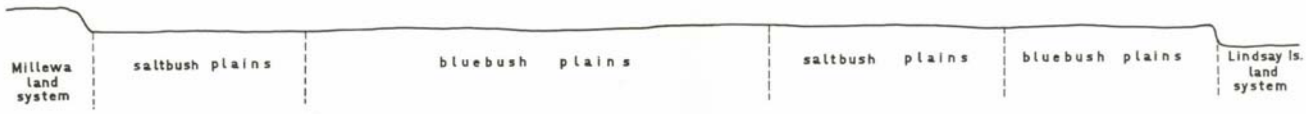
Ned's Corner Land System

Fig. 27 – Ned's Corner land system

NED'S CORNER LAND SYSTEM

(a) Distribution of land forms



(b) Land system diagram

AVERAGE ANNUAL RAINFALL: 10"

LAND USE: Sparse grazing of native vegetation

LAND FORM	Type	Plain		
	Approx. percentage of land system	100		
	Approx. cross-section	Several miles		
PARENT MATERIAL		Parna (with saltation material at surface ?)	As left with salt at shallow depth	Coarse saltation material and parna
NATIVE VEGETATION		Shrub steppe of bladder saltbush		Shrub steppe of bluebush
SOIL	Textural group	Sandy loams		
	Morphological group	Group C	Brown, saline variant of Group C	Group B
	Proportion on land form	Codominant		
	Moisture characteristics	moderate to poor		Moderate
	Fertility reserves	Moderate		
LAND USE	Most suitable form	Grazing of native vegetation		
	Nutrients required in fertilizers	Fertilizers uneconomical		
	Recommended pastures	Native vegetation		
	Land use class	5		
WIND EROSION HAZARD		Moderate		

The Ned's Comer land system occupies a plain some 270 square miles in extent beside the River Murray system in the very north-western portion of the State (Fig. 27). It forms a platform above flood levels from the river but below the Millewa land system to the south. The plain is clothed with bladder saltbush and bluebush. It thus affords an environment which is unique in Victoria yet widespread in the interior of the continent. Although saltbush, and to a less extent bluebush, are found in various parts of the Raak land system further to the south it does not occur here in stands as extensive as those in the Ned's Comer land system.

Plate 32 – Ned's Corner land system showing a shrub-steppe of bladder saltbush.
This is a well-preserved stand with no significant erosion.

Saltbush plains predominate in the central parts of the land system (Plate 32). They are almost level and the soil-parent materials are mainly regional dust or "parna" which has frequently blanketed saline deposits. Red-brown sandy loams of Group C occupy the better-drained sites whilst in the slight depressions the soils have a similar texture profile but they are browner and saline at a relatively shallow depth.

The bluebush plains occur between the saltbush and the Millewa land system-that is, they occupy the western, southern and eastern parts of the land system. The soils contain a greater proportion of coarse saltation material than the saltbush plains and the landscape is slightly more undulating. The soils are sandy loams of Group B.

The native vegetation has frequently been modified by overgrazing. This appears to have led in places to the replacement of saltbush by bluebush. In addition new communities have probably developed, for example the stands of bamboo grass *(Eragrostis australasica)* which occupy low sites which are flooded after heavy rains. The subordinate species beneath well-preserved stands of saltbush include glasswort *(Pachycornia spp*.) and pigface *(Disphyme spp.).* These two unpalatable species have in places assumed dominance as a result of overgrazing.

The native vegetation has been grazed since the 1840's when grazing runs were established with headquarters along the River Murray. This is the most suitable form of land use provided the stocking rates are kept low. The average annual rainfall is only 10 inches and although the soils have only a moderate erosion hazard, the native vegetation must be retained for stability. A proportion of feed is provided by annuals which grow intermittently between the saltbush and bluebush shrubs, for example barley grass *(Hordeum leporinum),* camel grass (Schismus *barbatus),* brome grasses *(Anisantha spp*.), medic *(Medicago denticulata)* and flatweed *(Hypochoeris spp.).* These annuals are most dense beneath the bluebush.

Because of the long period of occupation and the overgrazing which has occurred, particularly during droughts, the country is badly wind scalded. The drift which is produced is commonly trapped by dillonbush *(Nitraria schoberi).* Although the gradients are only slight the scalds may be rilled, and along the northern margins where there is a fall down to the Lindsay Island land system, deep gullies are common.

The characteristics of the scalded soils of Group C are similar to those in the Tyrrell Creek land system. A surface seal develops as a result of raindrop impact combined with high surface salt contents. Apart from the surface seal the clay has excellent structure and it can be readily cultivated provided it is not too wet, to produce a suitable tilth. However, during subsequent rains the surface seal re-develops and hinders the penetration of moisture, much of which is thus lost by evaporation. This magnifies the poor moisture characteristics of the clays. It was, pointed out in the section on the Tyrrell Creek land system that, under an average annual rainfall of 14 inches reclamation can be initiated on such soils by sowing Wimmera ryegrass but that the venture was costly and of doubtful economic value. Under the 10 inch rainfall of the Ned's Corner land system this method is definitely uneconomical and investigations are required into the best means of reclamation. These are likely to be similar to the techniques used in western New South Wales (Condon and Stannard 1957) where the land is furrowed, usually in a checkerboard pattern. The furrows trap seed which originates either from the remnants of vegetation or from sowing of annual or perennial native halophytes. Moisture accumulates in the furrows where it mitigates the unfavourable moisture characteristics of the clays. Vegetation thus becomes established on a checkerboard pattern particularly during favourable seasons. The force of the wind at ground level is broken and the inter-furrow areas may eventually become revegetated. Trials along these lines were established in 1962 by the Soil Conservation Authority near the Ned's Corner homestead.

Similar experiments are also required on the sandy loams of Group B. These soils may be more difficult to reclaim because their sandy clay subsoils are poorly-structured. They may thus be more difficult to cultivate and the resultant tilth will be poor.

The proximity to the river, the low water lift and the gentle topography are all favourable for the development of irrigation. Although many of the soils are suitable for this purpose, only a small proportion of the land system is irrigated. Before any large scale irrigation settlement is planned, an investigation is needed into the hazard of polluting the River Murray system by salt derived from subsoils. This salt has been observed in places and its extent needs to be determined. Although Kempe (1958) has shown that scalded soils of Group C will support successful perennial pastures providing they are well drained, uneroded soils are clearly more suitable for irrigation.