



ecoTude

changing your schools ecological attitude

Land use walkthrough

What you are auditing?

You will be calculating the area of your school and how the land is used.

Why are you auditing it?

Your school's footprint is calculated from a combination of land use types. Each type of land use changes the condition of the land by a different amount. For example, clearing and building on land disturbs its condition more intensively than using it for a park area. Most types of land use do not completely disturb the land, allowing some of the land's ecological functions to continue at a reduced level, for example maintaining the biodiversity above and below surface, maintaining soil structure and water flows, and absorbing wastes. The disturbance intensity for each of the different land uses at school can be found in the table below.

Land Use	Disturbance Intensity
buildings, roads, paths, pavements, and other hard surfaces	1.0
gardens, sports fields, ponds, and areas of bare earth	0.8
lawns and park areas with mostly non-native shrubs and trees	0.4
native vegetation (native trees, shrubs, grasses, etc) that has been partially cleared	0.2
native vegetation that is mostly undisturbed	0

If your school has any farming activities, then you should include the following in the above table:

- vegetable gardens, irrigated pastures and crops, and dams in the gardens area
- orchards, dry crops and pastures, and non-native tree plantations in the lawns area
- native tree plantations in the partially-cleared native vegetation area

How do you do it?

1. To begin this audit you will need a map or plan of your school. You can draw yourself a map or investigate if the school can access one. If you are drawing a map of your school here are a few helpful suggestions:
 - Ask the PE department if you can borrow a measuring wheel and a compass. Make sure you know how they work.
 - Before you begin do a quick walk around the perimeter of the school and draw a rough sketch. The sketch will highlight obstacles and areas that you might not get access to. Sketch the major land use areas on the map. Note the direction of north.
 - Begin your measurement of the perimeter by starting in a corner and as you go use the sketch to enter your measurements and the direction you are heading.
 - Once you have completed the perimeter begin to measure the major land use areas.
 - Draw your map. It makes life easier if you use grid paper. Remember to set a scale and set a north point.
2. If you drew your own map use your scale to determine the area of one grid square. Count up the total number of squares and you can calculate the area of the school. Alternatively divide up the map into rectangles and right angled triangles and determine the area of each shape and total them up to get the area. The calculator requires a result in hectares, to convert from square metres to hectares divide your result by 10,000.
3. Note your result into your Eco'tude journal.
4. On the map shade in the 5 different land use areas. Calculate the total area for each land use for the school. Convert this to a percentage of the total land use. Record your results in your Eco'tude journal.
5. What factors can you attribute to the land use types in your school?
6. Enter your results into the online calculator. How has the footprint changed from your best guess trial.

Land Use	Area	Percentage of total area
buildings, roads, paths, pavements, and other hard surfaces		
gardens, sports fields, ponds, and areas of bare earth		
lawns and park areas with mostly non-native shrubs and trees		
native vegetation (native trees, shrubs, grasses, etc) that has been partially cleared		
native vegetation that is mostly undisturbed		

Taking it further

1. Conduct a biodiversity audit of the school.
 2. You can determine the total amount of disturbed land on the school site by completing the table below. Put in your land use figures you calculated into column
2. Multiply these land use areas by the disturbance intensity factor to obtain an estimate of land disturbance (column 4). Add up column 4 and this will give you the total of disturbed land for your school site. Note this is for the school site only and not the footprint.

Land Use	Area Used in hectares	Disturbance Intensity	Disturbance area in hectares
buildings, roads, paths, pavements, and other hard surfaces		1.0	
gardens, sports fields, ponds, and areas of bare earth		0.8	
lawns and park areas with mostly non-native shrubs and trees		0.4	
native vegetation (native trees, shrubs, grasses, etc) that has been partially cleared		0.2	
native vegetation that is mostly undisturbed		0	
Total		Total	