Regenerating Building / Regenerative Sustainability – The Outline

Sustainable or Green Buildings are centred on creating more efficient buildings rather than aiming for zero or even positive contributions. This subject explores and critiques this efficiency based approach to sustainability and proposes a regenerative, positive and biophilic design framework.

The ideas are tested using existing building stock – looking at the question of how to retrofit, rebuild and revitalise them effectively you’ll be working on real projects with the Department of Human Services.

This subject will provide advanced skills in sustainably re-imagining and designing innovative, architecturally significant buildings from existing structures. Based on a series of seminars and site visits, student will apply their learning to existing buildings within Melbourne.

Objectives:
• To understand the limitation around the current approach to sustainability
• To understand the concepts of regenerative, biophilic and positive design and development
• Assess the opportunities of a retrofit project
• Use rating tools effectively
• Work in multi-disciplinary teams

There is one lecture and week and in your tutes we will be analyzing inspiring places in Melbourne based on what have we learnt ... then applying it to places of need...

Contact Dominique Hes dhes@unimelb.edu.au or Pippa Howard phoward@unimelb.edu.au
### Assessment

<table>
<thead>
<tr>
<th>Assessment Name</th>
<th>Weight</th>
<th>Due Date</th>
<th>Brief Description</th>
<th>Linked Learning Objective</th>
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<tbody>
<tr>
<td>A1 - 12 Weekly reflective cards</td>
<td>40%</td>
<td>12pm Monday (each week) Final one on the 1st of June</td>
<td>Each week the students will need to reflect on one element of the learning for that week</td>
<td>Reflection and looking at relevance to their own learning objectives</td>
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<tr>
<td>A2 - Critique of case study based on theory</td>
<td>30%</td>
<td>4th of May</td>
<td>We will be visiting 4 or 5 sites and the students will need to pick one to critique in 2000 words</td>
<td>Ability to interpret theory and critique a real project using this theory</td>
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<tr>
<td>A3 - Application to a project</td>
<td>30%</td>
<td>25th of May</td>
<td>In their groups of 5, students will be given a small project to apply their learnings from the course</td>
<td>Synthesis of learning into application</td>
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### Theory behind the assessment approach

The assessment tasks outlined below use an action-learning theoretical approach. The paper by Zuber-Skerritt 2002, defines action-learning as “learning from concrete experience and critical reflection on that experience”. He identifies some of the common characteristics of action learning as; learning by doing, experiential learning and reflecting on practice. Though this is aimed at the workplace this is valuable for you to understand that this learning technique is worth taking with you and not just to torture you at university.

A1 – from the papers by Daria Loi 2004 and 2007, the aim of the assessment is to not only document something you learnt that week (using visuals and written description) but also reflect on your learning of that lesson and identify what this might mean for your practice/life. Attachment 1 is a brief on this assessment task, you can question and adapt this brief as long as it is argued or obvious why you have departed from the task...for example, rather than use an image to document what you have learnt, you might decide one week that a recording, performance, artifact etc. better represent your point. You will have to hand in a hard copy of your card each week on Monday before lunch (12pm) so that we have time to mark it and give you feedback by the following lecture. (This weekly submission will also assist us to amend our approach toward teaching, where possible, to benefit your learning).

A2 – this assessment task is based on a multitude of authors who have researched how to best look at theory and learn from it. Action-learning is one such approach of grounding the theory in the real world. As this course is about critiquing our current approach to sustainability and to investigate a different way to move positively into the future, this assessment task asks you to critique one of the projects we will visit, all of which in some way are considered leading edge. The brief is in attachment 2.

A3 – this assessment task is centered on now applying what you have learned to a project that needs regeneration. As in Assessment task 2, teaching and learning research shows that working on real projects with real clients helps to ground and apply abstract concepts (Kolb 1984). This assessment task is a group project, were the groups will be selected so that students develop an active understanding of the power and potential of working with people with different perspectives and different expertise. Lastly, the task offers you the opportunity to be an active regeneration agent as you contribute positively and add value to a department which doesn’t have extensive resources to invest on thinking about how to improve their infrastructure. The brief is in attachment 3.

### Reading, literature and resources:

**Pedagogical background – how this subject is taught**


**Theoretical background**


**Tools, techniques and technologies**

Charrette - Charrette Center Accessed 11/1/2011
<http://www.charrettecenter.net/charrettecenter.asp?a=spf&pkf=7&gk=243>


<http://www.knooppuntinnovatie.nl/documenten/visioning%20and%20backcasting.ppt>


<table>
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<tr>
<th>Date</th>
<th>Activity</th>
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| 2 March    | L – Introduction to subject and what’s wrong with the current approach to sustainability  
T – Getting to know you  
A1 – Image of what you regarded sustainability as being (before commencing subject) with a description, what did you learnt in the lecture (in particular things you didn’t expect), how will this affect your practice in the future and a quote – due 7/3/2011 |
| 9 March    | L – Natures cycles and systems  
T – Cause and effect - activity  
A1 – Image of a several cycles and how they interact, description of why this is important for sustainability, reflect on why this is important, how will this affect your practice in the future and a quote – due 13/3/2011 |
| 16 March   | L – Biophilic design  
T – Site Visit: Mary’s house (by Robin Boyd in Ivanhoe) – activity  
A1 – Image of Mary’s house that particularly illustrates biophilic design to you, description of why this image illustrates biophilic design to you, reflect on how this affects your practice, look at one of your past designs or assignments in other subjects and give 5 dot point on how you would change this given what you have learnt/seen and a quote – due 21/3/2011 |
| 23 March   | L – Positive development  
T – Site Visit: The Venny (in Kensington) – activity  
A1 – Image of the Venny that particularly illustrates positive development to you, description of why this image illustrates positive development to you, reflect on how this affects your practice, look at one of your past designs or assignments in other subjects and give 5 dot point on how you would change this given what you have learnt/seen and a quote – due 4/4/2011 |
| 30 March   | L – Regenerative development part I  
T – Site Visit: CERES (East Brunswick) – site tour of why this space is regenerative followed by 30min (group work) thinking about the activity that you will do with the whole class (April 13) that illustrates an element of the materials/theory covered (weeks 1-5)  
A1 – Image of CERES that particularly illustrates regenerative development to you, description of why this image illustrates regenerative development to you, reflect on how this affects your practice, look at one of your past designs or assignments in other subjects and give 5 dot point on how you would change this given what you have learnt/seen and a quote – due 4/4/2011 |
| 6 April    | L – Reed intro then Masdar  
T – work at uni on your activity for CERES – work in your group to come up with an 20 minute activity to get the whole group to do that illustrates an element of the materials/theory covered in weeks 1-5. On April 13 each group will run their activity (with whole group) on site at CERES. Use tutorial time to develop your ideas and any supporting materials you will need as part of your activity – make it fun for you and us!  
A1 – Image of your activity, description of the activity, outline of the element you were investigating with the activity, reflection on what you hope to achieve through the activity and a quote – due 11/4/2011 |
| 13 April   | L – Regenerative development part III  
T – Site Visit: CERES – Each group will run their activity with the whole class  
A1 – Image of one of the activities you participated in, description of the element being investigated within that activity, reflection on how this activity worked and what you learned that you didn’t expect, reflection on how your own activity ran on the day and a quote – due 18/4/2011 |
| 20 April   | L – Regenerative development part II  
T – Site Visit: Pixel 3 and 3:30 and 4 and 4:45 pm 60L – from 4pm in the back meeting room  
A1 – Image of Pixel or 60L that illustrates an element of regenerative design or positive development, description of the element and why it illustrates an element of regenerative design or positive development, what did you learn from this, how does this influence what you do in your practice in the future and a quote – due 25/4/2011 |
| 4 May      | L – Technology part II  
Hand in – A2 – 4” of May before 12 on LMS  
T – Visit the case study project – in your group discuss the project and the way you want to address the assignment  
A1 – free form – choose your own image, issues, reflection and learning to put into this week’s card – due 9/5/2011  
A3 – group project applying what you have learned in the course to a real project |
| 11 May     | L – Multi disciplinary tools to use in regenerative design and development projects - charrette  
T/A3 – facilitated charrette in you group on the project  
A1 – image inspired by the charrette, description of this image and what is shows, reflection of what you have learnt from this and on the last page how this will influence your practice/life., and a quote – due 16/5/2011 |
| 18 May     | L – Prioritization and building a business case  
T/A3 – self directed work in your group to prepare for hand-in and exhibition the following week  
A1 – image of the biggest issue we need to apply regenerative design, description of what the image shows, why this is the biggest issues and what you will do in your practice about this… and a quote – due 23/5/2011 |
| 25 May     | L – An irresistible future – inspiring guest lecture  
T/A3 – exhibition set up and celebration  
A1 – on this last card take card 1 – contrast what you wrote and thought there with what you know and think now – contrast image, text, reflection and finish with what you will do with this new knowledge – due the 1/6/2011 |
Learning through experiencing

Site Visits included: Mary Featherston House (below, by Robin Boyd), CERES Community Garden (below), The Venny in Kensington Garden, The Pixel Building and 60L
Learning from one-another

Students organized and ran activities at CERES to teach their peers a lesson about sustainability. No surprise that CERES being a community garden the activities mostly related to food!
Learning through new and exciting technology

The students conducted a site analysis using environmental monitoring equipment (thermal camera, wind speed meter, light meter, sound meter) which was new and exciting.
Regenerating Sustainability – The weekly reflection cards

One way of approaching them

**KEY THEME**
This is the focus of your booklet. Keep it in mind!

**QUOTE**
Links to your key theme

**COVER**
Image that encapsulates the key theme

How you’ll APPLY it in your practice. Think about ‘why’

What you’ve LEARNT
Why did your key theme interest you? Investigate/reflect & tell us!
Regenerating Sustainability – The final exhibition

Dear all – 100% for their exhibition goes to ..... Urban Farm with over 50 votes! Well done

Please see this as part of your learning – in your practice being able to sell your idea visually as well as technically is very important!

<table>
<thead>
<tr>
<th>Urban Farm 50</th>
<th>Johnathan 6</th>
<th>Ben/Leigh/Rebecca (Group) 2</th>
</tr>
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<tbody>
<tr>
<td>Laura 13</td>
<td>Sindy 6</td>
<td>Manual 2</td>
</tr>
<tr>
<td>BJ &amp; Elba 13</td>
<td>Christine Li 5</td>
<td>Mohamad Khairil 2</td>
</tr>
<tr>
<td>Lasse/Josephine 12</td>
<td>Jim 4</td>
<td>Alex 2</td>
</tr>
<tr>
<td>Melissa 11</td>
<td>Nopanit 4</td>
<td>Patrick 2</td>
</tr>
<tr>
<td>Katie/Max 10</td>
<td>Yicheng 3</td>
<td>James Ryan 2</td>
</tr>
<tr>
<td>Eu Ric Thor 9</td>
<td>Tan Han Fu 3</td>
<td>Ng Wei Jin 1</td>
</tr>
<tr>
<td>Sam Wright 7</td>
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The DHS would like to set up an exhibition of work in second semester, so please hang on to your work.
Thank you all
Student feedback

I came into this subject aware of my own tendency towards reductionist thinking, but clueless as how to apply a systemic approach. The more I tried to think broadly, the more I saw problems, barriers and insurmountable obstacles. Despite my passion, sustainability seemed an exhausting, problematic and potentially unachievable obligation. Now I see sustainability as an opportunity. This subject has given me the strategies to work above the line, the ability to see opportunities in complexity and the imagination to glimpse a positive future. (Jim Stewart)

As a person I have relaxed my efforts in living a low environmental impact lifestyle over the past 3 or so years, mostly due to the challenge of a busy and stressful city life, and the choice to start eating meat again. But I have now been re-invigorated, and sit here by my computer with a few new leafy friends beside me, considering the personal changes I can make to contribute to the world near and far around me. (Anonymous)

I confess myself that after five years of studying architecture I had wrongly assumed I had already heard all the jargon & theory on sustainable architecture. However, I was pleasantly surprised to discover through study of this subject Regenerating Sustainability, that not only was there a whole world of theoretical discussion emerging on the refreshing new next positive steps above and beyond the accepted sustainability genre, but that there is also a wealth of examples of innovative designers/scientists/architects putting these regenerative principals into practical application.

This is very encouraging to see but I feel that the rest of the general public, including my fellow architecture students not fortunate enough to have chosen this elective, should be exposed to this pool of knowledge and hopefully this new found excitement and interest in a future with a revolutionised regenerative movement of sustainability will become infectious. (Laura Osborne)

One of the main realisations that I came to through this subject was our need to embrace technology. Previously I viewed sustainability as a rejection of technology due to it being synonymous with progress, which I viewed as the reason for our environmental problems. The benefits of embracing progress, however became apparent through learning how new technologies can provide sustainable substitutes for environmentally unfriendly systems and products. ... The most valuable lesson I learned was that sustainability is an ongoing process of regeneration. (Max Osidacz)
My approach to sustainability generally revolved around creating beautiful, historically-layered, stand-alone energy efficient buildings, without necessarily thinking about connections with the broader environment or community. While I still think reuse is an important aspect of a regenerative approach, this can be quite a narrow (and purely architectural) focus. This subject has allowed me to think more broadly and to try and take advantage of the opportunities for connections that each project brings. (Melissa Spencer)

It was merely 12 weeks ago, that I perceived the practices of conserving energy, reducing waste, using resources more efficiently and improving the quality of life through minimizing damage to the environment as the best we could do. But as the semester progressed, my perception of sustainability changed and along with it my understanding of the interconnectedness between the built and natural environments. I am highly excited about moving away from the short-term mitigation strategies of sustainability to a long-term adaptation approach in regenerative design: the regeneration of living systems will become a fundamental goal in my career as an architect. (Alex Mak)

As soon as we realize as a society that we are totally part of and dependent on nature it becomes much more logical to design our lives around ideas such as cycles, having a positive impact, seeing profit as waste or not talking about efficiency but about flow and throughput. (Bo Hoogenberk)

Without realising it, I was approaching the sustainability issue from the past tense (memory) & somewhat negatively. I centred its meaning on what I have and might not have in the future, as opposed to being excited about humanity’s potential to celebrate and nurture change. Over the course of this subject, this view has changed. Thus, this final card reflects a cheerful, child-like nature. The only ‘memory’ now is the cloud of possibility for the future. After all, by nurturing its benefits, “regeneration is about bringing out potential” (Katie Miller)

The perception of doing things that protect ourselves and nature, needs to shift to the understanding that human systems have to work with natural environment for mutual benefits.... The whole systems and cyclical thinking have provided frameworks for the next step of our sustainable approach. (Yicheng Fu)

How Blind I Was... At the beginning of this semester I had some ideas and basic concepts about sustainability but my knowledge about regenerating sustainability was blurry and far away. I was feeling blind facing such an area full of opportunities with regard to a better understanding between the link of architecture and the environment and the benefits that this can bring to people. However, I can describe my learning in this semester as a big and empty staircase where every lecture was a step closer to an open spectrum of new ideas and concepts that I will adopt and research in my future as an architect with the purpose of creating more friendly and living spaces. (Tomas Valenzuela)
Personal emails:

- thank you once again for such a well taught and intellectually stimulating subject, what i I have learned is invaluable. Alex Mak
- Thank you for running such a great subject. Annie Harrison
- Thank you for the semester and all the inspirational information and site visits! Bo Hoogenberk
- Thanks for the wonderful exhibition last Wednesday it was a really nice way to finish! Katie
- For the final time here is my card. Once again thanks for a fantastic subject, really saved me this semester. Laura
- Thank you Dominique for the great input of knowledge! It's been a really enjoyable module, which had given me a whole new insight on regenerating sustainability. Lee Hua
- A bit sad that the subject has ended. I had so much fun and learnt a lot from the subject.
- Thank you very much! Please have it again next year as I have recommended it to so many people! :) Mastura Mokhtar
- This is my last A4 card. I have to say thank you to bringing the wonderful lecture and sharing “Regenerating Sustainability” for us. Thanks for everything :-) Cheers Fu
- Also, I'd like to say thank you for the past 12 weeks.. I really enjoyed the subject! Best regards, Zuliana
- This subject really gets you to think, to question and to understand it should be compulsory for all masters students.