

**Special rural rezoning,
subdivision and development, Mariginiup**

Swan Loc 1739, Neaves Road, Mariginiup

S and R Lucisano

**Report and recommendations of the
Environmental Protection Authority**

**Environmental Protection Authority
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Background

The site is located on the southern side of Neaves Road approximately 4km east of the Neaves Road/Pinjar Road intersection (see attached map). Location 1739 is one of a number of Locations that form "cells" that extend eastward into State Forest No 65. The other locations in the vicinity (forming the western, southern and eastern boundaries) have been developed for "Special Rural" as an equestrian estate with lots being generally 2ha in size. There are no stands of native vegetation remaining on the site, the last having been cleared in early 1990.

The site is over a Priority 1 Source Area as defined by the Water Authority of Western Australia (WAWA) for the protection of groundwater supplies and is also in the Wanneroo Underground Water Pollution Control Area. The proposal, as Amendment No. 462 to the City of Wanneroo's Town Planning Scheme No. 1, was referred to the Environmental Protection Authority in July 1990 by the Department of Planning and Urban Development for comment. Due to the potential impacts on the groundwater protection areas as mentioned above, the Authority set the level of formal assessment at Consultative Environmental Review (CER).

At the present time an Environmental Protection Policy for the Gngangara Water Mound is being prepared under the Environmental Protection Act 1986. Thus this and other developments over the water mound are being assessed by the Authority in the interim phase before the finalisation of these documents. It is hoped that once they are completed, they will give a better indication of the acceptability of specific types of development on this public water supply area.

Whilst the Authority is continuing to assess individual rural residential developments in this interim phase, it would expect them to conform with the principles regarding the siting of effluent disposal systems, vegetation retention and revegetation, control of stocking rates and others as discussed in this report. These principles are generally consistent with the approach being taken in the catchment of the Peel-Harvey Estuary to minimise the transport of nutrients from septic tanks, fertilisers and stock off-site.

Proposal

The proponents, S & R Lucisano, propose to rezone, subdivide and develop Swan Location 1739 on Neaves Road Mariginiup to create 11 "Special Rural" lots ranging in size from 2.01ha to 2.34ha. The site is currently zoned "Rural" under the City of Wanneroo's Town Planning Scheme No 1 and has inadequate land use controls for the proposed "Special Rural" use. The development is seen by the proponent as an "infill" to develop the site in accordance with the surrounding area, allowing for the keeping of horses on the site.

Public submissions

During the public review period, five submissions on the proposal were received by the Authority, including three individual submissions, one government department submission and one local authority submission.

Of the five submissions, three were opposed to the proposal and two were awaiting the outcome of the environmental assessment before making a decision on the proposal. Opponents of the proposal had the following concerns/suggestions:

- land use planning is a huge issue and the current direction of travel is very worrying;
- concern over any developments that will compromise groundwater supplies (ie there should not be intensification of land use over groundwater supply areas);
- there is a responsibility to protect water supplies on a local and global scale;
- protection of groundwater supplies will be cheaper than remedial measures;
- polluting groundwater will put more pressure on the hills catchments and supply areas;
- protection of water supplies extremely significant given that 80-90% of Western Australia's population depends on water supplies in the Perth region.

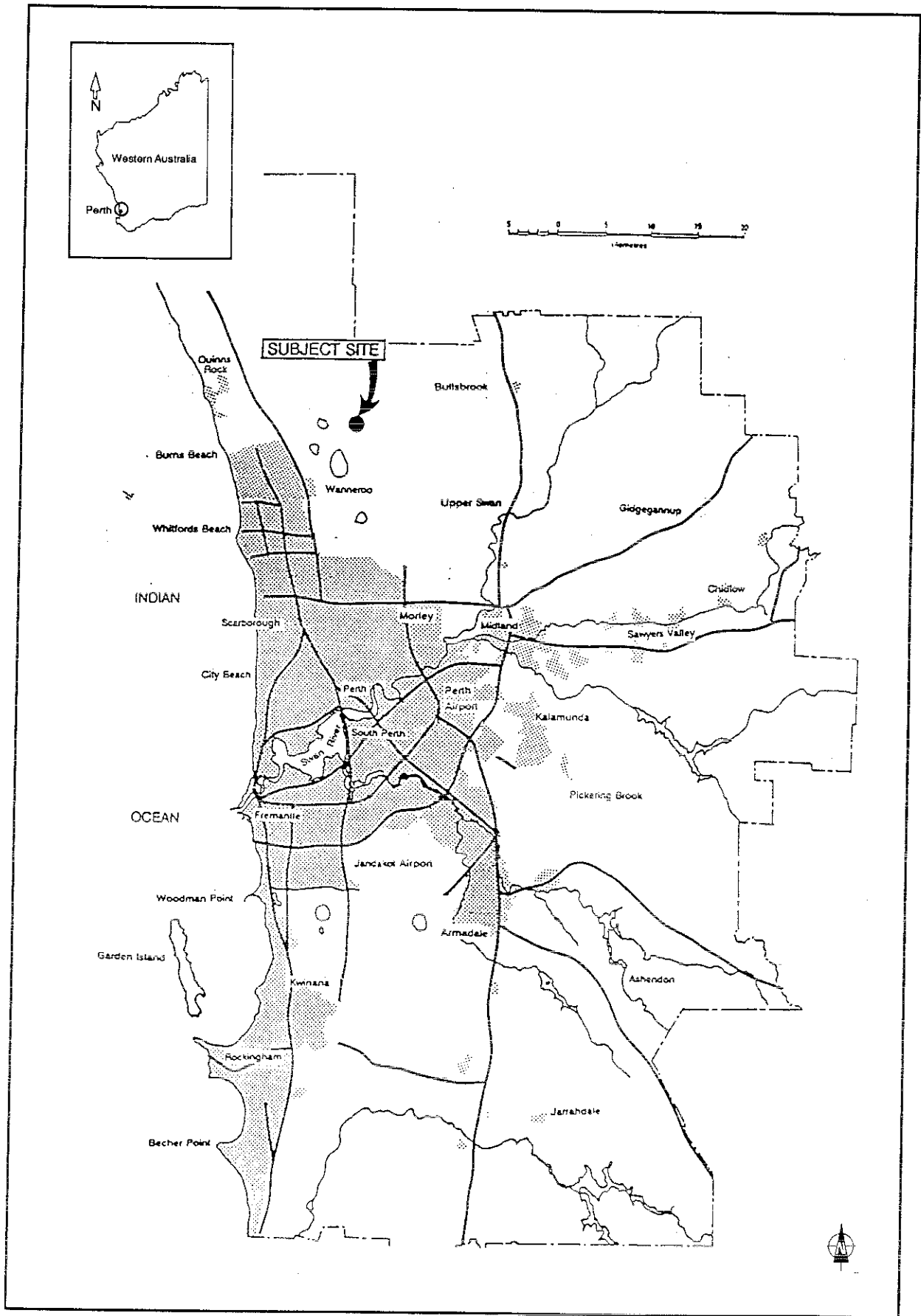


Figure 1: Location plan.

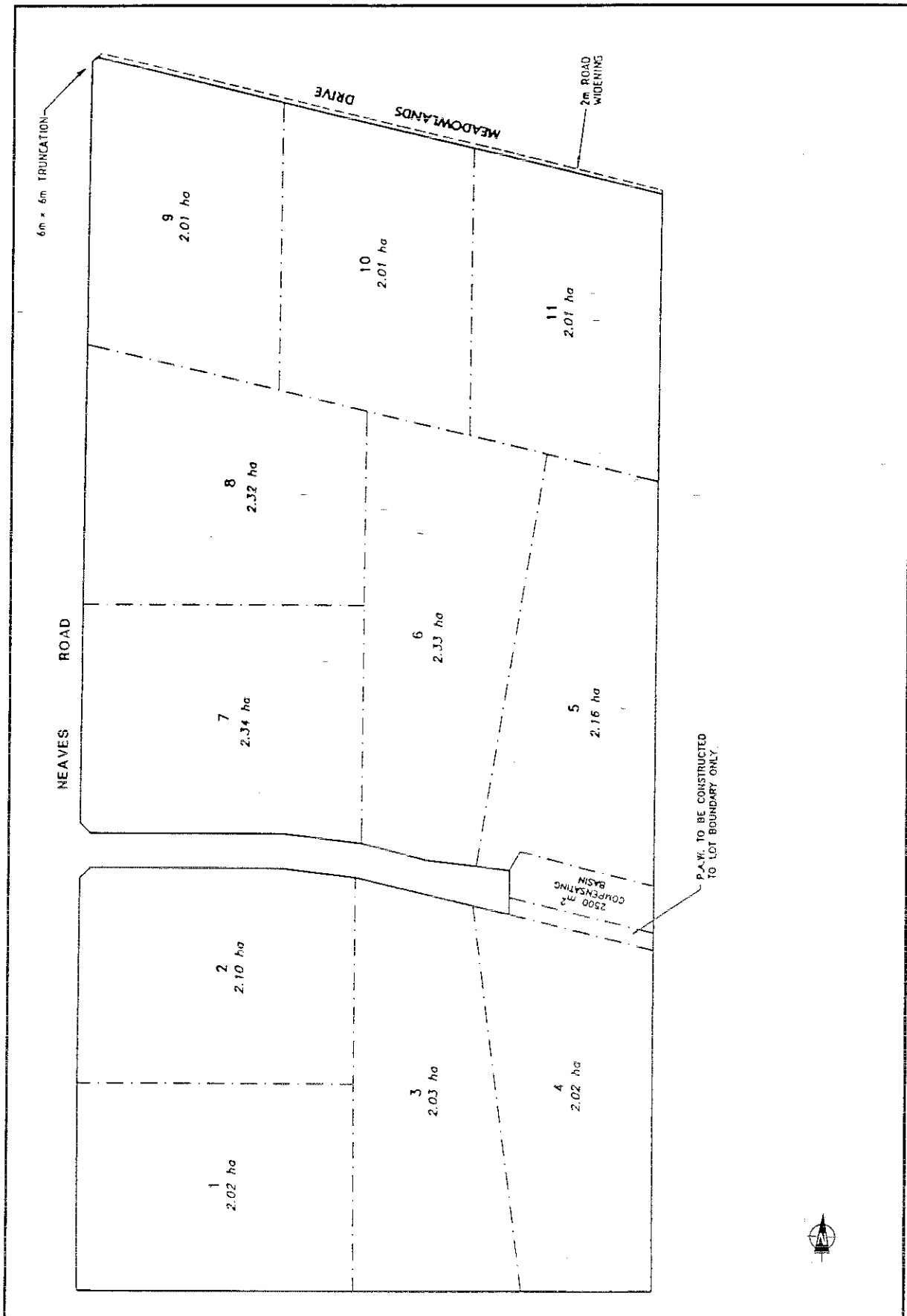


Figure 2: Development plan.

- revegetation of "Special Rural" lots could be used for commercial purposes (eg native seed orchards); and
- climatic change (particularly in terms of groundwater level changes and reduced rainfall) has not been addressed.

Environmental issues

With so much of Perth's domestic water supply coming from groundwater resources (particularly during the summer months), protection of existing groundwater supplies is of paramount importance. Thus on this site, the potentially adverse environmental impacts from the development (primarily nutrient pollution from effluent disposal systems and horses) must be managed to prevent further degradation of groundwater quality and quantity.

For this particular site, over a Priority 1 Source Area, the Authority considers that the proposal in its present form is unacceptable, but that if the minimum lot size were increased to 4 hectares, the resultant reduction in the intensity of development could lead to an environmentally acceptable proposal if appropriate controls were put in place.

The developer in a development such as this is usually only involved in the establishment phase of the project, and there is a need to make recommendations that will affect the development in the future. As the Local Authority has certain powers over the on-going management of the development through the relevant Town Planning Scheme, the Authority believes it is necessary for the Local Authority to make the appropriate adjustments to the Town Planning Scheme as a part of the rezoning to enable adequate on-going management controls to be in place before the development proceeds.

Recommendation 1

The Environmental Protection Authority has concluded that the proposed "Special Rural" development on Swan Location 1739 Neaves, Road Mariginiup would be environmentally acceptable if amended in line with the Environmental Protection Authority Recommendations in this report, and recommends that the project could proceed subject to those recommendations.

The Authority's experience is that it is common for details of a proposal to alter through the detailed design and construction phase. In many cases alterations are not environmentally significant or have a positive effect on the performance of the project. The Authority believes that such non-substantial changes, and especially those which improve environmental performance and protection, should be provided for.

The Authority has concluded that for the proposal to be environmentally acceptable, the following design constraints and management provisions must be applied. These fall into two categories: those which apply to the developer and are implemented prior to the issuing of titles for the proposed lots; and those which apply to the Local Authority and must be reflected in the Local Authority's Town Planning Scheme.

To be applied to the developer:

To protect the groundwater it is important to minimise the application of nutrients to the land above. One way of doing this is to specify larger lot sizes to reduce the intensity of septic tanks and another is to restrict any horticultural pursuit to within the building envelope in line with a normal domestic garden.

Recommendation 2

The Environmental Protection Authority recommends that lot sizes must be no less than 4 hectares, and contain a building envelope no greater than 10 per cent of the total lot area to the satisfaction of the Environmental Protection Authority.

Retention of native vegetation and revegetation has many benefits including:

- nutrient uptake;
- wildlife habitat retention/creation;
- maintenance of groundwater levels; and
- aesthetics.

Thus the Authority believes it reasonable to recommend that existing vegetation be retained and a replanting programme undertaken where necessary.

Recommendation 3

The Environmental Protection Authority recommends that with the exception of minimal clearing necessary for the building envelopes, fences, firebreaks, access and servicing, there is to be no removal of vegetation, and areas already cleared are to be revegetated with appropriate trees and perennial shrubs to a density of 800 stems per hectare to the satisfaction of the Environmental Protection Authority. The developer shall be responsible for replacing losses of plants in the first three years.

In a development such as this, there are many advantages in retaining stormwater on-site including groundwater recharge, increased availability for plants and the retention of nutrients on-site.

Recommendation 4

The Environmental Protection Authority recommends that stormwater must be contained on-site to the extent that a 1 in 10 year storm event will be contained for three to four days before leaving the property to the satisfaction of the Environmental Protection Authority.

The following recommendations should be implemented through the Local Authority's Town Planning Scheme:

Recommendation 5

The Environmental Protection Authority recommends that outside the area cleared for the building envelopes, fences, firebreaks, access and servicing, the existing vegetation and the revegetation established under Recommendation 2 above shall be maintained to the satisfaction of the Environmental Protection Authority.

Overstocking can lead to many problems including excessive nutrient loading, damage to vegetation, and as a result of this, erosion problems. This is particularly relevant on the easily erodable sands in this area, and the following recommendation is aimed at minimising potential environmental impacts.

Recommendation 6

The Environmental Protection Authority recommends that the only permissible primary land use be residential, and no more than one residence shall be permitted on each lot unless it can be demonstrated that an additional residence would not result in excessive nutrient application. Ancillary land uses may be permitted provided they do not involve excessive nutrient application or the clearing of land contrary to Recommendations 1 and 2 above (developer). Vegetation shall be protected from damage by grazing livestock. The type and numbers of livestock shall be controlled in order to prevent excessive nutrient input. Fertiliser application shall be minimised and limited to the building envelope. These measures shall be carried out to the satisfaction of the Environmental Protection Authority.

To minimise the environmental impact of nutrients from on-site effluent disposal systems on the groundwater and any nearby wetlands, adequate setback distances are required.

Recommendation 7

The Environmental Protection Authority recommends that conventional on-site effluent disposal systems must be located and installed such that there is at least a 2 metre vertical separation between the base of the leach drain and the highest recorded groundwater level or bedrock, and at least a 100 metre horizontal separation between the disposal system and the nearest water body to the satisfaction of the Environmental Protection Authority.

The Authority believes that any approval for the project based on this assessment should be limited to five years. Accordingly, if the proposal has not been substantially commenced within five years of the date of this report, then such approval should lapse. After that time, further consideration of the proposal should occur only following a new referral to the Authority.

It should be noted that the recommendations contained in this report do not prevent relevant Authorities from refusing the development on grounds other than environmental (e.g. planning, protection of water supplies).

It should also be noted that if the recommendations in this report are converted to Ministerial Conditions which subsequently conflict with other conditions/provisions applied through the planning process (e.g. scheme provisions, subdivision conditions), then the Conditions as set by the Minister for the Environment take precedence.

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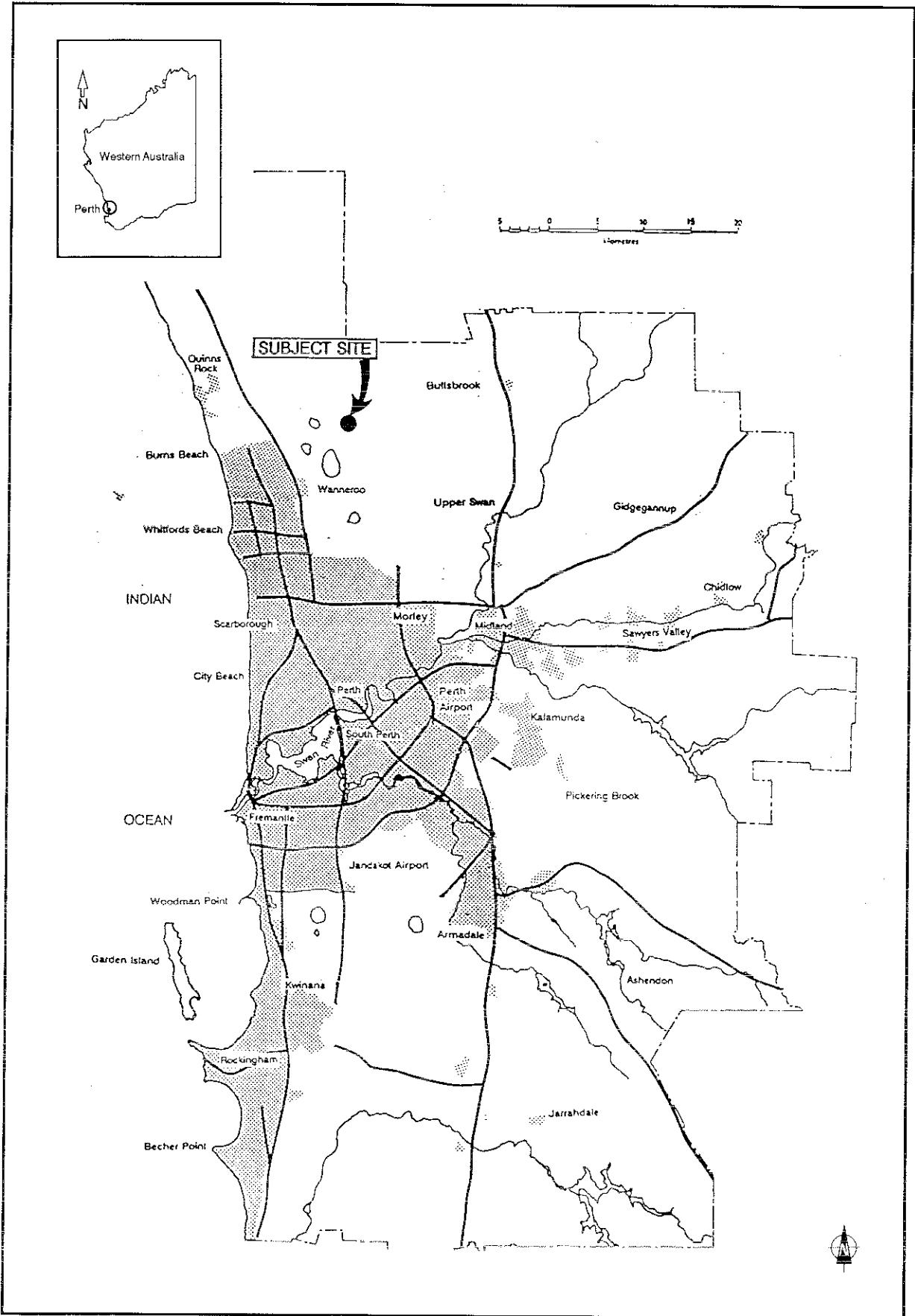


Figure 1: Location plan.

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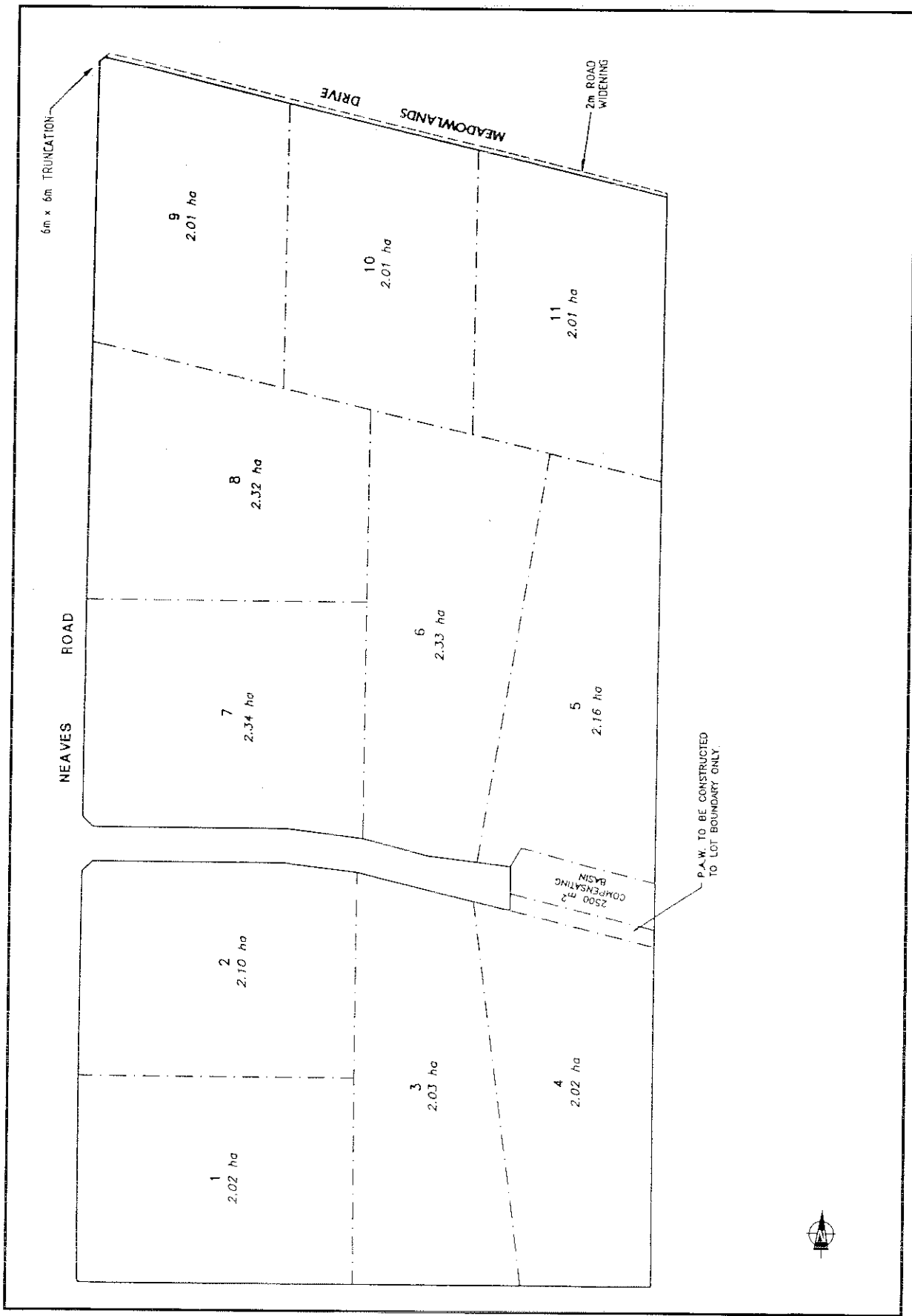


Figure 2: Development plan.