

WA Mineral Sands Mines

- 1 Southwest Western Australian illustrates well the co-existence of mineral sands mining with nearby population, significant national parkland (including Ramsar wetlands) and high value horticulture. The mineral sands industry has been in existence in this region for ~70 years and is now in its final years because of resource exhaustion.
- 2 The recent years of southwest Western Australia experience is relevant to the Fingerboards project.
- 3 The first two accompanying maps show some of the areas in southwest Western Australian that have been mined for minerals sands and the location of this land in relation to nearby features.
- 4 The situation to the east and southeast of Busselton is relevant in particular: refer Busselton WA environs annotated photo map at 12/2021. Busselton is a city of about 40,000. Busselton City lists mining as one of its industries in the immediate district and is the second biggest base of FIFO mine workforce in WA because of life-style of the area. Busselton is a significant tourist destination, along with Margaret River wine area to the south.
- 5 Mining has recently progressed through the Busselton airport and the airport runway will be extended on completion of rehabilitation to increase tourism capacity with larger aircraft. The housing development 3km immediately to the north the airport is on rehabilitated mining land, as is the Busselton golf course east of the airport.
- 6 High value avocado farming is becoming increasingly important in the Busselton area and will soon be a \$100m per annum industry with the increase in avocado plantings. Avocado is highly intolerant to dust as this can lead to fungal infection. It is important to note the co-existence of avocado plantations with mineral sand mining operations. Dust is not an issue because of industry standard dust mitigation by adjacent mineral sand mining companies.
- 7 The accompanying maps show two significant avocado growing properties nearby to mineral sands mines: both belonging to Jasper Farms which is the second largest avocado farming enterprise in Australia. Jasper Farms was acquired in November 2017 by Ontario Teacher's Pension Fund (OTPF) Agri-business (C\$181 billion funds under management) based on a business value of A\$180m, producing \$40-50m per annum (retail price value) avocados. Since the acquisition there has been a further acquisition by OTPF in the region, with the purchase of Capel Farms (horticulture including avocados on minerals sand rehabilitated land) so that OTPF hold in excess of 700ha in land to expand current avocado production of up to 7,000t pa.

At Yogarillup is Jasper Farms' oldest plantation, 360ha of trees established in 2004, located 2-3km equidistant from Doral's Yonarillup mine and the Iluka Resource's Tutunup South Mine.

- 8 Further north, at North Wonnerup, a major avocado planting was established in 2014, northeast of the Tronox's Wonnerup mine site, which is now in an intensive rehabilitation phase as mining has moved to North Wonnerup. The major avocado planting is now southeast and directly adjacent to Tronox's (Cable Sands) current and future mineral sands mine at North Wonnerup. (Refer particularly Tronox's 2021 photo map.)
- 9 The North Wonnerup avocado plantation is on rehabilitated land previously mined by Iluka Resources who mined the very high grade 12-15% Heavy Mineral strandlines; whilst Tronox is currently mining the lower grade extensive dunal material ~6% Heavy Mineral.
- 10 Both the large Busselton population centre and adjacent past and current mining sites are immediately adjacent to the Vasse-Wonnerup Ramsar wetland site and Ludlow Tuart National Park; and co-exist.
- 11 The accompanying material also shows the sequential rehabilitation of the Yoganup West, Yoganup and Tutunup mine sites. All are associated with the Whicher scarp, that is the original coastline cliff to the now coastal plain. The topographic falls are between 30 and 50 metres across sites and these mines have not "flatland" rehabilitation.

Regional Map

1



Level 1, 1002 Hay Street, Perth WA 6000
Office Tel +61 3 5152 3130 | Freecall 1800 791 396
info@kalbarresources.com.au | www.kalbarresources.com.au
ABN 30 149 545 362

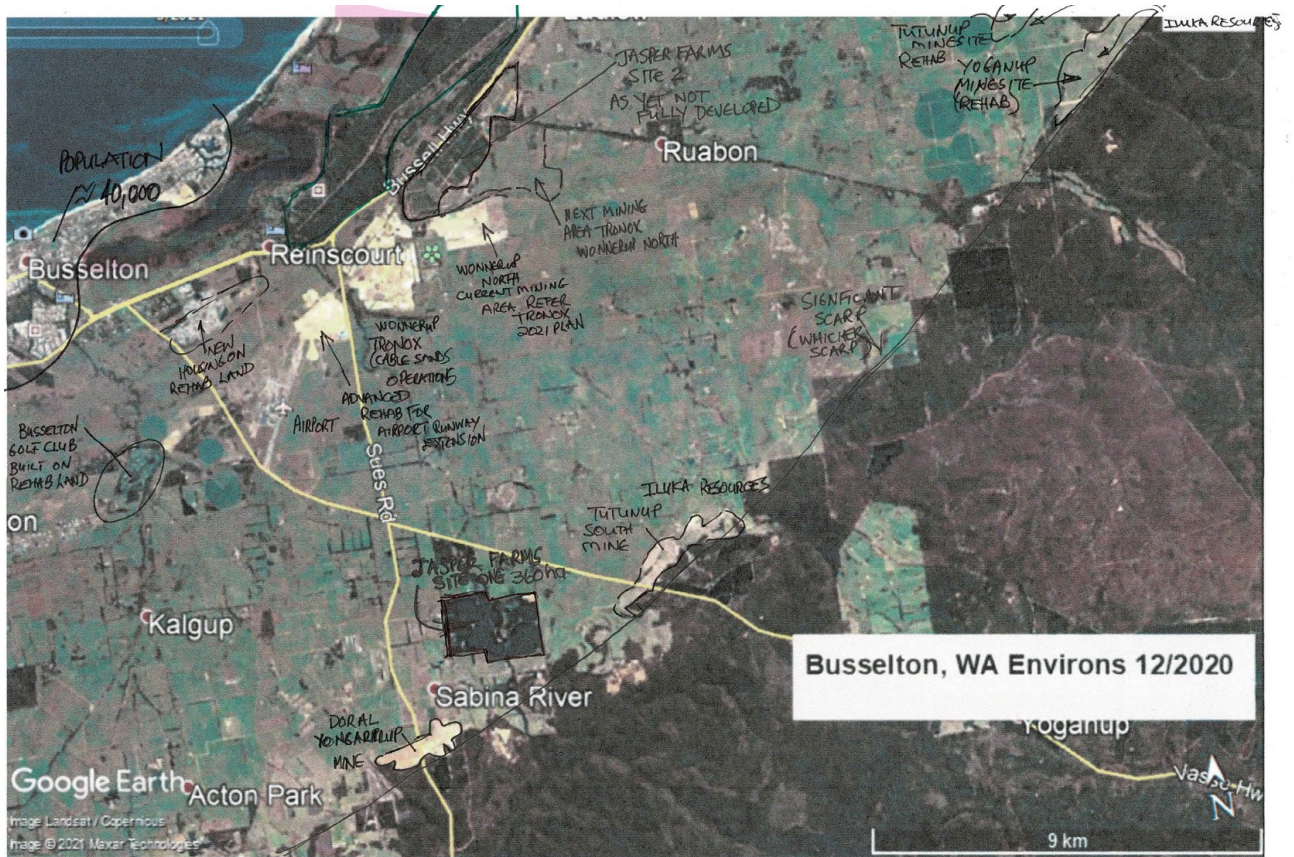
SW Mineral Sands Mines & Rehabilitation Sites



SW Mineral Sands Mines & Rehabilitation Sites_BLF250519.doc

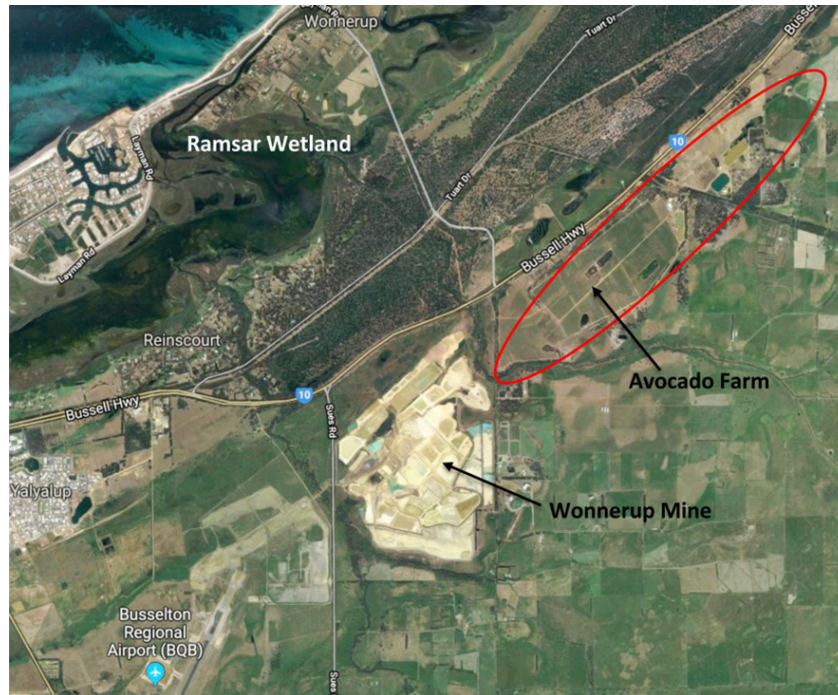
Reference is made to Busselton environs mineral sands activity in the extreme south of this regional map

Annotated Busselton Environs Photo Map



WONNERUP RAMSAR WETLANDS
 NATIONAL PARK

Tronox Ltd Wonnerup minesite 2017



Wonnerup minesite is southern adjacent to Ludlow Tuart National Park which in turn abuts the Vasse-Wonnerup Ramsar Wetlands



NE adjacent Jasper Farms avocado plantings in progress May 2015 on 3kms strip originally mined & rehabilitated by Iluka Resources Ltd

Tronox Ltd Wonnerup – Mining Active Site Phase



Wonnerup - mined cell being filled with tailings



Rehabilitated cell, topsoil emplacement in progress in front of wet concentration plant producing HMC

**Nearmap 2021 images of Tronox Ltd Wonnerup South (Busselton airport)
and in part adjacent eastern Wonnerup Mining Sites**



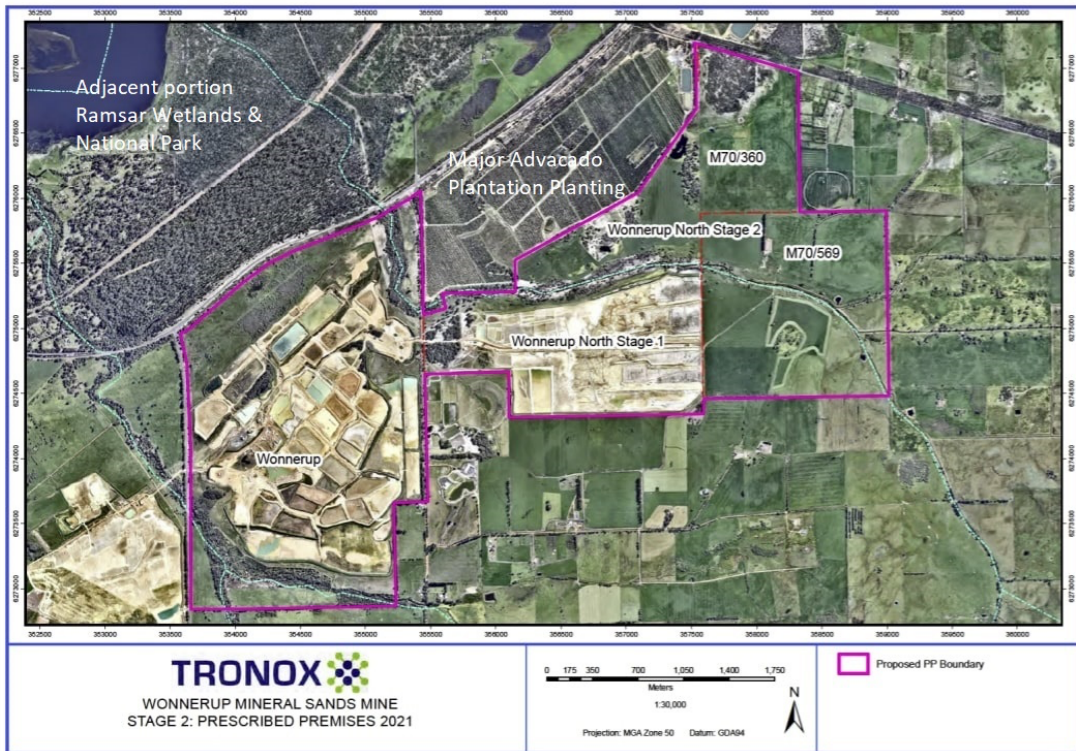
5 January 2021 – Advanced rehabilitation of Wonnerup South (Busselton airport) minesite (with runway extension preliminary works) with eastern adjacent Wonnerup minesite rehabilitation in progress.

Nearmap images 2021 of Tronox Ltd Wonnerup and Wonnerup North Mining Sites



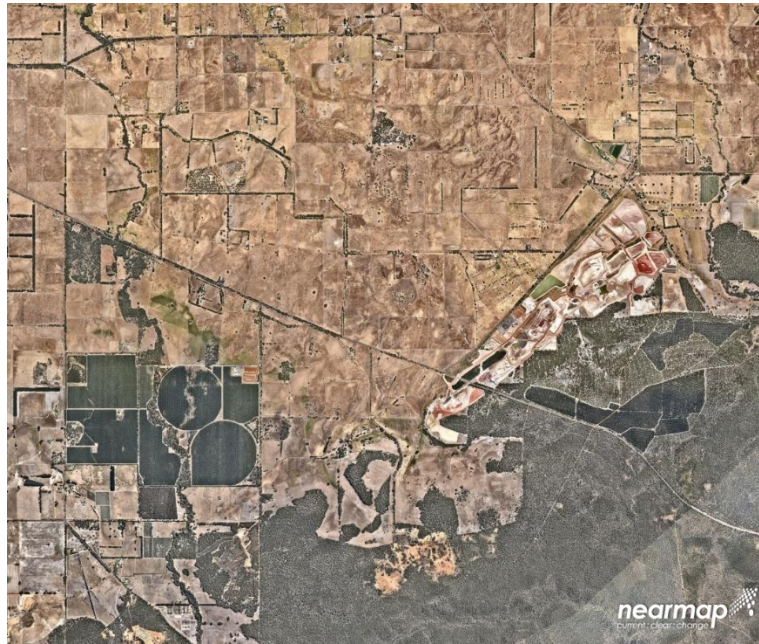
5 January 2021 – Note Jasper Farms northern adjacent developed avocado plantation which approximates in extent 4km (truncated in NE) of photo by 800m width.

Tronox Ltd Premises 2021 Map



Minesite generally will enclose from the south Jasper Farms avocado plantation. Mine site (Wonnerup site) abuts Ludlow Tuart National Park which in turn fringes Vasse-Wonnerup Ramsar Wetlands.

Nearmap images of Iluka Resources Ltd Tutanup South Mine Site



6 February 2017 - Active Mine Site



5 January 2021 – Mine closed Q1/2019 – Final rehabilitation phase

**Rehabilitation Iluka Resources Ltd Yoganup West and Yoganup minesites
(refer Busselton regional map NE cnr for location)**



**Northwest mine site is West Yoganup and large site is Yoganup mine.
The significance of these mines is they have falls of between 30 and 50
metres across the mines and are bisected by streams running off the scarp
and are not “flatland” rehabilitation.**



Yoganup 2016