

Site impacts

Introduction

Site issues means the physical change to the land that results from building your home. The sustainability of your home can be improved by reducing the severity of those changes.

Site issues manifest themselves as modifications to the local habitat (biodiversity), soil and relief (topography).



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Aim to tread lightly and lessen the impact of your building's footprint.

Noise impact has also been included here because it examines the impact of surrounding land uses on your site. It is the site impact created by your neighbours. There are design options to minimise the impact of noise on the peaceful enjoyment of your home.

BIODIVERSITY IMPACTS ON SITE

Local biodiversity is the variety of life forms, and the ecosystems of which they form a part, that exist on your property. The Biodiversity Impacts On-Site fact sheet examines ways to minimise the destruction of biodiversity and to retain as much habit as practicable, while accommodating your home.

Replanting cleared sites is definitely no substitute for leaving native vegetation intact.

Once land is cleared it is almost impossible to recover the full suite of indigenous species, remove introduced species and restore ecological processes. To minimise biodiversity impacts:

- > Choose a site that has been cleared, wherever possible.
- > Avoid unnecessary disturbance to vegetation and soil.



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- > Limit clearing outside the building footprint. Vehicle tracks, workers' carparking and rubbish dumps should be concentrated in one area.
- > Retain significant habitat trees.
- > Rehabilitate disturbed areas with saved topsoil and salvaged plants.
- > Use indigenous (local native) species in the garden.
- > Maintain links between adjacent bush and your garden.
- > Avoid introducing environmental weeds into your garden.

EROSION & SEDIMENT CONTROL

Erosion & Sediment control practices are used on building sites during construction to prevent sand, soil, cement and other building materials from polluting waterways.

Efficient erosion & sediment control usually requires little effort. Benefits include cleaner waterways, healthier aquatic life and reduced clean-up costs to the community. Added benefits to the builder include improved site conditions and wet weather access. Time losses due to waterlogging will be minimised.

Objectives of erosion & sediment control

Divert uncontaminated water away from the construction site.

Minimise erosion by minimising site disturbance, stabilising disturbed surfaces and securing material stockpiles.

Prevent sediment contaminated water leaving the construction site.

Use diversion devices such as channels and earth banks to divert clean stormwater away from the construction site. This reduces potential for stormwater to become contaminated with sediment.

Trap suspended sediment using a geotextile filter fabric fence or straw bales. Use barriers to filter coarse sediment at all points where stormwater leaves the construction site.

Use only a single vehicle access point.

Cut brick, tile or masonry on a pervious surface such as grass or soil, to prevent sediment reaching drains.

Stabilise the site as soon as possible after construction with semi permeable paving, mulch, plants and/or turf.

Most local councils have written guidelines on erosion and sediment control. Ask them for information pertaining to your area.

Developments likely to create sediment pollution to land or receiving waters downhill may need to submit erosion and sediment control plans for approval by Council prior to work commencing.

SUSTAINABLE LANDSCAPES

Sustainable landscaping implies putting back much of what was in place before development.

Sustainable landscaping is not only about planting natives. It can include food-producing or 'Permaculture' gardens and planting deciduous shade trees to control solar access, provide habitat and shelter.

In dry areas, that were not formerly wetlands, planting low water-use indigenous vegetation (xeriscaping) greatly reduces water consumption.

Indoor plants can be used to filter and improve indoor air quality

Vegetation can be used for screening, as a windbreak and to frame select views.

The topography of a garden should ideally reflect the original relief to minimise the impact on drainage patterns but bunds can sometimes be created to enhance visual and/or acoustic privacy.

NOISE CONTROL

Noise is "disagreeable sound". The perception of noise is therefore highly subjective.

Noise can be managed through careful site choice such as finding a property that is isolated from busy roads and industry.

Good design can also assist in managing external noise impacts. This can be achieved through site planning and use of appropriate materials and construction techniques.

Some design solutions

Locate quiet rooms as far away from noise sources as possible, without compromising passive solar design principles.

Install windows away from noise sources, if possible.

Position noisy areas together and away from quiet areas.

Avoid placing laundries, bathrooms or living rooms next to, above or below bedrooms without adequate sound insulation.

Provide extra soundproofing for teenagers' rooms and locate them away from adult living and sleeping areas and neighbours.

Locate driveways/garages away from bedrooms and living rooms.

Appropriate material selection can reduce noise levels within the home.

Choose wall and floor fabric with a high sound reduction index (Rw) to reduce internal noise transmission.

Install double glazing or laminated glass to reduce external noise transmission into the home.

Select proprietary noise reduction carpet underlays.

Choose solid core doors in preference to hollow core doors, as they are more effective sound insulators.

Soundproof plumbing.

Purchase soft furnishings, drapes and rugs to absorb sound.

Ask for design specifications for noise levels before buying a multi residential unit and ask your solicitor to link them to your contract as a performance measure. This will give you more options if you discover a problem after moving in.

The following design sound levels are recommended for an inner suburban house

| RECOMMENDED DESIGN LEVELS (DB) | | |
|--------------------------------|--------------|---------|
| Activity | Satisfactory | Maximum |
| Recreation areas | 35 | 40 |
| Bedrooms | 30 | 35 |
| Work areas | 35 | 40 |