

# McGEARY'S SAND QUARRY AND FUTURE RECREATION PRECINCT

## EXECUTIVE SUMMARY

i

This application seeks approval for two existing quarries to be expanded by deepening the existing pits, extending the footprint and operating the land use as a single quarry. It is estimated that 1.9 million m<sup>3</sup> (or 3,610,000 tonnes) can be extracted from the consolidated quarry over a period of 30 years. The proposed maximum extraction rate is 160,000 m<sup>3</sup> (or 304,000 tonnes) per annum. However, it is anticipated that this quantum of extraction will rarely be achieved, and the average rate will be more in the order of 64,000 m<sup>3</sup>-70,000m<sup>3</sup> (or 120,000-133,000 tonnes) per annum.

The previous approvals for the "Pick" & "AMA" quarries amounted to an approved extraction rate of 160,000 m<sup>3</sup> per annum. Thus, the proposed annual extraction rate for the new land use is exactly the same as that which has been previously approved and operated from the land.



*Oblique aerial view of the existing quarry operations looking south with Newrybar Swamp Road right of the quarries.*

The quarry is accessed via Newrybar Swamp Road.

The proposed extractive operations involve work being undertaken generally in three phases (see **Plan ES1**), commencing in the north and progressing southward. The operation involves:

- stripping topsoil (for use in minor site works and construction of the operational area bunding mounds);
- extraction initially using excavators;
- stockpiling of sand;
- treating of sand for acid sulfate soil management;
- loading of sand into haulage trucks for dispatch to market; and
- once a sufficiently sized "pond" has been created, a dredge will be brought to site and located within the extraction pond to complete quarrying in the first operational phase. At about this time the quarry "operations area" will be established.

Once Phase 1 (the northern pond) has been finalised, the extraction works will move south to Phase 2 and the rehabilitation program in relation to the northernmost pond implemented.

Upon completion of Phase 2 (the middle pond), the extraction will move to the southern, Phase 3, area. At this time, rehabilitation works in relation to the second (middle) pond will be completed and then the two northern ponds interconnected. With the completion of the extraction of sand material in the Phase 3 (southern) pond, rehabilitation works in relation to that pond and the quarry "operations area" established at Phase 1 will be implemented.

The proposed extractive industry is permissible with Development Consent pursuant to Council's Local Environmental Plans and the relevant State Environmental Planning Policies. Further, Action 13.2 of the North Coast Regional Plan 2036 specifies a whole of government approach to ensuring the ongoing productive use of the land because of the established resource accessibility.

No filling of the floodplain is involved with this project. All quarry operational aspects including stockpiling, loading and weighbridge are to be located on land above the 1% flood level.

Quarry sand material has a multitude of uses, with the predominant uses and users comprising:

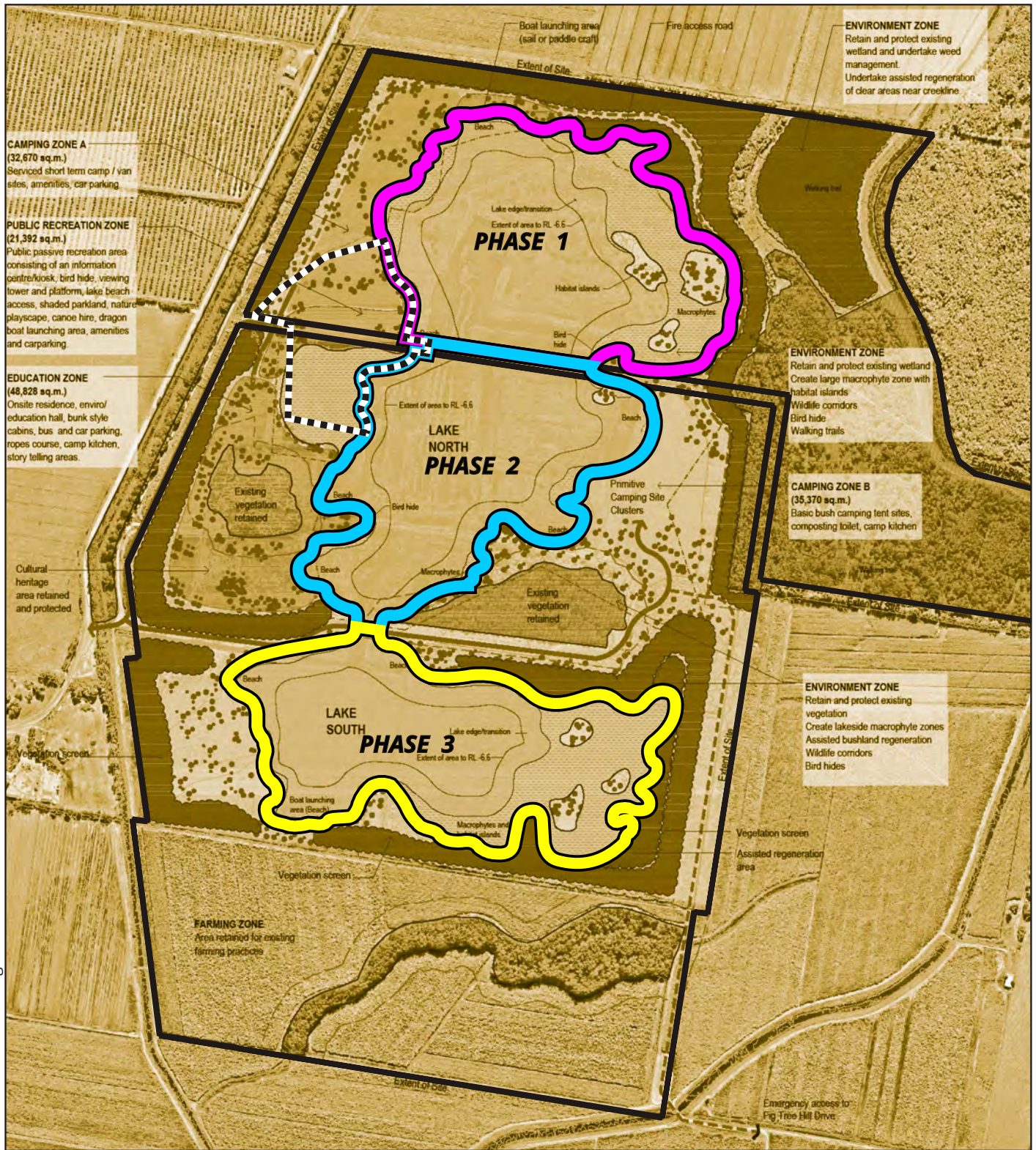
- filling for residential and commercial developments;
- road construction and/or repair;
- bedding sand for drainage pipelines and electricity cable conduits;
- under-turf sand;
- plant nursery sands to produce planting mix, organic soils, etc; and
- rehabilitation works.

The approach adopted for the McGeary's Sand Quarry project has been to contemplate the rehabilitated "end use" of the site whilst looking simultaneously at site constraints – noise, flooding, cultural significance, visual considerations and topography. In this way, the end use proposed seeks to protect important site aspects. By "starting" the design of this quarry at what would ordinarily be the end, the resultant extractive program not only provides an important resource for the



M'GEARY'S SAND QUARRY & FUTURE RECREATION PRECINCT

Source: Base Plan - Design Team Ink "Site Rehabilitation Master Plan" Final Rev. March 2017



**CAMPING ZONE A**  
(32,670 sq.m.)  
Serviced short term camp / van sites, amenities, car parking

**PUBLIC RECREATION ZONE**  
(21,392 sq.m.)  
Public passive recreation area consisting of an information centre/kiosk, bird hide, viewing tower and platform, lake beach access, shaded parkland, nature playscape, canoe hire, dragon boat launching area, amenities and carparking.

**EDUCATION ZONE**  
(48,828 sq.m.)  
Onsite residence, enviro/ education hall, bunk style cabins, bus and car parking, ropes course, camp kitchen, story telling areas.

Cultural heritage area retained and protected

Vegetation screen

**FARMING ZONE**  
Area retained for existing farming practices

**ENVIRONMENT ZONE**  
Retain and protect existing wetland and undertake weed management.  
Undertake assisted regeneration of clear areas near creekline

**ENVIRONMENT ZONE**  
Retain and protect existing wetland  
Create large macrophyte zone with habitat islands  
Wildlife corridors  
Bird hide  
Walking trails

**CAMPING ZONE B**  
(35,370 sq.m.)  
Basic bush camping tent sites, composting toilet, camp kitchen

**ENVIRONMENT ZONE**  
Retain and protect existing vegetation  
Create lakeside macrophyte zones  
Assisted bushland regeneration  
Wildlife corridors  
Bird hides



**Legend**

- Phase 1
- Phase 2
- Phase 3
- Operations Area

**Plan E1  
EXTRACTION  
PHASING**



# McGEARY'S SAND QUARRY AND FUTURE RECREATION PRECINCT

## EXECUTIVE SUMMARY

iii

future of the Ballina Shire but also can potentially provide an important resource, in perpetuity, for water-based recreation, camping, low scale tourism, public recreation, education and environmental protection.

This aspect is particularly important given that resident population growth and tourism growth is placing pressure on existing natural facilities like Lake Ainsworth and Shaws Bay.

Key environmental considerations for this quarry application have been canvassed in accordance with the Secretary's Environmental Assessment requirements (SEARs) as follows:



*Oblique aerial view of the existing quarry looking to the north east.*

**Biodiversity** considerations have been addressed for the McGeary sand quarry by:

- completing accurate assessments of all vegetation clearing on site;
- undertaking a detailed assessment of the potential impacts on fish and aquatic habitats;
- carrying out a detailed assessment of the potential biodiversity impacts of the development, paying particular attention to threatened species and/or populations (or their habitats), endangered ecological communities and groundwater dependent ecosystems; and
- proposing a detailed description of the proposed measures to maintain or improve the biodiversity values of the site in the medium to long term.

**Water** considerations for the McGeary sand quarry have been addressed by examining:

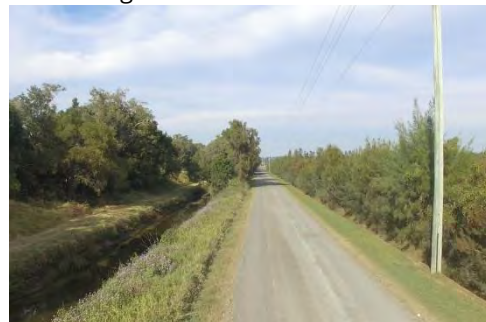
- completing an annual site water balance for representative years over the life of the development and demonstration

that sufficient water supplies are available together with identification of any licensing requirements or other approvals required under the *Water Act 1912* and/or *Water Management Act 2000*;

- examining acid sulfate soils on the site and defining mitigation and management measures to limit potential impacts on surface water and ground water in the local and regional area;
- managing activities that could cause erosion or sedimentation issues, and proposing measures to prevent or control these impacts;
- evaluating the likely impacts of the development on the quality and quantity of surface and ground water resources;
- proposing water management systems as well as other water monitoring programs and other measures to mitigate surface and groundwater impacts.

**Air** considerations for the McGeary sand quarry have been addressed by:

- making an assessment of the likely air quality impacts of the development; and
- giving particular attention to potential dust impacts on nearby private receivers due to construction activities, the operation of the quarry and/or road haulage.



*View of Newrybar Swamp Road immediately adjacent to the existing quarries showing the existing open drain and dense boundary vegetation.*

**Noise** impact considerations for the McGeary sand quarry have been addressed by:

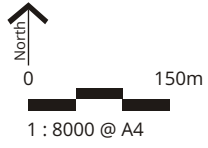
- consideration of the likely construction and operational noise impacts of the development in accordance with the NSW Industrial Noise Policy and the Interim Construction Noise Guideline; and








M'GEARY'S SAND QUARRY & FUTURE RECREATION PRECINCT



Source: Peter Parker "Newrybar sand quarry post phase 3 extraction.pdf"



**Legend**

- |  |  |
|--|--|
|  Screen planting  |  Revegetation                     |
|  Lake             |  Beach                            |
|  Macrophytes      |  Retained and restored vegetation |
|  Managed Parkland |  |
|  Habitat islands  |  |



# McGEARY'S SAND QUARRY AND FUTURE RECREATION PRECINCT

## EXECUTIVE SUMMARY

v

- completion of an assessment of the likely road noise impacts (traffic and haulage) of the development under the NSW Road Noise Policy.

**Heritage** considerations for the McGeary sand quarry have been addressed by the consideration of the potential impacts on Aboriginal heritage (cultural and archaeological), including consultation with relevant Aboriginal communities regarding the likely impact of the development on cultural heritage. The assessment has been compiled having regard to relevant policies and guidelines as well as OEH's requirements.

**Transport** considerations for the McGeary sand quarry have been addressed by:

- undertaking an assessment of potential traffic impacts on the capacity, condition, safety and efficiency of the local and State road networks, detailing the nature of the traffic generated, transport routes, traffic volumes and potential impacts on local and regional roads, having regard to the requirements of RMS; and
- proposing measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road network; and
- making contributions towards road upgrades or maintenance during the life of the quarry.

**Land use impacts** have been addressed by:

- completing an assessment of potential impacts on the quality and quantity of the soils and land capability of the site, including any likely disturbance of contaminated soils, and the proposed mitigation, management and remedial measures;
- examining the likely impacts on landforms and topography, including the long term geotechnical stability of any new landforms; and
- carrying out an assessment of the compatibility of the development with other land uses in the vicinity of the development.

**Waste** considerations for the McGeary sand quarry have been addressed by the compilation of estimates of the quantity and

nature of the waste streams that would be generated or received by the development and any measures that would be implemented to minimise, manage or dispose of these waste streams.



*Oblique aerial view of the site northwards of the existing quarries looking east.*

**Public Safety** has been considered with respect to the McGeary sand quarry assessment of the likely risks to public safety, paying particular attention to the transport, storage, handling and use of any hazardous or dangerous goods.

**Visual impacts** have been considered by the evaluation of the likely visual impacts of the development on surrounding private landowners and key vantage points in the public domain, paying particular attention to impacts on nearby private residences and road users.

**Social & Economic impacts** have been assessed by the:

- completing an assessment of the likely social impacts of the development, including any impacts associated with the demand for utilities and services; and
- an assessment of the likely economic impacts of the development, including consideration of both the significance of the resource and the costs and benefits of the project.

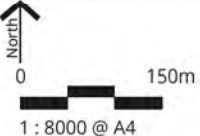
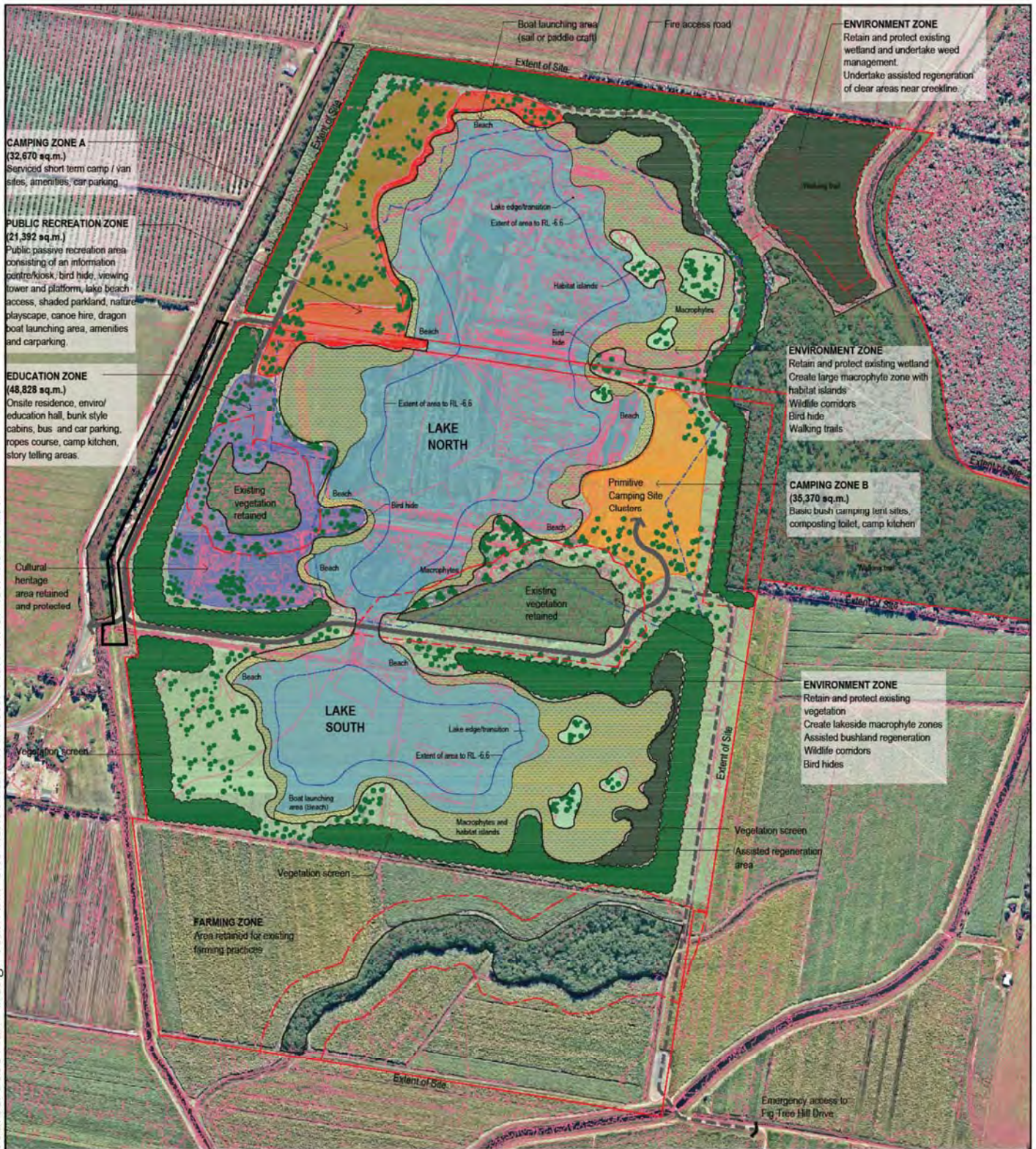
**Rehabilitation** has been an integral part of the EIS process. The EIS proposes:

- comprehensive rehabilitation measures that will be undertaken throughout the development and during quarry closure;



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Source: Base Plan - Design Team Ink "Site Rehabilitation Master Plan" Final Rev. March 2017



## LEGEND

- Cadastral boundary
- Contour (0.5m interval)
- Extent of Previous Sand Mining
- Existing vegetation
- 30m Bushfire APZ
- Lake beach

- Macrophyte zone
- Vegetation screen (locally native plants)
- Assisted regeneration area
- Managed parkland
- Main access road (7m sealed)
- Secondary gravel access road (4m with passing bays every max. 200m)
- Public Recreation Zone
- Camping Zones
- Education Zone

**PLAN E3**

**FUTURE  
RECREATION  
PRECINCT  
CONCEPT PLAN**



# MCGEARY'S SAND QUARRY & FUTURE RECREATION PRECINCT

## TECHNICAL REPORTS BUNDLE

- proposing a detailed rehabilitation strategy, including justification for the proposed final landform and consideration of the objectives of any relevant strategic land use plans or policies; and
- measures to be undertaken to ensure sufficient financial resources are available to implement the proposed rehabilitation strategy.



*Oblique aerial view from within the quarry site looking north.*

As a generalisation, virtually all development involves some potential environmental impact, which can be either positive or negative. Many potential adverse impacts have solutions or offset measures which can avoid or minimise risk to an acceptable level. In most instances, environmental impact assessment involves balancing positives and negatives in the context of scientific data, attitudes, potential externalities (such as flow on costs and benefits), and issues which ultimately rest on the standard of operational management.

An array of specialist assessments for the McGeary's Sand Quarry project have informed this EIS. Also, this Impact Assessment has had the benefit of local knowledge garnered from many years of quarrying being carried out on the site. This research and analysis confirms suitability of the site for continued extraction, involving:

- controlling the quarry footprint to minimise amenity and ecological impacts;
- providing a suite of operational and response strategies;
- adopting and implementing Council approved Management Plans as the primary mechanism for monitoring and measuring the environmental, health and safety performance ; and
- social benefits, including improved social cohesion, lifestyle improvement with the implementation of the recreational lake concept.

The overall result is considered to effectively avoid or reduce potential environmental risks and impacts to acceptable levels.

Such measures have been incorporated in a consolidated list of management and mitigation measures.

In broad terms the proposal's impact can be summarised as follows:

- contributing to the economy of the Shire and region;
- retaining site usage levels at historical rates to balance the positive economic outputs with the potential adverse social, amenity and environmental impacts;
- permanently improving the biodiversity characteristics of the site by way of extensive new habitat creation and preservation, major site regeneration, and utilising best practice with soil and water systems; and
- creating a longer-term land use which provides positive social and lifestyle benefits.



*Aerial view of existing quarry operations looking south. Newrybar Swamp Road is located to the right of the quarries and the Ballina Sand quarry extractive area in the middle ground.*

In our opinion the development can be seen to satisfy a legitimate need and continued development of the quarry land use is capable of implementation in a manner which mitigates potential adverse impacts, consistent with the zone objectives detailed in Council's LEPs and accordingly approval of this project would be in the public interest within the meaning of Section 79C(1) (e) of the Act.