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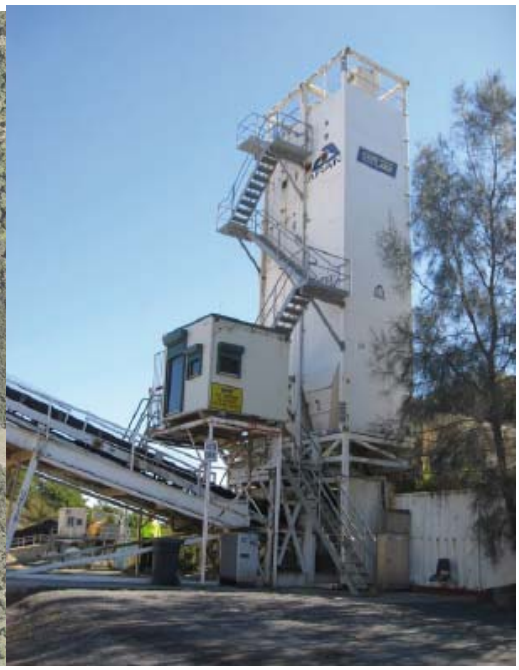
MAJOR PROJECT ASSESSMENT: CiviLake Construction and Green Waste Recycling Facility (MP 08_0079)



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

September 2011

ABBREVIATIONS

CIV	Capital Investment Value
Council	Lake Macquarie City Council
Department	Department of Planning and Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning and Infrastructure
EA	Environmental Assessment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPI	Environmental Planning Instrument
MD SEPP	*State Environmental Planning Policy (Major Development) 2005*
Minister	Minister for Planning and Infrastructure
PAC	Planning Assessment Commission
Part 3A	Part 3A of the *Environmental Planning and Assessment Act 1979*
PEA	Preliminary Environmental Assessment
PPR	Preferred Project Report
Proponent	Lake Macquarie City Council trading as CiviLake
RTS	Response to Submissions

Cover Photograph: L - proposed site layout. R – an asphalt mixing pug mill

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EXECUTIVE SUMMARY

CiviLake is seeking project approval under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to build and operate a facility to receive and re-process up to 200,000 tonnes per annum (tpa) of civil construction and green waste at a site located off The Weir Road near Teralba. CiviLake also proposes to receive and dispatch up to 5000 tpa of new material such as packing sand, top-soil and aggregate from the site.

CiviLake is a civil construction and maintenance business unit operating within Lake Macquarie City Council (Council). It services Council and other private and public sector clients. Every year, CiviLake generates 110,000 tonnes of waste material such as concrete, asphalt, road base, green waste, bricks, tiles and soil.

At present, 27,000 tpa of CiviLake's waste is reprocessed or reused at facilities in Awaba, Kooragang, Boolaroo, Teralba and Cardiff; 65,000 tonnes is used for inert fill at the Vales Point power-station ash-dam construction; while the remaining 18,000 tonnes goes to landfill at the Awaba tip.

As there is currently no single facility of sufficient capacity in the Lake Macquarie local government area to reprocess all of CiviLake's annual waste production, Civilake propose a purpose built facility where it would be able to receive, modify, and store recycled materials for reuse in on-ground works. The proposal includes a concrete batching plant, asphalt recycling plant and asphalt mixing pug mill.

The project is a specific delivery action in Council's current 4 Year Delivery Program to maximise the use of recycled bulk construction materials and is consistent with the *NSW 2021 Plan* and the *NSW Waste Avoidance and Resource Recovery Strategy* and *Implementation Strategy*. These strategic documents aim to reduce waste generation and increase resource recovery from waste material. It is also consistent with the *Lower Hunter Regional Strategy* as it would help reduce local demand on natural resources by recycling construction material.

The project has a capital investment value of $2M, and would create 5 operational jobs. The Director-General declared it a 'major project' under Part 3A of the EP&A Act on 20 January 2007 because the proposed capacity is more than the threshold value for resource recovery and recycling facilities of 75,000 tonnes per year specified in the then *State Environmental Planning Policy (Major Projects) 2005*.

During the exhibition period, the Department received ten submissions on the project, including: six from public authorities: (Office of Environment and Heritage (formerly Department of Environment and Climate Change), NSW Office of Water, Roads and Traffic Authority, Hunter Water, Hunter Region Development Committee and Rural Fire Service); and four from the community.

None of the authorities objected to the proposal, however issues were raised relating to road safety and the adjacent SEPP 14 wetland. The Office of Environment and Heritage and the Hunter Region Development Committee recommended detailed conditions of approval. All four submissions from the general public were opposed to the project due to potential air, traffic, noise, water and ecological impacts.

The Department has assessed the merits of the project and is satisfied that the potential impacts have been addressed via the Environmental Assessment, the Proponent's Statement of Commitments and the Department's recommended conditions of approval.

Consequently, the Department believes the proposal is in the public interest and should be approved subject to the imposition of strict conditions.

1. BACKGROUND

1.1 Project background

Lake Macquarie City Council operates a civil construction and maintenance business trading as 'CiviLake'. Civilake's activities include road maintenance and construction, buidling and demolition and park/garden maintenance. The service is available to private and public sector clients and it is both a waste generator and a recycled waste user.

Every year, CiviLake generates 110,000 tonnes of waste material such as concrete, asphalt, road base, green waste, bricks, tiles and soil. Only a small amount of this material is currently value-added or on-sold. There is no single facility of sufficient capacity in the Lake Macquarie local government area to reprocess all of CiviLake's annual waste production. At present, 18,000 tonnes goes to landfill at the Awaba tip, nearly 65,000 tonnes are used for inert fill at the Vales Point Power Station (for the ash dam construction) while the remaining 27,000 tonnes are reprocessed or reused at facilities in Awaba, Kooragang, Boolaroo, Teralba and Cardiff. Figure 1 depicts the nearest recycling facilities which can process and dispose of Civilake's waste.

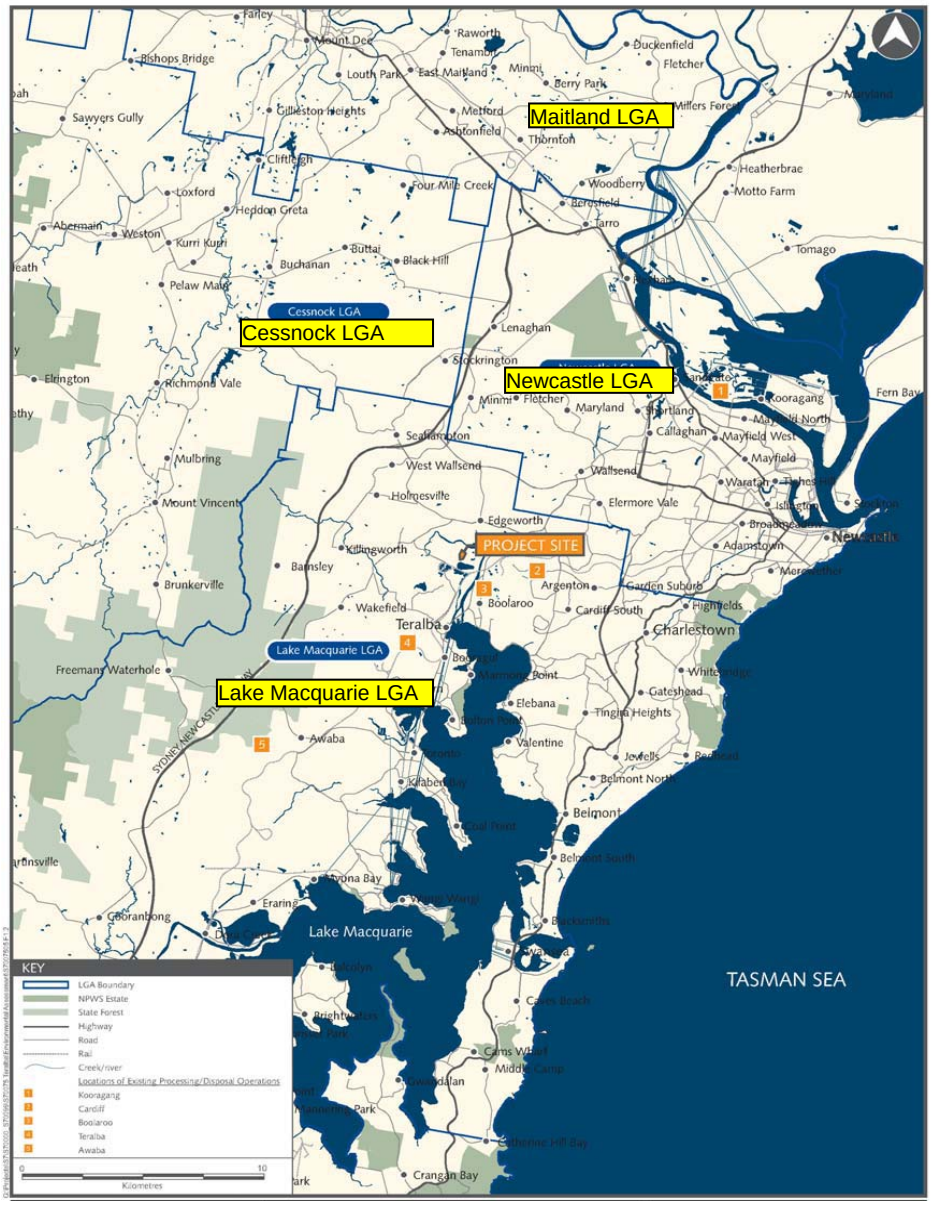


Figure 1: *Locations of existing processing and disposal locations, and the Project site*

Current waste processing at these sites includes re-use of road base/asphalt at Boral (Kooragang |sland) and recycling of concrete waste by Metromix (Teralba) for road base. Greenwaste is processed into woodchip at the Awaba Tip.

To reduce dependency on virgin bulk construction materials and to minimise waste that goes to landfill, CiviLake propose to have a new strategically located facility that would allow it to carry out these activities in one location on a much larger scale – a purpose built facility where CiviLake would be able to receive, modify, and store recycled materials for reuse in on-ground works. CiviLake considers this to be the most cost effective and efficient means of reprocessing its waste material.

1.2 Project Description

CiviLake proposes to construct and operate a facility (the Project) to receive and process up to 200,000 tonnes per year of waste material and up to 5000 tonnes per year of new material on a 7 hectare site off Weir Road at Teralba, in the Lake Macquarie Local Government Area.

The Project would crush, grind, separate and reprocess civil construction and green waste materials. The Project includes a concrete batching plant, an asphalt recycling plant and an asphalt pug-mill to re-process waste material (a pug mill is a fast continuous mixer in which materials are simultaneously ground and mixed with a liquid). The Project would have capacity to receive and process up to:

- 200,000 tonnes of waste material per year, including asphalt, aggregate, road base, concrete, weeds, leaf litter and hardwood; and
- 5,000 tonnes per year of new material such as packing sand, crusher dust, top-soil and aggregate*.

*Aggregate is material with a maximum stone size of 40mm.

Site construction involves capping and containing soil contamination and importing 200,000 tonnes of natural material to raise the site 2-3 metres so that it is above the 1 in 100 year flood level.

The major components of the Project are summarised in Table 1, and depicted in Figure 3. The Project is described in full in CiviLake's Environmental Assessment (EA), which is attached as Appendix D.

Table 1: *Key Project Components*

Aspect	***Description***
Project Summary	**A construction and green waste reprocessing facility, with the following key components:** • a concrete batching plant, asphalt recycling plant and asphalt mixing pug mill (relocated from the existing Metromix site); • a gatehouse and weigh station; and • large waste-feed stockpiles and storage bins for end-products.
Proposed waste materials recycling	• Up to 200,000 tonnes per annum (tpa) of waste concrete, bricks, tiles, asphalt, road base green waste and soil.
Proposed end-product output	• Aggregates, crusher dust, road base, recycled road base, gravel products, asphalt, woodchip and soil blends; • Some new materials additional to recycled products including: - 2,000 tpa of packing sand and crusher dust; - 1,500 tpa of topsoil; and - 1,500 tpa of backfill/drainage aggregate.
Proposed ancillary infrastructure	• internal access roads, storage sheds and office, parking for 6 cars; • two lane access driveway off The Weir Road with a Basic Auxiliary Right turn (BAR) intersection; • school speed warning lights outside Teralba and Barnsley public schools; • three access gates and internal roads for bushfire fighting; • water treatment ponds; • landscaping including bush regeneration and fencing; • package on-site sewage management system for office amenities; and • dust suppression infrastructure including water cart.
Summary of proposed waste-handling	• Trucks would be received via the double storey gatehouse and weighbridge where the waste product would be weighed and visually screened for contaminants; • trucks would then be directed to sorting and stockpile areas to unload and be sorted into feed stockpiles; • waste material would be crushed, screened, sorted and/or re-processed; • end product would be dispatched for use in Council and other civil construction and landscaping projects.

Aspect	Description
Approximate heavy vehicle movements	• Construction: 22 truck movements per day. • Operation: 218 truck movements per day or 26 per hour.
Transportation of Waste Materials	• About 60% of truck trips would be east through Teralba, via York Street; and • the remaining 40% would be west through Barnsley via Northville Drive.
Number of employees	• 3-5 during construction; and • 5 operational workforce.
Operating hours	Construction • Monday to Friday, 7am – 6pm; • Saturday, 8 am – 1pm; Operational *Crushing and processing works* • Monday to Friday, 7am – 6pm; • Saturdays, 8am – 1pm; • No process work on Sundays and public holidays. *Delivery of feed stock* • Monday to Saturday 7am – 4pm; • Sundays and public holidays 8am – 5pm. *Dispatch of end product* • Monday to Saturday 7am – 4pm; • Sundays and public holidays 8am – 4pm. *After hours delivery of feed stock* • up to 50 nights per year.
Construction stages	Stage one (about 3 years): • Construct site access; • fill site to design levels with 200,000 tonnes of fill to raise the site 2-3m so that it is above the 1 in 100 year flood level; • cap and contain remediation of contaminated soil; • install water treatment ponds; • landscaping and fencing; • install weigh bridge and product bins; • install at least one storage shed (for use of construction vehicles); and • install power, water and electricity supply. Stage two (shortly after stage one): • Install buildings including office and storage sheds; and • connect services to buildings. Stage three (up to and beyond 5 years): • Relocate asphalt mixing pug mill, asphalt recycling plant and concrete crushing plant from Metromix site to subject site.
Vegetation Clearing	• removal of 13 *Angophora inopina*; • clearing of approximately 500m^2 of degraded Swamp Sclerophyll Forest (EEC) to make way for the new driveway and intersection; and • removal of other scattered trees for fire access.
Vegetation offset / Management	• fencing to prevent intrusion into EEC and adjoining vegetation; • plant 91 local provenance Angophora inopina on a nearby site; and • maintain and manage on-site EEC.
Stormwater Management	• vegetated buffer strips around stockpiles; • silt fences along the downstream toe of stockpiles; • a sedimentation swale and a dirty water (sedimentation) pond through which all stormwater would be directed; • a bio-retention system; and • a storage pond in which overflow and treated flow from the bio-retention system would be collected for use in processes and dust suppression during operations.

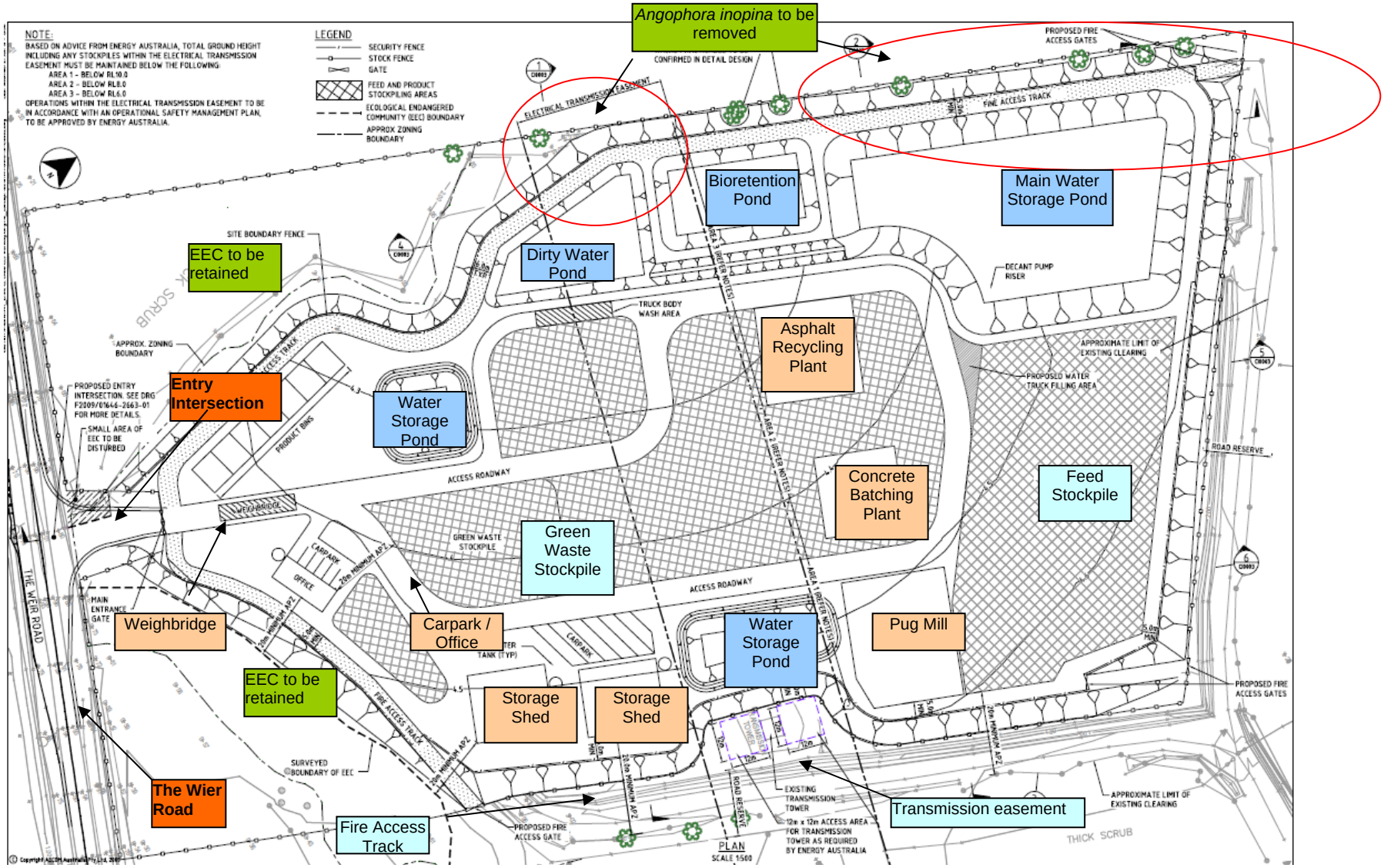
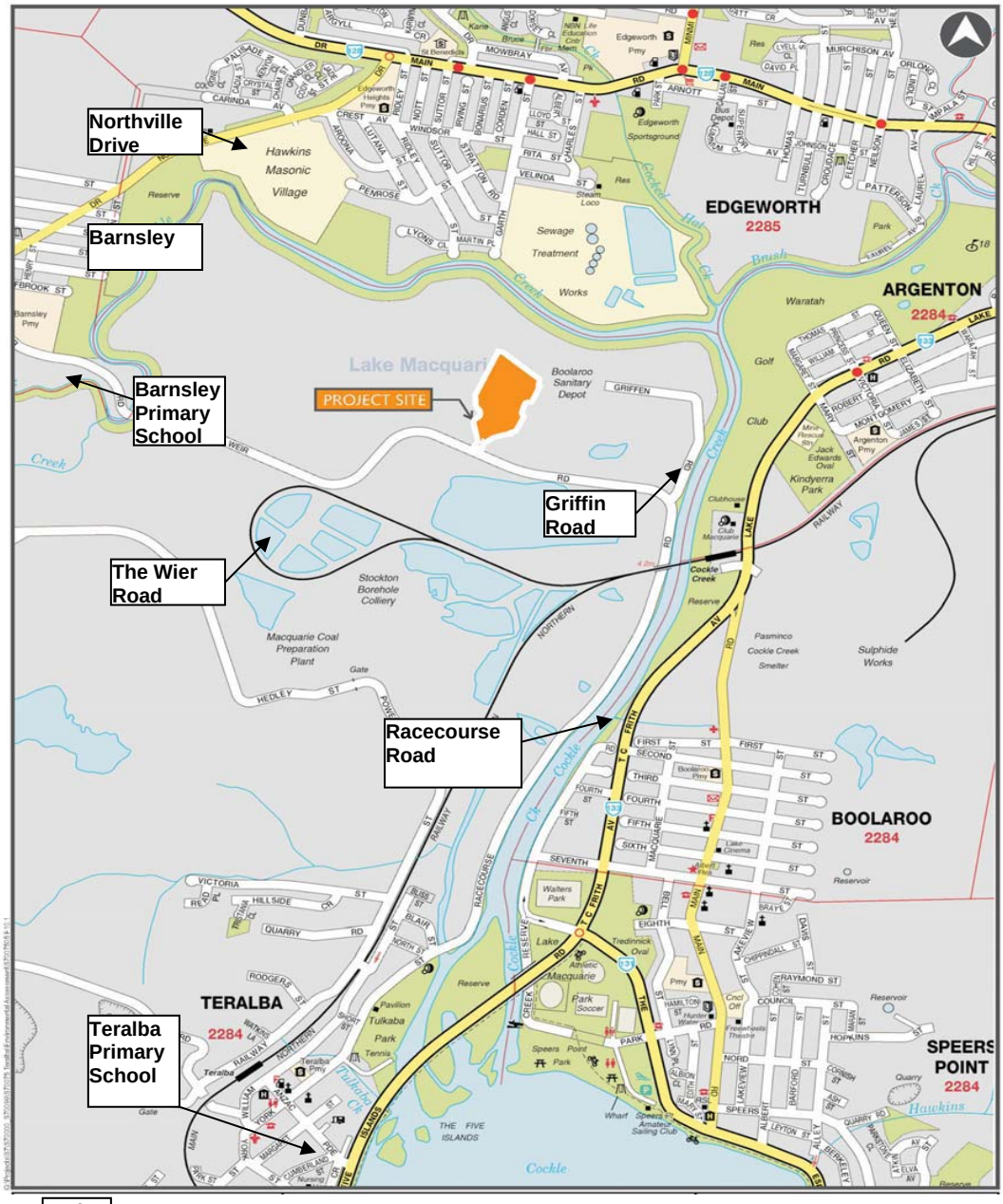


Figure 3: *Proposed site layout*

1.3 Project Setting

The Project site is a 7 hectare vacant rectangular field on The Weir Road approximately 2km north of the village of Teralba and some 20km south of the Newcastle CBD. Teralba railway station, 2km south of the Project site, is serviced by the Newcastle and Central Coast line which runs between Sydney and Newcastle.

The F3 Freeway, part of the wider road network servicing the site, is a 127km motorway linking Sydney to the Central Coast, Newcastle and Hunter Regions. Traffic on the F3 can access the site via the West Wallsend Interchange (from the south only) or the Newcastle Interchange. The local road network in the vicinity of the site is shown on Figure 2 and consists of The Weir Road, Griffen Road and Racecourse Road. The Wier Road has a single lane in each direction and connects the site to the suburb of Barnsley. Racecourse Road connects the project to the suburb of Teralba via York Street. Haulage routes from the project site would pass by both Barnsley and Teralba Primary schools.



***Figu** Project site location and local infrastructure.*

The Project site and surrounding landmarks are shown in further detail on Figure 3 below. The site is almost entirely cleared, open and weedy pasture, with the exception of a strip of vegetation along the western and southern boundaries. Two small patches of 'Swamp Sclerophyll Forest on Coastal Floodplains', an Endangered Ecological Community (EEC) are located in the south-west and south

eastern corners. The EEC connects to vegetation within the adjacent State Environment Planning Policy 14 (coastal wetlands) (SEPP 14) mapped wetland.

The site is gently undulating, generally sloping at <5° to the south. One metre deep, unlined drainage channels have been cut into the eastern, northern and western boundaries. These channel water to the east, through the SEPP 14 wetland to Cockle Creek.

A high voltage transmission line dissects the site in an east-west direction. The nearest building, the Council owned and operated Teralba Worm Farm Waste Education Centre, is some 300m to the east of the subject site. The nearest residential property is approximately 500m to the north, on Martin Place in Edgeworth. The Edgeworth Sewage Treatment Works is some 400m to the north of the site.

From the mid 1960s until 1999 the site was part of the Teralba Sanitary Depot and used for the disposal of toilet pans and dry sewage sludge. In addition, slag from the former Pasminco Cockle Creek Lead Smelter, located some 500m northeast of the site, has been used on the subject site as fill. The environmental site assessment identified three hotspots, some 200m^3 of soil, with contaminants in excess of the adopted site assessment criteria (commercial/industrial criteria under the *National Environmental Protection (Assessment of Site Contamination) Measure 1999*). The hotspots are contaminated with arsenic, copper, lead, manganese, zinc and Total Petroleum Hydrocarbons.

As described in Section 1.2, CiviLake propose to cap and contain the contamination by importing 200,000 tonnes of clean fill to raise the site 2-3 metres.

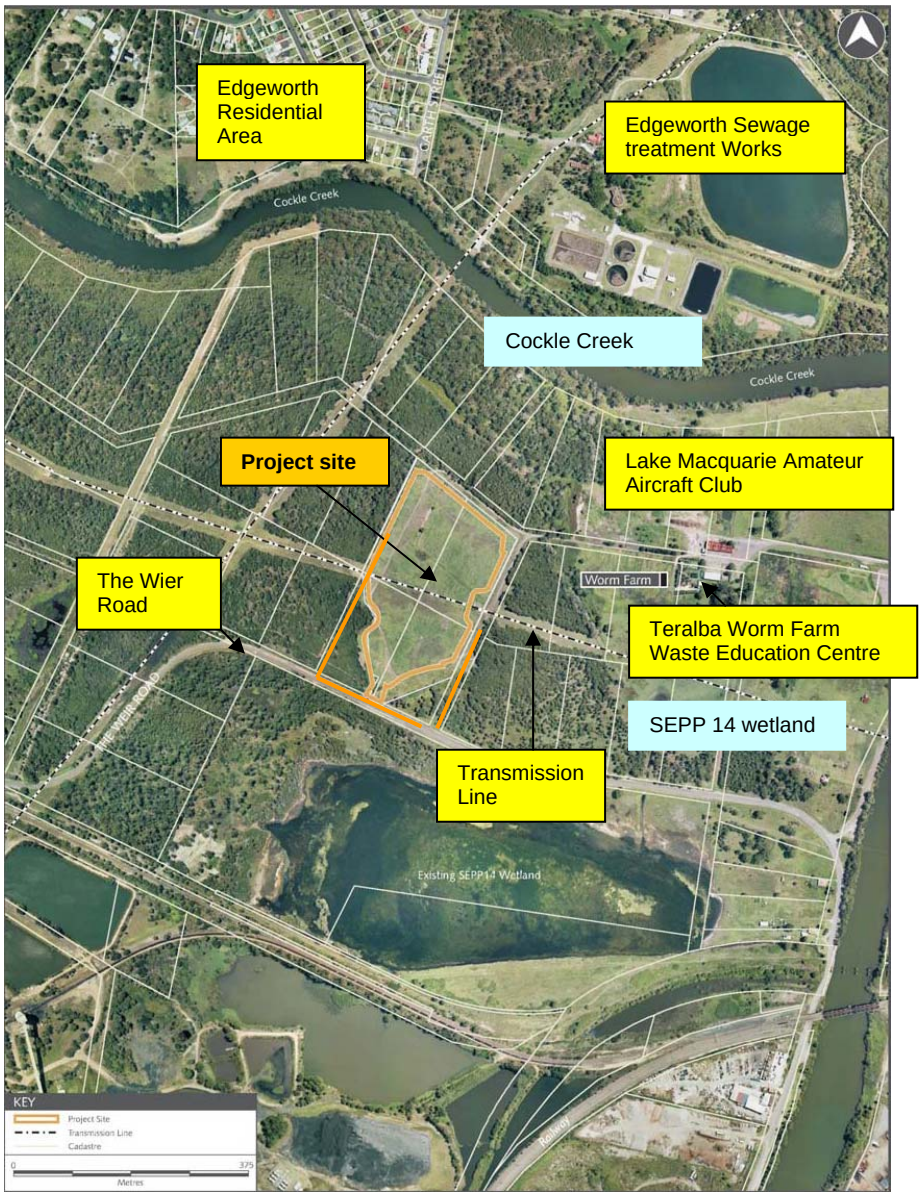


Figure 3: *Project site and nearby landmarks.*

1.4 Project Need

Strategic Objectives

The key strategic plans governing the Project include:

- NSW 2021 State Plan;
- NSW Waste Avoidance and Resource Recovery Strategy (WARR Strategy);
- NSW Reducing Waste: Implementation Strategy 2011 – 2015;
- Lower Hunter Regional Strategy;
- Lake Macquarie City Council 10 Year Community Plan and 4 Year Delivery Program; and
- Lake Macquarie City Council Draft Waste Strategy 2010 – 2040.

NSW 2021

NSW 2021 is a 10 year plan that sets strategies and goals for Government action for the State of NSW. The Department has assessed the proposal against the Plan's goals and considers that the Project would help NSW meet several targets particularly:

- increase recycling to meet the 2014 NSW waste recycling targets – the EA indicates that CiviLake currently disposes to landfill 18,000 tpa of waste generated by it's construction services. The proposed facility would enable the recycling of the majority of this waste. In addition, the facility would also accept up to 90,000 tonnes of construction waste from other producers.

Waste Avoidance & Resource Recovery Strategy 2007 (WARR Strategy)

The NSW Government is committed to waste avoidance and resource recovery from all waste streams across NSW. This policy is reflected in both the *Waste Avoidance and Resource Recovery Act 2001* and the associated *Waste Avoidance & Resource Recovery Strategy 2007 (WARR Strategy)*.

The primary aims of this policy are to:

(a) encourage the most efficient use of resources and reduce environmental harm in accordance with the principles of ecologically sustainable development; and

(b) ensure that resource management options are considered against the hierarchy of the following order:
  (i) avoidance of unnecessary resource consumption;
  (ii) resource recovery (including reuse, reprocessing, recycling and energy recovery); and
  (iii) disposal.

The WARR Strategy sets the following specific targets for resource recovery by 2014:

- 66% of municipal waste;
- 63% of commercial and industrial waste (C&I); and
- 76% of construction and demolition (C&D) waste.

For the 2008-2009 period, NSW recovered 73% of its construction and demolition waste. The *NSW Reducing Waste: Implementation Strategy 2011 – 2015* says NSW is tracking well and must focus efforts to increase construction and demolition waste recovery to the 2014 target of 76%.

To assist Council in meeting the targets in the WARR Strategy, Council has included aims to increase recycling and resource recovery in its 10 Year Community Plan. The proposal is a specific delivery action under Priority 6.2 in the Council's current 4 Year Delivery Program. The project will assist to maximise the Council's use of recycled bulk construction materials.

The Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy is the land use planning framework guiding the sustainable growth of the region to the year 2031. The project is consistent with the strategy as it would help reduce the local demand on natural resources by recycling construction material.

Lake Macquarie Council's 10 Year Community Plan

Lake Macquarie Council's 10 Year Community Plan aims to increase recycling and resource recovery. The Project is a specific delivery action under Priority 6.2 in the Council's current 4 Year Delivery Program. It will assist to maximise the Council's use of recycled bulk construction materials.

Lake Macquarie City Council Draft Waste Strategy 2010 – 2040

The *Lake Macquarie City Council Draft Waste Strategy 2010 – 2040* aims to reduce the amount of domestic organic waste going to the Awaba landfill. This would extend the life of the Awaba landfill, reduce the Council's future tax and fee liability and produce usable compost. The strategy notes relevantly:

- 30% of the waste that currently goes to the Awaba landfill is commercial, building and industrial waste and 70% is domestic waste;
- more than half of the domestic waste is organic and can be diverted for composting;
- the Awaba landfill is nearly full with 4 to 6 years capacity at the current filling rate;
- State Government policy says that local governments must reduce the amount of waste that goes to landfill; and
- government taxes and fees are increasing on waste that goes to landfill.

While the Project is not identified in the *Lake Macquarie City Council Draft Waste Strategy 2010 – 2040,* the proposal would assist by reducing the amount of construction and green waste that is sent to landfill.

The Department considers the project would provide a valuable contribution towards achieving the objectives and targets for waste recovery and re-use specified in the policies above.

3. STATUTORY CONTEXT

3.1 Major Project

The proposal is a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it is development for the purpose of resource recovery or recycling facilities that handle more than 75,000 tonnes per year of waste under clause 27 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*. Therefore the Minister is the approval authority.

On 25 January 2010, the then Minister for Planning delegated responsibility for the determination of project applications under Part 3A of the *Environmental Planning and Assessment Act 1979* to the Deputy Director-General, Development Assessment and Systems Performance where:

- there are fewer than 25 submissions in the nature of objections in respect of the project application; and
- the project is not a critical infrastructure project under Section 75C of the EP&A Act.

The Minister for Planning and Infrastructure has confirmed this delegation subject also to the local council not objecting to the proposal

The project, received fewer than 25 submissions in the nature of objections, Council does not object, and is not a critical infrastructure project. The Deputy Director-General can therefore determine the project under delegated authority.

3.2 Permissibility

Under Section 75J of the EP&A Act, the Minister cannot approve the carrying out of a project that would be wholly prohibited under an environmental planning instrument

The project is located on land zoned 9 Natural Resources and 7(1) Conservation (Primary) under the *Lake Macquarie Local Environmental Plan 2004.* The recycling facility will be located entirely within the portion of the land zoned 9 Natural Resources, while bush regeneration will be undertaken in the portion of land zoned 7(1) Conservation. Waste management and/or recycling facilities are permissible with consent in Natural Resource zone. The asphalt mixing pug mill and asphalt recycling plant can be classified as an industry under the LEP and is also permissible with consent in the Natural Resource zone.

Consequently, the Minister may approve the carrying out of the project.

3.3 Environmental Planning Instruments

Under Sections 75I(2)(d) and 75I(2)(e) of the EP&A Act, the Director-General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project.

Consideration of the following relevant Environmental Planning Instruments is shown in Appendix D:

- State Environmental Planning Policy 14 Coastal Wetlands;
- State Environmental Planning Policy 33 Hazardous and Offensive Development;
- State Environmental Planning Policy 44 Koala Habitat Protection;
- State Environmental Planning Policy 55 Remediation of Land;
- State Environmental Planning Policy 71 Coastal Development;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy (Infrastructure) 2007; and
- Lake Macquarie Local Environmental Plan 2004.

3.4 Objects of the EP&A Act

The Minister's consideration and determination of the application must be consistent with the relevant provisions of the EP&A Act, including the objects set out in the Act's section 5. The objects of most relevance to the Minister's decision on whether or not to approve the project are found in section 5(a)(i), (ii), (vi) and (vii). They are:

(a) to encourage:
- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare ofthe community and a better environment,*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- *(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- *(vii) ecologically sustainable development.*

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the application. The assessment integrates all significant economic and environmental considerations and seeks to avoid any potential serious or irreversible damage to the environment, based on an assessment of risk-weighted consequences.

CiviLake has also considered a number of alternative sites to the proposed project and has undertaken an environmental risk analysis of the project.

3.5 Statement of Compliance

In accordance with Section 75I of the EP&A Act, the Department is satisfied that the Director-General's environmental assessment requirements issued on 15 October 2010 have been complied with.

An objector had raised issue with the expiry of the Director General's environmental assessment requirements of 6 May 2008. However, the Director General re-issued his requirements 15 October 2010 and they therefore remain current for the purposes of this application.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the Department publicly exhibited it from 26 August until 1 October 2010 (37 days) on the Department's website, and at the Department's information Centre, Lake Macquarie City Council and the Nature Conservation Council. The Department also advertised the public exhibition in the Newcastle Herald and notified landholders and relevant State and local government authorities in writing.

The Department received ten submissions during the exhibition of the EA - 6 submissions from public authorities and 4 submissions from the general public.

A summary of the issues raised in submissions is provided below.

4.2 Public Authority Submissions

Six submissions were received from public authorities. None of the authorities objected to the proposal, however, the Hunter Regional Development Committee and the Department of Environment and Climate Change and Water (now the Office of Environment and Heritage), recommended detailed conditions of approval.

Hunter Regional Development Committee (HRDC): raised no objections to the project but recommended conditions in relation to intersection access and design, internal roads, lighting, signage and truck management.

Office of Environment and Heritage (OEH) does not object to the project, however, raised some concerns over the suitability of the location, particularly the proximity to Cockle Creek and the SEPP 14 wetland. The OEH has recommended conditions for the project, including waste management (including stockpile management) and the ignition risk of the power line.

Hunter Water does not object to the project and gave advice in relation to water connection and use.

The **Roads and Traffic Authority (RTA**), **Rural Fire Service** and the **NSW Office of Water (NOW)** did not object to the Project.

4.3 Public Submissions

Four submissions were received from the public, all 4 objected to the project. The key issues raised in public submissions include:

- flood issues;
- engineering issues - impacts of settlement of fill;
- road safety issues;
- noise impacts;
- odour and air quality;
- dust;
- traffic impact; and
- ecological impacts on wetlands.

The Department has fully considered the issues raised in submissions in its assessment of the project.

4.4 Proponent's Response to Submissions

AECOM, on behalf of CiviLake, provided a response to the issues raised in submissions (refer to Appendix C).

5. ASSESSMENT

The Department considers the key environmental issues for the project to be traffic, water quality and biodiversity. Other issues that are assessed in this report include air quality, noise (including traffic noise), contamination and bushfire.

In assessing the merits of the project, the Department has considered:

- the EA, submissions and the Proponent's response to submissions on the project (refer to Appendix C);
- the relevant environmental planning instruments, guidelines and policies;
- the objects of the EP&A Act, including the object to encourage ecologically sustainable development; and
- the relevant statutory requirements of the EP&A Act & Regulation.

5.1 Traffic

Issue

The Project could increase road safety risks along the proposed haulage routes.

Consideration

The proposed site access is off Weir Road, between Teralba and Barnsley. The site is accessed from two directions, from the east via York St and Racecourse Road, Teralba and from the west via George Booth Drive or Wakefield Road then Northville Drive, Barnsley.

The closest intersections to the site are shown on Figure 4, being Racecourse Road and Griffen Road (1), and Northville Drive and The Weir Road (2). All operate satisfactorily at a level of service A.

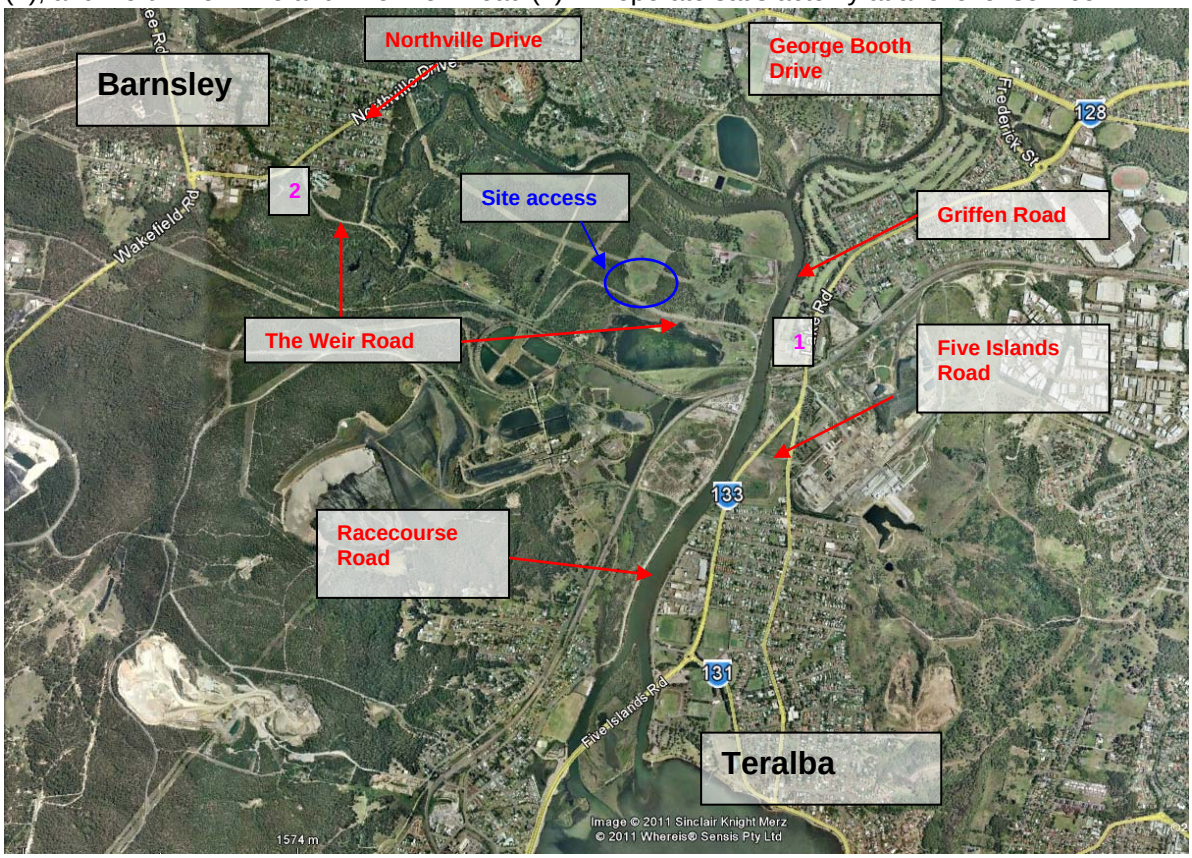


***Figure 4**: Surrounding network*

Construction

Importing approximately 200,000 tonnes of fill would require a total of 13,333 truck movements (for a 30-tonne truck) over a period of two to three years. The predicted daily average is 24 truck movements, which is minimal and is well within the capacity of the existing road network.

Operation

Haulage trucks are likely to be 6 and 12 tonne tip-trucks, semi-trailers and combination trucks with dog trailers. At full capacity, the facility would average about 218 trucks movements per day and 26 truck movements per hour. About 60% of trucks will use the eastern route via Teralba, and 40% would use the western route via Barnsley. The proposed haulage hours avoid the afternoon peak hour (4pm-5pm) and would be:

- Deliveries (in) 7am - 4pm, Monday to Saturday;
  8am – 5pm Sunday and Public holidays
- Dispatches (out) 6am (to coincide with road-work start times) to 4pm
  8am – 4pm Sunday and Public holidays
- Night-time: Up to 50 nights a year when night road-works are carried out.

The project's traffic impact assessment identified that the facility would not decrease the level of service of any of the intersections within the vicinity of the site. All would operate at an acceptable level of service with spare capacity. The Department considers that the traffic contribution to the surrounding network would not be significant. Notwithstanding, the Proposal would increase heavy vehicles movements along The Weir Road in the morning peak hour by 9 to the west and 17 to the east of the site.

Safety

The Department, the HRDC and a number of submissions all raised concerns over the impact of the project on The Weir Road users, particularly adjacent to the entrance to Barnsley Public School.

Following discussions with the Department, CiviLake proposed a number of measures to increase safety of road users, particularly school children. The measures include installing flashing lights at the 40km school zones for both Teralba School and Barnsley Public School and site inductions that include a discussion about road safety, particularly around the schools.

Intersection Design

Civilake propose to construct a new site access as a two lane - two way road intersecting The Weir Road at a priority T- intersection. The intersection would form a type BAR (Basic Right Turn) treatment which is the minimum treatment for this type of access. According to the EA, this treatment would provide sufficient width for heavy vehicles to pass on the left of a single unit stationary vehicle.

Following discussions with both the proponent and the HRDC, the Department agrees that the type BAR is the most appropriate type of intersection given that the access is constrained by the power poles on the southern side of The Weir Road and EEC on the project site. The HRDC also recognised the need to balance the level of intersection design with the vegetation removal and agreed that the type BAR was sufficient.

Developer contributions

Ordinarily, the Department would impose a Council specified developer contribution for haulage route maintenance. It is unnecessary in this case because the Council is both the proponent and the road authority. Should the facility be sold to a private interest in the future, the Council would be at liberty to account for future road maintenance in either the sale price or sale contract.

Conclusion

The Proponent specifies the following traffic impact mitigation measures:

- A Basic Auxiliary Right (BAR) access into the site off The Weir Road;
- 40kmh school-zone flashing lights on the haulage route outside Barnsley Public School; and Teralba Public School.

Due to residual concerns over the safety of road users, particularly adjacent to the Barnsely Public School, the Department has recommended a condition requiring the Proponent to prepare a transport code of conduct, to the satisfaction of the Director-General. The transport code of conduct is to be prepared in consultation with Teralba and Barnsley Public Schools given there is some scope for a negotiated agreement to reflect specific local circumstances and further reduce the impact of truck traffic on the schools. A code of conduct is a modern 'corporate-citizen' requirement that is common for haulage route approvals.

The Department considers that these measures will reduce traffic impacts to an acceptable level.

5.2 Water

Issue

The change in hydrology has the potential to further degrade the adjacent wetland.

Consideration

The stormwater flow path leaving the site is approximately 350m long and heads north through existing man-made drainage channels, then east through the Swamp Sclerophyll Forest EEC (EEC), then south to the adjacent SEPP 14 wetland (see Figure 5).

***Figure 5**: Stormwater flow path*

CiviLake estimate its operational water requirements would be in the order of 26ML per year for processes such as the pug mill, dust suppression and concrete crushing. Stormwater from the stockpile areas on site would be treated and stored in the main storage pond from which approximately 80% of operational water will be sourced.

Potential sources of pollutants from the site which could impact on water quality are considered to include:

- waste containing low levels of contaminants (heavy metals, oils and grease etc);
- decomposition of green waste (leading to leaching of nutrients);
- transport of suspended solids from stockpiled materials (Total Suspended Solids (TSS)); and
- minor leakage of oils and greases from plant and equipment on site.

The Proponent's proposed stormwater treatment (see Figure 7) includes:

- buffer strips around stockpiles;
- silt fences along the downstream toe of stockpiles;

- a sedimentation swale and a dirty water (sedimentation) pond through which all storm water would be directed;
- a bio-retention system; and
- a storage pond in which overflow and treated flow from the bio-retention system would be collected for use in processes and dust suppression during operations.

The "first flush" runoff from the development catchment area would be directed to the sediment deposition pond. The pond would target the efficient capture and removal of gross pollutants and coarse sediment, and reduce the sediment load that enters the Bioretention system.

The Bioretention system would be a standard vegetated filtration system, where runoff would be encouraged to pond above a loamy sand filter media and percolate down at a rate favouring nitrogen uptake by plants and organisms within the media and root mass. Treated run-off would then be collected through a series of subsoil perforated pipes and discharged to the main water storage pond for reuse. The filtration rate through the soil filter media is typically in the order of 100 to 180mm/hr ensuring the capture storage is drained within several hours, see Figure 6 for a cross section of a typical bioretention system.

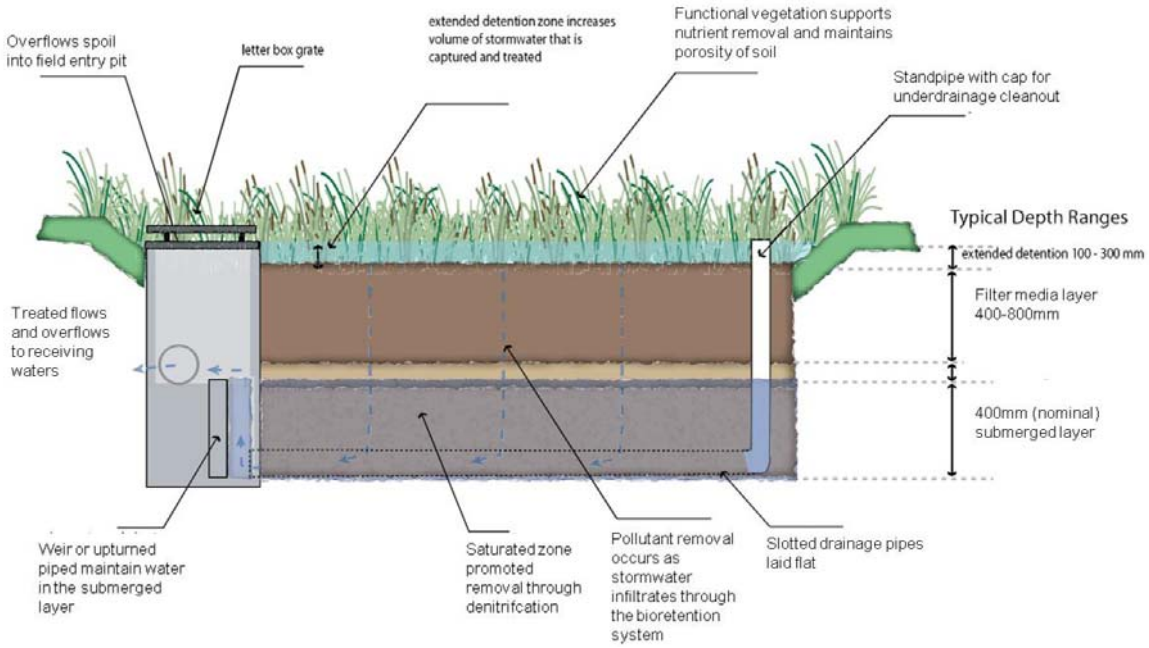


***Figure 6**: Cross section of a typical bio-retention system*

Figure 7: *Proposed water treatment train*

Hydrology

The water balance undertaken for the site shows that, even with the proposed stormwater treatment measures, the compacted-fill surface is expected to increase both the volume (by 35%) and frequency of stormwater (by three-fold) flows. Conversely, the compacted-fill surface would reduce ground-water infiltration and the overall volume of water discharge would be less than present.

In response to the Department's concerns, the Proponent consulted a wetland specialist to determine the ecological implications of the change in hydrological flows for the wetland. The report, included as part of CiviLake's response to submissions, found that:

- the wetland (shown as 4 on Figure 5) is currently highly disturbed by previous grazing and slashing;
- though the wetland extends south of The Weir Road to the water's edge of the downstream lake (shown as 6 on Figure 5), only a narrow strip of vegetation south of The Weir Road, growing within the channel would be subjected to runoff from the development site, (this means that any mitigation measures focus on the wetland to the north of the Weir Road); and
- the low lying areas of the wetland are already impacted by saline water. This is likely due to the intrusion of tidal saline water from Cockle Creek via the large lake south of The Weir Road.

The assessment concluded that the wetland has already been so degraded by salt incursions from Cockle Creek that the anticipated residual increase in post-development surface flow volumes is not considered an important component of maintaining the wetland's health.

Pollutants

CiviLake's proposed treatment system would achieve the pollutant load reduction targets in DECCW's draft policy *Managing Urban Stormwater: Environmental Targets (2007)*, namely 98% for total suspended solids, 91% for phosphorus and 84% for nitrogen. Removal of total suspended solids was used as a measure of the effectiveness in the removal of many other stormwater pollutants including particulate bound contaminants, such as heavy metals and hydrocarbons, which have the potential to be generated from the storage and processing of construction materials such as asphalt and recycled asphalt pavement.

Notwithstanding, some sediment is predicted to be released to the receiving wetland each year which, in-combination with the change in hydrology discussed above, has the potential to further degrade the already compromised wetland.

Conclusion

The Department is satisfied that the proposed stormwater treatment measures, along with a recommended condition that includes a requirement to monitor the stormwater system and the adjacent wetland, would manage water quality and quantity to a level that ensures minimal impact on the already degraded wetland.

Notwithstanding, as the Proponent's Response to Submissions Report concluded that a change in hydrology would have less of an impact on the freshwater wetland than salt tidal inundation, the Department has recommended that CiviLake undertake works to reintroduce the freshwater hydrology to the wetland. The works would assist in developing a healthy fresh-water community which would, in turn, increase the wetland's resilience. This condition also relates to the Proponent's bio-diversity offset package (See section 5.3).

5.3 Biodiversity

Impact

The project requires the removal of 13 threatened species (*Anophora inopina*) and 500m^2 of Swamp Sclerophyll Forest on Coastal Floodplains EEC.

Consideration

The subject site is primarily cleared of vegetation, with the exception of a strip along the western boundary and two patches of, an Endangered Ecological Community (EEC) in the south-west and south eastern corners. The EEC comprises part of a mapped SEPP 14 wetland which lies to the south and east of the site (see Figure 8).

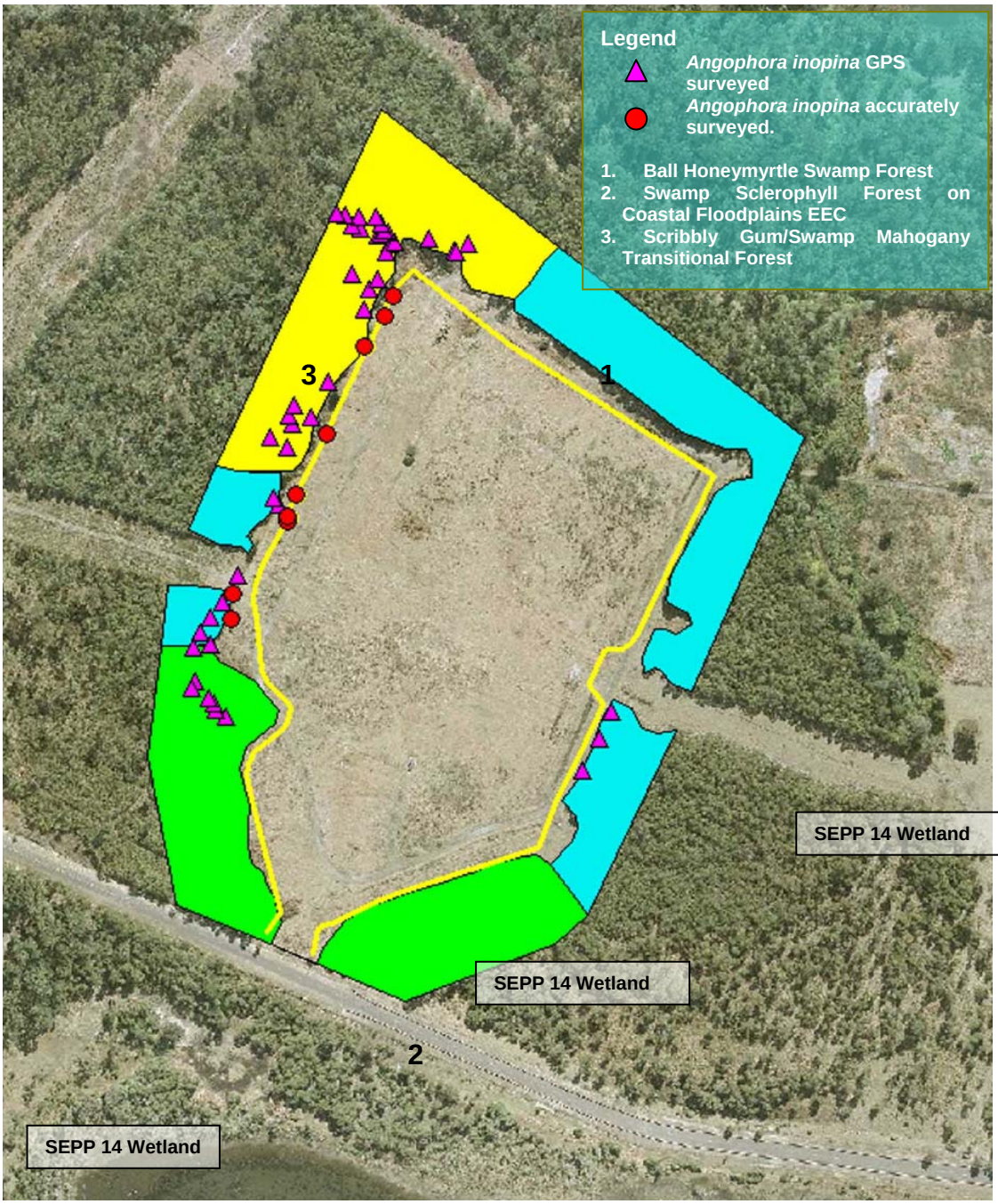


Figure 8: *Mapped vegetation*

The vegetation along the western boundary contains a number of *Angophora inopina,* which is listed as vulnerable under both the *Threatened Species Conservation Act 1995* (TSC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Fauna surveys

undertaken as part of the assessment process indicated that the site and adjacent vegetation may provide habitat for several species listed as vulnerable under both the TSC Act and the EPBC Act.

As part of the exhibited project, CiviLake proposed to:

- retain the *Angophora inopina* within the site through provision of a retaining wall that would protect the tree trunks from the earth bund wall (see Figure 3);
- remove a small patch of EEC at the site of the proposed The Weir Road entrance, amounting to an area of approximately 80m^2; and
- removal of other scattered trees for fire access, the boundary fence, and bund wall.

According to the ecological report provided with the EA, the area of EEC that is to be removed is in very poor condition compared to other parts of the EEC on the site. This is due to impacts resulting from edge effects as a result of runoff from The Weir Road.

Since the EA was exhibited, CiviLake's detailed design work has necessitated a minor amendment to the access design, primarily to avoid the newly placed power poles on the southern side of The Weir Road. In addition, the Proponent's arborist, who was consulted to determine what design and management measures would be required to protect the *Angophora inopina,* determined that it would not be possible to protect these plants in the long-term. Consequently the project now requires:

- removal of 13 specimens of *Angophora inopina* from the site's western boundary;
- clearing of about 500m^2 of degraded Swamp Sclerophyll Forest to make way for the new driveway and intersection; and
- removal of other scattered trees for fire access, the boundary fence, swale and bund wall.

The Proponent has subsequently committed to the following bio-diversity offset package for the project:

- planting 91 provenance specific *Angophora inopina* on an adjacent site. This equates to 217 "species credits" when calculated using the OEH's bio-banking calculator. The trees would be protected in perpetuity by a Section 88B restrictive covenant under the *Conveyancing Act 1919* on the title of the land; and
- retain and manage the on-site EEC that remains with bushland management techniques.

Conclusion

On consideration, neither the Department nor the OEH consider that the proposed off-set package alone adequately accounts for the removal of the EEC and the effect of the project on fauna using habitat adjacent to the site. Notwithstanding, both the Department and the OEH are satisfied that the off-set package, when considered in combination with the conditioned wetland rehabilitation (see Section 5.2 above), would reduce the ecological impacts of the project to an acceptable level.

5.4 Other assessment issues

Other issues raised during the assessment process and the Department's consideration of each are summarised in Table 2 below.

***Table 2** – other assessment issues*

Issue	***Assessment***	***Recommended Condition***
Air Quality	• Wheel dust, construction dust, stock-pile dust and dust from crushing and sorting recycled material would be the main cause of air emissions. • The site is remote from residential and other air-quality sensitive receivers. The nearest residential receiver being 500m to the north-west. • The Proponent's dispersion modeling shows the concentration of all pollutants to be below the relevant OEH criteria. Specifically: o Maximum predicted contributions from the facility are 8.47ug/m3; o Average annual PM_{10} from the facility would be 0.8ug/m3, resulting in a cumulative maximum of 27.5ug/m3,	Recommended conditions require the Proponent to: • implement all reasonable and feasible measures on the site to minimise dust generation from the project; • comply with dust limits; and • not cause or permit the emission of offensive odours from the site.

Issue	*Assessment*	*Recommended Condition*
	which is less than the DECCW maximum of 30ug/m3; and o Where background concentrations are elevated, the 24 hour PM_{10} criterion of 50ug/m^3 is exceeded, however, the Proponent's contemporaneous assessment concluded that operation of the project would not make the air quality any worse. • Odour is unlikely to be an issue as no composting is proposed. • Compliance with air quality (dust) criteria is dependant on dust management measures (such as the use of a water cart on windy days to prevent wheel dust). There are emissions targets in the recommended conditions.	
Flooding	• The site is flood affected, the proposed development has the potential to increase flood levels up-stream. • The site is located within the Cockle Creek flood plain and the project involves importing 200,000 tonnes of fill to raise the site above the 1-in-100 year flood level. The Proponent's flood assessment modelled the impact of fill on the pattern and depth of flooding adjacent to the site. The model accounted for sea level rise and a potential 30% increase in rainfall associated with climate change. The raised site would increase the 1 in 100 year flood level on the upstream site-boundary by 10mm. The modelled level quickly returns to predevelopment levels 20m upstream. • The Department is satisfied that the project will not affect flood levels at neighbouring properties, neither NOW nor the OEH raised concerns with the assessment. The OEH requested a condition specifying that the perimeter bund be built to a specification which would prevent flood waters entering the site during a 1-in-100 year flood event. However, as the site is being raised to a level above the 1-in-100 year flood level, this condition is deemed unnecessary.	No conditions have been recommended.
Noise	• Predictions of construction noise indicate the facility will comply with construction noise criteria. • When all plant are operating two residential receivers are either at or slightly above the stated residential daytime criteria of 45 dB(A). Both the Department and the OEH consider that the noise exceedances of up to 2dBA above the day time intrusiveness criteria were minor and acceptable. • The assessment predicts noise levels that should not result in sleep disturbance, when night receivals of product occur, however, the Department has recommended noise limits be imposed on the project. • Existing levels of road traffic noise exceed recommended daytime noise levels along York Street and Northville Drive during the noisiest 1 hour periods. While it has been demonstrated that the project will not increase road traffic noise levels by more than 2dB, the Department considers that the Proponent	• The Department recommends that all construction work be undertaken within standard working hours only. • Noise limits have been recommended. • To evaluate compliance with the noise impact assessment criteria and limits imposed, an operational noise management plan and monitoring program is recommended. • To determine if there are any reasonable and feasible measures available to mitigate residual road traffic noise, the Department has recommended that the Proponent undertake a dilapidation audit of York Street and repair any significant damage identified

Issue	***Assessment***	***Recommended Condition***
	should further demonstrate that all reasonable and feasible mitigation have been undertaken to reduce road traffic noise. • Proposed and recommended management measures will minimise noise impacts.	as the sound of an empty truck passing over a pot-hole or poorly-formed section can contribute to excessive road traffic noise .
Contamination	• The site was part of the Teralba Sanitary Depot and used for the disposal of toilet pans and dry sewage sludge. • Slag from the former Pasminco Cockle Creek Lead Smelter, has been used on the subject site as fill. • Three contaminated hotspots have been identified equating to some 200m^3 of soil. • The Remedial Action Plan recommended cap and contain as the preferred remediation strategy. The OEH raised no concerns with the RAP or with the proposed remediation strategy. • The Department is satisfied that the preferred remediation option is suitable for remediating the site.	The Department has recommended that the Proponent: • remediate the site in accordance with the Remedial Action Plan; and • prepare a Site Validation Report and Contamination Management Plan.
Bushfire	• The project is on and near to Bushfire Prone Land. The EA includes a bushfire risk assessment prepared in accordance with *Planning for Bushfire Protection 2006*. CiviLake proposes to: o maintain a minimum 20m Asset Protection Zone around buildings and combustible material stock-piles; o construct exposed buildings to comply with Level 3 specifications in AS3959 -Construction of Buildings in Bushfire Prone Areas; o connect new fire access trails to existing fire access trails to the east and north; o provide water storage tanks, fire fighting pumps and hose reels; and o prepare an Emergency Response and Evacuation Plan. • The Rural Fire Service found the EA risk assessment to be adequate.	The Department has recommended conditions to ensure compliance with the EA and *Planning for Bushfire Protection 2006*
Acid Sulfate Soils (ASS)	▪ The presence of ASS was confirmed during two investigations. ▪ As the site would be filled, disturbance of ASS is unlikely. ▪ Notwithstanding, the project would be constructed in accordance with CiviLake's Acid Sulfate Soil Management Plan which aims to reduce disturbance of ASS and requires treatment of any disturbed ASS with lime.	No conditions have been recommended
Hazard and risk	▪ Elevated concentrations of methane gas were detected in one of the groundwater monitoring wells located on the site in 2002. While higher concentrations were reported in the adjacent former pan disposal area, given the presence of the uncompacted fill materials across the site, methane gas migration may occur under certain conditions. ▪ CiviLake commit to methane monitoring both during and post construction. ▪ If methane monitoring suggests that methane is being generated at significant concentrations at the site appropriate mitigation measures would be included in the	The Department has recommended that the Proponent: • comply with Energy Australia's requirements; and • undertake methane monitoring prior to commencement of construction; and • implement auditable procedures to ensure that the site does not accept wastes that are prohibited.

Issue	***Assessment***	***Recommended Condition***
	CEMP prior to construction occurring. ▪ Measures to address safety in respect to the transmission easement would be developed in consultation with Energy Australia and be included in both the CEMP and OEMP for the proposed Facility. ▪ CiviLake would prepare and implement an Incoming Waste Quality Plan. The plan would ensure a range of procedures are in place to prevent asbestos and other hazardous materials from being accepted and processed at the site.	
Visual	▪ The subject site is a cleared paddock that is surrounded on three sides by vegetation. The site will be filled by some 2-3m above existing levels and will contain a range of plant, buildings and stockpiles. The tallest will be the Pug Mill at 17m. ▪ Some visual impacts may occur from activities, however mitigation measures such as landscaping and painting of equipment would mitigate these impacts.	No conditions of approval recommended.
Greenhouse Gas	▪ While some aspects of the project would generate GHG, the long-term environmental benefits of the project outweigh the environmental costs. ▪ CiviLake has committed to the installation of a photovoltaic system to reduce the project's generation of greenhouse gas.	The Department has recommended that the Proponent • implement all reasonable and feasible measures to: o minimise: energy use on site; and o the greenhouse gas emissions produced on site.
Economic impact	▪ Concerns were raised over the potential economic impacts of the project on other construction material recycling businesses in the area. ▪ It is the Department's view that this particular issue is a market and competition issue. Economic competition is not itself considered to be a planning consideration. What is considered under the EP&A Act is a wider and more general consideration of economic impacts in the locality. Consequently, the Department considers this issue is outside the scope of its environmental assessment of the proposal under the EP&A Act.	No conditions of approval recommended.

6. RECOMMENDATION

The Department has assessed the merits of the project having regard to the objects of the EP&A Act and the principles of ecologically sustainable development. This assessment has concluded that with the implementation of the recommended conditions of approval, the impacts of the project can be mitigated and/or managed to ensure an acceptable level of environmental performance

The Department recognises the importance of the construction and green waste recycling facility in decreasing the amount of waste that is deposited into landfill. The project is also consistent with the strategic direction for waste management in NSW.

Consequently, the Department believes that the project is in the public interest, and should be approved subject to conditions.

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26/9/11

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26.9.11

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APPENDIX A ENVIRONMENTAL ASSESSMENT

See the Department's website at http://majorprojects.planning.nsw.gov.au/page/project-sectors/resource---waste/resource-recovery-or-waste-facilities/?action=view_job&job_id=2249

APPENDIX B SUBMISSIONS

See the Department's website at http://majorprojects.planning.nsw.gov.au/page/project-sectors/resource---waste/resource-recovery-or-waste-facilities/?action=view_job&job_id=2249

APPENDIX C PROPONENT'S RESPONSE TO SUBMISSIONS

See the Department's website at http://majorprojects.planning.nsw.gov.au/page/project-sectors/resource---waste/resource-recovery-or-waste-facilities/?action=view_job&job_id=2249

APPENDIX D CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

Section 75I(2) of the *Environmental Planning and Assessment Act 1979* requires that reference be made to the provisions of any environmental planning instrument that would (but for Part 3A of the Act) substantially govern the carrying out of the project. Consideration of the proposed development in the context of the objectives and provisions of the relevant environmental planning instruments is provided below.

State Environmental Planning Policy No. 14 – Coastal Wetlands

The aim of *State Environmental Planning Policy No. 14 – Coastal Wetlands* (SEPP 14 – Coastal Wetlands) is to ensure that coastal wetlands are protected from clearing, draining, filling and levee construction and are preserved in the environmental and economic interests of the State. The subject site is adjacent to a SEPP 14 – Coastal Wetlands (No. 439) The Department has considered the potential impacts of the proposal on existing coastal wetlands adjoining the site. Requirements to ensure protection of wetland areas include the preparation of a comprehensive Biodiversity and Offset Management Plan that includes a requirement to reintroduce freshwater hydrology to the wetland. The EA also included a comprehensive Water Cycle Management Plan that ensures management of both quality and quantity of water leaving the site.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

SEPP 33 aims to identify proposed developments with the potential for significant off-site impacts, in terms of risk and/ or offence (odour, noise etc). A development is defined as potentially hazardous and/ or potentially offensive if, without mitigating measures in place, the development would have a significant risk and/ or offence impact, on off-site receptors. SEPP 33 was considered as part of the proposal.

State Environmental Planning Policy 44 – Koala Habitat

The aims of SEPP 44 are to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline by requiring the preparation of plans of management, identification of areas of core koala habitat and the inclusion of areas of core koala habitat in environment protection zones. The subject site consists primarily of grassland and as such does not represent koala habitat. However, the vegetation surrounding the subject site has been identified as 'potential koala habitat' based on the presence of food tree species listed in SEPP. However koala presence was not detected during targeted surveys indicating that the adjacent vegetation is not core koala habitat. The Department is satisfied with the consideration of SEPP 44 by the EA.

State Environmental Planning Policy No. 55 – Remediation of Land

Clause 7 of the *State Environmental Planning Policy No.55 – Remediation of Land* (SEPP 55) states that a consent authority must not consent to the carrying out of any development on land unless:

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose

Refer to Section 6 of this report.

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. The project involves remediation of known contamination. In accordance with SEPP 55, CiviLake would notify the Department and Council prior to commencement of works and on completion of works. The Department is satisfied with the consideration of SEPP 55 in the EA.

State Environmental Planning Policy No. 71 – Coastal Protection

State Environmental Planning Policy 71 – Coastal Protection (SEPP 71 – Coastal Protection) applies to land within the coastal zone. It aims to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast. The provisions of SEPP 71 – Coastal Protection have been considered in the assessment of the proposal, particularly in regards to the management of likely impacts of development on the water quality of coastal water bodies.

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)

The Infrastructure SEPP commenced in January 2008, consolidating and updating a number of State planning instruments. The aim of this SEPP is to facilitate the effective delivery of infrastructure across the State. The SEPP identifies that development for the purpose of waste or resource management facilities is permissible with consent on a number of land use zones whether or not it is permissible under the relevant LEP. The Project is not within a zone that is identified the SEPP, however it is permissible with consent under the *Lake Macquarie Local Environmental Plan 2004.*

Schedule 3 of the SEPP provides the RTA with the opportunity to provide feedback on certain traffic-generating developments, including "recycling facilities", before a consent authority makes a determination about a development application. The Proponent consulted the RTA during preparation of the assessment, in addition, the EA was referred to the RTA during exhibition of the Project.

The Department has considered the Infrastructure SEPP in its assessment of the project and concluded that the project is consistent with the relevant objectives of the SEPP.

Lake Macquarie Local Environment Plan 2004

The project is located on land zoned 9 Natural Resources and 7(1) Conservation (Primary) under the *Lake Macquarie Local Environmental Plan 2004.* The recycling facility will be located entirely within the portion of the land zoned 9 Natural Resources, while bush regeneration will be undertaken in the portion of land zoned 7(1) Conservation. Waste management and/or recycling facilities are permissible with consent in Natural Resource zone. Consequently, the Minister may approve the carrying out of the project.

The objectives of the Natural Resource Zone include to:

(a) provide land that has dual values as an economic natural resource and for environmental protection, and

(b) recognise the dual values of the land and integrate economic use of the land with ecological sustainability, and

(d) acknowledge the long term value of the land for the management and maintenance of biodiversity, threatened species habitat, and corridors by minimising the adverse impacts of resource development, and

(f) minimise earthworks while enabling productive use of the land, and

(i) provide for sustainable water cycle management.

The Project meets these objectives by remediating a contaminated site for development of a facility that will help recover and divert some 200,000 tonnes of construction waste from landfill

APPENDIX E RECOMMENDED CONDITIONS OF APPROVAL