

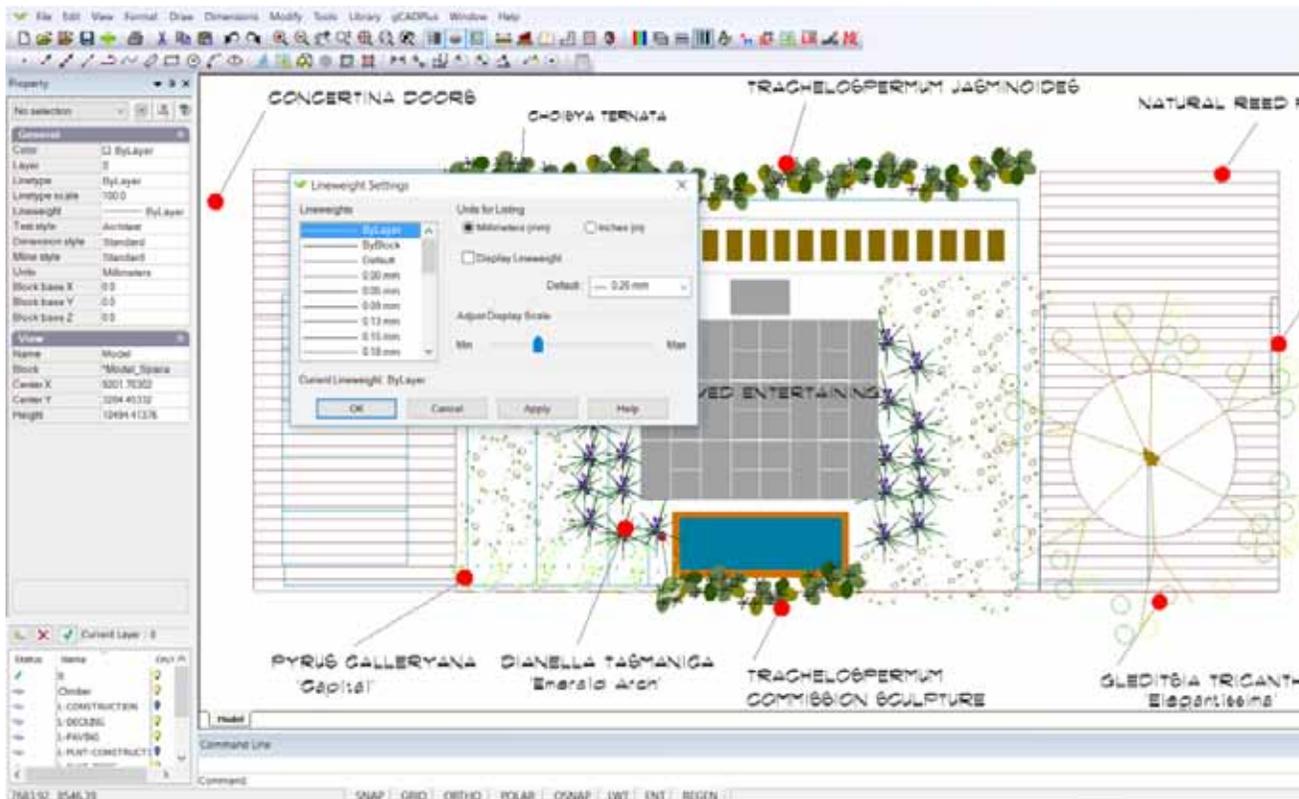
# c7 Handling line weights in gCADPlus drawings

This chapter describes the use of lines of different thickness lineweights in gCADPlus drawings.

The thickness of a line in a printed drawing depends on a number of factors:

- The lineweight value applied to a particular gCADPlus entity;
- The status of the lineweight (LWT) switch in the drawing editor status line (figure below),
- The space that an entity occupies [model space or layout space];
- The layer the entity is located on;
- Whether or not the entity is contained within a block;
- The lineweight setting for the layer; and
- The current value for display of lineweights on the screen.

This movie provides an overview of the use of lineweights in the gCADPlus environment.



In summary,

- When drafting, leave Format>Lineweight set at the default value of 0.25mm - 0.01 inch;

- Draft with lineweight set to default in the Properties box so entities used to make your design will have the default thickness assigned automatically;

- At the end of the job, select those entities in the design that need extra emphasis (like the building footprint), and set thickness via the properties box.

- If you need to print on markedly different sheets (e.g. A4 and A1) move those entities requiring extra emphasis to a separate layer, then set the thickness property of the entity to bylayer and adjust thickness of that layer in the layers box to cope with different size sheets;

- Adjust the line thicknesses in your title block such that they work well with your most common sheet size - A3, ARCH C etc.;

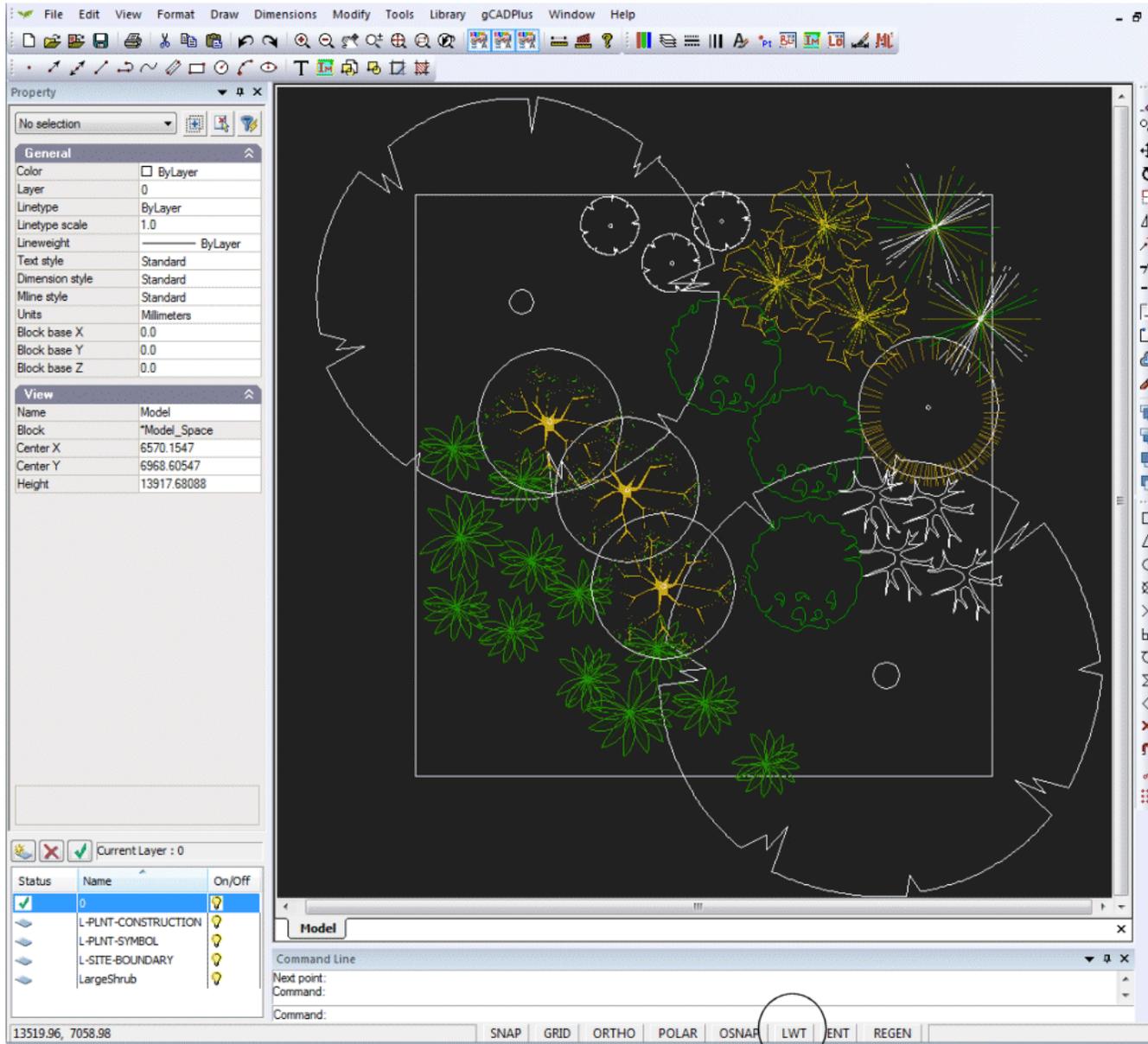
- Do not apply line thickness to a CAD font. If you need heavy text, use a bold version of a True Type font;

- Always print a check plot to PDF from the paper size you will eventually use.

*Reach the lineweight settings dialog box from the Format drop down menu.*

## The LWT switch

Line thickness (line weight) will not show unless the LWT switch is on. A tab on the status line controls the visibility of line weights in a drawing; when active, the tab is colored red. It is important to be aware of the status of that switch when setting lineweights.



*Typical gCADPlus drawing showing the LWT switch in the status line (circled).*

SNAP GRID ORTHO POLAR OSNAP **LWT** ENT REGEN P

## Why set line weight?

Varying line thicknesses in drawings adds to clarity. The line weight function, gCADPlus gives you the power to create drawings that are easy to interpret and have the same look and feel as hand drafted plans. In manual drafting, the tradition is to use a series of pens which produce lines of different thickness. For example, the Rotring series of technical contain varying nib thickness - 0.25mm, 0.35mm, 0.5mm and 0.7mm. Similarly, gCADPlus allows drafters to produce lines of varying thickness.

● Pathlight  
▲ Small bullet  
■ Large bullet  
■ Wall wash  
▲ Wall light

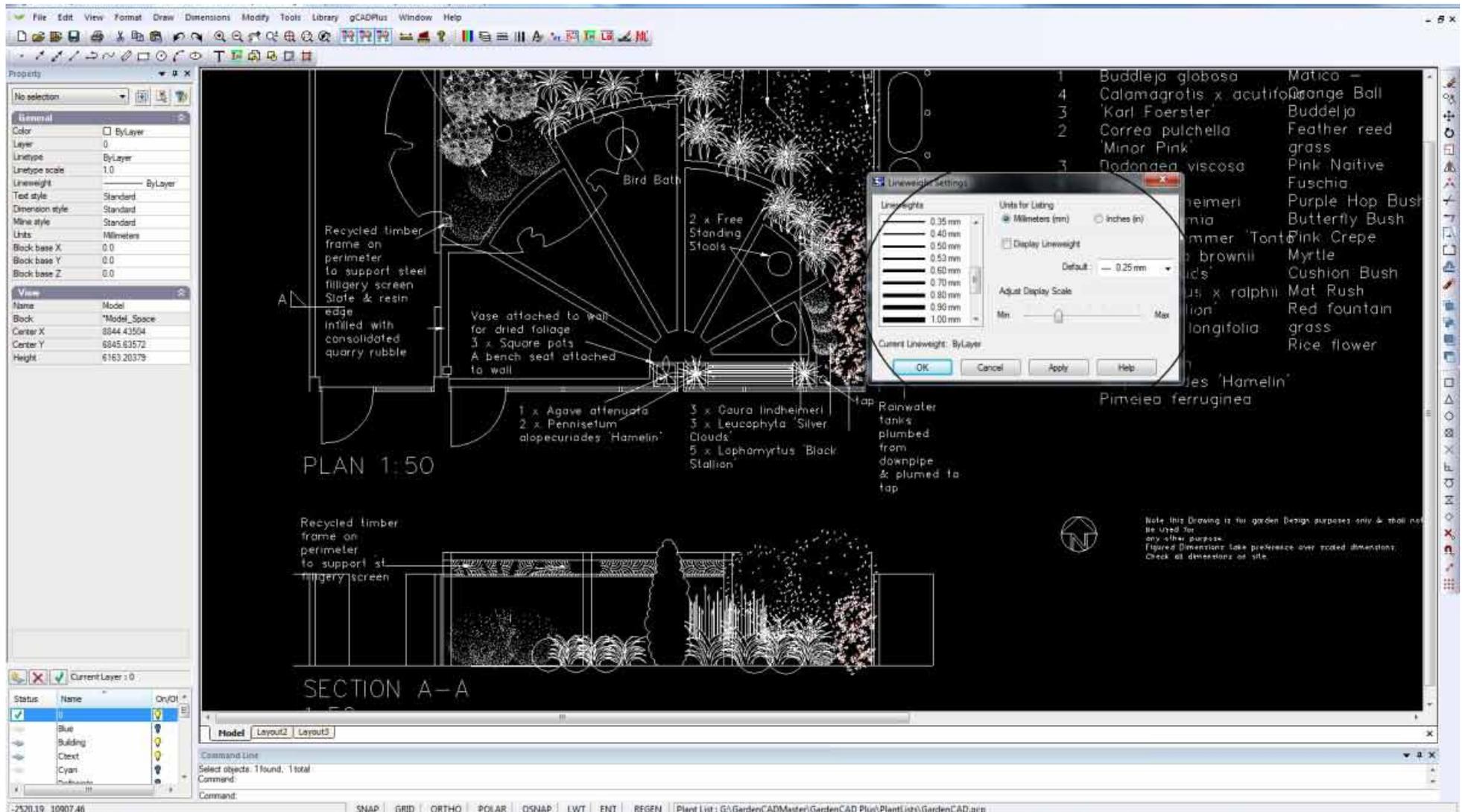
PLANT SCHEDULE		
Plant	Botanical Name Common Name	Total
Acacia cincinnatum	Vine Maple	3
Brunnera macrophylla	Sharon bugloss 'Jack Frost'	19
Carex testacea	Prickly Pine Sedge	8
Chiosya ternata	Melton Orange 'Sandera'	7
Daphne	Daphne 'Carol Moore'	7
Heuchera x 'Marmalade'	Marmalade Coral Bell	13
Leucothoe Fontanesiana	Leucothoe 'Nana'	8
Lirape Muscari	Lirape 'Yacht Club'	20
Ophiopogon planiscapus	Black Mondo Grass 'Nigrescens'	23
Ribes Songhinum	'King Edward VII'	3
Sarcococca ruscifolia	Fragrant Sweet Box	9
Thuja Plicata	Hopse Cedar 'Fastigata'	3
Woodwardia Fimbriata	Plant Ostrich Fern	11

dominion landscape  
FILE: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
PROJECT: \_\_\_\_\_ SCALE: \_\_\_\_\_

Portion of a partly finished landscape design by Dominion Landscapes. The LWT switch was turned on prior to printing. Right click and use the marquee zoom tool in Acrobat Reader to zoom right in on the red and cyan lines. Note that these have relatively thick line weights applied. Note also the construction lines running horizontally and vertically which have very light (thin) line weight applied. The border has a line weight of 0.005 inches for emphasis. Line weight settings in the title block have not yet been completed.

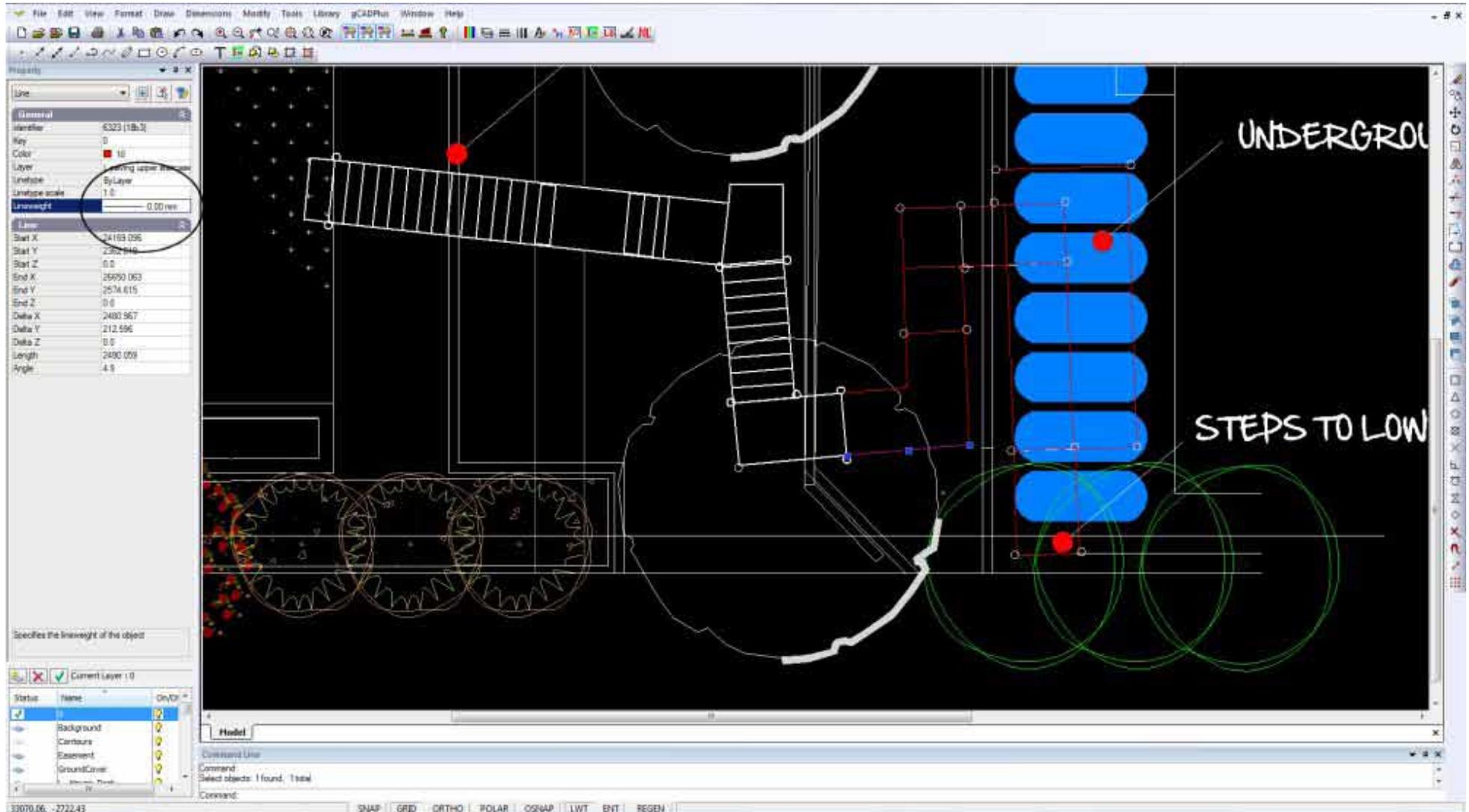
## Troubleshooting line weights

When drafting with gCADPlus, every entity automatically has a line weight. This is controlled by the value in the line weight field in the properties box. If the line weight property of an entity has been set BYLAYER, the entity will have its line thickness determined by the line weight setting for the layer. If the line weight property is set to default, the line will be drawn with the current default thickness setting. That value is controlled via the line weight option in the format drop down menu shown below.



*Some of the many line weight settings available in gCADPlus. Line weight thickness can be set using either mm or inches.*

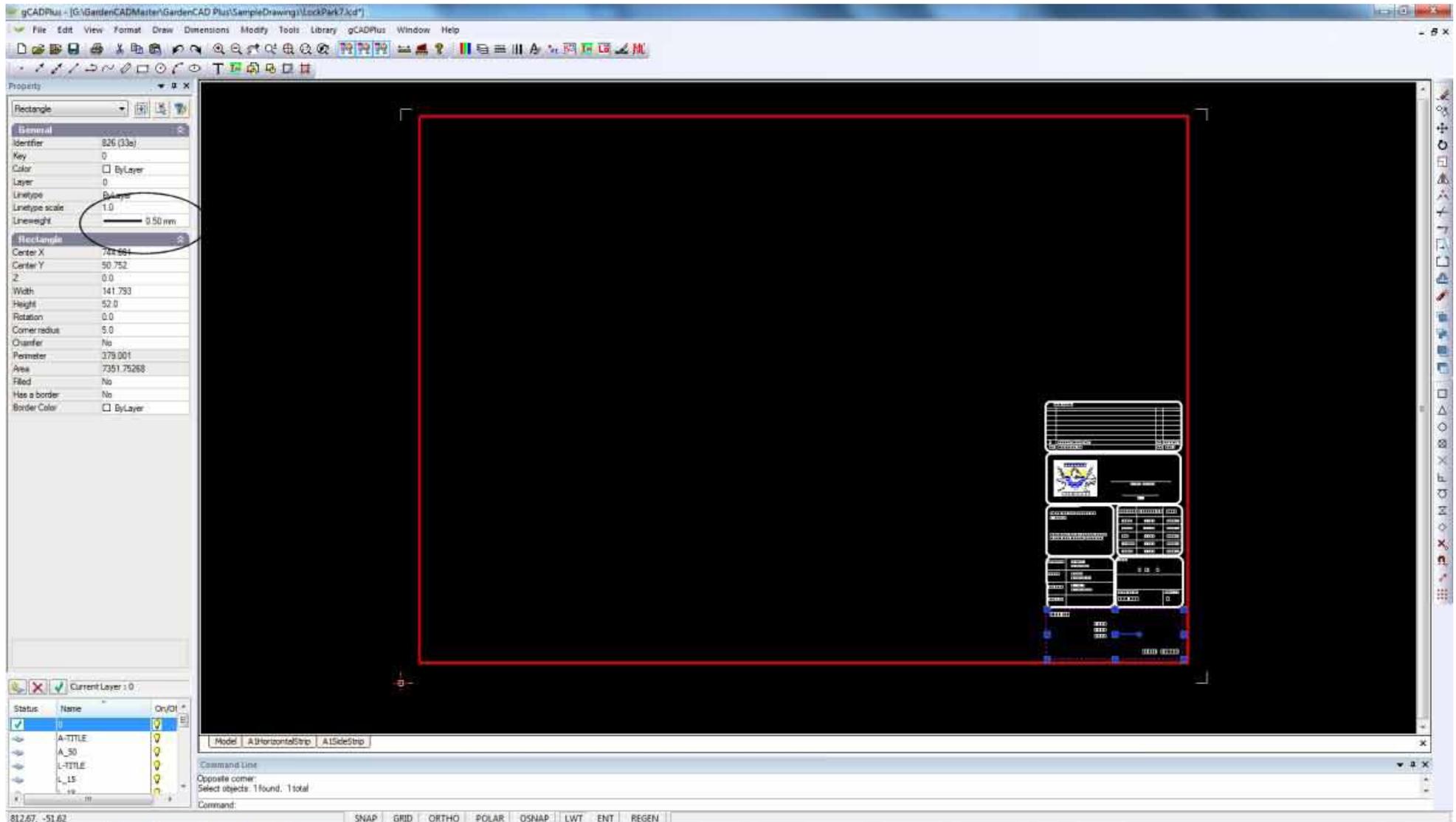
The figure below show these two different approaches to setting line weights in the same drawing.



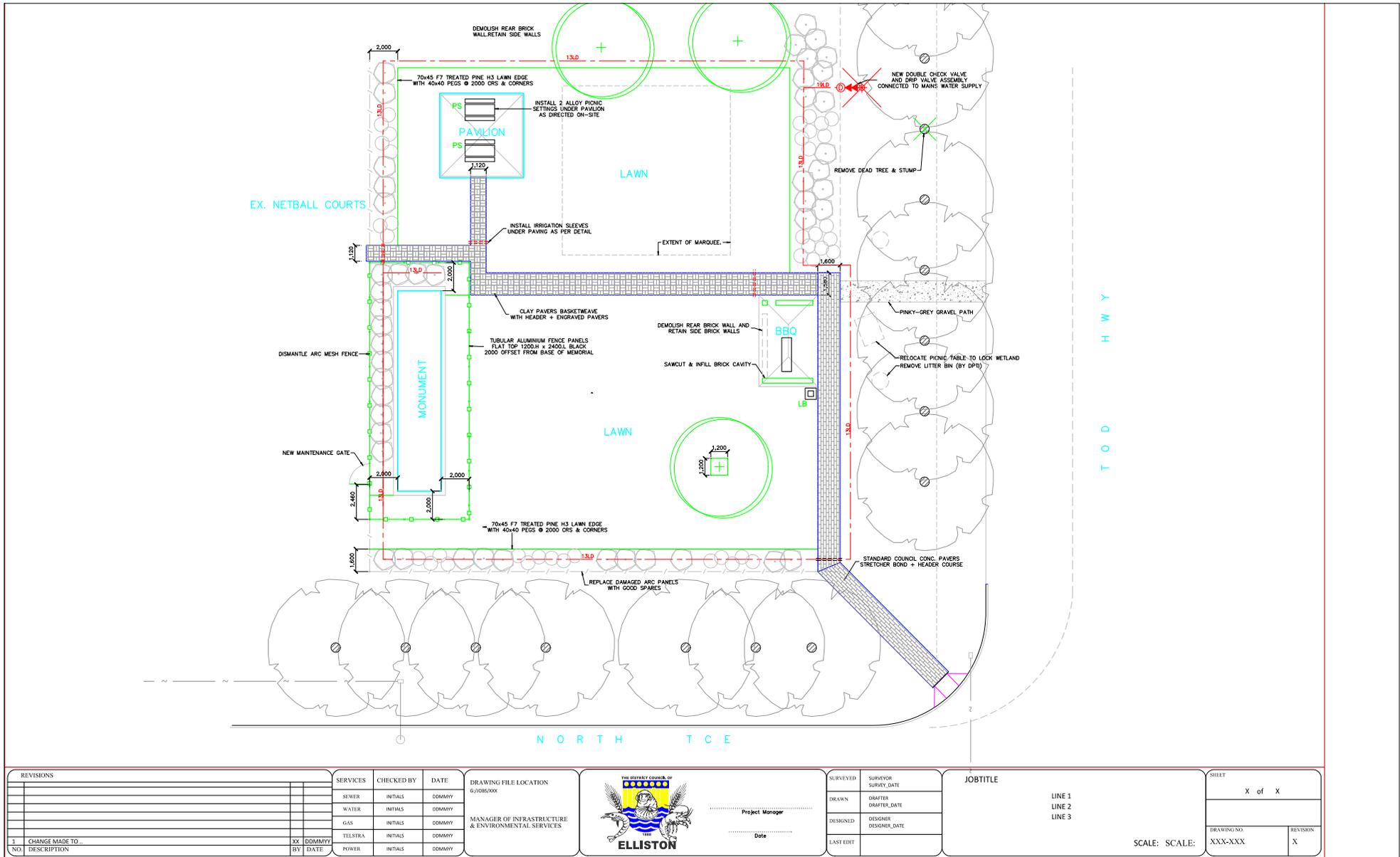
White lines making up the walkway have their line weight property set to BYLAYER. The layer on which the walkway entities have been placed has a line weight setting of default (0.25mm), so the lines show as thick. In contrast, the other lines indicating retaining walls and plant symbols have had line weight property set to 0.0 mm in the Properties Box and show as very thin lines. Implicit entity settings such as this, override layer settings. We recommend using the BYLAYER system to set lineweight as setting weight implicitly is very time consuming.

## Line weights in title blocks

The figure below show a drawing for a title block prepared for use by a local government authority. The red line for the border has been assigned a line weight of 0.7 mm (0.010 inches). Other lines in the title block have been assigned line weights of 0.5, 0.35 and 0.25 mm respectively.



The figure below shows the very same title block in action on an A1 sheet in a design for a small public park in a regional area of Australia. The line weight variation set in the title block are faithfully reproduced.



Portion of a partly finished landscape drawing for a local government authority. Use the zoom tool in your PDF viewer to zoom right in on the title block to see that the line weights have been controlled.

*Tip: When printing, be aware of the status of the LWT switch, turning it off will result in a drawing with uniformly thin lines.*

## Monochrome vs. Color

Black and white (Monochrome) printing is commonly employed for construction teams. Switching to monochrome does not affect the line weight setting. Variation in line weight will still be seen.

## The influence of the default line weight setting

You can set the default line weight style, in the same way that you can set a text style. The default setting is for entities to have a line weight of 0.25 mm (0.005"). This will likely work well for most drawings. All symbols in the gCADPlus library are drawn with line weight set to default.

It is recommend leaving this value set at the gCADPlus default. However, to draw a whole series of lines at a particular line thickness it is suggested that you:

- Create a new layer;
- Set the line weight for that layer to a new value; and
- Draw.

Changes to line thickness for those entities can then be made at any point without the need to edit every individual line entity.

## Recommended approach

In summary, the simplest way to work is to:

- Leave Format>Lineweight set at default;
- Leave the lineweight property of entities you use to make your design at BYLAYER;
- In contrast, set lines in your title block with appropriate thicknesses set;
- If you need heavy text, use a bold version of a True Type font;
- Do not try applying line thickness to a CAD font;
- At the end of the job, select lines in the design that need extra emphasis (like the site boundaries and house footprint) and set thicknesses in the linetype field of the property box; and
- Always print a check plot in PDF from the paper size you will eventually use.

