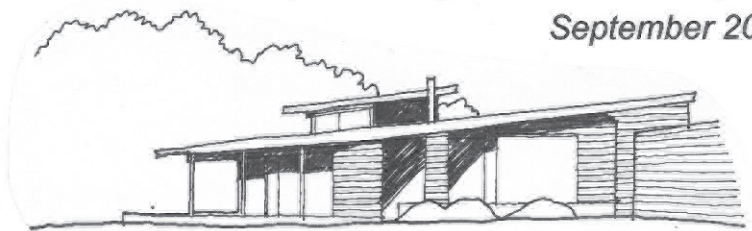
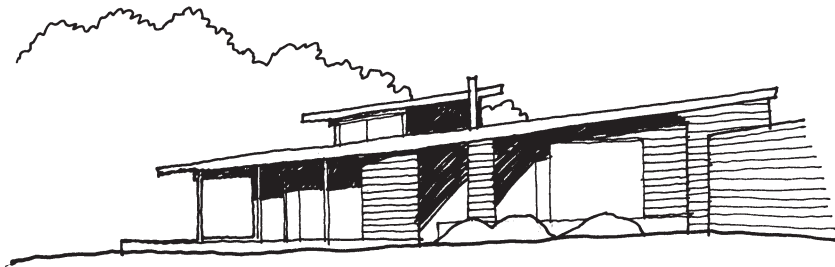


ROTORUA DISTRICT COUNCIL
LAKES A ZONE

DESIGN GUIDE
for **BUILDINGS**

September 2002





Low profile buildings of simple, contemporary form, and mid to dark finishes, can be unobtrusively nestled in to the lower slopes and vegetation of the lakes landscapes. Even with glazed front facades, large overhangs can provide shading to prevent these glinting in the sunlight.



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LAKES A ZONE

DESIGN GUIDE for BUILDINGS September 2002

The Lakes A Zone is an area where outstanding natural features and landscapes still dominate over the built environment. There are places where built development can sit comfortably within the landscape.

The purpose of these guidelines is to help landowners, developers and designers in the Lakes A Zone to design with the naturalness of the area in mind.

By recognising and designing sympathetically within the existing landscape character you will provide consistency and visually sensitive development and therefore assist in maintaining the high quality landscape and natural character.

When contemplating a new building, or a substantial addition, it would be wise to involve an Architect, and Landscape Architect, at the beginning, and discuss your intent with the Council. A list of registered practitioners is available from Rotorua District Council.

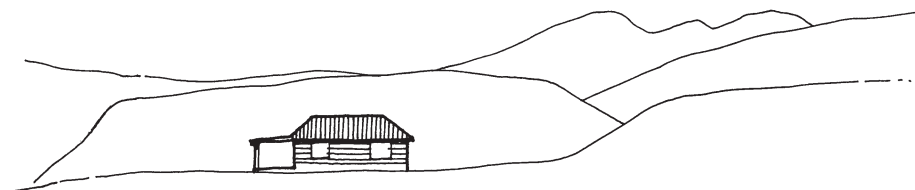
Following the guidelines will aid compliance with the District Plan Policies, Objectives and Rules, in particular, the Rules for Buildings. The aim is to assist in the design process through describing and showing some sensitive design. This Guide describes buildings of a scale generally “permitted” in the Lakes A Zone. This allows the following as permitted activities: *“any building (except for Marae buildings) where the maximum height does not exceed 6 metres above ground level and where the exterior walls do not exceed 5 metres, provided that chimneys may exceed the maximum height by up to 0.5 metres”*.

A proposal to exceed these height rules and extend a building to 7.5m in height should conform with the design principles below and will then be approved by Council.

SITING BUILDINGS

The choice of siting for a development is one of the most important decisions to be made. When considering siting, it is important to place buildings 'in' the landscape, rather than 'on' the landscape.

It is possible to site development 'in' the landscape by using existing landscape features, including the natural landform and vegetation, any existing buildings and structures, to help the development fit within an existing pattern.



By keeping development away from prominent landforms, off the sky-line and tucked down in to a lower landform or vegetation, any buildings will be less obtrusive.

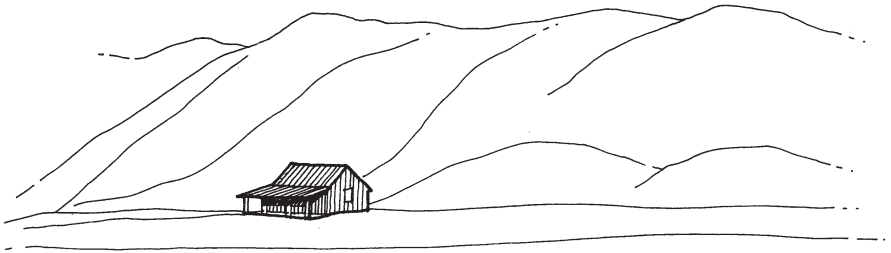
Often there are several alternative building sites that could be considered. Sometimes a small shift, a change in elevation or orientation, would make a building look more comfortable in the landscape, and may better exploit local microclimate.

Existing vegetation within the landscape can often be used to help screen or mask development. Total screening is not necessarily the desired outcome and it is possible to use existing vegetation to screen or mask parts of a development while still allowing views to be gained from within the development.

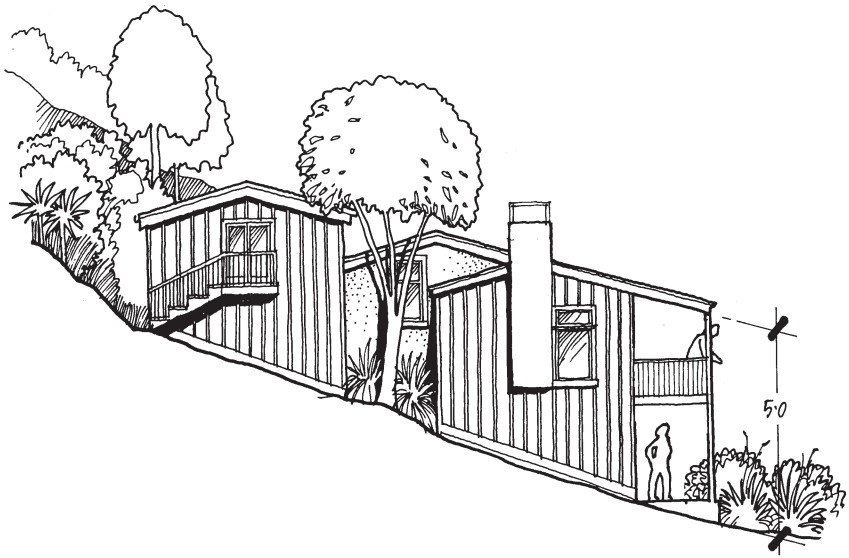
Existing or new vegetation can help visually soften contrasts between a building and its setting.

When siting a building, aim to:

- **Have a backdrop of land, not sky.** The skyline should not be broken by any building if it can be avoided, especially as seen from public places - roads, reserves and lakes. The slope behind should frame the building, and possibly reduce wind exposure too.

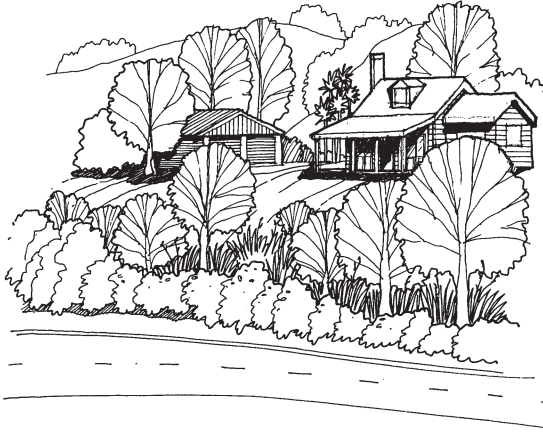


- **Be near a change in landform** eg. at the base of a slope; or on a terrace partway up the hillside; or tucked down into a fold of the ground.
- **Align the building with the land.** Run the length of the building with the direction of the land, not at an angle to it.
- **Take care with views.** Do not site a building where it will interrupt a view unnecessarily. When building to take advantage of lake and mountain views do not leave the site exposed to the prevailing winds. Instead preserve vistas. Provide shelter and seclusion, peeking and framing small portions of the lake and mountain views. Vary the views from different parts of the building, different parts of a site.



- **Minimise excavations.** Where a platform is cut to sit the building down into the landscape, the cut and fill slopes should be carefully shaped to blend them in to the surrounding landform. There should be no harsh lines or sudden changes. Carefully shape the land up around the buildings in the scale and direction of the natural landform. Once finished the buildings should look tucked down into the natural landform shapes - no artificial looking bumps or banks.
- **Take care with the siting of every structure.** It is pointless to carefully site a house if a shed or garage is just plonked down without thought to how it relates to the house or the landscape.
- **Do not leave a small structure on its own.** Either attach to another building (eg. as a lean-to); link with other structures with walling, fencing or planting; or, dig it right into the ground.

- **Keep well back from the road.** Buildings should not cling to the roadside as in urban properties. Sit them back and mass vegetation between the road and building, to help them look set back further.



- **Be viewed amongst or against substantial vegetation.** Trees and large shrub masses help considerably in relating a building to the landscape, and providing shelter and shade. The vegetation should mass around the ends of buildings and follow the landform, contributing and linking to the general vegetation framework. The vegetation must be large or dense enough to relate to the size of the building - perhaps a casual mix of fast and slow growing species, preferably local native species, or, non-invasive species from elsewhere.
- **Group with other buildings.** Place a building parallel or at right angles to other buildings to form a cluster and (even partially) enclose a space. Group as close as possible allowing for manoeuvring and expansion. Do not site any building at skew angles to another if they can both be seen from the same viewpoint. Create sheltered enclosures for yards or courts.

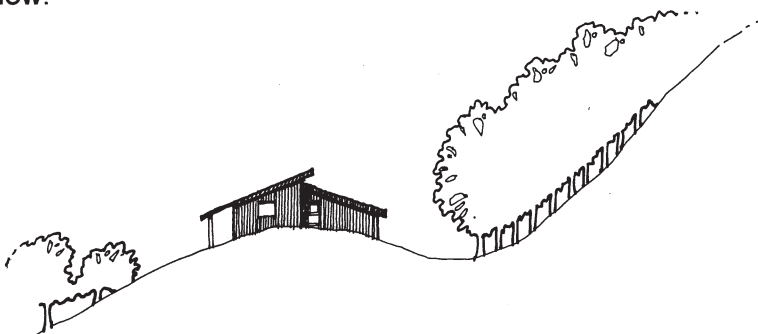
The grouping is especially important on more flat and open land, where the relationships between buildings become more significant than the relationship to the landform.

- **Relate to other buildings of similar scale, shape, materials and colour.** Create a tight building cluster rather than a scatter of separate buildings. Do not place buildings of a different size and shape near each other as their differences will be emphasised - or have screen vegetation so that the contrast is not visible.

EARTHWORKS

Earthworks are often inevitable with development in this hilly and broken landscape. Earthworks might be necessary to form building platforms, to cut an access track or driveway and even to site a yard or outdoor living areas. A number of the buildings illustrated assume excavations to somewhat nestle the structure in to the landform. However, compliance with earthworks controls will require a site specific assessment.

Earthworks change the natural drainage, geological and vegetation patterns in the landscape. Keep earthworks to a minimum to allow the landforms to retain their natural characteristics and minimise changes in stormwater surface flow.

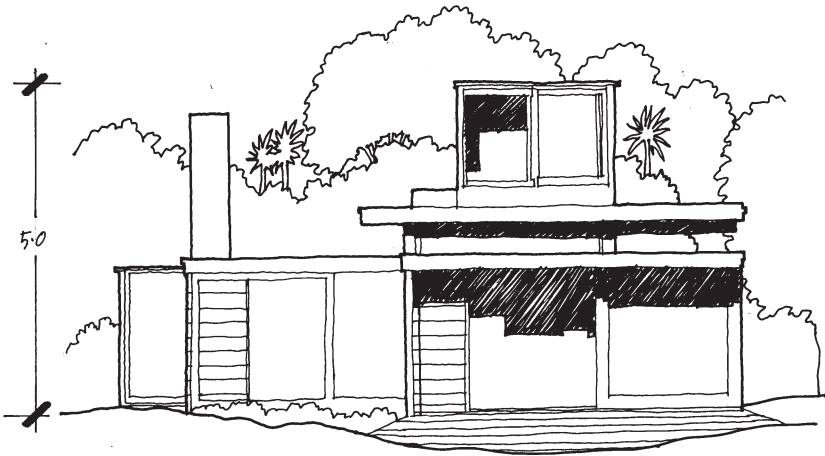


Retaining natural contours on a building site also encourages imaginative design solutions for changes in floor level. Step buildings and building groups up the natural slope so that they appear located with the lie of the land. This can avoid the large scale earthworks or expensive construction techniques necessary to place a development all at the same level.

BUILDING DESIGN

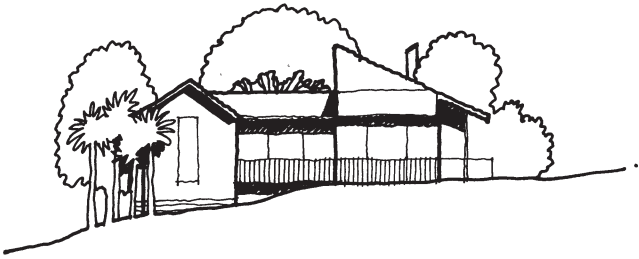
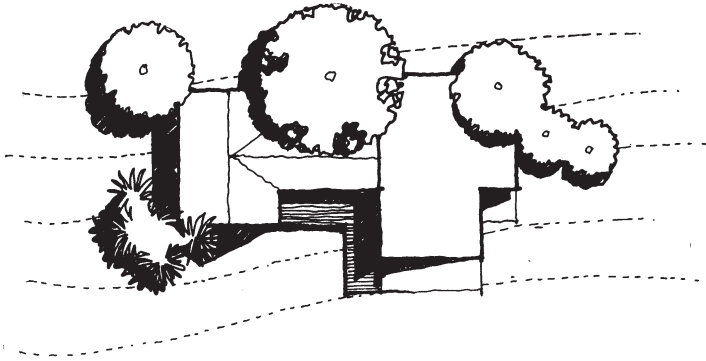
1. Aim for low profile buildings.

The proportion should be much wider than high, to relate buildings to the ground. A building should hug the slope of the ground.



2. Roofs

The lakes area earlier had simple single storey houses with roof pitches generally less than 30° , and these remain appropriate. Roof pitches from shallow to steep allow for traditional or modern design expression, and a relationship with the associated steeper or more gentle terrain. Have the same, similar or complementary roof forms on different buildings in a group, or on buildings visible in the same view.



3. Modulation

Break the length of a facade with steps in, to avoid annoying reflections from extensive glazed areas, especially as viewed from the lake. Overhangs, verandahs and pergolas also help break and visually soften facades.



4. Shading Devices

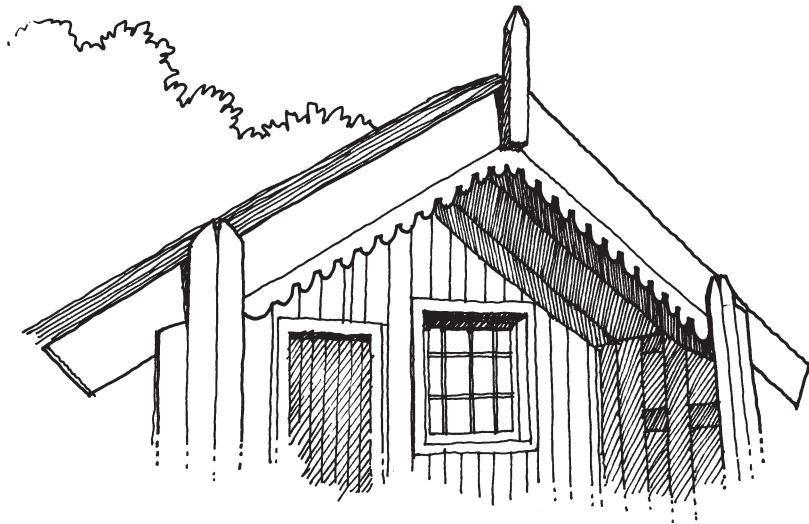
Use overhangs, verandahs, awnings, pergolas, louvres etc to create shade and 'break up' the facades of buildings. Ensure these have a surface finish darker than 37% reflectivity.

5. Avoid prominent basements or foundations. Have minimal foundations or basements. Extend materials right down to the ground rather than stack different materials, colours, textures (foundation, walls, roof) together like a 'liquorice allsort'. If this layering cannot be avoided, then continue the same colour eg. below a weatherboard wall, continue with open boarding across a pole foundation, with all the boarding coloured the same mid-dark tone.

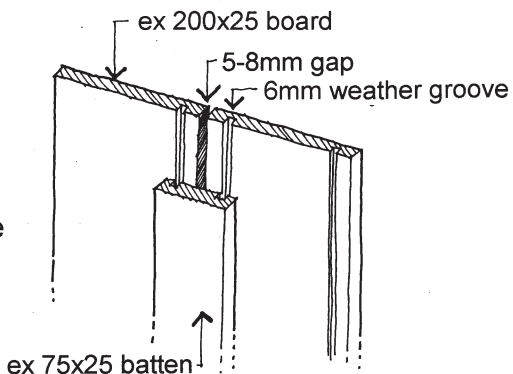
6. Separate garaging from houses. Rather than having garages with interior access, which substantially increase the bulk of a residential building, provide separate garaging. Having a garage separate and closer to the road can reduce the amount of driveway, earthworks and permeable surfacing required. To reduce the visual scale, have individual rather than double garage doors. Carports are likely to be less intrusive in the landscape. Tuck garages and carports in to a vegetation mass.

MATERIALS

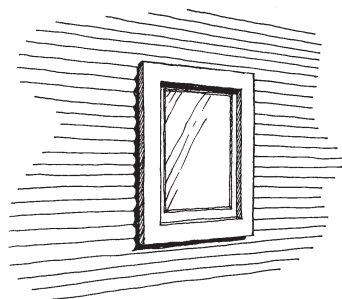
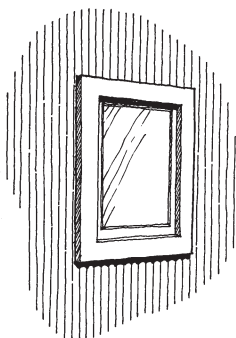
Historically buildings in this landscape have generally been of timber construction. This looks comfortable and continues to be appropriate in this lakes landscape.



Timber can be machined into various profiles, and two popular profiles are weatherboard or board and batten. Board and batten has an appropriate texture to the location when milled from 25mm timber, and the texture is interesting if the battens are 300mm or closer together.



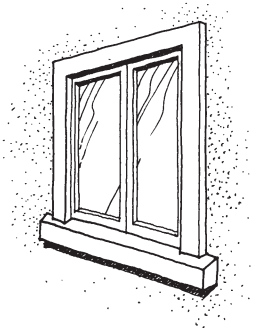
The same effect can be achieved quite economically using sheet materials, like plywood or fibreboard, which looks appropriate with closely spaced battens fixed over and generous thickness architraves around windows and doors. Dark, corrugated *Onduline* can also look most appropriate with weathered timber facings. A weatherboard texture can also be achieved with *Hardies Weatherboards*.



Coloured corrugated steel fits in well on roofs and walls, with vertical or horizontal profile

Brick is not a traditional material of this landscape. Care is also required in using materials like plaster for walling, in that a building can look too “thin” or insubstantial.

Textural interest can be introduced by providing substantial sills to windows and possibly raised mouldings to doors and / or windows.



External additions, such as satellite dishes, should be screened from view or sited so that they have minimum visual impact. Plan and cable early to enable this. External burglar alarms should be carefully located.

COLOUR AND REFLECTIVITY

Sympathetic exterior colours can be very effective at integrating built development into the landscape. The lightness or darkness of the colour is the most important consideration when trying to nestle a building in.

Generally landscapes, especially those which retain a high proportion of indigenous vegetation, are mid to dark in tone, that is, they have a low reflectivity. By ensuring that an element that is being introduced into the landscape has a similar level of reflectivity to it's background, you will assist in making that element less visually obtrusive. An assessment has been carried out of the reflectivity of the landscape in the Lakes A Zone. In response to this assessment, a reflectivity limit of 37% has been set as a maximum permitted for buildings in the Lakes A Zone area.

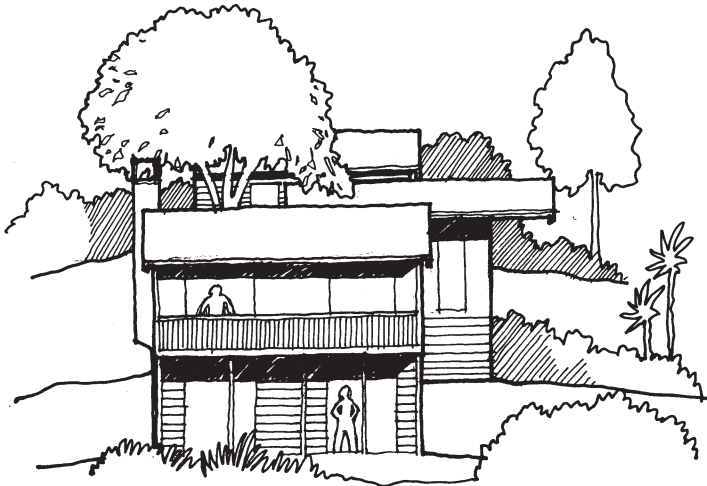
This reflectivity limit is not intended to make development invisible in the landscape, but to limit the degree of contrast between development and it's landscape setting. Use of these mid to darker colours is required for all external surfaces of

buildings, including window frames (ie. no raw aluminium), spouting, and trim. It applies to a shed as much as to a house. When repainting an existing buildings , continue with the original colour scheme, or change the colour scheme to fit with the new regime of 37% reflectivity or darker.

Glass

Windows should minimise their reflectivity with shadows from overhanging eaves etc. and the use of clear, grey-green or bronze glass with recessive tints. Highly reflective mirror glass should not be used.

If large areas of glass are to face towards the lake, ensure there is adequate eave, vegetated pergola or verandah overhang to shade it from catching sunlight and be visible from afar glinting. Also, visually “break” the glazed surface up into several panels.



Use of glass as a balustrading to outdoor spaces should be kept to a minimum, because of its reflectance. Restrict its use to narrowly framing key vistas from discrete viewpoints.

Remember too, that white or silver linings to curtains and blinds can have high reflectance especially when pulled during the day such as at times when the house is vacated. Low-reflectance linings, timber blinds or louvres are much less obtrusive. Overhangs will also assist with shading.

Subtle colour use of the mid-to darker colours can do much to make buildings a greater asset in the lakes landscape. Even mis-matched groups and badly proportioned buildings and structures can be better related to one another and to the landscape through the use of suitable colour.

If a building is lighter than the general colour of the landscape, or has smooth and shiny surfaces, it draws attention to itself, and looks bigger and somewhat shapeless. Usually it is best if buildings are not focal points in this way.

Remember, the colours of nature are mostly very muted, they are soft and neutral. Bright colours are absent or confined to small well-defined areas set against a muted background. Aim for similar colour use on buildings. Study the background, the landform and vegetation. Consider the relationship of buildings, and different parts of a building, to the background elements. Develop colour schemes to blend and contrast subtly with the background.

Aim to coordinate or complement the colours of various buildings in an area, even on neighbouring properties, to make them all look as if they really do belong to that particular landscape.

Within each property be sure to coordinate the colours of all buildings and structures - house garage, sheds, tanks, etc.

Some notes on colour use which may be useful when deciding on a colour scheme.

1. As roofs reflect more light than walls, they appear lighter if the whole building is painted one colour. Roofs usually need to look darker than the walls to visually anchor the building down to the ground. Thus the roof must be painted quite a lot darker than the walls to compensate for the higher reflectivity, and eventual greater fading. Make roofs at least 10% darker than walls.
2. Most houses look better if they are not light or bright focal points. Often merely painting the trim darker improves the look of a house considerably, particularly if the roof and walls were already darker.
3. Buildings of different shapes and sizes that can be seen in the same view can be better related if the same/similar roof and wall colours are used on each one.
4. To define the shape of buildings, the junction between the roof and walls can be accented. But this accent line, the bargeboard/fascia and gutter should be darker than the walls, probably the same colour as the roof, or darker. Do not pick out this line in a light colour.
5. Paint the whole of small buildings in one colour (tanks, small sheds etc.). Any colour changes and accents will just make them look even smaller and fussy. Use one colour that relates to the landscape - the same as the walls of any adjacent buildings. Do not use a very dark colour unless sited against dark vegetation.
6. Accenting large doors with the darker colour will help to break up large shed walls. Small or poorly proportioned features should not be accented - just paint all the same colour as the walls (window frames, trim, etc.).

A simple method to choose colours to nestle a building into a particular landscape:-

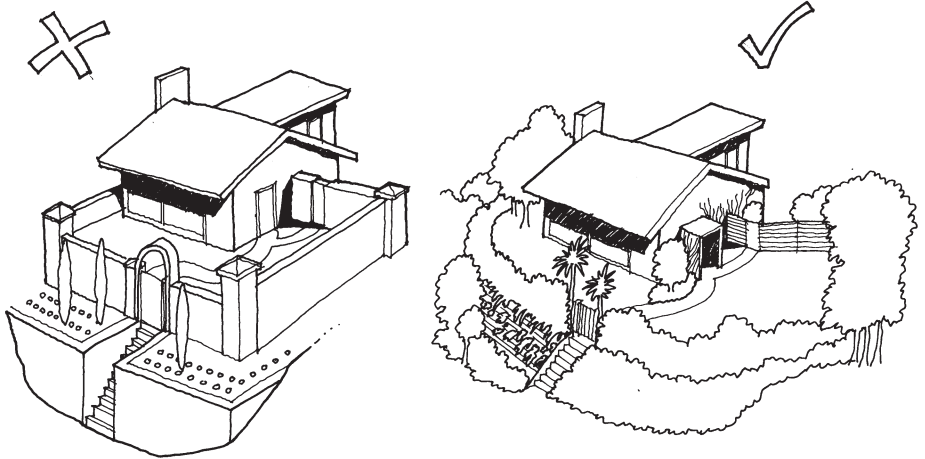
1. Assess the colours of that landscape from the middle distance. Photograph at different times to see the changes.
2. With colour samples choose a colour that blends with that backdrop throughout the different seasons. Camouflage is not the aim, so the colour should not be a perfect match. The backdrop colour will vary with the seasons, with different lighting etc. so that a match is impossible. Yellow-greens and blue-greens should not be chosen as they can appear as a clash with natural greens. If you want to use greens, it is better to use darker, murky grey-greens.
3. It is important to choose a colour of about the same depth, as the background, not lighter nor much darker. Use this colour for the walls of buildings. For more smooth materials, choose colours slightly darker than the background.
4. Now select a much darker colour compatible with this wall colour, and with the landscape, for the roofs, gutters, and bargeboards / fascias.

Night Lights

It is important to consider views of the development at night. Where possible direct lighting of adjacent roading, reserves, lakes, etc, should be avoided to ensure that a nuisance is not created. This can be done by using directional light fittings and light screens. Also, take care to avoid buildings appearing to be so lit up as to be 'on display'. Confine and limit light spill in this place where darkness and the night sky is appreciated.

Fences, walls and retaining walls

Fences and walling in this natural landscape should be minimal and more natural in character rather than appear as extensions of buildings. Thus, avoid solid masonry fences and walls. Opt for natural timber fences combined with vegetation instead.



Driveways

Reduce the amount of driveway required. Locate the garage and house closer to the road to reduce driveway length, whilst still having them nestled in. Investigate options to share driveways between neighbours. Reduce driveway width as far as is practical.

Use low key and unobtrusive materials more natural in appearance such as asphalt, exposed aggregate concrete, well-laid soil and grass filled 'gobi' type block or other roughened surfaces on steeper sites. On more gentle terrain, local dull gravels or a grass track may be adequate. Keep driveway 'colours' muted in the grey/black range. Avoid showy reflective colourful surfaces such as glossy terracotta-coloured stamped concrete.

