These notes have been compiled to provide a current indication of the general situation on the St Clair Property

11-03-2010

NOTE

Some modification to the document was made in October 2011. This was to reduce the file size and was done at the request of the document owners. The text of the document remains unchanged.

25/10/2011
NOTES IN REGARD TO THE CURRENT STATE OF THE St CLAIR PROPERTY

These notes endeavour to describe the current situation of the St Clair property. The object of this is to assess the current condition of the property in terms of the state of its natural resources and capital improvements. This will give some indication of the issues that will arise when bringing the property up to a productive state regardless of enterprises chosen.

The property has been used in recent times as a grazing unit. This is a simple arrangement requiring no more than a boundary fence and a source of stock water.

The current improvements on the property are in a run down condition. This assessment will attempt to provide a snapshot of the overall situation as it presently exists.

**Soil**

Some preliminary basic field soil tests have been done on the St Clair soils. The samples were taken from eight sites representing the range of soil types on the property. These indicate the soil is a shallow sandy clay loam with an impervious underlying clay base. It has a pH on the acidic side of neutral (neutral is 7). The pH ranges from 4.5 to 6.5. The consistency of the clay sub surface material suggests that the soil is very poorly drained. It may not be suitable for irrigation without some considerable amelioration.

The general topsoil structure is poor and would be readily damaged by excessive cultivation. The samples taken from locations adjacent to the bank of Glennies Creek show a deeper soil and indicate greater organic matter content.

They also indicate better soil structure than average across the property. Early indications are that there is only a small area of these soils.

**Comments:**

- Recommend that laboratory broad analysis soil tests be done
- Soil profile be examined using test pits for irrigation suitability
- Crop establishment should be only considered using minimum till methods
- Irrigation only be considered if soil analysis and assessment indicated soil suitability

### Soil Field Test Results

<table>
<thead>
<tr>
<th>Sample</th>
<th>pH</th>
<th>Texture</th>
<th>Dispersible</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>6.0</td>
<td>Silty sandy clay loam</td>
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</tr>
<tr>
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<td>6.5</td>
<td>Sandy loam</td>
<td>no</td>
</tr>
<tr>
<td>3</td>
<td>5.5</td>
<td>Sandy clay</td>
<td>no</td>
</tr>
<tr>
<td>4</td>
<td>5.0</td>
<td>Clay loam</td>
<td>no</td>
</tr>
<tr>
<td>5</td>
<td>6.0</td>
<td>Sandy clay</td>
<td>no</td>
</tr>
<tr>
<td>6</td>
<td>4.5</td>
<td>Sandy clay loam</td>
<td>no</td>
</tr>
<tr>
<td>7</td>
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<td>no</td>
</tr>
<tr>
<td>8</td>
<td>5.5</td>
<td>Clay loam</td>
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</table>
St Clair Locality showing Boundary, soil sample sites and Farm Dams
Fencing.
The boundary fencing is generally serviceable. The riparian zone fence is good to very good along Glennies Creek. Some of this fencing was only recently constructed. The boundary in the north eastern section around the Travelling Stock Reserve is very old and while stock proof is quite fragile. The Northern boundary fence is reasonably sound if quite old. The riparian zone fence on Burkes Creek is in poor condition and not stock proof.
The subdivision fencing is currently unserviceable. Some of it may be reconstructed to a reasonable condition. Much of it requires renewing.

Comments:
Clean slate approach such as a redesign of paddock layout before renewing subdivision fencing
Paddock Layout (as above)
Proposed land use e.g. cell grazing would require a specific subdivision design
Various types of fencing worth considering depending on land use.
There may be a possible potential for innovative land uses.

Stock Water
The present stock water availability is satisfactory when the property is grazed as one paddock. If the southern and Burkes creek paddock fences are renovated, including restoring the Burkes Creek boundary fence, they would not be able to be grazed as separate entities as they currently have no individual stock watering points. Stock now uses the waterholes in Burkes Creek and the two farm dams.

Comments:
Proposed land use dictates water issues
Preventing creek access to stock will greatly enhance the general wellbeing of the creeks.
Water reticulation to a water trough system would be necessary in self contained grazing paddocks
Reserve supply such as a large tank would be required to support water troughs
Troughing system and water reticulation system may need consideration.

NOTE: These dams are reasonably adequate stock water supply sources. They serve a Dual purpose as effective silt traps for topsoil material mobilized by water erosion.

Pastures
The existing pastures are predominantly grasses with some incidental remnants of clovers. In some areas there is a good stand of Kikuyu. They are quite run down in terms of management with significant weed intrusion providing only borderline productivity without improved management. There is also a significant amount of weed species of very low nutritional value. Generally the quality of the pasture is suboptimal. If grazing is to be pursued then a pasture improvement Programme should be considered.

Comments:
Current condition poor quality
Pasture improvement worthy of consideration for a grazing enterprise.
Forage crops will need to be considered to maximize livestock production.
Pasture strategies are dependant on proposed land uses

**Crop Potential**
There have been in the past apparently four paddocks that have been cultivated for crop production. Two have had irrigation infrastructure. The current state of fencing removes the possibility of cropping on the property in conjunction with grazing. Cropping potential is reliant on there being appropriate suitable soil resources. This will only be confirmed with in depth investigation of the soils.

**Comments:**
- Dryland or irrigated?
- Fodder crops to enhance grazing production
- Irrigated Hay production may be a consideration
- Horticulture vegetables a possibility
- Native tree propagation may be possible
- Possible potential for other more exotic crops e.g. Floriculture.

**Irrigation Farming**
The property has two water access Licences. The water allocated to these varies from time to time under NSW State Water policy. It is currently quoted as 15 General Security shares.

There has been in the past two separate pump sites established for this land. Both of these are on Glennies Creek. Pump Site No.1 is upstream of Geary's crossing causeway and Pump Site No.2 is downstream of this causeway. Both of these are in general disrepair. In addition the water main from the down stream pump is broken and needing repair or replacement. Should irrigation be considered, a considerable upgrade in infrastructure would need to be undertaken. A serious assessment of the soil profile on any areas proposed for irrigation would be essential to confirm the soil suitability. In addition to laboratory analysis of the soils this would require a series of pits being dug to enable an adequate examination of the soil profile characteristics underlying the top soil.

**Comments:**
- Currently no effective infrastructure
- There have been two irrigation power supplies; upstream one appears to be currently decommissioned
- New start required on the whole concept of irrigated production
- Clean slate approach for any proposal to establish any irrigation enterprise.
- Possible potential for intensive irrigated horticulture should an assessment of resources be favorable.

**Dryland Salinity**
There are a number of examples indicating some dryland soil surface salinity on the St Clair land.

This is evidenced by the occurrence of sedge, ("salt marsh sedge") in spots showing poor drainage in the paddocks. There is also sedge evident in the drains and around the water lines of the farm dams. This is mentioned in the management plan. Some indication of the symptoms referred to are evident in the following photos. **NOTE (photos deleted to reduce file size 25/10/20110)**
Weeds and Regrowth
There is a significant intrusion of weeds on the St Clair property. This in conjunction with eucalyptus regrowth is becoming a problem which will only increase if not combated. There are large amounts of Lantana along the Glennies Creek bank. A very effective start has been made on managing this but there is much more to be done. Just below the Geary’s crossing and in other places good preliminary results have been achieved with the Lantana management. The False Castor Oil plant has seen a good opportunity at this location and is now taking over there as the predominant weed. There is African Olive there as well which is also an undesirable species. There is much Bracken Fern along the Glennies Creek flats just down stream of the upstream pump site on the boundary fence line. This plant can be poisonous to stock. Thistles are doing well everywhere. There are small amounts of Prickly Pear and some Briar Rose as well.