

THE RECYCLING OF THE THESEN ISLAND BOILER HOUSE AS HOTEL

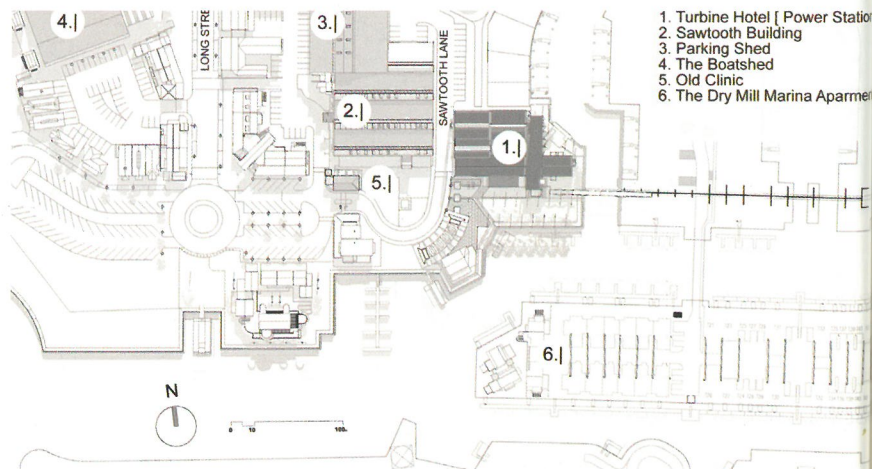
Architect's Notes

Mike Louw

As one of the oldest industrial structures retained for adaptive re-use on Thesen Islands, the transformation of the old power station into The Turbine Hotel & Spa has now been completed. The power station is a building of approximately 2 000m² and it used to be part of the Thesen Sawmill. It consists of a number of structures that were built and added onto over a long period of time, the largest of which were built about fifty years ago with some of the equipment inside being almost 100 years old. It used to provide electricity for the whole of Knysna and Plettenberg Bay, by burning woodchips left over from the cutting of locally harvested timber logs. It was decommissioned approximately 10 years ago and its estimated generating capacity, had it been in working order, would be 8.5MW – this is about one third of Knysna's present demand.

The new hotel, which was designed within and around all the existing structures and equipment, consists of 24 boutique rooms, a spa, conference facilities, a restaurant called The Island Café and The Turbine Tapas Bar. It incorporates the original turbines, mechanical equipment, operating panels and extensive sections of piping. In addition, more than 300 smaller pieces of equipment – including numerous gauges, switches, buttons and dials – were allocated specific positions in the new hotel. Meticulously catalogued and detailed, each piece was removed from the building to be cleaned, repainted, re-glazed and built back into this living museum. Many of these items were further customised to house new LED light fittings and have been linked to the hotel's lighting circuits.

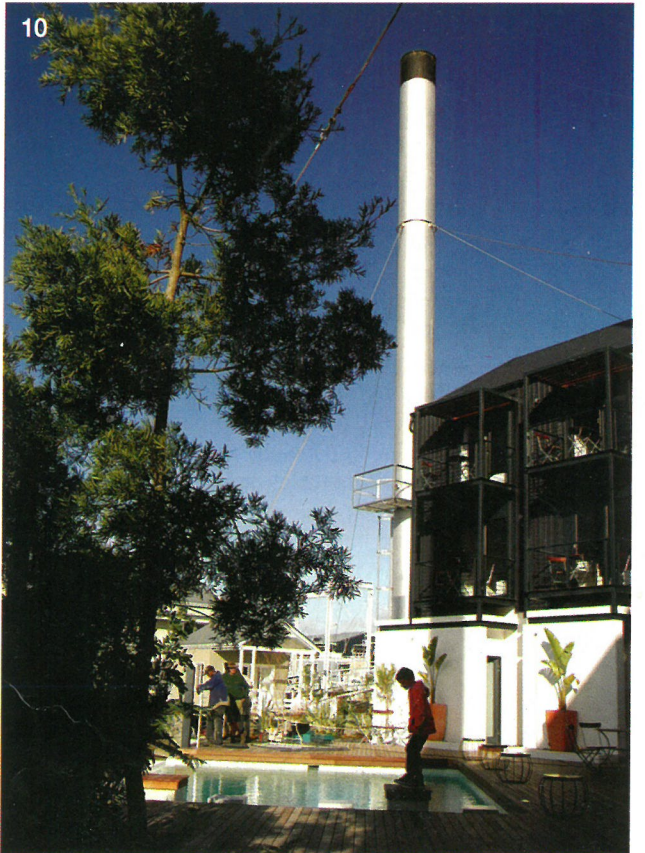
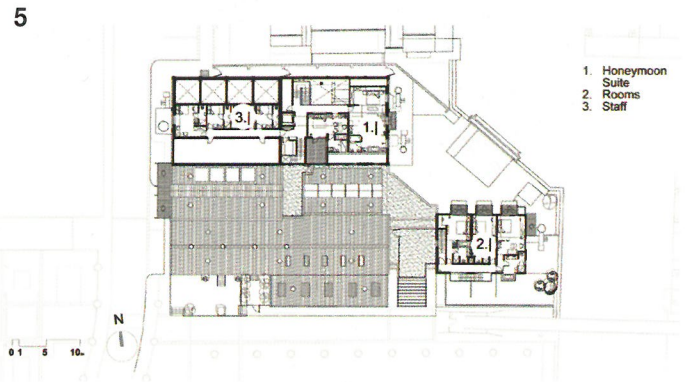
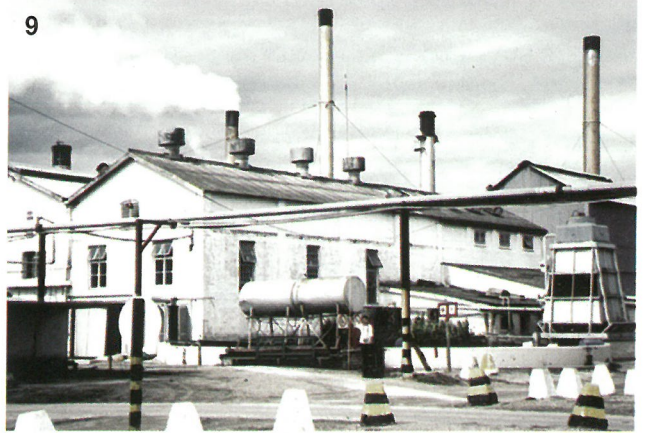
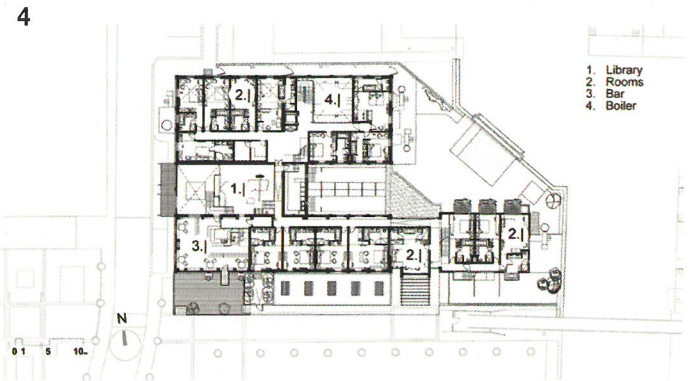
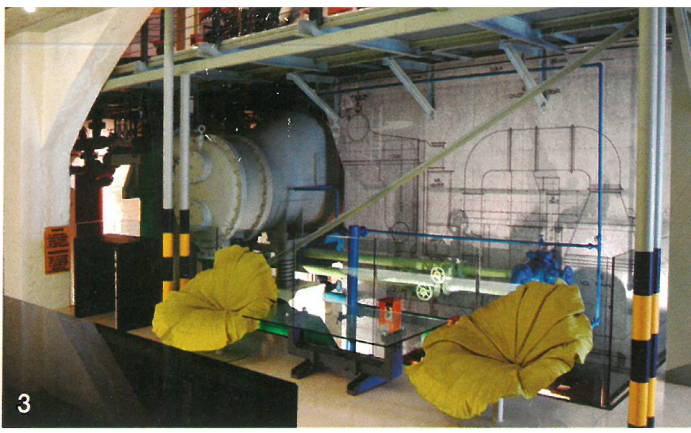
In addition to recycling the original structure and re-using as much of the existing building materials of the old building as possible, numerous energy- and water-saving measures have been implemented to minimise resource consumption: solar water-heating, heat pumps, energy-saving



1 Eastern gable, with chimney stack.

2 Site plan.

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- 3 After – reception lobby.
- 4 First floor plan.
- 5 Second floor plan.
- 6 Section.
- 7 Section.
- 8 After – south-western view.
- 9 Before – south-western view.
- 10 East elevation.

modules that automatically switch off power in the rooms upon exiting, LED & CFL light fittings throughout, rainwater harvesting and water-saving fittings are just some of the innovations that were incorporated.

The Turbine Hotel & Spa is an example of how previously derelict and obsolete industrial structures can be sensibly adapted to house a variety of functions. It also illustrates how the adaptive re-use of existing materials and structures can preserve the sense of history associated with a building, while responding to the surrounding environment in a positive manner.

Critique

Roger Fisher

The Thesen Island regeneration project has received scant attention in ASA.

Space does not permit a detailed review of the entire project here. The adaptive reuse of the old Boiler House is the keystone project that terminates a period of over 20 years of engagement by the design/development team.

The old timber plant that once employed 800 locals would, by today's standards, never have existed. Deforestation of the indigenous yellowwoods, the toxic waste of wood-preservatives, the over-burden of discarded sawdust and shavings that posed the dangers of spontaneous combustion, even the unscrubbed exhaust gases from the burning of waste wood to generate the electricity supply for Knysna and distant Plettenberg Bay would not pass the muster of contemporary environmental impact assessments (EIAs).

One would think any project that ameliorated the consequences of such devastation would be welcomed. But the public reaction was not sympathetic, and chief concern was the endemic seahorse. And the heritage sentiments around the relics of a dinosaur industrial process ran strong.

Not that I advocate the loss of what is possibly South Africa's most vast and least protected heritage resource – the residue structures and infrastructure of a mining and industrial past. Around the country we have old coco-pans and rails, railway sidings and stations, mining heads and gantries, all as ready material deposits for desperate harvesters and the avarice of recyclers. Pilgrims Rest, the most representative of these, moulders while awaiting imagination and funding.

What then to do in this particular case?

The first call for any difficult residue heritage is a 'museum', in this case a science one. But the museum too is a relic of the dodo past of the C19. In an era of the web, DVD and satellite TV, plus the magic of 3D animation, what adult, let alone child, is going to be excited by the prospect of staring at dead machinery?

And the mathematics (to use a contemporary aggrandisement of simple arithmetic) didn't work. But there was a visionary hotelier and the set pieces in the design were to be the preserved, if somewhat fossilised, relics of the machinery of the powerhouse.

The entire project had passed through the EIA with a constituent conservation plan, which included the Boiler House and was approved by the then National Monuments Council. The specifics of the proposal for the adaptive reuse of the Boiler

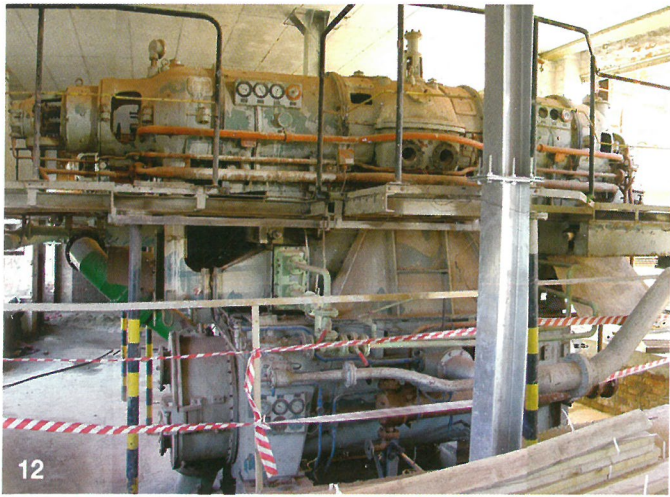


House as a hotel went before the Western Cape Heritage Agency and were approved with conditions, calling for the appointment of specialists to the team and the preservation of large representative sections of the plant.

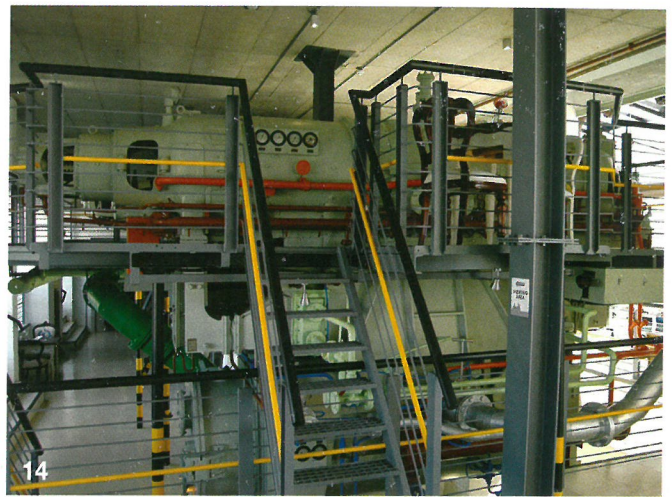
Who does one meet on the team of such a project? Some rare and exotic creatures: a heritage mechanical engineer (I kid you not); and an industrial archaeologist more given to ship restoration than buildings.

In consequence, the planning is a clever series of three-dimensionally interlocking spaces. This is made even more complex by the need to have the island raised by an additional 1,3m to deal with the projected consequences of global warming. In good contemporary heritage practice, past and present are readily distinguishable and the aesthetic of the past dominates but is borrowed to complement a quirky interior décor scheme. The retained boiler, evident in the stairwell, has the guts of its dissected remains revealed in the boardroom.

The architect documented some 300-odd heritage objects, and some of these gadgets and dials have been given a second life in the passages and rooms as lights and décor. The firebricks that lined the boilers are reused as walling in passages and counter supports, and the brick stamps of a variety of suppliers remind



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of a nostalgic past. Rescued yellowwood floorboarding now serves as panelling. All archival material including wage registers – an important piece of social history – meticulous mechanical drawings and significant pieces of industrial archaeology are now all in the possession of the new owner. He is a responsible citizen and treasures and displays these. I find it odd that Western Cape Heritage did not call for a curatorship and management plan for these and all the other loose objects and documents.

My questions are those of a devil's advocate. Can the loss of so much space to museum pieces be justified by the objects they house? Is the preservation of so much embodied energy of the retained plant as museum pieces justifiable in today's market with its demand for resources? Is the use of those many thousands of litres of stripper, primer and paint a justifiable employment of resources? In a world where resource-efficient design is ever more pressing, is there place for heritage pieces as museum objects?

Would a working 3D model posted on the internet not have been better?

PS: The seahorses are thriving, and so is the enormous and off-puttingly ugly sea slug, an indicator species of environmental well-being. 🐡

- 11 Foyer with glass floor.
- 12 Before – Turbine Hall turbines.
- 13 The Turbine Hall (Island Café).
- 14 After – Turbine Hall turbines.
- 15 A typical bedroom.

TURBINE HOTEL PROFESSIONAL TEAM

Project name:	The Turbine Hotel & Spa
Project address:	Sawtooth Lane, Theisen Harbour Town, Theisen Island, Knysna
Architects:	CMAI Architects (Mike Louw, Tiaan Smith, Cordia Louw, Liezl Verfuss, Margot Leonard)
Structural Engineers:	Nieuwoudt & Co
Mechanical Engineers:	Clinkscales Maughan-Brown
Electrical Engineers:	Clinkscales Maughan-Brown
Landscaping:	The Green Fairy
Quantity Surveyor:	Steele Consulting & McIntosh Consulting
Contractor:	Cape Island Construction
Any Other Specialists:	Wet Trades Consultant: United Plumbing 2004 OHS Consultant: Loen Nightingale Heritage Consultants: Vida Memoria & Ashley Lillie Refurbishment of existing equipment: TI Paint & Maintenance