



Environmental Defenders Office

Have your say on the referral of the Singleton Horticulture Project to the NT Environment Protection Authority

2 February 2023

Fortune referred the Singleton Horticulture Project to the Northern Territory Environment Protection Authority (**NT EPA**) for environmental impact assessment and approval under the *Environment Protection Act 2019* (NT) (**EP Act**).

Now is your opportunity to let the NT EPA know the Project must be subject to the highest tier of environmental impact assessment to ensure the impacts and risks of the Project are fully understood.

You can let the NT EPA know your views by filing your submission by no later than **11:59 pm (ACST)** on **13 February 2023**.

The referral documents are available on the NT EPA's website, [here](#).

What is the Singleton Horticulture Project?

Fortune Agribusiness Funds Management Pty Ltd (**Fortune**) plans to develop approximately 3,300 ha of intensive irrigated agriculture at Singleton Station, a cattle station located 35km south-east of Ali Curung and 390km north of Alice Springs (the **Project**). Fortune plans to grow perennial crops such as mandarins, grapes, avocados, and jujubes as well as annual crops such as onions and rock melons, including for export to international markets.

Fortune has been granted a 30 year, staged, Groundwater Licence from the Northern Territory Government for the Project. By year 8, the licence allows for 40,000 ML a year (40GL/year) of groundwater to be extracted for the Project.

The Environmental Defenders Office (**EDO**) are deeply concerned about this unsustainable Project, which will have substantial, irreversible environmental impacts if it is allowed to proceed in its current form.

Read on to find out more about:

1. What Environmental Impact Assessment is all about;
2. What decision the NT EPA has to make right now, and why this is important;
3. The biggest concerns with the Singleton Horticulture Project; and
4. How you can make a submission, including some tips for making your submission effective.

Approvals

The environmental approval is one of a number of approvals which Fortune needs to obtain for the Singleton Horticulture Project to proceed. Other approvals include:

1. The groundwater licence, referred to **above**,
2. A land clearing permit; and
3. A permit to use pastoral land for a non-pastoral use.

Fortune submitted its land clearing and non-pastoral use applications; however, a decision has been put on hold until the outcome of their referral for environmental impact assessment. See the NT Government's [approval mapping for the Project](#) for further detail on the assessment process.

The Groundwater Licence also provides that Fortune cannot commence extraction until all of the above approvals have been obtained.

What is this referral about?

Under the EP Act, any project or development (**action**) which will, or is likely, to have a **significant impact on the environment**, must be assessed and given an environmental approval from the Minister for the Environment (**Minister**) before it can proceed.

An impact of an action may be direct, indirect, or cumulative, and may occur over time. A **significant impact** is an impact of "major consequence", having regard to:

- the context and intensity of the impact; and
- the sensitivity, value and quality of the environment impacted on; and
- the duration, magnitude and geographic extent of the impact.

In determining if a Project may have a **significant impact**, the NT EPA identified a number of factors, in its [Environmental Impact Assessment Guidance for Proponents](#), that it may consider including:

- the value, sensitivity and quality of the environment that will be impacted;
- the extent and consequence of likely impacts;
- the resilience of the environment to cope with impacts and change;
- cumulative impacts with other Projects; and
- the level of certainty of the potential impacts and planned mitigation.

The NT EPA also identified a number of environmental factors that may be impacted by a proposed action to help assess whether the impacts of an action are significant: see

[Environmental Factors and Objectives: Technical Guidance](#).

The approval can be granted subject to conditions, or if environmental harms cannot be appropriately avoided, mitigated or offset, the Minister may find that the action has an unacceptable environmental impact and refuse it entirely.

The purpose of Environmental Impact Assessment (**EIA**) is to ensure there is no unacceptable impact on the environment, now or in the future, and that all actions that may have a significant impact on the environment are assessed and subject to appropriate conditions. It involves the following steps:

1. The proponent (Fortune) refers their action to the NT EPA.
2. The NT EPA decides whether any kind of environmental impact assessment is required for the Project, and if so, what tier or method of assessment is required.
3. If required, assessment of the action takes place. The NT EPA then prepares an assessment report, along with either a draft approval or a statement of unacceptable environmental impact, to give to the Minister. During the assessment period, the effect of any other licences or approvals for a project, such as a water licence, are suspended.
4. The Minister determines whether to grant environmental approval for the Project and what conditions the approval should be subject to. The environmental approval will override any inconsistent conditions in other approvals. So, if Fortune receives an environmental approval, it will override any inconsistent conditions of its Groundwater Licence and any land clearing/land use permits.

For more information on the EIA process, have a look at EDO's Factsheet: [Environmental Impact Assessment under the Environment Protection Act 2019 \(NT\)](#).

The NT EPA has also published a number of guidance documents about the process, which you can find on its website, [here](#), including a flowchart on the [Environmental Impact Assessment and Approval Timelines](#).

What is the NT EPA deciding?

The NT EPA accepted Fortune's referral and must now decide **whether** and **what** kind of assessment is required for the Singleton Horticulture Project. The higher the tier, the greater the amount of information Fortune must provide, the greater the level of scientific scrutiny, and the greater the opportunity for public consultation and feedback.

There are three tiers of assessment available under the EIA process:

1. **Assessment on referral information:** The NT EPA prepares its assessment report based on the original referral and any further information provided by Fortune.

2. **Assessment on supplementary environmental report (SER):** The NT EPA prepares an assessment report based on the original referral, any further information, and a SER prepared by Fortune. Members of the public can comment on the SER.
3. **Assessment by Environmental Impact Statement (EIS):** Fortune prepares an EIS which addresses Terms of Reference approved by the NT EPA. Members of the public can comment on the proposed terms of reference, on the draft EIS, and on the Supplement to the EIS, which is prepared after feedback from the NT EPA on the draft EIS. This is the most rigorous form of assessment, required for the most high-risk proposals.

In addition to three tiers, the EP Act also provides for an assessment by inquiry. This can be used for some or all components of the EIA process where an oral inquiry is considered more appropriate than a paper-based approach. The inquiry would be run by the NT EPA or a panel appointed by them.

But wait – weren't there Court proceedings challenging the validity of the water licence?

Yes – last year, ALEC, represented by EDO, sought review in the Supreme Court of the Minister's decision to grant the Groundwater Licence, arguing that the grant of the licence was unlawful. The Central Land Council (**CLC**), acting for Mpwerempwer Aboriginal Corporation, the corporation of native title holders for Singleton Station, also challenged the validity of the licence. We are still awaiting a decision from the Court.

EDO's position has always been that an EIA should have been undertaken *before* the water licence was granted so that the Project was subject to the highest level of scientific scrutiny.

How can I be involved?

We are deeply concerned about this Project and its potentially substantial environmental impacts. The Project requires the highest level of scrutiny – a Tier 3 Assessment, being an assessment by EIS, so that all the impacts and risks of the Project are fully known and understood.

You can **have your say** and call for a Tier 3 Assessment by making a submission by no later than **11:59pm (ACST) on 13 February 2023**.

Your submission should clearly identify your concerns with the Project and why you say that the highest tier of assessment is required. For the greatest impact, we recommend including issues that matter the most to you. Personalising your submission makes a difference.

For help in preparing your submission and making it persuasive, take a look at the [EDO's Factsheet on submission writing](#) and the NT EPA's [guide on making a public submission during the environmental impact assessment process](#).

What factors does the NT EPA consider when determining the method of assessment?

Under cl. 59 of the *Environment Protection Regulations 2020* (NT), the NT EPA **must** take into account the following factors when deciding what method of assessment should be used for the Project:

- the significance of the potential impact of the Project;
- the level of confidence in predicting the potential impacts of the Project, taking into account the extent and currency of existing knowledge;
- the level of confidence in the effectiveness of Fortune’s proposed measures to avoid, mitigate or manage the potential significant impacts of the Project;
- the extent of community engagement that has occurred in relation to the Project; and
- the capacity of communities and individuals likely to be affected by the Project to assess and understand information about the Project and its potential significant impacts.

We recommend that you directly address some or all of the above factors when making your submission about why the highest tier of assessment is required.

When making any decision under the EP Act, the NT EPA must also consider and apply the principles of **ecologically sustainable development (ESD)**. These include such principles as:

- **Decision-making principle:** Decision-making processes should integrate short and long-term environmental and equitable considerations and provide for community involvement.
- **Precautionary principle:** if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- **Principle of evidence-based decision-making:** Decisions should be based on the best available evidence.
- **Principle of intergenerational and intragenerational equity:** ensuring that the health, diversity and productivity of the environment is maintained or enhanced for future generations.
- **Principle of sustainable use:** Natural resources should be used in a manner that is sustainable, prudent, rational, wise and appropriate.
- **Principle of conservation of biological diversity and ecological integrity.**

In our view, applying these principles also requires the NT EPA to subject the Project to the highest tier of assessment, given the concerns we outline below.

What are some of the biggest concerns with the Project?

Below, we identify some of the most significant potential impacts of the Project and highlight some major knowledge gaps and uncertainties which we think mean the highest tier of assessment is required. You may wish to highlight some or all of these issues in your submission to the NT EPA.

Extraction of this amount of water is unparalleled and unsustainable:

- The Singleton Station groundwater licence presently authorises the extraction of 40,000 ML/year, or 40GL/year, from 144 bores. It is the largest groundwater licence granted in the Northern Territory by a margin of some 24.6 GL. By way of further comparison, the 10 largest groundwater licences in NSW range from approximately 7GL to 15GL, involving 3-11 bores per licence.¹
- As explained further below, Fortune’s modelling indicates that the water table would be lowered by up to 50 metres in parts of the aquifer,² **threatening Groundwater Dependent Ecosystems (GDEs)** and numerous **groundwater dependent sacred sites** in and around the drawdown area. These impacts are extremely significant, and in our view, unacceptable.
- The Project is located in the Arid Zone of the NT, and specifically within the Western Davenport Water Control District. Groundwater recharge in the Western Davenport region is “*highly episodic*” and “*rare, peak rainfall years contribute disproportionately to groundwater recharge while in an annual year, minimal, if any, groundwater recharge occurs*”.³ There have only been three significant recharge events in the last 100 years.⁴ We are concerned about the volume of water extraction that has been proposed in these circumstances, and especially where **substantial uncertainties remain about the nature of the water resource**.
- In addition, it is well understood that arid and semi-arid environments in Australia are already undergoing ecosystem collapse, including due to the impacts of climate change, such as changes to temperature and precipitation, and regional factors such as land clearing and habitat loss, invasive species, and impacts from agriculture and industry, including water extraction.⁵ The substantial groundwater extraction associated with this Project, as well as the land clearing it requires, will further threaten these at-risk ecosystems.

¹ Environmental Defenders Office, [Outline of Submissions to the Water Resources Review Panel](#), 3 September 2021, at [10].

² GHD, [Appendix R: Groundwater Dependent Ecosystem Mapping and Borefield Design: Singleton Horticultural Project](#), 21 October 2022, pp. 13 and 30.

³ Northern Territory Government (2021) [Western Davenport Water Allocation Plan 2021-2022](#). Department of Environment, Parks and Water Security: Northern Territory, Australia, p. 25.

⁴ *Ibid*, p. 88.

⁵ Bergstrom, D, Wienecke, B, van den Hoff, J, Hughes, L, Lindenmayer, D, Ainsworth, T, Baker, C, Bland, L, Bowman, D, Brooks, S, and Canadell, J. 2021. [Combating ecosystem collapse from the tropics to the Antarctic](#). *Global change biology*, 27(9), pp. 1692-1703.

There are substantial knowledge gaps associated with the Project that must be determined through the Environmental Impact Assessment process:

- The Groundwater Licence includes several Conditions Precedent which must be fulfilled before water extraction can commence. These Conditions Precedent require Fortune to prepare a number of further plans, programs and works in order to overcome areas of substantial uncertainty, which must be provided to the Controller of Water Resources (**Water Controller**) for approval. These include:
 - Maps and spatial data demonstrating the predicted impact on groundwater levels and identified Aboriginal cultural values;
 - An assessment of the potential salinity impacts to the land and water resource as a result of the proposed extraction;
 - An adaptive management plan;
 - A monitoring program to assess the impact of taking water upon the groundwater system;
 - A groundwater dependent Aboriginal cultural values impact assessment; and
 - A program to assess the nature of the water resource itself.
- The presence of substantial knowledge gaps at the time of referral serve to highlight why the Project must undergo a comprehensive Tier 3 assessment. As noted above, the NT EPA must consider “*the level of confidence in predicting potential significant impacts of the proposed action... taking into account the extent and currency of existing knowledge*”.⁶ In our view, these knowledge gaps must be worked out through the EIA process and the implications of further analysis and on-field data carefully considered in advance of any environmental approval decision being made.
- The Groundwater Licence, and indeed, the Project as a whole, also relies heavily on ‘adaptive management’ as a means of mitigating against uncertainties and risk. Adaptive management cannot occur in the absence of proper environmental impact assessment and should not be used to allow for the deferral of assessments to Conditions Precedent. Adaptive management is not an appropriate mitigation tool in all situations. “*Whether [adaptive management] is appropriate (or not) for a management plan is in part governed by the reversibility and/or the timescale of potential impacts. These limitations are especially significant for groundwater management due to challenges presented by the time-lags and inertia of hydrogeological systems.*”⁷

The Project is going to have significant and irreversible impacts on Groundwater Dependent Ecosystems (GDEs):

- GDEs are defined as ecosystems requiring “*access to groundwater to meet all or some of their water requirements so as to maintain their communities of plants and animals, ecological processes and*

⁶ [Environment Protection Regulations 2020](#) (NT), cl. 59.

⁷ Thomann et al. Adaptive management in groundwater planning and development: A review of theory and applications, *Journal of Hydrology* 586 (2020) 125871.

ecosystems services”.⁸ The Project’s modelled drawdown of up to 50 metres in some areas after 30 years is likely to have a significant negative impact on GDEs both within and outside of the Project area.

- There are many major terrestrial GDEs in the region, including bloodwoods, ghost gums, bean trees, coolabah trees, fig trees, river red gums and bush orange, which may be impacted. In addition, the drawdown is likely to impact soaks and creeks.
- Many terrestrial GDEs cannot access groundwater beyond 10 to 15 metres as their roots are unable to extend beyond this point. Certain GDEs may also not show signs of incremental distress but will manifest symptoms of decline only once ecological tipping points have been reached, by which time the impact is irreversible.⁹
- There have been no on the ground studies undertaken to determine the presence of stygofauna in the impacted aquifers, only a Desktop review which found the presence of stygofauna in some bores within and surrounding the Project to be likely,¹⁰ but noting a lack of available data for bores closest to the proposed borefield.¹¹ The Referral documentation acknowledges that there has been little research done on stygofauna in the Northern Territory overall.¹²

⁸ Northern Territory Government (2021) [Western Davenport Water Allocation Plan 2021-2022](#). Department of Environment, Parks and Water Security: Northern Territory, Australia, p. 29, citing Kuginis, L., Dabovic, J., Byrne, G., Raine, A., and Hermakumara, H. (2016). Methods for the identification of high probability groundwater dependent vegetation ecosystems. Department of Primary Industries (Water), Sydney NSW, p. 2.

⁹ Above n 1, at para [23].

¹⁰ Main Referral Document, p. 82; Aquatic Ecology Services, [Appendix N: Stygofauna Desktop Assessment Draft Report](#) (2 September 2022).

¹¹ Main Referral Document, pp. 104-105.

¹² Main Referral Document, p. 82.

- Stygofauna are aquatic GDEs that play a vital role in maintaining groundwater quality. They are likely to be impacted by rapid changes to groundwater heights, which affect aquifer connectivity and result in loss of vegetation and organic matter supply in the aquifers.¹³ Further work must be done to map the presence of stygofauna and the likely impacts of the Project on them, to ensure these vital GDEs are adequately protected.

What does the Water Allocation Plan have to do with it all?

The Project is located within the Western Davenport Water Control District. Until recently, there was a [Water Allocation Plan \(WAP\)](#) for the District declared under the *Water Act 1992* (NT), which includes the Project area. A WAP sets out how water in the relevant area is to be allocated between different users.

Whilst there are [many deficiencies with WAPs in the NT](#), the most recent [2021-22 Western Davenport WAP](#) does set out some key information about the water resource, present knowledge gaps and uncertainties, and rules around the protection of GDEs.

The plan recently lapsed and we expect a new draft Plan to be released for public consultation in the next few weeks.

The Project presently allows for the destruction of up to 30% of GDEs:

- Previous WAPs for the Western Davenport Water Control District, including the 2018-2021 and 2021-2022 WAP, included rules around the protection of GDEs. The WAP defines a GDE protection area and describes limits to changes in groundwater levels to protect GDEs.
- In February 2020, the Department of Environment, Parks and Water Security published the [Guideline: Limits of acceptable change to groundwater dependent vegetation in the Western Davenport Water Control District](#) (the **Guideline**). The Guideline sets limits on the impacts from development on GDEs by protecting 70% of GDEs, thereby permitting the destruction of 30% of GDEs as acceptable change. Previously, rules contained within the Western Davenport WAP precluded drawdown in excess of 15 metres to ensure GDEs were protected.
- Fortune’s groundwater modelling for the Project in turn adopts the Guideline, permitting the destruction of up to 30% of GDEs in the Project area. Because this rule has been adopted, Fortune does not consider the risks to GDEs from the Project to be significant, and is unlikely to propose any measures to offset such risks, because its borefield modelling shows a lesser rate of destruction. In our view, this level of GDE destruction is significant and should not be considered an acceptable consequence of the Project.

¹³ This is acknowledged in Fortune’s Stygofauna Impact Assessment (above n 10), at p. 17.

Impacts on sacred sites and groundwater dependent Aboriginal cultural heritage:

- In 2021, the CLC commissioned anthropologist Susan Donaldson to undertake a cultural values assessment associated with the Singleton Station groundwater licence area. Ms Donaldson undertook a literature review and undertook consultations with 80 traditional owners to understand the presence of sacred sites and associated cultural values.
- [The report](#) identified a total of **40 sacred sites within the drawdown area** for the Project, including 29 sacred sites within the drawdown contour areas mapped by Fortune as part of documentation in support of its Groundwater Licence application, and a further 11 sacred sites within the wider impacted alluvial and sandplain area.
- We note that Fortune has re-configured its borefield as part of its referral to the NT EPA. The impacts to cultural heritage as a result of Fortune’s updated proposal must be comprehensively examined through the EIA process, given the considerable uncertainties, in a process that is led by the Central Land Council and traditional owners for the area.

Salinity impacts:

- Cooke and Keane assessed the impacts of salinity to the area in their report, “[The Risk of Salinity due to Irrigation Developments in the Western Davenport Basin, Northern Territory.](#)” The authors conclude Singleton Station and the surrounding area is at ‘high risk’ of increased salinity after 30 years of groundwater extraction which will have “very significant implications for long-term viability of irrigated horticulture.”¹⁴
- The potential impacts to vegetation and GDEs have not been assessed in sufficient detail and the risks of salinity to these values are uncertain. Salinity has the potential not only to negatively affect soil quality and agriculture, but salinity impacts in groundwater could have negative impacts on the quality of drinking water in surrounding communities which depend heavily on groundwater for supply.¹⁵

Impacts to threatened species:

- At least 8 threatened species may be impacted by the land clearing required to establish the Project. These include:
 - Grey falcon (*falco hypoleucos*)
 - Red goshawk (*erythrotriorchis radiatus*)
 - Greater Bilby (*macrotis lagotis*)

¹⁴ Cooke and Keane (2021) “[The Risk of Salinity due to Irrigation Developments in the Western Davenport Basin, Northern Territory](#)” p 67.

¹⁵ For further information see [Singleton Horticulture Project Referral: Main Document](#), p 110.

- Black-footed rock-wallaby (*petrogale lateralis*)
 - Night parrot (*pezoporus occidentalis*)
 - Princess parrot (*prolytelis alexandrae*)
 - Australian painted snipe (*rostatula australia*); and
 - Painted honeyeater (*grantiella picta*).
- It is noted there is a lack of up-to date research and on ground surveys on threatened species in the Project area. The Biodiversity Assessment completed for the Project referral relies primarily on a desktop assessment and records of threatened species, as well as limited on-the-ground survey work conducted during one of the driest periods on record for the region in 2019. Much more comprehensive data needs to be obtained to appropriately mitigate the potential harms from the Project.

The Project is likely to have cumulative impacts within the region:

- The EP Act requires consideration not only of the direct and indirect environmental impacts of an action but recognises that impacts may be cumulative and occur over time. This Project sits within a broader context of development proposals and projects within the Barkly Region, as well as projects intending to draw from the same or interconnected aquifers, which also have or will have significant environmental impacts.
- It is important the cumulative impacts from the Project and surrounding developments are properly assessed by the NT EPA through a tier 3 assessment process.

How do I lodge a submission?

To make your submission, go to the NT EPA website landing page about the project, here: <https://ntepa.nt.gov.au/consultation/singleton-horticulture-project>, and click on the green “submit your comments” button. You’ll be directed to email eia.consult@nt.gov.au with some template information for you to fill in.

The [NT EPA’s Submission guide](#) also notes that there are a number of other ways you can make a submission other than via email, including:

- In hard copy, by:
 - Posting to the NT EPA, GPO Box 3675, Darwin NT 0810, or
 - Delivering in person to Level 1, Arnhemica House, 16 Parap Road, Parap; or
- Orally in person or by audio or audio-visual communication or recording.

In any submission, make sure you include your full name, address, and contact details.

You can have a look at the NT EPA's submission guide for more information about what information to include in your submission and what will happen to your comment once it is submitted, including details around privacy, the non-publication of sensitive or confidential information, and the making of anonymous comments.

If you have further queries about the process of making a submission relevant to your individual circumstances, you should contact the NT EPA at eia.ntepa@nt.gov.au or by phone on (08) 8924 4218.

What can I expect after lodging a submission?

All comments received during the referral process will be published by the NT EPA as soon as practicable online, unless anonymity or non-publication of certain information has been requested.

Once the referral consultation period has closed, the NT EPA has **30 business days** to make a decision on whether and what tier of assessment is required.

The EDO acknowledges the Traditional Owners of the lands on which the Project is located and the surrounding areas, being the Alyawarr, Kaytetye, Warlpiri, Anmatyerr, Warumungu and Warlmanpa people. We pay our respects to their Elders past, present and emerging.

Contact details

For further information please contact the EDO on darwin@edo.org.au