

The Petitcodiac River at High Water, Moncton, N.B.

MONCTON'S DOCKS AND SHIPPING YEARS ON THE BLUE PETITCODIAC 1766-1860  
(City of Moncton, 2016)

**ARCH 350**  
Collection 2  
Landscape Corridor  
&  
Reclaimed Landscape

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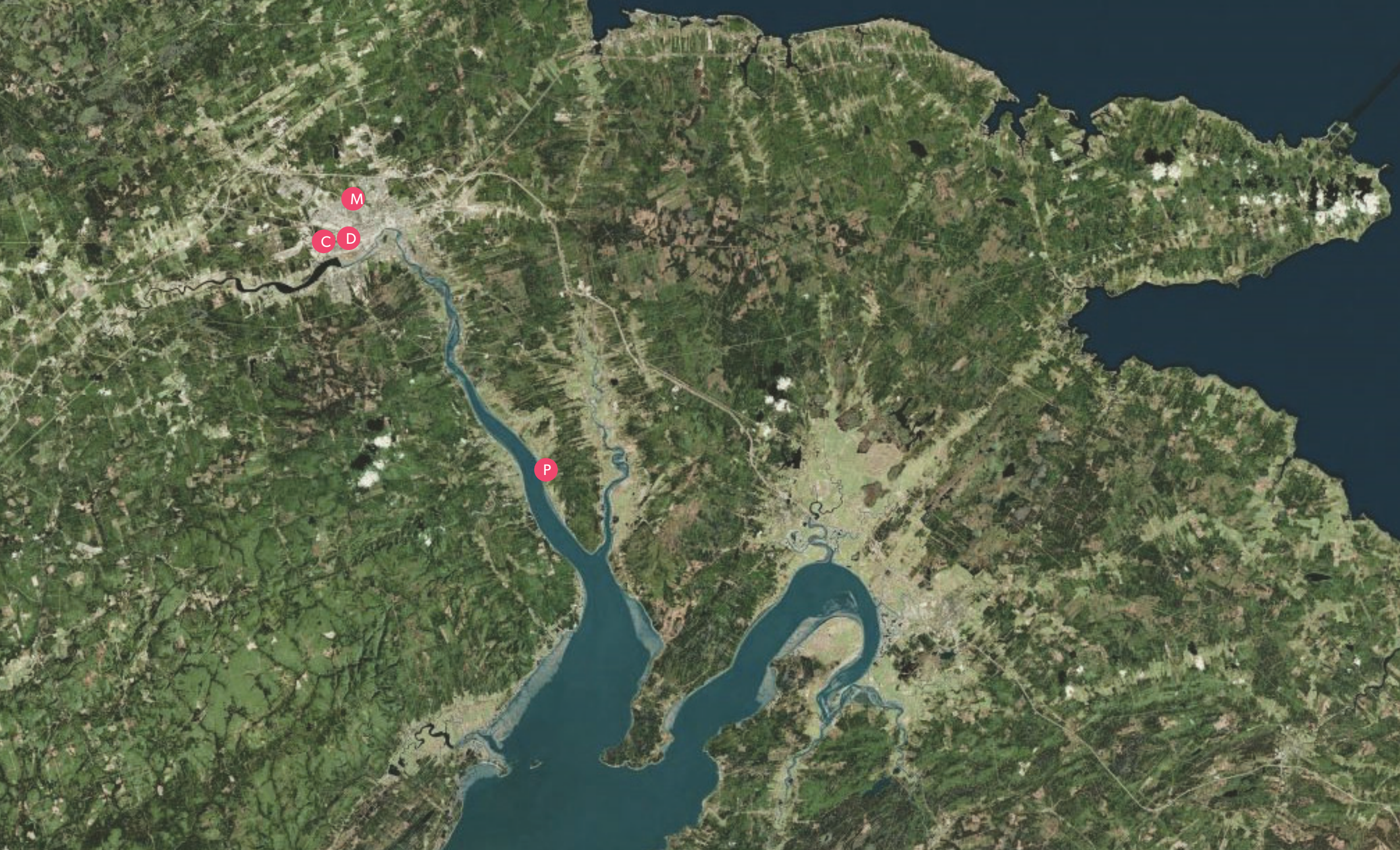
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*The language of landscape is our native language. Landscape was the original dwelling; humans evolved among plants and animals, under the sky, upon the earth, near water. Everyone carries that legacy in body and mind... Landscapes were the first human texts...*

(Sprin, 1998)





A CURRENT VIEW OF THE PETITCODIAC  
(Image by author - sourced with google maps)

## Pet-Kout-Koy-ek

*"In the beginning was the Great Spirit, who created everything in the sky, in the ocean and on the earth. He created the first man, whose name was Glooscap. And he created Pet-Kout-Koy-ek, the River That Bends Like a Bow.*

*Today the water of Pet-Kout-Koy-ek is brown like chocolate. But in ancient times it was clear and fresh. One day a monster Eel swam down the river, pushing all the fish and fresh water into the salty bay.*

*Turtle told Glooscap about the wicked Eel's misdeeds and the harm he had inflicted upon the river and its creatures. So Glooscap gave great powers to Lobster, who grew gigantic and strong enough to fight the Eel.*

*Their battle stirred up the mud of Pet-Kout-Koy-ek, turning the water brown, and sent waves far up the river. They fought long and hard, until Lobster prevailed and Eel was killed.*

*Even today, however, the battle takes place twice a day on the river now called the Petitcodiac. The wave, which forms as Lobster pushes Eel back inland, is known to most as the tidal bore."*

*(Francis, 2001)*

# LANDSCAPE CORRIDOR

&

# REHABILITATED LANDSCAPE

## LANDSCAPE CORRIDOR:

The landscape corridor, as per the assignment description, is a landscape that served to structure the form and development of the (my) region. I chose the Petitcodiac River (See "P", Figure 1) system as it was heavily used for transportation, followed by agriculture, then by trade and travel, and finally today for recreation and leisure. The beauty of this landscape corridor is in its super energetic tidal forces. This tidal energy is fuelled by the legendary tides of the Bay of Fundy, producing a surge up the river during high tides which we call the tidal bore.

This landscape corridor is no simple way of transportation or exploration, its topography changes hourly, its direction changes twice daily, and its water elevation is ever in flux.

A corridor implies direction, to and from, yet with this landscape one must also consider up and down as well as widening and shrinking. It is truly a dynamic landscape fueled by a rapid production of natural cycles that are age old and continue ever on today.

## REHABILITATED LANDSCAPE:

I chose to focus on the rehabilitation of a previously impacted site. I found two good examples of drastic human impacts on the Monctonian landscape. One of which, the old dumping grounds, became possible because of the other, the building of the Moncton/Riverview causeway (See "C" and "D", Figure 1). In spite of this fact I focused on the rehabilitated dumping grounds simply because the old dumping grounds have quickly been forgotten and the decision that the old dumping grounds had to be moved was the first signs that Monctonian's were thinking more ecologically. It later served as the precedent the Riverkeepers needed in order to have the causeway opened and eventually removed all together.

Both the causeway and the landfill had environmental and direct landscape impacts you can still see today from space (See Figure 1 and 13). At the time they must have seemed like progress to the people who devised and built them, until then the river had been a source for navigation and commerce, long gone were the days of dykelands and agriculture and little did they know that the residents of the future would want a clean waterfront for recreation and leisure. How quickly our minds can change, how deeply we can impact our landscape.

# CASE STUDY 1

## LANDSCAPE CORRIDOR

PETITCODIAC RIVER, NB

1. What are the key elements that contribute to the environmental value of these two sites?

### THE PETITCODIAC RIVER BASIN

Early European settlers of the Moncton area arrived by traveling up the Petitcodiac River. As described in Collection 1, “Le Coude” (The elbow), marks a sharp bend in the river, to which it got its nick name, and was one of the first areas to be settled by those who would be known as the Acadians – European French colonists who would soon drop their allegiance to their mother country.

J.B Jackson would remark that the obvious statements to make here would be of how people moved into this place, did what they could to survive and prosper with the resources they had at hand (pp. 12). But Jackson would also stress another important point of interest for the student of landscapes: “how space is organized by the community” (pp. 12), with an emphasis on the *how*. Using this new lens I would describe the Petitcodiac landscape as follows:

The native landscape of Le Coude consisted of the river, its muddy banks, marshlands, and forest. As described in Collection 1, upon arrival the French colonists converted the marshlands into arable fields thanks to dykes and sluice (Acadian “Aboiteau”). This is where we call for that special moment of attention of “when the first line is scratched in the soil...” (Jackson, 1980) (pp. 12)

These dykelands were amongst the earliest colonial interventions in the landscape of the Petitcodiac and is typical of this region and neighboring regions such as present day Wolfville, Nova Scotia. This is the *how* to which the designed landscape was first organized by the community.

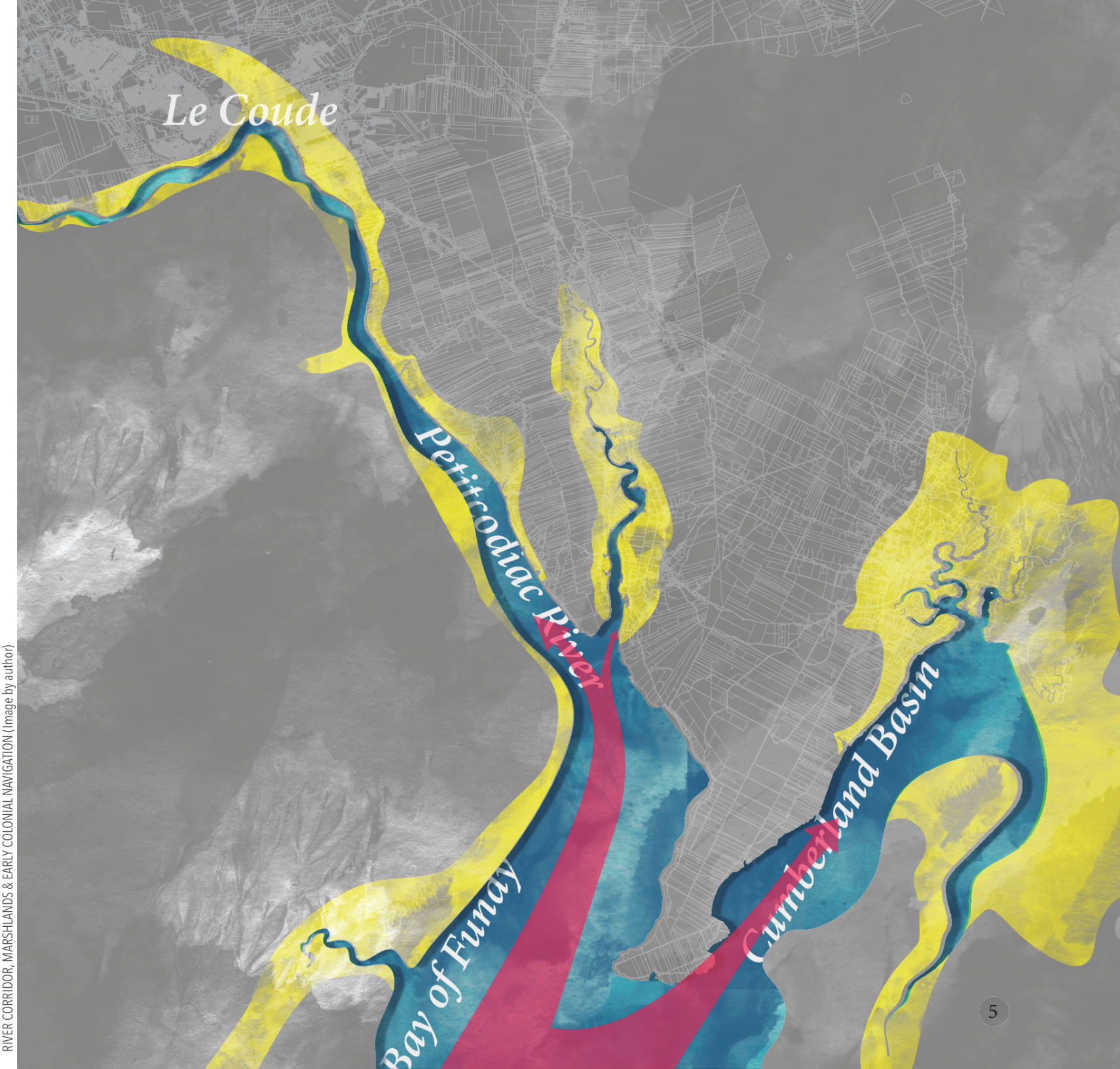
This landscape corridor had, of course, served other nations and cultures before the Acadians. As the opening legend on page 3 suggests the Mi’kmaq were familiar with the tidal waters of the Petitcodiac as they too had used the river as a means of travel.

Picking up where the Acadians left off, after their expulsion and return during the early 1800s, Moncton’s use of the Petitcodiac riverfront was focused more on navigation rather than agriculture. Trade and travel via the river meant that the city’s riverfront would be developed into shipping yards, wharves and shops. It is here that we begin seeing clear distinction in the *significance of space* - landscape terms described by Jackson (1980), “For the significance of space in landscape terms, the allotment of land for private or public use, is that it makes the social order visible” (pp. 12)

Fronting on the river’s water with shipping yards ( see Figure 1) shows just what Moncton as a city has always been all about and still is today, commerce.

Although the wharves and shops dwindled after the shipping days were gone and replaced by the railroads and again later by roads and highways, the forces of commerce can still be seen and felt today in the Monctonian landscape. Thankfully so to can the dykes and dykelands.

Locals no longer navigate the Petitcodiac for travel and trade, however the Riverfront Park and its foot paths, which connects multiple parks fronting the river, still embodies this idea of circulation.



RIVER CORRIDOR, MARSHLANDS & EARLY COLONIAL NAVIGATION (Image by author)

## THE RIVERFRONT TODAY

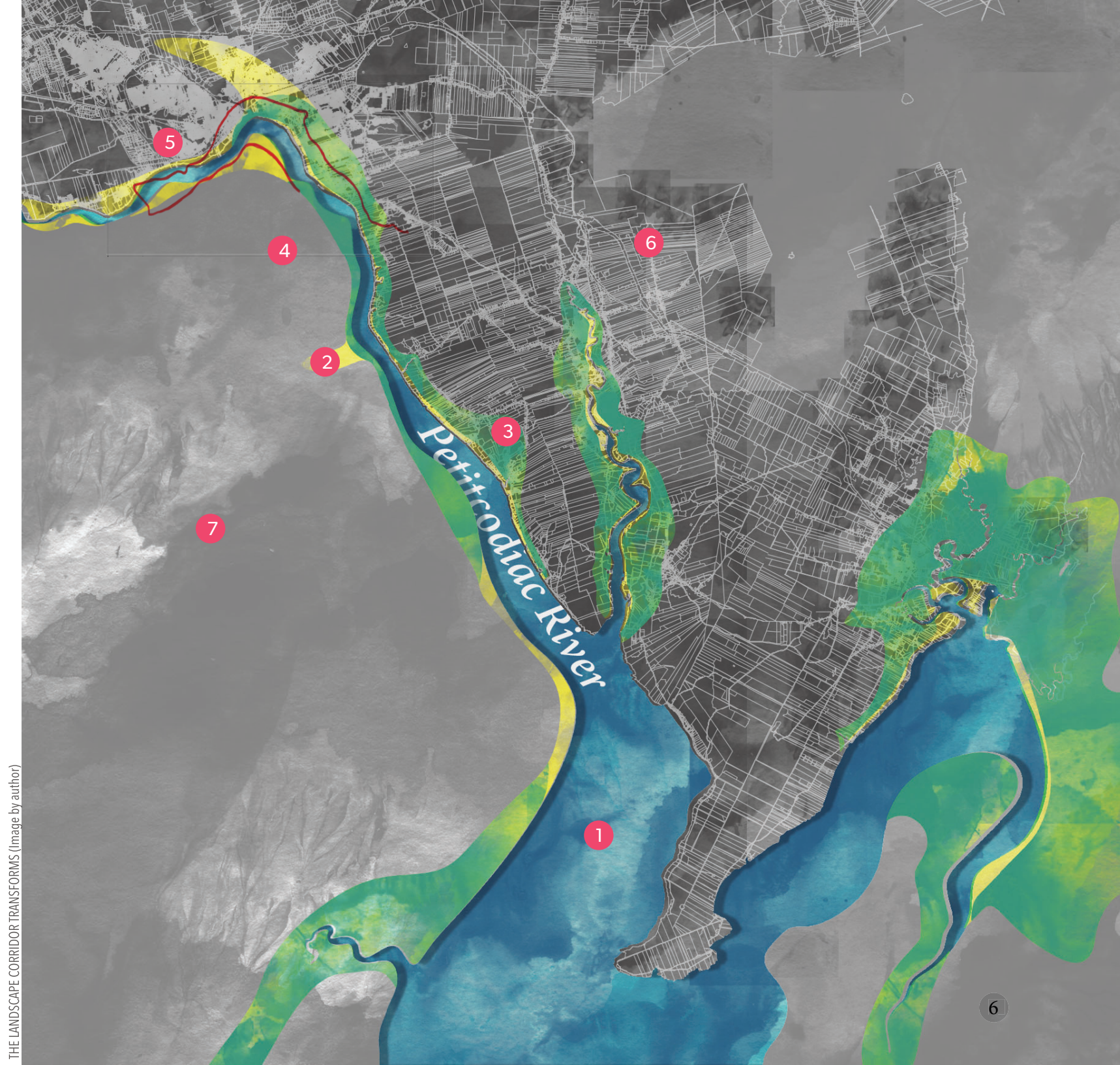
No longer strictly a commercial landscape, the riverfront design is now mainly one of public enjoyment. And this, the setting aside of land for communal use, according to Jackson in "How to study landscape" is of particular interest to the student of landscapes.

The community has set aside public land so that they may gather to frequent the river, view the daily tidal bores or to flock to see the fireworks on Canada day. Some of us even use the riverfront footpath to exercise and commute.

This too makes the social order visible as the park is reachable mostly from downtown. Only those who can afford to live close by can frequent it freely. Granted there are places to park vehicles nearby, enabling lower income and immigrant populations access to the park but it is plain to see the obvious - apart from special occasions the day to day use of the riverfront is by downtown residents and workers.

As a landscape student the beauty of this park and the landscape corridor is that it has offered me a glimpse back in time as well as opening my eyes to Moncton's social order. At its most inclusive, during the Canada day fireworks, thousands of people gather on the riverfront, flooding the Riverfront footpath and parks with people from all walks of life. Every other day the social hierarchy, and my privilege, is felt.

- 1 WATERWAYS
- 2 MARSHLANDS (YELLOW)
- 3 DYKELANDS- ABANDONNED (CONVERTED MARSHLANDS - GREEN)
- 4 DOWNTOWN MONCTON ( IN BOX )
- 5 RIVERFRONT PARK FOOT PATH (IN RED)
- 6 PREDOMINANTLY FRENCH INHABITANTS
- 7 PREDOMINANTLY ENGLISH INHABITANTS (DETAILS NA)



2. What are the key elements that contribute to the environmental value of these two sites?

## ENVIRONMENTAL VALUE

The environmental value of the Petitcodiac watershed is immeasurable. However, Moncton's history has shown just how invaluable and fragile it is. Decisions by the city to build a causeway across the Petitcodiac proved catastrophic, coinciding with the poor choice of location of the city dump (discussed in Case Study 2), permanently affecting the rivers flow and negatively impacting the landscape and health of the river (See Figures 2 & 13). The causeway flooded the lowlands up river and depleted the flow down river. The mighty tidal bore, once up to a meter tall, was now just a disappointing foamy ripple.

3. Comment on the reasons why they add regional value and/or contribute to the region's sense of identity...

## IDENTITY

The identity of the region, especially Moncton, is tied to the Petitcodiac. First its water provided a corridor for exploration, then its marshlands provided opportunity for agriculture and settlement, later it's waters were central to travel and economic trade. Later when maritime trade and commerce slowed the river became abandoned for a brief moment before being repurposed as a place for leisure and public gathering. Throughout Moncton's history the Petitcodiac has played a part in not only establishing the city but it was key to its flourishing as well. Without this landscape corridor there would be no town - at least not as we know it today.

In recent years the causeway was reopened, the ecology is slowly mending, the tidal bore is mighty again, and a bridge is currently in construction which will eliminate the causeway all together (See Figure 9 showing diverted traffic during bridge construction). Since the reopening of the rivers flow residents have noticed the water's color is blue again which is in stark contrast to the silty brown color it was during the causeway years. The nearby flooded lands are now growing new vegetation, birds and other animals are returning. Our irreverence for the ecology and the landscape is slowly erasing - many of us agreeing that the new outcome is far better than what the causeway offered.

1 CAUSEWAY 1968 - 2010 TURNING THE RIVER A SILT BROWN



THE LANDSCAPE CORRIDOR TAKES A TURN FOR THE WORST (Image by author)

4. ...What are the social, political, economic, and/or physical elements that have contributed to their longevity...

## SOCIAL & POLITICAL

Social: today the Riverfront foot path and its string of parks are used for leisure and as public gathering places. The riverfront's designed landscape is used for events such as festivals and fireworks linked to the city's downtown. Since the federal government's protection of the river and marshlands this landscape corridor is to be free of human development and what were once wetlands converted into dykelands will be left to slowly return to their natural state.

As mentioned earlier social hierarchy can be felt in the design of the riverfront landscape. Intended for recreation and leisure the waterfront, albeit accessible by all, is frequented mostly by the people who can afford to live and work near it. Therefore it is mainly used by middle to upper class residents.

Political: the age old desire in seeking to reduce tensions between French and English is exemplified with the riverfront pathway which connects the three city districts forming Greater Moncton - Dieppe (French Acadian), Downtown Moncton (Bilingual), Riverview (English), (See figure 4).

The Petitcodiac also links multiple communities both up and downstream from Moncton. One town may be historically Acadian, the next English, and the next Mi'kmaq. Like we do with our roads and highways, we share the river and its landscape with each other.

## ECONOMIC & PHYSICAL

Economic: the park and riverfront landscape is added value to the downtown core. Public access to the water is an asset to positive development downtown.

As stated earlier, Monctonians have learnt the hard way what value the river and its landscape brings. We are quicker to believe it has economic value as an unspoiled, protected landscape corridor than it would as a developed urban intervention - or at least that's what I believe.

Physical Elements: physical historical elements such as remnants of the wharves are few yet of valuable importance. There is a riprap edge marking the line between designed and untouched. Groomed patches of lawn, manicured trees and flowers, connected by footpaths all play into the general public's expectations of a modern landscape - ideas of the picturesque. The abandoned dykelands, dykes, ditches however are slowly returning to their original state. Thankfully some of these heritage landscapes are protected and being somewhat maintained.



- 1 RIP-RAP
- 2 RIVER BANKS
- 3 PETITCODIAC - HERE AT HIGH TIDE
- 4 DESIGNED LANDSCAPE - GROOMED LAWN

- 5 DESIGNED LANDSCAPE - TREES SHADING FOOTPATH
- 6 DOWNTOWN MONCTON



5. ... and how can their continued health be maintained in the future?

## CONTINUED HEALTH

Hopefully Moncton has learned from its past in its mismanagement of the river. The capital cost of creating the causeway and now, years later, demolishing and removing it to restore the original landscape tells a story of irreverence pushed out by environmentalism ideals. The same for the relocation and remediation of the old Moncton dumping grounds (Case Study 2) near the causeway, fronting the river's edge.

Both the causeway and the old dump have been carefully muted from the landscape and slowly deleted from public records. The "Sentinelles de Petitcodiac", the group responsible for the re-opening of the causeway however won't let us soon forget.

It is with attitudes like these and the rising public opinion on environmentalism that the Petitcodiac, it's muddy banks, it's marshes, it's parks and footpaths, and it's awe inspiring tidal bore will be maintained in the future.

The landscape corridor is ever changing. Like the waters of the Petitcodiac, the landscape of the Moncton riverfront has gone through rapid cycles and change. Ever energetic, fuelled by what seems like magic, the landscape takes a turn at "Le Coude" and expresses our ideas of place, society, commerce, living, recreation, but mostly it expresses *how we live*.

1 AREA OF CASE STUDY 2



# CASE STUDY 2

## REHABILITATED LANDSCAPE

OLD DUMPING GROUNDS, MONCTON, NB

1. What are the key elements that contribute to the environmental value of these two sites?

### THE OLD DUMPING GROUNDS

1968, during the same time Moncton planners decided to create a causeway, which would create a fixed link to the township of Riverview, a nearby site was selected for a new city dump. These two decisions, with a mile radius of each other, had lasting negative impacts to the landscape. As discussed in Case Study 1, the causeway was an ecological disaster, the nature and location of the old city dump was a disaster of its own.

The site selection for the old dumping grounds may have been convenient, no land to clear since it was already flat marshlands, but it lay next to the Petitcodiac River and well within its watershed. The dumping site was clearly visible from across the river and now thanks to the causeway, it would be seen more and more as people travelled by it every day.

Not only was it unsightly, but it was an environmental nightmare, one that Moncton would seek to clean up for decades to come. In time it was shown that toxic seepage from the dump was making its way into the remaining adjacent ecology and ultimately into the Petitcodiac River. Adding insult to injury the causeway choked the river off and the dump was seeping toxic sludge at that crux.

The landscape of this zone in the early 70s was a reflection of what people thought of as progress. Big engineering projects like the causeway and the ever expanding city's needs to manage its trash were signs of a booming town, in a hurry to get things done. Unfortunately the landscape and environment suffered for it. This is what Ian McHarg (1967) would call retrogression in the landscape, "...any system moving toward simplicity, uniformity, instability with a low number of species and high entropy is retrogressing; any system moving in that direction is moving towards ill health" (pp. 42).

- 1 THE CAUSEWAY
- 2 DUMPING GROUNDS
- 3 PETITCODIAC
- 4 NATIVE ECOLOGY
- 5 PEDESTRIAN BRIDGE
- 6 TOWNSHIP OF RIVERVIEW (PART OF GREATER MONCTON)
- 7 DOWNTOWN MONCTON
- 8 PREVIOUSLY FLOODED AREA RETURNING TO NATURAL STATE



## THE REHABILITATED DUMPING GROUNDS

As environmental matters became accepted by the general public and city policy makers followed suit it became clear that the old dumping grounds had been established in a bad location. Two heaps of trash could be seen across the river by a growing number of commuters and the residents of the booming township of Riverview. Although reluctant to do anything about the causeway city officials eventually had to abide by the Peticodiac River Keepers demands to restore the river's flows by opening the causeway dams.

Massive clean-up efforts were undertaken to not only remedy the years of toxic seepage, but to prepare the two mounds of trash for their transformation from dumping ground to public grounds. The old dump landscape today resembles mound architecture. It was left for years this way, growing over with native and introduced species of plants. In recent years the city has incorporated the Riverfront footpath into the rehabilitated dumping grounds connecting it to the existing path by way of a small pedestrian bridge.

I have to admit the first time I took this path I thought little of the mounds as I followed the path, studying the plants and admiring the view of the river from above. Just like Bernard Lassus's (1998) *invisible warship* against the landscape of the port, "...I suddenly saw before me the silhouette, which had remained until then invisible, of an imposing warship, it was undoubtedly because, in the background beyond the ship was the landscape of the port" (p.64)

The dumping grounds, now covered in vegetation, was playing mimic to its surroundings and essentially vanished from my vision from the landscape of the marsh. It was only years later that I realized I had been taking my pleasure walks on mountains of trash.

The old dumping grounds today provide a buffer between a busy main street and the river. It is not only a visual break but it dampens vehicular noise as well. It is part of a trail system and has been added to other public grounds fronting the riverbanks. Although far from perfect it is equally as far from being the toxic, unsightly mess that it was.



Current aerial view of old dumping grounds (Image by author - source image google maps)

- 1 THE CAUSEWAY
- 2 DUMPING GROUNDS
- 3 PETITCODIAC
- 4 NATIVE ECOLOGY

- 5 PEDESTRIAN BRIDGE
- 6 TOWNSHIP OF RIVERVIEW (PART OF GREATER MONCTON)
- 7 DOWNTOWN MONCTON
- 8 PREVIOUSLY FLOODED AREA RETURNING TO NATURAL STATE

2. What are the key elements that contribute to the environmental value of these two sites?

## ENVIRONMENTAL VALUE

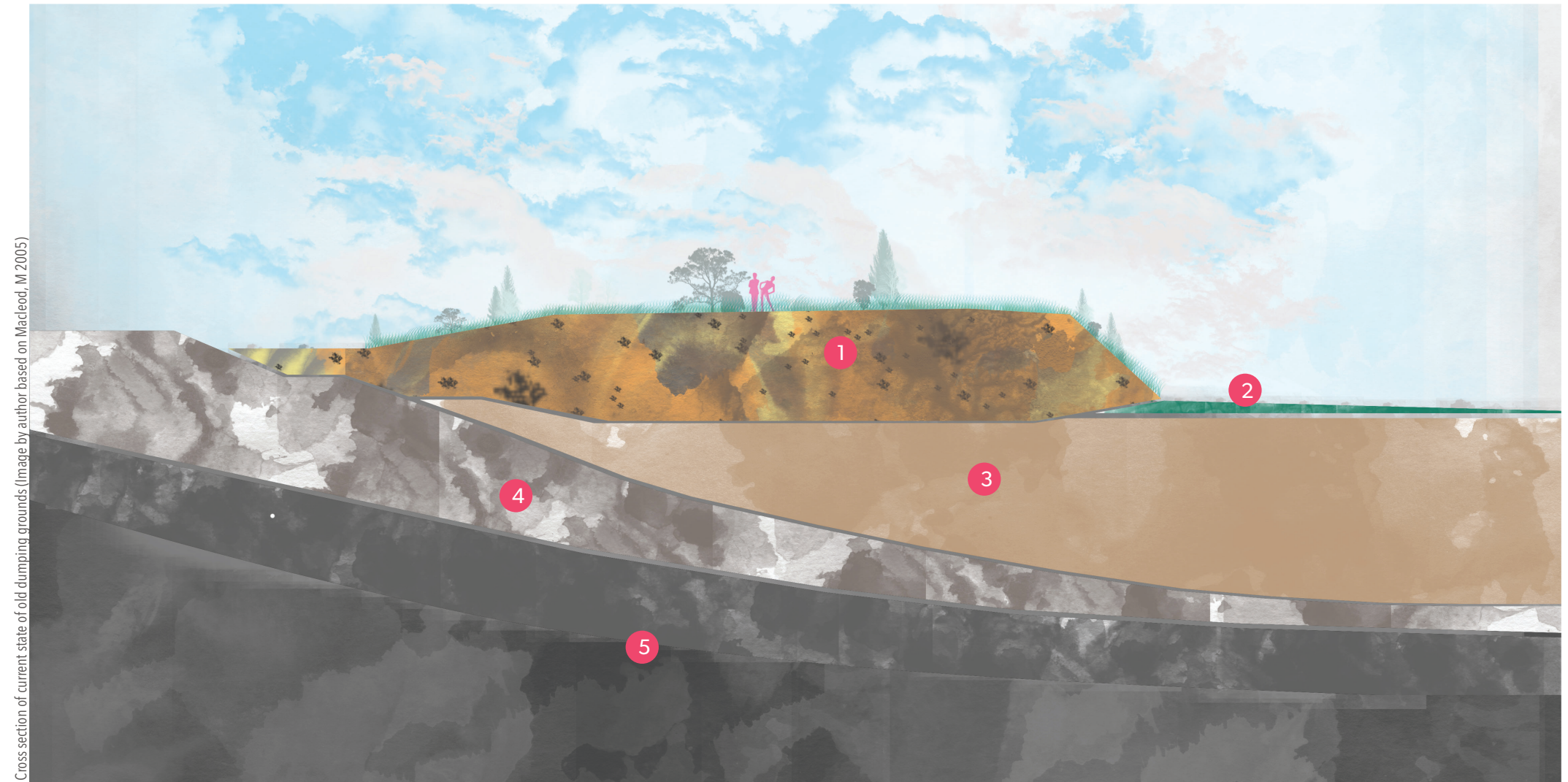
The environmental value of the rehabilitated dumping grounds is immense. The mistakes Monctonians had made with the location of the old dumping grounds was not repeated with the new. Our new dumping facilities is now state of the art with a three bag system and staggered pick-ups, but most importantly it is kept far from the marshes and the river. Plants and animals, including humans, have returned to the grounds to use it in a similar way that it was used prior to the dumping.

3. Comment on the reasons why they add regional value and/or contribute to the region's sense of identity...

## IDENTITY

The identity of the region is that of a historic rapid expansion and a series of hasty decisions. In their recent past Monctonians have identified with environmental concerns, even inciting the creation of groups such as the Petitcodiac River Keepers. Remediation of sites like these shows our strength of will when it comes to questioning the past and righting what we see as wrong.

- 1 GARBAGE
- 2 NATIVE ECOLOGY
- 3 SILT + CLAY
- 4 SAND + GRAVEL
- 5 BEDROCK



4. ...What are the social, political, economic, and/or physical elements that have contributed to their longevity...ontribute to the heritage value of the site?

## SOCIAL, ECONOMIC, & PHYSICAL

**Social:** Moncton is an ever expanding city. The old dumping grounds were bound to be converted to another use, sooner or later. As a society having an unsightly and smelly dumping ground right next door was not going to fly. It is no surprise that it was repurposed. It is a little surprising that the ultimate choice was to turn the grounds over to public use, as waterfront property it had great commercial potential. Perhaps to cost of moving the mounds of trash would be too much, perhaps the only acceptable solution was to clean up as best as they could and let it grown into itself... Socially the rehabilitated grounds are accepted today probably for the same reasons I took pleasure hikes there, people don't realize what it really is or what it was.

**Economic:** The contribution of the old dumping grounds to the economy is important. Not only was it necessary to move the facilities to a new, better location, but the environmental clean-up came at great costs to the city and residents. These were needless expenses if planners had chosen a better dumping site.

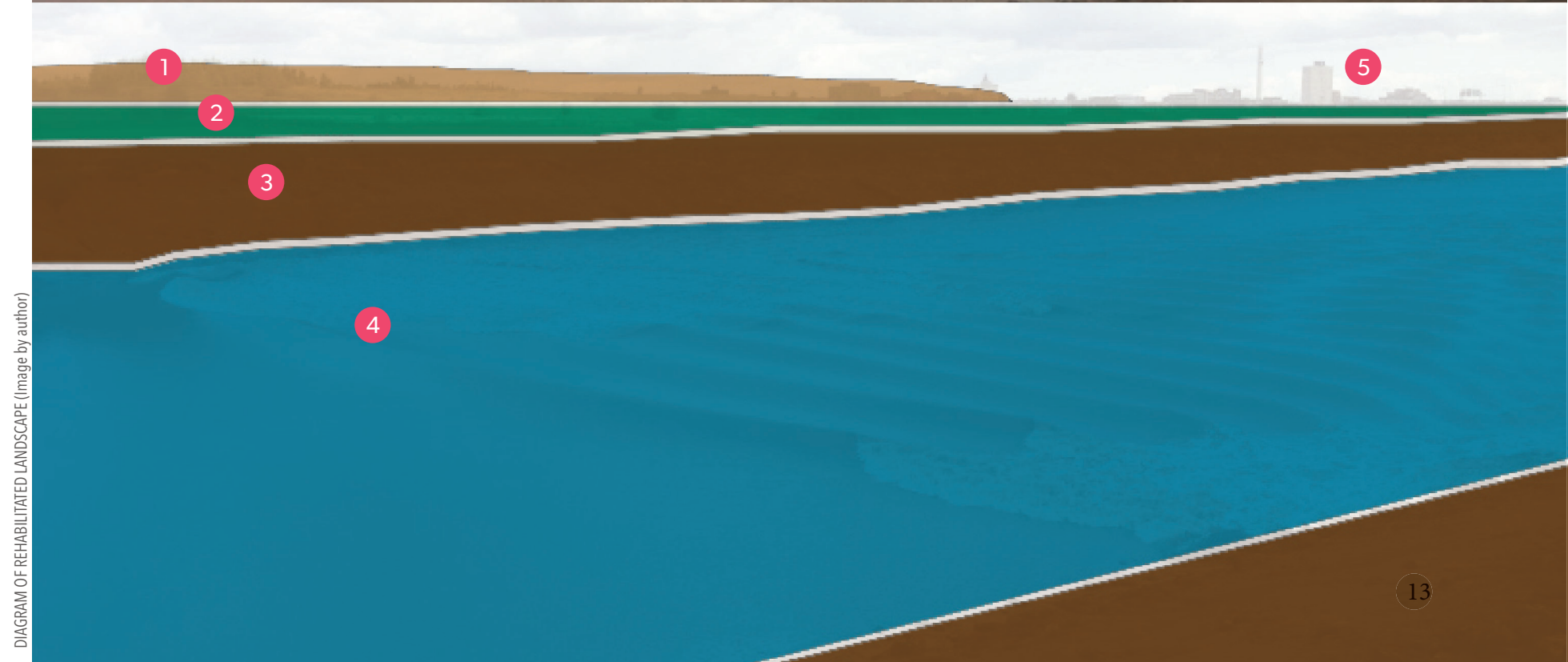
**Physical Elements:** Physically the old dumping grounds can still be felt, once one is wise to the history of the current mounds linked to the Riverfront footpath. They can be seen from the former causeway and from across the river (See Figure 11-12).

- 1 REHABILITATED DUMPING GROUNDS
- 2 NATIVE ECOLOGY
- 3 MUD BANKS (SILT & CLAY)
- 4 PETITCODIAC RIVER - AT LOW TIDE WITH TIDAL BORE
- 5 DOWNTOWN MONCTON

TIDAL BORE & REHABILITATED GROUNDS BEYOND (image sourced on google maps)



DIAGRAM OF REHABILITATED LANDSCAPE (image by author)



5. ... and how can their continued health be maintained in the future?

## CONTINUED HEALTH

The rehabilitated dumping grounds, the city, the river, and the residents of the area all enjoy healthier lives. It is unfortunate that the scars and welts in the landscape can still be felt today but they are mending. For the generations of residents, who like me, never knew the old dumping grounds and future generations who will never have heard of the causeway, the wounds left to heal in the landscape will become part of the dynamic of the area, and they may serve as wonder to the few who learn about the history of these “scabs” on the land.

In any case, mistakes endured by the local landscape and ecology have served as examples of what not to do and are reflected in new policies and regulations. And to the student of landscape what Peter Jacobs (1991) expresses as “...the strength of the field of landscape architecture lies in its ability to express the relationship of society to nature” (pp.120) Here the student can clearly see past and present intensions of residents and policy makers.

These two Case Studies and their affected landscapes serve as examples of what not to do and also show that with the right support these landscapes can heal and become healthy once more.



Petitcodiac Riverkeeper Imagery (Riverkeepers, S.P., n.d.)

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