
Mullumbimby Sewage Treatment Plant



Land Use Options Update

Prepared for Byron Shire Council
by MikeSvikisPlanning
22 January 2021



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1 Background

Byron Shire Council engaged GHD in 2008 to determine preliminary land use options for the Mullumbimby Sewage Treatment Plant (STP) in anticipation of its closure. Mike Svikis Planning updated this report in 2017.

This report revisits the five land use options for the Mullumbimby STP that were examined in 2017, and documents what has changed since that time.

The new Brunswick Valley STP was commissioned in 2010, and the Mullumbimby STP was decommissioned. It is currently only being used for storage of treated water prior to it being dosed and pumped to various destinations for irrigating agriculture. The STP has been subject to thorough contamination testing and a Remediation Action Plan. Most of the above- and below-ground infrastructure is currently being removed. In the next 12 months the site will be remediated and stabilised, leaving only the larger pond for storage of treated water.

Mullumbimby Sewage Treatment Plant has been subject to a boundary adjustment so that the entire large pond is located on a single lot. The new description for the subject land is Lot 100 DP 1265508 and Lot 101 DP 1265508, Casuarina Street, Mullumbimby. Both lots are currently in Council ownership. The site has a total area of approximately 2 hectares (Figure 1).

Figure 1: Subject land



2 Objectives

The objective of this report is to establish:

- What has changed since the updated land use options report was prepared in 2017?
- How have those changes affected the options for land use?
- Has the preferred land use option changed?

It is not intended that the updated report will be completely rewritten.

3 What has Changed?

3.1 Legislation and Policy

SEPP Coastal Management 2018

In April 2018, the NSW government gazetted a new SEPP that combined SEPP No 71 (Coastal Protection), SEPP No 14 (Coastal Wetlands) and SEPP No 26 (Littoral Rainforests). The subject land is not affected by either coastal wetland or littoral rainforest mapping, and is not affected by any buffers to these areas.

However, the subject land is identified as being entirely within the Coastal Environment Area (Figure 2) and Coastal Use Area (Figure 3) mapping.

Figure 2: Coastal Environment Area mapping

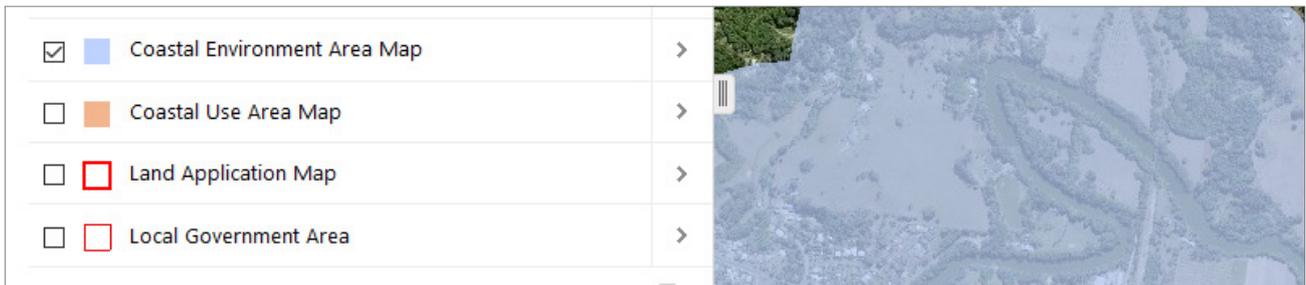
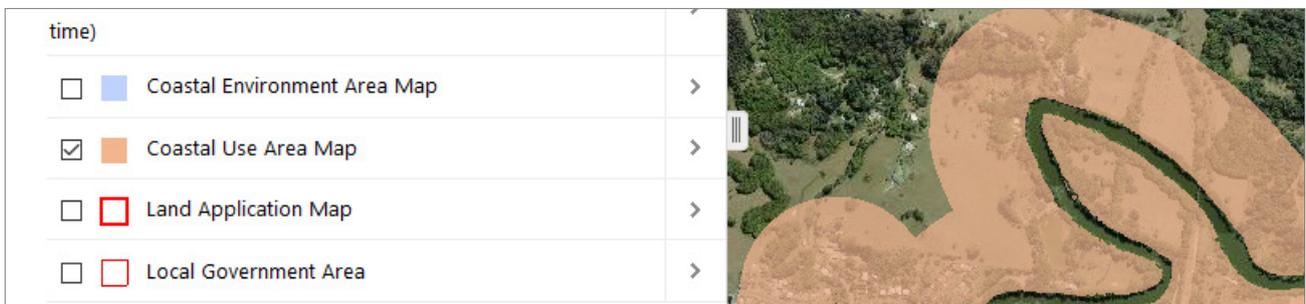


Figure 3: Coastal Use Area mapping



Any development located on the subject land will need to consider a wide range of matters identified in the SEPP, including:

- the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment;
- coastal environmental values and natural coastal processes;
- the water quality of the marine estate;
- marine vegetation, native vegetation and fauna and their habitats;
- Aboriginal cultural heritage, practices and places;
- existing, safe access to and along the foreshore and
- the visual amenity and scenic qualities of the coast.

The inclusion of land in the SEPP does not of itself trigger development consent or designated development for works on the subject land.

North Coast Regional Plan 2036

The State government produced this regional plan in 2017 and it is enforced through a section 9.1 Direction.

The Mullumbimby STP site is not identified in the maps marked “Urban Growth Area” or “Investigation Area – Urban Land”. Future urban related development that requires a zone change will be inconsistent with the North Coast Regional Plan and would need to be justified by supporting information.

Local Environmental Plan

A new standard format Local Environmental Plan (LEP) was introduced in 2014. It did not completely replace Byron LEP 1988 because the new LEP did not contain any environmental zones. The subject land is mapped as mostly RU2 Rural Landscape and partly Deferred Matter under LEP 2014 (Figure 4). The deferred matter is zoned partly 5A Special Uses and partly 1A Rural under LEP 1988 (Figure 5). The deferred matter on the subject land correlates mostly with a vegetated riparian strip adjacent to the Brunswick River. The deferred matter was publicly exhibited as an E2 Environmental Conservation zone.

Since 2017, Council has commenced a process of implementing “e zones” and in due course it is expected that the deferred matter on the subject land will be included in an “e zone”.

The land affected by LEP 2014 is also subject to DCP 2014. This DCP provides a range of development controls and guidelines relevant to future development on the subject land.

Figure 4: Zones under LEP 2014

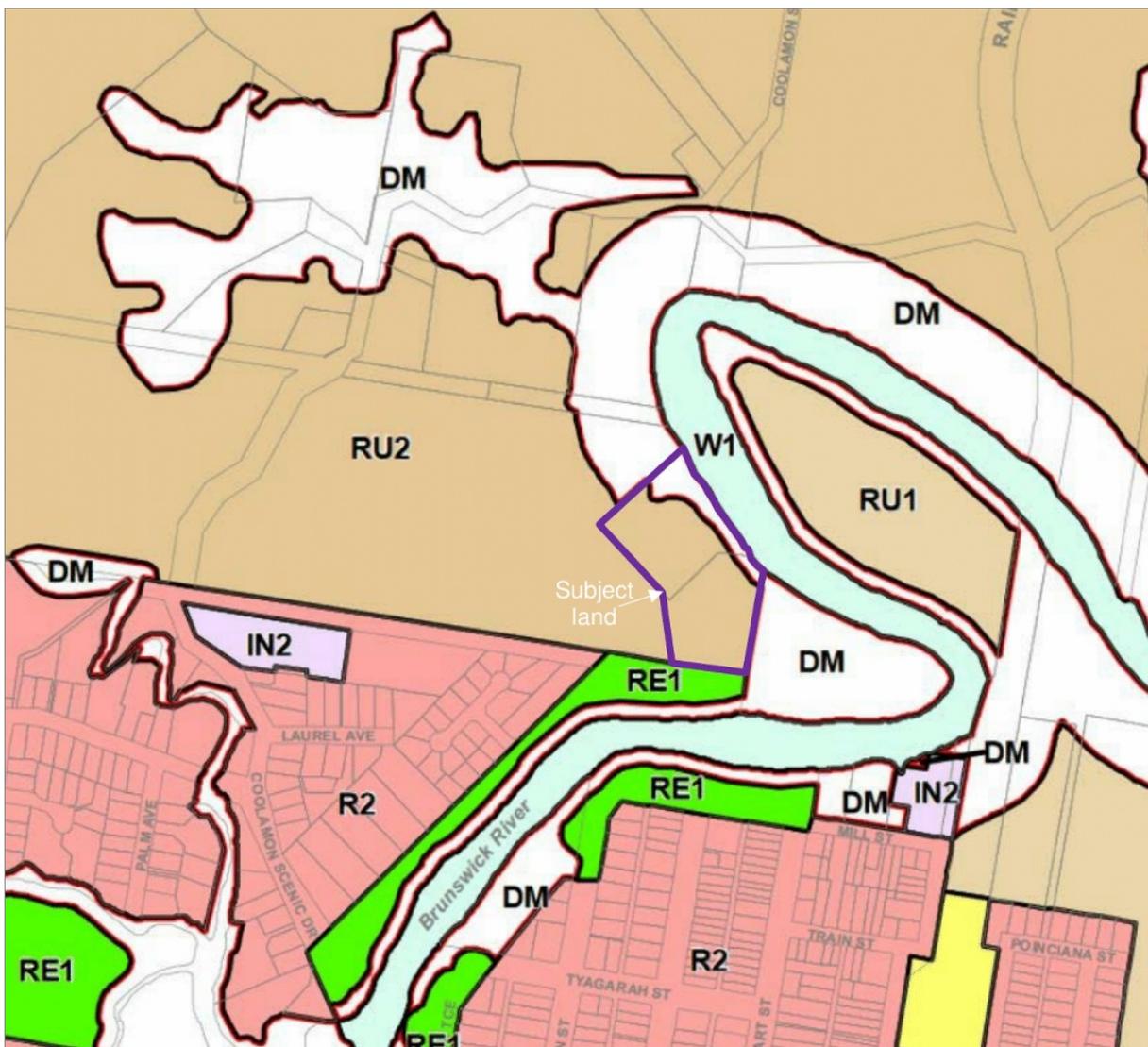
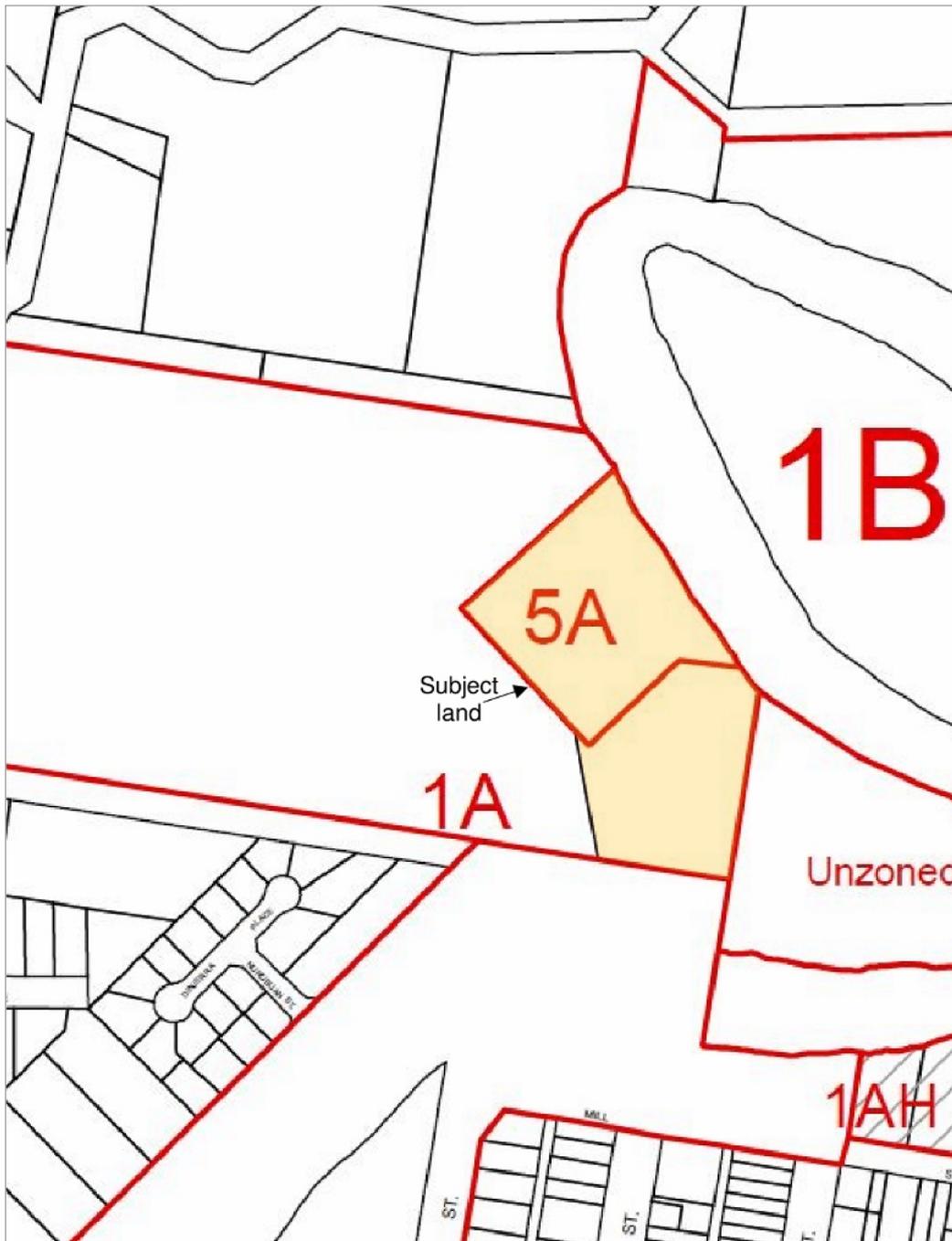


Figure 5: Zones under LEP 1988



Byron Rural Land Use Strategy

Byron Shire Draft Rural Land Use Strategy was prepared in 2016/2017 and finalised in March 2018. It received the approval of the Department of Planning and Environment in June 2018. The draft strategy used site suitability criteria to map land as potentially suitable for rural residential use. Land was potentially “unconstrained land” or “assessable rural development land”. The subject land is categorised as “assessable rural development land” and was considered. However, it is not identified for rural residential development on the “Priority Locations Map-4” of the strategy. On this basis, the subject land (and the land it adjoins to the west) is not likely to be rezoned in the foreseeable future for rural residential development.

Byron Residential Strategy

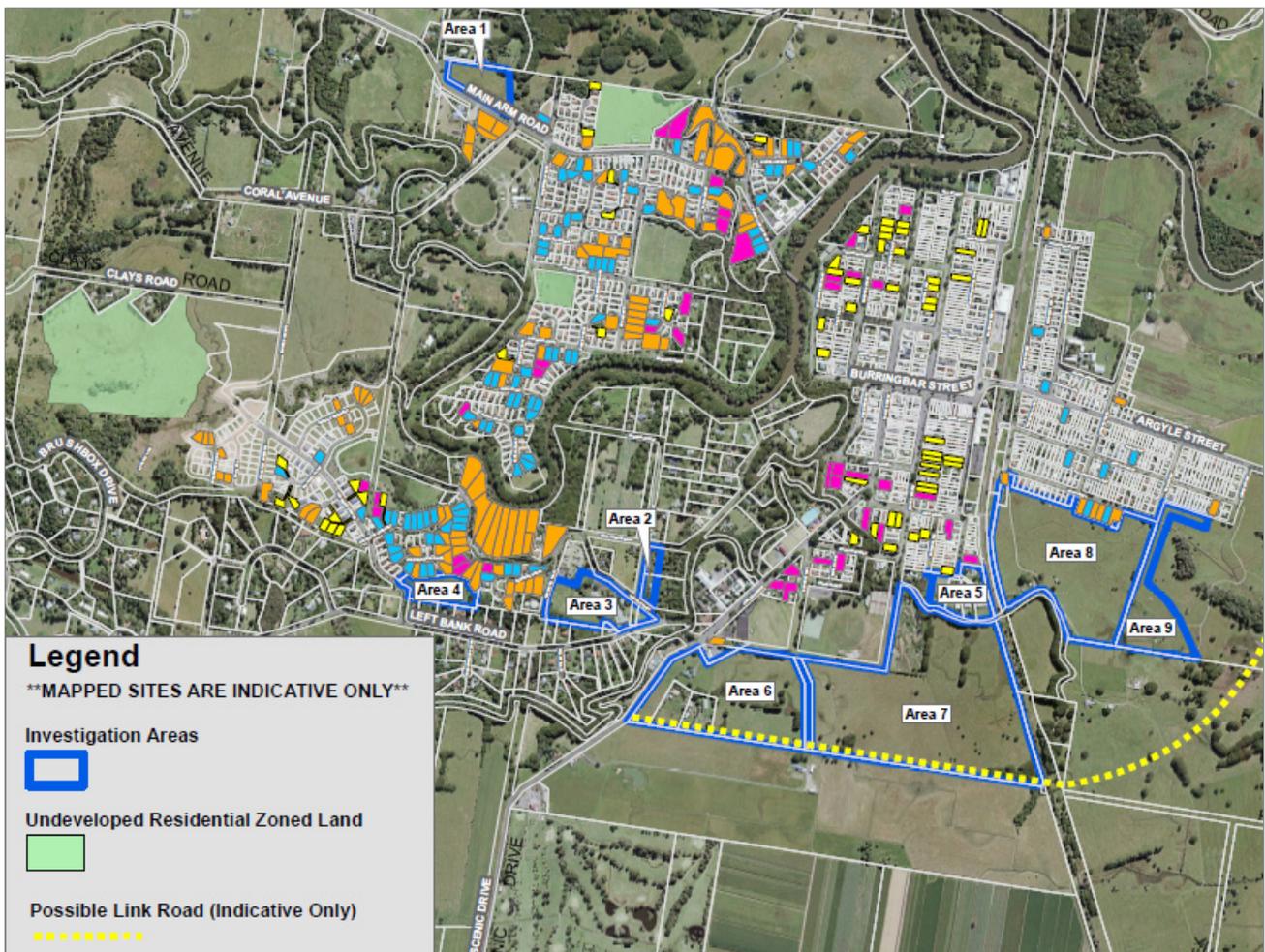
Byron Shire Preliminary Draft Residential Strategy was prepared in August 2016. Council is preparing the residential strategy to set a clear vision and policy framework for the Shire's urban residential lands. Part of the process involves identifying areas that have potential for additional housing to accommodate the expected 7,500 new residents by 2036.

Council adopted the final residential strategy at its Planning meeting on 10 December 2020. The strategy has been forwarded to the NSW Department of Planning, Industry and Environment (DPIE) for final endorsement.

The draft strategy classified the subject land (as part of a larger site inclusive of land to the west) as "Future investigation – medium to high suitability", and identified it as Area 5. Area 5 is known to be affected in part by flooding, slope, bushfire and visual constraints.

However, the final strategy does not include the subject land as an investigation area at all (Figure 6). On this basis, the subject land (and the land it adjoins to the west) is not likely to be rezoned in the foreseeable future for residential development.

Figure 6: Byron Residential Strategy – Mullumbimby Potential Housing Supply



3.2 Environmental Constraints

Northern Councils E Zone Review and Section 9.1 Direction

In October 2015, the NSW Department of Planning and Environment released the final recommendations of its E zone review. This will influence the zone of the subject land when E zones are eventually inserted back into Byron LEP 2014. The key recommendations of the final report relevant to Byron and the subject land are:

- Environmental zones should only be applied to those areas which have important environmental values, based on validated ecological evidence.
- E2 and E3 zoning should only be applied where there is proven evidence of significant environmental values that meet the specific criteria listed by the consultant.
- Land that does not meet the criteria should be zoned according to its primary use.
- Where an environmental value is identified which may not warrant an environmental zone, it should be protected through an environmental overlay on the LEP map with an accompanying clause. The consultant considers environmental values which should be managed in this way are drinking water catchment areas, scenic protection areas, coastal risk areas and terrestrial biodiversity.

The section 9.1 Direction that requires Council to implement the E zone review at some time in the future when E zones are inserted back into Byron LEP 2014 states:

A planning proposal that introduces or alters an E2 Environmental Conservation or E3 Environmental Management zone or an overlay and associated clause must:

- Apply the proposed E2 Environmental Conservation or E3 Environmental Management zones, or the overlay and associated clause, consistent with the Northern Councils E Zone Review Final Recommendations.*

The area which is currently represented by the Deferred Matter (DM) on the LEP map is likely to be included in an “e zone” or an environmental overlay at some time in the future.

Coastal Vegetation Communities Mapping

Coastal vegetation mapping, including extensive field investigation, has been undertaken by Council and was released for public comment in 2015.

The subject land is mostly cleared, but the remnant vegetation is mapped as Community #2040 and Community #3. These communities are described below and are shown in Figure 7.

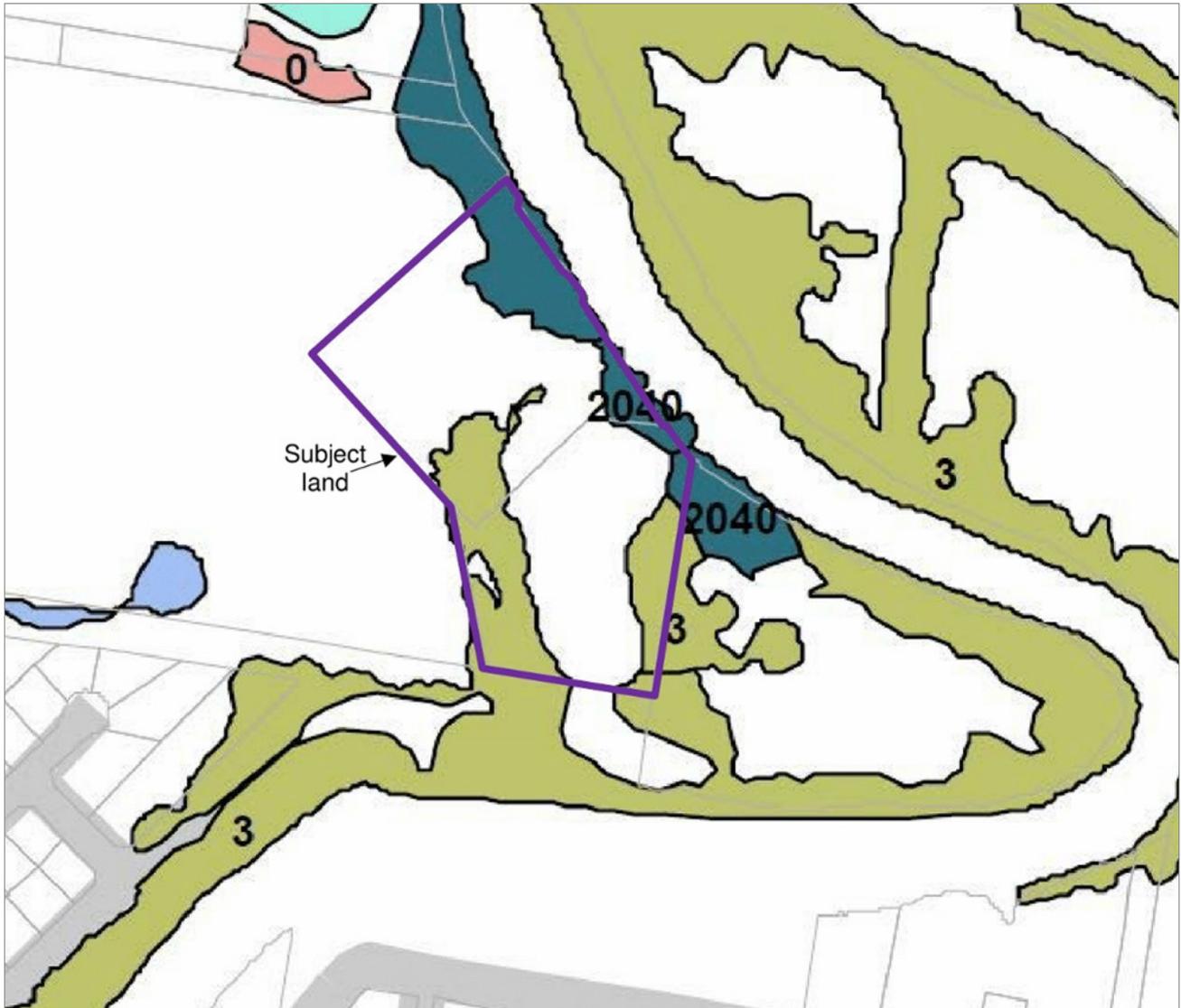
#2040: Rainforest – Tuckeroo – Cottonwood – Hoop Pine littoral rainforest of tidal channel bank alluvium

This is a littoral rainforest community of channel bank alluvium next to tidal estuaries on the Far North Coast. Occupies a linear band of slightly higher ground following the levees and banks of tidal waterways. This community grades into Swamp Oak – Milky Mangrove king tide forest and woodland, which occurs at slightly lower elevations. The overstorey is open in structure and dominated by mid-high to tall Tuckeroo (*Cupaniopsis anacardioides*), Cottonwood (*Hibiscus tiliaceus*), Small-leaved Tuckeroo (*Cupaniopsis parvifolia*) and emergent Hoop Pine (*Araucaria cunninghamii*). The middle stratum is composed of saplings of canopy rainforest species and epiphytic ferns on tree trunks. The lower stratum is sparse and consists of a few herbaceous species including *Einadia hastata*, New Zealand Spinach (*Tetragonia tetragonioides*) and Saltwater Couch (*Sporobolus virginicus*) and the scrambling vine *Cynanchum carnosum*.

#3: Rainforest – Derived Camphor Laurel rainforest wet sclerophyll forest

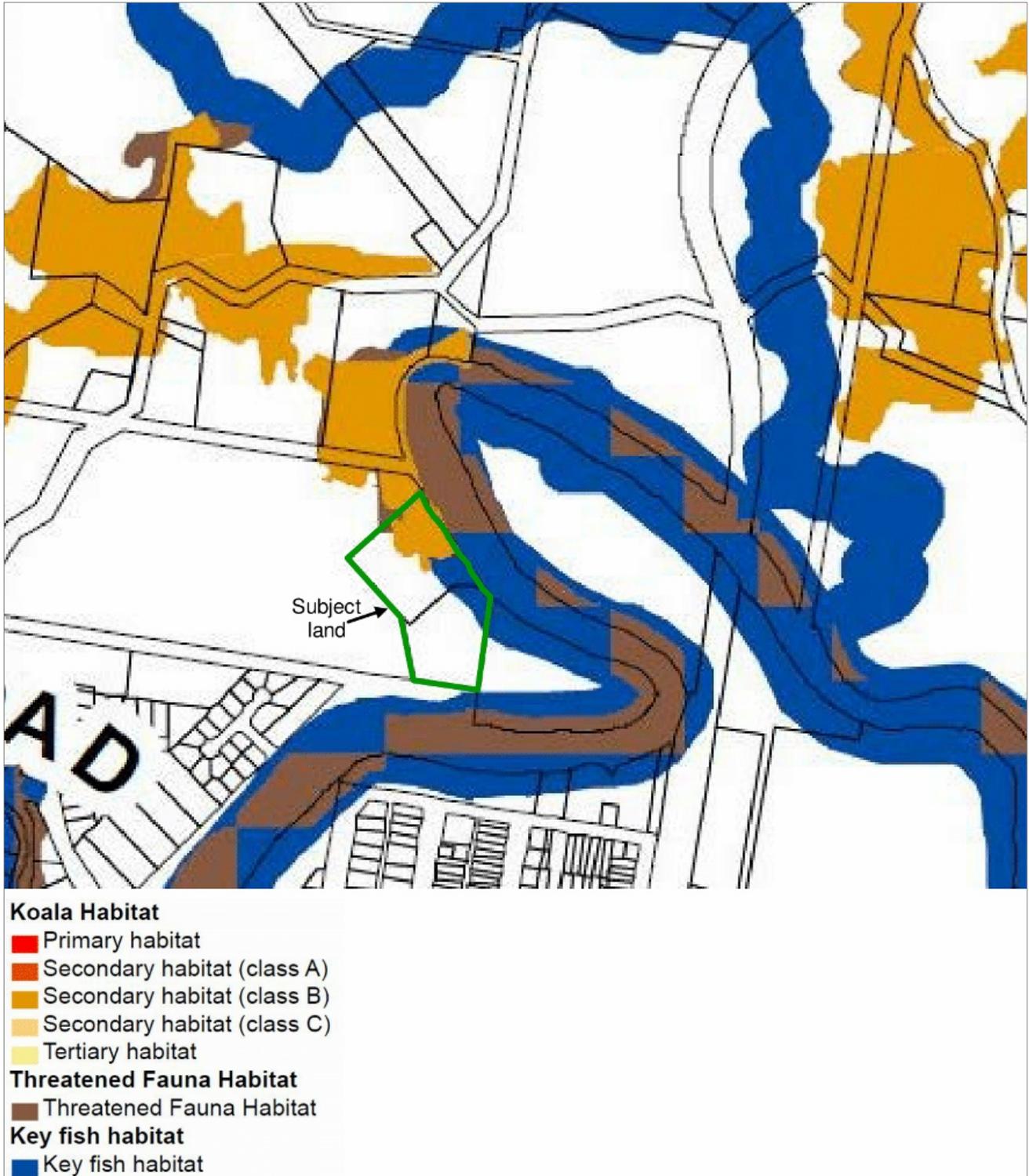
An open forest in which the exotic Camphor Laurel (*Cinnamomum camphora*) dominates and is occasionally associated with Forest Red Gum (*Eucalyptus tereticornis*), Brush Box (*Lophostemon confertus*) and Pink Bloodwood (*Corymbia intermedia*). Camphor Laurel co-occurs with other rainforest species such as *Guioa semiglauca*, Foambark Tree (*Jagera pseudorhus* var. *pseudorhus forma pseudorhus*). The middle stratum is composed of Large-leaved Privet (*Ligustrum lucidum*) and Small-leaved Privet (*Ligustrum sinense*). Some natives are also present including Red Kamala (*Mallotus philippensis*), *Pittosporum undulatum* and Scrub Turpentine (*Rhodamnia rubescens*). The lower strata may include Privet seedlings, Blue Couch (*Cynodon dactylon*), *Ottochloa gracillima*, *Paspalum wettsteinii*, *Ochna serrulata*, Fishbone Fern (*Nephrolepis cordifolia*) and *Ardisia crenata*.

Figure 7: Coastal vegetation communities



Council's environmental values mapping (2012) identifies the eastern part of the subject land as having habitat for koalas and other threatened fauna, as well as key fish habitat (Figure 8).

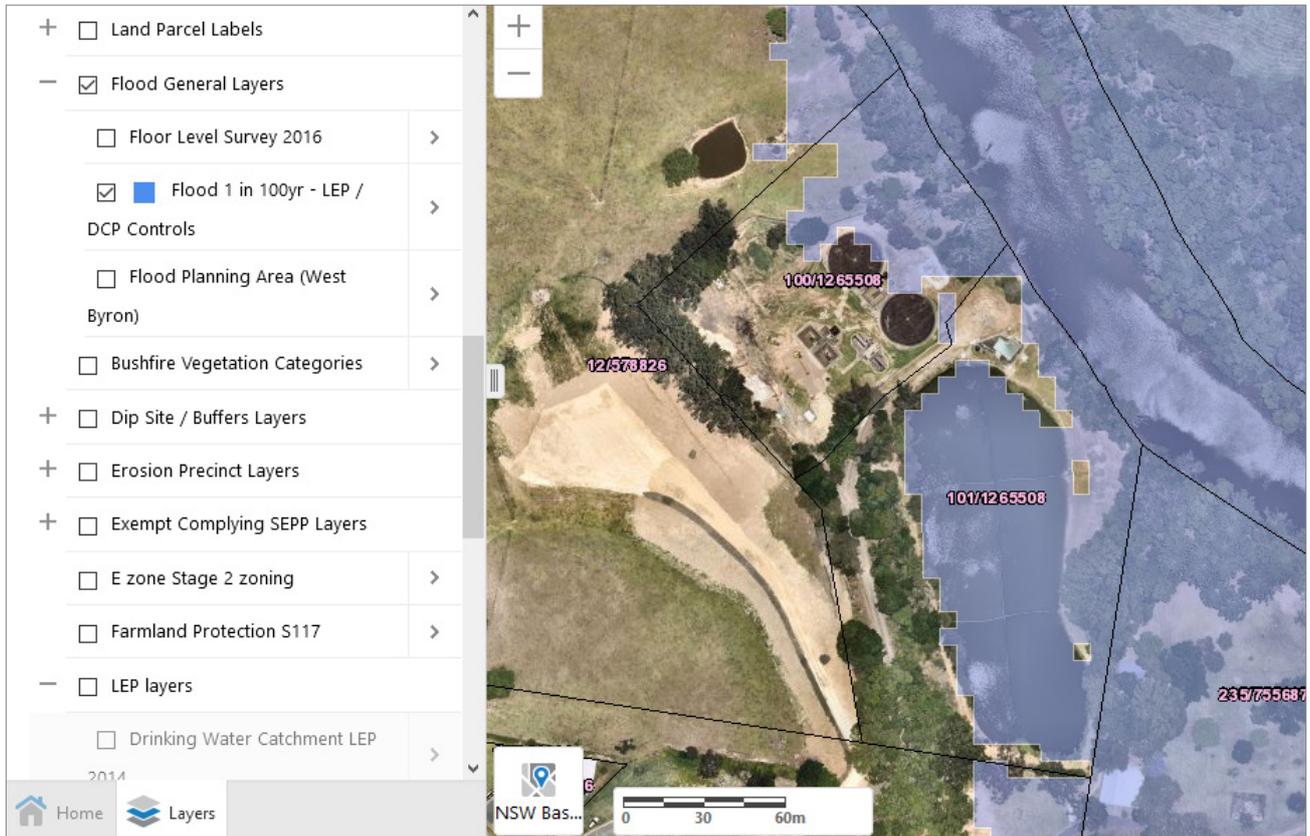
Figure 8: Council's environmental values mapping (2012)



North Byron Flood Study

The subject land is partly flood prone on its eastern edge, and Council is aware of this. The “design flood” on which Byron LEP 2014 bases its flood planning level and flood planning area on the 100 year ARI flood plus a 500 mm “freeboard”. Figure 9 shows the one in a 100-year ARI flood as it affects the subject land. A larger area would be affected in a Probable Maximum Flood (PMF).

Figure 9: One in 100-year flood effect on the subject land



Source: Byron Shire Council GIS

4 Re-evaluation of the Options

4.1 Industrial/Solar Farm

Industrial use of the site was not favoured in 2017, and the circumstances have not changed. It is a small site, isolated from other industrial areas and close to the sensitive receiving waters of the Brunswick River. The site might be suitable for a single light industrial use, but not the full suite of uses that would come with an IN1 General Industrial or IN2 Light Industrial zone. If a single use was proposed, found suitable but not permitted in the RU2 zone then it could be permitted with an amendment to Schedule 1 of LEP 2014. This would take up to 12 months.

It is worth considering a niche “light industrial” type use such as an electricity generating works (eg solar energy system). SEPP (Infrastructure) 2007 states that a **solar energy system** means any of the following systems:

- (a) a *photovoltaic electricity generating system*,
- (b) a *solar hot water system*,
- (c) a *solar air heating system*.

The SEPP states (clause 34) that an electricity generating works (which includes a solar energy system) can be constructed on the subject land with Council consent in the current RU2 zone. If the solar energy system is ancillary to an existing infrastructure facility then it is permitted without development consent as long as it is undertaken by a public authority (such as Council); is ancillary to the existing infrastructure facility; and is a photovoltaic system that is less than 100 kW in capacity. There is an argument that preserving the pond (at least in part) and a pump station (and dosing plant) for recycled water retains the use of the site as an existing infrastructure facility, which means that Council does not need development consent for a photovoltaic system that is less than 100 kW in capacity. The energy from the photovoltaic system could be used to offset the cost of running the recycled water pump or sold back to the grid as “green energy”. The cost/benefit of this needs to be established.

A key limiting factor on use of the site for a solar energy system is the tall trees along some of the boundaries. However, there is an area of at least 2,000 square metres in the middle of the site that is quite open, above the 100 year ARI flood level, and may well be suitable. Clearing some Camphor Laurel trees may also assist. The pond area could also be partially filled and used to support a photovoltaic system if additional area was required and the pond was no longer needed. Alternatively, the pond could be used without being filled as has recently been undertaken in Lismore LGA at the East Lismore STP. The floating photovoltaic system at Lismore is expected to save \$24,000 per annum from Council’s electricity bill, and have a payback period of 10 years.

A solar energy system in combination with the continuing use of the site for a recycled water pond and/or pump or dosing station is the preferred short- and long-term option subject to a cost benefit analysis.

4.2 Rural with a Dwelling

Rural with a dwelling entitlement on Lot 100 DP 1265508 was not favoured in 2017. There was an expectation that LEP 2014 would result in Lot 100 receiving a dwelling entitlement. This did not happen and neither lot has a dwelling entitlement. In theory, a dwelling could still be achieved on Lot 100 through an amendment to the LEP. However, requiring remediation to a residential standard for a single dwelling entitlement may not be cost effective. Retaining the recycled water pond and associated pump (and dosing plant) would be an issue for a future rural resident in terms of noise and odour. Council’s 2014 DCP recommends a buffer distance of 400 metres (or more) between a rural dwelling and a sewage treatment plant. Even though the pond and pump are now located entirely on Lot 101 (through a boundary adjustment), they would still be approximately 120 metres from the northern boundary of Lot 100. Therefore, the erection of a rural dwelling on Lot 100 would be inconsistent with current Council policy.

As long as the site retains a recycled water pond and/or pump or dosing station, this option is not recommended. If the recycled water pond and/or pump or dosing station is removed and the site is remediated to an appropriate standard then amalgamation of the two lots and amendment of LEP 2014 to create a dwelling entitlement prior

to disposing of the site could be considered to add value that would offset remediation costs. This option is not preferred but could be considered a “fall back” position if other options do not proceed.

4.3 Rural with No Dwelling

This option assumes that Council will remove the recycled wastewater pond and all pumps and infrastructure, and remediate the site to an agricultural standard. The subject land would not have a dwelling entitlement under LEP 2014, but could be used for a suite of uses permitted in the RU2 zone (including grazing and crop production). It accumulates all the costs associated with the remediation without any significant increase in value to offset those costs.

This option is not recommended due to high cost to benefit outcomes.

4.4 Rural with Recycled Water Storage

This option reflects where Council is at the moment. The site is mostly zoned RU2 and the existing pond has been retained for recycled water storage. A pump and dosing plant is retained to pump water up the Brunswick Valley for agricultural use. As long as the pond and pump are retained, this option remains a practical use of the site. Council staff confirm that the pond and pump are needed for the foreseeable future. It could also co-exist with a solar energy system and this option is preferred (post site remediation), subject to a cost benefit analysis.

4.5 Residential

The 2008 report did not recommend this option. It stated:

It is unlikely that the subject sites are able to add much in terms of potential residential lot yield. Buffers adjacent to the environmental conservation area and riparian habitat will reduce the possible lot yield for these sites as well as the steep lands to the northwest. Parts of the land are flood prone and a flood study would be required to justify any filling of this land. The amount and extent of contamination of the subject site and any possible contamination of adjacent sites from past land use may also limit the lot yield.

This is all still true. Exclusion of the site from the recent Byron Residential Strategy and Rural Lands Strategy means that the site has little or no chance of being rezoned for either purpose in the foreseeable future. In any case, the size of the subject land alone means it cannot realistically be developed in isolation of other land to the west, which is also excluded from both strategies.

At this stage, based on available information, this option is not recommended as being realistic in the next 20 years and then only in conjunction with adjacent land holdings.

5 Conclusion

This report revisits the five land use options for the Mullumbimby STP that were examined in 2017, and documents what has changed since that time. Since it was decommissioned, Council has continued using the site for a recycled water storage facility. Council is now undertaking remediation of the site (other than the main storage pond), but the recycled water pond and pump are to be retained. This remains the logical primary use of the site. The RU2 zone is appropriate for the foreseeable future.

If the recycled water pond and pump are to remain then a solar energy system should be considered as a use to offset the costs of pumping the recycled water onto and off the site. Depending on its size, it could also sell back into the grid as green power. This could be done after the STP infrastructure is removed and the site is remediated. The best location is on the cleared land at the centre of the site. If located correctly, it could co-exist with the likely “e zone” area on the riverfront. A floating solar energy system could also be built over all or part of the recycled water pond.

A rural dwelling entitlement to the subject land was not provided by Byron LEP 2014. There is no point in pursuing a single dwelling entitlement for the RU2 zoned land (via an LEP amendment) unless the recycled water pond and pump are not required. This option is not preferred but could be considered a “fall back” position if other options do not proceed and the pond and pump are not required.

On balance of probabilities, the vegetated parts of the subject land on the riverbank previously proposed for inclusion in an E2 zone (and currently marked as Deferred Matter) will in the future end up in an E2 zone, an E3 zone or an environmental overlay (when Council reintroduces these zones to its LEP). This does not significantly influence the land use options.

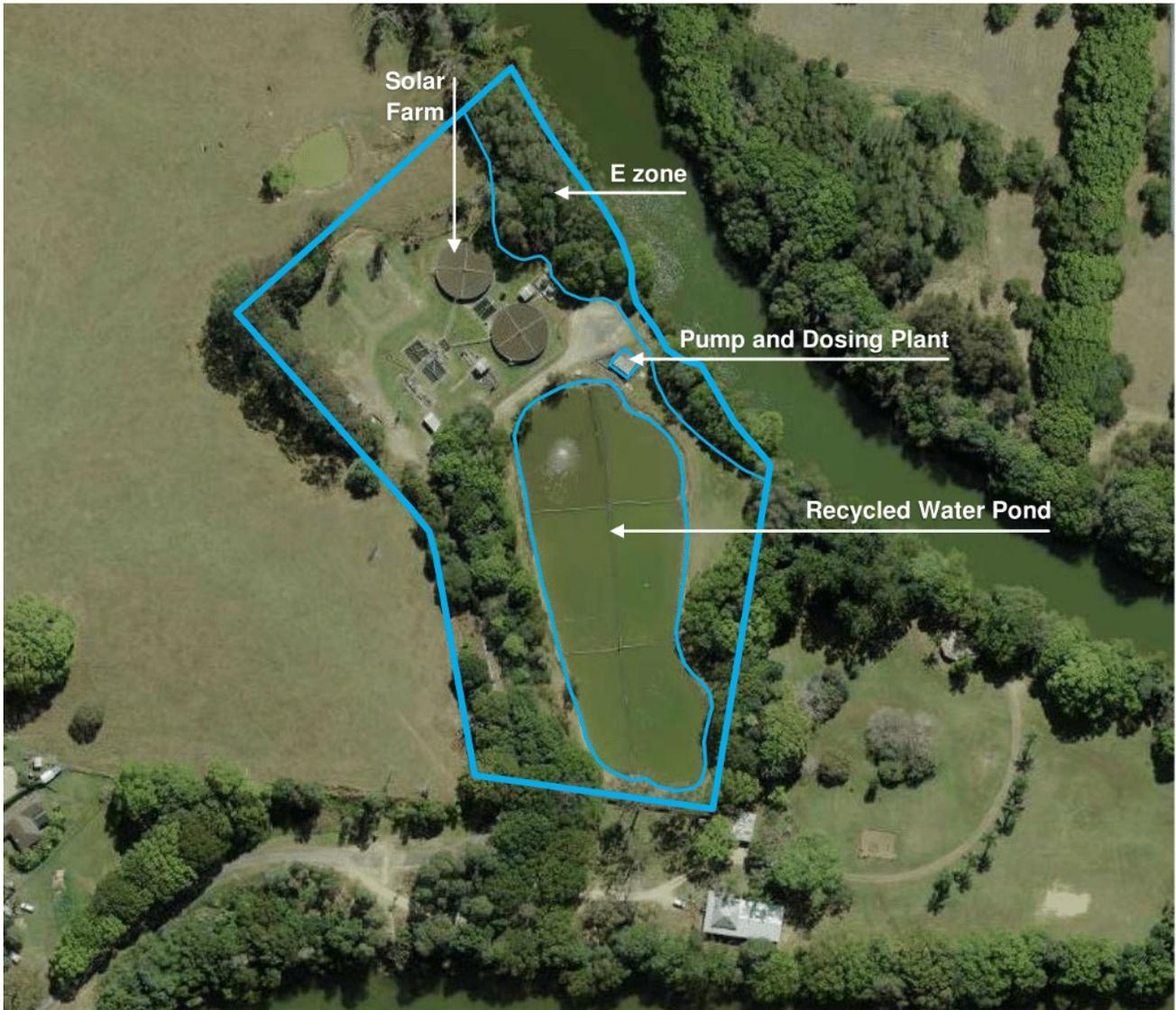
Exclusion of the subject land from the recent Byron Residential Strategy and Rural Lands Strategy means that the site has little or no chance of being rezoned for either residential or rural residential purposes in the foreseeable future. In any case, the size of the subject land alone means it cannot realistically be developed in isolation of other land to the west, which is also excluded from both strategies.

Short- and long-term options are summarised below:

Short- and Long-term = *Recycled water pond and dosing pump station + habitat (E zone, etc) + large solar farm + floating solar farm option*

Figure 10 depicts the potential use of the site in the short and long term.

Figure 10: Potential short- and long-term use of the site





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