



krikis taylor architects

Report

**The Next Generation
Energy from Waste Facility
Eastern Creek**

Architectural Design Statement

ISSUE A

27 March 2015



krikis taylor architects pty limited abn 87 074 121 609

report

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SUMMARY

The planning submission for the Energy from Waste Facility at Eastern Creek was submitted to the Department of Planning and Environment during October 2014. A subsequent review of the adequacy of the Draft Environmental Impact Statement was undertaken by Blacktown City Council. The review identified aspects of the proposal which were considered deficient or required further information or reconsideration.

Krikis Tayler Architects was asked to review the letter from Blacktown City Council, addressed to The Department of Planning And Environment, dated 30 October 2014, which documented the deficiencies.

In particular Krikis Tayler Architects was asked to review the Architectural Merit issues raised in Attachment A to the letter and to undertake a design exercise to explore potential modifications that would address the issues raised by Council.

As a consequence of the review, a modified design proposal was established and discussed with Council's Planning officers on the 11 and 19 of December 2014. Refer to meeting minutes attached as Appendix A.

The latter meeting established agreement that the modifications proposed to the design satisfied the criteria suggested by Council in their review. We refer to the following email correspondence received from Blacktown Council dated 27 March 2015.

"I can confirm that following an initial meeting with council officers about the architectural issues facing the proposed development, another meeting was held with Council officers on the 19th December 2014 to address the architectural merit of the proposed EFW facility proposed at Eastern Creek. This meeting was attended by Glennys James -Director, Sara Smith Assistant team leader and myself along with the applicant Mr Malouf and Mr Tayler the architect. Council was shown amended elevations and computer generated modelling and fly -over which showed a variety of architectural features, materials and colours that combined to give a contemporary looking building which responded to Council's concerns.

As such council has no objection to these plans forming part of the SSD proposal.

Judy Portelli"

DESIGN STATEMENT

The description of the modified proposal has been structured in response to the following specific comments made by Council in their review.

Architectural Merit

1. *The design of the building lacks architectural merit and has an appearance of a series of "boxes"; the design does not include any innovative or contemporary elements. The design should include elements to provide an improved façade such as use of masonry elements, the use of innovative metal work techniques such as perforated metals, and more glass elements.*

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A variety of materials will provide a building of architectural merit and assist to reduce and break up the bulk and scale of the proposed 50m high walls.

2. *The proposed flat roof form lacks architectural merit, elements including saw tooth elements, cantilevering components, roof overhangs should be incorporated into the design to ensure the building does not have the appearance of a series of “boxes”.*
3. *A revised schedule of materials is required to be submitted – this shall be a true representation of the proposed colours. The elevations are not reflective of the external materials colour sample. Copies of the manufacturer’s brochures are required to be submitted.*
4. *Details of any proposed fencing including elevations and details of materials of construction.*

Landscaping

5. *The landscaping plans are considered to lack vital detail regarding the height of the proposed species. The landscaping plan is required to be amended to clearly show all proposed plant species and the height of the species.*

DESIGN RESPONSE

Introduction

Firstly it must be acknowledged that the fundamental scale and shape of the building form is derived from the need to meet the functional requirements of the energy from waste process and to house the plant and equipment.

Having said this however, each component building of the facility relates to a distinct stage of the industrial process and results in a range of different building sizes and shapes that can be exploited to achieve variety and interest in the overall architectural composition. These differences can be given further enhancement through expression of particular functional components and can be combined with a varied pallet of contemporary detailing techniques, materials and finishes.

It is considered important to retain an overarching consistency in the application of form, detail, material and finish, such that the facility reads as a well considered and pleasing composition that relates well to the site and the broader context.

Other key considerations include the need to create a robust building envelope that is long lasting and requires little maintenance. In this regard, high quality materials are considered the most appropriate solution.

Roof Forms

The horizontal parapet and “box” forms have been eschewed in favour of a series of mono pitched roofs that sleeve above one another and reinforce the north south axis of the building groupings. The pitching roofs of the Tipping Hall, Waste Bunker and Boiler House feature deep 2.5m eave overhangs with a metal panel fascia and soffit lining, which is profiled to create a dramatic shark nose edge. The façade junction with the eaves is given crisp definition through application of a 300mm

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shadow line detail, enhancing the deep shadow casting and the perception of floating roofs. A hidden gutter detail set within the fascia line and use of internal downpipes ensures the building forms remain uncluttered.

The Turbine Halls feature similar pitched roofs and eaves overhangs, although these roofs have been orientated in an east west direction, to create compositional interest.

Ancillary structures such as weighbridge enclosures, office, workshop and amenities buildings, although smaller in scale than their key building counterparts, echo the pitched roof form to unify the composition.

Facades

The façade design of each building component responds to particular functional requirements, whilst applying a consistent, yet sufficiently varied pallet of details, material, and colours. A number of key lines or heights at which façade treatments are changed serve to diminish the apparent bulk of the buildings and create a compositional framework for the grouping and expressing of functional details.

Each building features a recessed base, creating the first key line. The Tipping Hall expresses this through exposing the pre cast “push walls” that are a necessary part of the tipping function as a strong, dark coloured base set within the line of the supporting columns. The façade plane above is fixed to the outside face of the columns. Other buildings utilise a dark coloured profiled metal cladding that is inset from the façade plane above to achieve a similar detail.

A prefinished “Colorbond” profiled metal cladding is applied in a vertical direction above the base of each building and is set on the outside face of the columns, thus creating a practical ventilation zone as well as a shadow line that reinforces the base of each building. The deep, vertical rib profile of the cladding adds visual texture through further shadow casting.

The apparent façade height of each building is reduced through application of a further key line around the building, above which an “Alucobond” pre finished metal panel cladding system is applied up to the roof eaves line. Within this upper portion of the façade there are a variety of functional and architectural devices used to diminish the apparent bulk whilst adding texture and interest.

The east and west facades of the Tipping Hall feature a “Danpalon”, translucent polycarbonate glazing zone, to bring natural light and add further texture to the façade. Both east and west facades are further embellished with “Alucobond: clad metal blades which provide a pronounced third dimensional quality and link the façade cladding zones, whilst offering shade to the glazing zones. Formed concrete portals around the roller shutter entry points give visual strength and a scale in keeping with the overall composition.

Similarly, the east and west facades of the Ash Bunker and the Boiler House feature metal panels at high level, with metal clad blades, in between which panels of “Danpalon” glazing and prefinished metal ventilation louvers are set.

Other elements of the facility have been treated as an expression of their function and add interest and logic to the architectural composition.

The lift/stair cores are expressed as strong vertical elements linking building components and providing a clear visual expression of the vertical circulation. Off form concrete is finished in a high quality paint to achieve a smooth even quality. The east and west cores incorporate passenger lifts

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and window openings to the stair well. The windows are grouped within a projecting metal panel clad surround to emphasize the verticality of the core elements.

A family of expressed steel framework elements has been developed. Such elements include external stairs, the framework supporting the upper volume of the Waste Bunker, the framework supporting Flue Gas Treatment plant as well as the steel truss bridges that support the pipe work linking between each Ash Bunker and the Turbine Hall. The steel framing adds a filigree to the composition. This character has been perpetuated as a structural surround to the base of the stacks.

Landscaping

Site Image landscape architects were appointed to review and respond to Council's comments. Their design combines a selection of hardstand, permeable hard surfaces and softscape treatments to provide a suitably robust setting for the building whilst achieving a suitable relationship to the surrounding precinct.

The functional requirements of the on site activity determine expanses of hardstand. Other peripheral areas of banking and non trafficable surfaces are treated with crushed rock, applied in contrasting colours to create pattern that enlivens the ground scape. Plant species selection responds to the need for reduced maintenance. Street tree planting along the north and south sides of the estate road creates a boulevard quality. Palisade style fencing at a height of 2.4m is applied along the north boundary of the TNG facility as well as the south boundary of the adjacent genesis facility. Hedge planting within the fence line creates a suitable visual screen.

Conclusion

The issues of architectural merit raised by Blacktown City Council in their letter addressed to The Department of Planning And Environment, dated 30 October 2014 led to modification of the building form. The redesign was developed and discussed with Council at two meetings and has resulted in Council's support of the revised proposal.

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APPENDIX A



krikis tayler architects

minutes of meeting

project	Energy from Waste Facility, Eastern Creek	
subject	Design Response to Issues Raised in Council Letter dated 30 October 2014	
meeting held at	Blacktown City Council	
meeting date	11 December 2014	
those present	Judith Portelli Blacktown Council (BC) Sara Smith Blacktown Council (BC) Ian Malouf DADI Dial A Dump Industries (DADI) Jim Moffit Brookfield Multiplex (BM) Nick Tayler KrikisTayler Architects (KTA)	
file ref	0009-2015.4.01-NT-lcs.doc	pages total 2

1.00 Design Presentation and Discussion

KTA briefed BC on the proposed transformation of the building design. The following outlines key points and responses.

1.01 Roof Forms

The buildings have had parapets deleted to reduce bulk and height. Accepted well by BC.

Roofs changed to raking mono pitch over each component building to create consistency and a layered effect to the overall composition.

Deep eave, cantilevered overhangs introduced to accentuate shadow modelling. Accepted by BC.

1.02 Façade Composition and Material Selection

Functional elements have been expressed as features to add interest and articulation to the building composition feature. Noted by BC.

Colours relate to the stage of the process and applied to reinforce the articulation of the building form, creating a visual logic and variety in the composition.

BC agreed that darker colour at the base moving to lighter colours up to the roof.

BC wants some colour in the concrete stair elements. Kiem paint system was discussed. BC requested sample, photo's etc to be in submission.

BC have suggested that some cladding is composite cladding to reduce the extent of profiled metal Colorbond cladding.

BC requested greater extent of alternate façade material such as masonry.



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minutes of meeting

project	Energy from Waste Facility, Eastern Creek	
subject	Design Response to Issues Raised in Council Letter dated 30 October 2014	
meeting date	11 December 2014	file ref 0009-2015.4.01-NT-lcs.doc

KTA agreed to assess the proportion of façade materials.

BC agreed that the design is effective in reducing the bulk and the scale but want the material selection to raise the appearance. These were discussed and KTA will issue sample board photos in submission to address these issues.

BC noted that louvres, screens etc need to be power coated / high quality finish.

BC requested that the "blades" on the east and west elevations extend to finish lower than the current louvre opening. KTA hand marked up the drawings to illustrate the intended response. This was generally accepted by BC as a suitable means of breaking up the side of the building.

BC wants to see the samples of the translucent "Danpalon" glazing material proposed and did not want to see domestic type material such as "sun tuff" utilized.

BC stated that the water tank needs to be screened or dealt with in a manner which address the visual impact from the precinct road. BC require specific details on how this will be achieved.

2.00 Conclusion and Action

General agreement that the design was a positive response to the issues raised by Council, however further development and illustration of response to the comments made during the meeting were requested by BC.

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APPENDIX B



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minutes of meeting

project	Energy from Waste Facility, Eastern Creek
subject	Design Response to Issues Raised in Council Letter dated 30 October 2014
meeting held at	Blacktown City Council
meeting date	19 December 2014
those present	Glennys James Blacktown Council (BC) Judith Portelli Blacktown Council (BC) Sara Smith Blacktown Council (BC) Malouf DADI Dial A Dump Industries (DADI) Jim Moffit Brookfield Multiplex (BM) Nick Tayler Krikis Tayler Architects (KTA)
file ref	0010-2015-4.01-NT-lcs.doc
pages total	1

1.00 Design Presentation and Discussion

KTA presented further enhancement of the building design in response to comments made at the meeting with BC on 11 December 2015.

A 3D CAD model and rendered perspectives were used to describe the proposal.

The following outlines key points and responses.

1.01 Roof Forms

Roof forms previously agreed.

1.02 Façade Composition and Material Selection

KTA presented increased extent of "Danpalon" glazing, louvred zones and extension of metal blades within the façade to create greater façade articulation. BC agreed that this was a satisfactory result.

Discussion raised a question about the nature of the perimeter fencing along the estate road. It was agreed that a palisade style fence with landscape buffer planting was a superior solution to the previously proposed precast walling and would be incorporated.

Discussion reiterated the need to screen or incorporate the water tank on the east side of the building so that its visual impact when viewed from the estate road is minimised.

2.00 Conclusion and Action

It was concluded that the design as amended would result in a contemporary building form that addressed the concerns previously raised by Council in a positive manner. BC stated that they could support the proposal in this form.



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