

PROPOSAL for RESOURCE RECOVERY FACILITY

SPRINGFIELD QUARRY

SEPTEMBER 2011



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1. EXECUTIVE SUMMARY

This Proposal has been prepared by Gosford City Council's Construction Section at the request of the Coastal Open Space System (COSS) Task Group. It relates to the use of the Springfield Quarry at Clarence Rd, Springfield as a Resource Recovery Facility. In particular it considers part of the area that has previously been quarried is referred to the "operational area". The proposal discusses the history of the site, and also the operating and management procedures for the Resource Recovery Facility.

The Construction Section undertakes road construction projects for Gosford City Council. These projects generate waste material that can often be recycled. In most cases it is not practical to undertake recycling on individual construction sites. The area known as Springfield Quarry provides a central, relatively isolated area where recycling activities can be undertaken with minimal impact.

The ability to recycle and reuse construction waste is an essential component of current construction, environmental and economic practice. The reuse of construction waste lowers the demand on quarried materials thus reducing impacts on the environment, reduces the consumption rate of council's licensed waste facilities and lowers construction costs as tip fees are not incurred for the disposal of waste.

Under Council's DRAFT LEP the zoning of the site is E2 Environment Conservation. The site has existing use rights and currently operates as a quarry. A Resource Recovery Facility is prohibited in this zoning. A report is currently being prepared for the consideration of Council for a Planning Proposal as whether to proceed with the Resource Recovery Facility. As part of this report the COSS Task Group was requested to comment.

Due to the location of the site the COSS Task Group requested a proposal be submitted, describing the management and long term intent of the site as a Resource Recovery Facility. The objectives of the COSS are outlined in Section 2.3.

The implementation of Council's Integrated Management System outlines the procedures established to ensure risk management of both environmental and safety issues.

The Resource Recovery Facility sited in the operational area will be funded by construction projects through the recycling and recovery of construction materials.

Additional funding generated will allow the staged rehabilitation of the site outside of the operational area. This will protect and enhance the wildlife corridor which runs along the western and northern boundaries of the site.

The long-term intent of the site is for Council to maintain the ability to use the site as a Resource Recovery Facility operating responsibly on COSS land.

2. BACKGROUND

2.1 HISTORY

The site operated as a privately owned quarry from the 1970s to the mid to late 1990s. This operation was undertaken utilizing the existing use rights provisions in the legislation. The quarry was purchased by Council in 1997 as an operating quarry. Council has operated the quarry since its purchase sourcing sandstone and rock for road construction projects. Recycling of road construction waste materials at the site commenced in 2001 and was undertaken up until 2006 when it was ceased due to planning restrictions.

In 2006, an Environmental Impact Statement (EIS) was commissioned preparatory to submission of a Development Application (DA) to formalize the use of the site for the recycling of road construction waste materials. The EIS concluded that "Operation of the quarry as a recycling facility will result in minimal impacts to the environment, and will have the benefit of providing a cost effective solution to material supply for Council's external construction activities, meeting environmental requirements. Where operational impacts do arise, they will be managed in accordance with Gosford City Council's existing operational environmental management framework". A copy of EIS is appended to the proposal.

Prior to submitting the DA, planning legislation changed and an application to extend the existing use rights to include the Resource Recovery Facility was no longer possible.

Under Councils DRAFT LEP the zoning of the site is E2 Environment Conservation. A resource recovery facility is prohibited in this zoning. As the land cannot be incorporated into the draft Gosford LEP 2009, it will have to be considered as a separate Planning Proposal. A report is currently being prepared for the consideration by Council for a Planning Proposal as whether to proceed with the process to forward the Planning Proposal to the Department of Planning for a gateway determination to change the zone of the subject site to Zone 5 Special Uses, Resource Recovery Facility. As part of this report the COSS Task Group was requested to comment.

The COSS Task Group resolved the following in a meeting held on the 18th June 2011: "THE TASK GROUP RESOLVES (Wills/Harper) that a report be brought before the Task Group describing the management and long-term intent of the site as a resource recovery facility with the land being retained in the COSS, but with a change of zoning. The report is to include an outline Plan of Management covering weed control, erosion and sediment control, designated operational footprint, funding arrangements for resourcing the plan of management and a timeframe for usage. The report should include a current copy of the EIS."

2.2 SITE IDENTIFICATION AND LOCATION

The site is located off Clarence Road, Springfield.

Access to the site was via a track across two privately owned lots under a lease arrangement with the owner. In 2006 Council approved the purchase of these 2 lots, namely Lots 451 & 452 DP 849998.

The site is bounded to the north, east and west by forested hills and valleys. A residential subdivision exists to the south-east separated from the site by a mound and forested gully. The site is centrally located to Council's worksites. See Figure 1.

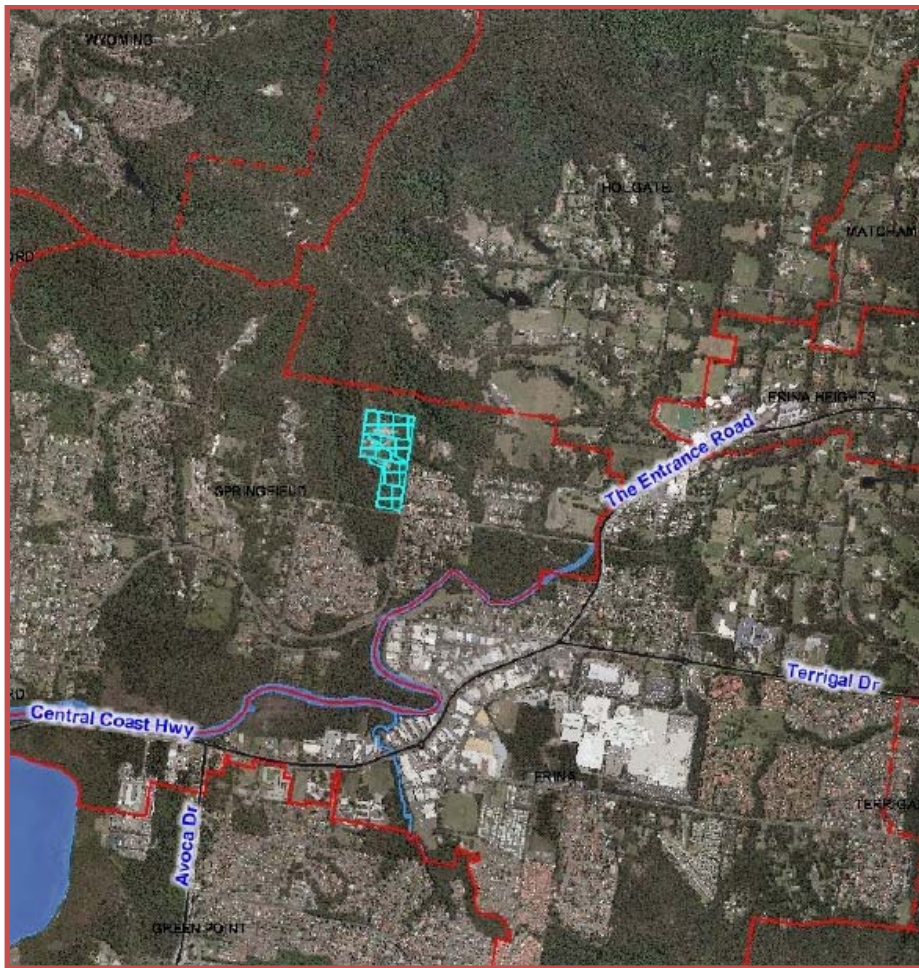


FIGURE 1 - SITE VICINITY

The site is comprised of Lots 1-3, 20-22 Section 1 DP 72550 (purchased in 1997 as the quarry). These are outlined in yellow in Figure 2 and are identified as COSS land. And Lots 451 & 452 DP 849998 (purchased for access in 2006).

The area of the site identified as being most suitable for the Resource Recovery Facility is that area most affected by the quarrying operations. It comprises Lots 2 & 3 Section 1 DP72550 and a very small section of Lots 21 & 22. The area is shown bounded with a red line in Figure 2.

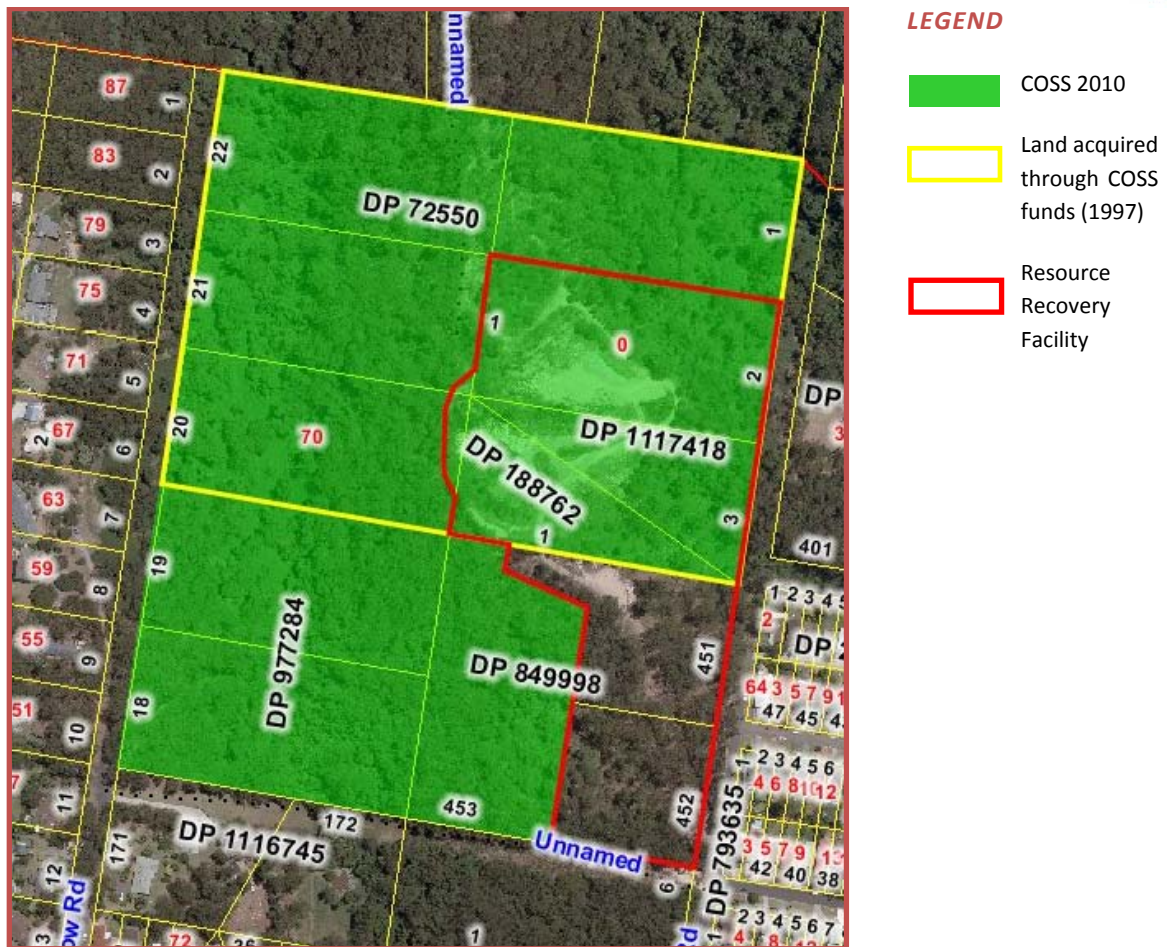


FIGURE 2 - SITE LOCATION

2.3 COASTAL OPEN SPACE SYSTEM (COSS) OBJECTIVES

The COSS is a network of reserves supporting native vegetation and habitat that are managed by Gosford City Council for a number of environmental and community values.

The COSS Strategy 2010, recently adopted by Council, has specific requirements for the assessment process of the COSS boundary.

The specific objectives of the COSS are:

- a) to conserve the visual and environmental quality of the natural scenery of Gosford City
- b) to protect the vegetated ridgelines which provide a green backdrop and visual relief to the urban areas
- c) to provide habitat for native flora and fauna, and for the protection of biodiversity within the city
- d) to provide vegetated connections between ridgelines and wetlands to allow movement of wildlife and the plant gene pool
- e) to facilitate and enhance the enjoyment of the conservation areas by the provision for passive recreation activities compatible with the natural environment
- f) to ensure natural areas with water catchments remain undeveloped thus not causing deterioration in water quality entering receiving waters
- g) to ensure natural areas are preserved for the educational and scientific value they provide to the community; and

- h) to bring land that has environmental and scenic value into public ownership.

Of the original six lots of land comprising Springfield Quarry and purchased for COSS in 1997 the three lots used for quarry operations and referred to as the “operational area” do not exhibit the characteristics of COSS land.

The land is on the edge of the COSS network and is significantly altered from its natural state as a result of the quarrying activities. These reasons and the environmentally sustainable and economic advantages of a Resource Recovery Facility mean that at the very least the use of the operational area although adjacent to COSS is not incompatible.

3 BENIFITS

3.1 OPERATIONAL, ENVIRONMENTAL AND FINANCIAL

Developing a Resource Recycling Facility as part of councils Constructions Section will deliver multiple benefits to many Gosford City Council stakeholders. The requirement to recycle and reuse construction waste is an essential component of current construction practice. The opportunity to do this in close proximity to projects offers the opportunity for significant environmental, financial and operational benefits.

Construction waste generated on projects can be recovered and reused on other projects. This is mostly not possible on an individual projects due to cost and space restrictions. The cost associated with recycling machinery means that significant tonnage of material is required to make its set up worthwhile. For local government works, this generally means the material generated from several projects need to be combined at a central area large enough to store and process the materials. The use of the recovered materials is advantageous on two fronts; as new material does not have to be bought nor does it have to be quarried from elsewhere. A reduction in quarried materials means less disturbance to the environment from which it is sourced. The reuse of the waste generated from a project means that less material is going to landfill, allowing valuable landfill area to be available for more suitable waste products. It also saves on tipping fees which can be a significant project cost.

An additional benefit of having the Resource Recycling Facility located at Springfield is the reduction of truck traffic on roads. The location of the Springfield site is central to council worksites minimizing the distance and travel time for trucks. Shorter travel distances and times result in a reduction in emission, lower hiring costs and lower wear and tear on roads by trucks.

The recovery of construction waste also assists in the delivery of targets identified in New South Wales’ “Office of Environment and Heritage” (formerly D.E.C.C.W) outlined in the “Waste Avoidance and Resource Recovery Act 2001” and accompanying strategy which identifies an area of improvement to be the recovery of construction waste in areas outside of Sydney.

A Resource Recovery Facility offers many environmental and financial benefits. It also demonstrates a strong commitment by Council to Environmental Sustainability.

3.2 FUNDING AND REHABILITATION

It is proposed to fund the management of the site by using rates allocated from each construction project which may utilize the site. These funds will cover the ongoing costs required to manage and operate the

Resource Recovery Facility. This includes maintaining appropriate sediment control, weed control, access roads, hiring of plant used to recycle materials, general site maintenance and lease costs.

An additional charge will be made and used to develop and implement a Rehabilitation Management Plan for areas affected by quarrying that are outside the “operational area”.

4. OPERATIONS

4.1 QUARRY OPERATIONS

It is not envisaged that extensive quarrying will be undertaken.

If quarrying is required, the nominated Construction Overseer shall undertake the role of Production Manager as stipulated in the Mines Act 1901.

Any areas to be quarried will be determined by the Production Manager in accordance with the approved quarrying plan prepared by Bissett and Wright.

4.2 RECYCLING OPERATIONS

The area identified as the “operational area” (Figure 3) shows the currently disturbed area which will form the perimeter of all future works for the Resource Recovery Facility. This will ensure there is no further disturbance to the natural environment.

The operational area will be divided into separated controlled locations for different materials. The allocated working platforms outlined in Figure 4 show the designated areas proposed for each activity proposed for the site.

Areas for recycling and storage will be provided and clearly marked for:

- Profiled road materials
- Rock
- Concrete
- Vegetation material
- Topsoil
- Sand
- Aggregate

The boundaries of the operational area will be clearly identified to ensure adequate protection is provided for the natural COSS land. The natural land form and current shape of the ground will be utilized to develop barriers and buffer zones. Planting of vegetation will be utilized to assist in managing the operational area. This will provide a noise, dust and visual barrier between the Resource Recovery Facility and the surrounding land use areas.



LEGEND

- Operational Area

FIGURE 3 - OPERATIONAL AREA



FIGURE 4 – WORKING PLATFORMS

5. ENVIRONMENTAL AND SAFETY MANAGEMENT

Council's Integrated Management System (IMS) has been developed to ensure plans and policies for Occupational Health, Safety and Environmental Management come to fruition by offering a structured and integrated approach to Occupational Health, Safety and Environmental Management across all of Council's operations.

Council's IMS complies with the requirements of the Occupational Health and Safety Model for Self Insurers, AS 4801:2000 Occupational Health and Safety Management Systems and ISO 14001:1996 Environmental Management Systems.

The following sections detail how Council's IMS system will apply to typical hazards identified as part of the Resource Recovery Facility proposed at the Springfield Quarry site.

5.1 RISK ASSESSMENT

A Risk Assessment (incorporating hazards and risk to both safety and the environment) will be prepared prior to commencement of work.

All workers, plant operators and contractors will be inducted onto the worksite. After the induction and advice of all identified hazards, each person will acknowledge the information given by signing the Risk Assessment document. A copy of the risk assessment will be filed in the Construction Office at Erina Depot.

A copy of the sections Work Procedures are kept in the Construction Office at Erina.

All site personnel are made aware of these procedures at site induction.

5.2 EROSION AND SEDIMENT CONTROL

A site-specific erosion and sediment control plan (ESCP) will be developed by the Project Overseer prior to commencement of a project. A copy of the plan is kept in the construction office.

The ESCP details areas of concern and indicates steps required to ensure controls are placed at suitable locations to manage storm water on the site. After the installation of control devices, a site inspection is carried out to ensure that the ESCP has adequately addressed erosion and sedimentation issues from construction activities.

All erosion and sediment control devices are developed in accordance with RTA Road Design Guide 1989 Section 8 *Erosion and Sedimentation* and the Landcom publication *Managing Urban Stormwater – Soils and Construction*, and in accordance with RTA's Specification G39.

The control structures are constructed to protect the area within the work site as well as prevent egress of sediment to adjacent land and waterways.

Issues such as vegetation retention, runoff management, watercourse protection and any other site-specific environmental considerations are addressed in the development of the ESCP.

5.3 WEED CONTROL

The mitigation and control of weeds throughout the site will be part of the ongoing operations. Initial treatment of weed infestations will be required in particular areas on the site before stockpiling and recycling activities are carried out. This is to minimize the contamination of the imported material from weed seedlings.

After the initial site treatment, regular ongoing maintenance will be undertaken to manage the uptake of weeds. The intervals between ongoing maintenance will be determined by the findings in the monthly IMS Inspections outlined in section 5.4

Table 1 outlines the weed species present on the site and the locations in which they are found is illustrated in Figure 5. A description of each area and the proposed treatment is outlined in Table 2.

The control and management of weeds throughout the site will incur initial and ongoing costs to the project. The ability to fund the facility has been outlined in Section 3.2 of the proposal. The treatment as outlined will be staged as funds permit ensuring that the areas of greatest concern are prioritized. Consultation will occur with Council's Bushcare Officers to determine the priorities. The regeneration of areas outside the "operational area" will be undertaken as funds permit.

TABLE 1 – WEED SPECIES PRESENT

Weed Species Present	Primary Location	Secondary Location
Castor Plant (<i>Ricinus Communis</i>)	E	C
Lantana (<i>Lantana Camara</i>)	C	F
Caana Lily	C	E
Black Eyed Susan (<i>Thunbergia alata</i>)	C	F
Giant reed (<i>Arundo Donax</i>)	C	
Madeira Vine	C	
Stinking Roger (<i>Tagetes minuta</i>)	C	E
Crofton Weed	C	
Farmers Friends (<i>Bidens spp.</i>)	C	E, F
Tobacco Bush (<i>Solanum mauritianum</i>)	C	
Coral Trees (<i>Erythrina X sykesii</i>)	C	
Other Ivy Species	C	
Miscellaneous Grasses	Entire Site	



FIGURE 5 - SITE VEGETATION LOCATION

Table 2 – Weed Control Plan

Area to be Treated	Description	Initial Control Techniques to be used	Follow Up Control Technique to be used
E	No resilience area with high weed specie density. Requires immediate attention.	- Define limit of works - Immediate spray - Allow root systems to stay to retain mound - Possible stripping of weed vegetation	Routine splatter gun spraying
C	No resilience area on steep terrain with high weed specie density. Requires immediate attention.	- Immediate spray - Allow root systems to stay to retain batter - Clearing of tidying of batter	Routine splatter gun spraying
F	Little resilience area with moderate weed species present.	- Scrape and stockpile material for mulching onsite. - Spray and level area	Routine splatter gun spraying.
B	Area of resilience and strong diversity of native plant species present. Moderate weed infestation. Long term Bush Regeneration achievable.	- Mark native plants to ensure their safety. - Removal of weed species by slashing and spraying. - Stockpile removed material for mulching	Routine weeding
D	Moderate Resilience of plant species, low weed infestation.	- Mark native plants to ensure their safety. - Removal of weed species by slashing and spraying. - Stockpile removed material for mulching	Routine weeding
A	Moderate Resilience of plant species, low weed infestation. Long term Bush Regeneration achievable.	- Mark native plants to ensure their safety. - Removal of weed species by hand or plant. - Stockpile removed material for mulching	Routine weeding
G	Well established sediment pond, with good diversity of reed species and native plants.	- Minor clearing of debris grasses - Clear sediment build up for successful treatment.	Routine inspections and clearing if required

5.4 INSPECTIONS

IMS Inspections will be carried out every four weeks by the Overseer. All inspections are documented and filed in the relevant project file in the Construction Office.

The site may also be randomly inspected by the Operational Safety and Environmental Management Committee. Responses to rectification of non-conformances raised by these inspections are to be submitted to the Audit Committee within one week of them being raised.

5.5 NON-CONFORMANCE, CORRECTIVE AND PREVENTATIVE ACTION

Standard documentation in the IMS Manual/SP11 Procedures is used for completion of non-conformance reports.

Corrective and preventative actions are listed for completion on the base of the audit forms.

Rectification of non-conformances is carried out on a priority basis to restore the affected area and provide any required additional controls to minimize the risk of reoccurrence.

5.6 PLANT AND EQUIPMENT

All plant and equipment used by Gosford City Council's Construction Section is maintained in an efficient operating condition. Daily checklists are completed by operators prior to use. This is also specified in the contracts for Sub-contractor, plant and equipment.

Council owned plant is generally returned to the Council Depot each night for security reasons. Any plant left on the job will not create any problems to the public site area or environment.

Fuelling and servicing of plant is generally done at the Council Depot. If fuelling on-site is required, this is done by the mobile fuel truck.

5.7 AIR QUALITY

Loads with the potential to generate dust are wet down or covered during transportation.

In line with Erosion and Sedimentation Control Plans, minimum work areas only will be exposed. If required, dust will be controlled by using a water truck. If feasible, exposed batters will be seeded. The area is bound on all sides by vegetation, which will minimize the possibility of any dust escaping from the site.

Exhaust systems of construction plant, vehicles and machinery are maintained in accordance with manufacturer specifications and the exhaust emissions shall comply with the requirements of relevant legislation.

5.8 NOISE AND VIBRATION

Work and activities are restricted to the following hours:

Mondays to Fridays:	7.00 am to 6.00 pm
Saturdays:	8.00 am to 2.00 pm
Sundays & Public Holidays:	No construction work

These hours may be varied with advice to affected local residents and if required after prior notification has been provided to the DECCW.

It is noted that existing residences are well away from the area. Noise testing carried out as part of the EIS prepared in 2006 did not identify any noise issues for surrounding residences associated with a concrete crushing machine operating on the site.

The access road to the site is on council owned land off Clarence Road.

5.9 WASTE MINIMISATION AND MANAGEMENT / CHEMICAL MANAGEMENT

Waste will be managed and disposed of in compliance with relevant legislation. Measures to reduce, re-use and recycle waste products including soil, road pavement materials, concrete and vegetation will be implemented. Waste will be recycled and used on other projects after required testing and compliance is achieved as per current Resource Recovery Legislation and Exemptions.

5.10 ARCHAEOLOGY AND HERITAGE

If any Aboriginal archaeological sites or artifacts are discovered during construction then work shall cease immediately in the vicinity and the NSW N.P.W.S shall be contacted promptly for further advice and action.

If any sites or relics of non-Aboriginal heritage value are discovered, work shall stop immediately in the vicinity and the Heritage Office of NSW shall be contacted for further advice and action.

To date there are no aboriginal sites recorded in or near the location of the quarry according to the AHIMS website.

5.11 TRAINING

All personnel are made aware of the Management Procedures as part of their Site Induction.

5.12 PUBLIC SAFETY

Access to the “operational area” by the public will be denied. Access gates will be locked when the area is not in use.

6.0 CONCLUSION

An Environmental Impact Statement (EIS) was prepared by Connell Wagner for the proposal to extend the existing use rights at Springfield Quarry to include a Resource Recovery Facility. The EIS assessed that the environmental effects would be “generally minor in nature and would be adequately addressed through appropriate mitigation measures”. These measures would be addressed by the implementation of Council’s Integrated Management System.

The proposal for the Resource Recovery Facility accords with the principles of Environmentally Sustainable Development (ESD) by facilitating the reuse of what would otherwise be waste material. The ability to reuse material minimizes the need to quarry new material from virgin land and also reduces the amount of material going to licensed landfill sites.

The use of Springfield Quarry, an already cleared, central and well screened site further supports the principles of ESD.

The use of the existing facility avoids waste disposal, maximizes reuse and minimizes truck use and travel.

APPENDIX A: Environmental Impact Statement