PIERREFONDS WEST VILLAGE

SITE DEVELOPMENT PLAN RESUME



School of Urban Planning Planning Projects III--409-604A Professors D. Brown & A. Hoffman December 19, 2000



PlanIT Consulting

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December 19, 2000

Mr. Michael Labelle, City Councillor City of Pierrefonds 13665 Boulevard Pierrefonds City of Pierrefonds, QC H9A 2Z4

Re: Innovative Development for the Western Sector of Pierrefonds

Dear Mr. Labelle,

PlanIT Consulting is pleased to submit a summarised version of the presentation that will be delivered December 19, 2000 at 7pm to representatives of the City of Pierrefonds. As promised in our Offer of Services submitted to you in September, we have prepared a site development plan for Sector 10 in Pierrefonds entitled *Pierrefonds West Village*. Each member of our interdisciplinary team has contributed their expertise to create a comprehensive study of the site and a development program. The enclosed document provides an illustrated resume of our plan.

We thank you for the opportunity to be involved in the production of a vision for this site. It has been a rewarding experience to learn about the area and to provide you with a full site analysis and development plan.

We look forward to sharing our ideas with you and your colleagues.

Best regards,

Therese Gieselman (Team Co-ordinator) Robert S. Campanelli, Lindsey Ginou, Sabine Nevermann







Slide 1: Pierrefonds West Village project embraces the concept of a unique community situated in the western sector of Pierrefonds. The vision and concepts presented illustrate an innovative approach to new development on the west island of Montreal. It aims to create a live-work community and offer recreational facilities to all Pierrefonds residents.





Slide 2: The project was developed over the past four months by a team of students at McGill University. In order to illustrate the process through which Pierrefonds West Village was developed, the presentation will provide an overview of the background and research conducted by the team. Secondly, an analysis of the site will follow. Thirdly, the actual site concept and plans will be discussed along with the development program. The presentation will close with recommendations and conclusions that can be used to launch the project into implementation.







Slide 3: This part of the presentation will show how the project began, our vision of the site, and the research and case studies that were used to gain a stronger understanding of successful projects of this type.

When Pierrefonds city councillor Michael Labelle approached McGill University's School of Urban Planning in September, he requested the development of a long-term plan for the 500-hectare site to the west of the city. Development pressure threatens to chop up this beautiful site into piecemeal unsustainable urban sprawl that has already consumed much of the west island. It is important to note that this mandate was given prior to the "One Island One City" legislation was tabled, so it is unclear how the proposed merger will affect the proposal.



Introduction



Vision

To be the first New Urbanist community in the West Island, which provides a mix of healthy, sustainable alternatives for people to live, work, and play.

Mission

To develop a master planned "live/work" community which will respect the principles of new urbanism so as to promote the appropriate physical and technological environment which will support the growth of technology-based enterprises within a thriving residential, pedestrian-oriented community.

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Slide 4: The guiding principles of the plan were drafted during the first stage of the development process. The following points constitute the basic strategies for the development of the site.

- **Values**: By respecting the unique biophysical and natural features of the site, this project offers a concept that can be developed tomorrow while still protecting the future.
- **Goals**: (a) create a community unique to the west island; (b) integrate innovative urban design models that will strengthen the economic sustainability of Pierrefonds; (c) create a live/work community with an R& D campus as the key component of the project; (d) attract, active and civicly minded corporate residents.
- Objectives: (a) incorporate Smart Growth principles; (b) employ New Urbanist methods for design, construction and administration; (c) site to be built out by 2015; (d) achieve level of tax revenues that surpass average current levels meet community amenity and infrastructure demand.



Smart Growth?

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- Principle 1: Efficient Use of Land and Energy Resources
- Principle 2: Full Utilization of Urban Services
- Principle 3: Mix of Uses
- **Principle 4:** Transportation Options
- **Principle 5:** Detailed, Human-Scaled Design

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Slide 5: To date, consumers of the West Island have been offered limited suburban lifestyle options. Using the principles of Smart Growth this proposal offers a better quality of life that has otherwise been available elsewhere in the region.

Smart Growth creates communities in which people have an increased number of choices in housing types and a higher quality of life in terms of their surrounding environment. Smart Growth advocates communities that are more compact and reduce consumption of open space and infrastructure.

The principles of Smart Growth are integral to the success of the development plan and the strengthening of Pierrefonds' sense of community and tax base from a fiscal perspective.

If these principles are realized, the success of the site's development will ultimately set a strong precedent for New Urbanism developments in similar areas in Canada.





Slide 6: The following four slides provide two examples of New Urbanism developments that have succeeded as live-work communities. In these two cases, there is a contrast. Case study #1 has a larger number of research and development sites with a small proportion of residences. The case study #2 has a larger proportion of residential lots and less land devoted to commercial/industrial pursuits.

The significance of these case studies relative to the Pierrefonds site is that they provide examples that Pierrefonds can use to create a formula to build a balanced research/development and residential community on the same site.



Legacy--Case Study #1

- Site development began in 1983
- 2,665-acre master-planned business and residential community
- Live/work community using neo-traditional planning concepts
- R & D world headquarters for:
 - EDS, Ericsson Village, J.C. Penney & Frito-Lay
- 6.5 million sq.Ft. Of office space; 36,000 employees
- Currently 17,000 Dwelling Units; 4,000+ projected



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Slide 7: This is one of two case studies discussed in the following four slides. Legacy was chosen because it provides a vision of what an R & D campus can look like. Even though Legacy is larger in scale than is planned for Pierrefonds West Village, it provides an example of the kinds of R&D companies that locate in live-work type communities.



Legacy--Case Study #1







Slide 8: This site is an example where commercial and office space constitutes a larger portion of the overall site. More residential development is expected in the future, but in the meantime, Plano Texas is able to benefit economically from the dominance of R&D sites.



Northwest Landing--Case Study #2

- Site development began in 1989
- 3,000-acre mixed use neo-traditional community
- 10,000 residents and 8,600 employees.
- R & D Headquarters
 - Intel Corporation, Lone Star Northwest, Westblock Pacific,







Slide 9: This case study illustrates a community that places greater emphasis on residential development, and R&D development occupies a lesser proportion of the space.







Slide 10: This community has 5 distinct neighbourhoods that are bordered by two major R&D campuses.

The development plan for Pierrefonds West Village is a balance of both case studies whereby both residential, R&D campuses and civic space will be equally important to the development and livability of the site.

In researching both of these case studies, it became obvious that proximity to a major autoroute is imperative. As will be discussed later in the presentation, access to nearby highways will be critical to the realization of the Pierrefonds West Village project.





Slide 11: The following section covers the analysis of the site prior to the creation of the site development plan. This section focused on three key topics, the include:

- Regional influences
- Biophysical environment
- Transportation



Regional Context







Slide 12: The site is 1/2 hour to 45-min drive from downtown. Trans-Canada (route 40) runs 2 km south of site with Highway 20 an additional 1 km further to the south. Dorion-Riguad commuter train line follows route 20 with Beaurepaire closest to the site. Montreal/ Deux Montagnes line accesses eastern end of Pierrefonds (Roxboro-Pierrefonds stops 8 km away from site).





West Island Municipalities





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Slide 13: Pierrefonds is currently bordered by 6 municipalities (including St. Genevieve) and is one of the longest municipalities in Quebec.





Slide 14: One of the most striking elements of the area surrounding the site is the juxtaposition of the parklands that border it to the north and west (Regional Parc de l'Anse-a-l'Orme, Regional Park Cap- Sainte- Jacques, Parc Agricole de Bois-de-la-Roche, and the Morgan Arboretum) and the vast tracts of residential lands to the east. Further residential developments have begun to encroach from the south

To the south east of the site (along the Trans-Canada highway) is a large industrial park, which is rated as the 6th most economically important park in North America. A major point of commercial interest is Fairview Mall. It is a regional mall of over two hundred stores located in Point Claire at the corner of Boul. St. Jean and Route 40.





Slide 15: Site Size = 504 hectares. The transect along ABC represents a $\frac{1}{2}$ hour walk along a farmer's property from the northern to the southern border of the site.

- A.- A cultivated field
- **B.-** Irrigation ditch that now supports a diversity of wildlife
- **C.-** The beginnings of the forested area to the south.



Forested Area







Slide 16: The green patches represent forested areas on and surrounding the site. The greatest concentration of trees is found in the western third of the map, especially following the Riviere -a-l'Orme. Bush, scrub and patches of trees can also be found scattered throughout the private lots, although most of the land has been cleared for agricultural purposes.







Slide 17: The site is predominately flat and averages between 23-30 meters above sea level. The area is drained by Rivière-a-l'Orme, and by a drainage ditch in the north that empties into a small lake/ pond, and two intermittent streams in the east. The large flood plain that surrounds Rivière-a-l'Orme is of primary concern. The interior is shown darker a 20-year flood zone with the darker edges forming a 100-year flood zone. The floodplain covers 179 ha, approximately 35% of the site.






Slide 18: The site has been divided into eight different zones. Just over half of the land has been zoned for agricultural uses with an additional quarter for residential uses. However, the proposed residential development that was to be built just west of the future AutoRoute 440 is no longer taking place. This timely occurrence allows for a vision to be created for the entire site.

The agricultural land is currently divided into long lots, following the historical Quebec land pattern. The site delimits on the north with the regional park Du-Cap- Saint-Jacques.



Regional Links







Slide 19: The site is currently accessible by Gouin Blvd. on the north and east, and Chemine de l'Anse-a-l'Orme on the west. The dark-red, dotted arrow at the eastern boarder is the proposed 440 AutoRoute that would link the site with Hwy. 40. Good accessibility is an important component of an R&D campus plan. However, the 440 is not in the 5 year projection of the Ministry of Transport.





Slide 20: The actual development plan and program contains the following chapter that will illustrate the proposals for the development of the site into a live, work, **and** R & D campus community. This includes a discussion of the principles, the concepts, the site plans and the building programs for Pierrefonds West Village.

The following few slides are going to show the principles that are going to be developed on the site. However, we will show first what kind of development we do not want to have in the area.



What we do not want



- Excessive car use
- Unecessarily wide streets
- Lack of commercial service
- Little opportunity for live, work, play
- Lack of preservation of natural resources



Typical West Island suburban development

Slide 21: This photo shows the traditional urban sprawl that has moved west as the West Island has evolved over time. By allowing typical suburban sprawl to spread into this beautiful site, Pierrefonds will lose a great opportunity.

However, the proposed plan will create a more compact community with a strong centre and a diverse mix of functions within the same area.



What we plan to do



- Provide alternatives to the status quo
- Create a community where live/work/play are interconnected
- Compact walkable
 neighbourhoods
- Abundant green space
- Recreation outside the backdoor
- Higher density with more amenities and options
- Formal street pattern



New Urbanism: Peter Calthorpe's Gold Country Ranch, CA



Slide 22: We found illustrative examples of similar proposals. Peter Calthorpe's new urbanism development was one of the examples that were used as an inspiration for the development plan of the site.

This plan illustrates how a mixture of uses and integrated development are important to create a self-sustained community. In this plan there are a variety of different neighbourhoods, a town centre and an R&D campus to achieve a self-sustained community. Neighbourhoods are more compact, pedestrian friendly, and green spaces are interspersed throughout the site to preserve the natural habitat. This site also accommodates a network of greenways and bikeways, and the formal street pattern is based on a grid system that is easier to navigate and less disorienting for residents and visitors. These principles are similar to those we intend to adopt in our plan.







Slide 23: New Urbanism ideas are favoured by both Pierrefonds and Ministry of Transport for any new developments west of the proposed 440 Autoroute. This will help to ensure that smart growth development, and new urbanism principles will create a community unique to the West Island.





Slide 23: The concept of Pierrefonds West Village is based upon a main village centre, which is the heart of the site. This main centre is connected to Pierrefonds via the main spine, which is a boulevard that crosses the site, parallel to Boulevard Gouin. Around this heart it is medium density residential housing with shops and business located on the ground floor.

The heart of the community is surrounded by smaller satellite neighbourhoods and links to the residential pedestrian-oriented pockets.

The R & D centre is located next to the 440 AutoRoute. It will evolve through incremental chain growth, so that it can accommodate different types of campuses with flexibility.

The marina is located to the northeast corner of the site and faces Rivière des Prairies, where the waterfront development will occur.

The concept respects the flood plain as much as possible, as well as the existing trees and green areas.





Slide 24: The layout of the site will respect the history of the original farmland divisions as much as possible.

The site accommodates three different residential types: high, medium and low density. The high-density residential areas contain 4 to 5-story apartments and are represented by dark orange on the map. They are located on the lower part of the Pierrefonds Boulevard extension (main spine), and the waterfront in order to take advantage of the views and beauty of the site. Medium density 2 to 3 storey walk-ups surround the village centre as well as the R&D campus. Low-density single-family homes will take advantage of the natural green spaces, including forests and parks.

The town centre—with its commercial and residential mixed use -- is located in the heart of the site. The village centre will be maximum six storeys high.

The R & D development is located at the extreme east of the site because it is uncertain how fast it will grow or how much area R & D companies will need (for eg. Apple Computer has a 10 acre site in Northwest Landing while smaller companies like Intel only use 1-2 acres.)

Greenways with bike and pedestrian paths will be interspersed throughout the site.





Slide 25: A major east/ west spine (which is an extension of the existing Pierrefonds) Boulevard will connect the site to the already developed area of Pierrefonds.

In order for the development to be successful, it will be critical to develop a north/south urban boulevard for access to Hwy 40 to the south. This will improve the connection and transportation to and from the site, which is essential in a development of this type.

Transit facilities will also be necessary, so a direct connection to the 20 AutoRoute and to the Dorion- Rigaud trainline to the south will be required.

Since historic Gouin Blvd. is the oldest road in the area, it will be beautified with trees to celebrate its importance to Pierrefonds' history.

A network of "greenways" for cycling, walking, rollerblading, x-country skiing will be established throughout the site.







Slide 26: This slide shows three different sections of the site. Section A is in the city centre, and it shows a mixed use buildings. Section B cuts through the extension of Pierrefonds Boulevard at a residential development. Section C illustrates the intersection of medium- and low density housing on either side of the street.



Main Districts: Pierrefonds West Village Centre



X-section of 3 Storey Walkup--6 Plex / Apartment Complex



Vision of Planned Unit Development (PUD) for Town Centre



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Slide 27: The village centre will incorporate a number of different uses. Housing, commercial, and R&D functions (that require smaller spaces) will be part of the human scaled environment. The town centre will evolve as the community does. It is planned to be a strong node of attraction within the community and greater Pierrefonds, and it is the heart of the site, with a main park and an existing lake for recreational attractions. This area is linked to the marina via a linear park.











Slide 28: One of the most beautiful assets of the site is the waterfront along Rivière des Prairies. In this area a small-scale marina is proposed to open up the river. It would add a unique element to the site that is unavailable in most other suburban neighbourhoods. A boardwalk and bike path will allow public access and create a lively focal point for the community.







Slide 29: This shows how different housing densities relate and coexist within the plan.

Public green spaces and bike paths will be an important part of each neighbourhood. This will ensure that many of the existing streams and natural habitats will be preserved.



Lifestyle Analysis



- Who is the community geared towards?
- What can people do here?
- Why do people live here?





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Slide 30: The lifestyle analysis introduces three main questions?

Who is the community geared towards? Pierrefonds West Village will serve families and professionals.

What can people do here? Pierrefonds West Village will provide employment at R&D campus firms as well as small shops and businesses in the town centre. Recreation opportunities are abundant with the marina, greenways for biking, walking, roller-blading, cross-country skiing and other sports facilities. Shops and cafes in the town centre will also provide leisure activities.

Why do people live here? Pierrefonds West Village is a self-contained community that boasts a high quality of life in a tranquil setting. The environment is human-scaled and pedestrian friendly with safe streets and parks close to home. For those who live and work in the community, there is no commute to work.







Slide 31: Housing type and its respective location is based on the density objectives for the site. The slide illustrates the four housing types recommended to achieve these densities, however it does not prescribe the architectural style.



Housing Types - Multiplex / Apartments (High Density)

House Type	Triplex / Apt.
Total (ha)	34
% Total Site Area	7%
Total Buildable (ha)	26
No. of Lots	310
No. of Units	1858
Estimated Pop	4087
Cost of Lot & D.U.	\$300,000
Est. Tax Rev. @ 1.965%	\$1,825,428



Mulitplex / Apartment Complex--8800 sq. ft lot





Slide 32: The highest recommended densities for the site are envisioned along the waterfront and in the village centre, at 55 units per hectare. The housing type suggested for the area is based on the tree story triplex on building up to but not exceeding 5 floors, on lots of 8800 sq.ft.



Housing Types - Townhouses (Medium Density)





Typical townhouse lot--2000 sq. ft. lot

House Type	Town House
Total (ha)	57
% Total Site Area	11%
Total Buildable (ha)	42
No. of Lots	2264
No. of Units	2264
Estimated Pop	4981
Cost of Lot & D.U.	\$160,000
Est. Tax Rev. @ 1.965%	\$7,118,452

Townhouses





Slide 33: The housing type suggested for the area planned at medium density is a traditional townhouse form, on lots of 2000 sq.ft. at a density of 40 units per hectare. The medium density area is located to the immediate southwest of the village centre.



Housing Types - Single Family (Low Density)

House Type	S / F Det.
Total (ha)	125
% Total Site Area	25%
Total Buildable (ha)	94
No. of Lots	2004
No. of Units	2004
Estimated Pop	4408
Cost of Lot & D.U.	\$180,000
Est. Tax Rev. @ 1.965%	\$7,086,954



Single family lot--5000 sq. ft. lot



Typical single family homes



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Slide 34: The housing type suggested for the area planned at low density is a standard detached family dwelling form, on lots of 5000 sq.ft. at a density of 16 units per hectare. The low-density area is sandwiched in the middle of the site just west of the village centre. The single-family lot will occupy the most area of the developable land on the site at approximately 25%.



Housing Types-Single Family Luxury (Low Density)

House Type	S / F Det. "Lux"
Total (ha)	39
% Total Site Area	8%
Total Buildable (ha)	29
No. of Lots	417
No. of Units	417
Estimated Pop	917
Cost of Lot & D.U.	\$210,000
Est. Tax Rev. @ 1.965%	\$1,719,768



"Luxury" homes--7500+ sq. ft. lot

Sample of luxury homes





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Slide 35: The lowest recommended densities for the site are envisioned along the western boarder of the site abutting the green reserve along Chemin de l'Anse-a-l'Orme, at 11 units per hectare. The housing type suggested for the area is a traditional detached single family dwelling on lots of 7500 sq. ft.



Site Programme Totals



	Average Lot	No.of	No. of	No. Units /	Density
Housing Type	Size	Floors	Units	Floor	(units/ha)
Multiplex	8800	3 to 5	6 to 10	2	55
Townhouse	2000	2 to 3	1	1	40
Single Family	5000	2 to 4	1	1	16
Single Family	7500	2 to 4	1	1	11

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Projected Land Use	ha	%
Residential & Mixed Commercial (10%)	255	50%
R & D Campus	70	14%
Civic Space	10	2%
Green Space & 25 yr. Flood Plain	170	34%
Total	504	100%

Site Statistics	Total
Gross Density	26
Net Density	34
No. Lots	4994
No. of Units	6543
Estimated Pop	14394
Tax Rev. @ 1.965%	\$17,750,601

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Slide 36: The site development program totals are outlined, in brief, on the slide. The three boxes highlight, (A) housing type composition, (B) the projected land use measured in hectares and as denoted as a percentage of the whole site and finally (C) the residential statistics for the site, most notably the potential revenue to the Ville if the program were to be realized in full at current tax rates.







Slide 37a: The development program is designed to strengthen the tax base for Pierrefonds. The information on this slide illustrates the difference in return between two scenarios:

- 1. The first shows what current development practices may likely produce if continued.
- 2. The second shows what the proposed development for Pierrefonds West Village could achieve.







Slide 37: The phasing strategy is key to the success of the development plan. The phasing fully incorporates the principles of Smart Growth as a key guide for development.

Phase 1: will occur on the most easterly boarder of the site and will include the development of the R&D area on the site, as well as some high and medium density residential development. The extension of Pierrefonds Blvd. West through the village centre.

Phase 2: continues west over the site and sees the development of the village centre as well as the development of high, medium and low density residential units running from north to south through the centre of the village. The continuation of Antoine-Faucon.

Phase 3: includes the completion of the village centre and the last of the medium and high-density residential units.

Phase 4: has the western sector of the site built out with the majority of the development being low and very low density single family dwelling units. Finally, the construction of a north-south road joining Pierrefonds and Antoine-Faucon Blvds at the intersection of chemin de l'Anse-a-l'Orme.



Recommendations and Conclusions



- Policy Review
 - Public participation (acceptance in principle)
 - 440 Link / Urban Boulevard
 - Zoning must incorporate principles of New Urbanism.
- Benefits of Our Plan to the Enhancement of Pierrefonds
 - Healthier living
 - Establishes a town centre and communal focus
 - Stronger tax base
- Challenges to Pierrefonds
 - To change development practices under current planning philosophy
 - Land assembly

Slide 38: The plan offers a number of recommendations drawn from its conclusions. For it to achieve its full potential an exercise in public participation on this matter must be given consideration. The transportation infrastructure for the site must be constructed especially a north south road where the proposed AutoRoute 440 lies. If the plan is accepted and there must be very little deviation from the prescribe formulas related to New Urbanism.

Furthermore as the plan stands at the moment the potential benefits to the West Island Pierrefonds and the future residents of Pierrefonds West Village are compelling.

Finally, it is foreseeable that the best way to launch this project would be through the creation of a land assembly committee, where a plan to ensure site's land is not sold and developed in a piecemeal manner, which ultimately render the proposed development plan difficult to realise or possibly rendering it moot.