



**Bioregional**  
Championing a  
better way to live

Zibi One Planet Action Plan  
Progress Review

April 2021

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## Zibi's One Planet Action Plan

### Status of the Zibi development project

Zibi – meaning 'river' in the Algonquin language – is a unique redevelopment project by Theia Partners and Dream Unlimited Corp, located on islands on the Ottawa River at the crossroads between the cities of Gatineau and Ottawa, Canada.

The status of the buildings onsite is:

Complete or mostly complete:

- The 70 units of O Condominium, (block 13) fully occupied since 2019
- Kanaal (block 205a) construction complete during 2020, almost fully occupied
- Block 2/3, a restoration of an industrial brick building completed in 2019, occupation delayed by Covid. Currently one tenant: Spaces, a shared office concept
- Block 208 is a commercial building with a retained façade, completed at the end of 2020. Will be occupied in 2021 by Spaces and Zibi
- Block 301, a public underground car-park in Ontario completed in 2019

Under construction:

- Block 10, a predominantly affordable 162-unit rental building in Quebec, with plenty of amenity space slated to complete by the end of 2021
- Block 211, rental accommodation for government employees, is substantially complete and occupancy will begin in 2021.

In design:

- Block 7, space that could accommodate a grocery store and commercial office space on hold due to Covid
- Block 206, shared rental accommodation with an affordable housing piece, construction to start in 2021
- Block 207 – commercial building, construction to start in 2021

Parks and plazas are also a critical component of the Zibi redevelopment:

- The opening of Pangishimo (sunset) park was delayed from 2020 to 2021
- Mokaham (sunrise) park will open in 2022
- Terasini park, which was significantly impacted by flooding in 2019, will remain as a floodplain, but will open as a park in 2022/3
- One plaza was completed in 2020, a second will open in 2021

The Zibi zip-line, allowing you to ride a highwire from Ontario to Quebec will also open in 2021!

## One Planet Living

Bioregional's One Planet Living® framework is a practical, intuitive and globally recognised framework, which makes it easy and attractive for everyone to lead happy and healthy lives within the environmental limits of our planet.

It is made up of 10 Principles (see Table 1), which grew out of Bioregional's experience of developing the pioneering BedZED eco-village in south London. These principles allow a holistic and interconnected view which addresses social, economic and environmental aspects of sustainability.

## One Planet Action Plan

The Zibi One Planet Action Plan was developed in April 2015. The One Planet Living principles have now been embedded into the by-laws of the project, in both the Gatineau and the Ottawa municipalities.

The One Planet Action Plan was updated in December 2017, following changes in the development site. This Annual Review document looks at these changes and reviews the progress made since 2015 and Zibi's 2017 data.

	         
<b>Health and happiness</b>	Encouraging active, social, meaningful lives to promote good health and wellbeing
<b>Equity and local economy</b>	Creating safe, equitable places to live and work which support local prosperity and international fair trade
<b>Culture and community</b>	Nurturing local identity and heritage, empowering communities and promoting a culture of sustainable living
<b>Land and nature</b>	Protecting and restoring land for the benefit of people and wildlife
<b>Sustainable water</b>	Using water efficiently, protecting local water resources and reducing flooding and drought
<b>Local and sustainable food</b>	Promoting sustainable humane farming and healthy diets high in local, seasonal organic food and vegetable protein
<b>Travel and transport</b>	Reducing the need to travel, encouraging walking, cycling and low carbon transport
<b>Materials and products</b>	Using materials from sustainable sources and promoting products which help people reduce consumption.
<b>Zero waste</b>	Reducing consumption, re-using and recycling to achieve zero waste and zero pollution
<b>Zero carbon energy</b>	Making buildings and manufacturing energy efficient and supplying all energy with renewables

Table 1. One Planet Living Principles

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### **Comment by Ashley Graham, Sustainability Project Manager at Zibi**

This past year was unprecedented for everyone on the planet, Zibi included. Little did we know that a virus mentioned on the news in January 2020 would have such a profound effect on our project a couple of months later.

With a state of emergency declared at the end of March, the global coronavirus pandemic presented us with closed construction sites and a stalled schedule in the short term, on top of a lot of fear and uncertainty about the future.

When construction was allowed again from May onwards, we were faced with having to implement additional health and safety measures on the construction site and a shortage in supplies, contributing to a rapid increase in construction costs. Continuing restrictions on movement also presented challenges in connecting with our community. As people fled urban centers for a rural lifestyle, the role of condensed urban living was questioned.

Despite all of this, Zibi managed to adapt and progress. The pandemic led us to reflect more on the value and importance of One Planet Living. Specifically, we realized that access to outdoor space and nature was critical to helping people cope. Having a strong sense of community was also helpful to many of us as we navigated these uncertain times. And more than ever, it brought into focus the importance of local and sustainable food.

As we begin to see a glimmer of light at the end of the tunnel, we look forward to seeing our Zibi community blossom. If we've learned anything from the pandemic, it's that we are adaptable.

### **Comment by Bioregional reviewer - Benjamin Gill**

While Covid-19 has been the main staple of news throughout the year, extreme weather events have continued to make headlines. Whether the unprecedented floods in Australia or the record high of over 100°F recorded inside the Arctic Circle in June, these events show us that the climate is changing rapidly and we must strive to minimise the impact.

Throughout 2020 Zibi, like the rest of the world, had to respond to the impact of Covid and the associated shutdown. Despite this, it made impressive progress in terms of both construction and the delivery of its One Planet Action Plan. Zibi also responded smartly to the lockdown, using the restrictions on organising events to develop key sustainability guidelines and materials that will be in place as soon as commercial tenants get on site.

Covid delayed the opening of the sustainable transport corridor, the first park and the arrival of the first commercial tenants onsite. These events are now all slated for 2021 along with the opening of the zero-carbon thermal energy network. This would make 2021 a truly pivotal year with the delivery of key infrastructure coming on line that helps meet the project's sustainable transport, zero carbon and biodiversity objectives! This progress has all been taking place set against the backdrop of the incredible work that Zibi has been undertaking to engage and work with the land's original First Nation tenants.

With these key elements in place it gives Zibi the opportunity to address its other impacts and look at how it can create a new standard there too. Specifically it would be fantastic to see a significant timber-framed building on site and see how far Zibi can go in encouraging tenants to develop their own sustainability strategies connected to the goals and targets that Zibi has set for the community. This would lead to Zibi surpassing almost all of its original commitments.

Zibi has already demonstrated that it is a Global Leader in One Planet Living, but given the scale of the environmental challenges we face, its successes should be used as inspiration to set its ambition even higher – this is very much the example we need Global Leaders to be setting.

**Comment by Bioregional – Nicole Lazarus, Head of One Planet Living**

Having reviewed the information provided we concur with the reviewer that Zibi’s sustainable infrastructure, commitment to stakeholder engagement and detailed implementation of its Action Plan makes it a standout example of how to implement the One Planet Living principles.

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## 2020 summary of progress and highlights

### Highlights of 2020

- Key elements of the zero-carbon thermal energy network were completed: permits, financing and the bulk of the construction, meaning the network is aiming to open in 2021, four years ahead of the original commitment.
- Zibi's portion of the remodelled Eddy-Booth corridor, converting a multi-lane highway into a multi-modal route, was largely completed in 2019, but finished in 2020 and will open in 2021.
- The completion and opening of a second condominium building increases the number of residents onsite increasing the scope for resident engagement. It has also kickstarted the community-wide residents' association.
- O Condominium community garden was established, providing opportunities for food growing to the wider Zibi community.
- The One Planet Living Ambassador continued engaging with residents and used the enforced lockdown as an opportunity to create a number of guidance documents, such as an OPL leasing guide for commercial tenants.
- Water metering at O Condominium showed residents to be using 99 litres per person per day.
- Zibi started actively tracking the VOC content of products and incorporated requirements into all building specifications.
- The project continues to demonstrate true leadership in reconciliation. The number of First Nations people finding work outside their reserves is close to double the original target, and the parks and landscaping and their names are being used to highlight local Algonquin Anishinabe culture as well as benefitting local biodiversity.

### Overview of progress in 2020

Since the review undertaken last year there has been significant improvement against many One Planet Living principles, with a number of them already having a high degree of certainty over their deliverability at this early stage of the project. Progress is shown in the table overleaf using the following traffic light system.

	Not able to assess progress at this stage
	Substantially or entirely completed, or a high degree of certainty over deliverability
	On track for a long-term target
	Substantially incomplete, behind schedule or doubt over delivery

One Planet Principle	Summary of activity	Performance & progress
<b>Health and happiness</b>	The OPL Ambassador organised 24 events, many online due to Covid, and created OPL guidance documents: A leasing guide, green cleaning guide and material for resident and building managers. The O Condominium Community Garden was created by 10 O Condo residents	Unchanged
<b>Equity and local economy</b>	Construction started on Block 10, of which the majority of the 162 units will be affordable. A further 4 members of the Algonquin community were employed onsite in the Covid administration programme, bring the total to 35 people gaining off-reserve work.	Progress on affordable housing
<b>Culture and community</b>	Zibi is culturally complex and the developer continues to show an unprecedented level of engagement. The Heritage Interpretive Plan is being implemented with all parks named in the Algonquin language. The OPL Ambassador has initiated a range of programmes to build a culture of sustainability onsite	Progress on creating a culture of sustainability
<b>Land and nature</b>	The remediation is underway and ahead of schedule, though the opening of Pangishimo Park was delayed by Covid. Zibi Plaza includes 17 native species, 11 of which are culturally significant	Unchanged
<b>Sustainable water</b>	Metering at O Condominium shows residents using 99 litres per person per day – excellent performance. Further stormwater infrastructure was also installed.	Improvement
<b>Local and sustainable food</b>	O Condominium Community Garden allowed members of the wider community to have access to food growing space. The proportion of residents using the organic Community Supported Agriculture scheme supported by Zibi increased from 13% to 16%.	Improvement
<b>Travel and transport</b>	The opening of the remodelled Eddy-Booth corridor, the 4-lane highway changed to 2 lanes with dedicated pedestrian and cycle links, was delayed until 2021 due to Covid. Kanaal parking was provided in the central car park, reducing the total number of spaces. All spaces have conduits for charging. Engagement with residents and commercial tenants started, but can be stepped up.	Progress in key areas
<b>Materials and products</b>	Lower-carbon cement with 50% recycled material helps reduce embodied carbon – but further attention is required to address this issue. FSC timber remains challenging and wasn't specified at block 208, so also needs attention. Building and material reuse was maximised from the outset.	Regression in terms of FSC specification
<b>Zero waste</b>	Only 83% of construction waste is recycled in Ontario, and needs to be addressed. Residential recycling facilities are in place, with building-specific strategies to make recycling easy. The OPL Ambassador is engaging with residents and this will need to continue.	Regression in construction waste
<b>Zero carbon energy</b>	Modelling of energy performance at Kanaal showed it to be just below the 30% target (see full report). Significant progress in the permitting, financing and construction of the zero-carbon heat network means that it should come online in 2021, four years before the original target date.	Significant improvement



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## Key plans for 2021

The outbreak of the Covid-19 pandemic meant that a number of key activities were delayed until 2021 specifically:

- Pangishimo Park and Head Street Square will be turned over to the city in 2021
- The Eddy-Booth sustainable transport connection will open
- The first commercial tenants will be moving in, and these tenants will be selected to have values that align with Zibi's values and aspirations
- One Planet Living on-boarding session for businesses moving onto the site and development of a specific strategy to educate residents about low-carbon diets and other key environmental issues

Further specific activities in 2021 include:

- Bringing together both residential condo boards (equivalent to a residents' association) into a site-wide resident association, increasing resident engagement
- Undertake regular visual waste audits of the first occupied buildings and use this to engage with residents
- Works by local and indigenous artists will be installed onsite, including art bike racks with Karl Chevrier of the Algonquin community, and Zibi Plaza Wall art by Naomi Blondin (a local artist). A selection process for further pieces will be initiated
- Opening of the zero-carbon thermal energy network
- Implementation of an indigenous youth engagement strategy in local schools, with support from Algonquin partners
- Ongoing and enhanced sustainability engagement, including online newsletter, events, garage sale etc
- Improved system to track recycled content in all products and materials used for each construction project

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## Suggestions from the reviewer

Having reviewed the information provided, the reviewer recommends the following for the year ahead:

- The use of cement replacement materials helps to reduce the embodied carbon of construction, but to genuinely address this issue the focus needs to be on alternative construction systems as opposed to incremental changes in materials. With the completion of the sustainable transport connection and the heat network it would be excellent to see Zibi turn its attention to showcasing low-carbon building systems. An approach could be the commitment to a timber-framed building in one of the later phases.
- Visual waste audits will be undertaken in 2021. These could be undertaken systematically, and feedback provided to residents to drive engagement.
- The opening of the Eddy-Booth sustainable transport corridor provides an excellent opportunity to promote sustainable transport options to residents and commercial tenants. Setting these new habits and norms at the outset will go a long way to creating a culture of sustainability onsite.
- The initiatives around food are excellent, and Zibi needs to ensure that it is planning for success, i.e. as more people have an interest in food and wellbeing. More food-growing areas and restaurants with sustainable options may be required. Building this into planning now will reduce future challenges.
- Zibi responded very proactively to the opportunity presented by Covid to get in place guidelines for future tenants. This clearly outlines how the commercial tenants are expected to contribute to the delivery of Zibi's One Planet Action Plan. The next stage is to support the commercial tenants in developing their own vision and plan that is as ambitious as the Zibi OPL plan.

## Review of progress against Zibi's One Planet Action Plan

This section reviews the progress against the targets set out in Zibi's One Planet Action Plan. It takes into account the latest changes made to the Action Plan in 2017.

	Substantially or entirely completed, or a high degree of certainty over deliverability
	On track for a long-term target
	Substantially incomplete, behind schedule or doubt over delivery

## Health and happiness

### Progress

Outcomes	Indicators	Baseline	Progress
Increase happiness for Zibi residents	> 75 % of residents 'happy' with their lives	Ottawa-Gatineau: 8/10 2018: 3.75/4	Survey: average response 4/5
Create opportunities for community involvement, learning and creative expression	> 70% of residents feel actively involved in their community > 12 events / classes held per year within community spaces	58% for Ottawa-Gatineau, (O&G) 65% for all of Canada	35% feel engaged down from 50% in 2019. Potentially due to new residents not yet engaged and Covid. 24 events were hosted in 2020, 14 were for the community only
Support better health outcomes	> 85% of residents/workers indicate overall satisfaction with their health >85% of workers indicate increased satisfaction working at Zibi as compared to other sites	63.6% of O&G residents perceive their health as very good; and 72.3% perceive for their mental health. Canadian average is 59.9% and 72.2% respectively	Survey: > 90% of residents feel their health allows them to meet their daily needs >80% of workers rate themselves in good health

### Key achievements and challenges

In the early years of a development there is a constant inflow of new residents. Most of them are likely to take some time to feel engaged in the community. With Kanaal becoming occupied this year, plus the disruption of Covid-19, it is perhaps unsurprising that there has been a drop in the percent of residents that feel engaged in the community. The One Planet Living Ambassador managed to hold 24 events throughout the year – but obviously the majority were online and weren't able to bring the community together in the same way as an in-person event does.

A major success in 2020 was the launch of the O Condo community garden. Ten members of O Condo planted up 10 vegetable-growing boxes and produced sufficient vegetables for the group throughout the summer. The members have agreed to make the growing space available to the wider community, giving access to food growing to more people and building community interaction. The One Planet Living Ambassador, a role that is fully funded for 5 years, shifted their focus to creating guidance that will be used through the duration of the project. This included: One Planet Living leasing guide, Green cleaning guide and materials for construction worker engagement. All construction workers continue to receive a One Planet Living induction, including a short video and guidance on wellbeing and healthy eating. Ongoing engagement remains a challenge as most workers have a specific trade and so are onsite to perform a specific short-term task and then move on.

## Equity and local economy

### Progress

Outcomes	Targets / indicators	Baseline	Progress
Plan for 7% affordable housing	7% of total units social housing	Frequently zero	First two buildings - zero, next building, Block 10, close to 100% affordable
Promote and give precedence to smaller, local and/or ethically run enterprises	50% of retail space storefronts that contain small, local, and / or ethical businesses, compared to the total number of storefronts at Zibi	n/a	First commercial tenant will be a shared office facility, a fair trade café is still targeted
Develop Zibi beneficially with and for the Algonquin Anishinabe Nation and people - to ensure Indigenous culture is not only present at Zibi, but that Indigenous people truly live, work and play at Zibi	<ul style="list-style-type: none"> <li>• At least 20 First Nations individuals are bridged from on-reserve work to off-reserve work experience</li> <li>• At least 2 opportunities for long-term investment throughout project lifecycle</li> <li>• Offer a preferential residential pricing program for Indigenous purchasers</li> </ul>		4 further individuals bridged to off-reserve work - total of 35. Investment discussions ongoing Pricing programme in place

### Key achievements and challenges

Financing was secured with Canada Mortgage and Housing Corporation to enable the majority of the 162 units of Block 10 to be affordable rental housing. The construction of this building started in 2020. When completed, approximately 50% of the completed units at Zibi will be affordable. This affordable housing is supplemented by the preferential pricing programme which offers a discount to Indigenous purchasers, though no purchases have been met through this programme yet.

Zibi aims to support First Nation workers to gain work outside their reserves. In 2020, four members of the Algonquin community worked on the Covid administration programme, bringing the total of individuals off-reserve work experience to 35. During the remediation phase it has been possible to employ a higher number of First Nation workers, as they have more experience in this industry, nonetheless Zibi is approaching twice its initial target. Additionally in the formation of the District Utility Company, a 10% placeholder for Algonquin share ownership has been earmarked, and the offer is under consideration.

Tourism was held up by the pandemic, though there were still 12,000 visitors, to the site and the zip wire facility will open in 2021. There remains an opportunity to engage more with event organizers to maximise the sustainability of the event and look to engage with visitors.

## Culture and community

### Progress

Outcomes	Target / indicator	Baseline	Progress
Create a cultural identity that reflects the history of the locale	A Heritage Plan, endorsed by Municipal Heritage Planners and regional Algonquin communities, developed and implemented	Heritage Interpretive Plan in place since March 2017	Ongoing – all parks to be named in Algonquin language
Engage with Algonquins to ensure First Nations history, presence and culture are reflected throughout the development	<ul style="list-style-type: none"> <li>• Mention traditional Algonquin territory in all media events</li> <li>• 15% of place names will be in Algonquin</li> <li>• Establish an advisory council of Algonquin Anishinabe to guide on cultural matters</li> <li>• Minimum of 2 youth engagements per year</li> </ul>	2-3 public speaking engagements / month  Council in place  Outreach undertaken	Continue to make this clear and the language will be reviewed in 2021  On track for 15% 7 meetings in 2020 One summer student
Create a sense of belonging through a culture of sustainability	<ul style="list-style-type: none"> <li>• 70% of residents know their neighbour</li> <li>• 80% of all residents and workers indicate their awareness of sustainability has increased</li> </ul>		70% know >1 neighbour 50% of residents, versus just 35% of workers, surveyed report increased or good awareness of sustainability

### Key achievements and challenges

Zibi continues to implement the agreed Heritage Interpretive Plan. The naming of parks and public spaces, and signage for the three parks on site recognises the traditional ownership, while the retention of three facades and two buildings in phase 1 reflects the site's industrial buildings of heritage. While Zibi continues to highlight the traditional ownership of the site they are working with a cultural advisor to refine its acknowledgment statement to ensure that it remains relevant and meaningful.

Zibi has been working successfully with the Memengweshii Advisory Council since 2014. This advises on Algonquin protocols and culture in all aspects of the project and continues to work to implement two Collaborative Benefits Agreements with 10 Algonquin communities, which outline what the communities want to get out of the project. This is a great success and is probably one of the first instances of a real-estate developer working in this way in the region.

The Zibi site was once the industrial heart of the National Capital Region and the restoration of some buildings will preserve this heritage. The retrofit of Block 208 was completed in 2020, with historic brick facades intermingled with a modern steel and glass design. Currently Zibi isn't managing to achieve two youth engagements per year, and the indigenous youth engagement plan for 2020 has been postponed until 2021 due to Covid.

Zibi aims to build a strong community around sustainability and the One Planet Living Ambassador used social platforms to engage residents in discussions, workshops (such as worm composting), and share lifestyle tips around low-carbon eating, gardening, sustainable shopping and exercising for health. This is an excellent start, and it would be interesting to see what further opportunities can be implemented to help residents see moving to Zibi as the start of their sustainability journey.

## Land and nature

### Progress

Outcomes	Targets	Baseline	Progress
Remediate contaminated land and revitalize the area to maximize the benefit to natural ecosystems	<ul style="list-style-type: none"> <li>• 100% of the site area to meet provincial regulations after remediation</li> <li>• 14% of site to be parks</li> <li>• 400% increase in biodiversity with all to contain at least one plant of significance to First Nations people</li> </ul>	Contaminated land	Remediation is ahead of schedule with a further 14,000 tonnes of soil remediated. No planting took place in 2020 but at Zibi plaza: 17 native species, 11 plant species identified as being culturally significant to First Nations people.
Foster a love for nature through education and enhanced opportunities to interact with the natural world	50% of all residents will increase their time in nature		50% residents spending increased time in nature

### Key achievements and challenges

The rehabilitation work is ahead of schedule and the amount of material rehabilitated dropped to 14,000 tons as the task nears completion. The first park, Pangishimo (Sunset) Park, was delayed due to the unprecedented flooding in 2019 and now Covid. The Park balanced the desire of the Memenguweshii Council to maximise the natural landscaping while satisfying park requirements of the National Capital Commission. Pangishimo Park and Head Street Square will both be completed in 2021 and will both contain native species and species important to the Algonquin community.

The second survey was undertaken to understand if residents feel the amount of time they spend in nature has increased since moving to Zibi. The figure has increased from 20% to 35% in one year, which seems impressive given that the pandemic restricted the options for outdoor events.

## Sustainable water

### Progress

Outcomes	Targets	Baseline	Progress
Reduce potable water use for residents and irrigation	<ul style="list-style-type: none"> <li>• 138L Potable water consumed per resident, per day</li> <li>• 0% of potable water used for permanent irrigation systems</li> <li>• 10% toilet flushing with non-potable water</li> </ul>	163l	All installations to LEED platinum standard, no irrigation installed, O Condominium has >45m <sup>3</sup> rainwater storage and average water consumption was 99 lpd.
Achieve near-zero export of pollutants via stormwater outflow	Total Suspended Solids will be reduced by 80% prior to discharge	Infrastructure planned,	Infrastructure installed

### Key achievements and challenges

Water consumption at O Condominium has been metered since July and is averaging 99 litres per person per day, which comfortably exceeds the target and is an impressively low level of water use. Ongoing water metering will verify that this is a true representation of water consumption. Further stormwater infrastructure was installed in 2020 and a process for measuring total suspended solids will be installed in 2021 to confirm that the treatment is meeting the expected standard.

## Local and sustainable food

### Progress

Outcomes	Targets	Baseline	Progress
Provide access to modest garden spaces for 90% of households that want it	1.4 m <sup>2</sup> Area of food-growing garden spaces onsite per household (m <sup>2</sup> )	Planned for first building	Plots in place for 10% of residents, At O Condo 50% of survey respondees expressed an interest
Create a community-scale food distribution network to increase access to local, fairly traded and organic food	5% in year 1, growing to 25% by year 5 of Zibi residents participating in 'farm-to-table' schemes		16% of residents participated, up from 13%
Engage residents to reduce their consumption of high-carbon foods	50% of all residents will report a decrease in high-carbon food consumption year over year		No specific initiatives

## Key achievements and challenges

Zibi aims to provide some food growing space to all residents. At O Condominium there are 15 gardens, each of which can be two plots, for the 70 apartments. Currently this more than meets the demand of the residents, and therefore a Community Garden has been set up to enable residents at Kanaal to have access to food growing space too. This is an excellent initiative to enable more residents to be able to grow food but does highlight the low ratio of gardens to homes across the site of just over 1 plot per 10 apartments, which may not be sufficient to meet demand.

Zibi has initiated a Community Supported Agriculture partnership with a local organic farm, Roots and Shoots, and will be a prime drop-off location for the weekly organic vegetable box delivery. There has been a growth in participation in the scheme from 13% to 16% of residents, and members of the Zibi community used the farm for their Autumn open day. This engagement will hopefully see participation increase over time, and provides a good route for engagement over sustainable diets.

## Travel and transport

### Progress

Outcomes	Targets	Baseline / 2017	Progress
Reduce carbon emissions associated with local transportation of residents	20% of parking spaces with electric car charging stations	Ontario: >20%	First building designed with 10%, subsequent buildings have conduits installed for all parking spaces
	0.7 household car parking ratio	Car ownership in O&G >1.45 per household	First two buildings designed with 1:1 ratio (Kanaal in block 301), latter buildings will be closer to 0.5
	Modify roadway reducing lanes from 4 to 2,	Planned	Opening delayed till 2021
	Targeted commuter transport split: Auto Driver: 25%, Auto Passenger: 10%, Transit: 45%, Non-motorized: 20%	n/a	Planned, but not yet executed
Reduce the travel distance for basic goods and services to within walking distance	Community walkscore >90 at 50% build-out	Gatineau 92, Ottawa 44, (O&G region 54)	Block 2/3 planned as a food hall but not achieved due to pandemic – assessing options for future buildings



## Key achievements and challenges

The Eddy-Booth corridor was completed in 2020 and due to open but this was disrupted by the pandemic. It will now open in early 2021. This will be a fantastic step forward in creating sustainable transport connections to the site, adding to the Ottawa's Light Rail Transit which opened in late 2019.

The One Planet Ambassador has been promoting the public transport links to residents and future commercial tenants, including in the One Planet Guide for commercial tenants. But this is an area that can be developed further as more residents and tenants move onsite. This can include training, guidance, apps to provide real-time information, negotiating discounts or offers at bike stores or for public transport.

O Condominium and other early buildings do not meet the target car parking ratio or electric vehicle charging points; however later buildings will have a lower parking ratio to ensure that the 0.7 ratio is achieved overall. Conversely the Kanaal building parking is provided in block 301, which slightly reduces the total number of spaces onsite and centralises the parking – reducing vehicle movements onsite. and moves car parking to the periphery of the development.

## Materials and products

### Progress

Outcomes	Targets	Baseline	Progress
Reduce the impact of construction	<ul style="list-style-type: none"> <li>• 50% of existing building area retained</li> <li>• 90% of demolition materials recycled</li> <li>• 5% of demolition materials reused</li> </ul>		Retaining of facades and demolition recycling on track, reuse not always being met
	20% of materials contain recycled content 20% materials locally sourced/manufactured	n/a	Some building specific successes: average sitewide concrete > 50% recycled
	80% of timber or wood products reclaimed, reused or certified by FSC	n/a	Mixed performance; Zibi Plaza: 100% FSC, Block 2/3: 25% FSC by value O Condominium – about 2/3rds Kanaal (205a) and 208 didn't have FSC in specifications – therefore limited use
Meet or exceed best practice standards for indoor air quality	Achieve relevant LEED credits	n/a	Set in specifications in all buildings
Embed a culture of reducing and reusing within the development	At least one sharing centres and/or related web-based sites established at Zibi	n/a	Online forum set up

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## Key achievements and challenges

Zibi undertook excellent groundwork to review what buildings could be retained and which materials recycled and reused, ensuring that the project is well on track in these areas. Use of sustainable materials in the buildings has been a little more piecemeal, with a mixture of successes and some failures:

- Recycled content of concrete averaged over 50% across the site – but it is not known if this is cement or aggregate replacement, which has a significant impact on the carbon benefit of the recycled material.
- Efficient design to minimise concrete led to O Condo having 14% less concrete compared to industry benchmarks.
- FSC certified timber has not been specified in a number of buildings and in general the project is struggling to secure the FSC timber supply to meet the project's demand. Zibi has been engaging with local suppliers directly to identify FSC products that are available locally.

When it comes to the embodied carbon of construction, avoiding the use of cement and steel is critical, and work has been undertaken to support this:

- An embodied carbon study of O Condo has been undertaken to inform future design
- Work with the main cement supplier led to it sourcing Ground Granulated Blastfurnace Slag (GGBS), as waste product from steel production, often achieving 25-50% cement replacement.

The most effective strategy to drastically reduce the carbon content is to eliminate the use of cement-based materials, for example through the use of timber, 100% cement-replacement materials, lime and plant-based materials. Piloting the use of these materials in a major building would be a demonstration of true leadership.

The use of LEED standards for air quality has been included in construction specifications. For example:

- Building 208: nearly 50% of all insulation materials are GREENGUARD Gold Certified (lowest level of VOCs), CFC & HCFCs-free, and have less than 100ppm product formaldehyde content.
- Building 205: All paints, coatings, sealants and adhesives used have 45 g/l VOC content or lower.

In terms of sustainable materials in operation the new One Planet Ambassador has initiated a number of projects:

- Set up an on-line forum for exchange of goods between residents
- Created a Green Cleaning Guideline for commercial tenants
- Developed a One Planet guide for commercial tenants with a range of minimum and suggested requirements for tenants. This includes an extensive list of procurement requirements.

These will be supported by an OPL on-boarding session and an OPL property managers guide. For the residents more events are planned to co-create a culture of sharing durable goods.

## Zero waste

### Progress

Outcomes	Targets	Baseline	Progress
Divert 70% of total annual residential and commercial waste from landfill	>70% of residential and commercial waste diverted from landfill	n/a	Waste audit not practical, but full range of services in place
Reduce residential waste	291 kg/person/year, a 20% reduction compared to municipal average	n/a, 365 kg/person/year	Resident engagement
Divert 90% of construction waste from landfill	<ul style="list-style-type: none"> <li>90% construction waste diverted from landfill</li> <li>Concrete: 75% re-use on site, 20% re-use off-site, 5% clean fill</li> </ul>	98%	99% in Quebec 83% in Ontario

### Key achievements and challenges

There is a significant divergence in construction waste performance from Quebec to Ontario – this needs to be investigated and addressed if Zibi is going to get back on track with its waste target.

Zibi had planned to undertake a waste audit to understand performance in the residential buildings – but as the facility is managed by the municipality there is little Zibi can do to act on the information and so the cost did not match the benefit. Visual checks were planned for 2020, but impeded by Covid – these should be undertaken in 2021.

Residents are provided with sorting bins to enable recycling of key materials and kitchen waste. Anecdotally, sorting at Kanaal has not been as good as hoped, and the One Planet Ambassador has responded with creating more signs, online Q&A sessions and discussions with residents to find solutions. Certainly the residents have the facilities to achieve a 70% recycling rate if they follow the guidelines and fully use the facilities, but it seems that further engagement will be required.

For the commercial buildings the One Planet Commercial Tenant Guide outlines the obligations on the tenants. Performance will need to be verified and supported with engagement materials.

## Zero carbon energy

### Progress

Outcomes	Targets	2017	Progress
Ensure 100% of Zibi energy needs met from renewable energy	100% of total building energy demand met through zero carbon sources		Energy company and infrastructure installed to supply zero-carbon heat, opening planned for 2021
Decrease building energy demand by 30%	30% reduction in building energy demand during operations, compared with a code-compliant baseline building	N/A	30% saving at O condominium 25% at Kanaal

### Key achievements and challenges

The final energy modelling report for Kanaal reported a performance rate of 25.4% relative to ASHRAE 90.1, a little outside the target set and below the 31.6% achieved at O Condominium. Nonetheless it is a high level of energy efficiency.

The Zibi Community Utility to provide zero-carbon heat was established in 2018 and huge progress on establishing the zero-carbon thermal energy network was made in 2020:

- Zibi obtained the relevant federal and provincial permits to construct and operate the district thermal energy plant
- Construction began of the district thermal energy central plant, with much of the connection to the river completed
- Financing and a grant were secured for the district thermal energy system.

The initial commitment was for the zero-carbon heat network to be in place in 2025, yet the opening is likely to happen in fall 2021 – a fantastic achievement.

Electricity is all zero-carbon electricity sourced from Quebec Hydro.