

**'Engineered Wood Products -
from here to the future'**

Australian Timber Industry Seminar 2014



TIMBERLAB

NATURE ENGINEERED

Combining the Expertise of.....



TIMBERBOND

76 years Leading Development Engineered Timber Solutions

TimberLab Solutions Ltd – Australasia's Most Experienced Manufacturer

Owen Griffiths – Marketing Director

**'Engineered Wood Products -
from here to the future'**

Australian Timber Industry Seminar 2014



Engineered Wood ~~Products~~

**'Engineered Wood Products -
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Engineered Wood Solutions

-

the Future is Here

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Engineered Wood Solutions

-

An Industry with Aspirations

To see a Greater use of EWS in
Australasia

reNewing Zealand

THE NEW ZEALAND WOOD INDUSTRY STORY



Engineered Wood Solutions

Where Industry focused?

Throughout value chain

What drives our Aspirations

- Product Push
 - Market Pull
- Who is Market – What looking for.
- Who – Designers, Engineers, Architects, Building Owners
- What – Efficient, Effective, Reliable, Sustainable Solutions

Engineered Wood Solutions

How to Achieve Aspirations

Supply chain collaboration & cooperation

Look for complementary partners

Use the BEST to do the BEST

Experience counts.

Stick to what good at!

Continuous improvement

Select best technologies

Objective - Converting Concepts to Reality

Aspirations – vs - Capabilities

Reliability

Quality control

Demonstrable Experience

Adequate equipment

Service

Certified Manufacturers



ASNZS 1328 – Glue Laminated Structural Timber

AS 5068 – Structural Finger Joints

NZS 3640 – Timber Treatment

NZS 3631 – Timber Grading Rules

ASANZS 3913 – Quality Systems

Manufacturer's License Certificates

Regular inspections by JASNAZ accredited

AsureQuality

FSC – Certified Chain of Custody

Rainforest Alliance

TIMBERLAB SOLUTIONS LTD
9 BOS TOCK PLACE, EAST TAMAKI, AUCKLAND
NEW ZEALAND

IS CERTIFIED FOR FOREST STEWARDSHIP COUNCIL
CHAIN OF CUSTODY

Certificate Scope

Certificate Type: Single Chain of Custody
Standard(s): FSC-STD-40-004 V2-1
Product group(s): Solid processed timber; Glulam
Valid from October 11, 2011 to October 10, 2016
Certificate Registration Code: SW-COC-005630

FSC License Code: FSC-C084824
Certificate Issue Number: IN-2012-2

Additional details regarding the scope, including a full list of products and species, are available at info.fsc.org

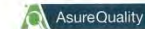
Joshua Taitesaki, RA Cert Director
Rainforest Alliance
605 Broadway, Suite 500 New York, NY 10012 USA

RAINFORREST ALLIANCE IS AN ACCREDITED FSC® CERTIFICATION BODY

The validity of this certificate shall be verified on info.fsc.org. This certificate does not constitute evidence that a certifier product supplied by the certificate holder is FSC-certified and/or FSC-Certified Wood. Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of the certificate when the required FSC claims are clearly stated on invoices and shipping documents.

This certificate is the property of Rainforest Alliance. This certificate and all copies or reproductions of this certificate shall be returned or destroyed if requested by Rainforest Alliance.

ACCREDITED
FSC-COC-004
Version March 2012



This is to Certify

TimberLab Solutions Ltd

Bostock Place, East Tamaki

Has been assessed by AsureQuality Limited and found to have a production system that meets the requirements of the

PINENZ Compliance Programme

Scope of Certification

TimberLab Solutions Ltd has demonstrated compliance to the AsureQuality PINENZ Certification Programme for the following standards and products:

Finger Joint and Glue Laminated Standards

ASNZS 1328.1 Glue laminated structural timber - Part 1 Performance requirements and minimum production requirements
ASNZS 1328.2 Glue laminated structural timber - Part 2 Guidelines for ASNZS 1328 - Part 1 for the selection, production and installation of glue laminated structural timber

AS5068 - Timber - Glue laminated non-structural timber - Performance and production requirements
AS 5068 - Timber - Finger joints in structural products - Production requirements

For Finger Jointed and Glue Laminated products produced using timber grown in New Zealand

Registration No: PMA10
Certificate No: 01
Certification Date: 19th November 2012
Date of Issue: 19th November 2012
Re-issue: October 2014



Michael Thomas
Chief Executive

Global experts in food safety and quality

This certificate remains the property of AsureQuality Ltd
8 Southview, Mt Wellington | Auckland 1111 | New Zealand
+64 9 373 8000 | www.asurequality.com | info@asurequality.com

Quality control

Assurance – verifying properties



Demonstrable Experience

Pressing any length



Demonstrable Experience

Pressing any length



Demonstrable Experience

Pressing any shape



Demonstrable Experience

Pressing any size



Demonstrable Experience

Machine Planning



Demonstrable Experience

CNC Profiling



Demonstrable Experience

Prefabrication

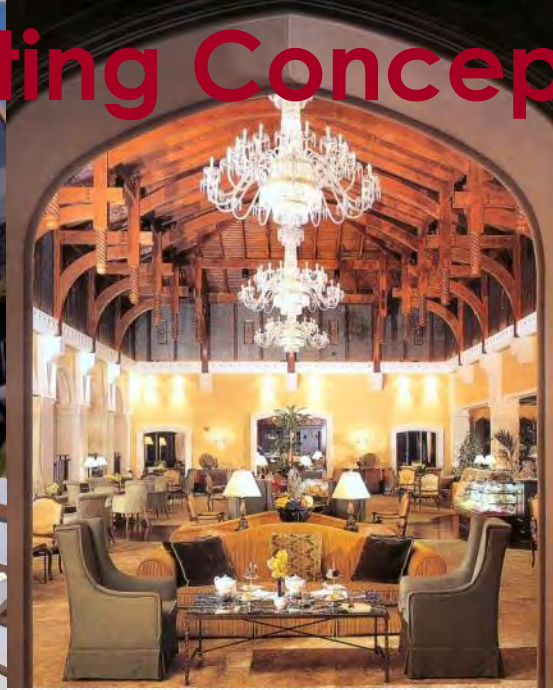


Life Cycle

Green Living Building Challenge – Tuhoë Headquarters



Converting Concepts to Reality



Engineered Wood Solutions

Converting Concepts to Reality

1. Glulam Project Solutions
2. Fabricated LVL
3. CNC Processing



HOW IT ALL WORKS

Close co-operation from.....

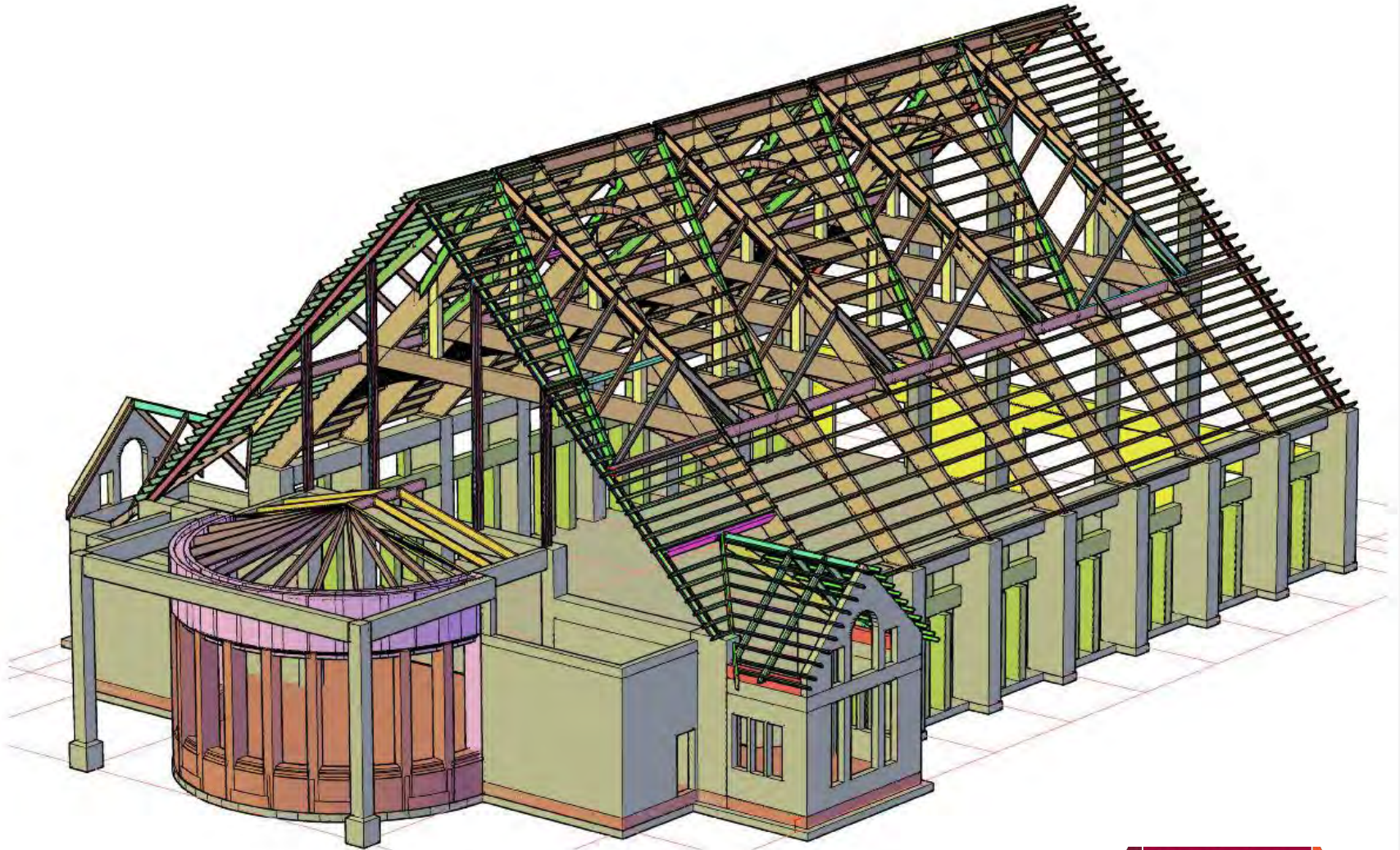
Concept

Design

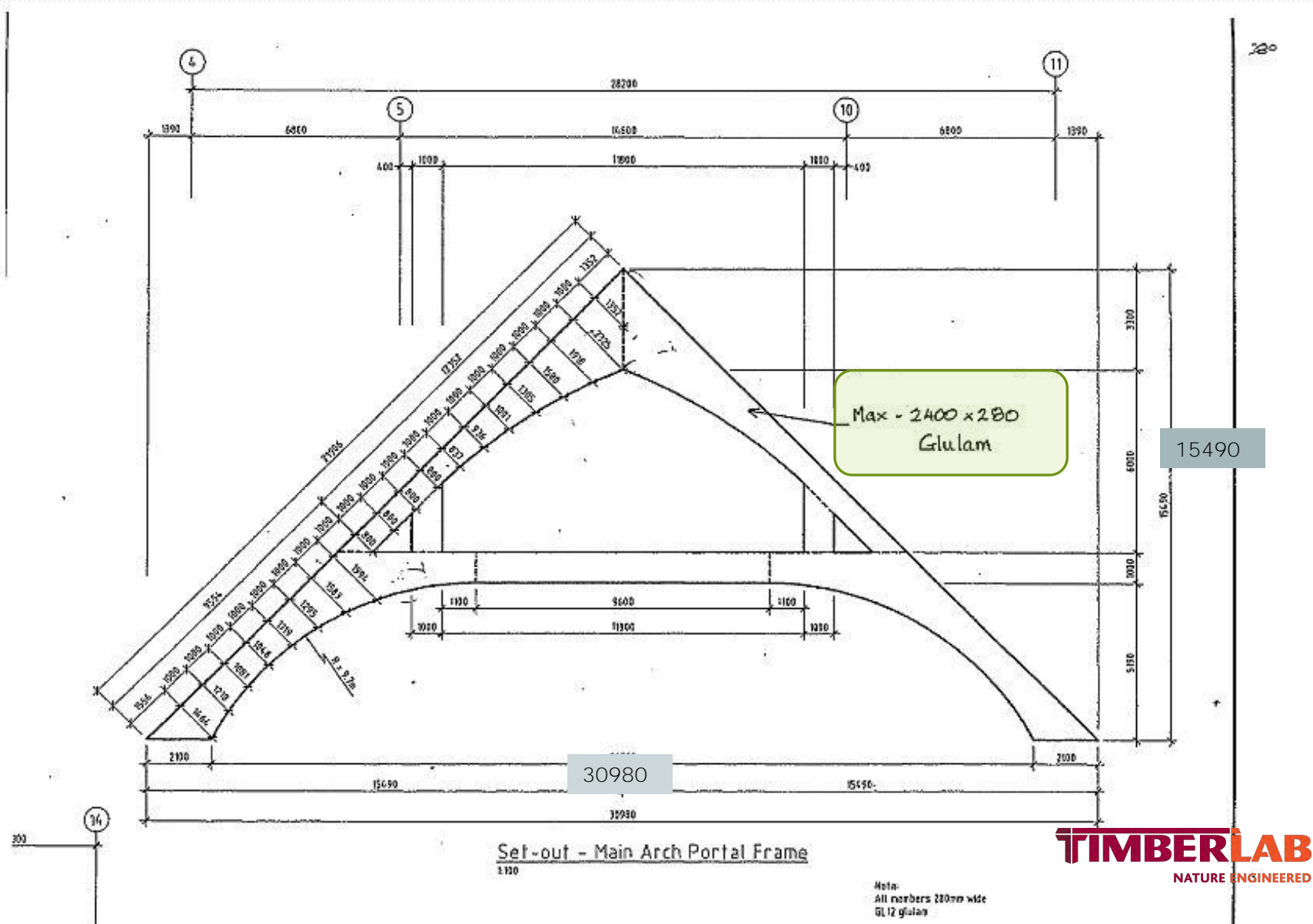
Manufacture

Installation

Value Engineering Cost Savings



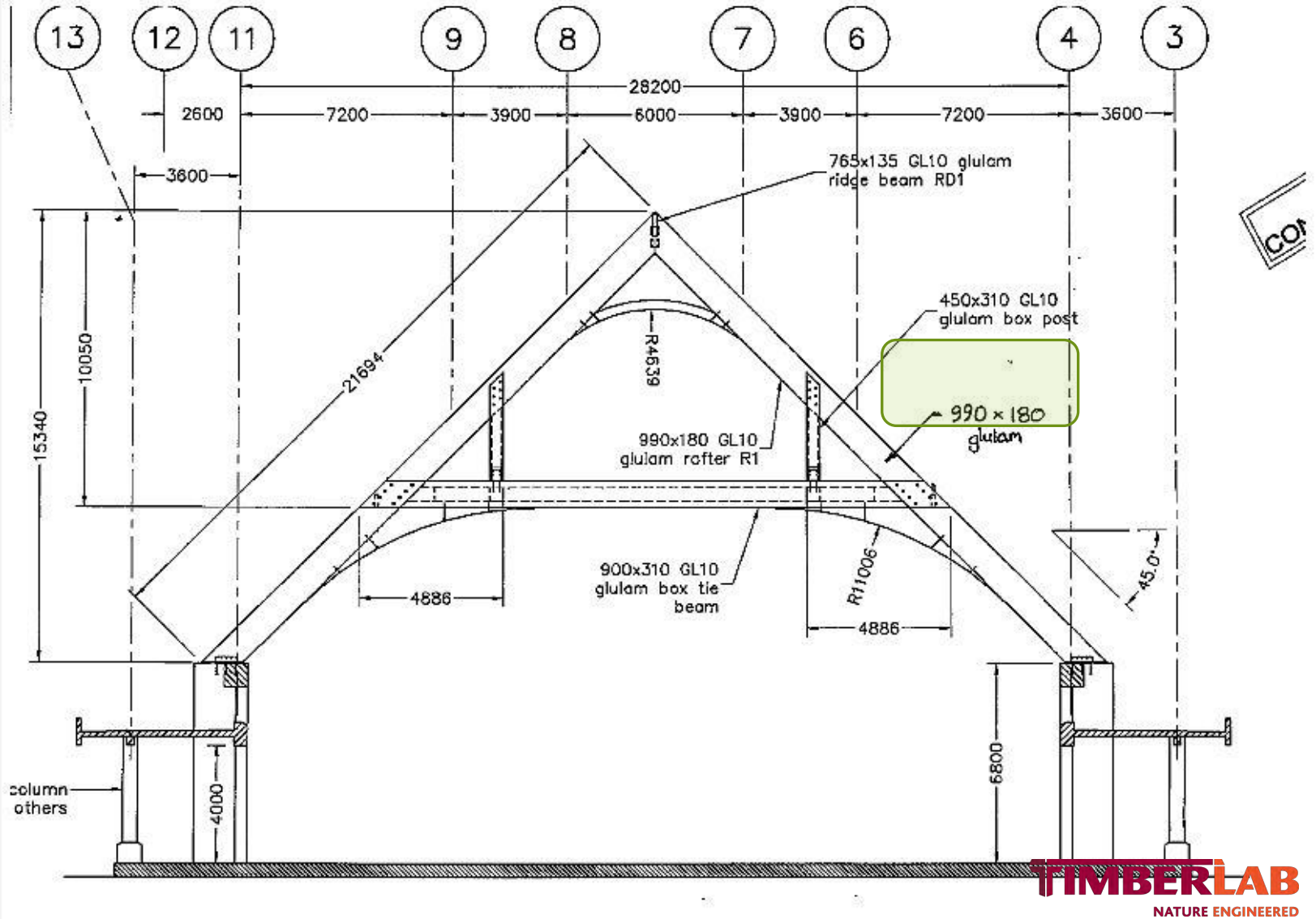
Value Engineering Cost Savings



Set-out - Main Arch Portal Frame
1:10

Value Engineering Cost Savings

Saved \$500,000.00



Value Engineering Cost Savings

Replacement of heavy connection plates and large bolts – with 8mm plates and Glulam Rivets proved significant cost saving.



Carterton Events Centre
Architects/Engineers – Opus

KONECRANES



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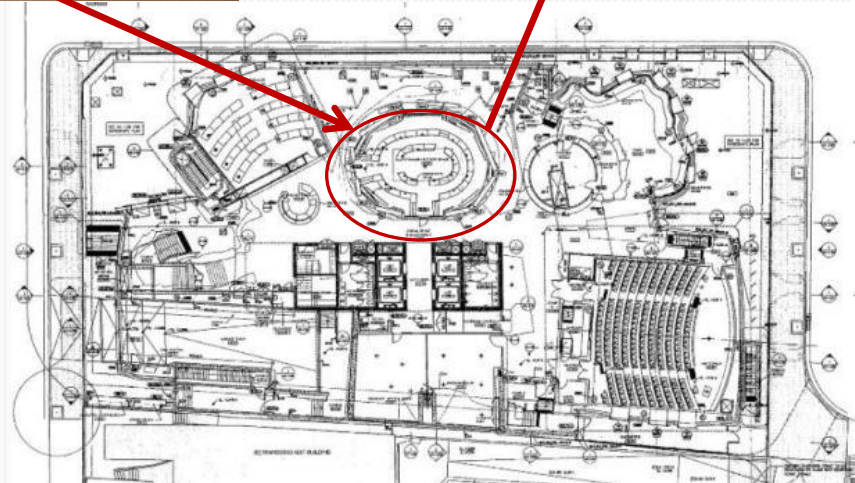
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Converting Concepts to Reality

1. Glulam Project Solutions



Frank Gehry - Architect University Technology Sydney



Glulam
Blocks form 2
storey lecture
rooms



640 x 450 Glulam Blocks







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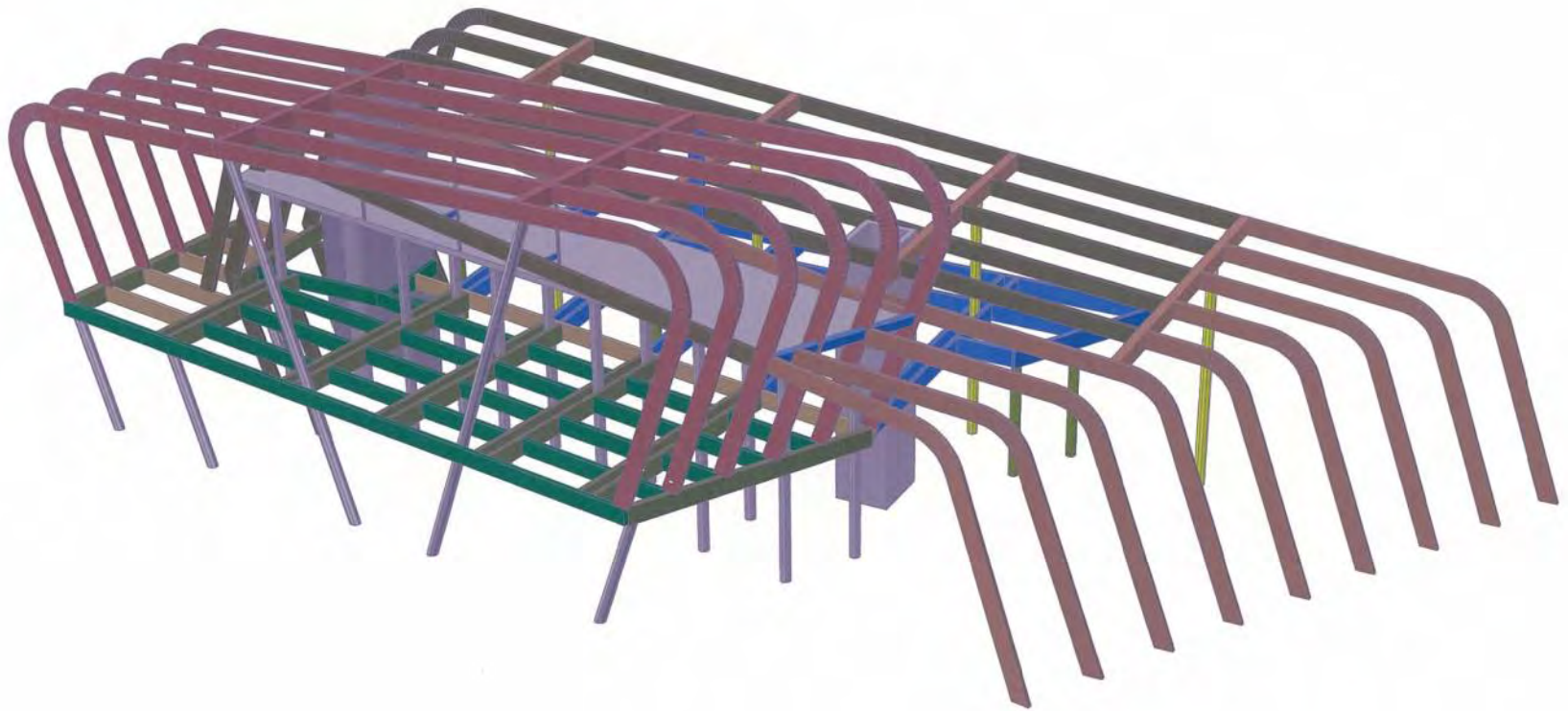




Design Flexibility Overwater Restaurant – Arabian Gulf



Architects – Broadway Malyan Engineers – MLB Consulting



Two Trapezoids intersecting mid height at 10deg.
Lower Structure 37m x 14m, Upper Structure 21m x 7.5m
Max Height 12m





Roof Section Assembled on Ground



200m2 Roof Section Lifted with One Crane – 12 tonne

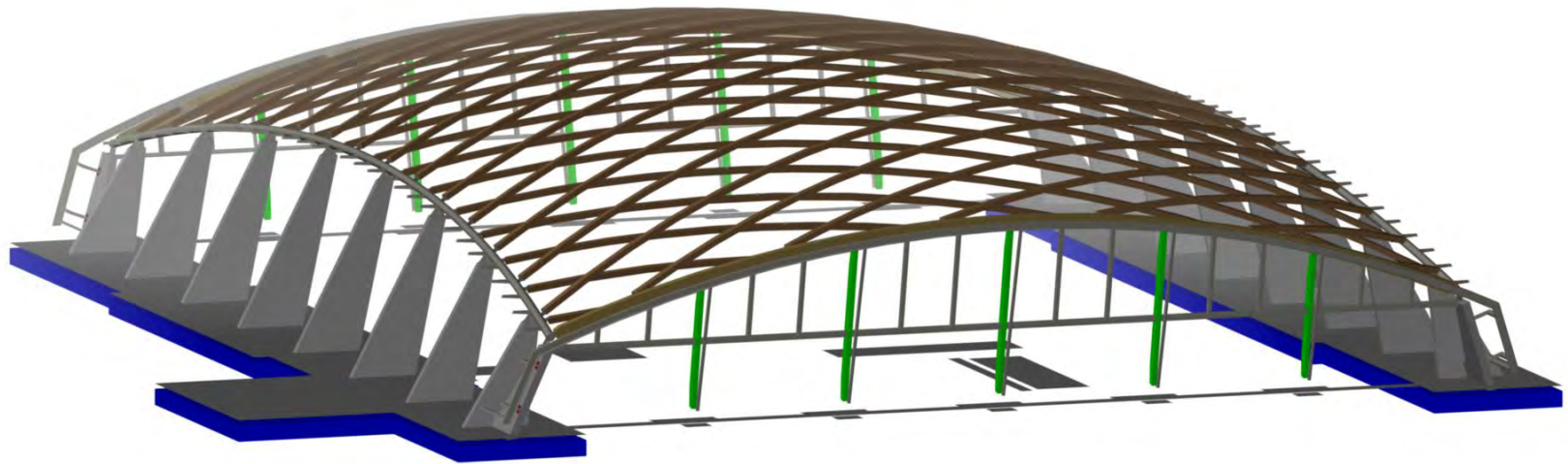




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Case Study.. Kapiti Coast Aquatic Centre Glulam Gridshell



Architects – ASC Architects

Engineers - LHT



29m beams – curved and twisted



EEVES SCAFFOLDING



Pedestrian Bridge Bahrain – 61m span Architects Concept



PERSPECTIVE VIEWS: SHEET-2



JUBAIL OFFICE

DEVELOPMENT of
ARAD BAY PROTECTORATE AREA

KINGDOM OF BAHRAIN
Commission for the Protection of Marine Resources,
Environment & Wildlife.



SK-13
oct. 2010





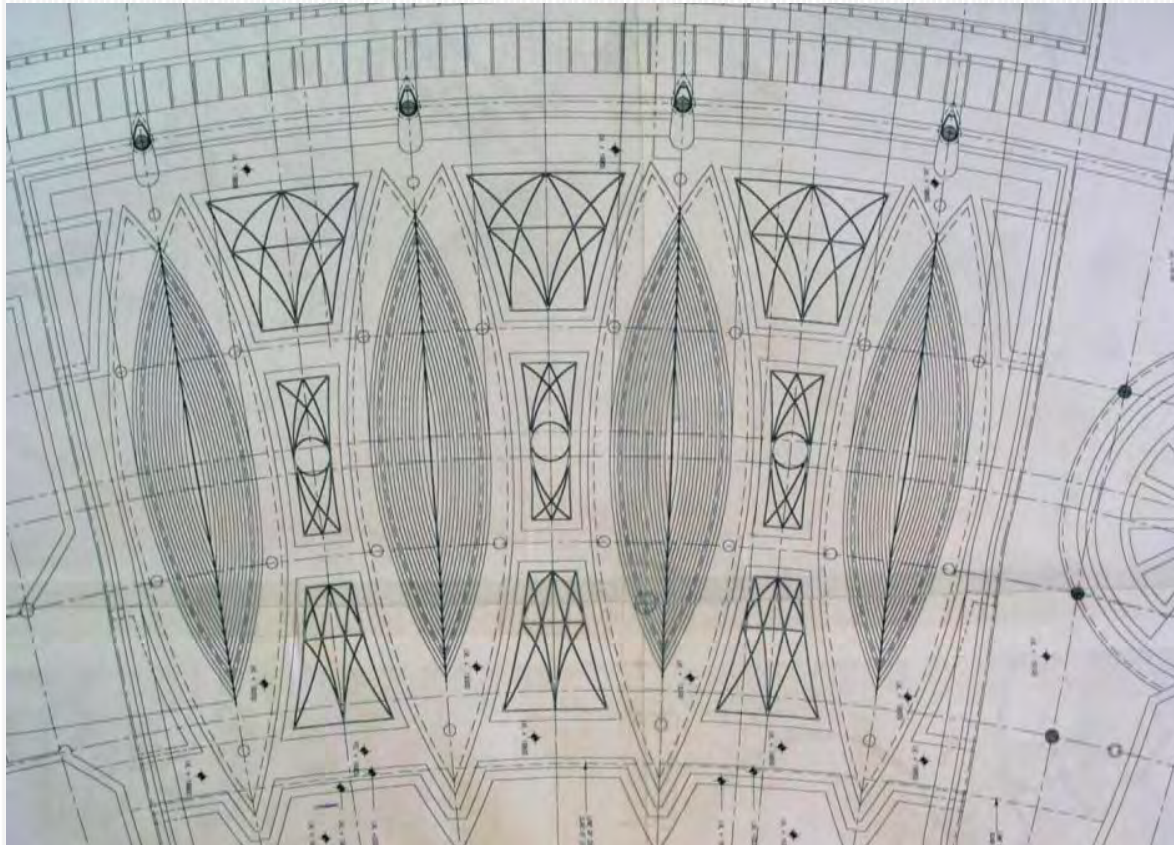
Midnight Lift over main Motorway



Pre Assembled Bridge – Installed over 5 nights – Minimal disturbance to traffic

Grand Hyatt Hotel Atrium – Dubai

Reflected Ceiling Plan – shows 4 suspended Dhow hulls






Main Structure – 34m Glulam Truss





Trusses located at 4m Centres



Complete Timber Roof Structure





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Finished Roof – 34m x 56m

Ballarat University – Riding Arena

43m span – More cost effective than steel



Composite Glulam / Concrete Solution – 43m Span

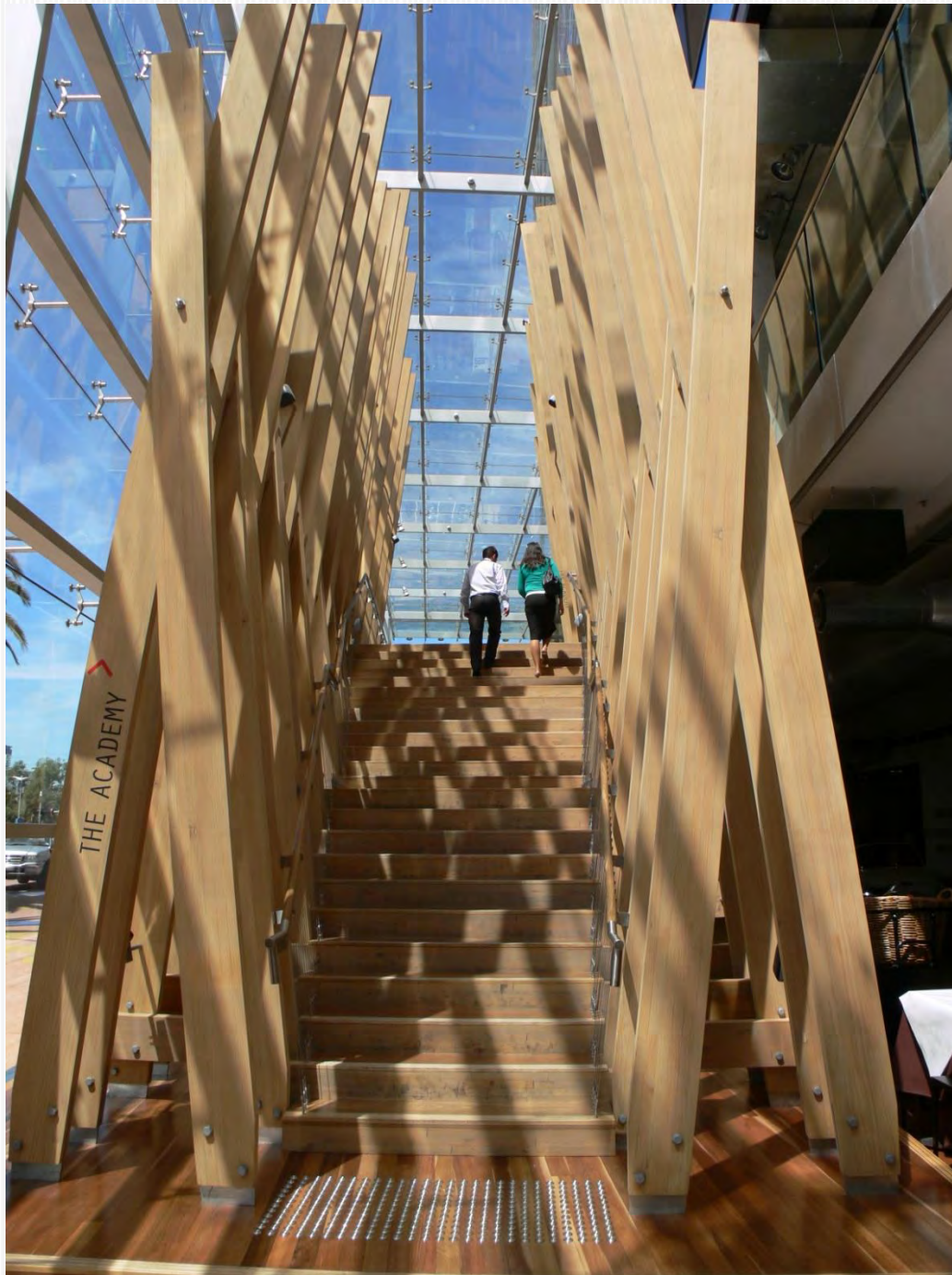


Sydney House – Hrdina Architects – Berlina Projects



Hrdina House Interior





NAB
Melbourne

National
Wine
Centre
Adelaide



Glulam Entrance Canopies City Centre Fujairah



Dusseldorf House Tahiti –
Lend Lease first foray into Engineered
Timber – 1970??



Engineered Wood Solutions

Converting Concepts to Reality

2. LVL Fabrication



Merrit Building – LVL Fabrication, 3 Storey – Post Tensioned Architects – Shepherd & Route Engineers – Kirk Roberts





Pre assembled in factory before delivery to site.



cbre.co.nz
For Lease
374 9889
Premium Profile / Premium Position

- 1,869sqm of quality office & retail space
- Cutting edge safety design
- Flexible size options (260m²+)
- Excellent on-site carparking

Brynn Burrows 021 375 917 **CBRE**

CONTRACT CONSTRUCTION

COMMERCIAL RESIDENTIAL PROJECTS RECONSTRUCTION

SHEPARD & ROUS

FUTUREBUILD™ LEVEL THREE SOLUTIONS FOR COMMERCIAL BUILDINGS

ROBERTS





- Trimble Building –
 - LVL Factory Fabrication



• Consultants - Opus



Shear Walls









Major Step Forward!

A First for Australasia



Large Scale CNC Processing

CNC CAPABILITY – 5 AXIS GANTRY – Weinmann WMP240

Processing 30m long x 4m wide



INNOVATION



INNOVATION





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Case Study

Royal Maternity Hospital - Bahrain

View in 3D with Deep View
Free at
www.righthemisphere.com/dv

3D Modelling – Complex Cross-over Arches – Changing Radii.

Completed Components cut to Detail



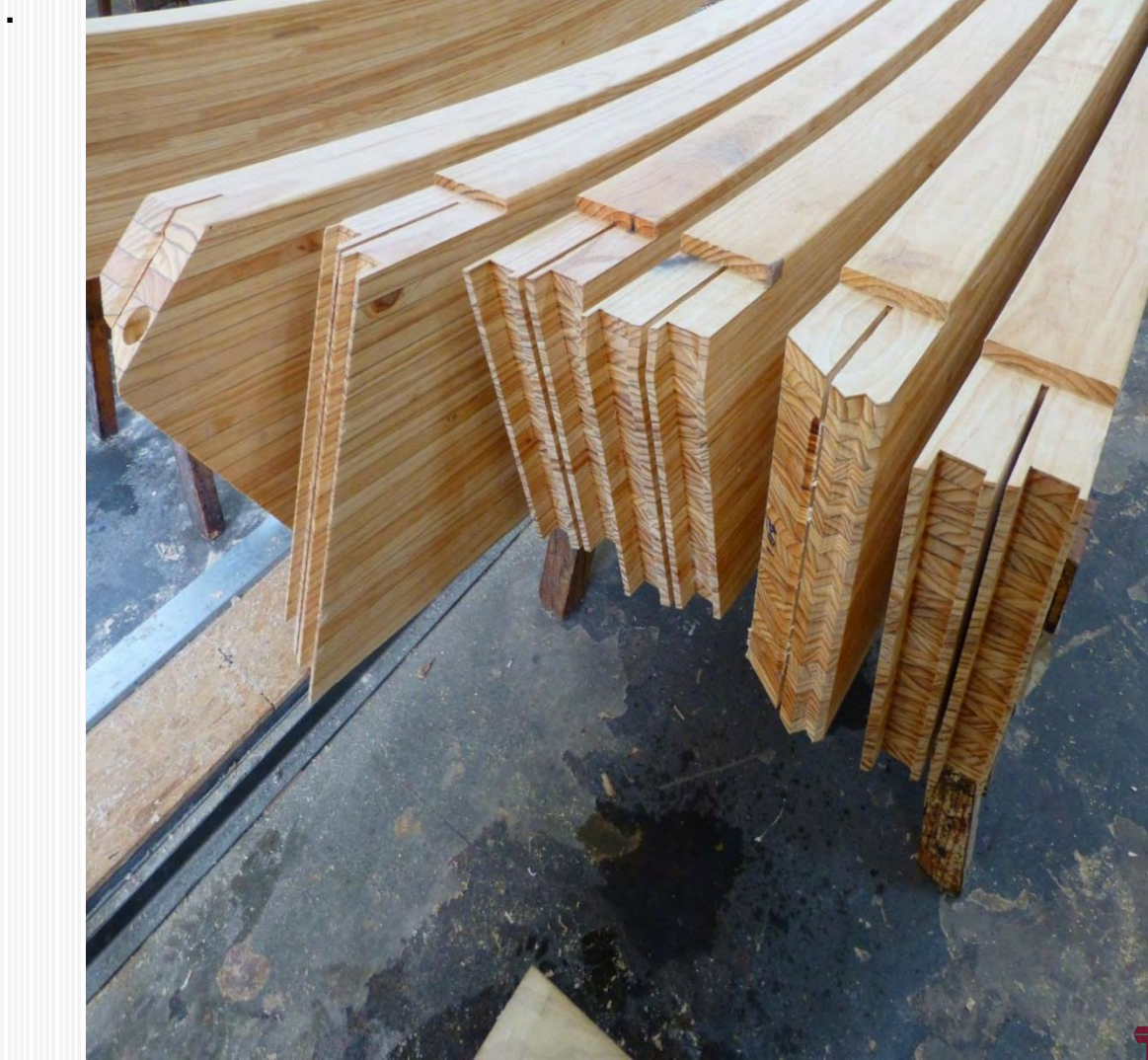
CNC Profiling to Precise Detail.



CNC Profiling to Precise Detail.



Completed Components cut to Detail



Factory Prefabrication

-



Royal Maternity Hospital – Bahrain – Site Progress July 2014







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1st Floor, 200, 201 & 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

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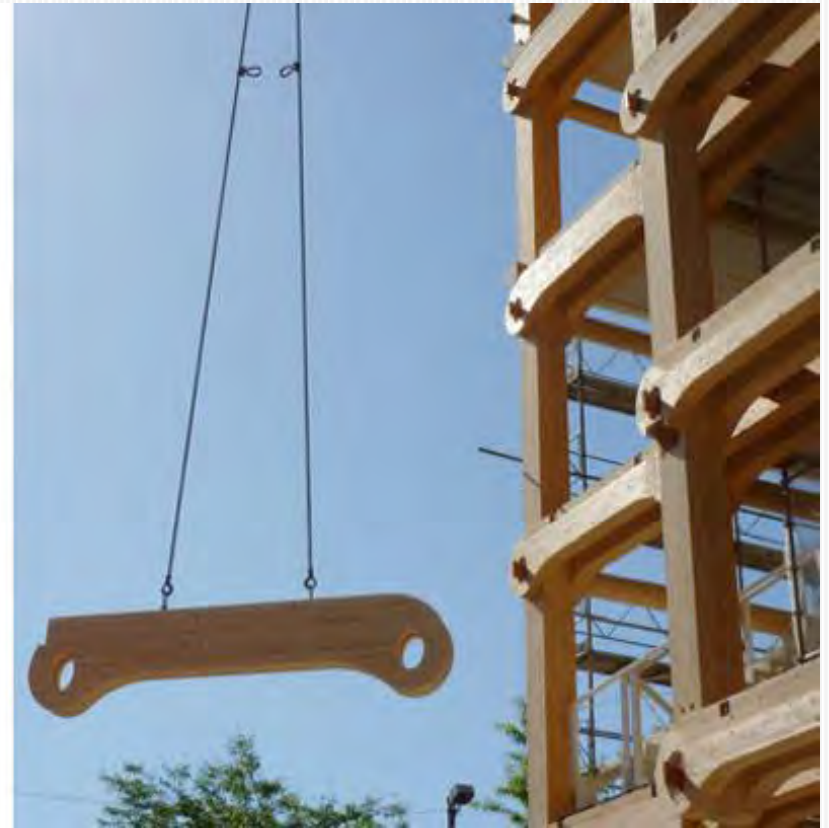
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Timberlab Solutions Limited
+44 9 20 240 | www.timberlab.com

Possibilities



European Project, manufacturer unknown



Possibilities



European Project, manufacturer unknown



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Engineered Wood Solutions

the Future is Here

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TimberLab Solutions Ltd – Australasia's Most Experienced Manufacturer

Owen Griffiths – Marketing Director