

**MAJOR PROJECT ASSESSMENT:
COOKSON PLIBRICO
REFACTORY OPERATIONS PROJECT**



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

July 2010

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EXECUTIVE SUMMARY

Cookson Plibrico Pty Ltd (the Proponent) proposes to relocate an existing refractory plant at Sandon Point in Bulli, to a new site (the site) 18 kilometres to the south at 10-12 Sylvester Avenue, Unanderra. The site is approximately 2.7 hectares in area and is located within an existing industrial estate.

The site is located approximately 8 kilometres south-west of the Wollongong CBD and is surrounded by industrial development. There is no existing development on the site, which has a frontage to Sylvester Avenue and an access handle to the Princes Highway.

Cookson Plibrico manufactures high temperature refractory products such as tiles for use as linings in furnaces, boilers and any other device that requires high heat isolation, protection or containment. The current facility produces approximately 400 tonnes of finished product per week, which equates to approximately 21,000 tonnes per annum.

The current site at Bulli includes the operations of a Cookson Plibrico subsidiary, Andreco-Hurll Refractory Services Pty Ltd, which install products manufactured by Cookson Plibrico. It is intended that Andreco Hurll would also be relocated to the proposed site.

The project would employ approximately 110 people and has a capital investment value (CIV) of \$7M. The proposal constitutes a 'major project' under Part 3A of the EP&A Act, and consequently requires the Minister's approval.

The proposed relocation of the Cookson Plibrico operation meets the statutory requirements that apply to the subject site. The proposal is consistent with surrounding development in the Unanderra Industrial Estate and would have minimal impacts on residential developments further a field.

It is considered that the proposed use is an appropriate use on the site and would not pose unreasonable impacts on existing or future developments in the locality. Furthermore, the project is of local importance as it would allow for the retention of local industrial activities in the Wollongong region and the retention of local jobs that would otherwise be relocated off shore. Consequently, the Department recommends that the project be approved subject to the imposition of strict conditions.

1. BACKGROUND

1.1 Project Background/Current Operations

Cookson Plibrico (the Proponent) currently operates from premises at Sandon Point at Bulli. It is a large local employer (approximately 70 people), and the Company's activities have been ongoing at the Bulli site since 1968.

Cookson Plibrico currently operates under a development consent issued by Wollongong City Council. While the operation at Bulli was previously the subject of an environmental protection licence (EPL) administered under the *Protection of the Environment Operations Act 1997* (POEO Act), the licence was surrendered in August 2001. The current operation is not licensed by the Department of Environment, Climate Change and Water (DECCW) as it does not meet the threshold under the POEO Act.

Cookson Plibrico manufactures high temperature products such as tiles for use as linings in furnaces, boilers and any other device that requires high heat isolation, protection or containment. For example, the cradle used in the blast furnace for steel production at the Port Kembla Steel works is lined by the Company's product in order to contain the molten materials/metal.

The operation currently produces approximately 400 tonnes of finished product per week and around 21,000 tonnes per annum.

Since the commencement of operations, residential development in the area of the facility has developed, including the Sandon Point residential area which is around 80 metres from the facility. The increasing residential development combined with the site operations (some of which are undertaken outside of the building) has resulted in land use conflict. This combined with future residential developments planned for the area has led to the need for the facility to relocate.

In 2006, the Department approved an amendment to *State Environmental Planning Policy (Major Development)* to list Sandon Point, Bulli as a State Significant Site. The SEPP sets aside 11 hectares of former industrial land (including Cookson Plibrico's existing premises) for environmental conservation purposes, along with 19.3 hectares for low density residential and 1.2 hectares for medium density residential.

In 2009, the Department also approved a project application allowing Stockland to build its first residential subdivision at the site including 181 residential dwelling lots and one lot where up to 80 apartments may be located, along with associated roads and bridges.

The listing of Sandon Point as a State Significant Site and the approval of Stockland's subdivision project has necessitated the relocation of Cookson Plibrico's operations from its current site.

The current plant at Bulli includes the operation of a Cookson Plibrico subsidiary, Andreco-Hurll Refractory Services Pty Ltd, which install products manufactured by Cookson Plibrico. It is intended that Andreco Hurll would also be relocated to the Unanderra site and would occupy a designated area within the proposed manufacturing building situated between the office and the Cookson Plibrico operations.



Figure 1: Location of Existing Cookson Plibrico Refractory Plant at Sandon Point, Bulli

1.2 Project Setting

Cookson Plibrico Pty Ltd (the Proponent) proposes to relocate an existing refractory plant at Sandon Point, Bulli (see Figure 1) to a new site 18 kilometres to the south in the Unanderra Industrial Estate (see Figure 2). The Princes Highway and F6 Freeway run either side of the industrial estate. The proposed site, (Lots 1 and 2 DP 1064872) 10-12 Sylvester Avenue, Unanderra, has an area of approximately 2.7 hectares and would be located within an existing industrial area.

The site is surrounded by industrial development in all directions. These include; Grace Removals, Sassall Glass, Coates equipment hire depot, Flinders Bakeries complex, Joy Mining Machinery, which manufactures and services machinery for the mining industry, and SITA Environmental Solutions which operate a waste facility.

The closest residential area is the Orana Parade residential subdivision which is located across the Princes Highway approximately 300 metres to the north of the site. There are also two dwellings located to the west of the site in Canterbury Road, however these are in an area zoned 'B6 Enterprise Corridor' which provides for residences associated with businesses. Adjacent the residential subdivision and the industrial estate is land zoned 'SP1 Special Activities' which is open space associated with a private cemetery.

The topography of the area screens the proposal from non-industrial development to the south and east, as well as from much of the development to the north.

The site contains two access points, one from Sylvester Avenue and also via a 20 metre wide access handle from the Princes Highway. The access handle is burdened by a 10 metre wide right of carriage way which provides access to two additional sites within the industrial estate.

There is no existing development on the proposed site but the battleaxe access driveway from the Princes Highway is already formed. The site contains a small rise on its south-western boundary, which effectively screens it from that direction. The site slopes down from south to north, and has an average gradient across the site of approximately 11 percent. The site slopes up from the Princes Highway.

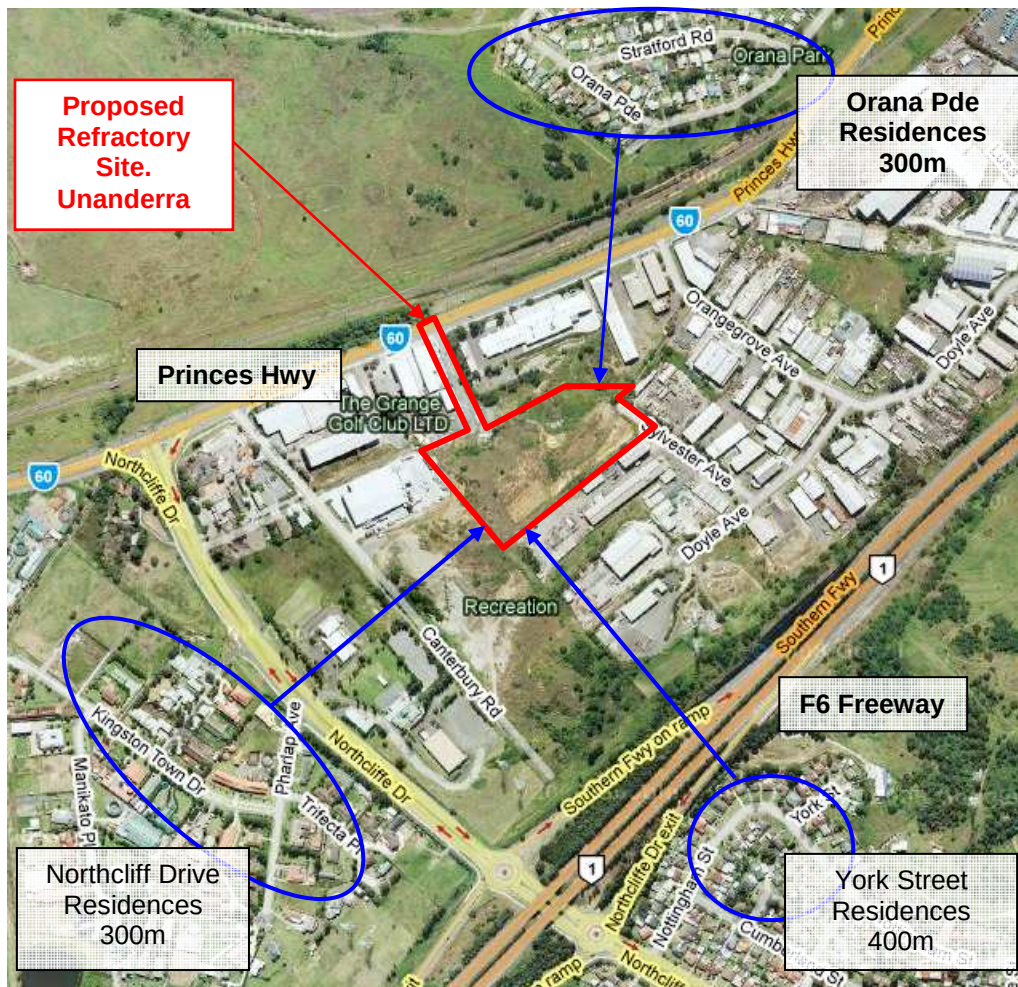


Figure 2: Location of Proposed Cookson Plibrico Refractory Plant at Unanderra Industrial Estate, Unanderra

2. PROJECT DESCRIPTION

2.1 Project Description

Cookson Plibrico Pty Ltd (the Proponent) proposes to relocate its existing refractory to a new site 18 kilometres to the south at Sylvester Avenue, Unanderra. Cookson Plibrico manufactures high temperature concrete products for use as linings in furnaces, boilers and any other device that requires high heat isolation, protection or containment. Its operations generally include crushing and blending aggregate materials with processed powder and resins to produce the tile product.

Cookson would also take the opportunity to modernise their facility and enclose all operations within the new building.

The production capacity of the new facility would be the same as the existing facility, which is around 400 tonnes of finished product per week, or approximately 21,000 tonnes of product per annum.

The major components of the project are summarised in Table 1, and depicted in Figure 3, 4 and 5. The project is described in full in Cookson Plibrico's Environmental Assessment (EA), which is attached as Appendix D.

Table 1: Major Components of the Cookson Plibrico Refractory Operations Project

Aspect	Description
Project Summary	Construction and operation of a new refractory manufacturing plant and associated infrastructure in the Unandurra Industrial Estate.
Production	Total output would be 21,000 tonnes of refractory product per year
Facility Description	A refractory manufacturing facility with additional office space and associated infrastructure. The manufacturing building would have a roof height of 5.7 metres.
Operational Processes	Internalised operating processes include: - crushing and screening - an elevated rotating crusher would smash and/or seive raw aggregate material into different size materials; - ball mill operation - a rotating conical mill containing steel balls designed further reduces the size of aggregate material; - dry powder blending - refined material produced by the Ball mill is either stored for later onsite use or bagged for market sale; - plastic/RAM operations - dry processed powder is blended with other components and extruded through a hydraulic ram for later use off site in the repair of furnace linings or containers holding liquid metals; - custom slab production - pre-blended product is fashioned into precast slabs or moulds according to a clients requirements; - crecast shape production - residual material is mixed with water to create a wet cement mix and moulded into clients requirements; - taphole clay production - premix is combined with resins and hexamine to create a malleable clay type product for specialised use in control of high temperature liquidised metals; and - mortar production - mortar material is produced to a clients requirement.
Landscaping	Landscape plan provides for shade tree planting within the parking areas and additional screening planting. The western portion of the site would be vegetated to provide a screening buffer.
Infrastructure and Services	
Access and Roads	The site contains two points of access, one from Sylvester Avenue and also via a Right of Carriage Way access handle from the Princes Highway.
Car Parking	102 parking spaces (including 2 disabled parking bays) and 12 bicycle parking spaces
Vehicle Movements	8 truck movements per day (4 into the site and 4 out of the site). Additional trucks would be required to remove wastewater from the site on a bimonthly basis. 204 light vehicle movements per day associated with staff.
Wastewater	An on-site wastewater treatment plant would be provided to treat the domestic sewerage/grey water and the process wastewater to a tertiary level, suitable for reuse on the site. The wastewater stream generates in the order of 4,200 litres per day (90% domestic sewage / grey water and 10% process water). Excess treated wastewater and grit/sludge produced from the plant would be stored on site (in underground tanks) and removed by tanker to a licensed liquid waste treatment plant.
Rainwater Harvesting	Two 15,000 litre tanks (30,000 total) would be installed to collect rainwater from the building roof. Harvested water would be used in toilet flushing, external wash down and irrigation. These tanks would also supplement tertiary treated wastewater from the on-site package treatment plant. Excess rainwater would be released to Council's stormwater system.
Stormwater	A concept stormwater drainage system has been designed and prepared in consultation with Wollongong Council. Site runoff would discharge to the Princes Highway system via a 120m long swale drain providing primary treatment. Runoff entering the site via Sylvester Avenue would be collected separately in an open perimeter drain before connecting to the swale drain at the Princes Highway. Two gross pollutant traps would be incorporated into the stormwater drainage swale
Utilities	Augmentation of Integral Energy's existing electricity services would be required. A substation of approximately 1000 KVA would be constructed on an existing pad within the site at the cost of the Proponent. The site would be connected to existing telecommunications.
CIV	\$7,000,000
Employees	Construction - 30 people. Operation - 110 people - 50 office employees and 60 factory employees.
Hours of Operation	Monday to Friday, 6am to 10pm.



Figure 3: Crusher and Mixer Plant



Figure 4: Vibrating Table and Precast Shape Mixer

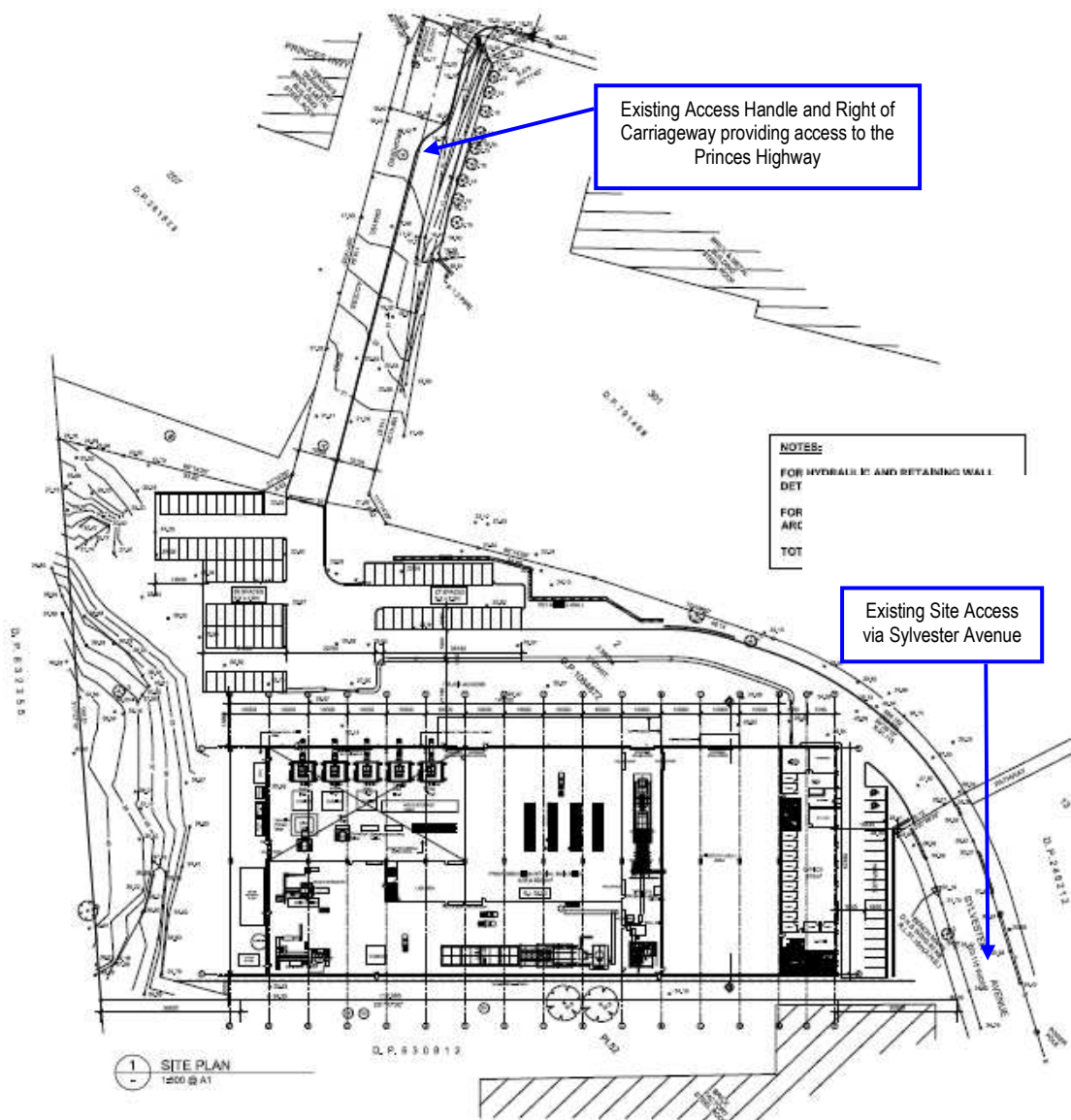


Figure 5: Proposed Site Plan

3. STATUTORY CONTEXT

3.1 Strategic Context

The project is consistent with the goals and priorities of the State Plan, and in particular priorities to increase business investment, provide jobs closer to home and improve air quality.

The project is also consistent with the goals and priorities of the South Coast and the Illawarra Regional Strategies, which aim to maximise community access to services and employment opportunities. The proposal would also facilitate the on-going operation of a manufacturing industry in the Illawarra region, which is a key aim of the Illawarra Regional Strategy.

3.2 Major Project

The proposal is classified as 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 a ceramic and cement works that would employ more than 100 people, and therefore triggers the criteria in Clause 9 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*.

Under the EP&A Act the Minister is the approval authority for a major project. However, on 25 January 2010, the Minister delegated his powers and functions as an approval authority for certain projects under section 75J of the EP&A Act to the Deputy Director-General of Development Assessment and Systems Performance. This project application meets the terms of this delegation. Under these circumstances, the Deputy Director-General may determine the application under delegated authority.

3.3 Other Approvals

In addition to a Part 3A approval, Cookson Plibrico would be required to obtain approval from both the RTA and Council for any roadwork proposed outside of the site boundary. Further, additional assessment and approval would also be required if Cookson Plibrico propose to use heavy vehicles (ie. B-Doubles) larger than 12.5 metres in length.

The project would be classified as a 'non-scheduled' activity and would not require an Environmental Protection Licence (EPL) under the *Protection of the Environment Operations (POEO) Act 1997*.

3.4 Permissibility

At the time of lodgement of the Project Application, the proposed site was zoned 4(a) - Light Industry under the *Wollongong Local Environmental Plan 1990* (LEP 1990). Under the LEP 1990, the proposal was permissible with consent.

On 26 February 2010, the Wollongong LEP 2009 was approved by the NSW Minister for Planning. The 2009 LEP retains the zoning for the site as light industrial (IN2) and the proposal is still permissible with consent.

3.5 Exhibition and Notification

Under Section 75(3) of the EP&A Act, the Director-General is required to make the Environmental Assessment (EA) of a project publicly available for at least 30 days.

After accepting the EA for the project, the Department:

- made it publicly available from Thursday 12 November 2009 until Monday 14 December 2009:
 - on the Department's website,
 - at the Department's Information Centre,
 - at the Nature Conservation Council's Sydney office, and
 - Wollongong Shire Council's administrative office;
- notified landowners in the vicinity of the site about the exhibition period by letter;
- notified relevant State government authorities and Wollongong Shire Council by letter; and
- advertised the exhibition in the Wollongong Advertiser.

This satisfies the requirements in Section 75H(3) of the EP&A Act.

During the assessment process the Department also made a number of documents available for download on the Department's website. These documents included the:

- project application;
- Director-General's environmental assessment requirements;
- EA; and
- Cookson Plabrigo's response to issues raised in submissions.

3.6 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is required to include a copy of, or reference to, the relevant environmental planning instruments (EPIs) that substantially govern the carrying out of the project.

In relation to this particular project, the key EPIs are:

- *State Environmental Planning Policy (Major Development) 2005*;
- *State Environmental Planning Policy No. 33 - Hazardous and Offensive Development*;
- *State Environmental Planning Policy No. 55 - Remediation of Land*;
- *State Environmental Planning Policy (Infrastructure) 2007*;
- *Illawarra Regional Environmental Plan No. 1*; (IREP 1) (deemed SEPP)
- *Wollongong Local Environment Plan 1990 and 2009* (Wollongong LEP); and
- *Wollongong Development Control Plan No. 6 Section 5* (DCP 6).

Copies of these instruments are included in Appendix C.

The Department has assessed the proposal against the relevant provisions of the key environmental planning instruments and is satisfied that none of these EPIs substantially govern the carrying out of this project.

3.7 Statement of Compliance

Under Section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the environmental assessment requirements with respect to the project.

The Department is satisfied that the environmental assessment requirements have been complied with.

4. ISSUES RAISED IN SUBMISSIONS

During the exhibition period, the Department received a total of four submissions on the project:

- three from public authorities - Wollongong City Council (Council), the Road and Traffic Authority (RTA), and Department of Environment Climate Change and Water (DECCW); and
- one community submission.

A summary of the issues raised in submissions is provided below. A full copy of these submissions is attached in Appendix E.

4.1 Public Authorities

Council was supportive of the project in principle. However, concerns were raised in relation to air quality, wastewater discharge, on-site detention, stormwater runoff, noise, traffic and parking. Further, Council provided a list of recommended conditions which have been incorporated into the project approval.

Wastewater discharge was the main issue of concern raised by Council. Cookson Plibrico's initial proposal involved the release of tertiary treated wastewater directly to Council's stormwater system. Council advised that they would not support this component of the project and that an alternative strategy to remove wastewater from the site would need to be developed. This issue is discussed in more detail in Section 5.2 below.

The **RTA** was supportive of the project subject to the inclusion of specific conditions that specifically addressed access to the Princes Highway, signage and the requirement for a Traffic Management Plan (TMP).

The **DECCW** raised no objection to the project and advised that an EPL would not be required. The DECCW also indicated that, as the premises would not be licensed (ie. is unscheduled), Council would be the regulatory authority under the POEO Act which includes air quality emissions.

4.2 Community

One submission was received from a member of the community. This submission objected to the project on the grounds that the project would lead to decreased property values, and noise impacts.

4.3 Response to Submissions

Cookson Plibrico has provided a response to the issues raised in submissions (see Appendix F). This response has been made publicly available on the Department's website.

The Department has considered the issues raised in submissions, and Cookson Plibrico's responses to these issues, in its assessment of the project.

5. ASSESSMENT

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

- the environmental assessment, submissions and response to submissions on the project (see Appendices D, E and F);
- the relevant environmental planning instruments, guidelines and policies (see Appendix C);
- 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.

The following provides the Department's assessment of the key issues associated with the project. Other issues are summarised in Table 3.

5.1 Traffic and Access

Issue

- The project could increase traffic and road safety risks.

Consideration

A Traffic Impact Statement (TIS) was prepared for the project which considered the existing and proposed traffic conditions, access arrangements, and the potential impact the proposed development would have on the surrounding road network. The TIS was considered by Council and the RTA who did not support the use of the access handle for ingress or egress to the Princes Highway for any vehicles, or for parking. Further, both Council and the RTA considered that the Proponent had not demonstrated that B-Doubles would be able to access and manoeuvre throughout the site in accordance with Australian Standards.

Access

The proposed site is located at the end of Sylvester Avenue within an existing industrial estate. The Princes Highway and the F6 Freeway abut the northern and southern boundary of the estate. Sylvester Avenue has a carriageway width of 12.8 metres. This street connects Doyle Avenue, Orangegrove Road, Nolan Street and the Princes Highway, which all have a wide carriageway to cater for heavy vehicles (refer Figure 6).



Figure 6: Surrounding Access Roads

The site also contains a 20 metre wide access handle from the Princes Highway. This access handle is burdened by a 10 metre wide and variable Right of Carriage Way which permits access to a number of other industrial sites on the western side of the access handle.

All employee and visitor vehicles would access the site via Orangegrove Road, Doyle Avenue and Sylvester Avenue. Mechanisms such as gating and other physical restrictions, that prevent light vehicle access to or from the site via the Princes Highway and the access handle, have been incorporated into the project.

The proposed operations would utilise 12.5 metre long rigid trucks and would generate approximately 4 truck movements into the site and 4 truck movements out of the site each working day (Monday to Friday). Cookson Plibrico proposes that the only vehicular use of the access handle would be for heavy vehicle egress turning left onto the Princes Highway.

To address the RTA and Council's concerns, Cookson Plibrico amended the project by removing the car parking spaces along the access handle, restricting vehicular access to Sylvester Avenue only, and proposing left hand egress by heavy vehicles only onto the Princes Highway via the access handle.

Further, Cookson Plibrico propose that 12.5 metre rigid vehicles would be the largest vehicles to access the site until such time that it could be demonstrated that B-Doubles could access the site and approval obtained. Both the RTA and Council considered and subsequently supported the revised access arrangements.

Construction Traffic Generation

Construction traffic generated by the project is considered to be minimal and short-term. The streets within the area are considered to have ample capacity to accommodate the temporary increase in traffic during the construction phase of the project.

Operational Traffic Generation

The project would generate approximately 204 light vehicle movements per day associated with staff and approximately 8 truck movements per day (refer Table 2). Additional trucks would be required to remove wastewater from the site on a bimonthly basis.

The peak hour traffic generation estimate, which has been determined in accordance with the RTA guidelines, is 58 vehicles/hour. Due to the staggered work hours between the office and factory workers this number is considered conservative.

Table 2: Operational Traffic Generation (Monday - Friday)

Vehicle Type	In	Out	Total Trips/day
Light Vehicles	102	102	204
Trucks	4	4	8
Total	106	106	212

It is considered that the contribution of operational traffic from the proposed project on the surrounding road network would be negligible. However, the streets and intersections within the area have ample capacity to cater for the predicted increased traffic generation. Neither Council nor the RTA raised concerns regarding traffic generation associated with the project or the ability for the surrounding road network to accommodate this traffic.

Conclusion

The Department, in consultation with Council and the RTA has assessed the potential impacts associated with traffic and access arrangements for the project and is satisfied that they can be adequately managed or mitigated to ensure an acceptable level of environmental performance.

The Department considers that construction traffic is unlikely to generate significant impacts on the public road network and any impact would be short term. With regard to operational traffic, the project would result in a small increase in traffic, however, the Department considers that the existing infrastructure has sufficient capacity to accommodate this traffic in addition to other regional traffic.

Notwithstanding, the Department has recommended a number of conditions to ensure traffic and access impacts are appropriately managed. Recommended conditions require Cookson Plibrico to:

- erect mechanisms such as gating and other physical restrictions to prevent light vehicle access to or from the site via the Princes Highway and the Right of Carriageway;
- restrict access to the site to vehicles up to 12.5 metres in length unless agreed to by the Director-General in consultation with Council and the RTA;
- ensure truck ingress is restricted to Sylvester Avenue via Orangegrove Avenue;
- restrict egress from the site via the Right of Carriageway onto Princes Highway to left out truck access only;
- ensure that the project does not result in any vehicles queuing on the public road network; and
- prepare and implement a Traffic Management Plan including a Drivers Code of Conduct for the project, in consultation with the RTA and Council, to the satisfaction of the Director-General.

5.2 Stormwater & Treated Wastewater Disposal

Issue

- Wollongong City Council suggests that the project could result in potential stormwater and wastewater impacts, in particular on the downstream catchment of Lake Illawarra

The proposed onsite tertiary treated wastewater discharge was the main issue of concern raised by Council. Cookson Plibrico's initial proposal involved the release of tertiary treated wastewater directly to Council's stormwater system. Council advised that they would not support this component of the project and that an alternative strategy to remove the treated wastewater from the Sylvester Ave site would need to be developed. Further, Council recommended that the proposed stormwater system be enhanced to remove fine particulates prior to the site's and other stormwater (ie. from Sylvester Ave itself) entering Council's stormwater drainage system.

Consideration

The proposed site is currently undeveloped. The subject site and surrounding topography has a significant fall from the East (Sylvester Avenue) to Northwest (the Princes Highway), and all stormwater drainage must therefore be directed towards the Highway. There is currently no access from the subject Sylvester Ave site to Sydney Water's sewer system, although Sydney Water envisages that the site would potentially be connected within five (5) to seven (7) years. The Proponent has indicated that it would connect once available.

Stormwater

A concept stormwater drainage system has been developed in consultation with Council and in accordance with Council's Stormwater Drainage Policy, Onsite Detention Policy and Development Control Plan 54 (Stormwater DCP). The system addresses both the immediate site runoff and that entering the site from Sylvester Avenue.

As the site is situated within an on-site detention exclusion zone, the proposal is to discharge site runoff to the Princes Highway stormwater system via a long open swale drain (approximately 120m long) which runs adjacent to the sites access handle. The swale would be constructed and maintained by the Proponent and would be planted with suitable watercourse vegetation. To further enhance the removal of fine and coarse particulates prior to the site's stormwater entering Council's stormwater drainage system, two gross pollutant traps (GTPs) would be installed within the swale.

Additional surrounding stormwater runoff, directed into the site from Sylvester Avenue, would be collected separately into an open drain which would run around the northern site boundary before connecting into the common open swale. This practice is consistent with normal stormwater design practices and Council's stormwater guidelines.

Sediment and erosion control is likely to only be an issue during construction of the project and would be addressed through the implementation of standard sediment and erosion control measures as outlined in the *Construction Sediment and Erosion Control Plan* prepared by KFWilliams.

Stormwater (Rainwater) Harvesting

The new facility would incorporate two 15,000 litre storage tanks (total volume of 30,000 litres) to collect stormwater runoff, principally from the building roofs, which is intended for reuse in site

operations, including: the manufacturing process, flushing toilets, external wash down and landscape irrigation. The tank water would supplement the tertiary treated wastewater produced by the proposed on-site wastewater treatment plant. Any excess tank water would discharge into the site's stormwater system. Excess rainwater, not required for reuse on the site would be discharged directly to Council's stormwater system.

Wastewater

There are three main types of wastewater generated from the project; process water, domestic sewage, and domestic grey water. Normal 'domestic' grade sewage and grey water from the site personnel (approximately 70 personnel on site at any one time) is understood to form approximately 90% of the overall wastewater discharge from the plant.

The daily wastewater generation is estimated to be 4,200 L/day, consisting of:

▪ Domestic sewage (toilets)	1,400 L/day
▪ Domestic Grey Water (showers etc)	2,400 L/day
▪ Process water (mostly wash down of mixing hoppers)	400 L/day
▪ Total	4,200 L/day

The estimated total discharge of 4,200 L/day is not considered large in relative terms and is indicative of the relatively small process water usage.

Currently, at the Bulli plant, the domestic wastewater is discharged directly to Sydney Water's sewer system, while the process wastewater passes through a basic sedimentation process prior to being stored in a below ground tank then pumped out by a contractor and taken to Veolia's Liquid Waste Centre at Unanderra.

As there is currently no connection point to Sydney Water's sewer system at the Sylvester Ave site, Cookson Plibrico has opted to install an on-site tertiary wastewater treatment plant. The treatment plant would treat both domestic sewage/grey water and process water to a tertiary level consistent with Australian Standards. The treated wastewater would then be supplemented and further diluted with fresh rainwater and reticulated back to on-site reuse applications.

The proposed wastewater system would also incorporate bimonthly (once every two months) pump-out and removal of approximately 30,000 litres of concentrated treated water to Veolia's Liquid Waste Treatment Centre at Unanderra. The excess wastewater would be stored in holding tanks centrally located beneath the sites hardstand area. The residual grit/sludge produced from the water treatment process would be stored prior to removal by tanker to an approved facility.

Conclusion

The Department considers that the revised wastewater system which has been developed in accordance with Council's Stormwater Drainage Code, represents a sound environmental outcome. The estimated total wastewater generation (4,200 L/day) is not considered to be large in relative terms and is indicative of the relatively small process water usage. Council has also advised that it would support, in principle, the proposed wastewater system.

The Department considers the proposed stormwater system and wastewater concept would not result in a significant impact to the environment. Notwithstanding, the Department has recommended a number of conditions to ensure the projects wastewater and stormwater can be adequately managed to ensure an acceptable level of environmental performance.

Recommended conditions of approval require Cookson Plibrico to:

- direct all wastewater to the package treatment plant where it shall be treated to a tertiary level, suitable for reuse on-site (for irrigation, toilets etc) or to be stored and collected for disposal at a registered liquid waste disposal facility;
- ensure no wastewater (treated or otherwise) is discharged into Council's stormwater drainage system;
- connect to Sydney Water's sewer system within 5-7 years, or in a timeframe agreed with the Director-General, once the infrastructure becomes available;
- prepare and implement a Wastewater Management Strategy and Stormwater Management Plan for the project in consultation with Council; and

- incorporate a second stormwater treatment device to capture fine particulate matter in the drainage swale immediately downstream of the main gross pollutant trap.

5.3 Noise

Issue

- The project could result in potential noise impacts.

Consideration

Cookson Plibrico has operated a refractory facility at their existing Bulli site since the 1960's. However, as a result of residential encroachment, operations have become constrained. In particular, noise has been an issue for the company and they have sought to relocate their operations to a more suitable site.

The proposed site is located within the Unanderra Industrial Estate and is surrounded by industrial development. The Princes Highway and the F6 Freeway abut the northern and southern boundary of the estate and are the dominate noise source in the area. The proposed operations would be enclosed within a modern manufacturing building constructed from precast concrete wall panels.

With the exception of two dwellings located on Canterbury Road, the majority of residential dwellings are located between 300 and 600 metres from the site (see Figure 1). The closest residence is located in Orana Parade to the west of the site across the Princes Highway. The two dwellings located in Canterbury Road are in an area zoned B6 Enterprise Corridor which provides for residences associated with businesses,

The Noise Impact Assessment (NIA) was prepared for the project which considered the construction, operational and traffic noise associated with the proposed refractory facility. With the benefit of measurements made at Cookson Plibrico's existing premises, the NIA contains detailed data on the specific equipment that would be utilised at the proposed site. The methodology undertaken provides confidence that sound power levels used in the predictive modelling should be accurate and would result in sound acoustic predictions.

The NIA has determined that the proposal would meet the relevant noise criteria at all residential properties, both in the residential areas and the dwellings located in the Canterbury Road industrial area. Whilst unlikely that it would result in any non-compliance of the relevant noise criteria, the operation of the ComCast vibro table has been identified as a potentially noisy activity which could result in complaints. Therefore, as a precautionary measure it has been recommended that the hours of operation for this particular plant equipment be restricted to normal daytime hours of 7am - 6pm Monday to Friday.

Conclusion

The Department is satisfied with the noise assessment undertaken for the proposal and that the acoustic criteria for the project can be met at all residential and commercial receivers.

The Department is satisfied that acoustic criteria for the project can be met and any potential impacts from noise can be adequately mitigated. Notwithstanding, the Department has recommended Cookson Plibrico be required to;

- ensure that noise generated from the site does not exceed the noise impact criteria specified by the Department which has been determined in accordance with the Industrial Noise Policy;
- develop and implement a Noise Management Plan for the project;
- ensure all plant and operations are internalised;
- restrict operation of the ComCast vibro table to between the hours of 7am to 6pm Monday to Friday; and
- undertake a Noise Audit for the project within 6 months of commencement of full operation.

5.4 Air Quality

Issue

- That the project could result in potential adverse air quality impacts.

Consideration

As detailed above, the industrial processes involved to produce the refractory products would all be undertaken within the building envelop. Cookson Plibrico has also incorporated a number of measures into the projects design to minimise air quality impacts. These include:

- fitting each production unit with a dust collection system that captures the emissions from each process in bags, before returning them to the process;
- fitting the exhaust flues servicing the ovens with filters and or scrubbers as required to manage any potential emissions; and
- internalise plant and operations to abate potential emission impacts.

An air quality assessment was undertaken to examine potential air contaminants generated by the plant. The assessment also analysed potential risks associated with the use of various products in Cookson Plibrico's manufacturing process.

The assessment concluded the following;

- Cookson Plibrico's current operations at Bulli are classified as 'non-scheduled' activities as defined by the POEO Act, as its output does not exceed the criteria of 30,000 tonnes of product per annum. In their relocation there would be no change in their operations or the manufactured output volumes that would alter this classification;
- the relocated plant at Unanderra would be required to meet conditions within the POEO Act and the Regulation for emissions from 'non scheduled' premises including fumes, pollutants and odours;
- modelling work, undertaken using worst case scenarios, indicated that the plant emissions for dust and volatile organic compounds from the plant in its new location (and with the proposed mitigation measures) would comply with the provisions of the Clean Air Regulations of the POEO Act. Impact levels beyond the plant boundary were well within statutory guidelines;
- the relocated plant would not increase the level of pollutants as tabled in the DECCW's Air Emissions Inventories for the NSW Greater Metropolitan Region; and
- the emissions from the plant show a negligible contribution to overall pollution levels.

During the assessment of the project, the Department consulted the DECCW with regard to potential air quality impacts. Following a site inspection of the existing plant at Bulli and a review of the EA, the DECCW confirmed that the proposed project would be classified as a 'non-scheduled' activity and would not require an EPL. Further, the DECCW advised that Council would be the appropriate regulatory authority under the POEO Act for Cookson Plibrico's proposed operations.

Conclusion

Based on the information provided, and consultation with Council and the DECCW, the Department is satisfied that air quality impacts from the project are acceptable and could be effectively managed and mitigated. The proposed project would be classified as a 'non-scheduled activity' and as such would not require an EPL.

Notwithstanding, recommended condition require Cookson Plibrico to:

- carry out all reasonable and feasible measures to minimise dust generated by the project;
- ensure exhaust flues servicing the ovens are fitted with filters and or scrubbers to manage any potential emissions;
- ensure each production unit is fitted with a dust collection system to capture emissions from each process;
- ensure that the project does not cause or permit the emission of any offensive odour from the site; and
- prepare and implement an Air Quality, Odour and Greenhouse Gas Management for the project.

5.5 Other issues

Table 3 presents the Department's consideration of other issues.

Table 3: Consideration of Other Issues

Issue	Assessment	Recommendation
Regulatory Authority	- While the operation at Bulli was previously the subject of an EPL administered under the POEO Act, the licence was surrendered in August 2001 following changes to DECCW's regulation and is therefore not currently licensed by DECCW. - The Department considers it appropriate for Council to continue regulating the operations in conjunction with the Department administering the Minister's approval.	
Odour	- The current plant located at Bulli has no history of odour impacts on the surrounding residential properties; - The Air Quality Assessment undertaken for the project considered the potential for materials used within the manufacturing process to cause odour impacts. - The assessment concluded that the plant would not require additional pollution control systems to remove organic or odorous compounds from the plant process exhaust air as emissions were well below prescribed odour limits. - The Department is satisfied that the project would not result in any odour impacts.	Recommended conditions require Cookson Plibrico to: ensure that the project does not result in the emission of any offensive odour from the site.
Parking	- An average of 102 cars may be parked on site during peak period (shift changeover) with visitors accounting for an additional 7 passenger vehicles per day. - Cookson Plibrico proposes to provide 102 car parking spaces (including 2 disabled parking spaces) and 12 bicycle parking spaces on-site. - Both Council and the RTA raised concerns that the proposed car parking provision is deficient. Under the Wollongong DCP 6, 155.8 car parking spaces would be required for the project. The RTA guidelines require the provision of a minimum of 115.7 spaces. - Cookson Plibrico justified the proposed number of parking spaces principally on the basis that; - the number of spaces proposed meets the likely car parking utilisation rates based on the actual usage of the existing site at Bulli; and - the parking generation requirements of DCP 6 (adopted 25 years ago) are considered to be unnecessary and unreasonable for the proposed development type. - The Department considers that the provision of 102 car parking spaces is justified and adequate for the project. Notwithstanding, the Department has recommended a number of conditions pertaining to parking.	Recommended conditions require Cookson Plibrico to: - ensure that all parking generated by the project is accommodated on site, and that no vehicles associated with the project shall park on the public road system at any stage, and - ensure that the project does not result in any vehicles queuing on the public road network;
Pedestrian Access	- Council requested that a footpath be provided to link the proposed development to the existing footpath/share way located on the Princes Highway. - Cookson Plibrico, in their response to submissions, argues that the access handle provides access to a number of other industrial sites and is readily utilised for vehicular and truck access which could potentially create a road safety risk. Further, the primary pedestrian access to the site should be via Sylvester Avenue and via the existing public pathway from Orangegroove Road. - The RTA advised that it would not object to a cyclist/pedestrian connection from the shared use path	Recommended conditions require Cookson Plibrico to: provide pedestrian access to the Princes Highway via the access handle unless it is demonstrated through a feasibility assessment, undertaken to the satisfaction of the RTA and Council, that access is not viable.

Issue	Assessment	Recommendation
	along the Princes Highway to the site along the access handle subject to this facility being provided in a manner that is safe and separated from traffic flow. The Department considers that the provision of pedestrian access via the access handle should be further investigated.	
Visual	- Cookson Plibrico has proposed a building height of 15.7m to accommodate the required plant and maintenance area. - Clause 139 of IREP 1 relates to building height and contains a provision requiring all buildings in the location of the proposed development greater than 11 metres in height to obtain concurrence from the Director-General. - The Department considers the visual impacts from the project have been adequately mitigated through architectural design, landscaping and the proposed colour scheme. The additional building height (4.7m above maximum height limitation) is considered justified and suitable given the proximity of the site within the industrial estate, the topography and site surrounds.	Recommended conditions require Cookson Plibrico to: - prepare and implement a landscape plan for the project in consultation with Council; - ensure lighting is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network; and - seek further approval for any signage and advertising media at the site.
Hazards	- The Department undertook an assessment of the hazard related issues in the EA and the additional information submitted in response issues raised during the assessment of the project. - Taking into account the hazards on site; that the nearest residential land use is around 145 m south-west of the project; and that the nearest land uses are industrial uses, it is considered that the qualitative assessment adopted in the PHA is sufficient. - Based on the information provided by Cookson Plibrico, and assuming all risk reduction measures and recommendations of the PHA would be implemented, the Department considers that the proposed project would not significantly increase the risk in the area and it is considered "Low Hazard".	Recommended conditions require Cookson Plibrico to: - prepare a Fire Safety Study; - prepare a Hazards and Operability Study; - undertake a Final Hazard Analysis; - prepare an Emergency Plan and Safety Management System for the project; - submit a Pre-Startup Compliance Report; and - undertake a comprehensive Hazards Audit for the duration of the project.
Greenhouse Gas and Energy Efficiency	- The EA ascertained that under the reporting requirements of the National Greenhouse and Emissions Reporting Act ('NGER Act'), the new plant at Unanderra would be well within the reporting threshold and hence is not required to submit annual report on GHG emissions. Specifically, the plant would not; emit more than 25 kilotonnes of greenhouse gas; or produce/consume more than 100 terrajoules of energy. - The Department is satisfied that the proposed project would not result in any significant impacts with regard to GHG.	Recommended conditions require Cookson Plibrico to: - implement all reasonable and feasible measures to minimise: - energy use on site; and - the scope 1, 2 and 3 greenhouse gas emissions produced on site; - prepare and implement an Air Quality, Odour and Greenhouse Gas Management Plan for the project.

6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the project (see Appendix B) and summarised these conditions in Appendix A. These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

The Department has provided the draft conditions of approval for the project to relevant government authorities for comment, and has incorporated these comments into the conditions of approval where appropriate.

Cookson Plibrico has reviewed and accepts the recommended conditions.

7. CONCLUSION

The proposed relocation of the Cookson Plibrico's operations meets the statutory requirements that apply to the subject site and the proposed use. The project is consistent with surrounding development and would not pose unreasonable impacts on existing or future developments in the locality. Furthermore, the project holds great local importance as it would provide for the retention of local jobs that are otherwise likely to be relocated off shore.

The Department has assessed the project in accordance with the requirements of Clause 8B of the EP&A Regulation, and considers that potential impacts of the project can be suitably managed to ensure an acceptable level of environmental performance.

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.

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

8. RECOMMENDATION

It is RECOMMENDED that the Deputy Director-General:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under section 75J of the Environmental Planning and Assessment Act 1979; and
- sign the attached project approval (see Appendix 2).


Chris Ritchie
Manager - Industry


Chris Wilson
Executive Director


Richard Pearson
Deputy Director-General

APPENDIX A: SUMMARY OF CONDITIONS OF APPROVAL

Aspect	Condition	Requirement
Schedule 2: General Administrative Conditions		
<i>Limits of Approval</i>	5	The Proponent must not produce more than 21,000 tonnes of castable product per year at the site
Schedule 3: Specific Environmental Conditions		
<i>Design</i>	1	undertake the factory building design in accordance with the architectural design plans prepared by PDR Architects
	2	prepare and implement a Landscape Plan for the project
	4	signage and advertising media shall not be erected at the site, with the exception of internal site signage for traffic management and safety purposes. Any proposed signage will be subject to further application and approval by the Director-General
	5	security fencing shall be erected around the perimeter of the site with lockable gates at each entry point
	7	heavy vehicles accessing the site shall be restricted to vehicles up to 12.5 metre in length
<i>Traffic & Access</i>	8	all truck ingress to the site shall be restricted to Sylvester Avenue via Orangegrope Avenue; all truck egress from the site shall be restricted to left out onto the Princes Highway; and all other vehicles (visitor and employee) accessing the site shall be via Sylvester Avenue only
	10	pedestrian and cyclist access to the Princes Highway shall be provided via the access handle, unless it is demonstrated through the provision of a feasibility study that access is not viable
	12	a minimum of 102 parking spaces are provided on site
	12	all parking generated by the project is accommodated on site, and that no vehicles associated with the project are park on the public road system at any stage
	13	disabled parking and assess shall be provided on-site
	14	prepare and implement a Traffic Management Plan including a Driver Code of Conduct
	16	implement and maintain all erosion and sediment control measures detailed in the Erosion and Sediment Control Plan prepared by KFWilliams
<i>Soils and Water</i>	18	all wastewater shall be directed to the onsite wastewater treatment plant where it shall be treated to a tertiary level, suitable for reuse on site (for irrigation or toilets) or be stored and collected for disposal at a licensed liquid waste disposal facility.
	19	no wastewater (treated or otherwise) is permitted to be discharged into Council's stormwater drainage system.
	21	prepare and implement a Wastewater Management Strategy for the project
	22	prepare and implement a Stormwater Management Plan for the project
	23-24	comply with the specified construction and operational hours and noise limits.
<i>Noise</i>	25	prepare and implement a Noise Management Plan for the project
	25	conduct a Noise validation of the project
<i>Air Quality Odour</i>	27	carry out all reasonable and feasible measures to minimise dust generated by the project
	28	ensure each production unit is fitted with a dust collection system to capture emissions from each process
	29	exhaust flues servicing the ovens shall be fitted with filters and or scrubbers to manage any potential emissions
	30	do cause or permit the emission of any offensive odour from the site
	32	prepare and implement an Air Quality, Odour and Greenhouse Gas Management Plan for the project
	33	implement all reasonable and feasible measures to minimise the waste generated by the project
<i>Waste</i>	34	prepare a Fire Safety Study, Hazards and Operability Study and Final Hazards Analysis
<i>Hazards</i>	35	prepare an Emergency Plan and Safety Management System
	36	submit a Pre-Startup Compliance Report
	37	carry out a comprehensive Hazard Audit of the project

Schedule 4: Environmental Management, Monitoring Auditing and Reporting		
<i>Environmental Management</i>	1	prepare and implement an Environmental Management Strategy for the project
<i>Reporting</i>	3	submit 'work as executed plans' to the Department for all the development associated with the project
<i>Annual Review</i>	6	submit an AEMR to the Director-General and relevant agencies

APPENDIX B: CONDITIONS OF APPROVAL

APPENDIX C: ENVIRONMENTAL PLANNING INSTRUMENTS

APPENDIX D: ENVIRONMENTAL ASSESSMENT

APPENDIX E: SUBMISSIONS

APPENDIX F: COOKSON PLIBRICO'S RESPONSES TO SUBMISSIONS
