

**The Architecture of Gender and Health:  
A Holistic Life-Cycle Based Approach to Women's Reproductive  
Health in Moncton, New Brunswick**

by

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## **ABSTRACT**

This thesis investigates the role of architecture in women's health. The proposal consists of a facility in downtown Moncton, New Brunswick that provides reproductive and health services in both on-site and outreach capacities. The selected site and program respond to medicalization of formerly community-based services, and a present-day demand for increased access to alternative and stigmatized treatments (such as midwife-lead natural birthing and abortion). The objective is to return to women their agency within this arena. The architecture aims to incorporate control over one's environment and non-distinction between users with a system of nature-based elements promoting a holistic woman-centred approach to healing and everyday wellbeing. The integration of people and services on a community and building scale encourages open discussion, acceptance and normalization of all facets of women's reproductive health and life cycle.

## **ACKNOWLEDGEMENTS**

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Thank you to my friends, and especially to Anders, for being a calming and inspiring support system over the past four years.

And to my Mom, Dad and Hilary, I can not thank you enough for your unending support, encouragement and enthusiasm.

## **CHAPTER 1: INTRODUCTION**

This thesis investigates the current approach to women's health across the life cycle, with a focus on reproductive and sexual health. Reproductive health is defined as the life-trajectory of a woman's relationship with her body, from pre-puberty to old-womanhood. This path, shown on the next page, is simultaneously individual and universal.

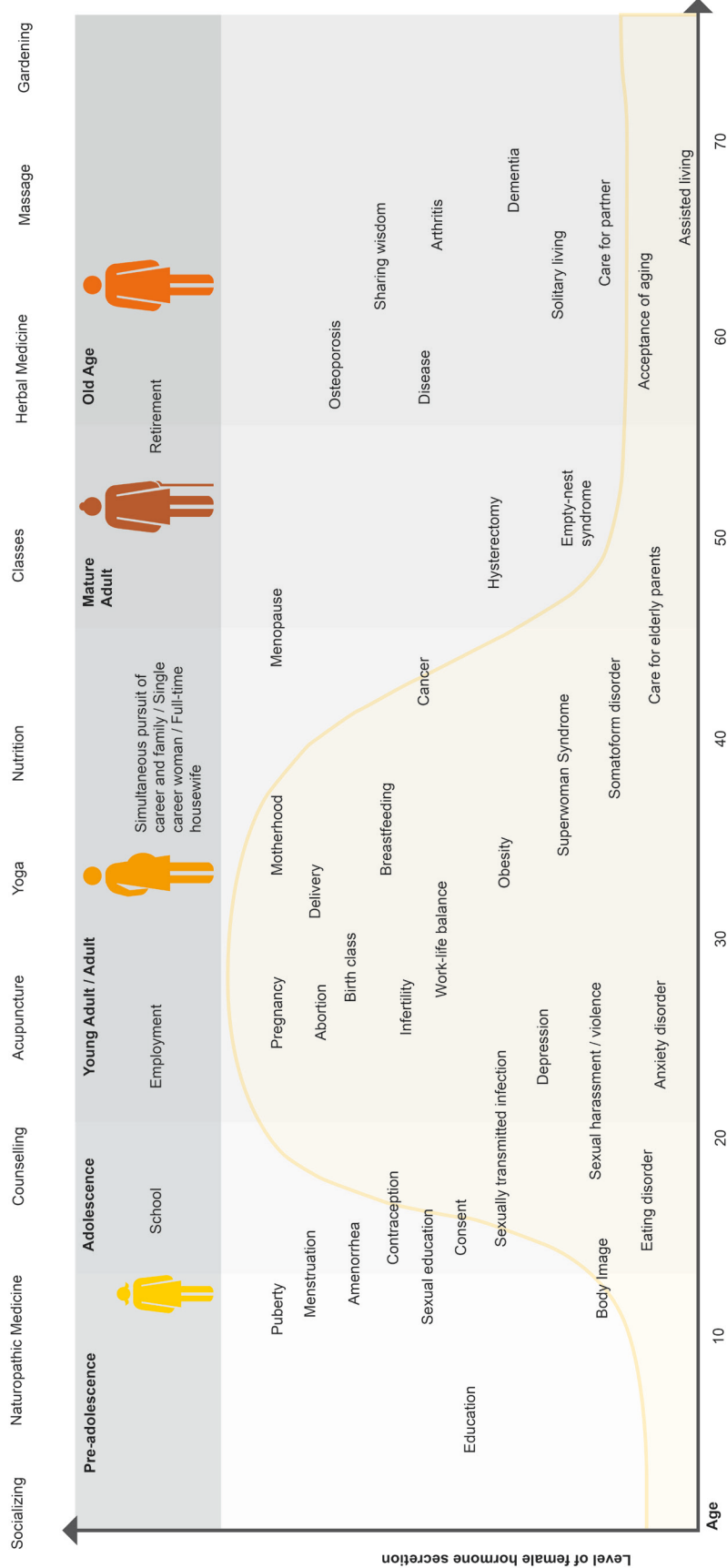
Presently in Canada the reproductive experience is fragmented. It takes place outside of a woman's community and is not seen as a part of everyday life. The services and support available to a woman at each stage of her life vary wildly across the country: sexual education in school or in the family, (in)accessible contraception, abortion and birthing options. In addition, women must contend with stereotyping throughout their lives, from the overly sexualized girl to the disenfranchised old woman. We have arrived at this situation after a long history of medicalization, stigmatization and conservatism; the objective of this work is to use architecture to increase the agency of women within this somewhat contentious arena.

### **Historical Context**

Historical practices and evolution of beliefs are key to understanding the present situation of women's reproductive health. The fundamental ideas that will form the core of this proposal are evident in early societies: a connection with the natural-spiritual world, a balance between inclusiveness and privateness within the community, and a holistic woman-centred approach to healing. The historical trajectories of birth and abortion are highlighted here to demonstrate the effects, both positive and negative, that modernization and encroachment of exterior forces has had on these philosophies.

### **Ancient Practices**

An examination of practices in ancient societies suggests a greater degree of integration of the different aspects of women's reproductive health than is seen in Canada today. Three cultures of significance will be mentioned here: first the traditional Mi'kmaq, which still exists in the Maritimes; second, Ancient Egypt, which influenced the third, Ancient Greek, and both of which form the foundations of Western culture and medicine.



Female life stages; data from Yuko Takeda, "Understanding the Life Stages of Women to Enhance Your Practice"

## **Mi'kmaq**

Aboriginal cultures in North America date back more than 10 000 years. The Mi'kmaq perspective of health and wellbeing “is holistic and is linked to spirituality: healing is associated with restoring harmony and connections,”<sup>1</sup> an idea which manifests in the symbolic medicine wheel. A Mi'kmaq medicine wheel, shown below. The circle represents the human life cycle and all other cycles in nature.<sup>2</sup>



Mi'kmaq medicine wheel; data from Adam Joyce, “Creating an Inclusive School Climate for Aboriginal Learners: A Reference Guide for Teachers”

The Mi'kmaq philosophy of healing and intervention is notable also for its consideration of the individual within the community; Baker notes that the belief that a person must find their own life trajectory is demonstrated in a practice of non-interference in raising children, however the wisdom and experience of elders are viewed as valuable tools for maintaining the community’s culture and traditions.<sup>3</sup>

1. Cynthia Baker and Monique Cormier Daigle, “Cross-Cultural Hospital Care as Experienced by Mi'kmaq Clients,” *Western Journal of Nursing Research* 22, no. 1 (2000): 9.
2. Adam Joyce, “Creating an Inclusive School Climate for Aboriginal Learners: A Reference Guide for Teachers,” Mi'kmaq Confederacy of Prince Edward Island, accessed September 2014, [http://www.mcpei.ca/files/u1/ve\\_School\\_Climate\\_for\\_Aboriginal\\_Learners\\_a\\_.pdf](http://www.mcpei.ca/files/u1/ve_School_Climate_for_Aboriginal_Learners_a_.pdf).
3. Baker and Daigle, “Cross-Cultural Hospital Care,” 16.

Due to the lack of an ancient written language<sup>4</sup> there is little information available on contraception and reproduction in traditional Mi'kmaq culture; however it is significant that the sacred herb for the adult woman is sage, a known contraceptive and abortifacient.<sup>5</sup>

Birthing was separated from everyday life; it typically took place in a separate wigwam as shown below. Mike Petrou describes,

Traditionally, in Mi'kmaw society, the birthing process was the domain of women. ... In the past, Mi'kmaw children were delivered by midwives. As Margaret Johnson, a Mi'kmaw elder, said, "there's no medicine for that. It's just natural." Margaret Johnson also described "maternity teepees" where women would go to give birth: "They have teepees, they used to have birch bark teepees, and one is for women, the ones that are going to have a baby. They take her there when she's ready to have a baby." Mi'kmaw women were traditionally in control of bringing life into the world.<sup>6</sup>



Mi'kmaq wigwam and plan of separate birthing; from Mi'kmaq Spirit, "Mi-kmaw Daily Life: Shelter and Implements"

The tools used in this setting were effectively, the women's hands. Today some members of the Mi'kmaq community continue to use natural medicine and ritual to maintain their health<sup>7</sup>, however with medicalization of health management in Canada, a large shift took place and treatment is frequently sought outside of the community.<sup>8</sup>

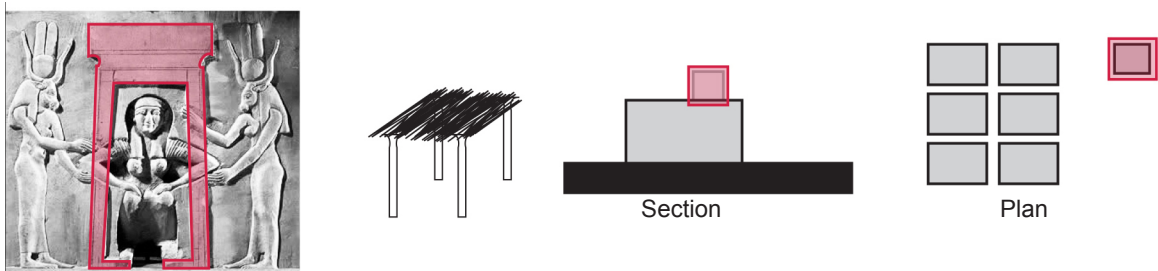
4. Anne-Christine Hornborg, "Visiting the Six Worlds: Shamanistic Journeys in Canadian Mi'kmaq Cosmology," *Journal of American Folklore* 119, no. 473 (2006): 313.
5. John M. Riddle, *Eve's Herbs: A History of Contraception and Abortion in the West* (Cambridge: Harvard University Press, 1997), 61.
6. Mike Petrou, "Two Pathways to Health: Exploring Potential Relationships Between Traditional Mi'kmaw Medicine and Western Biomedicine" (Master's Thesis, Saint Mary's University, 1998), 118-119.
7. Baker and Daigle, "Cross-Cultural Hospital Care," 10.
8. Blythe, "Issues in Health Promotion," 5.

## ***Ancient Egypt***

Ancient Egyptian medicine, where the roots of the West's present medical practices may be found, also exhibits a holistic-spiritual approach to healing. The ancients believed that "many illnesses were a result of maladies both in the soul and the body, therefore the cure must treat both."<sup>9</sup> This was accomplished using charms and incantations.<sup>10</sup> While we may disregard the effectiveness of charms today, the importance of mental and spiritual healing is increasingly an area of focus in present-day medical care.

The earliest records of contraception and abortion date to Egypt's Old Kingdom (2705 - 2250 BC<sup>11</sup>);<sup>12</sup> The Ebers and Kahun Papyri list plant and herb-based remedies for everyday ailments, including a recipe that will "cause a woman to stop pregnancy in the first, second or third period [trimester]."<sup>13</sup> The simple, natural ingredients seen in these recipes recur throughout the history of female reproductive control in the West.<sup>14</sup>

Slightly more prolific than descriptions of abortion and contraception are depictions of birth. The image and sketches below show a woman giving birth in a 'birth arbor' assisted by two goddesses. The arbor was typically located outside and separated from (as shown in the plan), or on the roof of the dwelling (as in the section).<sup>15</sup>



Birth arbor; from Marie Parsons, "Egypt: Childbirth and Children in Ancient Egypt, A Feature Tour Egypt Story"

9. Riddle, *Eve's Herbs*, 66.

10. *Ibid.*, 65.

11. Richard Sullivan, "Divine and Rational: The Reproductive Health of Women In Ancient Egypt," *Obstetrical & Gynecological Survey* 52 (October 1997): 636.

12. Riddle, *Eve's Herbs*, 35.

13. *Ibid.*, 35.

14. *Ibid.*, 35.

15. Sullivan, "Divine and Rational," 640.



Ancient Egyptians saw childbirth as “a normal event not requiring medical help.”<sup>16</sup> Instead of relying on a medical professional’s expertise, women looked to the deities and to other women in the community for support. According to Chamberlain, for example, although the community possessed knowledge of some anaesthetics a birthing woman relied on other women to divert her from her pain as they “filled the birth room and, shrieking loudly in sympathy with the woman during her contractions, made much noise to keep away demons (and men).”<sup>17</sup>

### ***Ancient Greece***

The ancient Greeks, who are credited with the invention of modern rational medicine, were influenced by Ancient Egyptian medicine.<sup>18</sup> The ancient natural-holistic, female-centred approach to reproduction continued in this society, but with a few key developments.

The medical profession had evolved to include more female concerns; the earliest known writing on obstetrics and gynaecology is credited to a Greek doctor working in Egypt in the 3rd - 4th century BC;<sup>19</sup> a resource that also facilitated increasingly formal training for midwives.<sup>20</sup> While the medical practice was expanding to include female-specific considerations, women were initially excluded from the profession, although in later years female doctors became more common.<sup>21</sup>

According to John Riddle, in ancient Greece “...it was accepted that they [women] determined reproduction and that they did so deliberately.”<sup>22</sup> In fact Socrates’ mother was a midwife, and Plato quotes him as saying, “They [midwives] cause miscarriages if they think them desirable.”<sup>23</sup> However, despite these accepting attitudes, a key source of historical anti-abortion sentiment has its origins ancient Greece. Hippocrates, the ‘founder

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16. Geoffrey Chamberlain, “Historical Perspectives on Health: Childbirth in Ancient Egypt,” *The Journal of The Royal Society for the Promotion of Health* 124, no. 6 (2004): 284.

17. *Ibid.*, 286.

18. Sullivan, “Divine and Rational,” 635.

19. F.P. Retief and L. Cilliers, “The Healing Hand: The Role of Women in Ancient Medicine,” *Acta Theologica Supplementum* 7 (2005): 171.

20. *Ibid.*, 177.

21. *Ibid.*, 179.

22. Riddle, *Eve’s Herbs*, 65.

23. *Ibid.*, 64.

of modern medicine,' is believed to have penned an oath (that continues to be taken today, in an evolved form, by students entering the medical profession) that prohibits the physician from causing an abortion by giving a woman a pessary.<sup>24</sup> This was later expanded, through mistranslation, to include all forms of abortion, and was integrated in to the very core of the medical profession and laws surrounding it.<sup>25</sup> Also significantly, it is now believed that the oath was not written by Hippocrates, and did not represent the true Hippocratic practice.<sup>26</sup>

## **Evolution of Attitudes and Practices**

### ***Abortion and Contraception***

The erosion of women's reproductive rights continued with developing religious doctrine and escalated with persecution in the witch trials of the middle ages. However, Riddle maintains that while midwifery and particularly abortion and contraception were under attack in to the 16th and 17th centuries, women maintained their 'folk' knowledge of plant and herbal remedies and therefore maintained some degree of control in this area.<sup>27</sup> This knowledge was largely lost, however, with urbanization and increasing reliance on complex pharmaceutical remedies provided by specialists.<sup>28</sup>

This trend ultimately culminated in the complete criminalization of both contraception and abortion in the late 19th century.<sup>29</sup> Liberal shifts in attitude and legislation only began to occur in the late 20th century and perceptions and attitudes continue to evolve today.

The architecture of abortion is difficult to trace. Prior to the creation of stand-alone clinics, abortion was hidden; it took place in a number of different locations, including the home, often under stressful and unsanitary conditions. Dr. Henry Morgentaler opened Canada's first abortion clinic in Montréal in 1969.<sup>30</sup> The current state of abortion clinic architecture

24. Michael North trans., "Greek Medicine: The Hippocratic Oath," *National Library of Medicine* (2002), [http://www.nlm.nih.gov/hmd/greek/greek\\_oath.html](http://www.nlm.nih.gov/hmd/greek/greek_oath.html).

25. Riddle, *Eve's Herbs*, 38.

26. *Ibid.*, 39.

27. *Ibid.*, 151-152.

28. *Ibid.*, 107.

29. Lori A. Brown, *Contested Spaces: Abortion Clinics, Women's Shelters and Hospitals*, (Farnham: Ashgate Publishing Limited, 2013), 57.

30. *Ibid.*, 58.

will be discussed in a later section. Because of the controversial nature of abortion, one could argue that there has historically been an excessive focus on the privacy aspect of the procedure, possibly to the detriment of other healing principles. This thesis aims to return power to women, and to normalize this area of reproductive health through the provision of supportive services and knowledge and re-connecting with natural practices.

### ***Birthing***

Unlike abortion and contraception, birthing remained a cultural and community-specific event until doctors intervened in the process and it became increasingly medicalized in the late 19th century.

Prior to this institutionalization, birthing in urban centres typically took place in a room in the house that had been arranged by the woman for her lying-in. According to Annmarie Adams,

More than an innovation of architectural convenience, the lying-in room was both a symbolic and visual extension of the mother's body, an observable space through which doctors could expand the conceptual limitations of the body.<sup>31</sup>

Leading up to the entry of the medical profession, the lying in room was the woman's domain, where she exercised control over her surroundings and the birthing process with the help of a midwife and family or friends, also of her choosing.<sup>32</sup> Adams describes that medicine first entered the birthing room through women's desire to have a physician present during the birthing process; they provided an expertise that mitigated the potential dangers of childbirth. Thus doctors began to gain control over birthing, and subsequently pre and post-natal care. First came recommendations for the arrangement of the lying-in room, shown below: that the room be in a quiet, private area of the house (often the rear), away from bad smells, with plenty of daylight, and with only as much furniture as was absolutely necessary.<sup>33</sup> The recommendations came even to contain a 'choreography' of birth, which dictated the specific individuals and objects to be involved, as well as their movements. This included, notably, the woman's complete segregation from the family

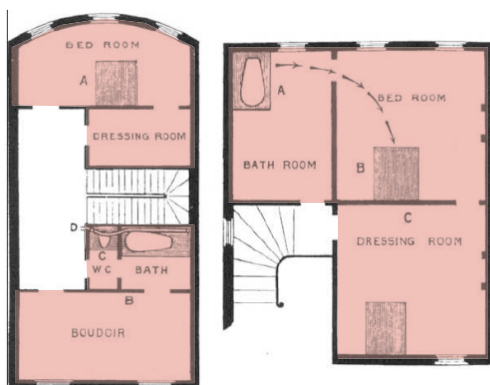
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31. Annmarie Adams, *Architecture in the Family Way: Doctors, Houses and Women, 1870-1900* (Montreal & Kingston: McGill-Queen's University Press, 1996), 103-104.

32. Ibid.

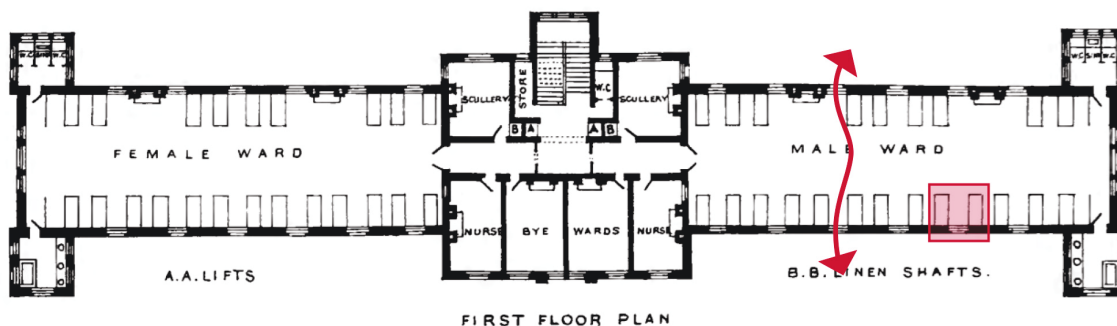
33. Ibid., 115-119.

with the commencement of labour.<sup>34</sup>



Doctor's plan of possible lying-in rooms; from Adams, *Architecture in the Family Way*

These recommendations were followed by a proposal to relocate birthing to an even safer and more controlled environment: the hospital. Early lying-in hospitals were used only by the poor and exhibited deplorable conditions; Florence Nightingale describes overcrowding, poor sanitation and insufficient light and ventilation as the key determinants of high early hospital mortality rates.<sup>35</sup> It was not until hospital design was revolutionized in the late 1800s, by such key figures as Nightingale and Henry Currey that the general public migrated in to the hospital for birthing. Nightingale and her peers promoted the pavilion plan, which focused on natural light and ventilation, and included recommendations for spacing of individual beds (one window for every two beds) and rows.<sup>36</sup> An example is shown below.

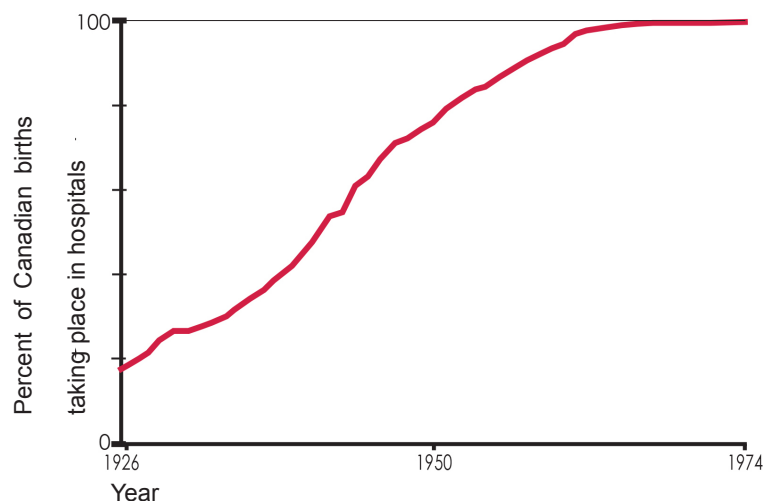


Nightingale pavilion plan; from Nightingale, *Notes on Hospitals*

34. Ibid.

35. Florence Nightingale, *Notes on Hospitals* (London: Longman, Green, Longman Roberts, and Green, 1863), 25.

36. Ibid.



Relocation of birth to the hospital; data from Statistics Canada, “Historical Statistics of Canada”

Today more than 98% of births in Canada take place in the hospital environment.<sup>37</sup> Giving birth may be a very important moment for both mother and child, and the environment in which it takes place certainly has an impact on that experience. Foucault described the hospital as “...an artificial locus in which the transplanted disease runs the risk of losing its essential identity;”<sup>38</sup> birth loses its cultural and societal significance when it is placed in the hospital. He notes further that:

...in any case, can one efface the unfortunate impression that the sight of these places, which for many are nothing more than ‘temples of death’, will have on a sick man or woman, removed from the familiar surroundings of his home and family? This loneliness in a crowd, this despair disturb, with the healthy reactions of the organism, the natural course of the disease; it would require a very skillful hospital doctor ‘to avoid the danger of the false experience that seems to result from the artificial diseases to which he devotes himself in the hospitals.’<sup>39</sup>

In fact women who give birth in the hospital environment deliver by cesarean more frequently, experience more medical interventions than midwife-lead births in either the home or the hospital, and are at risk for nosocomial infections in both mother and child (there are also higher rates of intervention and cesarean for midwife-lead hospital births

37. Public Health Agency of Canada, “Perinatal Health Indicators for Canada 2013: A Report From the Canadian Perinatal Surveillance System.” [http://publications.gc.ca/collections/collection\\_2014/aspc-phac/HP7-1-2013-eng.pdf](http://publications.gc.ca/collections/collection_2014/aspc-phac/HP7-1-2013-eng.pdf).

38. Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (New York: Vintage Books, 1975), 17.

39. Ibid.

than there are for midwife-lead home births).<sup>40</sup> Midwife-lead births are typically only an option for low-risk pregnancies, which skews these results somewhat, however it may also indicate an over-medicalization of birthing where intrusive interventions occur when they may not be entirely necessary. This can be damaging for both the woman and her child. In a 1985 report on birthing in Europe, the World Health Organization stated that:

...by “medicalizing” birth, i.e. separating a woman from her own environment and surrounding her with strange people using strange machines to do strange things to her in an effort to assist her (and much of all this may sometimes be necessary), the woman’s state of mind and body is so altered that her way of carrying through this intimate act must also be altered and the state of the baby born must equally be altered.<sup>41</sup>

The histories of both abortion and birthing have culminated in situations where women have limited control over their bodies and their reproduction, as well as over the physical and social situations in which they exercise that control, and have lost a connection with historical natural-holistic healing methods. This thesis is rooted in this idea that the ideal conditions for birth and abortion, and indeed for any medical procedure, should incorporate the positive aspects of a social approach and a medical approach.

## **Current Conditions in Canada and New Brunswick**

Since the 1988 Supreme Court decision in *R. V. Morgentaler*, abortion has essentially been legal and unrestricted in Canada. Each provincial government regulates the funding that abortion providers receive, and there are currently abortion providers (in either a hospital or clinic environment) in every province and territory with the exception of Prince Edward Island.

Surprisingly, facilities supporting natural birthing are less prolific across Canada than abortion clinics with the exception of Quebec which has 13 birth centres. The availability of midwifery services, which facilitate natural birthing, also varies greatly across the country. Presently the Yukon, Newfoundland and Labrador and Prince Edward Island do not regulate midwifery as a profession, and there are no midwifery services available in

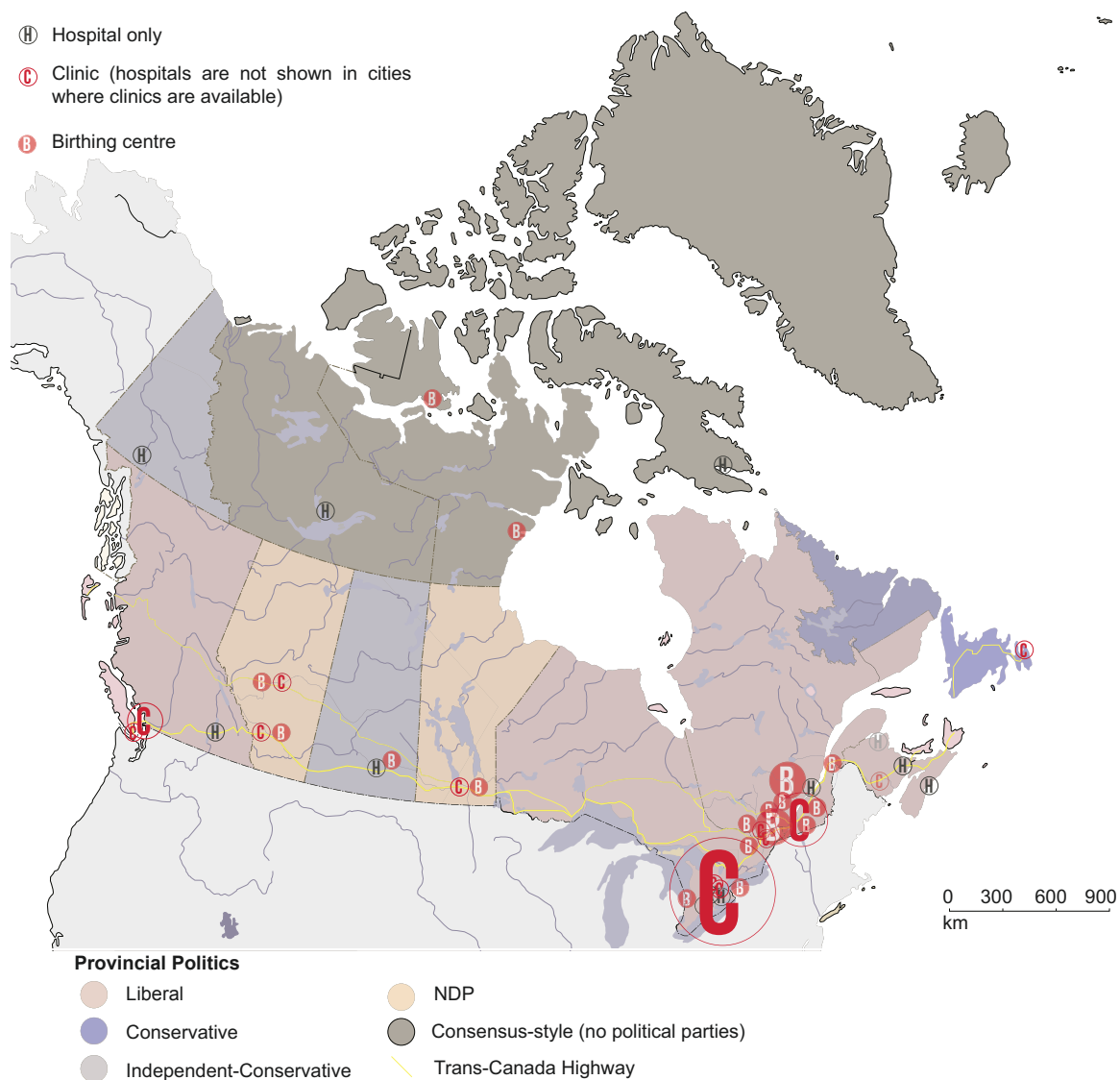
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40. Eileen K. Hutton et al., “Outcomes Associated with Planned Home and Planned Hospital Births in Low-Risk Women Attended by Midwives in Ontario, Canada, 2003–2006: A Retrospective Cohort Study,” *Birth* 36, no. 3 (2009): 187.

41. World Health Organization, *Having a Baby in Europe*, World Health Organization Regional Office for Europe, Copenhagen, Public Health in Europe Series 26 (1985): 57.

those three places as well as in New Brunswick.<sup>42</sup>

Current provincial politics, abortion providers and natural birthing facilities in Canada are shown below.



Abortion and natural birthing options in Canada; base map from Natural Resources Canada, "Canada"

## Abortion

Although clinics have excellent safety records, offer more flexible care and have helped to keep the cost of abortions as low as possible, the separation and dislocation of the service

42. Canadian Association of Midwives, "Midwifery in Canada – Provinces/Territories," accessed October 2014, <http://www.canadianmidwives.org/province/Alberta.html>.

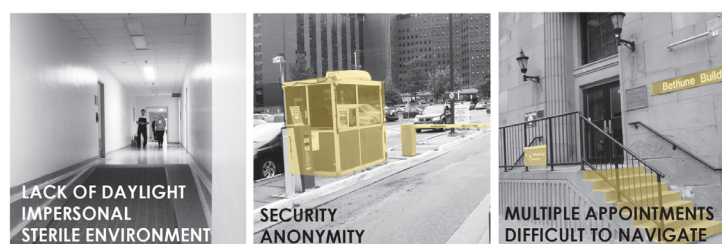


being situated outside ob/gyn practices and general medicine in stand-alone spaces has had a negative effect on the relationship between abortion to the rest of the medical profession.<sup>43</sup>

In most provinces there are abortion services in both a hospital and clinic environment (the only option in all three territories is a single hospital). The hospital environment provides a level of anonymity and separation from protesters that is missing at a clinic, however as with the birthing experience described above, the hospital may be a sterile, impersonal environment, and often multiple appointments are required for testing before the procedure (e.g. ultrasound, blood sample, etc.) whereas many clinics can provide complete services in a matter of hours.<sup>44</sup> A woman may also encounter unsupportive attitudes due to the large number and rotation of staff within a hospital; one woman in New Brunswick reported that:

...the people that I was dealing with in the hospital would put some doubt in me...what if it's harder to deal with getting an abortion than not getting an abortion...it sort of seemed like that my decision wasn't respected...<sup>45</sup>

An example of a typical hospital environment is shown below:



QEII Hospital in Halifax, NS

The clinic environment provides a more tailored and personal level of care. Both clinics and hospitals may attract protesters, however due to the stand-alone nature of the clinic interactions with protesters are more direct. The location of clinics within the city reflects, and also propagates societal attitudes and the stigmatization facing the procedure today, as well as its segregation from the rest of the medical profession.<sup>46</sup> The diagrams below show the present situations of abortion clinics in Canada.

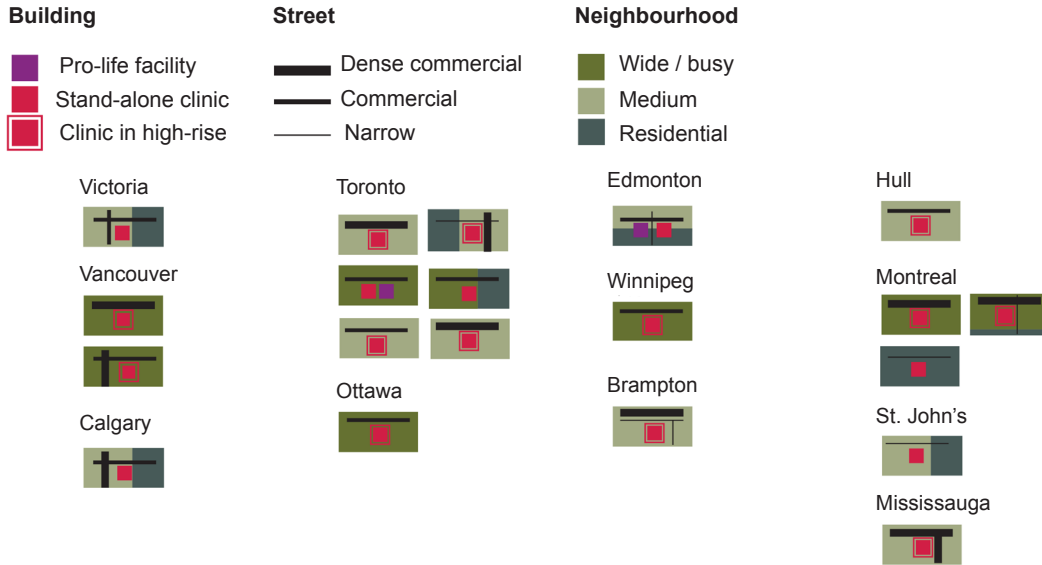
43. Brown, *Contested Spaces*, 195.

44. Kensington Clinic, "FAQs," accessed August 2014, <http://kensingtonclinic.com/faq/>.

45. National Film Board of Canada, *Status Quo? The Unfinished Business of Feminism in Canada -- Abortion Rights*, film, directed by Karen Cho (2012) 9:56-11:24.

46. Brown, *Contested Spaces*.

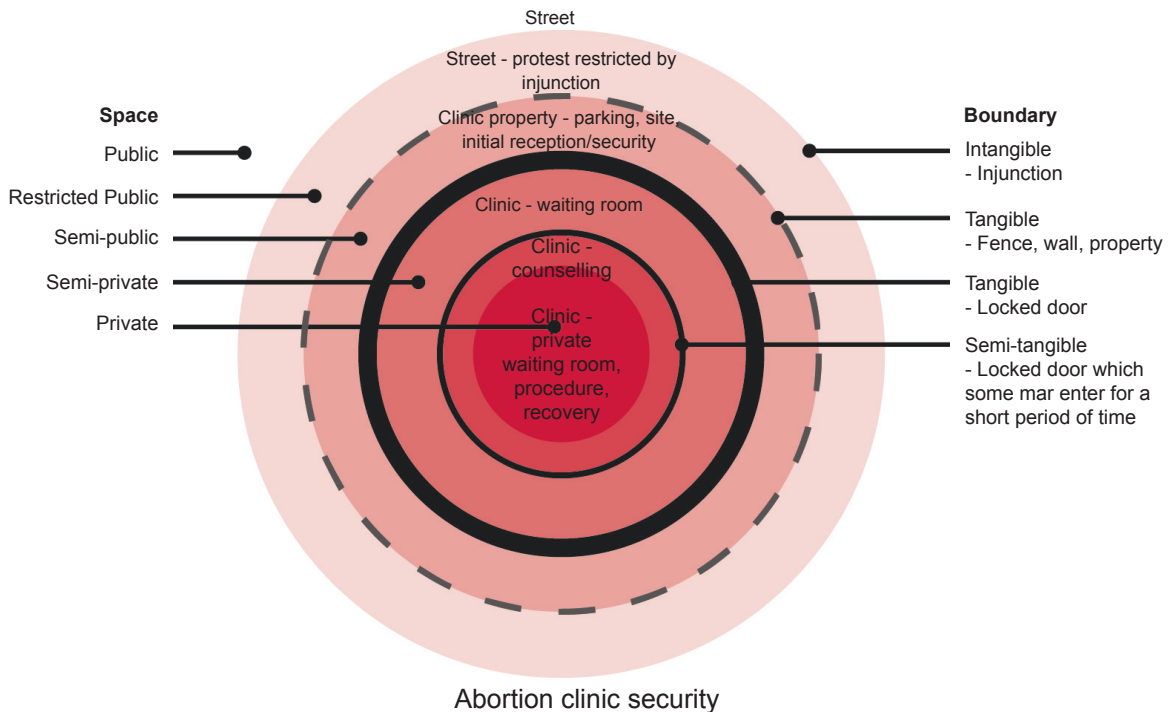




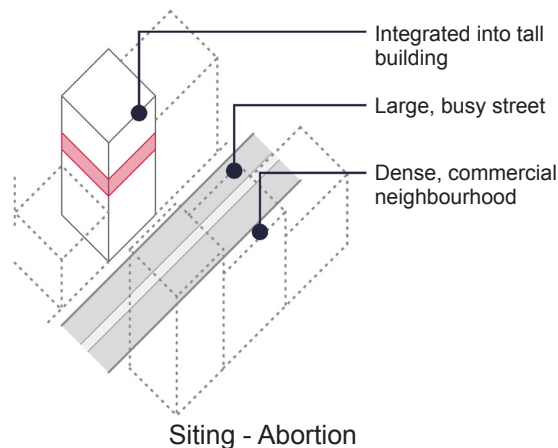
Canadian abortion clinic siting

Clinics that are situated in a more liberal environment (e.g. Montréal) tend to be integrated with the building and city fabric, in a commercial centre, which may also prevent anti-choice groups from easily targeting the clinic. A location on a large busy road is also simple mechanism to limit the impact of protesters.

Abortion clinics require special attention to security and privacy issues, in both their siting and architecture. Below is an example of the levels of security and privacy, as well as types of boundaries within a clinic.



The figure below outlines the 'ideal' siting parameters for an abortion clinic. The outcome of the studies supports Lori Brown when she argues that clinics should be located in central locations where they are easily accessible, effectively fulfilling both security and political aspirations.<sup>47</sup>



### ***New Brunswick***

On January 1, 2015, the province of New Brunswick officially dropped a more than 30 year old regulation restricting access to abortion in the province. The unconstitutional law required that, in order for the procedure to be covered by Medicare:

The abortion is performed by a specialist in the field of obstetrics and gynaecology in a hospital facility approved by the jurisdiction in which the hospital facility is located and two medical practitioners certify in writing that the abortion was medically required<sup>48</sup>

The regulation now reads, "The following are deemed not to be entitled services: ... (a.1) abortion, unless the abortion is performed in a hospital facility approved by the jurisdiction in which the hospital facility is located;"<sup>49</sup> thus abortion may be performed by all doctors but remains confined to the hospital environment. This is certainly a positive step, but the ongoing lack of support for independent practices reflects a desire on the government's part to retain control over the procedure (including, for example, time limits on the procedure which are presently 12 weeks compared to up to 24 weeks elsewhere in

47. *Ibid.*, 195.

48. Government of New Brunswick, "New Brunswick Regulation 84-20 under the Medical Services Payment Act," filed February 13, 1984, <http://www.gnb.ca/0062/PDF-regs/84-20.pdf>.

49. Canlii, "General Regulation, NB Reg 84-20," accessed February 24, 2015, <https://www.canlii.org/en/nb/laws/regu/nb-reg-84-20/latest/nb-reg-84-20.html>.

Canada).<sup>50</sup> Restricting abortion to the hospital keeps it out of the public eye, and without additional measures, unsupportive attitudes such as those experienced by the hospital patient quoted above, are not addressed.

The Morgentaler Clinic in Fredericton, which reopened in 2015 with the assistance of community funding after closing in July 2014 due to lack of financial support from the province, was historically the only facility providing unrestricted abortions in the province. However these services are financially inaccessible for many, with abortions costing between \$700 and \$850.<sup>51</sup> The clinic (Newly re-named Clinic 554) has adopted many of the philosophies that this thesis advocates; it aims to provide a wide variety of patient-centred services in an atmosphere of “respect, inclusiveness, and evidence-based best practices.” The architecture of the clinic is not reflective of this, however; the siting of the clinic and intrusive security measures are shown below.



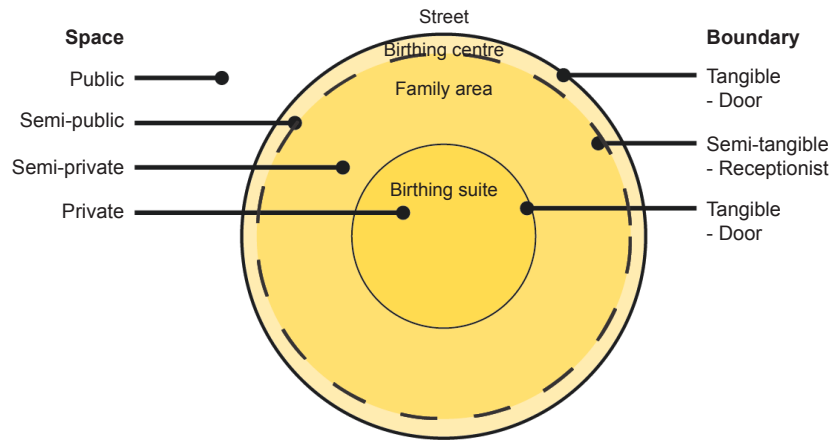
Fredericton Morgentaler Clinic siting and security; from National Film Board of Canada, *Status Quo*

## Natural Birthing

Birth Centres are situated very differently from abortion clinics. They do not incite the controversy that abortion clinics do, and in fact may be actively celebrated and supported by their community. There are privacy requirements within a birthing centre, but little need for security measures. A key concern for a birthing centre is physical accessibility, as it must be available at all hours and on short notice. An example of the levels of security and privacy, as well as types of boundaries within a birth center is shown below.

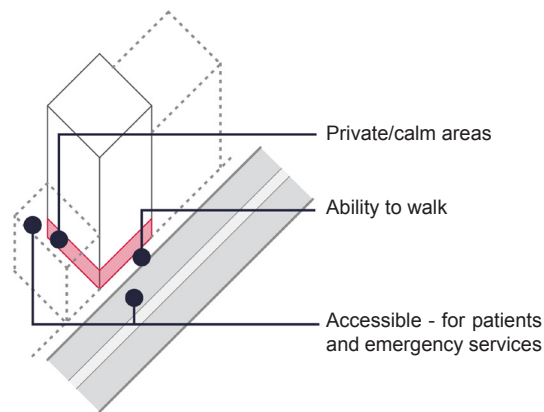
50. Abortion Rights Coalition of Canada, “List of Abortion Clinics in Canada,” (2014), accessed August 2014, <http://www.arcc-cdac.ca/list-abortion-clinics-canada.pdf>.

51. Morgentaler Clinic, Fredericton, New Brunswick, “Fees,” <http://www.morgentalernb.ca/fees.html>.



Birth centre layout and levels of security

These objectives translate in to a different set of ideal siting parameters:



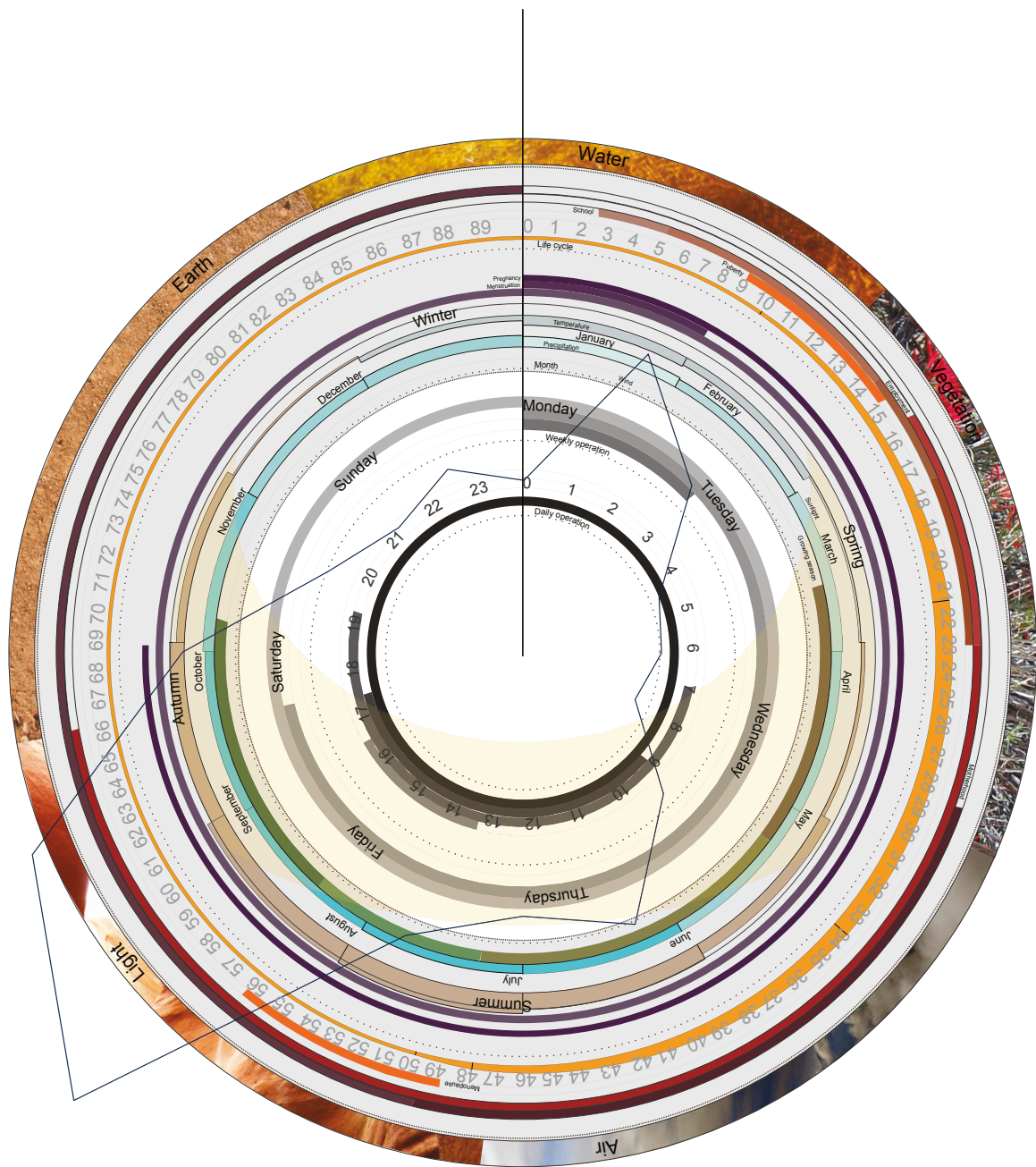
Siting - Birthing

## Elements of Health and Healing

This thesis advocates a modern return to a holistic, woman-centred approach to care and community. The aim is to create a facility that is both individual and communal, allowing a woman to exercise control over her environment and experiences while connecting her with her community and the natural world.

The architecture aims to concretize the social and political aspirations of the project. Design intentions revolve around three main ideas: connection with nature, a holistic approach to care, and balance between inclusion and privacy. The aim of this design is to create a space that embodies the complex rhythmic nature of a woman's life cycle. The architecture strives to be simple and fluid; capable of adapting to the changing needs of an individual as she moves through life.

The facility must cater to many rhythms, from the everyday work-week to natural cycles of the seasons and the body.

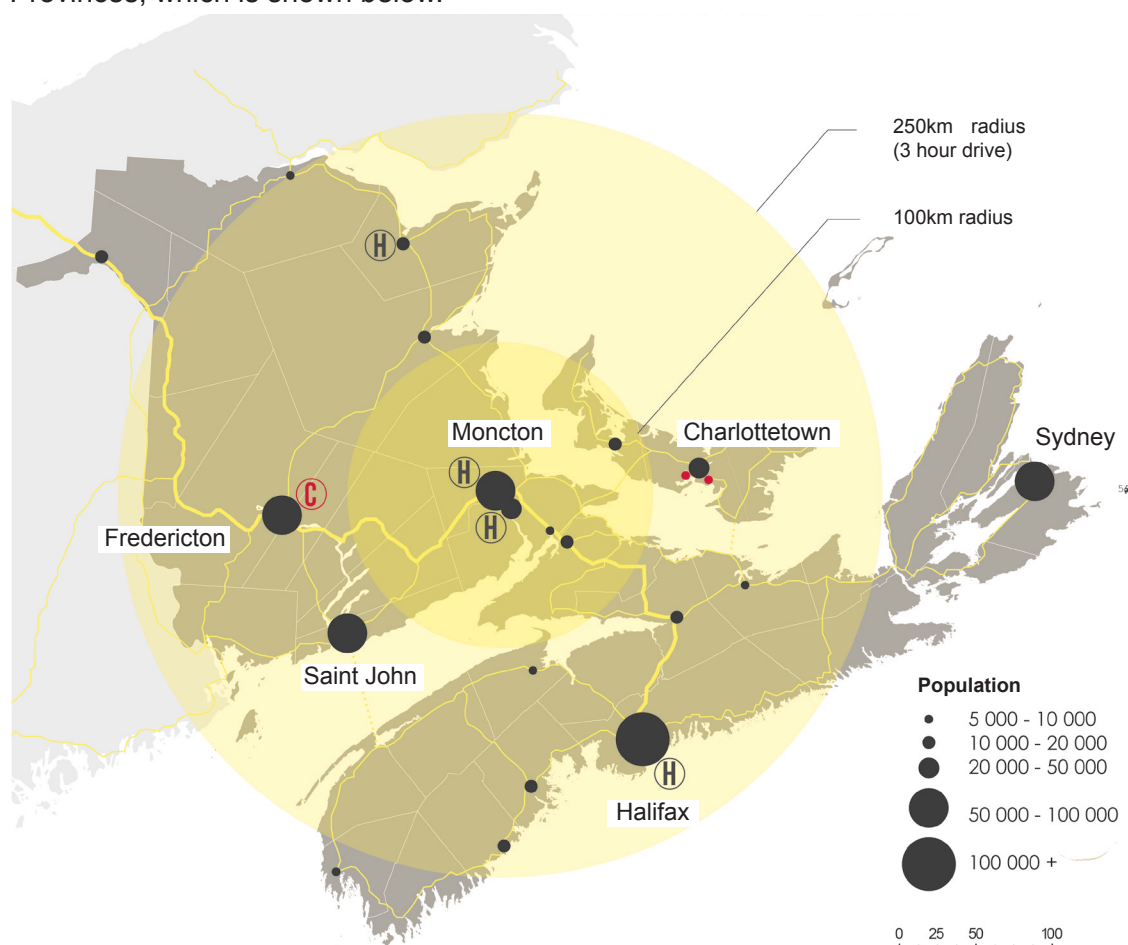


Concept as a system of overlaid cycles

## CHAPTER 2: DESIGN

### Siting

New Brunswick has a long history of political conservatism; it was among the first provinces to criminalize abortion in the mid-1800s, along with removing the distinction between the quick and non-quick fetus in the legislation.<sup>52</sup> While both New Brunswick and Prince Edward Island have limited access to abortion and natural birthing services, New Brunswick was selected as an ideal site in which to test this thesis because of its present and historical conservatism, as well as a high level of accessibility within the Maritime Provinces, which is shown below.



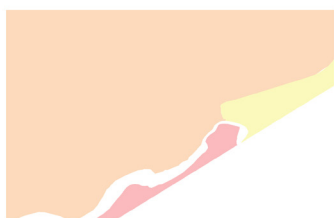
Population and accessibility in Maritime provinces; base map from Province of Nova Scotia, "Counties of the Maritime Provinces"

Moncton was selected as the most accessible city in which to site this thesis. It is the

52. J.Douglas Butler and David F. Walbert, eds., *Abortion, Medicine and the Law* (Martinsville: Fideli Publishing Inc., 1992), Ch. 12.

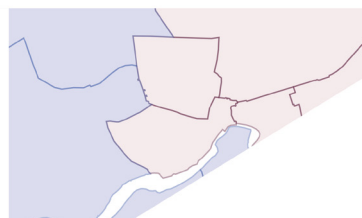
second largest city in New Brunswick (and is directly adjacent to Dieppe and Riverview, for a total population that is the largest in the province) and is easily accessed along the TransCanada Highway and train lines from PEI and most parts of New Brunswick and Nova Scotia.

The city was mapped with a focus on key characteristics observed in earlier site analyses; namely searching for dense commercial centres on busy streets in an area with high accessibility and liberal politics.



Language

Moncton - 75% English  
 Dieppe - 74% French  
 Riverview - 95% English



Politics

Moncton Centre - Liberal  
 Moncton Southwest - P.C.  
 Moncton East - Liberal  
 Albert - P.C.  
 Shediac Bay-Dieppe - Liberal  
 Moncton South - Liberal  
 Moncton Northwest - P.C.  
 Riverview - P.C.  
 Dieppe - Liberal



Public Transport

Bus and train networks



Services

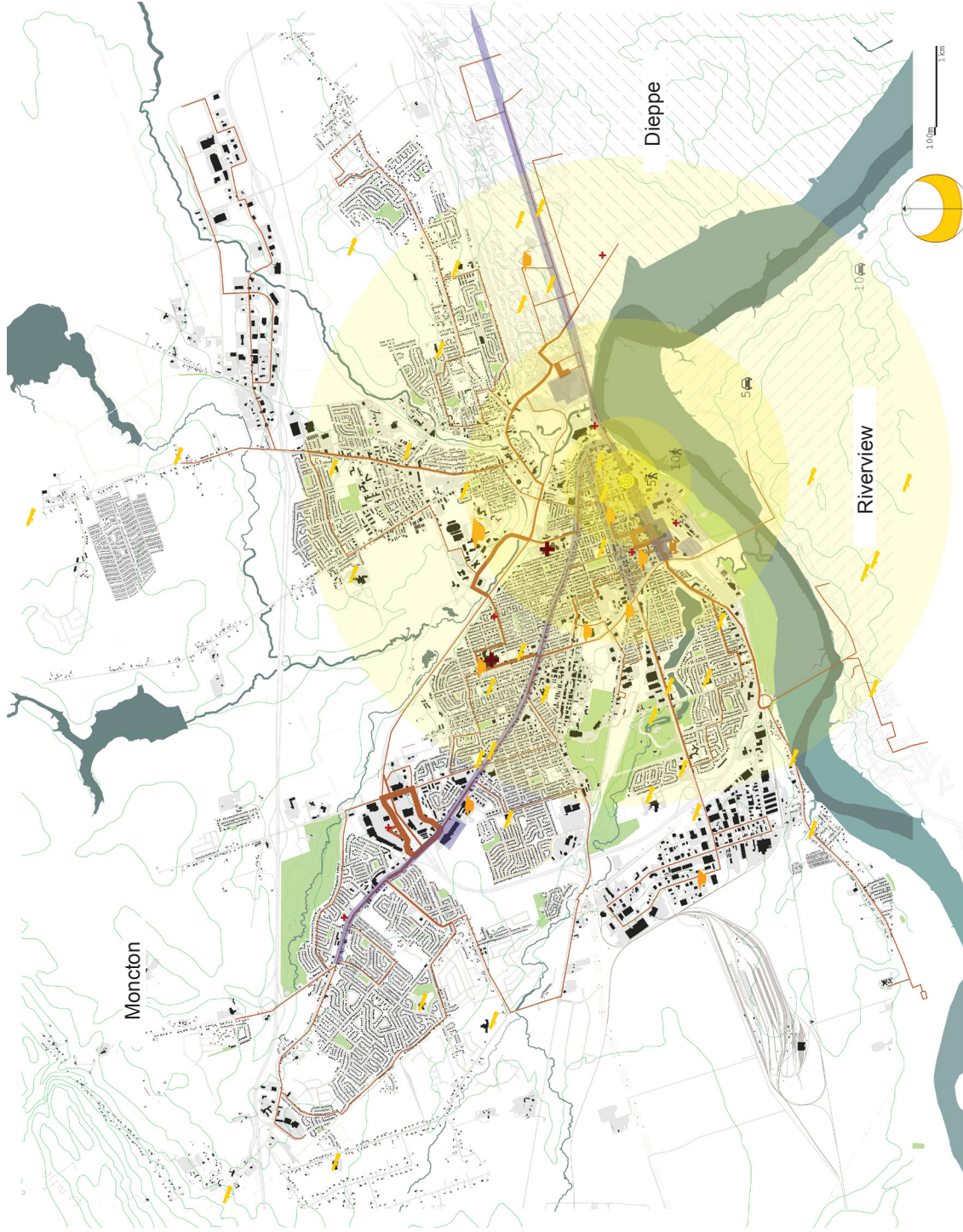
Health Centres Commercial districts (many commercial streets and districts, few with significant density)



Natural Areas

Parks and water





- Site
- 🚌 Bus / train station
- Bus route
- Cultural / commercial area
- ⛔ Hospital
- ⛔ Clinic
- 🎓 Grade school
- 🎓 Higher education

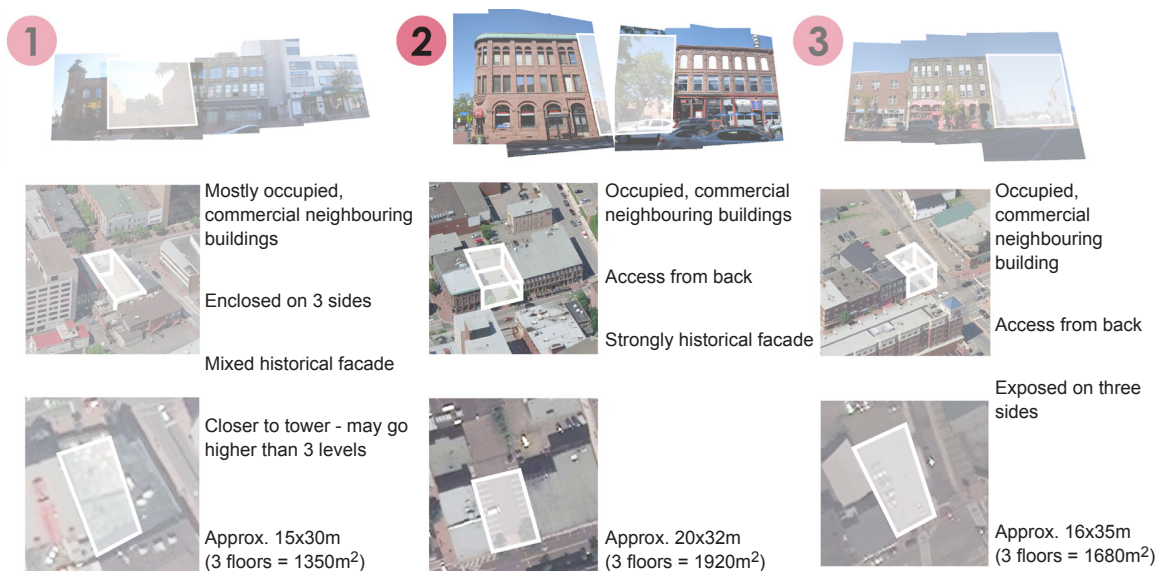
Moncton - Riverview - Dieppe; base map from City of Moncton, GIS Entire City





Downtown Moncton; data from City of Moncton, *GIS Entire City*

Based on this information downtown Moncton, particularly Main Street, was selected as the area of focus for a site visit in October 2014. In order to retain maximum architectural control over the building and site only empty sites were considered. Three potential sites were selected; important aspects are outlined below.



Three sites; from Bing Maps

Site two was selected for a number of reasons. It is enclosed on two sides, which provides a level of security and control that site three, which is exposed on three sides, is lacking. Site three is an exposed site that may make a more aggressive political statement, however the end goal of this thesis is to normalize this perspective, thus a site that is more integrated in to the city fabric was selected. Site two also provides an opportunity for a back entrance, which may be important for emergency medical, loading/delivery and privacy concerns and is missing in site three, which is enclosed on three sides and has only a narrow dead-end lane for a secondary entrance. Finally, site two is the largest of the sites and has a strong physical historical aspect in the façade that is a useful tool to express the political aspirations of the project.

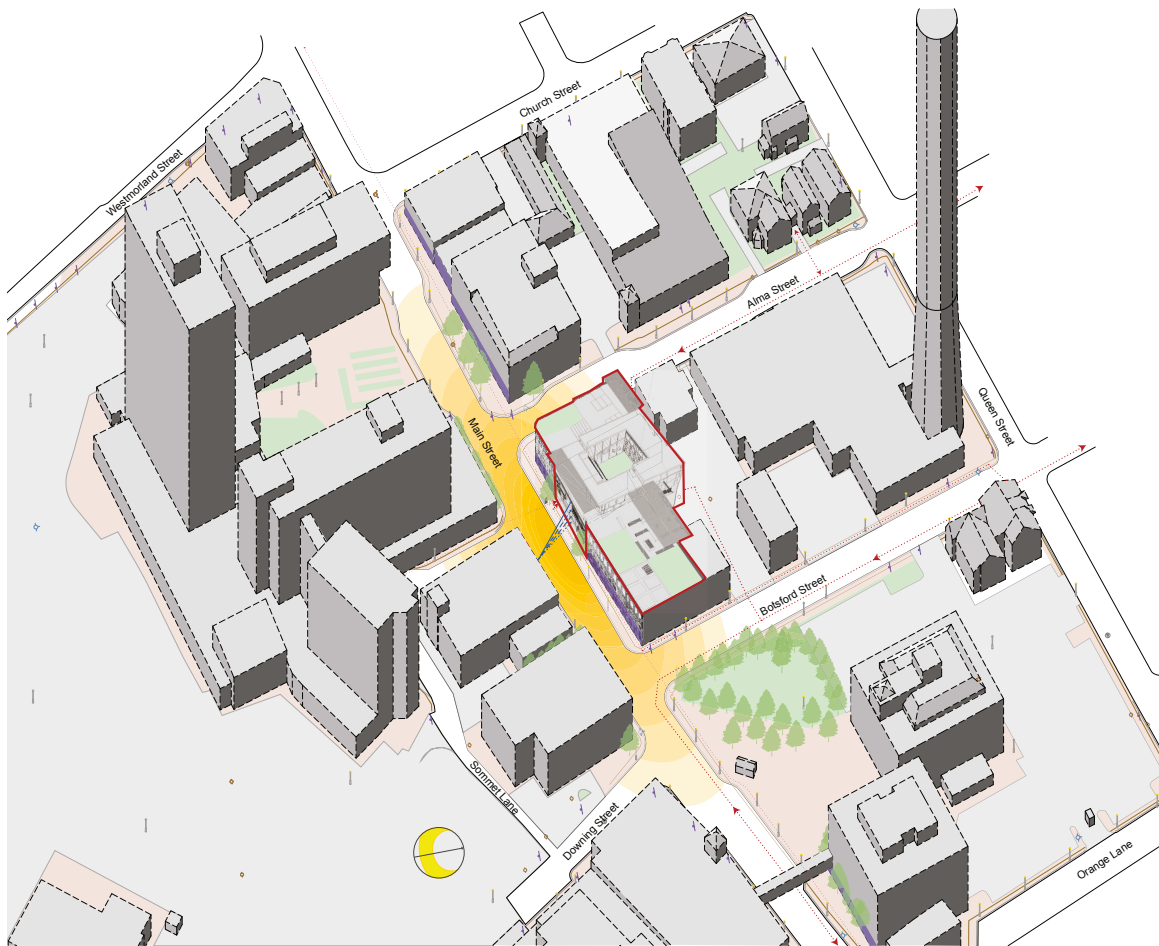
Abortion remains a contested issue in Canada; there will be protesters at a facility such as this. The building is located on a large commercial street, which provides eyes and bodies on the street as well as screening mechanisms across the busy road. The aim of this design is to stimulate discussion by making both sides of the issue visible and accessible while maintaining a safe environment. This plays out on many levels in the design.

## Urban Scale

A wide range of expertise and technical resources will be required to deal with the range of conditions throughout a woman's life. A patient-centred model is proposed where the

facility is able to accommodate a rotation of on-site practitioners as well as supporting off-site practitioners and outreach programs. The facility aims for integration on a community scale as well as at the personal / building scale. A number of strategies were used to achieve this.

## Integration Strategies



- City fabric
- Green space
- Commercial storefront
- Visibility
- Accessibility

### Urban scale site considerations

#### **City Fabric**

The building is inserted in to the existing block, integrating with historical building fabric and the public streetscape.

### ***Green Space***

An interior courtyard relates to the streetscape and punctuating downtown green spaces, while the rooftop garden expands on to neighbouring buildings.

### ***Visibility***

The location of the building provides a high level of visibility to the public along a busy commercial street and an opportunity for passive participation as well as surveillance on both sides.

### ***Accessibility***

The site is accessible to a maximum number of people within Moncton-Riverview-Dieppe, being located in close proximity to public transit as well as municipal and provincial transit hubs. It provides front and back entrances in a central location, near parking and other services (such as commercial and shopping districts, hotels, etc.).

### ***On-Site Services***

A variety of services are available on-site, creating a central hub with a variety of user groups and promoting interactions between groups and individuals at the facility.

### ***Mobile Services / Outreach***

As the facility is accessible to the city, the city is accessible from the site, enabling off-site services to be provided to a variety of people and locations. Practitioners are mobile and can offer services and education off site (at hospitals, homes, schools, etc.). This serves to integrate and embed the underlying philosophies in the community, and to provide women with agency within other, exterior arenas.

## **Building Scale**

### **Design Ideology**

The building is essentially a coming-together of experiences, with the aim to create a rhythm of tactile and experiential systems within the design. It is a flexible space that fits in to a woman's everyday rhythms as well as becoming a place of significance for meaningful

life events. Key experiences are illustrated on the following pages.

### ***Non-Distinction***

All users of the facility are treated as equals, without distinction based on their status as practitioner or patient, or the type of procedure that they are seeking. This begins with the common front entrance and continues throughout the building in spaces that are re-configurable and are not defined by any one use or user.

### ***Nature***

The architecture strives to create a connection with the natural elements of earth, air, water, light and vegetation. This manifests in different ways for different users: as an outdoor exercise class, or more private reading space, as an individual birthing tub, or a communal pool, or simply as walking through the entry courtyard.

### ***Control***

Today many ideas of feminism revolve around control, the architectural expression of which is control over one's environment, in terms of visibility and audibility, as well as temperature and access to light and air.

### ***Community***

The ultimate goal is to create connections between women in the community and encourage mutual support and learning. This includes the more defined roles of health practitioner and patient, as well as informal interactions and access to information and resources without the need to consult an expert.

The facility provides a variety of practical healthcare services within the holistic framework. The main objective in situating a variety of services in close proximity to each other is to facilitate sharing of expertise, resources and experiences. This includes a practical aspect in that the number of potential patients/practitioners is maximized, but more importantly the bringing together of seemingly exclusive and contradictory aspects of women's lives encourages interaction, exchange and acceptance. Life course theory hypothesizes that a person's experiences, choices and situation at each stage of their life have implications





Anonymity at the street entrance





Communal pool area





Birthing suite





Research and reading material





Control over space and environment





Natural outdoor space



for their later life,<sup>53</sup> thus if women are able to freely share and discuss their choices and views there is great potential to create changes in attitude.

### **Building Elements and Systems**

The aim is to create a simple, flexible architecture that is able to adjust to the complexity of one woman's journey through life. Materials are used to create a procession through the building, and to mediate between public and private experiences. The result is a set of overlaid material and programmatic systems, rooted in the natural world with an emphasis on visibility, connection and movement, shown on the following pages.

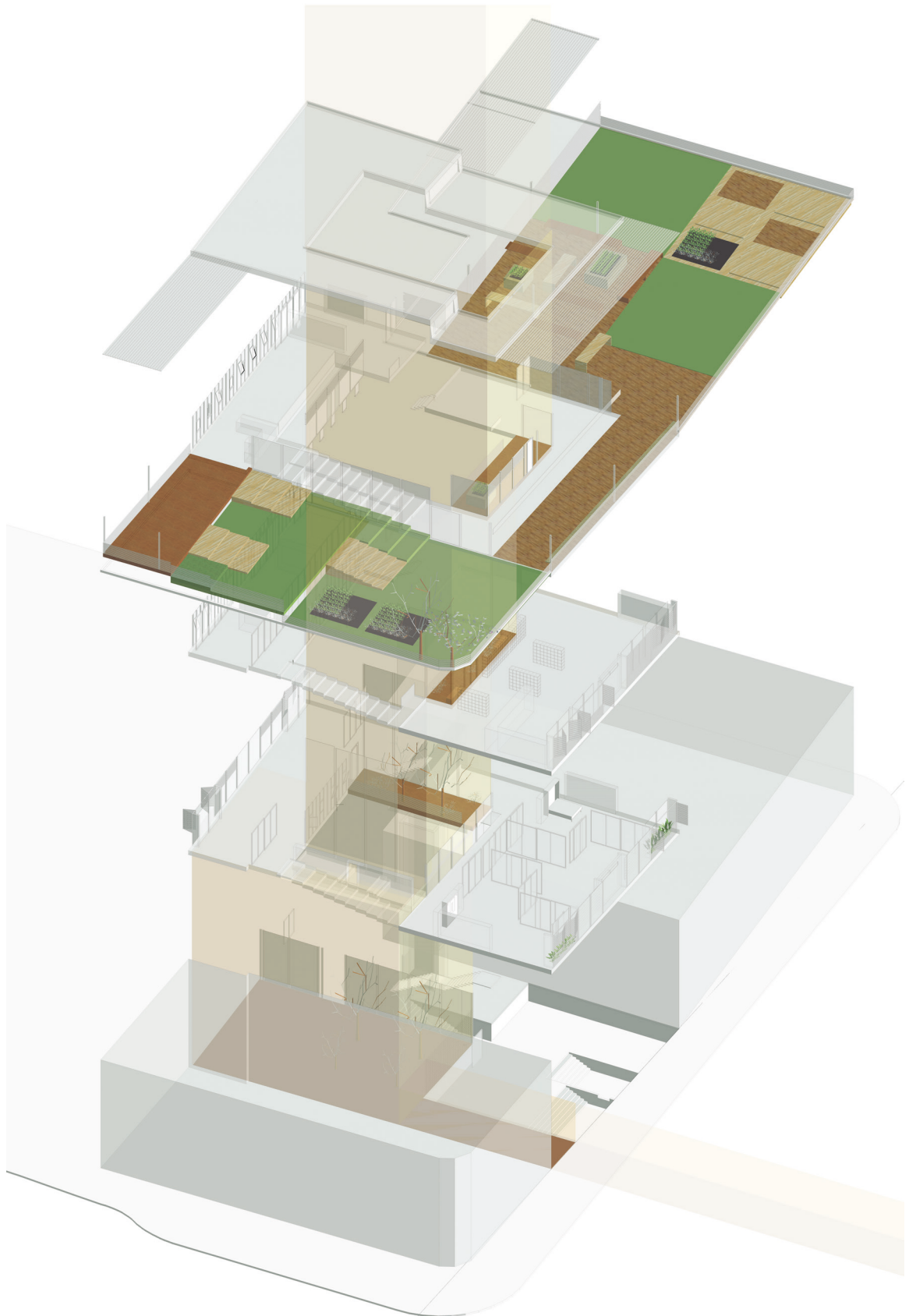
These systems and materials also recall Moncton's rich natural heritage. The Petitcodiac river, with its tidal fluctuations, rich earth and lush vegetation, has been an important aspect of life in Moncton since it was used by the Mi'kmaq as a portage stop thousands of years ago.



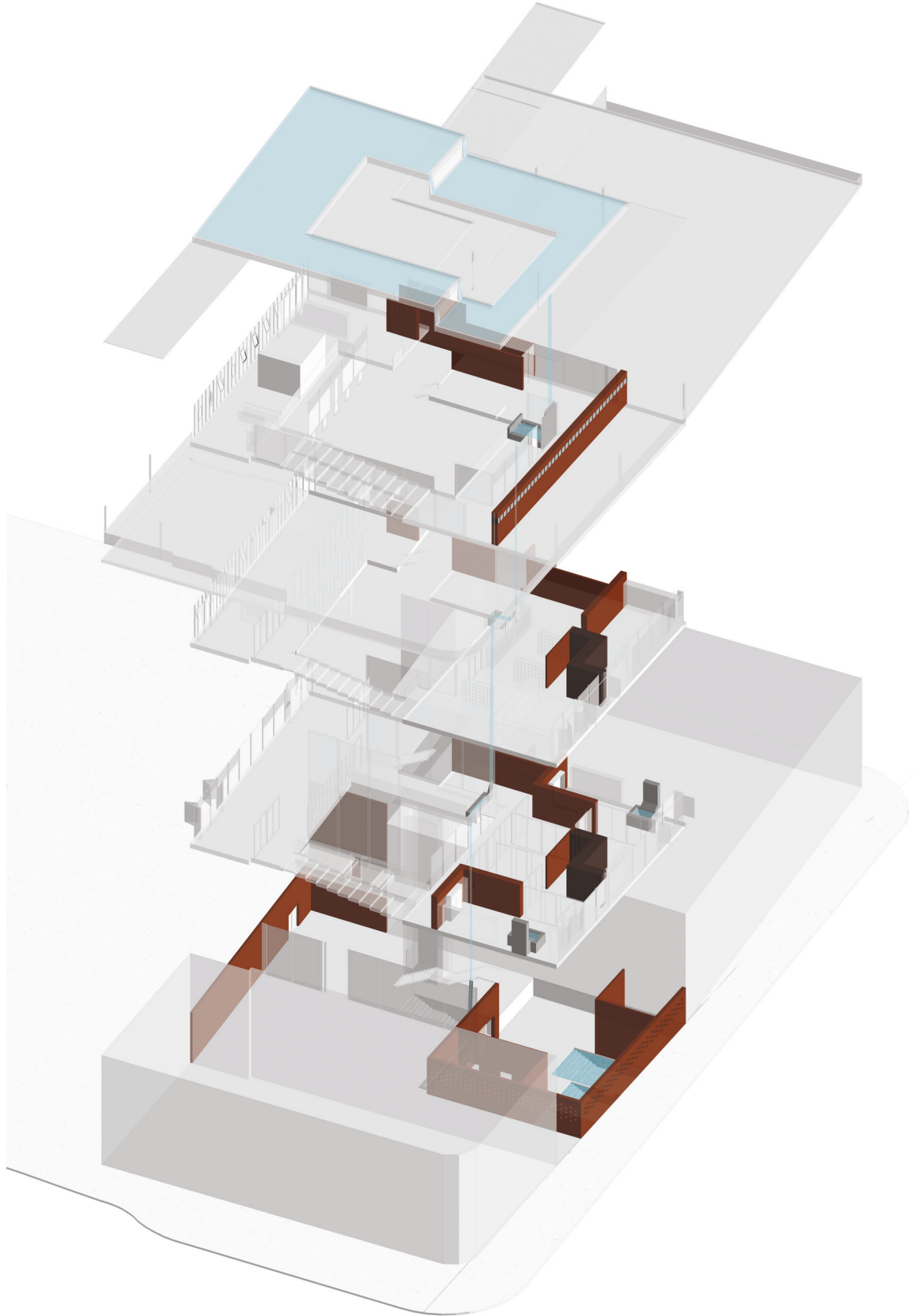
Petitcodiac River in Moncton

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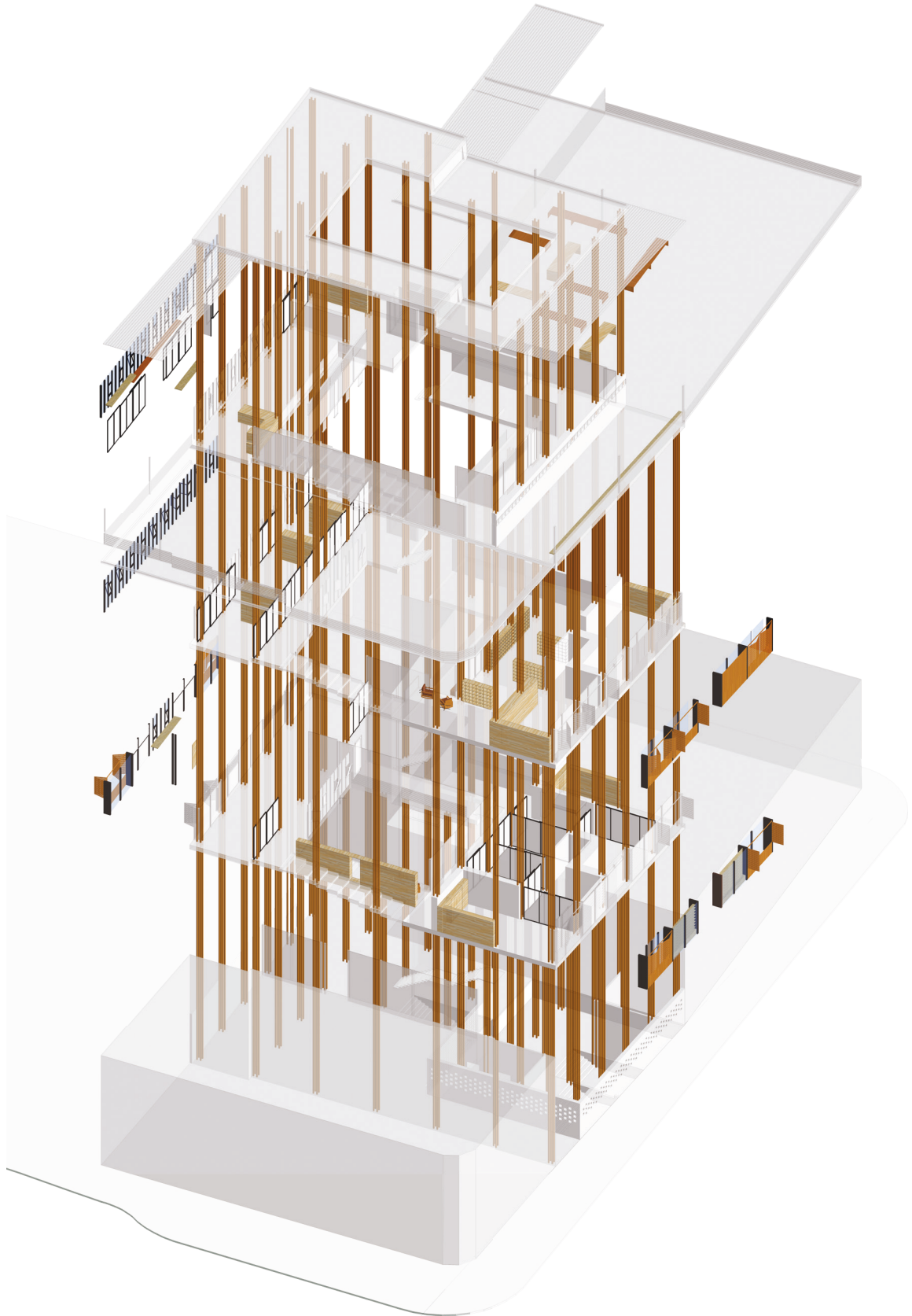
53. Hanna Jokinen-Gordon, "Still Penalized? Parity, Age at First Birth and Women's Income in Later Life," *Journal of Women & Aging* 24, no. 3 (2012): 227.



Light and vegetation



Earth and water



Wood and flexibility

***Light***

Connection with the natural environment has been shown to be a vital aspect of the healing process as well as everyday health and wellbeing. Daylight and fresh air are available throughout the building through a central light well and operable layered façade.

***Garden***

A variety of garden spaces run through the building and are experienced in a number of capacities, from rest and reflection as a non-participatory observer, to active participation and outgoing connection.

***Water***

Water is another natural element that is present in a variety of participatory capacities. Water is associated with earth, in keeping with water's natural association with gravity.

***Earth***

Earth leads the user through the facility and wraps around moments of pause, particularly those associated with water.

***Wood***

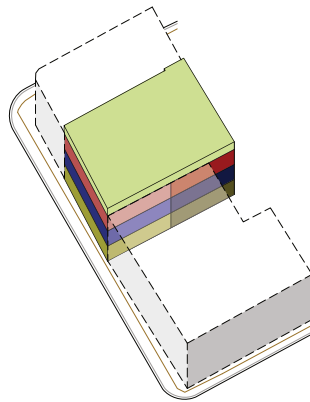
Wooden elements signify change and mobility. This includes the structure, which allows the moveable partitions to pass through it. Wooden furniture elements divide spaces and provide them with adaptable furnishings, while wood and glass elements combine in a layered façade to allow for control over individual environments.

**Integration Strategies*****Program***

Bringing-together of separate and seemingly contradictory program in to one building decreases segregation of services in the public eye as well as for the patient.



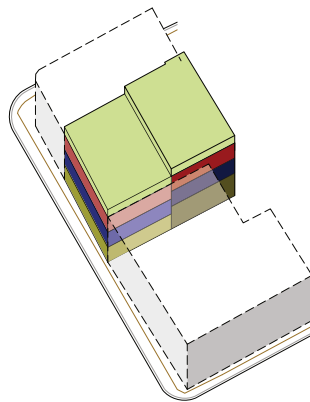
- |  |   |
|--|---|
| <span style="color: #90EE90;">●</span> Green space                 | <span style="color: #000080;">●</span> Surgery        |
| <span style="color: #C00000;">●</span> Group work / meeting spaces | <span style="color: #90EE90;">●</span> Public program |
| <span style="color: #800000;">●</span> Offices / consultation      | <span style="color: #6B8E23;">●</span> Reception area |
| <span style="color: #000080;">●</span> Birth suites                | <span style="color: #666666;">●</span> Circulation    |



Program

### ***Split level***

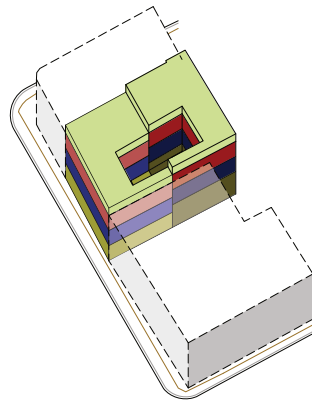
Offset floors create greater visual and auditory connection between programmatic components



Split levels

### ***Light well***

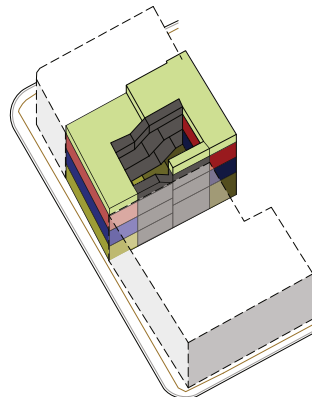
Addition of a light well/inner courtyard creates visual connection within the open interior as well as neutral common space between programmatic elements.



Light well

### ***Split Circulation***

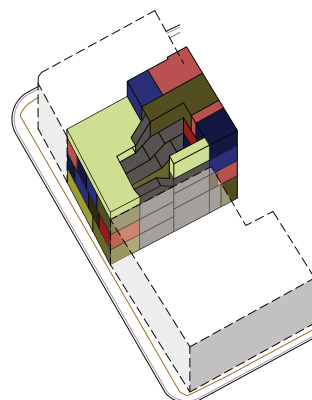
Distribution of circulation promotes interaction with a variety of program and building elements



Split circulation

### ***Integrate Program***

Individual spaces that make up larger programmatic elements are distributed throughout the facility to provide maximum opportunities for mixing and interaction between user-groups, as well as efficiency and flexibility of the building and its operation.



Integrated program

## **Orthographics**

Building plans and sections are shown on the following pages.

The common entrance creates an extended threshold when entering the facility. This is used for passive security, while the courtyard grounds the facility in nature and allows glimpses of the upper floors. This entry courtyard on the ground floor connects upward through the building with overlapping and increasingly social terraces on the second and third floors to an active and productive roof garden that expands on to neighbouring rooftops. Rainwater and snow melt descend through a series of troughs on these terraces, within the light well, where it may be used to water plants.

Visibility to and from the public street is controlled using a variety of screening mechanisms that allow light and air to pass through while limiting visual and auditory connection. Moments of pause are incorporated along circulation routes, and include seating, library, social and exterior spaces.



Section 1



Section 1 detail





Section 2



Section 2 detail



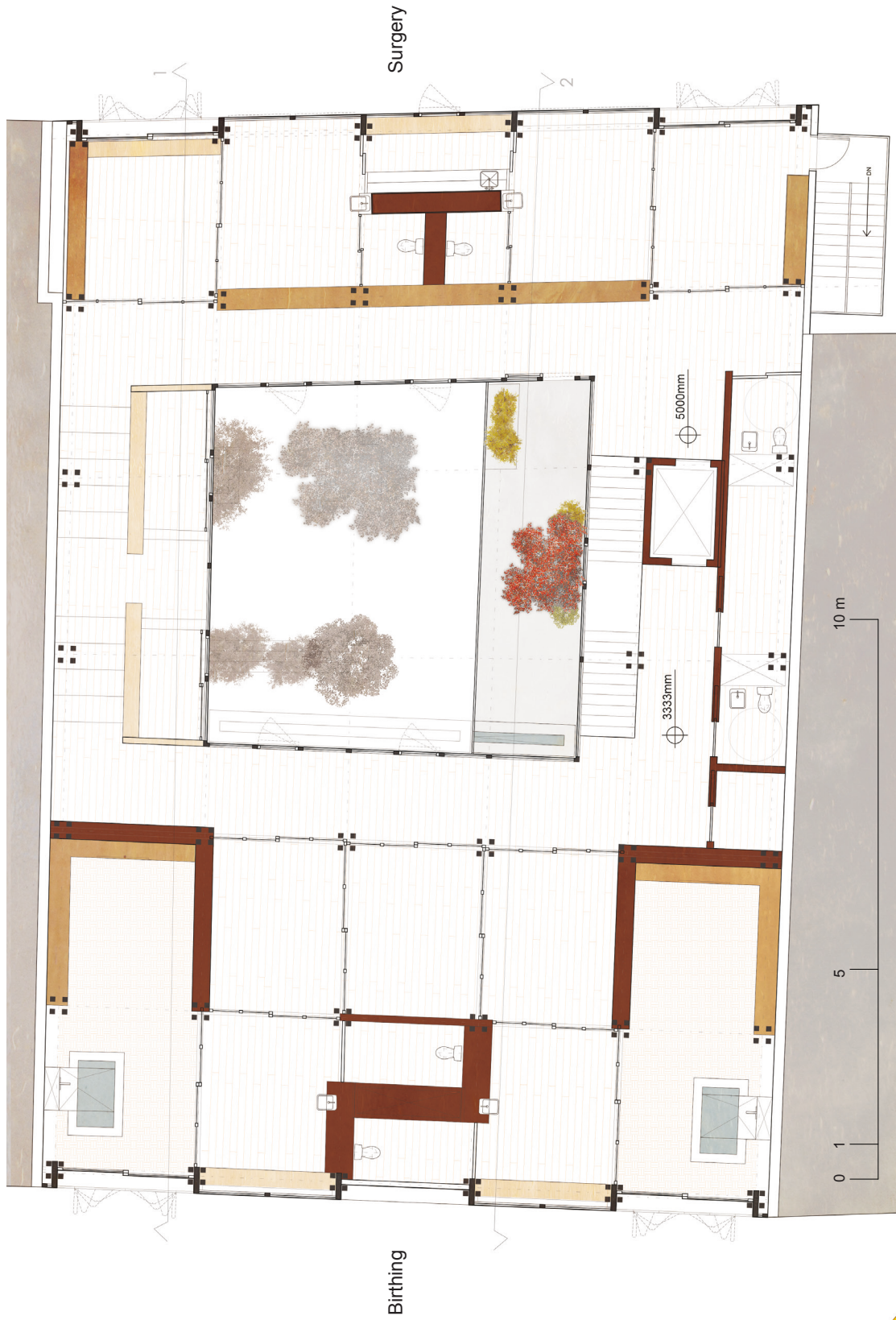


Floor 1 and -0.5





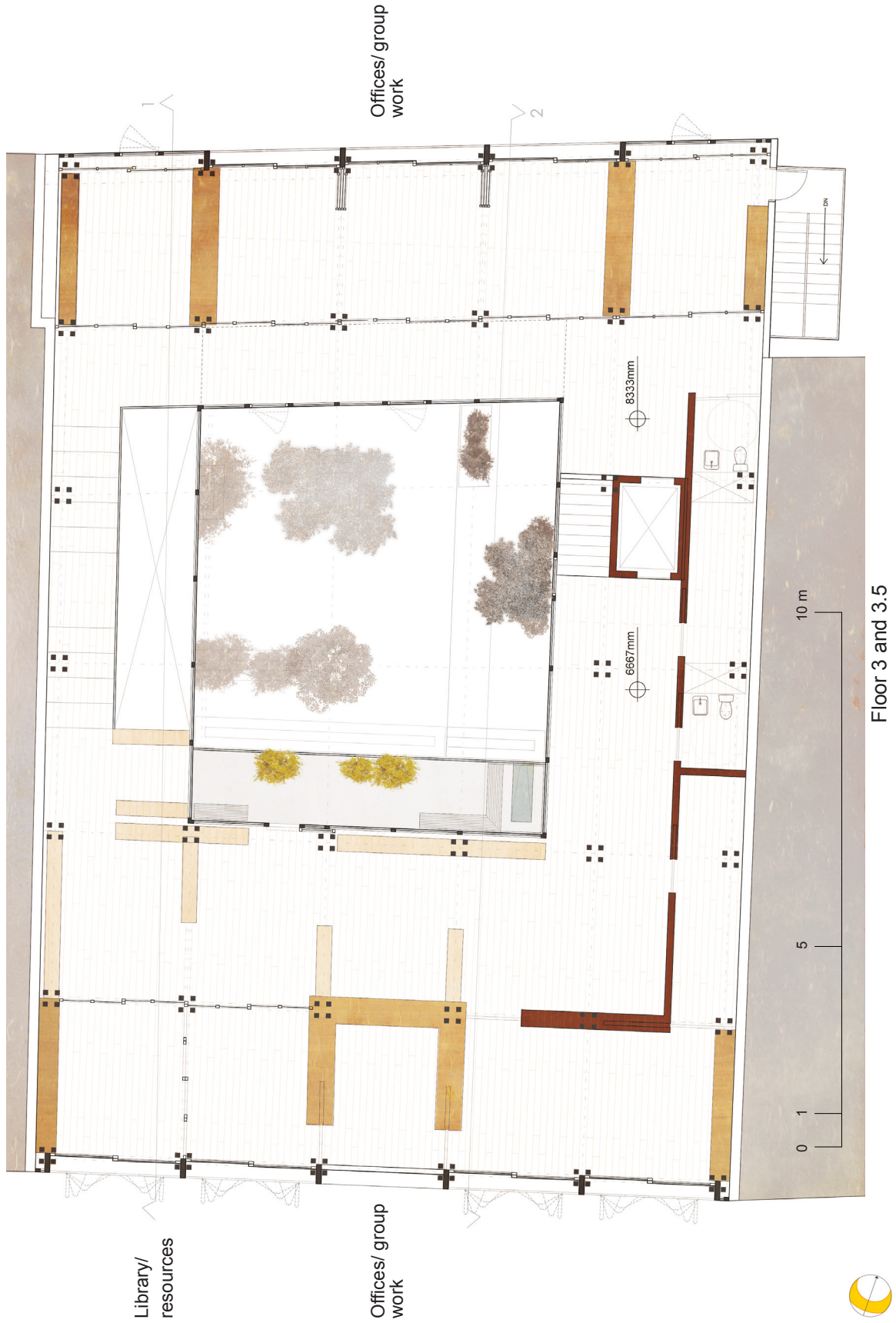
Floor 1 and -0.5 detail

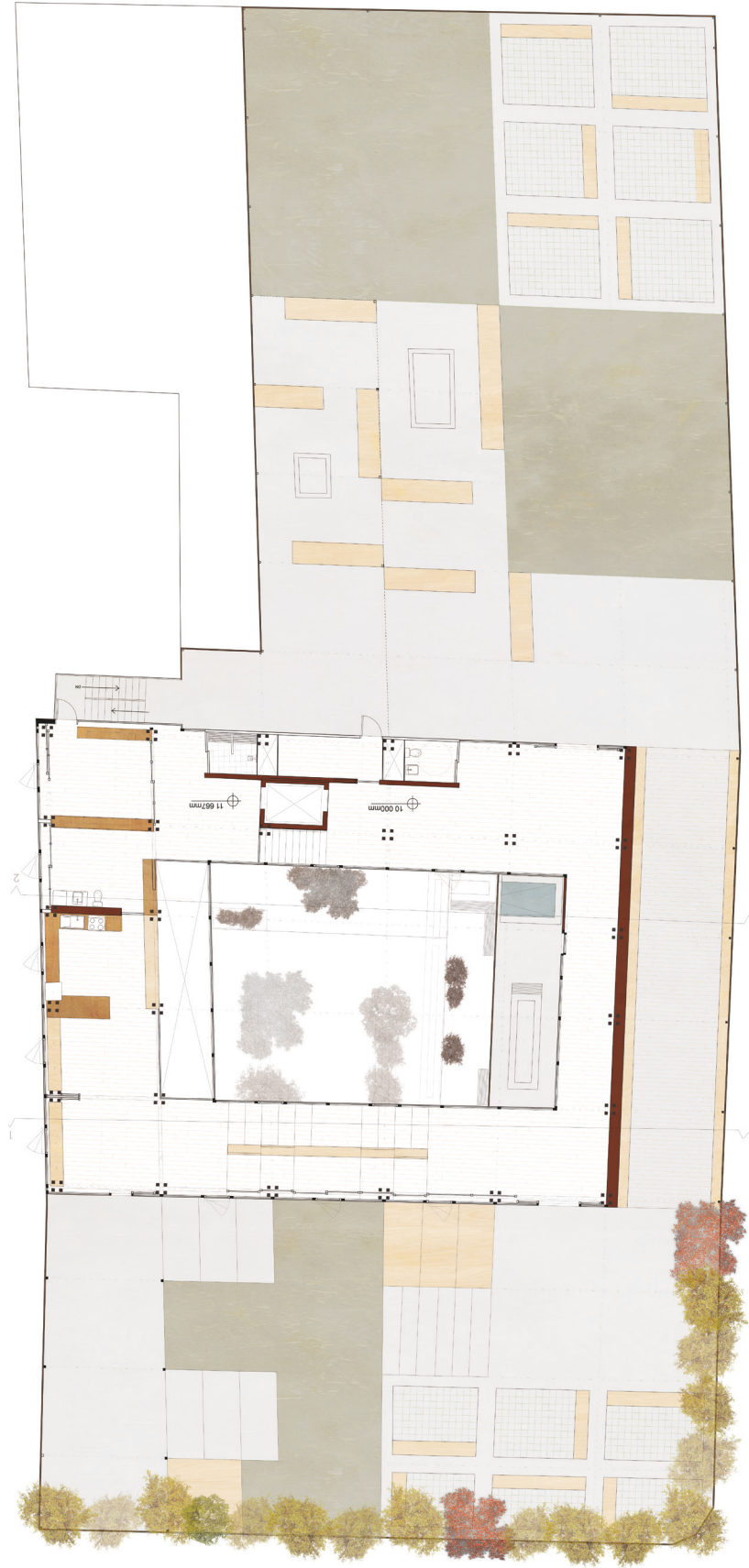


Floor 2 and 2.5



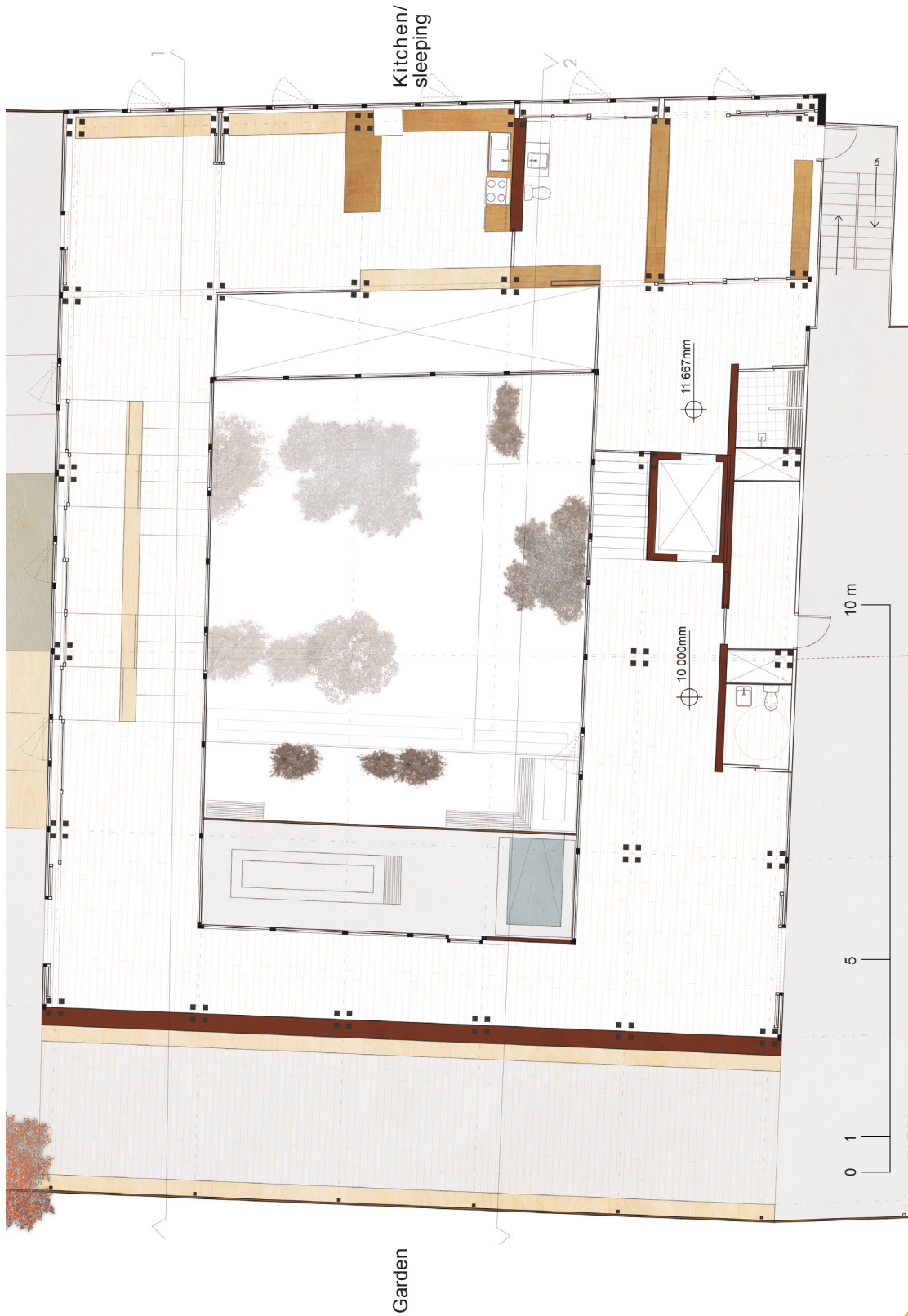






Floor 4 and 4.5

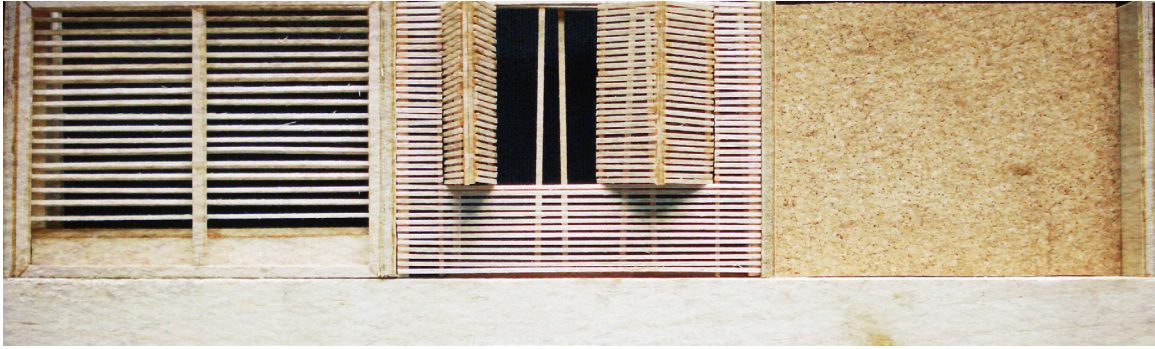




Floor 4 and 4.5 detail







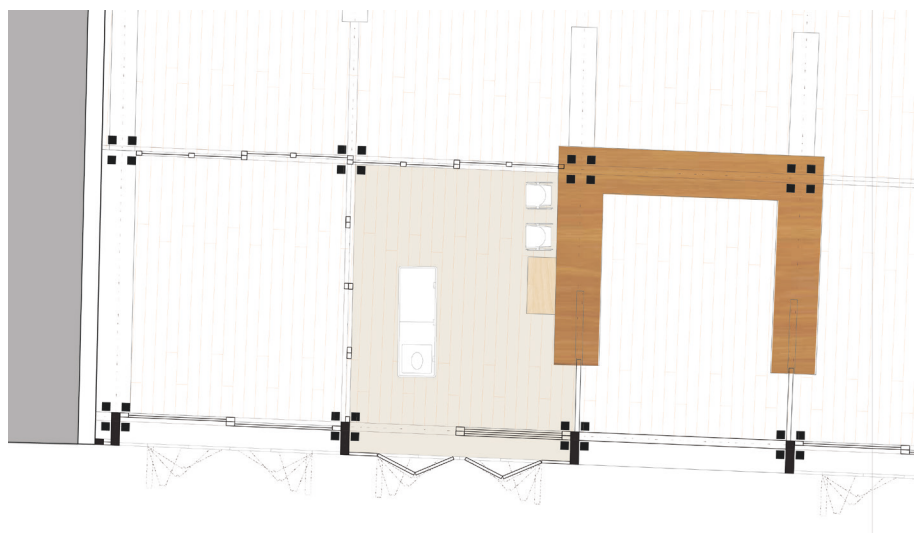
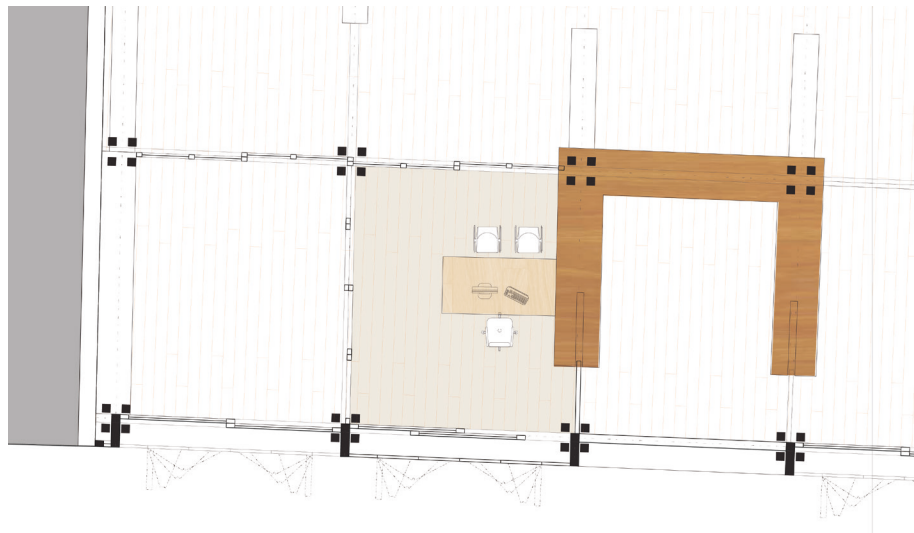
Screening facade

### **Detail and Flexibility**

Most spaces are adaptable to changing programmatic needs. Retractable or modifiable furniture is built in to wooden cabinets, and other furniture is easily moveable by hand to and from the storage areas available on each floor. This allows for shifts in program and associated furniture within the same space as well as expansion or contraction of spaces to allow for changing needs.



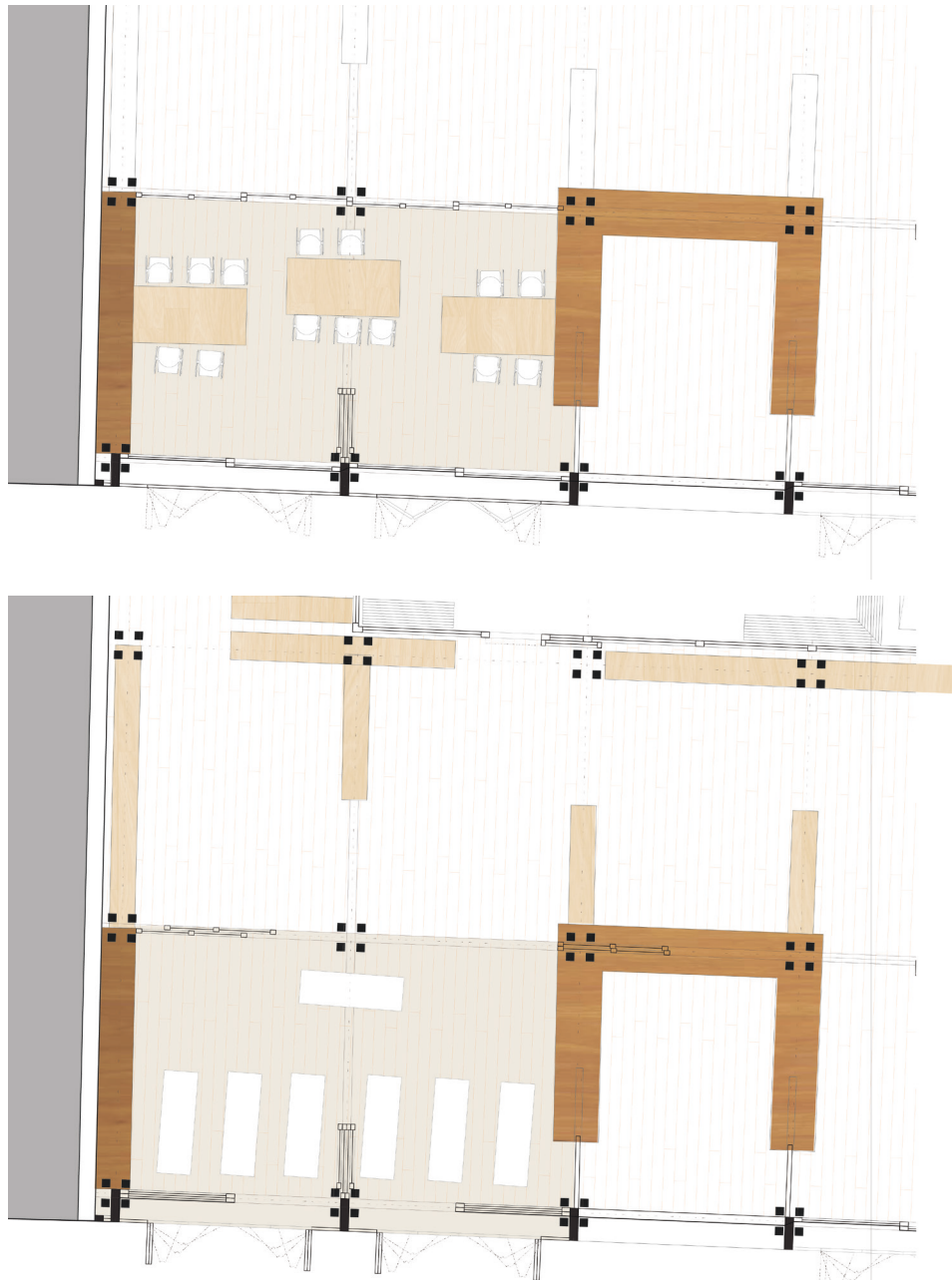
An example of program and furniture changing within the same space: a couple attends a consultation regarding fertility treatment then the same space is used by a different practitioner and their massage client.



Shifting program



An example of space changing: the space first expands to allow for group work then opens to the exterior and to the public corridor for a yoga class.

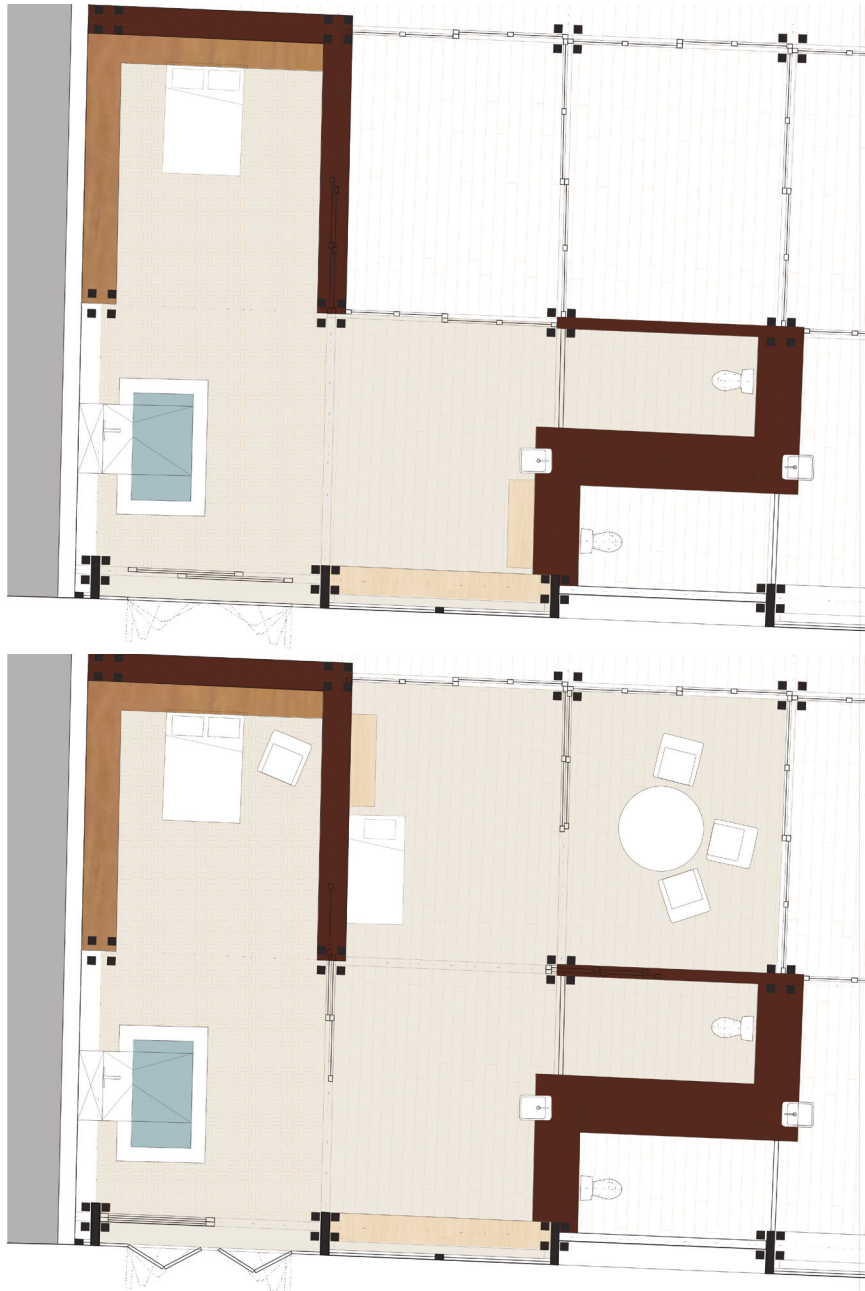


Shifting space, connection between public and private spaces





An example of perceptions changing: birthing and late term abortions take place in the same space and allow family and friends to attend and offer support to the woman.



Shifting perception, expanding birth suite

## **CHAPTER 3: CONCLUSION**

This thesis aims to use architecture to create a reproductive life cycle that is not hidden or stigmatized, but celebrated as an important part of everyday life. It is hoped that the building itself would be able to adjust to evolving attitudes; if the outreach component became more significant in the future it could become more of a social hub, or have completely new program introduced.

The scope of this thesis is to create a single, typological study in the context of the conservative environment of the Maritime Provinces; the aim is to create a seed that may serve to promote changes in attitude, and potentially the creation of a network of such facilities. It would be useful to study the adaptation of this philosophy in to a network of scales and cultural contexts.

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