Chapter – 4

ADOBE PHOTO SHOP CC

Introduction:

Adobe PhotoShop 7.0 is a powerful tool for creating, editing, manipulating and maintaining images both for the web and in the printed medium. It can be used to create spectacular graphics for a web site, or to enhance digital photographs for vital presentations. Whether you're maintaining a personal website or editing images on behalf of your department, a good basic knowledge of PhotoShop can help you on your way to a professional level of graphic design and implementation in your work.

This course will be broken down into **four** main areas:

1. **Introduction to the Work Area:** - a look at the various tools, toolbars, palettes and menus that you will use in Photoshop

2. **Creating Simple Graphics:** - Learn how to create banners, logos and buttons for the web and presentations

3. **Digital Image Manipulation:** - Learn how to manipulate digital photographs with such techniques as Red Eye removal and other more complex image manipulation practices

4. **Web Site Composites:** - Learn how to create the look and feel of a complete web site, cutting the graphics to fit the web page and other issues involvedwith producing graphics for use on the web

There is, of course, a lot more to Adobe Photoshop than can be covered in this course.The comprehensive help file that comes with Photoshop can help a user to find information on aspects not covered in this manual, and there is a wide variety of online tutorials available, with the best obtained through www.adobe.com. The time constraints of this course should not, however, preclude the achievement of a good solid grounding in the basics of Photoshop, sufficient to the everyday graphics needs of most departments. As always, we hope you enjoy the course and encourage questions and feedback throughout the day.

1. Introduction to the Work Area:

In this section we will look at the tools, palettes, menus and work area of Photoshop. We will go through the main tools, looking at what each one does. We will then go through the menus, identifying the functions contained within each one. Then we will look at the different toolbars and palettes that give Photoshop its great functionality.

The Tool Palette:

To the right we have the tool palette. This contains the tools you need for image creating, editing and manipulation. The tools with black arrows at the bottom right corner indicate that there are moreoptions within that tool. To access the other tools within that tool, just left click the mouse and hold it down. The currently selected tool is the **move** tool. Hovering the cursor over the tool will give you its name and the keyboard shortcut to access it (in the case of the move tool Shift + M will automatically select it for you).

The tools in the top four sections of the tool palette are as follows (moving anticlockwise):

- **Marquee:** this tool allows you to select an area of an image within a particular shape. The default is rectangle, but there is also an ellipse selection as well as a single row and single column marquee

- **Lasso:** this tool allows you to select irregular areas of an image. In the image to the right, the **polygonal lasso** tool is showing. There is also the **freehand lasso** tool and the **magnetic lasso** tool (which will find the edge of an element within the image you are trying to select).

- **Crop:** this tool allows you to cut an image to a particular segment.

- **Healing Brush:** this tool allows you correct imperfections, causing them to disappear into the surrounding image. You use the healingbrush tool to paint with sampled pixels from an image or pattern. The other

Figure 1.1

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tool that this button allows you to select is the **patch** tool. The patch tool lets you repair a selected area with pixels from another area or a pattern.

- **Clone Stamp:** this tool takes a sample of an image, which you can then apply over another image or part of the same image. Each stroke of the tool paints on more of the sample. The other tool that can be selected here is the **pattern stamp** tool, which lets you paint with a pattern. You can select a pattern from the pattern libraries or create your own patterns.

- **Eraser:** this tool allows you to erase parts of your image. You can also select the **background eraser** tool or **magic eraser** tool which allow you to erase specific parts of the image.

- **Smudge:** this tool allows you to create an effect similar to the effect caused when working with pencils and you smudge an area of the image with your finger. The companion tools to this tool are the **blur** tool and the **sharpen** tool which allow you to blur the focus or sharpen the focus of an area of the image

- **Path Selection:** used for selecting **vector images**. Vector images are images that can be resized without loosing resolution because they are based on mathematical formula as opposed to **bitmapped** or **raster** images, which are constructed using a finite number of pixels. The companion tool to this is the **direct selection** tool, which allows you select a **path segment**.

- **Pen:** used for creating straight lines and smooth curves with precision. The image created is a vector image. There are a number of companion tools to this tool – **freeform pen, add anchor point, delete anchor point** and **convert point** tools

- **Notes:** this tool is used to add notes to an image. They are not part of the image but can be useful when sharing the image as the image author can add valuable information about the image to the image file so others can appreciate what is intended by an image. The companion tool to this tool is the **audio annotation** tool, which allows a user with a microphone attached to their computer to add a "speaker note" to the image to convey information to other users of the image.

- **Hand:** allows you to move an image around the screen to allow access to

various parts of the image when the image is too big for the screen

- **Zoom:** allows you to magnify/de-magnify areas of an image to allow for more detailed work

- **Eyedropper:** this tool allows you to set the colour of the foreground of the colour palette from a colour within the image. The companion tools are the **colour sampler** tool and the **measure** tool, which can be used to get the exact coordinates and pixel height and width of any part of the image

- **Rectangle:** this tool allows you to draw different shapes, with the default set to rectangle. You can also draw **rounded rectangles**, **ellipses**, **polygons**, **lines** and **custom shapes**.

- **Text:** this tool allows you to add text to your image. You can also change the orientation of text to the **vertical type tool**.

- **Sponge:** this tool allows you to subtly change the colour of the image, by altering the colour saturation of the area adjusted by the sponge tool. The other options under this tool are the **dodge** and **burn** tools, which are used to lighten or darken an area of the image respectively.

- **Gradient:** a gradient allows you to fill an area of an image with a colour range, where the colours gradually run into each other. The other option with this tool is the **paint bucket** or **fill** tool, which you would use to fill a selected area of the image with a single colour.

- **History Brush:** this tool allows you paint with the source data from a specified history state or snapshot. The other option is the **art history brush** which allows for painting with *stylized strokes* from a specified history state or snapshot

- **Paint Brush:** this tool is as you would imagine used to paint on an image. There are numerous different brush shapes and sizes that

Fig1.1b

allow the user to create different textures to their image. The other option

tothis tool is the **pencil** tool.

- **Slice:** the slice tool allows you to divide an image into sections, making it easier to break up the image for putting it on the web or for making composite images. The second option under the slice tool is the **slice select** tool, which allows you to apply modifications to a slice that you have created.
- **Magic Wand:** the magic wand tool is another tool that you can use to select an area on the screen. It is used when you want to select an area that contains the same colour throughout.

Tool Options:

As you can see there are a wide variety of tools to be used. Each tool also comes with it's own set of tool **options**. These options allow the user to fine tune aspects of the tools usage and are different for each tool in question.

Fig 1.2

In **Fig. 1.2**, we see the tool options for the text tool. The first item in the tool options palette is the **tool presets** button that allows you to access preset combinations of options, which you may have saved in the past. This feature allows for you to save common combinations of options so that you do not have to reset them every time you use the tool.

In the text tool options, the next button allows you to change the orientation of thetext. Following that we have the options to change the font and the font style. Next, we have the drop down list to change the font size, while the types of anti-aliasingyou want to set follow this. **Anti-Aliasing** is a technique where by extra pixels are added at the edges of shapes in order to give them a smoother, less pixelated look.The alignment buttons and the colour swatch for choosing the colour of your text in turn follow this. The second last button on the tool options palette allows you to createwarped text while the final button allows you to open up a dialogue box for further **character** and **paragraph** options. As we have said, these are just the text tool options – as we use different tools, we will see their different options in use.

Menus:

We can also see the menu bar in Fig. 1.2, showing the different menus that the usercan choose from. Each of these contains a drop down list of even more options:

- The **file** menu enables the user to perform operations such as open, close or save. Indeed, there are even a number of different save options to enable the user to save the image in the most appropriate context.

- The **edit** menu offers a range of options for editing the image. One of the most popular features that we will use from this menu is the **transform** option, which allows us to scale, rotate or skew and image element.

- The **image** menu gives options for working with the image such as resizing the amount of pixels in the image, or increasing the size of the work area or **canvas**.

- In PhotoShop, images are contained on layers. The advantage of this is that we can compose a more complex graphic from independent graphic elements based on separate layers. Each layer can be edited separately without compromising the overall integrity of the image file. To this end we have a **layers** menu for performing operations to do with the management of the different layers within an image.

- The next menu along the menu bar is the **select** menu, which allows you to perform operations on selections.

- Next to the select menu is the **filter** menu. This menu provides the user with many different filters that they can apply to their image to create different effects.

- The **view** menu allows you to such things as set a colour set for the document, turn on rulers, zoom in and out etc.

- Second to last we have the **window** menu, which allows you to turn on and off the different palettes that we will use in the course of our work with Photoshop.

- The last menu on the menu bar is the **help** menu. This is quite a comprehensive feature, due to the complex nature of the Photoshop package. As it will be impossible to demonstrate every single aspect of Photoshop's

Fig 1.3

functionality, this feature will be a positive aid to you in your work with Photoshop after today.

In the work area there are a number of palettes visible to the user. These palettes contain useful functions for manipulating images. Acomplete list of palettes and the option to turn them on or off is visible under the **window** menu.

Each palette can be made visible by clicking the tab with its name on it. The most important palettes are:

- The **History** palette, which allows you to view the history of actions that you have performed on an image and to undo those actions while also providing you with the opportunity to save these actions for repeated use.

- The **Layers** palette, which allows you to efficiently manage the different layers in your image. From here, you can lock a layer so that it can't be edited, add image effects, create and delete layers, set the opacity of a layer and many other things that help you to create images cleanly and efficiently

- The **colour, styles** and **brushes** palettes are also two very important palettes, giving you continued variety when creating and manipulating images.

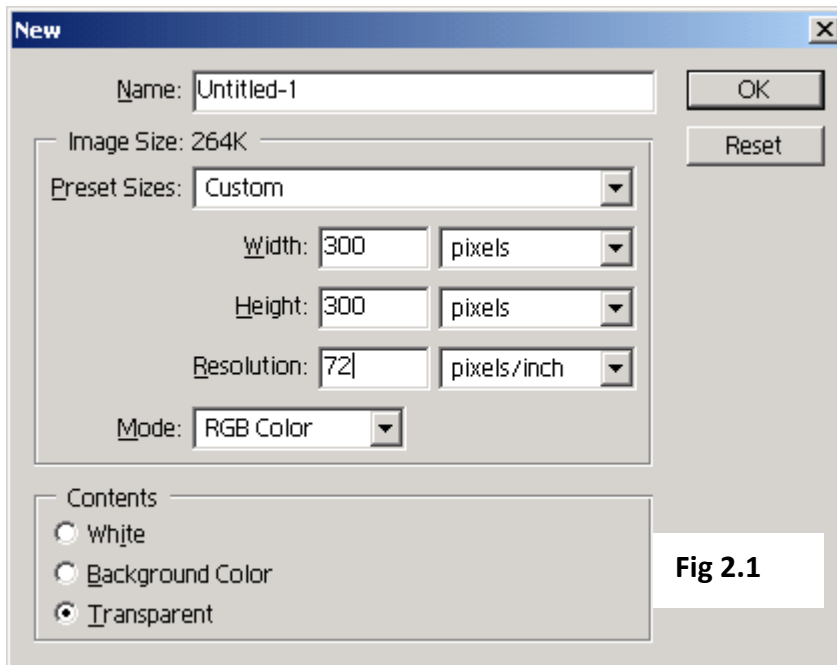Individual palettes will be discussed as we meet them in the course of this class.

2. Creating Simple Graphics:

Now that we have looked at the workspace we will begin to create simple graphics. We will learn to use some of the more common tools and palettes to create some simple banners, logos and buttons for use on both web sites and in presentations. When it comes to these types of graphics it is quite often the best practice to keep things as simple as possible, only using a few colours, and keeping designs basic.

Creating a Logo:

We will start by creating a simple logo. Let's say the company Discover Ireland have asked us to come up with a new corporate logo for them that will be used on their website and in promotional literature. It must identify the company at a glance, giving some impression as to what the company stands for. To that end, the simple combination of the outline map of Ireland, the initials "D I" and a magnifying glass should convey what it is we want.

To begin we must open a new image. From the File menu, go to New (ctrl+N). We are then presented with the **New Image** dialog box (Fig. 2.1), which allows us to set certain properties of the image before we begin editing. For this image we are going to go with a **custom** size, which will allow us to set the width and height according to our own needs. In this case we will set the dimensions to **300 pixels** wide by **300 pixels** high, which should give us plenty of room to design our logo. We can, of course crop the image at a later stage (or indeed

Fig 2.1

increase the canvas size should the need arise). We leave the resolution at **72 pixels per inch**, as this is the default resolution for graphics to be used on the web. When creating an image for print, it is recommended that the image be **300 pixels per inch**. Leave the mode set to **RGB** (stands for Red, Green, Blue) and the contents set to **transparent**. You can always add a filled layer later for your background when you know what it's going to be.
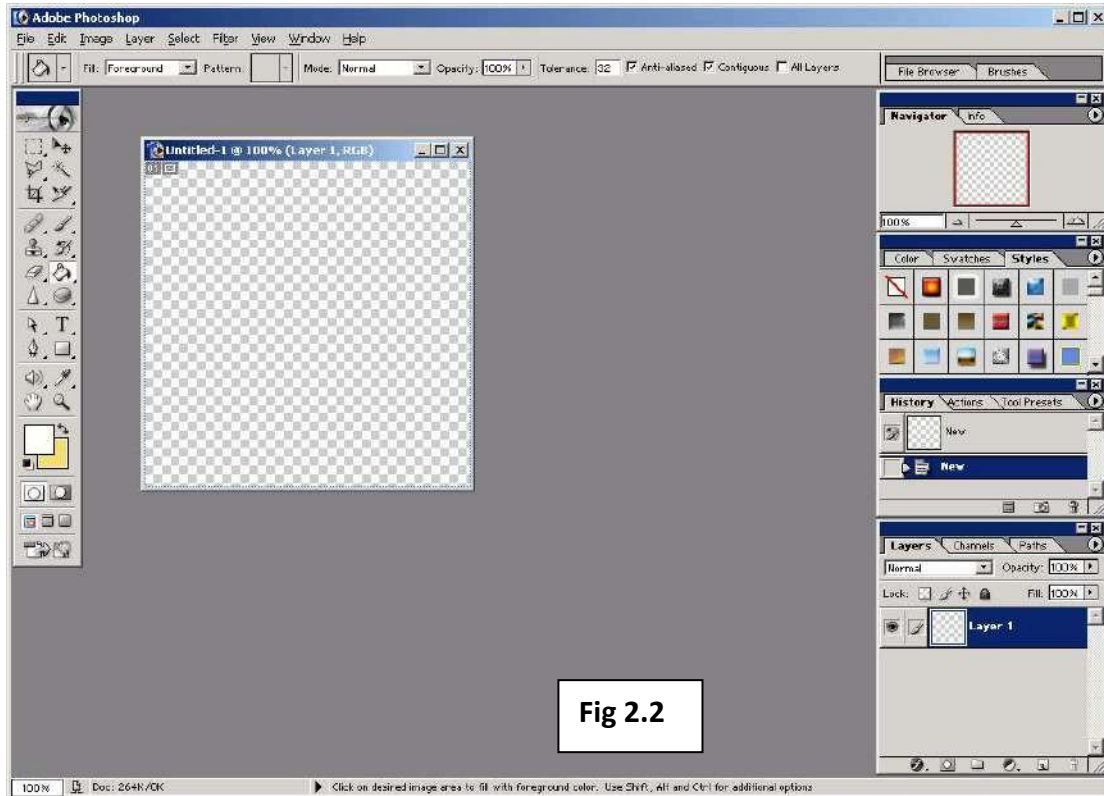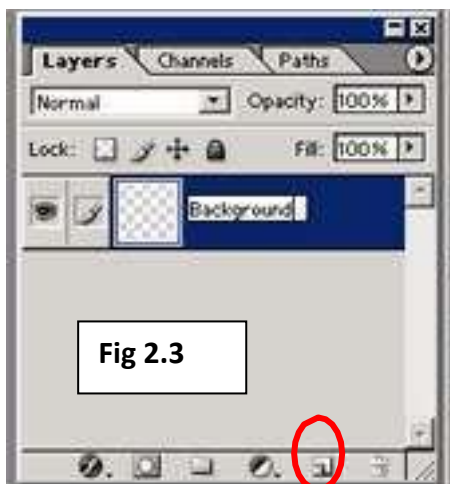

Fig 2.2

Fig 2.2 shows your workspace after launching the new image. We start by renaming our initial layer to **background.** It is always a good idea to give the different layers


Fig 2.3

meaningful names so that you know what elements of the image each layer contains. To rename the layer, double-click the name of the layer and change the name to background, as seen in **Fig 2.3**. We will rename additional layers as and when we add them.

Next we will create a new layer to contain our map of Ireland. The new layer button is circled in Fig. 2.3. Rename the layer **Ireland.** Next, we

will select a colour for the line that we will paint. To do this we double click on the foreground colour to launch the colour picker dialog box (**Fig 2.4**).
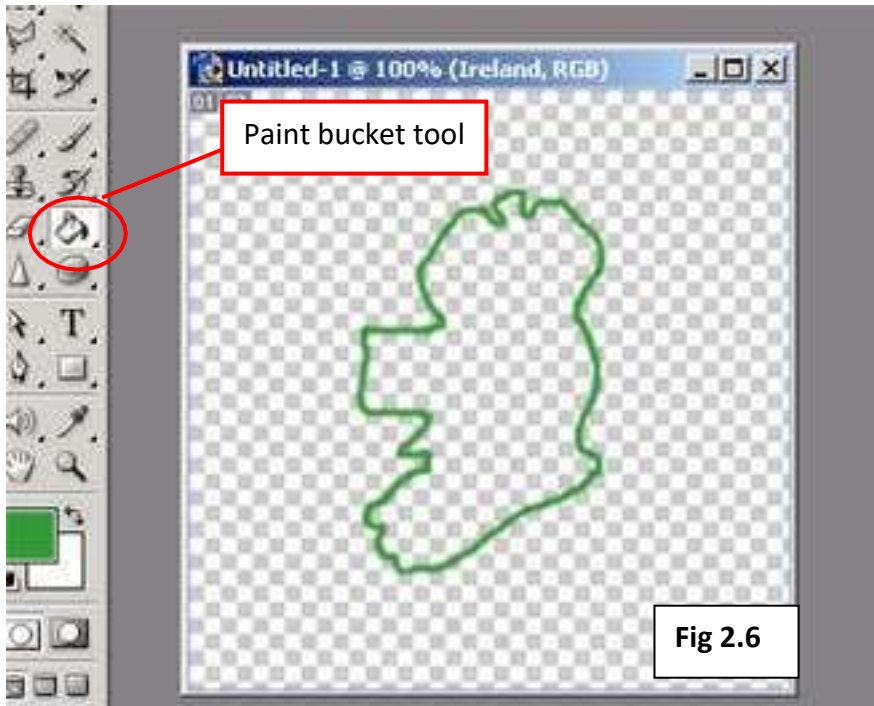

Fig 2.4
Brush Tool
Foreground Colour
Colour Value
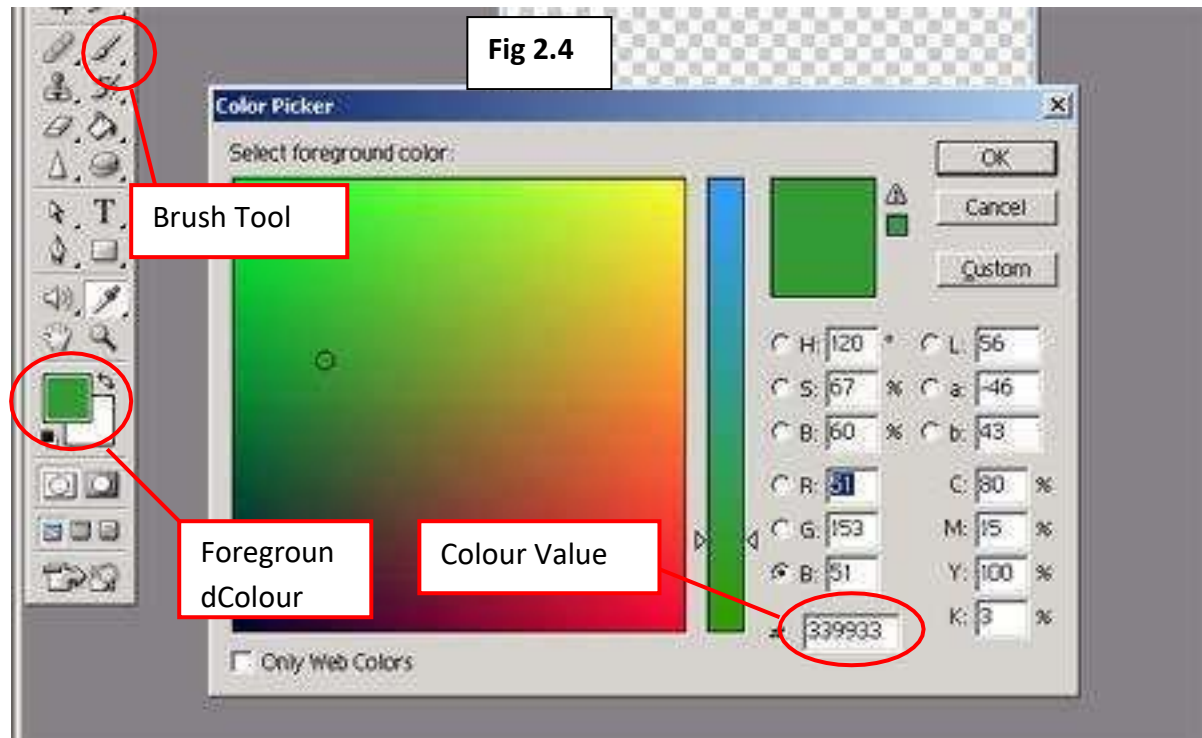
The colour we want is some kind of green. A nice Irish green has a hexadecimal RGBvalue of **339933*.** Next we select the brush tool in order to begin our image and from the brushes palette we select an appropriate brush size and shape. For our purposes,

Fig 2.5
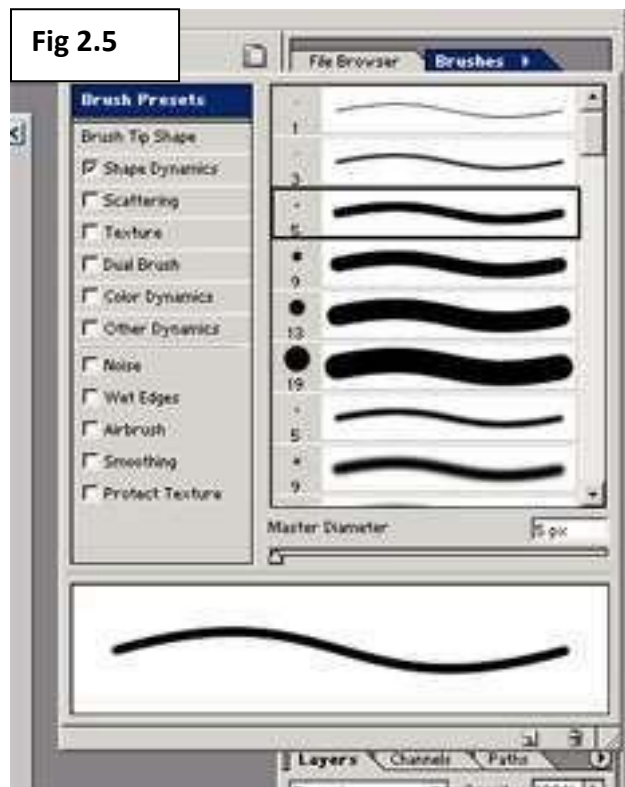
the third brush down will be sufficient, but be aware of the other brushes available. Making sure that the Ireland layer is selected, begin your drawing.

*: Colour of course is something that is quite subjective and up to you to decide whether or not it suits your purposes. There is significant talk of colour theory on the web and although it is out of the scope of this course, it is highly recommended that you familiarise yourself with some of the concepts involved so that you pick colours that complement each other in order to create the most visually appealing images. Some good sites include: www.lynda.com, www.colormatters.com

You should end up with something similar to Fig 2.6. Next we will use the **paint bucket** tool to fill the outline with green. When you select thePaint bucket tool, make sure the tool options setting are asseen in Fig 2.7. This will give you a solid fill colour and yet will leave a gap between the outline and the block of green fill.

Paint bucket tool

Fig 2.6

Fig 2.7

Once you have filled the outline, it would be a good idea to save your image. For the time being we will save it as a Photoshop Document (**.psd** file extension) but we may save it later as a JPEG or a GIF, depending on our needs. To save the document, go to File> Save and in the Save dialog box, change the filename from untitled to **DiscoverIreland_Logo** and select the folder **PSImages** from the desktop in which to save the file. Make sure the **Layers** option is checked in the **Save Options** section so that you retain the layers and their associated information. When you are ready click Save and the file will be saved to the folder you specified. It is important to save your files regularly, especially when working with complicated image files, as you do not want to lose any changes you may have made in a particular session.

Next, we will create another layer, this time to contain the magnifying glass part of the image. Rename it **magnifying glass** and select the **Rectangular Marquee tool.**

	Rectangular Marquee Tool	M
◯	Elliptical Marquee Tool	M
▭▭▭	Single Row Marquee Tool	
▯	Single Column Marquee Tool	

We want a circular or elliptical shape so we hold the mouse key down on the

rectangular marquee so that we are presented with the other options and then we choose the **Elliptical Marquee Tool** so that we can draw a circular shape on our image. When we have the circle drawn to ourliking (so that it covers most of the Ireland shape) we must then fill this selection with

Fig 2.9

a colour using the Paint Bucket tool as we did earlier. In this case we have chosen an orange colour to stay with the Irish theme. The colour code for this orange is **FF9933**.

With the orange circle still selected, we copy the layer press **ctrl + c** and **ctrl + v** to paste (or alternatively click and drag the active layer down as far as the **new layer** button within the layer palette). Our new layer should be called **magnifying glass copy** and we will use this layer to create a smaller circle and then in turn

use that circle to delete an equal area from the original magnifying glass layer so that we can see through the shape.

To begin this process, we will change the colour of the copied shape to white by filling the still-selected shape with the paint bucket. Then we go to Edit menu and select the Transform sub-menu. From this we select the **scale** option, which will add aframe around our selected circle with which we can scale the image down in size. To
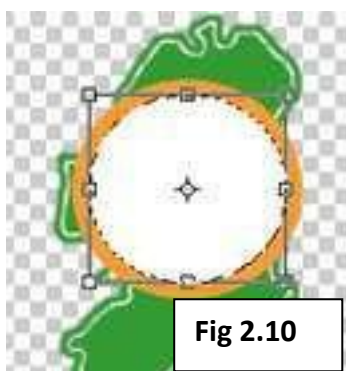

Fig 2.10

scale, place the cursor over the top left hand corner handle of the frame and while holding the **shift** key, drag the circle to **85%** of its original size – you can see the percentage of the original displayed within the **tool options** towards the top of your screen. Holding the shift

key maintains the proportion between the height and

key maintains the proportion between the height

width so that you have the same shape as the original, just smaller. We then move thissecond circle so that its centre point is aligned as close as possible to the centre of the larger circle giving us the image as seen in **Fig 2.10**.

We must also **commit** transform by pressing the 'tick' in the tool options bar. You will be unable to make any further edits until you have done this. If at any time you wish to cancel the transform, you click the 'cancel' button next to the tick.

Next, we will **merge** the two magnifying glass layers. This is achieved by first of all **linking** the two layers involved and then merging the linked layers.

To link the two layers, we use the layer palette – simply click the empty square besidethe **eye icon** on the **inactive** layer that you want linked. A little chain link will appear indicating that that layer is linked to the currently active layer. Make sure that it is oneof the magnifying glass layers that is active and that it is the other magnifying glass layer that the chain appears in, otherwise when you go to merge the layers, you will

Fig 2.12
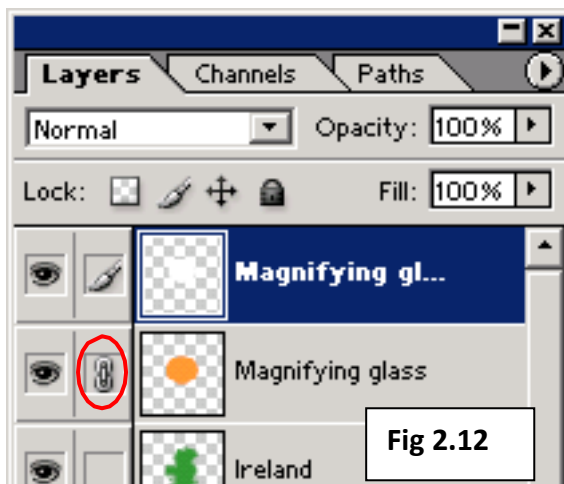
have a problem.

When you have linked the layers, go to the Layer menu and then down to Merge Linked (**ctrl + E**). The two layers have now become one layer called **magnifying glass copy.** If the white circle has become deselected, we can use the **magic wand tool** to select the white area.

Once the white area has been selected, press **delete** on your keyboard to remove this area. Then press **ctrl + D** to deselect any selected areas.

Next we will create a new layer called **magnifying glass handle** using the **pencil** tool from the tool palette. It is one of the options under the **brush** tool. Making sure
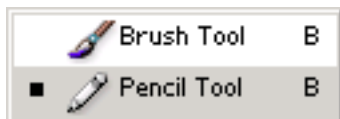
foreground colour is still set to orange set the brush size for the pencil to 13pts. Then click once at the edge of the orange circle. Move the cursor to an approximate angle of

45 degrees and about 2 inches distant from the edge of the circle and hold the **shift** key while clicking once with your mouse. This will automatically draw a straight line

from your first dot to the 2nd point. Merge the Handle layer and the rest of the

magnifying glass. We will now apply a style to this layer to give the magnifying glassa 3-D look about it.

In the **layers** palette, with the magnifying glass layer active, click on the **layer style** button. It is the button that looks like a little "**f**". This will then bring up a list of style types that you can apply to your layer. From this list choose **bevel and emboss…** This will bring up the **layer style** dialogue box that will present you with a number of options for changing the characteristics of the styles:
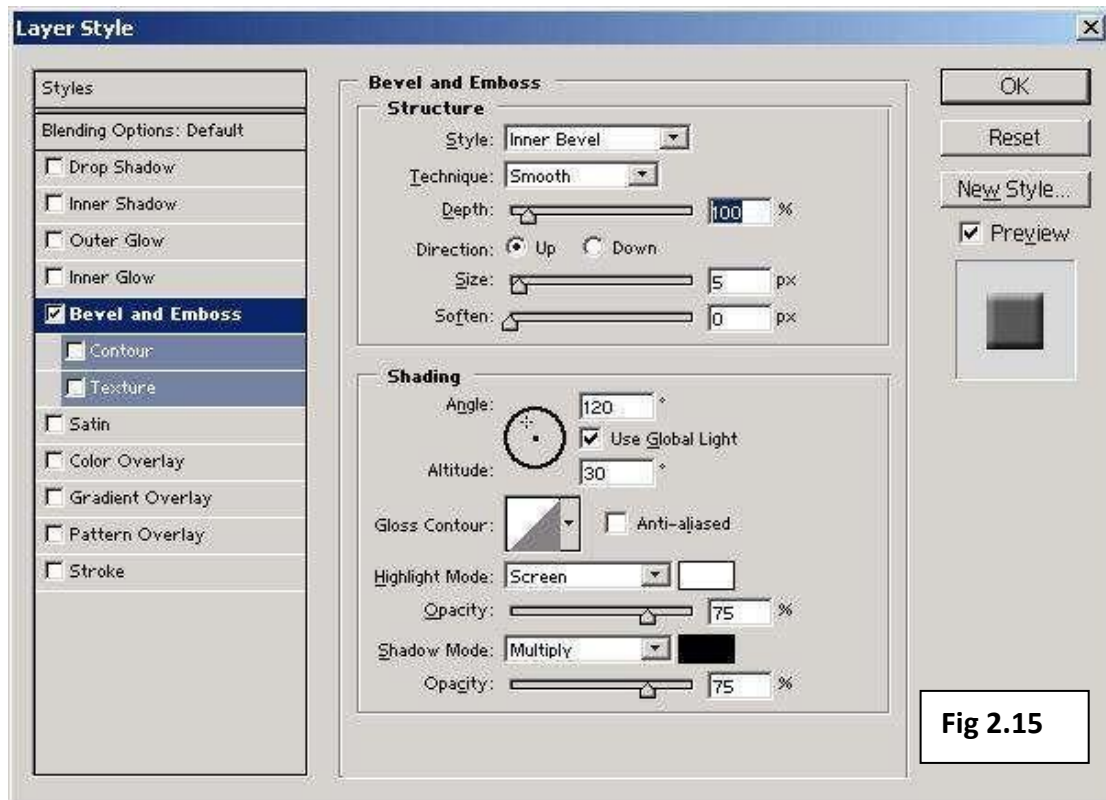

Fig 2.15

Depending on the effect you want to achieve, these options can be changed from their default setting allowing you to create a wide variety of interesting styles and graphics.

Fig 2.16

In this instance though, we will maintain the settings as seen in **Fig 2.15** by clicking **OK**. This will give us the style as seen in **Fig 2.16** below. We will now add the initial **D.I.** (as in Discover Ireland) on a separate layer so that they can be "seen" through the magnifying glass.

First, change the foreground colour to **white** and then select the **writing** tool (it looks like a capital ck in the middle of the magnifying glass. This will

automatically create a text layer for you and give you a prompt to start typing. Type the letters "D" and "I". Next we will use the tool options to change the font and size

Fig 2.17

Fig 2.18

of the text. Making sure that you are still using the text tool, select the text. Then in the tool options at the top of the screen, change the font to **Book Antiqua** and the size to **72** pts. Set the font style to **bold**. Next you should click and drag the text layer in the **layer palette** to below the magnifying glass so that the text appears below where the "lens" will be in the image. You will also notice that Photoshop will automatically name any text layers with their content so that you know exactly which layer you are dealing with.

With the text layer active, we will now add a style to this layer. Again, within the layer palette click the style button and this time select **Drop Shadow…** This will put
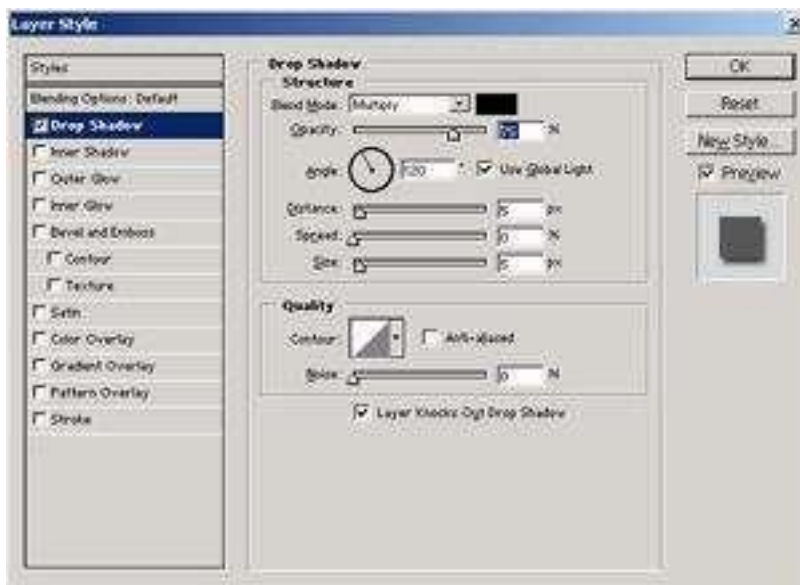
a shadow behind the text to make it look like it is floating above the map of Ireland.

Again we are going to leave the settings as they are, but be aware that you have a good many options to play around with keep this checked

every time you add a style to any layer, then your image will look like the "light" is coming from only one direction. If you uncheck it for different layers and styles, the light source will seem to be coming from a multitude of different directions. Again,

depending on what you want to achieve from your image, it may be a good idea tokeep the global light source to promote uniformity and consistency within the image. The final part of the image that we are going to add is a layer that will contain the"lens" of the magnifying glass. We add this layer **between** the text layer and themagnifying glass layer and we'll call it **Lens**.

Fig 2.19

Make the magnifying glass layer active and select the magic wand tool. Click in the centre of the magnifying glass to select a circular shape. Then make the Lens layer active again. Select a light

blue colour as your foreground colour. In this case we will use the colour code **#3399CC** to fill the selected area in the Lens layer. To fill the area use the paintbucket tool as before. The contents of the text layer should now be obscured. Next we will add a "reflected light source" to the lens. This is achieved simply by using a large brush with a white foreground colour. Select the brush tool and set the brush size to **45**. Make sure the **Air Brush** option is selected in the tool options.

Fig 2.20

Then in the top left of the image in the Lens layer, click the mouse once or twice to add the white "shine" to the blue "lens".

As we still cannot see the content of the text layer, we must reduce the **opacity** (the extent to which the content of the layer is visible) of the Lens layer so that the

contents of the layers beneath show through. In the layer palette, there is a facility for reducing or increasing the opacity of the layer, which is by default set to **100%**. We want to knock the opacity of the Lens layer down to about **55%**.
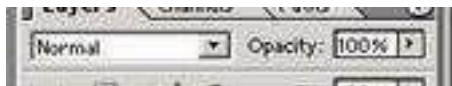
All that remains to be done is to crop the image so that there is not somuch wasted space. Select the **crop tool** from the tool palette and select

an area around the logo that is neat and that does not contain so much unused space. To crop, just click the accept button in the tool options, just as you did when you wanted to accept the transformation of an object. You should then end up with an image that is approximately **186 pixels wide** and **218 pixels high** (to check the size of

the image, go to the Image menu and then down to Image Size). You should end upwith an image similar to the one in **Fig 2.23** below:

Fig 2.23

The last thing that remains for us to do is to save the image in a format appropriate toits usage. Photoshop supports most image formats for a variety of functions. When
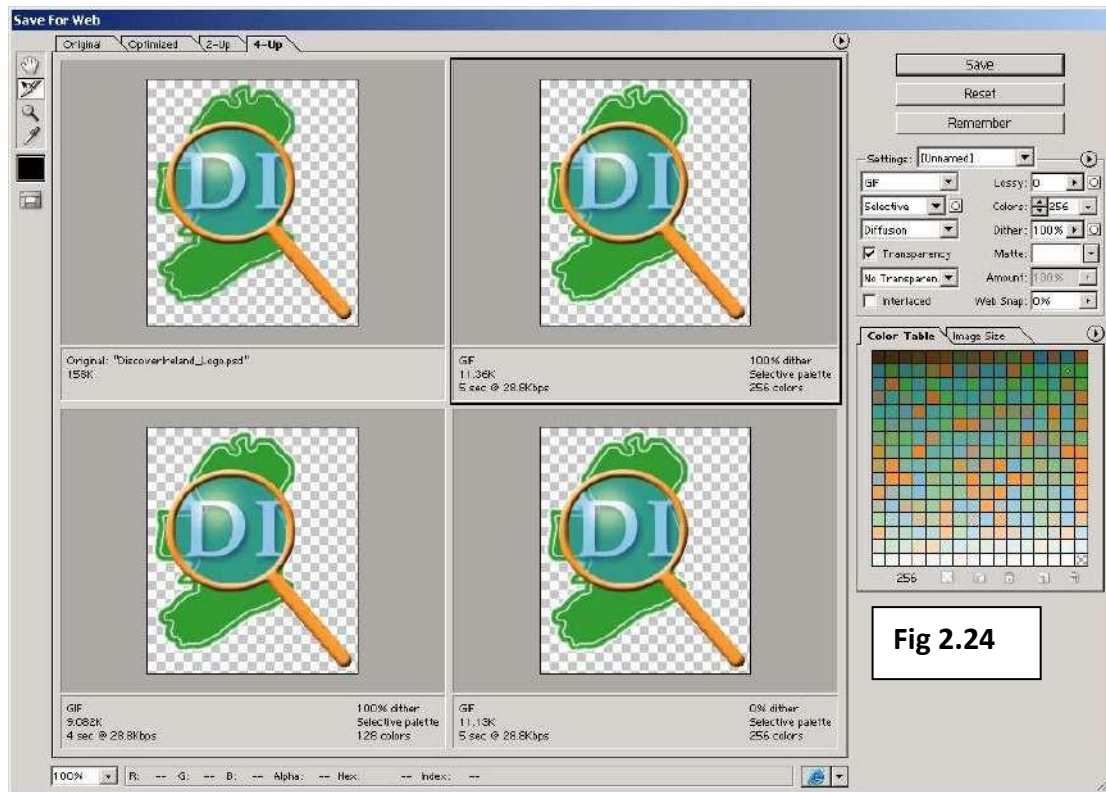

Fig 2.24

saving images for the web it is most common to save them as a **.GIF** or **.JPG**, where the former is used for graphics such as logos with simple colours and shapes. The latter is used where the image may contain complex images with millions of colours such as more detailed graphics or photographs. The **Save For Web** function under theFile menu will save the image as a **.gif.** GIF stands for **G**raphics **I**nterchange **F**ormat, and images in this format are optimised for image size and download time. They can also preserve transparency (which we have in this image for our background). We willsave this image for the web now. When you *do* save for web you are presented with a dialogue box (see **Fig 2.24**), which will give you important information as to the size of the image and the download time of the image at modem speeds. This will give youan idea as to how quickly users of your website will be able to see the image. Leaving the default settings unchanged, we will choose the **optimised** version, which will be the one with the black border around it. Click the save button and then when the second save dialogue box presents itself, save to the PSImages folder on the desktop, without changing any of the other default settings. Our final image is presentedbelow:

Creating Banners:

In this next section, we will look at creating a banner to advertise our **Discover Ireland** website. This image will be longer than it is wide so that it will fit onto a standard web page. It will also incorporate the logo we created in the last section along with some text and further graphical effects.

To begin, we open a new image (**ctrl + N**). In the new image dialogue box, name the image **DiscoverIreland_Banner** and set the dimensions to **600 pixels** wide and **100 pixels** high. Rename your first layer, Layer 1 to **background**.

Next we want to copy the Discover Ireland logo into this new image. Start by opening the **gif** version of the logo (**ctrl + O** and then browse to the location of the File – the folder called **PSImages** on your desktop) and selecting the whole image (**ctrl + A**). Once the image has been selected, copy it (**ctrl + c**) and then switch to the new image.Next we need to create a new layer and call it **logo** and then paste the logo into this layer (**ctrl + v**). You will end up with the logo, partially displayed,

Fig 2.26

because its

dimensions differ from the banner (**Fig 2.26**). We will now reduce the size of the logo using the **Transform** function under the **Edit** menu, as we did in the previous section.We use the **scale** function within the transform sub menu. You may need to resize the image window in order to see all the transform handles around the logo. Once you cansee all the transform handles, hold down the shift key (this maintains the ratio between the height and width of the newly scaled image) and drag the bottom right

Fig 2.27
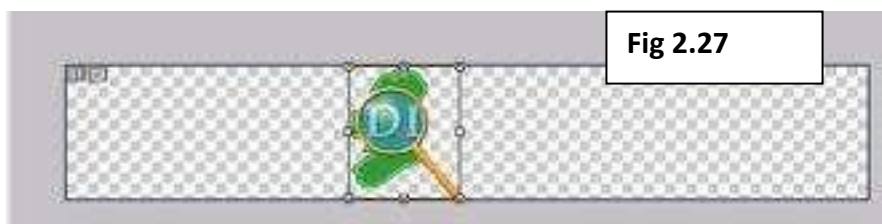
hand handle until the image fits into the canvas. Once you have

done

this, accept the transformation and move the logo to the left hand side of the canvas.

Next, we are going to add some text to the banner. Using the **DI** that is already there, we want to have the slogan "Dive into the myth..." on our banner. To do this we select the **text** tool. Set the font to **Book Antiqua**, the font size to **36pts**, the font styleto **bold** and the font colour to the same green as Ireland in the logo (**#339933**). Then click the cursor next to the Logo so that it will line up with the DI and type "ve intothe myth…" When you have this typed you may need to move the text around so that you have it as close as possible to looking like the whole line has been typed out so that it reads "DIve into the myth…" (See **Fig 2.28**).

Fig 2.28

The next thing we shall add to the image is a green ellipse to cover most of the right hand side of the image. We will then move the ellipse below the writing and change the colour of some of the text so that it is readable against it.

The first step involved is to select the shape tool and choose ellipse from the shape options. Making sure green is our foreground colour, draw a large ellipse so that it obscure most of the right hand side of the image up to the "O" in "into" (you may need to use the transform - scale function to get the right shape). The layer created will be a vector mask shape. To add effects and styles to this shape later on, it must be in a bitmapped or **rasterized** format. To convert from a vector layer toa raster layer, make sure the layer is active and right click on the layer in the layer palette. From the menu presented, choose **rasterize** layer. Once you've done this, rename the layer to **green oval** and move it below the text layer by clicking and dragging in the layer palette.

Fig 2.30

Next, we will select the text in the text layer from the "O" in "into" to the end of the slogan using the text tool. Of course, the Text layer must be active to do this. Once selected, change the colour of the selected text to white (**#ffffff**). At this stage we will

fill the background layer with the colour white as well. Make the background layer active and use the **paint bucket** tool to fill the entire layer, making sure the foreground fill colour is set to white. When this is done we end up with an image similar to **Fig 2.31** below.

Fig 2.31

Our next step will be to add a **drop shadow** style effect to the text, green oval and logo layers. For each layer in turn, click on the style button in the layer palette and select drop shadow from the list of styles. Within the drop shadow options, change theangle of the light source to **45 degrees**. We end up with the image below.


Fig 2.32

Next we will add some text to tell the viewers of our banner where to go to see the website. We select the text tool and click to add the web address:

www.discoverireland.com to the bottom right hand corner of the image. Make sure this new text layer is at the top of the layer order in the layer palette. Reduce the font size to **14 pts** but retain the other text settings. Also note that if you are having difficulty clicking and dragging the layers contents in order to position them, you can always use the **arrow keys** on the keyboard for more precise positioning.

The final part of our image will be a light pattern going in a wave motion from left to right. To achieve this, there are a number of steps we must carry out first. Start by creating a new layer called **pattern** above the logo layer but below the text layers. Select the brush tool and then select the brushes palette. From the brushes palette, we will load an extra set of brushes, which will contain the brush pattern we want. Click on the arrow next to the title of the brushes palette and then choose Load Brushesfrom the presented menu (**Fig 2.33**). The Load brushes dialogue box will then appear, from which you should load the **Special Effects** brushes (**Fig 2.34**). We then choose

the brush we want which will be the brush shape that will give us spiral/concentric circles as we brush (**Fig 2.35**).

Fig 2.33

Fig 2.34

Fig 2.35
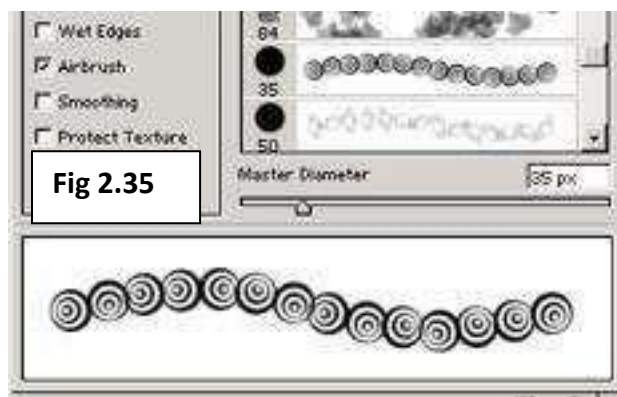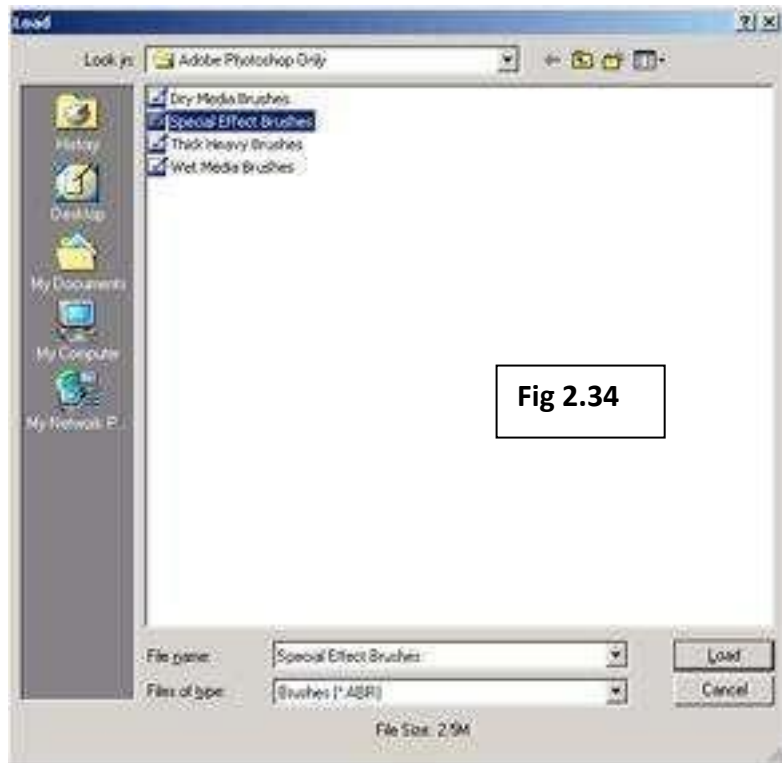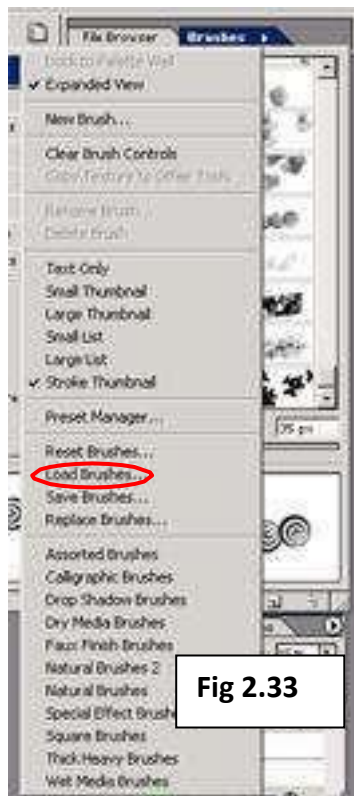
Leave the other brush settings as they are.

Starting from the left, with green as you foreground colour, click and draw a wave/crest, stopping when you get to the edge of the green oval. Change the foreground colour to white and continue your undulating waves. To finish the step, knock the **opacity** for the **pattern** layer down to **15%** giving you an image similar to the one in **Fig 2.36**

Fig 2.36

Our last step is to save the image in a format that is appropriate to its usage. This time,instead of using the **save for web** function (which is an equally valid option) we will

save the image as a **.jpg** file type (**JPEG** stands for **J**oint **P**hotographic **E**xperts **G**roup). A jpeg image is commonly used to display photographic or other continuous tone images on the web. It supports most colour modes and compresses images by selectively discarding data from the file in order to save on size. In Photoshop you canspecify the level of compression and hence the size of the image when saving as a jpeg image. When a jpeg image is opened it is automatically decompressed. However,the more an image was compressed to begin with, the lower the image quality. Of course the level of compression used is purely up to you, depending on your priorities (e.g. do you want the image to download fast, but not of good quality or do you want the user to see the image in it's full glory but have them wait a while) but remember, web users will not wait for more than a few seconds before they get bored and go looksomewhere else for an appropriate image.

So, to save our Discover Ireland banner as ajpeg (the image should already be saved as a

.psd file as you have been working along), we select the **save as…** function from the File menu. From the save as dialogue box, choose **.jpg** from the **format** drop down list. When saving a jpeg, Photoshop will automatically add the word copy to the file name. You can of course change this

Fig 2.37

yourself later. Click the save button and you will be presented with the compression options (**Fig 2.37**). We want maximum quality for this image so set the quality to **12**. You will notice that the slider is now at **Large file** because we are using minimum compression. In **Format Options** select **Baseline ("Standard")** for a standard formatting. You will also notice that this dialogue box shows you the image **size** and how fast it will download at given transfer rates. When you're happy press **OK.** Your image has now been saved as a Jpeg and should look like the image below:

Fig 2.38

3. Digital Image Manipulation:

In this next chapter, we will look at manipulating digital images. We will be using digital photographs and manipulating them to suit our purposes. We will look at removing red-eye from photographs, removing parts of photographs and replacing them with other parts of the photo and brightening dark images to make the contents more visible.

Removing Red Eye:

In this section we will look at removing redeye from a photograph. In your PSImages folder on the desktop, there is a file called **redeye.jpg**. Copy this file and rename the copy **redeye_example.jpg** (*it is always a good idea to have a clean back up copy of your original digital image or photo so you can start again should you make any mistakes during the editing*). Next, open the file in Photoshop. You will notice the retinas of the man in this photograph are reflecting the flash of the camera causing what is known as red eye. We want to remove this, in what is a relatively simple procedure.

It is a good idea to make a copy of the layer and work with this copy for the same reasons as you work from a copy of the original image – it is safer and there is less chance of you deleting your image completely.

Fig 3.1

Once you have copied the layer, zoom into **200%** so that you have a better view of the eye area.

After this, we create a new layer called **redeye fill**. This layer will contain the colour that will replace the red in the pupil of the eye. We use a separate layer, again, as a precaution. You can never be too careful in using separate layers so that you don't completely

Next, select the **magic wand** tool. We will use this to select areas of red within the eye and then fill them with black. Make sure your **background copy** layer is active to select the red areas.

Fig 3.2

Make the **redeye fill** layer active and select the **paint bucket** tool. Change the foreground colour to black (**#000000**) and fill the selected area. Press **ctrl + d** to deselect the selected area. You will notice that the majority of the red area is nowfilled with black. However, there are still some noticeable red areas that need to be made less noticeable. To achieve this we will use the **smudge** tool as seen in Fig 3.3.

Fig 3.3
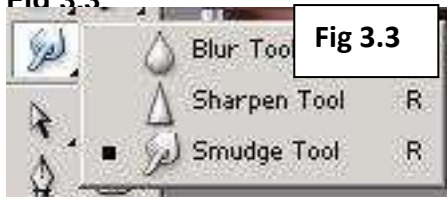
We will use this tool to blend the black and red so as that they are not so noticeably contrasted. We must choose a suitable brush size for this, and as this will be a delicate enough task, we will

use a small brush, of size **3**, so that we have better control over the area affected. Also feel free to increase the magnification further if this helps you see more of the area weare manipulating. So, making sure the **redeye fill** layer is active, begin smudging the black area outwards to mask and mingle with the remaining red areas. Do not smudge over the few white pixels remaining in the centre of the pupil, as these will help the

Fig 3.4

image retain a more natural look when finished.

When you're finished smudging, reduce the magnification to **100%** again so that you can see the result. Notice the difference already between the eye that has been

edited and the one that hasn't. There is a marked improvement.

When working within such a finite space as the pupil of the eye, it is quite possible that you will make mistakes. To undo one single mistake, you can use the keyboard shortcut **ctrl + z**. However, if you wish to undo a whole series of commands, it is best to use the **History palette**. This contains a record of a significant proportion of the last number of commands that you have made, be it opening the image, selecting a

Fig 3.5

particular tool or even using a particular tool, as we can see in **Fig 3.5**.

It is also worth noting that if you want to completely undo **all** changes you have made to a Photoshop document, you can use the **Revert** command, under the file menu, which will revert the image to the previous saved version of it. Make sure you want to be rid of all changes though, or you could loose a full days work.

Getting back to the task at hand, repeat the steps that you followed for the first eye to remove the red in the second eye. You should be saving your image the whole time asyou go along. Then, when you are satisfied that you have removed enough of the red eye, save the image as a **JPEG** image called **redeye_filled.jpg**. You can see the difference between the before and after below in **Fig 3.6**.
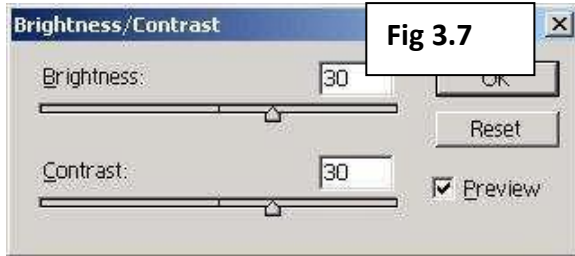

Before   After

Fig 3.6

Brightening a Photograph:

In the photo that we have used for the red-eye example, you will notice that the imageis quite dark. Photoshop provides facilities for **brightening** images that are too dark.

Fig 3.7

Open the **redeye_filled** image in Photoshop. Go to the Image menu and select **Brightness/Contrast** from the Adjustments sub-menu. For the purposes of this example, we have

increased the **brightness** to **30** and the **contrast** also to **30**. Make sure the **preview** option is checked so that you can see the changes to the image before you click OK. Ifyou had just increased the brightness, you may find that, although brighter, the figure in the picture also looked paler. By increasing the contrast as well you maintain the brightness/contrast balance. When you are finished click Save As under the file menu (**do not** click save as you may want to retain a copy of the image as it was before you made the changes to the brightness and contrast). Save the file as **Brightness_Example.jpg** within the PSImages folder. **Fig 3.8** shows the result.

Before   After

Fig 3.8

Cleaning Up a Digital Photograph:

In this section we will look at cleaning up digital photographs. We will look at how to remove blemishes from an image and replace them with more sightly aspects of the

image. This technique is sometimes known as "airbrushing" and is used quite widely in the fashion industry where models faces are "touched up" digitally before publication. In our example, however, we will be touching up an image of UCC's grounds and not any famous models!

In your PSImages folder, you will find a picture called **ucclitter**. Make a copy of this image and call it **ucclitter_example**. It is this copy that you will be working from. Open this picture and as we did for the red-eye reduction, we copy the entire image to a new layer. The picture is of the lower grounds of UCC by the river. As we can see there is some unsightly litter in the picture, which we would like to remove so that thepicture could be used in promotional literature.
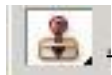
To do this we use the **clone stamp** tool. Its operation is simple enough –you press the **alt** key and click on the area that you want to copy *from* and then left click the area you want to copy *to.* Before we start the cloning process, we must choose a suitable brush size. The smaller the area you arecloning to, the smaller the brush should be. And although this is quite a simpleprocess, it can be quite delicate so remember to use your history palette if you make mistakes.

The first area we will clone from is the darker green area below the small piece of white rubbish by the edge of the river. We will use this green area to cover the rubbish. Use a brush size of **3** for this. Again, feel free to zoom in, in order to have a greater view of the area you are working with. Select the area to clone from by pressing ALT and clicking. Then paint over the white rubbish. The result can be seen below in **Fig 3.10**.

Before   After

Fig 3.10

For the other larger pieces of rubbish, choose a larger brush of size **19**. Select an areato the left of the black bag to copy from. Give your self plenty of room to manoeuvre

or you could end up copying from where you want to copy to – meaning that you will just redraw the rubbish in a different place. We see the result in **Fig 3.11** below.


Before   After

Fig 3.11

Image Resizing:

When working with digital photographs, it is often necessary to resize them to more manageable sizes in order to print them or to use them on the web. On the web, theuse of thumbnail pictures is common place where by a large number of pictures need to be displayed but where the site owner does not wish to overburden their server or the user's connection with large images. In these cases, the thumbnail would act as a link to a separate page containing the image.
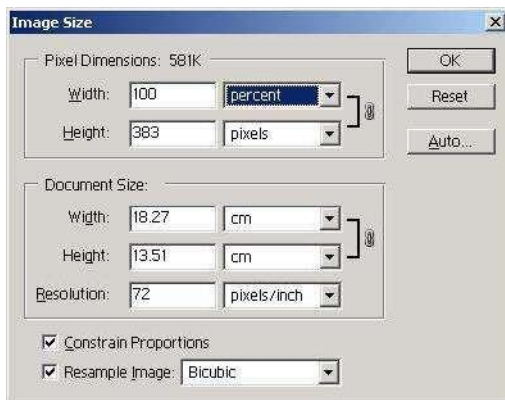
To produce a thumbnail image is very simple. Under the Image menu select the Image Size option. The **Image Size** dialogue box will then be presented, allowing you to resize the image to suit your purposes. If youwish to retain the ratio between height and width, keep the **Constrain Proportions** box checked. You can also specify the dimensions as percentage of the original size and can change the resolution for printing purposes too.