

# **Appendix C**

## **Alternatives Research**



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MUNDAY**

4 September 2007

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Dear Carrie

### **Andranangoo aircraft landing area alternatives**

As requested in the EPA Guidelines for the assessment on the Andranangoo aircraft landing area proposal, Michels Warren Munday has researched alternatives for the transport of crew, emergency and medical evacuations to and from the Matilda Minerals Andranangoo site. Telephone interviews were conducted with Jayrow Helicopters, Direct Air, Airborne Solutions, Pearl Air, Northern Territory Police, ConocoPhillips and the Tiwi Barge Service.

The following is a précis of the information received.

### **Jayrow Helicopters**

Jayrow Helicopters provides general transport of personnel to Matilda Minerals when requested and would be keen to investigate the provision of more permanent services to include emergency operations.

Jayrow Helicopters has a range of helicopters available for use in the Northern Territory.

- ❖ Single engine Jetrangers will seat the pilot plus 1 person
- ❖ Long range helicopters will seat pilot plus 6 persons (and equipment). The long range helicopter can also carry up to two stretchers for medical evacuations.
- ❖ They also have five twin engine helicopters that will seat 10 to 12 people plus luggage. Using aviation standard for weight capacity.

These helicopters are generally not available without some notice as they could be working on jobs out of Darwin or require pilot rostering. However, if Matilda would

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like to contract to a standing charge, they can be available 24 hours a day to the company with little to no notice. A standing charge of approximately \$30,000 per month would apply to have a machine assigned for Matilda Minerals' exclusive use, but they could then negotiate on the cost per hour (flying time) to be reduced from the casual rate. The cost involves having three pilots, who are night trained, on 24 hour roster, and would be varied according to requirement. The machine would sit at the ready, with pilot on standby at the hanger for exclusive Matilda Minerals use.

Notice for casual or ad hoc use is approximately one working day to be assured of availability. However, if at the time of the call the pilot and helicopter are available and not on another job, it can be ready in half an hour.

They also have a squirrel helicopter, with facility for attachment of winch and 'night sun' for special evacuations and lifting and transport of machinery. At this stage, due to lack of demand, the equipment (winch, night sun etc) are being used on mine sites, but can be regained with notice and fixed quickly to the vehicle.

All of these helicopters are able to land not only on helipad areas but wherever there is clearance.

It is suggested that perhaps several mining companies would consider joining together to pay the standing fee to have a helicopter equipped with water bucket and on stand by at all times for water bombing during the dry season when fires can flare quickly.

A service more commonly contracted by mining companies is the supply of a light single engine helicopter in daylight hours. Costs reduce if you do not require night trained pilots, can share the time with other companies, or will be able to use the helicopter for regular business rather than just having it sit at the base.

Individual arrangements can be negotiated for use as required, for example Telstra who have a contract for the provision of a machine five days a week for regular use of moving staff, and an option for weekend emergency use only.

For exclusive use in daylight hours, the standing charge would be approximately \$1300 per day.

To improve the existing helipad landing site, Jayrow Helicopters suggest increased lighting for night landings and watering the helipad prior to use for dust suppression.

The benefit of using a helicopter is that it is faster, with greater ability to land in difficult or unusual locations if needed in an emergency situation than a fixed wing plane. They would be able to pick up a medical officer to carry them to the islands if needed. In the past, Jayrow has set down in the main street of Katherine to pick up a doctor to accompany them to an accident site. This was the most time effective way to get a medic to the site.

Although Jayrow Helicopters do not offer a discrete medical and rescue service in the NT, they do operate this in Queensland through their company arm 'Capricorn Rescue Services' and would be keen to see a similar service established in the NT.

The funding for the service in Queensland comes from the community and state government.

### **Direct Air**

Currently Direct Air is the primary provider of transport services to Matilda Minerals utilising the Pickertaramoor, Milikapiti or Garden Point (Pirlangimpi) air craft landing areas. They are happy with status of the current landing strip, but suggest that improvements could be made to the lighting. However, the current landing strip facilities are at least an hour's drive one-way from the Matilda site.

Planes are better for carrying equipment and medical teams in certain situations. However Direct Air does not have the capacity for medical evacuations (Pearl Aviation is contracted by NT Aerial rescue services, AirMed).

Direct Air can provide a range of single, twin and large twin engine aircraft, seating 4, 5 and 9 passengers. Currently they fly on behalf of Matilda Minerals three to five times a week. The time for the trip is only 20 minutes, and there is easily enough fuel to travel there and back. They do keep back up fuel drums on site for emergency but do not expect to have to use them.

There are problems with flying in bad weather, although they can usually skirt the storms. They have landed in all sorts of weather in the past. Their pilots are all weather rated.

Their quick response time is about one hour, night or day. They have pilots on night standby, all of whom are night and all weather qualified.

The time delay seen in medical and other evacuations is usually in getting the doctors to accompany the flight, and the ambulance or other transport of the patients or staff from the incident and evacuation site to the airstrip. In this instance the crews would have to travel 90 minutes by vehicle to get to the strip.

Direct Air currently charge on a per use basis to Matilda, would be happy to consider a more permanent arrangement to include a standing fee to ensure exclusive use of a plane.

### **Airborne Solutions**

Airborne Solutions currently operates out of Katherine, but is in possession of a block at Darwin Airport on which it could develop a main base facility. Airborne Solutions has also negotiated successfully with the Port of Darwin for the establishment of a helipad on the outer end of Fort Hill Wharf, to be operational in March 2008.

Airborne Solutions has a fleet of 8 helicopters that offer onboard GPS and moving map systems, stabilised cameras that can record film, infrared and plot positions on map overlays. Airborne Solutions has Tourism NT Accreditation and is currently seeking ISO9001-2000 accreditation.

The company has committed to the purchase of an ED 120 helicopter, which will be in use in early 2008. They can bring forward the introduction of this craft to the fleet if requested specifically by a client willing to commit to its use. This helicopter has a reputation as the quietest helicopter in use, can carry a medical stretcher patient and two passengers. They are also considering the purchase of a Super D2 Squirrel, which will have the capability of running a full life support system with one passenger, two medics and a pilot. They have the finances available for the outlay of the equipment, and they are currently seeking government and consumer advice as to the anticipated usage of the machine. They are in active negotiations with community and business groups, the NT Government and St John ambulance, to provide a fully staffed 24 hour a day medical helicopter service. This is not yet available.

The cost of equipping a helicopter with a turbine, floats, nightlights, full medical kit, and to have it on stand by 24 hours a day with a pilot ready to go within 5 minutes notice, is approximately \$500,000 per year. This is not financially viable for a single business, hence the move to recruit a consortium of community and government supporters.

This new helicopter in the meantime will be used for crew transport, equipment movement and evacuations.

Flying time from the Tiwi Islands direct to Royal Darwin Hospital (using the airport or Darwin city helipad) will be approximately 25 minutes, with helicopters prepared to take off within 10 - 30 minutes of notification (depending on equipment that needs to be procured).

The helicopters do have emergency floats for sea landings and can fly at night. At the moment Airborne Solutions does not have the number of pilots on staff required to 24 hour on-call / stand by service. At this stage they work on the roster system, with pilots coming in from home rather than being housed at the base.

Helicopters can land in more venues and sites than a fixed wing aircraft and there is flexibility in their ability to land where appropriate.

Airborne Solutions is keen to talk with Matilda Minerals about their needs and put forward a proposal to service their requirements. They will negotiate a cost for dedicated (on stand by) arrangement if requested.

They currently do have enough helicopters to provide a regular service to Matilda. The rate for casual (ad-hoc) service provision varies with the machine required. For example, while it is \$1000 per hour for a Bell Jet Ranger, seating four passengers, the 119 Koala will seat 7 passengers and a pilot, can travel at 300kph, and is charged at around \$1800 per hour.

Specific arrangements for mining companies can be negotiated. Airbourne Solutions currently has a Bell Jet Ranger stationed full time at another mining operation, with no standing fee for dedicated use, charging only a per flight hour basis with a heavily reduced contract rate of around \$750 per hour. With another

operation they have negotiated a special rate based on the purchase of a block of 150 hours to be on call.

### **Northern Territory Police**

The NT Police rely on commercial fixed wing and helicopter support for movement of personnel and evacuations. Although the NT Police own their own fixed wing plane, there is a lot of commercial hire of helicopters from local companies for regular movement of personnel to and from emergencies or for routine travel.

The NT Police does not have emergency medical evacuation ability per se. They work within the Emergency Service response protocols, and when there is an emergency it would be AirMed operated by the NT Department of Health who would organise the transport vehicles.

There is no plan for NT Police to get a helicopter or further fixed wing plane for medical or other emergency transport. It is unlikely that the NT Police plane would ever be used for transport to a site such as Matilda on the Tiwi islands. It is more likely that a quick response will be facilitated through helicopter transport.

The police plane is not available for commercial use or charter.

### **Pearl Aviation**

Pearl Aviation has the Territory's only sea planes, but these operate as a private operator licence, and so are reserved for Paspaley company use only and are not available for charter.

Pearl Aviation has both King Air turbine aircraft that will seat nine people, or in different configurations can seat seven executives or become a medical craft carrying a doctor, nurse and two stretcher patients.

They also have the Metro, a 19 seat aircraft which is purely high capacity seating (no executive version). Again the luggage capacity is to standard. Depending on destination and distance they carry average weight of 100kg per person (to include luggage), with a payload of 1800 – 1900 kg only in total.

The Metro is the better craft for regular transport of staff in numbers, to include the rostered change over of staff. Flight costs are only slightly higher than flying a King Air, but it can carry double the number of people. As it is a bigger plane it does require larger landing facilities and a permanent strip.

The King Air however can be used on dirt strips and has been used on remote airstrips all over the NT. Pearl Aviation has the contract to provide aerial medical services for the NT Government and use the King Air in the medical configuration for medical transport and evacuation all over the Northern Territory. This is a full time commitment and this particular plane is dedicated to the service, so cannot be chartered.

Pearl Aviation reports that NT AMS (AirMed) services are not necessarily available for emergency evacuations for even police and emergency service use. The planes have a regular schedule of patient transfer to and from communities, medical team movement, and providing services to outlying communities. Should a plane not be available in time, as it is already out on a transfer service, then ambulances will be tasked for transfer of medical team.

If Matilda Minerals was to seek access to AirMed services, it would be by an approach to the Northern Territory Government's Department of Health who would assess on a case by case basis the availability and charge that would apply.

To convert one of the other planes into the medical configuration takes only 30 minutes. Pearl Aviation does not currently have medics or nurses on standby, but anything can be negotiated if you are willing to contract for standing time. They have two further aircraft available for this purpose.

Pearl Aviation suggests that they would be able to fit the usual movement of staff and supplies to a mining site, oil rig, remote community etc into their regular schedules. If the contract was set to fly in and out at certain times, on certain days, with a regular schedule, they would fit in with their other commitments to mining organisations. So you would not have to have a dedicated plane, or pay standing rates. The schedule would be arranged to suit you.

### **Tiwi Barge Service**

Tiwi Barges currently land at Milikapiti and Garden Point. It would be difficult to get new landing areas at other parts of the islands, as they can become mudflats when the water goes out and the draught will not allow easy access as the areas are shallow and long. There is a potential environmental impact issue, pertaining to the nesting sites of sea turtles which can be found in the northern beaches.

The number of trips that Tiwi Barge Service operates to the islands per week depends on the number of charters that are planned. A charter would cost \$12,000 for a round trip. Barges can of course carry bulk equipment and supplies.

Barges can carry medical crews and equipment for evacuation of personnel, but the round trip from Darwin is 36 hours (18 hours one way) and of course they can only land at certain points. The patient would need to be transported to barge sites. The ability of the barges to land is also seriously affected by the tides so there would be no predicting the time it would take to evacuate (if time was of the essence).

Barges are used generally for equipment and supply movement.

### **ConocoPhillips**

ConocoPhillips uses fixed wing plane charters to move staff overseas, and then helicopters, generally commercially chartered, for transit to site. It is unlikely that

there would be the need for sharing equipment and therefore the concept of sharing the costs of establishing a more permanent evacuation service was not discussed.

### **Other information**

The following information has been gathered in discussion with the service providers mentioned above. Formal interviews have not yet been undertaken with these organisations:

#### **Defence Force**

The Defence Force has one twin engine helicopter for the transport of its own personnel.

It also has a contract with a local provider for the exclusive use of one twin engine helicopter, for RAAF use only, which can be airborne within 30 minutes for the rescue of fighter pilots. This is fitted out with rescue winches, lights, pontoons and other equipment. It is highly unlikely that this aircraft would ever be chartered out or available for use by Matilda or other users. Should there be government intervention to force the use of this helicopter, it should be remembered that as it is stationed at Bradshaw Air Force base, there is a significant travel time to reach Darwin. The cost of flying this craft is between \$5000 and \$7000 per hour.

#### **Canadian Helicopter Company**

Canadian Helicopter Company (CHC) operates out of Darwin and provides off shore helicopter services to oil rigs and overseas sites. They do provide a charter service. As their helicopters are committed to the oil rigs, they can be 250 air miles out to sea when you need it in the case of an emergency, with the time to return to base, refuel and leave for the new destination running into hours. The cost of flying the larger helicopters is around \$10,000 per hour.

#### **Customs and Quarantine air services**

The government has purchased a quick response helicopter in Gove, but it is not fitted for medical situations. It is used by the customs service to search for foreign fishing vessels and has only a short range. It is unlikely that this will be able to be used by Matilda in an emergency.

#### **Northern Territory Aerial Medical Service**

The Northern Territory Aerial Medical Service (NTAMS / Air Med), a division of the Department of Health and Community Services, is a 24-hour emergency medical retrieval service operating in the Top End of the Territory.

The service carries out medical evacuations from remote communities, cattle stations, mining leases, oil rigs, ships at sea as well as intra and interstate hospital transfers and international retrievals from South East Asia.



NTAMS has three bases covering the Top End, Darwin, Gove and Katherine. The aircraft used by the service are Beechcraft 20000 Super King Airs which have the capacity to carry two stretcher patients and three walking passengers plus medical equipment in a pressurised environment.

The core service provision of AirMed is the transfer of patients from smaller communities in the Northern Territory to the base hospital in Darwin. The majority of these transports are performed in dedicated fixed wing aircraft but some may be by road, chartered helicopter or boat.

The planes used for these services are commercially leased.

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