Apex Residence

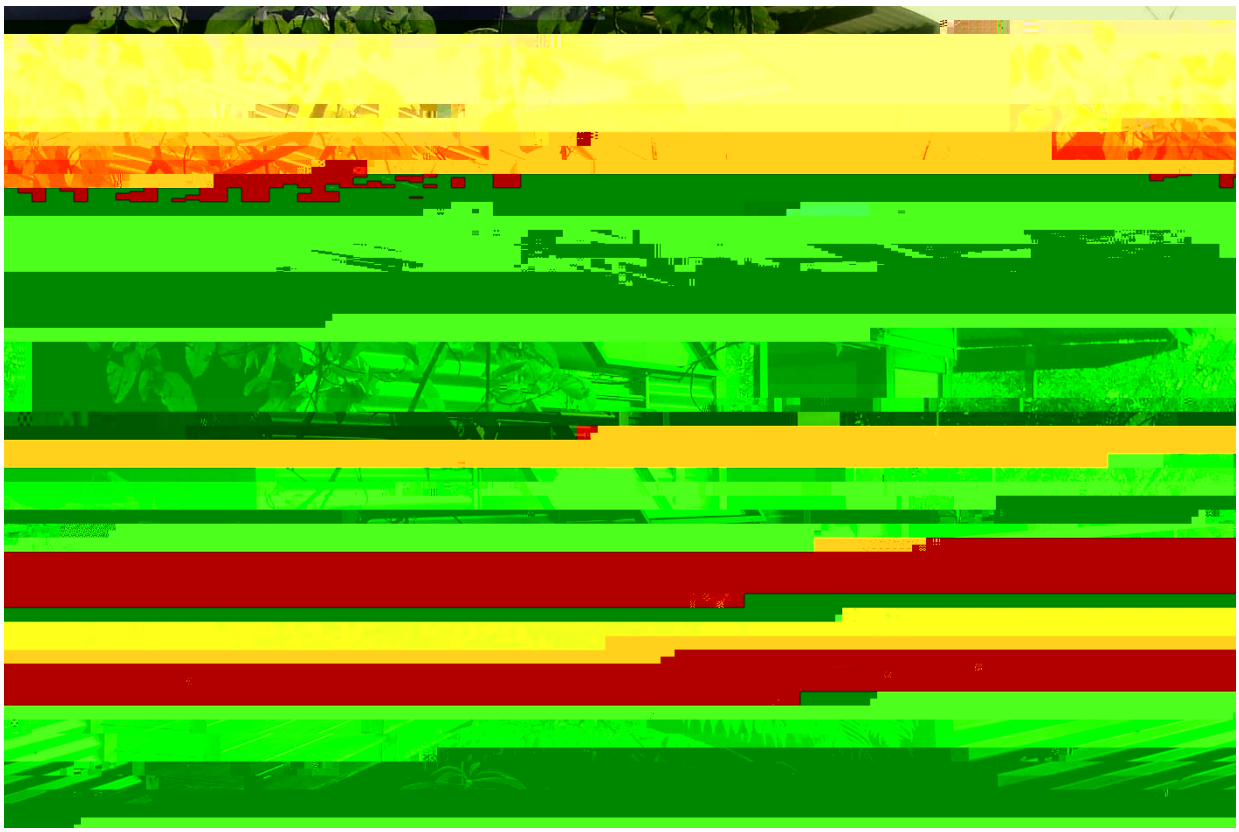
Project type: Residential

Location: Smithfield, Cairns, QLD, Australia
Year completed: 2000

A simple and effective study in passive design to suit its suburban location on a Cairns hill slope
Early implementation of strategies to improve the ecological value of the site

OVERVIEW

Apex residence was conceived as the design response to a brief to create a [illegible] within a necessarily suburban location.



The house sits discretely within the protective contours of a north facing slope. It is surrounded by dense native landscape which conceals the house from the streets below, yet allows vistas of the distant sea and adjacent mountains from all parts of the house. It remains hidden until the moment of discovery and delight.

It is not a large house and was delivered within a modest construction budget, yet the simple, outwardly focussed design feels light, airy and spacious. The house is a simple and effective study in passive design applied precisely to the [illegible] flexible living spaces link closely to the surrounding natural environment and promote comfortable outdoor living in all seasons.

Thehousewasdesignedto haveminimalimpacton the site,to be energyand water efficient and to incorporaterecycledmaterials.It wasawardedthe inauguralHIAenergyefficient designaward for the Cairnsregionin 2001.

PLANNINGANDMANAGEMENT

The project was designedlocally by a designereducated and experiencedin tropical sustainable design.

Wasteminimisationand recyclingproceduresweremplementedduringconstruction.Timberoffcuts were usedto makebespokefurniture for the house,for example.

Constructionwas programmedto commenceat the beginningof the dry seasonto minimisewet weather delaysand other wet weather impactssuchassoil erosionand water damageto materials. Constructionsequencingallowedthe roof to be installedearlyto provideprotectionfor the remainder of the build.

Durable,robust and mould resistant materials including colorbond steel roof and wall cladding, profiled FC

effectivethermalventingviahighlevelclerestorywindows.Themainlivinglevelisa raisedplatform positionedhigh amongstthe surroundingtrees to effectivelycapture breezes.Thereare generous verandahsand overhangsto protect the walls from the sun and an ideal northern orientation to minimisesolarheat gain.Thespatialplanningfeaturessimple,generous,flexible

nights.Thedensesurroundingtrees alsohelp keepthe housecomfortablycool.

Thehousewaspart of a recentenergyprovidertariff trial, and consistentlyrated well below average householdenergyconsumptionlevels.

WATERANDWASTE

Thereis a 2000litre colorbondsteelrainwatertank for irrigation. Thehousehasbeenretrofitted with low volume WCcisternsand tapware. Thereis no dishwasher.The site featuresa low water native bushlandscapewith greenand recycledmulchesappliedannually.Thereare swalesto control high volumeoverlandflow. Thereis no lawn to water.

OWNERS/USERSSTATEMENT

Outdoors,natural ventilation, flexible spaces,light, cool, views,closeto nature, private yet central and convenient,low energybills, low maintenancenaturallandscapeand no lawn to mow.

PROJECTTEAM

Basebuildingarchitect/ designer/ESDconsultant: BelindaAllwood
Structuralengineer:CMGConsultingEngineersPtyLtd
Builder:LenHarris

For more information visit: www.jcu.edu.au/tsd
www.greenbuild.com.au

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