

Webinar: Escape from the concrete jungle - 2nd Nov 2022

#	Question	Answer
1	What is the conveyance capacity of the trapizoidal channel?	The design channel capacity at the upstream end of the project is 40,000 cfs and the downstream design channel capacity is 104,000 cfs
		How much changes in conveyance is anticipated? And have you guys considered holding back the water using the naturalisation at certain reaches to assist in flood control?
2	What local fauna are you hoping to accommodate via the riparian habitat improvements and how will these be kept safe from road strike?	What local fauna are you hoping to accommodate via the riparian habitat improvements and how will these be kept safe from road strike?
		Many of the species of concern are bird species including: White Pelicans, Yellow Warble, Coopers Hawk among others. There are plans for animal corridors as well to address road strike.
		Thanks Lauren!
3	what measures have been designed to bypass the existing channel while new work or revised channel work is under construction?	We are just entering design phase by reach, but there will be a requirement to maintain a level of flood risk reduction when construction commences.
4	Hi Lauren, do you have a guideline or manual for the open channel restoration and naturalization?	
5	Within the proposed rectangular channel configuration, will the configuration include a bankfull channel?	
6	What considerations have been given to the provision of recreational space and 'naturalised areas' for the health of the community in driving improvement to the River? That is, the consideration of improving blue-green infrastructure for people in the face of climate change.	The city of LA has a variety of revitalization projects- that you can see here: https://lariver.org/
7	changing from trapezoidal channel to rectangular channel, and putting in vege just outside, why did you avoid completely naturalising the channel (ie no longer having a rectangular channel either?).	changing from trapezoidal channel to rectangular channel, and putting in vege just outside, why did you avoid completely naturalising the channel (ie no longer having a rectangular channel either?).
		live answered
8	Will the profile of the channel thalweg include riffle and pool sequences?	
9	What safety risk will be introduced moving to a rectangular channel, over a trapezoidal channel, and how will this be managed?	That is a consideration that will need to be considered. At this point in the design phase, we have not gotten there yet.
10	Are fish or aquatic species considered stakeholders in this project? How are they being accomodated for? Or is water quality unsuitable for them and this project is just about flood conveyance and naturalisation of banks vs water quality improvement too?	there is a fish passage project in reach 8 and downstream although flows are not perennial -- but it aims to serve as a sort of pilot to see if southern pacific steelhead can be reintroduced
11	Some drops / waterfalls along the cannels may be barriers for fish moving upstream. Will fish ladders (other devices) be installed to allow fish to migrate?	There are no drops/waterfalls in the current project reach.
		there is a fish passage project in reach 8 and downstream although flows are not perennial -- but it aims to serve as a sort of pilot to see if southern pacific steelhead can be reintroduced
12	In many places in the world, invertebrate/insect populations have dropped 60-80%. Has there been a focus on invertebrates and has rehabilitation vegetation been specifically chosen to improve invertebrate populations?	
13	Are the future planted areas be interact with the main channel? What is the main channel capacity regarding the avergae recurrence interval? Will the concrete rectangular channel provide connectivity to the riparian environmane to normal flow? Has there been a water quality benefit quantified from this restoration?	This is interesting. How would scouring be prevented against the back of the reactangular concrete channel?
14	Presumably the restoration work will significantly increase evapotranspiration in the river corridor, was there any modelling of the potential benefits to the local climate?	Presumably the restoration work will significantly increase evapotranspiration in the river corridor, was there any modelling of the potential benefits to the local climate?
15	The LA project is titled ecosystem restoration. A comendable goal. Ecosystem restoration suggests species and functional complexity in the restored vegetation. A major impediment to such goals in Aust are poorly established/supported seed supply chains. In the US seed supply chains for farm based CRP programs are well developed in the Mid west and eastern states.. Is this also the case on the west coast? Is seed/diversity available in quantity and quality and low cost and with matching restoration sector capacity/expertise?	Good question, but I do not know.
16	Can you discuss the public involvement process for the Redbank Plains project? Did you encounter opposition to the concept and if so how did you promote the project to build stakeholder support?	Hey Regina. No opposition that I'm aware of. However, I was mainly involved in the design of the wetland - and Ipswich City Council did the community liaison. I can swing you a contact there if you'd like to know more - bradd@oceanprotect.com.au cheers
17	for the australian examples, does it ever need scaling down because 2d flood modelling it done and finds adverse impacts to nearby properties? and if yes, do you scale back the amount of vege to achieve no adverse impacts?	for the australian examples, does it ever need scaling down because 2d flood modelling it done and finds adverse impacts to nearby properties? and if yes, do you scale back the amount of vege to achieve no adverse impacts?
		Hey Anita. I can't comment on the projects i weren't involved in, but i certainly the type of vegetation would have been limited - e.g. using shrubs/ grasses in low-lying areas, and keepig any trees out of main flow area. Obviously, channel widening would be another way of reducing any impacts. cheers
18	sorry I joined late. any evidence that naturalising drains reduces maintenance costs?	sorry I joined late. any evidence that naturalising drains reduces maintenance costs?
		Great question. Not to my knowledge. I'd be keen to know of any studies if you find any.
19	Have any case studies come out of these naturalisation projects e.g. flooding risks, sediment accumulation, downstream/upstream flow impacts ect. Is there any negative impacts you can highlight that could have been better planned for	Great question. Not to my knowledge - except for the Bowies Flat wetland project. Key learnings from this, included improved outlet design and management, improved erosion risk mitigation.
20	Are there any mosquito issues with wetlands?	live answered
21	If there is a creek (non concrete channel), but we want to increase the amount of riparian vege, but flood modelling shows adverse impacts, what would you suggest, or just have to accept that less re-vege will have to be done?	If there is a creek (non concrete channel), but we want to increase the amount of riparian vege, but flood modelling shows adverse impacts, what would you suggest, or just have to accept that less re-vege will have to be done?
		widen channel, if there is space
22	With a riparian habitat protection with a trapezoidal channel give rise to backing up U/S flood levels in Tweed River in NSW whereas Concrete line channel provide a greater capacity for conveyance of Flood. Where is the balance ?	
23	Can you place concrete keys (volumetric cubes) distributed at regular intervals along the alignment sides to slow down erosion?	Yep. Also, if you google image "Small creek naturalisation" you'll see that many concrete slabs were integrated within the channel to reduce erosion risk.

24	is there any design method or design solution for stabilised the river bank for high level soil hazard nature water channel? If the site impossible to build all concrete channel base or side banks?	Yep, there's quite a few bank stabilisation options that have been applied previously - whether it's roughening up the banks or direct stabilisation materials, products and/ or structures.
25	How were these channel naturalisation projects done? Was it by engineering firms or the like that specialise in naturalisation projects?	
26	To all presenters, what is the most significant challenge to implementing nature-based solutions or natural channel design? In my experience, a major constraint is that natural channel design usually requires more land acquisition (larger footprint) than conventional, grey infrastructure.	Agreed about need for additional land - were there acquisitions required, including removal of structures, for the Australian projects? Yep, i'd agree. Even if its low value parkland or open space - there'll likely be objections.
27	How will homelessness/camping be addressed?	more emphasis/resources/taxes need to focus on homelessness. A horrible status of our societies that shouldn't be with us.
28	I beleive that all creeks and rivers need riparian zones of substantial width to enable integration of development with natural areas.	
29	Hi Brad, can you share the report from Griffith Uni about mozi assessment in the wetland/waterway?	Ooh, best to email me - bradd@oceanprotect.com.au. It was a study by Margaret Greenway 20 years ago. I don't have it, but could track it down. cheers
30	Are there issues with locally restoring a channel but not restoring the whole length?	