

LSAA / MADA 2016 Lightweight Structures Workshop Brief. (Rev Aug 31)

Background

My company specializes in the conceptual design of new urban developments. We have been approached by the state government to do some conceptual designs for a planned new community on the outskirts of a rapidly expanding regional centre in NE Victoria.

We have ideas about creating a user friendly “Central Park” area essentially free from vehicles except for emergency access and service vehicles. The planned park area is roughly in the form of a hexagon and measures about 250 metres on each triangular edge. There is a small natural shallow watercourse running between two opposite vertices. The concept is to make sealed walkways along both sides of the waterway, reconstruct the banks and create a small artificial lake at the centre hub.

Coming in from the other corners of the hexagon would be broad walkways. A two-way shared bicycle track would extend around the perimeter. Each of the internal triangles would be used for a different function being:

1. A community sports ground for cricket, soccer, football and running. This would require some sheltered facilities/spectator viewing area.
2. A skateboard area which would be partly covered with a shade system
3. Community swimming pools including a covered shallow toddlers wading pool.
4. A playground with swings, slides, walk bridges that will need shading
5. An outdoor sound shell

Other systems may be considered in a later phase.

The Brief

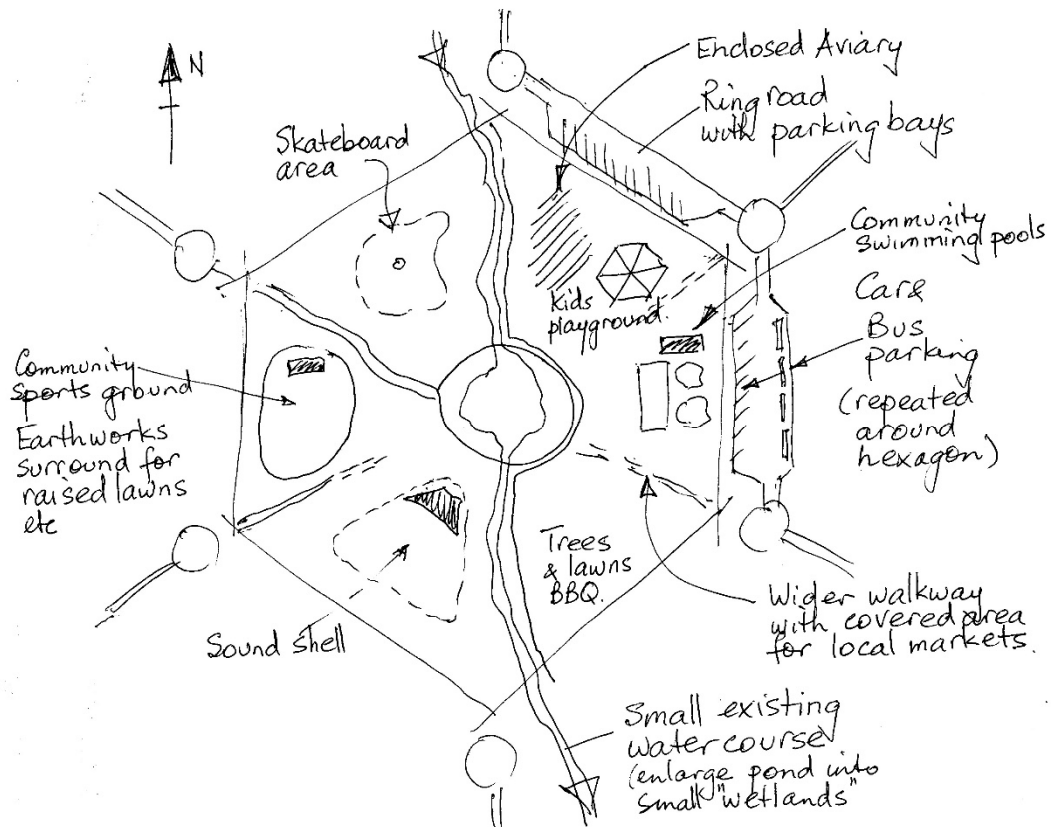
My company has seen some examples of assorted membrane structures and we think that the exciting forms available will be a great incentive for the community to make use of the park.

We understand that your group has access to creative minds that are exploring the application of fabrics and wire meshes for such projects. We believe that it would be great to be able to present some physical models for the above mentioned areas of the Central Park to the government bureaucrats in order to progress the feasibility studies in this direction.

We would be looking for a rough physical model of the structure assigned to your group. This is to be supported by hand-drawn sketches and a short bullet list of “features”.

Back of Envelope Sketch

See next page. Earthworks are envisaged that may provide some separation between the different areas such as the community sports ground. These sloping mounds/hills would enable viewing. The existing small watercourse would be altered to have a central hub/pond or small wetlands area for ducks and other birds to congregate.



Some Thoughts and Concerns

The main concerns are:

- Vandalism – not easy for persons to gain access to roofs
- Safety – especially around “kids” areas that there are no inclined guy ropes to masts. Very steep backstays might be OK if surrounded by suitable “planters” or equivalent

Structure 1 Community Sports Ground

For Stage 1, there should be an amenities block (M, F and Handicap Toilets/ change rooms, small store room, canteen – approx. 30m long x 6m wide x 3.5m high with near flat corrugated iron roof sloping away from the playing ground). I am after a covered area to augment the area in front of the amenities block for approx. 60 bench seats with standing room behind for about 120 persons. No columns on the playing ground side if possible. Waterproof membrane.

Structure 2 Skateboard Area

It has been suggested that it might be feasible to cover about 4-500 sqm of the different bowls with perhaps a knitted shade cloth to cut down glare and UV from the sun. It may be possible to have a taller mast somewhere near the centre that would carry night floodlights and CCTV cameras etc.

Structure 3 Kids Playground

Essential to provide good shade coverage – will probably have some playground equipment like a climbing tower or slides. Am concerned about kids not being able to climb on top. I need to use the effective provision of known shading areas for all seasons and from 10am – 4pm. Location (for latitude figure) is similar to outskirts of Benalla or Bendigo.

Structure 4 Swimming Pools

Shallow end of the main pool and the toddlers/parent watching area need shading during October through March 10am – 4pm

Structure 5 Sound Shell

Ideally a shape to naturally project sound. Facility to mount speakers and some lighting. Back of stage (Power, storage etc could be self-contained sealed block). An internet search for community sound shells should define approx. size and geometric forms.

Groups and Projects

First Name	Surname	Background	Group	Structure
Mike	Xie	Conference Presenter	1	1 Community Sports Ground
Reshan	Jayamanne	FT Student Workshop	1	1 Community Sports Ground
James	Meunier	FT Student Workshop	1	1 Community Sports Ground
		Full Conf Fees LSAA		
Simon	Higgs	Members	1	1 Community Sports Ground
		Full Conf Fees LSAA		
Lisa	James	Members	1	1 Community Sports Ground
Anoosheh	Rezaee Javan	Full Time Students	1	1 Community Sports Ground
Jane	Burry	Conference Presenter	2	1 Community Sports Ground
Tiffini	Tran	FT Student Workshop	2	1 Community Sports Ground
Sopheapmolika	Pheng	FT Student Workshop	2	1 Community Sports Ground
		Full Conf Fees LSAA		
Steven	Theophanous-Maddison	Members	2	1 Community Sports Ground
		Full Conf Fees LSAA		
Emily	Joyce	Members	2	1 Community Sports Ground
Aisha	Aziz	Full Time Students	2	1 Community Sports Ground
Mathew	van Kooy	Conference Presenter	3	1 Community Sports Ground
Jeanette	Stoffregen	FT Student Workshop	3	1 Community Sports Ground
Banafshe	Khan amidi	FT Student Workshop	3	1 Community Sports Ground
		Full Conf Fees LSAA		
Chris	Arkell	Members	3	1 Community Sports Ground
		Full Conf Fees Non-		
Angus	Miller	Members	3	1 Community Sports Ground
Jie	Liu	Full Time Students	3	1 Community Sports Ground
James	Marr	Conference Presenter	4	1 Community Sports Ground
Jose	Suarez	FT Student Workshop	4	1 Community Sports Ground
Ashkhen	Manukyan	FT Student Workshop	4	1 Community Sports Ground
		Full Conf Fees LSAA		
Greg	Thomas	Members	4	1 Community Sports Ground
		Full Conf Fees Non-		
Malcolm	Barr	Members	4	1 Community Sports Ground
Zita	Ulmann	Full Time Students	4	1 Community Sports Ground

First Name	Surname	Background	Group	Structure
Barbara	Koenig	Conference Presenter	5	2 Skateboard Area
Shihui	Xie	FT Student Workshop	5	2 Skateboard Area
Ran	Yang	FT Student Workshop	5	2 Skateboard Area
Paul	Hunt	Full Conf Fees LSAA Members	5	2 Skateboard Area
Matthias	Kleibel	Full Conf Fees Non- Members	5	2 Skateboard Area
Warren	Taylor	Invited Media	5	2 Skateboard Area
Stuart	Harper	Conference Presenter	6	2 Skateboard Area
Nguyen	Hoang	FT Student Workshop	6	2 Skateboard Area
Peiyao	YU	FT Student Workshop	6	2 Skateboard Area
David	Gullis	Full Conf Fees LSAA Members	6	2 Skateboard Area
John	Devitt	Full Conf Fees Non- Members	6	2 Skateboard Area
Ian	Maxwell	Invited Media	6	2 Skateboard Area
Andrew	Maher	Conference Presenter	7	2 Skateboard Area
Enzo	Lara-Hamilton	FT Student Workshop	7	2 Skateboard Area
GOLBARG	Shokrpour	FT Student Workshop	7	2 Skateboard Area
Tom	Gastin	Full Conf Fees LSAA Members	7	2 Skateboard Area
Toby	Mason	Full Conf Fees Non- Members	7	2 Skateboard Area
Tava	Darakamaran	Invited Media	7	2 Skateboard Area
Scott	Rathie	Conference Presenter	8	2 Skateboard Area
Judith	Sharkey	FT Student Workshop	8	2 Skateboard Area
KHOA	DOAN	FT Student Workshop	8	2 Skateboard Area
David	Greenup	Full Conf Fees LSAA Members	8	2 Skateboard Area
Douglas	Turnbull	Full Conf Fees Non- Members	8	2 Skateboard Area
Joseph	Dean	Organizing Committee	8	2 Skateboard Area

First Name	Surname	Background	Group	Structure
Nigel	Bertram	Conference Presenter	9	3 Kids Playground
xinxia	yang	FT Student Workshop	9	3 Kids Playground
Harrison	Mourelatos	FT Student Workshop	9	3 Kids Playground
Matthew	Gisler	Full Conf Fees LSAA Members	9	3 Kids Playground
Mark	Rogan	Full Conf Fees Non- Members	9	3 Kids Playground
Rowan	Murray	Organizing Committee	9	3 Kids Playground
Peter	Murenu	Conference Presenter	10	3 Kids Playground
Panashe	Makuni	FT Student Workshop	10	3 Kids Playground
Nadia	Morris	FT Student Workshop	10	3 Kids Playground
Mike	Fisher	Full Conf Fees LSAA Members	10	3 Kids Playground
Claire	Fu	Full Conf Fees Non- Members	10	3 Kids Playground
Joel	Wilson	RMIT FT Student for Workshop only	10	3 Kids Playground
Brian	O'Flaherty	Conference Sponsors	11	3 Kids Playground
Leonard	Khoo	FT Student Workshop	11	3 Kids Playground
Anlin	He	FT Student Workshop	11	3 Kids Playground
Jethro	Jones	Full Conf Fees LSAA Members	11	3 Kids Playground
Hanako	Ogawa	Full Conf Fees Non- Members	11	3 Kids Playground
Malcolm	Pascoe	RMIT FT Student for Workshop only	11	3 Kids Playground
Craig	Fuller	Conference Sponsors	12	3 Kids Playground
Merlin	Jolly	FT Student Workshop	12	3 Kids Playground
Erica	Chen	FT Student Workshop	12	3 Kids Playground
Barry	Jamieson	Full Conf Fees LSAA Members	12	3 Kids Playground
Amir	Zaghloul	Full Conf Fees Non- Members	12	3 Kids Playground

First Name	Surname	Background	Group	Structure
Paul	Joseph	Conference Sponsors	13	4 Swimming Pools
Jessica	Na	FT Student Workshop	13	4 Swimming Pools
James	Yan	FT Student Workshop	13	4 Swimming Pools
Leonard	Collins	Full Conf Fees LSAA Members	13	4 Swimming Pools
Nicolas	De Mallmann	Full Conf Fees Non- Members	13	4 Swimming Pools
Andrew	Nasarczyk	Conference Sponsors	14	4 Swimming Pools
Thanda	Zaw	FT Student Workshop	14	4 Swimming Pools
Teagan	Boka	FT Student Workshop	14	4 Swimming Pools
Martin	Eddleston	Full Conf Fees LSAA Members	14	4 Swimming Pools
arash	ghaedizadeh	Full Time Students	14	4 Swimming Pools
Laure	Sénéquier	Conference Sponsors	15	4 Swimming Pools
JingYi	Zhang	FT Student Workshop	15	4 Swimming Pools
Shreeya	Khanal	FT Student Workshop	15	4 Swimming Pools
Alex	Urweiss	Full Conf Fees LSAA Members	15	4 Swimming Pools
Manuel	Muehlbauer	Full Time Students	15	4 Swimming Pools
Gregory	Lefevre	Conference Sponsors	16	4 Swimming Pools
Lenore	Whiteside	FT Student Workshop	16	4 Swimming Pools
Dexter	Wong	FT Student Workshop	16	4 Swimming Pools
Justin	Dale	Full Conf Fees LSAA Members	16	4 Swimming Pools
Xin	Ren	Full Time Students	16	4 Swimming Pools

First Name	Surname	Background	Group	Structure
Farid	Sahnoune	Conference Sponsors	17	5 Sound Shell
Lily	Jiang	FT Student Workshop	17	5 Sound Shell
Michael	Finlay	FT Student Workshop	17	5 Sound Shell
		Full Conf Fees LSAA		
Mark	Sheldon	Members	17	5 Sound Shell
Chao	Ding	Full Time Students	17	5 Sound Shell
Geoff	Napier	Day Registration FRIDAY	18	5 Sound Shell
Chelsea	Clarke	FT Student Workshop	18	5 Sound Shell
Sarah	Mitchell	FT Student Workshop	18	5 Sound Shell
		Full Conf Fees LSAA		
Serena	Collins	Members	18	5 Sound Shell
Chen	Chen	Full Time Students	18	5 Sound Shell
Jon	Mirtschin	Day Registration FRIDAY	19	5 Sound Shell
Ibolya	Liptai	FT Student Workshop	19	5 Sound Shell
		Full Conf Fees LSAA		
Chris	Tattersall	Members	19	5 Sound Shell
		Full Conf Fees LSAA		
Michael	Chong	Members	19	5 Sound Shell
Hamed	Seifi	Full Time Students	19	5 Sound Shell
damon	van horne	Day Registration FRIDAY	20	5 Sound Shell
Jesse	Oehm	FT Student Workshop	20	5 Sound Shell
		Full Conf Fees LSAA		
Martin	Eddleston	Members	20	5 Sound Shell
		Full Conf Fees LSAA		
Graham	Thomson	Members	20	5 Sound Shell
Joel	Wilson	Full Time Students	20	5 Sound Shell

First Name	Surname	Background	Group	Structure
Tim	Schork	Conference Presenter	Mentor	Assist all groups
Prof Vinzenz	Sedlak	Conference Presenter	Mentor	Assist all groups
Robert	Roithmayr	Conference Presenter	Mentor	Assist all groups
Robert	Cahill	Conference Sponsors	Mentor	Assist all groups
Tim	Schork	MADA Staff	Mentor	Assist all groups
Maud	Cassaignau	MADA Staff	Mentor	Assist all groups
Diego	Ramirez-Lovering	MADA Staff	Mentor	Assist all groups
Nic	Goldsmith	Keynote Speakers	Mentor	Assist all groups
Ron	van Sluijs	Keynote Speakers	Mentor	Assist all groups
Peter	Lim	Organizing Committee	Mentor	Assist all groups
Peter	Kneen	Organizing Committee	Mentor	Assist all groups
Kourosch	Kayvani	Organizing Committee	Mentor	Assist all groups