

no

NOWRA

Depositional



Landscape—moderately to gently undulating rises to low hills on Nowra Sandstone. Relief >40 m. Slopes >5%. Broad ridges and crests. Benched sandstone outcrops adjacent to drainage lines. Extensive to moderately cleared tall open-forest.

Soils—moderately deep (50–100 cm) Brown Podzolic Soils (Db1.11) occur on crests and upper slopes. Soloths (Dy3.21) and/or Yellow Earths (Gn2.61) occur midslope. Yellow Podzolic Soils (Dy5.11) occur on lower slopes and drainage lines.

Limitations—run-on, rock outcrop (localised), shallow soil (localised), stoniness, hardsetting, sodicity, low permeability, low wet bearing strength (subsoil).

LOCATION

Moderately to gently undulating rises to undulating low hills on sandstone on the Coastal Plain. Examples include Bomaderry and Falls Creek areas extending south and east of the township of Nowra.

LANDSCAPE

Geology

Nowra Sandstone—medium- to coarse-grained quartz sandstones which contain rounded pebbles scattered throughout the beds. Localised laterisation west of the village of Kangaroo Valley.

Topography

Moderately to gently undulating rises to undulating low hills. Relief >40 m. Slopes >5%. Broad ridges and crests with long, very gently inclined slopes, broad drainage areas with deeply incised channels. Benched sandstone outcrops adjacent to drainage lines.

Vegetation

Extensively to moderately cleared with stands of tall open-forest. Common species include turpentine (*Syncarpia glomulifera*), grey gum (*Eucalyptus punctata*), scribbly gum (*Eucalyptus sclerophylla*), sydney peppermint (*Eucalyptus piperita*), thin-leaved stringybark (*Eucalyptus eugenioides*), red bloodwood (*Eucalyptus gummifera*), forest oak (*Allocasuarina torulosa*) and blackbutt (*Eucalyptus pilularis*) with an understorey of flaky-barked

tea-tree (*Leptospermum attenuatum*). Mountain devil (*Lambertia formosa*), hairpin banksia (*Banksia spinulosa*), pine-leaf geebung (*Persoonia pinifolia*) and burrawang (*Macrozamia communis*) grow on sandier soils.

Spotted gum (*Eucalyptus maculata*) and grey ironbark (*Eucalyptus paniculata*) grow on heavy soils. Decorative paperbark (*Melaleuca decora*) grows in drainage lines.

Land Use

Cattle grazing on improved pastures. State Forests including Nowra, Shoalhaven, Colymea, and Currambene. Urban—for example, Nowra—with small areas set aside as parks or undisturbed bushland.

Existing Erosion

Moderate rill erosion on batters.

Included Soil Landscape

Small areas of Greenwell Point (gp) soil landscape occur.

SOILS

Dominant Soil Materials

no1—Loose yellowish brown single-grained sand (topsoil)

Colour greyish yellow brown (10YR 5/4) to yellowish brown (10YR 4/6)

Texture sand to loamy sand

Structure apedal, single-grained

Fabric sandy

pH 4.0–6.5

Stones nil

Roots common

no2—Hardsetting gravelly massive yellowish brown clayey sand (topsoil and subsoil)

Colour yellowish brown (10YR 5/6)

Texture clayey sand to sandy loam

Structure apedal massive

Fabric sandy

pH 5.5

Stones 50–90% 6–20 mm sub-angular, stratified

Roots common, in-ped

no3—Hardsetting dark reddish brown loam fine sandy (topsoil)

Colour dark reddish brown (5YR 3/3)

Texture loam fine sandy to silt loam

Structure apedal massive

Fabric earthy

pH 4.5

Stones nil

Roots common

no4—Mottled light clay (subsoil)

Colour dull yellow orange (10YR 7/3) red and grey mottles (50%)

Texture light clay with coarse sand

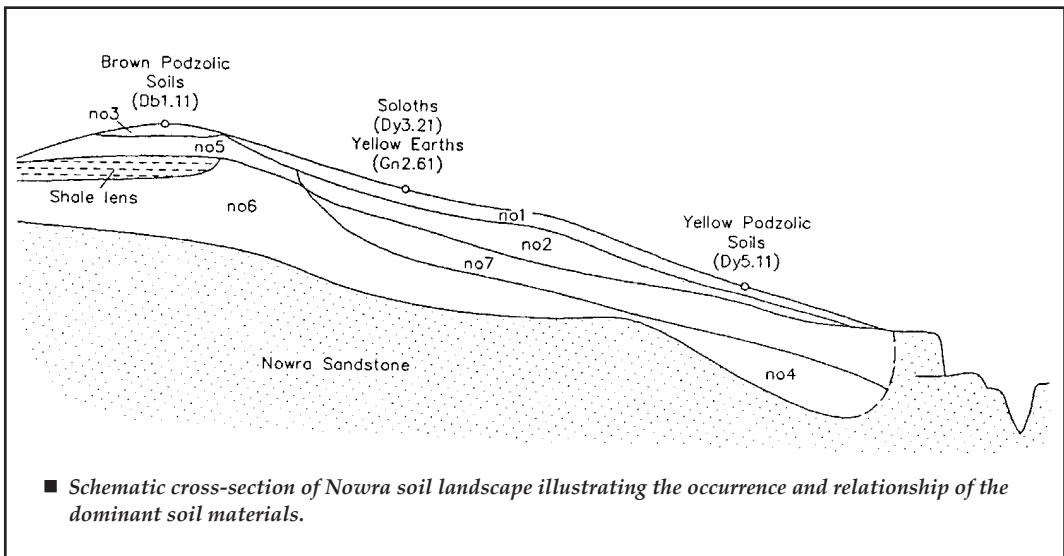
Structure weak to moderate, 10–20 mm sub-angular blocky peds

Fabric rough-faced, peds

pH 3.5

Stones nil

Roots nil



no5—Dark olive sandy clay (subsoil)

Colour	dark olive (5Y 4/4) to brown (10YR 4/6)
Texture	sandy clay
Structure	weak to moderately pedal, 2–20 mm round to sub-angular blocky peds
Fabric	smooth-faced, dense
pH	3.5–6.0
Stones	20–50% 6–20 mm rounded and sub-angular, dispersed
Roots	nil

no6—Bright brown moderately pedal light medium clay (subsoil)

Colour	bright brown (7.5YR 5/8) to dark olive (5Y 4/4)
Texture	light medium clay to medium clay
Structure	moderately pedal, 2–20 mm round to sub-angular blocky peds
Fabric	smooth-faced, dense
pH	3.5–5.0
Stones	10–20% 6–20 mm sub-rounded and sub-angular, dispersed
Roots	nil

no7—Brown sandy clay loam (subsoil)

Colour	brown (7.5YR 4/6)
Texture	light sandy clay loam to sandy clay
Structure	apedal massive
Fabric	earthy
pH	6.5
Stones	nil
Roots	few

Occurrence and Relationships

Crests and upper slopes. Up to 40 cm hardsetting dark reddish brown loam fine sandy (**no3**) overlies <30 cm dark olive sandy clay (**no5**) which overlies <30 cm bright brown moderately pedal light medium clay (**no6**). Boundaries are clear [Brown Podzolic Soils (Db1.11)]. Total depth is <120 cm.

Midslopes. Up to 10 cm loose yellowish brown sand (**no1**) or hardsetting gravelly massive yellowish brown clayey sand (**no2**) overlies <20 cm brown sandy clay loam (**no7**) which overlies <100 cm **no6**. Boundaries are clear [Soloths (Dy3.21)] to gradual [Yellow Earths (Gn2.61)]. Occasionally **no1** does not occur. Total depth is <150 cm.

Lower slopes and drainage lines. Up to 15 cm **no1** overlies <15 cm **no7** which overlies <70 cm light clay with mottles (**no4**). Boundaries are gradual to clear [Yellow Podzolic Soils (Dy5.11)]. Total depth is <120 cm.

LIMITATIONS TO DEVELOPMENT**Soil Limitations**

no1 High organic matter
High permeability
Low available water-holding capacity
Sodicity

no2 Hardsetting
Stoniness
Low permeability
Sodicity
Low available water-holding capacity

no3 Hardsetting
Low permeability
Low wet bearing strength
Sodicity
Strongly acid
Low available water-holding capacity

no4 Low permeability
Strongly acid
Low wet bearing strength
Very high aluminium toxicity
Low available water-holding capacity

no5 Stoniness
Low permeability
Strongly acid (localised)
Sodicity
Low wet bearing strength
Low available water-holding capacity

no6 Stoniness
Strongly acid (localised)
Low permeability
Low wet bearing strength
Aluminium toxicity

no7 Low permeability
Low wet bearing strength
Very high aluminium toxicity

Fertility

General fertility is low to moderate. Topsoils (**no1**, **no2**, **no3**) are generally hardsetting. The soils are often moderately deep but are stony, strongly to moderately acid with generally low CEC.

Erodibility

Erodibility for the topsoil is generally low, but for the subsoils (**no4**, **no5**, **no6** and **no7**) the erodibility is high.

Erosion Hazard

Erosion hazard for non-concentrated flows is moderate to high. The calculated soil loss for the first 12 months of urban development ranges up to 20 t/ha for topsoils and 60 t/ha for exposed subsoils. The erosion hazard for concentrated flows is low to moderate.

Surface Movement Potential

These soil materials are generally stable.

Landscape Limitations

Shallow soil (localised)
Rock outcrop (localised)
Run-on

Urban Capability

Generally low limitations for urban development.

Rural Capability

Generally low to moderate limitations for regular cultivation and grazing.