

Building Control Staff Calculator

Instructions for use

Background Information

This spreadsheet-based tool has been developed to assist Territorial Authorities to estimate the staffing levels required for processing Building Consent Applications and undertaking Building Inspections.

It can be used as a basic guide for future staffing or in the preparation of a business case to look at current staffing levels.

The accuracy of the calculator obviously depends on the availability and accuracy of the data used for input.

Data inputs

The following data is required for the calculator:

- ▲ Total number of annual consent applications received
- ▲ Number of annual consent applications processed by Approval staff
- ▲ Number of annual inspections completed
- ▲ Breakdown of consent application numbers into complexity categories
- ▲ Average number of hours spent per consent approval or building inspection, split by complexity category
- ▲ Number of hours paid in a working year
- ▲ Percentage of annual hours spent on consent processing or on inspections
- ▲ Number of Approvals staff assessed as being able to work at each category of complexity
- ▲ Number of Inspections staff assessed as being able to work at each category of complexity

To use the calculator, work through the Inputs from A to M as follows:

Input A cell: Consent Application Totals

In the **Input A** cell enter the actual number of Building Consent applications received in the year.

Input B cell: Approvals Workload

Enter the percentage of the Consent Applications that **Approvals** staff would handle in the year. Usually this number will be 100%, as you would expect all applications received to be processed.

Input C cell - Inspections Workload

This input may be more complicated.

Note: Your work data should tell you how many inspections were carried out during the selected year. This number may well be different from the number of Consent Applications that you entered in **Input A**.

Express the total Inspections carried out as a **percentage** of the **Input A** total and enter this percentage in the **Input C** cell.

Input D cells: Breakdown of Consent Applications by complexity/difficulty

1. Guidelines

This is an optional input and will vary according to Territorial Authority. Many larger Territorial Authorities assess the Consent Applications received according to their difficulty or complexity. There will also be many Territorial Authorities that do not perform this assessment.

For the purposes of the basic calculator on this website, the assumption is Building Consent applications fall into one of three categories, with Category One being the simplest, most straightforward work and Category Three as the most complex. These are only guidelines as each Territorial Authority will have its own taxonomy.

Possible activities within each Category are:

- **Category One** would normally include single-level residential dwellings and basic office fit-outs, and lower-level alterations, garages, fireplaces and office fit-outs.
- **Category Two** would include two-storey residential dwellings, more complex office fit-outs and commercial work etc.
- **Category Three** work would include three-level residential dwellings, significant commercial construction etc.

2. Applying the guidelines

For each Category Level (1, 2 and 3) enter in each **Input C** cell the percentage that each category represents of the total consent applications received.

You will see that the calculator will then calculate the assumed annual consent volumes handled by both **Approvals** and by **Inspections** under the respective "**Assumed Consents**" columns.

3. Instructions if you do not assess Consent applications for complexity

If you do not assess applications for complexity, then you should just enter **100%** in the first **Input D** cell, and ignore the other two.

Input E cells: Average Hours per Approval

This is a key input, as it is used to calculate workload and any surplus or shortfall of resource capacity.

For each Category Level (1, 2 and 3) enter in each **Input E** cell the average total hours you consider it takes for Building Approvals Officers to process applications of the Category level concerned. This average figure may be derived from time-writing data or may be an agreed number based on a purely qualitative assessment.

You will see that the column on the right under **APPROVALS** will calculate the total hours required to process the consents received within this Category.

If you do not split applications into different Categories then you only need to enter a single hourly average in the **first Input E** cell, and enter “0” in the remaining two **Input G** cells. You will get a single total for “Hours Required”.

Input F cells: Average Hours per Inspection

The procedure here is the same as for Input E: Average Hours per Approval.

For each Category Level enter in each **Input F** cell the average total hours you consider it takes for Building Inspections Officers to complete the inspection activity for approved Consents within each Category level.

You will see that the column on the right under **INSPECTIONS** will calculate the total hours required to process the consents received within this Category.

Again, if you do not split applications into different Categories then you only need to enter a single hourly average in the first **Input F** cell and you will get a single total for “Hours Required”. Enter “0” in the remaining two **Input F** cells.

Input G cell: Uncategorized Consent Approval time

You may be in a situation where you do not categorise consent applications for complexity, but due to inaccuracies in data entry you have some time-writing data that is clearly time spent on Consent Approvals, but has not been categorised.

If so, then enter these total hours in the **Input G** cell.

Input H cell: Uncategorized Consent Inspection time

Similarly you may have some time-writing data that is clearly time spent on Consent **Inspections**, but has not been categorised.

If so, then enter these total hours in the **Input H** cell.

Input I cells: Total annual hours

Enter in the two **Input I** cells the total number of hours in a working year.

In most circumstances this number will be **2088 hours** - this is the total number of working hours in a year for which we are **paid**.

Input J cell: Percentage of hours worked recorded or assessed as being spent on Consent Approvals

Assess the average total number of hours spent in a year by a Building **Approvals** Officer on processing consent application.

Express this total as a percentage of **2088 hours**.

Enter this percentage in the **Input J** cell.

Input K cell: Percentage of hours worked recorded or assessed as being spent on Consent Inspections

Assess the average total number of hours spent in a year by a Building **Inspections** Officer on Inspections activity.

Express this total as a percentage of **2088 hours**.

Enter this percentage in the **Input K** cell.

Input L cells: Current staff numbers for Approvals

There is an assumption here that, if you assess incoming applications for complexity, you also assess your staff against the level of complexity they can competently work with.

For each Category Level (1, 2, or 3) enter into the **Input L** cell the number of **Full Time Equivalent (FTE)** staff that you have assessed as being competent to process consent applications at this level and no higher. If you have a Building Officer who does both Approvals and Inspections, just include the FTE amount of time s/he spends on Approvals (eg 0.6 FTE)

Note: If you do not separate your consents into categories it is unlikely you will have undertaken similar competency assessments for staff. In this case enter **all FTE Approvals staff** in the **first Input L** cell and enter **"0"** in the remaining two cells.

You will see that total staff capacity expressed in hours is calculated in the **"Capacity"** column.

The excess or shortfall in capacity is calculated in the **"Surplus/(Shortfall)"** column. This column estimates either shortfall in staff hours available to process consent applications, according to **work complexity category** and **staff competency category**.

A positive number indicates that there are more total staff hours available than the work demand requires at this Category level.

A negative number indicates that there are not enough total staff hours to cope with the work demand within the Category level concerned.

Input M cells: Current staff numbers for Inspections

Again the assumption in the calculator is that you are assessing your **Inspections** staff against the level of complexity they can competently work with.

For each Category (1, 2, 3) enter into the **Input M** cell the number of staff that you have assessed as being competent to handle **inspections** at this level and no higher. If you have a Building Officer who does both Approvals and Inspections, just include the FTE amount of time s/he spends on Inspections (eg 0.4 FTE).

Note: As with Approvals, if you do not competency assessments for staff. In this case enter **all FTE Inspections staff** in the **first Input M** cell and enter **“0”** in the remaining two cells.

You will see that total staff capacity expressed in hours is calculated in the **“Capacity”** column.

The excess or shortfall in capacity is calculated in the **“Surplus/(Shortfall)”** column. This column estimates either shortfall in staff hours available to carry out inspection activities, according to **work complexity category** and **staff competency category**.

A negative number indicates that there are not enough total staff hours to cope with the work demand within the Category level concerned.

A positive number indicates that there are more total staff hours available than the work demand requires at this Category level.

Total FTE staff required

You will see in the section below on the spreadsheet that the calculator has estimated the number of FTE staff required to perform the amount of Approvals and Inspections work that you have inputted earlier.

The staff required for each of **Approvals** and **Inspections** is expressed as either:

- additional staff required - **a negative number**, or
- you having surplus staff - **a positive number**

The combined total required is then shown as a **shortfall** or a **surplus**.

These instructions were developed by CHANGeworks for use with the Building Control Staff Calculator. If you wish to get more information on CHANGeworks, please go to: www.changeworks.co.nz