



The project vision:

To create an oasis-like farm destination in Charleville focused on the produce and interpretation of dates, figs and other productive arid landscape foods.

The date plantation aims to be a model for country town sustainability and renewal: by harvesting the town's wastewater and by bringing a new farming and tourism venture to Charleville, Mark Hampel hopes that the plantation will contribute to the town's positive future.

Objectives:

1. to progressively relocate family, home and business to Charleville for the venture
2. to establish stage one plantations and works within six months of commencement
3. to create produce within four years
4. to establish over 800 trees within the whole site
5. to create in the longer term a tourism facility: visitors will be encouraged to learn about the farm and its processes, and be able to buy packaged produce from the farm, as well as other associated items such as arts and crafts
6. to establish walking trails and viewing/bird watching places through the oasis destination
7. to encourage the creation of pedestrian and bike trail links along the gully treescape back to the main street
8. to harness the wastewater from the treatment plant through a series of ponds and reedbeds to provide the water requirements of the plantation
9. to make an attractive oasis-like landscape
10. to create an interpretive facility which features local wildlife and flora and supports the abundant bird life on the site
11. to retain and enhance riverine corridor areas and encourage kangaroo's and other fauna to these areas. Promote kangaroo watching.

Short term works:

Stage one incorporates a new access track to the facility centre. Around 100-150 advanced and seedling palms will be established, and a detailed irrigation system and pump installed. Lined ponds and reedbeds will be created and planted out, and then the table drain will be redirected through the system to provide continual irrigation water through a filtered system. Fencing and other site works will be undertaken.

Lease terms:

Site investigations have been undertaken as part of the master planning, and the prior to undertaking significant start up works, the lessor seeks some minor revisions to the lease in order to proceed:

- 1) Access to the treated water will be permitted provided all costs for piping and pumping are met by the lessee. For the period of the life of the existing treatment plant, the wastewater will be made freely available to the date plantation lease. If the supply of wastewater diminishes at any point in time, then the lessee will have the right to use bore water on the site additional to and in lieu of wastewater
- 2) tourism uses associated with the date plantation will be permitted
- 3) the public track near the gully and on the lease area will be relocated by council off the lease area within two years. The current track in the short term can be retained as a public right of way.
- 4) track access along the gully from the lease area to the town will be able to be planned and installed over time to allow visitors to ride to the site.



Mark and Veronica Hampel

THE DATE PLANTATION, CHARLEVILLE

Project Vision

May 2014

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The site already has the emerging character of an oasis. The project intends to build around this vegetation to create an attractive destination from day one.



Mark and Veronica Hampel
THE DATE PLANTATION, CHARLEVILLE

Site Images

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Why dates?

Date palms are well suited to the hot arid climate of Charleville, and will produce good crops, particularly in those years when there is less summer rain than average. (The mature palms scattered around the town are testimony to this.)

The abundance of reclaimed water from the STP, the availability of deep, sandy loam soil, and the plentiful heat, make Charleville well suited to grow and ripen dates.

The market demand

There are three avenues for the marketing of dates

- local tourism
- domestic market
- export market

Local tourism: The Eulo Date Farm and Mecca Date Gardens in Alice Springs demonstrate that tourists will seek out and purchase significant quantities of dates and date products from local suppliers.

Domestic market: The growing proportion of the Australian population who are of Arabic descent, now estimated to be some 300 000, are keen to source fresh, high quality dates of the varieties with which they are familiar. Central markets in the capital cities of Eastern Australia would be keen to sell fresh dates to local green grocers and fruiterers.

Export: There is an emerging view that dates can be grown in the southern hemisphere to supply a northern hemisphere out-of-season market. Some 15 years ago, Date Palm Developments, a major UK company involved in the propagation of date palms by tissue culture, estimated that this market could support production from 500 000 palms. Total world production is about 4 million metric tonnes per annum, of which a minuscule proportion is grown in the southern hemisphere.

The produce

At maturity (10 - 12 yrs) a date palm is expected to produce approximately 100 kg of fruit per annum. A plantation of 800 palms would therefore be expected to produce 800 000 kg or 800 tonnes per annum.

These dates can be either sold fresh or value added by using them to make date scones, date ice-cream, sticky date pudding, date loaf, date liquor, etc., for sale to tourists. Packaging dates into fancy packs for the tourist trade is also a good line of marketing.

Types of dates

We intend to plant mainly the Bahree variety as it is the most rain tolerant of the commercially sought after cultivars. (This is a risk reducing measure, designed to combat the prevalence of summer rains in the region.) Bahree dates are renowned in the Middle East as an excellent eating date. They also have the advantage of being able to be 'bunch harvested', reducing harvesting costs substantially, and can be harvested in the semi ripe or khalal stage, which further reduces the risk of damage from summer rains.

I intend to also plant a variety of other date cultivars such as Khalas, Khadrowy, Medjool, Thoory, Zahidi, Halawy, Sultana, etc. These will be sourced from the only supplier of tissue culture in Australia at Gurra Downs, South Australia, as well as our own offshoots.

Harvesting

While some varieties can be bunch harvested, others need to be hand-picked, as they do not all ripen at once. This requires several pickings from each bunch. Dry and semi dry dates such as Thoory and Zahidi are left until all are ripened on the bunch, then the bunch is cut. Drier fruit from a once only harvest can be softened by rehydration.

The optimum stage for picking dates varies with the varieties, but for all soft varieties it is when the fruit has lost its watery consistency and become pliable, but not tough to the touch.

When palms are young, they can be picked from the ground. When they get bigger, ladders or hydraulic picking platforms (cherry pickers) are used to get the bunches. Soft dates are picked into shallow trays to avoid bruising and squashing. Three layers is usually the maximum depth.

The dates are then cleaned, graded, packed and stored in cold rooms until sale.

Growing

Pollination occurs in August. One has to be right on the ball at this stage, as for some varieties, the receptivity of the female flower is limited to a few days after the spathe opens. Pollen is introduced by blowing male pollen into the female flower by using a pollinator - a device with a long hollow tube that is inserted into the flower and then blown to bring the dried pollen to the flower.

Bunch thinning is next - to stop overcrowding, to increase fruit size and the chance of good flowering in the following season. The amount of thinning varies with the different varieties and is determined by experience of specific varieties in specific localities.

About 6 weeks after pollination, the bunches are pulled down and tied with twine to the midrib of a suitably placed lower leaf. The idea is to position the bunches between the branches and to clear them of leaves to avoid scaring and damage to the fruit.

Plastic banana covers are tied over the bunches, to reduce the risk from rain and bird attack. As rainfall is erratic in the region and significant falls can occur between January and April, bunches must be protected by bunch covers.

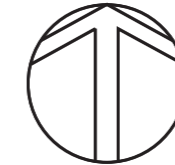
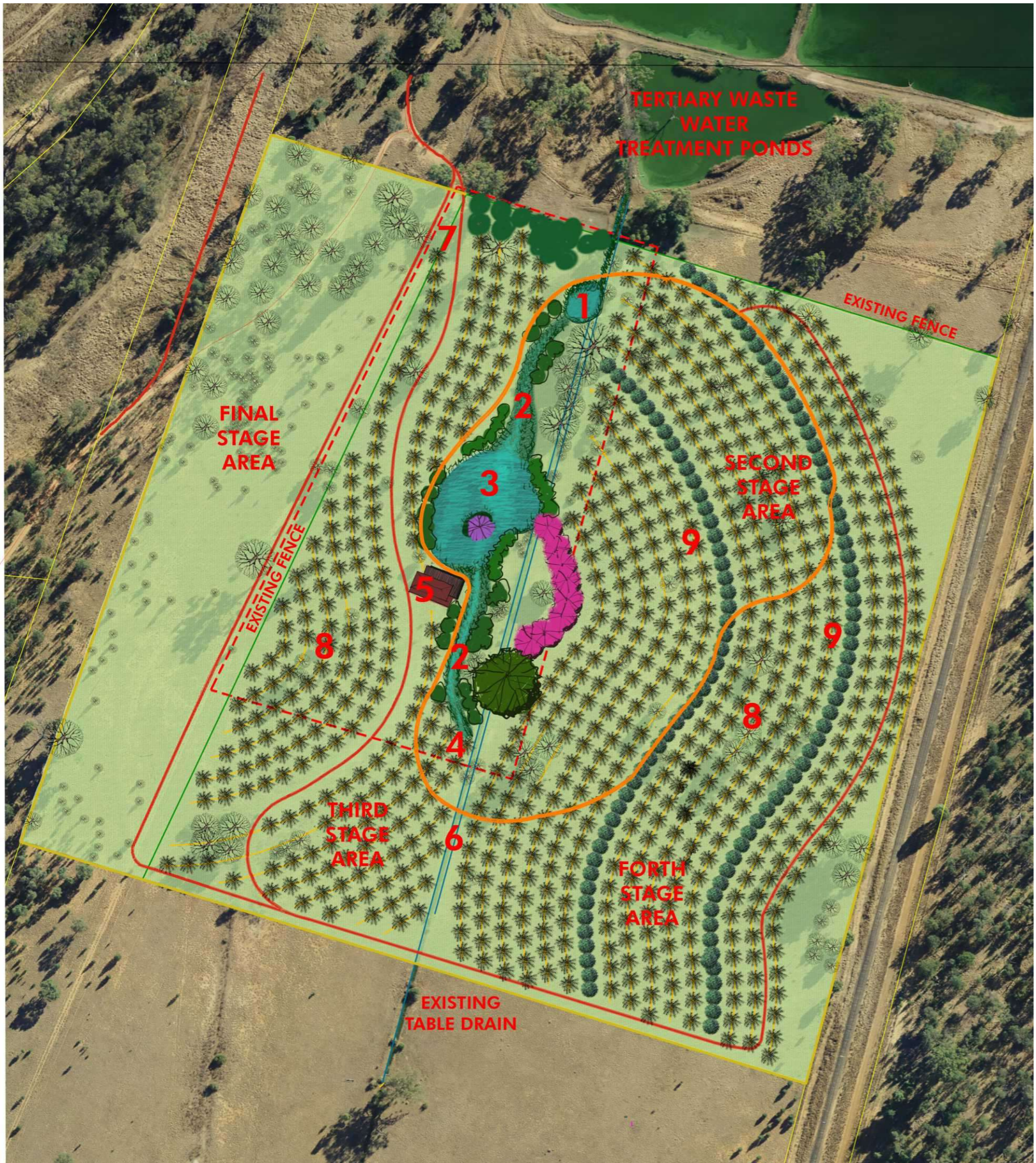
After harvesting, the dead fronds are pruned from the tree, fertilisation, mulching takes place, and general maintenance and upkeep of the plantation take place.

Throughout the growing season it is important to apply the correct quantities of water. This especially so during fruiting.






Mark and Veronica Hampel

THE DATE PLANTATION, CHARLEVILLE



Scale 1:2000 at A3

-  Stage 1 Area
-  Existing trees to retain
-  Interpretive trail & bird watching route

LEGEND

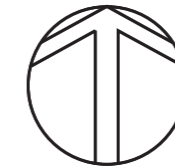
1. Filter pond
2. Reed beds with macrophytes
3. Oasis lagoon with reed bed edge
4. Irrigation chamber & pump for filtered recycled water
5. Plantation Centre with deck, storage, sales and interpretive centre
6. Existing table drain takes any overrun of wastewater
7. New access track
8. Date palm plantations
9. Interpretive trail & bird watching route






Mark and Veronica Hampel
THE DATE PLANTATION



THE DATE PLANTATION OASIS



Scale 1:1000 at A3

-  Stage 1 Area
-  Existing trees to retain
-  Interpretive trail & bird watching route

LEGEND

1. Filter pond
2. Reed beds with macrophytes
3. Oasis lagoon with reed bed edge
4. Irrigation chamber & pump for filtered recycled water
5. Plantation Centre with deck, storage, sales and interpretive centre
6. Existing table drain takes any overrun of wastewater
7. New access track
8. Date palm plantations
9. Bird & animal sanctuary, kangaroo pasture

The aim in establishing a date plantation at Charleville is to not only create a financially viable agricultural business but also provide a valuable service to the local community.

Recycling the town wastewater uses an otherwise unutilised resource in an environmentally productive and responsible way. This concept has the potential to be a prototype for other population centres and mine sites in arid zone areas.

Within the town of Charleville the date plantation will provide an attractive tourist destination with walking and bike-riding trails, bird watching areas, and an interpretive centre selling local produce. The community will also benefit from increased employment, training and flow-on business opportunities.



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THE DATE PLANTATION

Stage 1

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