, as stated in specification 5, above. A search of references to the Canadian National Occupancy Standard has not yielded any more information about this. However the following passage in *NZ Housing Now* from Statistics NZ indicates that NZ official crowding statistics reflect an understanding that those aged five to 17 should not share a room with a member of the opposite sex from the same age group.

“While the British standard permits two children under 10 years to share a bedroom, irrespective of gender, in the Canadian model the equivalent age is under five. The age at which young adults should have their own room is also lower – 18 years compared with 21 in the United Kingdom.”²¹

According to these criteria, two bedrooms would be sufficient for our target household if the two children were of the same sex and no older than 17. In many cases, however, the two children will be of opposite sexes and at least one of them older than five. In view of this, it is prudent to specify three bedrooms for the purposes of this Living Wage research because this size will meet the requirements of most target households and accord equal treatment to all pairs of children, regardless of their sex. This is also consistent with another measure that has been used in New Zealand: The Equivalised Crowding Index²² which applies the concept of the adult individual's need for a separate bedroom. The formula weights each individual who is in a couple relationship as one half, as well as children aged under

²¹ Statistics New Zealand (2008) *New Zealand Now: Housing*. Wellington: Statistics New Zealand.

²² http://www.stats.govt.nz/tools_and_services/tools/TableBuilder/housing-quality-tables/crowding-occupancy-rate.aspx

10 years.²³ This gives an equivalised number of people per bedroom. Any value in excess of 1.0 represents a measure of crowding. The formula is:

- Equivalised Crowding Index = [(1/2 number of children under 10 years) + (number of couples) + (all other people aged 10 years and over)] / number of bedrooms

Using this measure, two children of either sex will need separate bedrooms if at least one of them is aged 10 years or over.

Statistics New Zealand Childcare Survey

Published results from this survey indicate that formal Early Childhood Education and care arrangement use was most common for children in two-parent families where both parents were employed with 66.4 percent of such families using them. Given this, childcare is definitely relevant to our target household. The survey results provide information about hours of care and indications of cost.

Statistics New Zealand Household Labour Force Survey

Results from this survey have been used to find the labour market status of the target household of two adults with two dependent children. This has been done to help establish an ideal composition of household income and decide whether a Living Wage as paid by an employer to an individual employee should be based on a single household income, or take account of income earned by another household member.

The HLFS shows that at June 2012, 68.5 percent of households with two adults and two dependent children, both adults were income earners, 25.8 percent had only one income earner, and 5.7 percent had none.²⁴ This shows that single income households are a minority in this category and supports selection of the two income household as the target for this project.

²³ Morrison, P. (1994) "Housing occupancy and the changing size of households and dwellings in New Zealand 1951-1991", *New Zealand Population Review* 20(1&2).

²⁴ Household Labour Force Survey: June 2012 quarter, Table 10
(http://www.stats.govt.nz/browse_for_stats/income-and-work/employment_and_unemployment/HouseholdLabourForceSurvey_HOTJun12qtr.aspx)

Inland Revenue Department income tax rates information

For the purposes of determining the contribution of income tax on calculating the level of gross income required to produce a given level of net income it is necessary to be able to calculate a net amount from a given gross amount and also to calculate a gross amount from a given net amount. The latter calculation is particularly valuable for this work which aims to define a gross living wage on the basis of a certain level of net, disposable, income.

Calculations of tax payable on gross income were based on the tax rates in effect during the current tax year 1 April 2012 to 31 March 2013 shown in Table 13. Income tax calculations are based on the PAYE rates in the third column of Table 13 which shows the total deduction after the addition of the ACC Earners' levy to the PAYE. The ACC Earners' levy is currently set at 1.7 percent and applied equally to all income levels.

Table 13. PAYE rates for the year 1 April 2012 31 March 2013

Taxable income	Income tax rates for every \$1 of taxable income (excluding ACC earners' levy)	PAYE rates for every \$1 of taxable income (including ACC earners' levy*)
up to \$14,000	10.5 cents	12.20 cents
from \$14,001 to \$48,000	17.5 cents	19.20 cents
from \$48,001 to \$70,000	30 cents	31.70 cents
\$70,001 and over	33 cents	34.70 cents

Source: Inland Revenue²⁵

In order to simplify the process of calculating net and gross values with different income values and PAYE rates four sets of conversion formulas have been derived, and these are defined in the following section.

Tax calculation formulas

Four sets of formulas were derived, one for each of the four income brackets listed in Table 13. In the formulas, gross and net incomes are indicated, respectively, by the letters G and N. Formulas are shown for converting gross income to net and for converting net to gross. The formulas (shown in ***bold italic*** type) were derived as shown below.²⁶ In the first line of the working for deriving each formula, each sub-bracket contains the dollar amount covered by one tax bracket shown in Table 13, column 1 and the associated tax plus ACC rate shown in column 3 of Table 13. A further explanation of the content of the first line of each set of equations is provided at the end, using the first set as an example.

²⁵ <http://www.ird.govt.nz/how-to/taxrates-codes/itaxsalaryandwage-incometaxrates.html>

²⁶ Standard algebraic bracket expansion operations are used.

It must be emphasised that each formula is only valid for the income range to which it applies. In other words, the value of G in any particular case must be less than the value of the lowest income covered by the next highest tax bracket – except that there is no upper limit for income covered by the highest tax rate (i.e., for incomes over \$70,001).

1. If Gross income is \$70,001 and above

$$\begin{aligned} N &= G - [(G-70000)*0.347 + (22000*0.317) + (34000*0.192) + (14000*0.122)] \\ &= G - [(G - 70000)*0.347 + 15210] \\ &= G - [(G - 70000)*0.347] - 15210 \\ &= G - 0.347G + 24290 - 15210 \end{aligned}$$

So

$$N = 0.653G + 9080$$

And (if Net income is in the range: \$54,790.65²⁷ and above)

$$G = (N - 9080) / 0.653$$

2. If Gross income is in the range: \$48,001-\$70,000

$$\begin{aligned} N &= G - [(G - 48000)*0.317 + (34000*0.192) + (14000*0.122)] \\ &= G - [(G-48000)*0.317 + 8236] \\ &= G - [(G - 48000)*0.317] - 8236 \\ &= G - 0.317G + 15216 - 8236 \end{aligned}$$

So

$$N = 0.683G + 6980$$

And (if Net income is in the range: \$39,764.68 - \$54,790.00)

$$G = (N - 6980) / 0.683$$

3. If Gross income is in the range: \$14,001-\$48,000

$$\begin{aligned} N &= G - [(G - 14000)*0.192 + (14000*0.122)] \\ &= G - [(G - 14000)*0.192 + 1708] \\ &= G - [(G - 14000)*0.192] - 1708 \\ &= G - 0.192G + 2688 - 1708 \end{aligned}$$

So

$$N = 0.808G + 980$$

And (if Net income is in the range: \$12,292.81 - \$39,764.00)

$$G = (N - 980) / 0.808$$

4. If Gross income is in the range: \$0 - \$14,000

$$N = G - (G*0.122)$$

²⁷ I.e., the net value of \$70,001 gross.

so

$$N = 0.878G$$

And (if Net income =<\$12,292.00)

$$G = N / 0.878$$

A further explanation of equation content

Using the first line of set 1, above, as an example, the term (G – 70000) represents the result of subtracting the threshold value of \$70,000 from the value of the total income received (when that income is greater than \$70,000). The resulting income over the threshold of \$70,000 is taxed at 34.7 percent, including the ACC earner's levy, which is expressed as 0.347 in the equation.

The second term, (22000*0.317) represents the tax on the \$22,000 of income between \$48,000 and \$70,000 (\$70,000 - \$48,000 = \$22,000) that is taxed at 31.7 percent (or 0.317), including the ACC earners' levy.

The third term, (34000*0.192) represents the tax on the \$34,000 of income between \$14,000 and \$48,000 (\$48,000 - \$14,000 = \$34,000) that is taxed at 19.2 percent (or 0.192), including the ACC earners' levy.

The fourth and final term, (14000*0.122) represents the tax on the first \$14,000 of income that is taxed at 12.2 percent (or 0.122), including the ACC earners' levy.

The subsequent lines in each set of equations document the steps by which the final, simplified, conversion formulae were derived.

Inland Revenue Department eligibility criteria for Working for Families Tax Credits

Table 14 Family and In Work Tax Credit eligibility for households with two dependent children.

Family Income (Before Tax)	Two Children	
	Annual \$	FTC \$
to 36,350	8164	3120
36,351 to 38,000	7800	3120
38,001 to 39,500	7488	3120
39,501 to 41,000	7176	3120
41,001 to 42,500	6864	3120
42,501 to 44,000	6500	3120
44,001 to 45,500	6188	3120
45,501 to 47,000	5876	3120
47,001 to 48,500	5564	3120
48,501 to 50,000	5252	3120
50,001 to 51,500	4940	3120
51,501 to 53,000	4628	3120
53,001 to 54,500	4316	3120
54,501 to 56,000	3952	3120
56,001 to 57,500	3640	3120
57,501 to 59,000	3328	3120
59,001 to 60,500	3016	3120
60,501 to 62,000	2704	3120
62,001 to 63,500	2392	3120
63,501 to 65,000	2080	3120
65,001 to 66,500	1716	3120
66,501 to 68,000	1404	3120
68,001 to 69,500	1092	3120
69,501 to 71,000	780	3120
71,001 to 72,500	468	3120
72,501 to 74,000	156	3120
74,001 to 75,500		2964
75,501 to 77,000		2652
77,001 to 78,500		2288
78,501 to 80,000		1976
80,001 to 81,500		1664
81,501 to 83,000		1352
83,001 to 84,500		1040
84,501 to 86,000		728
86,001 to 87,500		416
87,501 to 89,000		104

Source: Inland Revenue Department

The Working for Families scheme provides tax credits to families with dependent children to help with the costs of raising a family. Dependent children are defined as

aged 18 or under who are not in full-time employment. The Working for Family tax credits include four types of payments:

1. Family tax credit which provides ongoing support for beneficiary and working families with dependent children.
2. In-work tax credit which is available to working families only, who meet the minimum number of hours worked per week.
3. Minimum family tax credit which is paid to working families to ensure they earn a minimum annual income after tax.
4. Parental tax credit which is paid for the first eight weeks after birth to assist with the costs of a new baby.

Eligibility is determined by family income and number of children. For the purposes of this Living Wage related work only the family and in work tax credits are used. The annual income levels and associated annual family tax credits and in work tax credits are shown in Table 13. The Accommodation Supplement is not counted as income for the purposes of determining WFF eligibility.

Work and Income Accommodation Supplement information

The Accommodation Supplement is a weekly payment which helps people with their rent, board or the cost of owning a home, if their income from other sources is below a certain income threshold level and their housing cost is above a certain rent or mortgage payment cost level. The amount of Accommodation Supplement payable ranges between a specified maximum and reduces towards zero as income increases from the threshold level to a specified cut point. Income and housing cost thresholds, cut points, and maximums vary for different categories of household, and each of the four areas of New Zealand. The area based variations reflect differences in housing costs across the country, with Area 1 comprised of the most expensive housing areas, and Area 4 the least expensive and comprised of all areas not included in any of the first three.

This Living Wage related work uses the income and housing cost thresholds, cut points and maximums specified for non-beneficiary households of married, civil union or de facto couples with children, for each of the four areas (see Figure 5).

Figure 5. Accommodation Supplement income cut-out points²⁸ and entry thresholds and maximum payments²⁹ for non-beneficiary couple with children households

Married, civil union or de facto couple with children	Income threshold	Income cut-out point per week	Entry threshold for rent or board per week	Maximum rate for AS per week
Area 1	\$568.00	\$1,468.00	\$109	\$225
Area 2	\$568.00	\$1,228.00	\$109	\$165
Area 3	\$568.00	\$1,048.00	\$109	\$120
Area 4	\$568.00	\$868.00	\$109	\$75

The calculation of the level of supplement (if any) available to a household is carried out according to the following formula:

Accommodation Supplement formula (Non-beneficiaries)

Where:

- AS = Accommodation Supplement
- R = Rent
- Rt = Rent threshold (Non-beneficiary)
- Yg = Gross income
- Yt = Income threshold

AND subject to relevant threshold, cut out point and maximum values.

²⁸ http://www.workandincome.govt.nz/manuals-and-procedures/deskfile/extra_help_information/accommodation_supplement_tables/income_cut-out_points_non_beneficiary.htm

²⁹ http://www.workandincome.govt.nz/manuals-and-procedures/deskfile/extra_help_information/accommodation_supplement_tables/entry_thresholds_and_maximum_rates-119.htm

$$\mathbf{AS = [(R - Rt)*0.7] - [(Yg - Yt)*0.25]}$$

Because AS is treated as income (although it is not counted as such for WFF eligibility), it might be useful to be able to find out what level of rent would be met by a given sum of gross wage income and AS. In that case the formula and its derivation are shown below.

$$[(R - Rt)*0.7] = [(Yg - Yt)*0.25] + AS$$

$$0.7R - 0.7Rt = 0.25(Yg - Yt) + AS$$

$$0.7R = 0.25(Yg - Yt) + AS + 0.7RT$$

$$\mathbf{R = [0.25(Yg - Yt) + AS + 0.7RT] / 0.7}$$

Childcare Assistance

Childcare assistance is paid direct to providers at one of three rates of payment. The payment rate is determined by the household's income and number of children. The table below sets out the April 2012 rates.³⁰

Number of children	Gross weekly income	Childcare Subsidy (per hour, per child)	Childcare Subsidy (per week, per child for 50 hours)
1	Less than \$1,200.00	\$3.91	\$195.50
	\$1,200.00 to \$1,299.99	\$2.72	\$136.00
	\$1,300.00 to \$1,399.99	\$1.51	\$75.50
	\$1,400.00 or more	nil	nil
2	Less than \$1,380.00	\$3.91	\$195.50
	\$1,380.00 to \$1,489.99	\$2.72	\$136.00
	\$1,490.00 to \$1,599.99	\$1.51	\$75.50
	\$1,600.00 or more	nil	nil
3 or more	Less than \$1,540.00	\$3.91	\$195.50
	\$1,540.00 to \$1,669.99	\$2.72	\$136.00
	\$1,670.00 to \$1,799.99	\$1.51	\$75.50
	\$1,800.00 or more	nil	nil

³⁰ http://www.workandincome.govt.nz/manuals-and-procedures/deskfile/extra_help_information/childcare_assistance_tables/childcare_assistance_income_limits_and_rates-01.htm

Appendix 2 Focus Group Checklist and Guidelines

CHECKLIST AND GUIDELINES TO BE FOLLOWED DURING LIVING WAGE FOCUS GROUPS.

These guidelines are based on those developed for the poverty line measurement research, but differ in some of their assumptions because the living wage is intended to be above the level of the poverty line.

Household Conditions that Apply

The groups are asked to estimate the budgets within the following parameters:

- The household consists of two adults and two dependent children.
- One child is a teenager and one is aged under 10.
- Both children are attending school.
- “Income” includes the value of all money, goods and services received by the household regardless of the source.
- The financial circumstances of the household are not expected to change significantly.
- The members of the household are drawing on a common pool of resources and the earned market income of one or both of the two adults.;
- There are costs relating to generating income, such as travel to and from work, work clothes, meals, and tools.
- Work done within the household has no financial value.
- The goods and services that are available, including public services, will continue to be available at the same cost.
- The householder has access to good information on options that affect income and expenditure decisions and has a very good ability to manage a household budget.

Budget Setting Specifications and Assumptions

During the discussion, participants will often ask you to clarify something about an expenditure item, such as “What sorts of things should we include under Furniture?”, for example.

The following bullet points under each budget item provide guidance for answering these questions and clarifying what is to be included in the estimates.

If all focus groups follow these guidelines, we can be reasonably confident about comparing the results of one focus group with those of others.

Food

- Three meals a day for all members, plus snacks after school and work.
- Allow for meals for visitors at least once a week.
- Food of supermarket price and quality sufficient to maintain health and normal development
- One child is a teenager and one is aged under 10.

Additional notes about food for facilitators

- The Department of human nutrition at University of Otago carries out an annual survey of food costs, and their estimate for the most basic, nutritional weekly food budget for two adults and two children, one a teenager and one under 10 is about \$260, the moderate budget is about \$340, and the liberal budget is about \$400.
- For the food cost component, then, facilitators are asked to enter the discussion when agreement seems to be moving towards an estimate of less than \$260 or more than \$340.
- The purpose of entering the discussion should be to ask probing questions that cause the participants to reflect on what they are suggesting.
- The purpose is NOT to *direct* the group towards a particular estimate. The purpose is to guard against estimates that are *unrealistically* high or low. However, the focus group participants have the ultimate say.
- When the estimates are moving above the \$340 level, the facilitator should remind the group that they are being asked to estimate food costs when they are buying as economically as possible.
- When the estimates are moving below the \$260 level, the facilitator should remind the group that the amount they decide upon should be enough to maintain the household in good health through adequate nutrition, and also be able to provide food and hospitality for visitors at least once a week.

Household operations

- Maintain cleanliness and hygiene.
- Utensils and cutlery for all members.
- Feeding and caring for pets.

Housing

- Private sector market rents at the lower end of the market in the area for 3 bedrooms.
- We do not want State House rent levels, because most poor people cannot gain access to one.
- One child is a teenager and one is aged under 10.

Additional notes about housing for facilitators

- We provide here some objective information that facilitators can use to check that the estimates their groups develop are consistent with actual local conditions.
- To help in this we obtain information about recent private market rent levels in the areas we are going to conduct focus groups. These levels are at the top of the bottom quarter of the rent range for each area and are a good guide to the levels being paid by low income households.
- The current levels appropriate for your groups are set out below. We suggest that if estimates start to go above these figures, the facilitator should enter the discussion to ask probing questions that cause the participants to reflect on what

they are suggesting. Likewise, if they go more than \$20 below, further probing questions should also be asked.

The following tables show the average, lower quartile, median and upper quartile rent levels for Lower Hutt and Porirua.

Suburb	3 Bedroom Houses			
	Average Rent	Lower Quartile	Median Rent	Upper Quartile
Eastern Bays	\$434	\$360	\$450	\$475
Epuni/Avalon	\$382	\$350	\$390	\$410
Hutt Central/Waterloo	\$397	\$375	\$390	\$425
Moera/Waiwhetu	\$372	\$335	\$382	\$400
Petone West/Alicetown	\$427	\$382	\$410	\$480
Petone/Esplanade	\$431	\$405	\$450	\$460
Stokes Valley	\$332	\$313	\$330	\$350
Taita/Naenae	\$327	\$310	\$330	\$350
Wainuiomata	\$295	\$280	\$300	\$310
Western Hills/Haywards	\$383	\$350	\$365	\$420
Average for Lower Hutt	\$378	\$346	\$380	\$408

Suburb	3 Bedroom Houses			
	Average Rent	Lower Quartile	Median Rent	Upper Quartile
Porirua East/Waitangirua	\$295	\$260	\$290	\$340
Papakowhai/Whitby/Pauatahanui	\$386	\$350	\$380	\$406
Paramata/Mana/Pukerua Bay	\$386	\$350	\$380	\$430
Titahi Bay/Onepoto/Elsdon	\$341	\$310	\$335	\$370
Average Porirua	\$352	\$318	\$346	\$387

Suburb	3 Bedroom Houses			
	Average Rent	Lower Quartile	Median Rent	Upper Quartile
Otahuhu	\$421	\$360	\$400	\$425
Panmure	\$448	\$398	\$430	\$480
Penrose/Mt Wellington South	\$438	\$400	\$440	\$460

It would be very useful for us to know what suburbs the participants are thinking of as they develop their estimates, so facilitators should ask this and record the suburbs in the notes section of the budget recording form.

Power/Heating

- Continuous hot water supply and normal use of all appliances.
- All rooms warm when people are at home during winter.

Phone

- Landline rental plus toll calls for keeping in touch with family outside the free-calling area.

AND

- Cellphone call costs for necessary calls close to home and keeping in touch with family further away (recognising, of course, that all call costs are the same).

Internet

- Broadband connection.

Transport

- Public transport in the locality
- Travel to work
- The household has a car of its own.

Activities/Recreation

- Four household members participate in at least one activity per week in the local area.

Holiday

- Annual holiday for one week away from home area for all family members.

Insurances

- Able to replace property in event of fire, theft, damage.

Life insurance/Super

- Ability to maintain a minimum standard of living.

Saving

- Amount sufficient to build up and maintain a reserve fund to cover emergencies.
- Amount sufficient to save for retirement.

Exceptional Emergency

- Provision to meet an unforeseen cost that would destabilise the household budget, eg. accidents, legal costs.

Appliances

- The household has a basic set of appliances:
 - fridge,
 - computer
 - lawn mower
 - washing machine,
 - TV,
 - Music system
 - jug,
 - iron,
 - toaster,
 - radio,
 - vacuum cleaner,
 - drier and heaters.
- The estimated budget should cover:
 - Maintaining appliances in operational condition and
 - Replacing, where necessary, with new appliances.
- There are no other significant assets.

Furnishings

- The household has a basic set of furniture and furnishings and may have other significant assets
- All rooms are furnished, with beds, linen etc. for all members of the household, plus carpets, curtaining.
- The estimated budget should cover:
 - Maintaining the furniture and furnishings by repair and replacement to meet normal wear and tear.

Medical

- There are no significant costs associated with recurring sickness or disability
- Consult doctor or chemist when symptoms cause concern.
- Obtain medicine when prescribed.
- Regular medical checks at recommended intervals.
- Dental care.
- One child is a teenager and one is aged under 10.

Clothing/Shoes

- Adequate summer and winter sets of clothing for each member of the household, plus additional items for recreational activities.
- Sufficient shoes for informal, formal, work and recreational purposes per year per household member.
- Clothing at new clothing prices.
- One child is a teenager and one is aged under 10.

Childcare

- After school
- Daytime for pre-schoolers

Education

- To meet school “donations” and costs of activities common to all pupils.
- One child is a teenager and one is aged under 10.

Appendix 3. Living Wage Calculation Sheet

Extract from calculation spreadsheet using the National rent estimate of \$275 per week

Annual gross	Kiwi saver 2% deduction	FTC	IWTC	Total tc's	Full time gross	Half time gross	Full time net	Half time net	Total net excl tc's	Total net incl tc's	Full time hourly rate	Rent at \$275/week	AS area 1	AS area 2	AS area 3	Total net incl tc's and AS 1	Total net incl tc's and AS 2	Total net incl tc's and AS 3
40000	800	7176	3120	10296	26667	13333	22527	11707	33433	43729	12.82	14300	3426	3426	3426	47156	47156	47156
40500	810	7176	3120	10296	27000	13500	22796	11853	33839	44135	12.98	14300	3301	3301	3301	47436	47436	47436
41000	820	7176	3120	10296	27333	13667	23065	11999	34245	44541	13.14	14300	3176	3176	3176	47717	47717	47717
41500	830	6864	3120	9984	27667	13833	23335	12146	34650	44634	13.30	14300	3051	3051	3051	47686	47686	47686
42000	840	6864	3120	9984	28000	14000	23604	12292	35056	45040	13.46	14300	2926	2926	2926	47966	47966	47966
42500	850	6864	3120	9984	28333	14167	23873	12427	35450	45434	13.62	14300	2801	2801	2801	48235	48235	48235
43000	860	6500	3120	9620	28667	14333	24143	12561	35844	45464	13.78	14300	2676	2676	2676	48140	48140	48140
43500	870	6500	3120	9620	29000	14500	24412	12696	36238	45858	13.94	14300	2551	2551	2551	48409	48409	48409
44000	880	6500	3120	9620	29333	14667	24681	12831	36632	46252	14.10	14300	2426	2426	2426	48678	48678	48678
44500	890	6188	3120	9308	29667	14833	24951	12965	37026	46334	14.26	14300	2301	2301	2301	48635	48635	48635
45000	900	6188	3120	9308	30000	15000	25220	13100	37420	46728	14.42	14300	2176	2176	2176	48904	48904	48904
45500	910	6188	3120	9308	30333	15167	25489	13235	37814	47122	14.58	14300	2051	2051	2051	49173	49173	49173
46000	920	5876	3120	8996	30667	15333	25759	13369	38208	47204	14.74	14300	1926	1926	1926	49130	49130	49130
46500	930	5876	3120	8996	31000	15500	26028	13504	38602	47598	14.90	14300	1801	1801	1801	49399	49399	49399
47000	940	5876	3120	8996	31333	15667	26297	13639	38996	47992	15.06	14300	1676	1676	1676	49668	49668	49668
47500	950	5564	3120	8684	31667	15833	26567	13773	39390	48074	15.22	14300	1551	1551	1551	49625	49625	49625
48000	960	5564	3120	8684	32000	16000	26836	13908	39784	48468	15.38	14300	1426	1426	1426	49894	49894	49894
48500	970	5564	3120	8684	32333	16167	27105	14043	40178	48862	15.54	14300	1301	1301	1301	50163	50163	50163
49000	980	5252	3120	8372	32667	16333	27375	14177	40572	48944	15.71	14300	1176	1176	1176	50120	50120	50120
49500	990	5252	3120	8372	33000	16500	27644	14312	40966	49338	15.87	14300	1051	1051	1051	50389	50389	50389
50000	1000	5252	3120	8372	33333	16667	27913	14447	41360	49732	16.03	14300	926	926	926	50658	50658	50658
50500	1010	4940	3120	8060	33667	16833	28183	14581	41754	49814	16.19	14300	801	801	801	50615	50615	50615
51000	1020	4940	3120	8060	34000	17000	28452	14716	42148	50208	16.35	14300	676	676	676	50884	50884	50884
51500	1030	4940	3120	8060	34333	17167	28721	14851	42542	50602	16.51	14300	551	551	551	51153	51153	51153
52000	1040	4628	3120	7748	34667	17333	28991	14985	42936	50684	16.67	14300	426	426	426	51110	51110	51110
52500	1050	4628	3120	7748	35000	17500	29260	15120	43330	51078	16.83	14300	301	301	301	51379	51379	51379
53000	1060	4628	3120	7748	35333	17667	29529	15255	43724	51472	16.99	14300	176	176	176	51648	51648	51648
53500	1070	4316	3120	7436	35667	17833	29799	15389	44118	51554	17.15	14300	51	51	51	51605	51605	51605
54000	1080	4316	3120	7436	36000	18000	30068	15524	44512	51948	17.31	14300	0	0	0	51948	51948	51948
54500	1090	4316	3120	7436	36333	18167	30337	15659	44906	52342	17.47	14300	0	0	0	52342	52342	52342
55000	1100	3952	3120	7072	36667	18333	30607	15793	45300	52372	17.63	14300	0	0	0	52372	52372	52372

55500	1110	3952	3120	7072	37000	18500	30876	15928	45694	52766	17.79	14300	0	0	0	52766	52766	52766
55608	1112	3952	3120	7072	37072	18536	30934	15957	45779	52851	17.82	14300	0	0	0	52851	52851	52851
56000	1120	3952	3120	7072	37333	18667	31145	16063	46088	53160	17.95	14300	0	0	0	53160	53160	53160
56500	1130	3640	3120	6760	37667	18833	31415	16197	46482	53242	18.11	14300	0	0	0	53242	53242	53242
56600	1132	3640	3120	6760	37733	18867	31469	16224	46561	53321	18.14	14300	0	0	0	53321	53321	53321
56700	1134	3640	3120	6760	37800	18900	31522	16251	46640	53400	18.17	14300	0	0	0	53400	53400	53400
56800	1136	3640	3120	6760	37867	18933	31576	16278	46718	53478	18.21	14300	0	0	0	53478	53478	53478
56838	1137	3640	3120	6760	37892	18946	31597	16288	46748	53508	18.22	14300	0	0	0	53508	53508	53508
56900	1138	3640	3120	6760	37933	18967	31630	16305	46797	53557	18.24	14300	0	0	0	53557	53557	53557
57000	1140	3640	3120	6760	38000	19000	31684	16332	46876	53636	18.27	14300	0	0	0	53636	53636	53636
57432	1149	3640	3120	6760	38288	19144	31917	16448	47216	53976	18.41	14300	0	0	0	53976	53976	53976
57463	1149	3640	3120	6760	38309	19154	31933	16457	47241	54001	18.42	14300	0	0	0	54001	54001	54001
57500	1150	3640	3120	6760	38333	19167	31953	16467	47270	54030	18.43	14300	0	0	0	54030	54030	54030
58000	1160	3328	3120	6448	38667	19333	32223	16601	47664	54112	18.59	14300	0	0	0	54112	54112	54112
58092	1162	3328	3120	6448	38728	19364	32272	16626	47736	54184	18.62	14300	0	0	0	54184	54184	54184
58375	1168	3328	3120	6448	38917	19458	32425	16702	47960	54408	18.71	14300	0	0	0	54408	54408	54408
58500	1170	3328	3120	6448	39000	19500	32492	16736	48058	54506	18.75	14300	0	0	0	54506	54506	54506
59000	1180	3328	3120	6448	39333	19667	32761	16871	48452	54900	18.91	14300	0	0	0	54900	54900	54900
59400	1188	3328	3120	6448	39600	19800	32977	16978	48767	55215	19.04	14300	0	0	0	55215	55215	55215
59477	1190	3328	3120	6448	39651	19826	33018	16999	48828	55276	19.06	14300	0	0	0	55276	55276	55276
59500	1190	3016	3120	6136	39667	19833	33031	17005	48846	54982	19.07	14300	0	0	0	54982	54982	54982
59873	1197	3016	3120	6136	39915	19958	33232	17106	49140	55276	19.19	14300	0	0	0	55276	55276	55276
59900	1198	3016	3120	6136	39933	19967	33246	17113	49161	55297	19.20	14300	0	0	0	55297	55297	55297
59939	1199	3016	3120	6136	39959	19980	33267	17124	49192	55328	19.21	14300	0	0	0	55328	55328	55328
59940	1199	3016	3120	6136	39960	19980	33268	17124	49193	55329	19.21	14300	0	0	0	55329	55329	55329
59945	1199	3016	3120	6136	39963	19982	33270	17125	49197	55333	19.21	14300	0	0	0	55333	55333	55333
59990	1200	3016	3120	6136	39993	19997	33295	17137	49232	55368	19.23	14300	0	0	0	55368	55368	55368
60000	1200	3016	3120	6136	40000	20000	33300	17140	49240	55376	19.23	14300	0	0	0	55376	55376	55376
60203	1204	3016	3120	6136	40135	20068	33409	17195	49400	55536	19.30	14300	0	0	0	55536	55536	55536
60230	1205	3016	3120	6136	40153	20077	33424	17202	49421	55557	19.30	14300	0	0	0	55557	55557	55557
60500	1210	3016	3120	6136	40333	20167	33569	17275	49634	55770	19.39	14300	0	0	0	55770	55770	55770
60506	1210	3016	3120	6136	40337	20169	33573	17276	49639	55775	19.39	14300	0	0	0	55775	55775	55775
60533	1211	3016	3120	6136	40355	20178	33587	17284	49660	55796	19.40	14300	0	0	0	55796	55796	55796
61000	1220	2704	3120	5824	40667	20333	33839	17409	50028	55852	19.55	14300	0	0	0	55852	55852	55852
61080	1222	2704	3120	5824	40720	20360	33882	17431	50091	55915	19.58	14300	0	0	0	55915	55915	55915
61090	1222	2704	3120	5824	40727	20363	33887	17434	50099	55923	19.58	14300	0	0	0	55923	55923	55923
61100	1222	2704	3120	5824	40733	20367	33893	17436	50107	55931	19.58	14300	0	0	0	55931	55931	55931