

## **2.2.5 Grounds Maintenance**

Additional grounds maintenance on the golf course including at the clubhouse, outside of the greens, teeboxes and fairways, will extend to caring for various landscaped areas, including flowerbeds, and ongoing maintenance for trees planted on-site. After initial landscaping, associated activities will include watering and fertilizing, staking and pruning tasks, and pond and drainage maintenance.

## **2.2.6 Municipal and Other Services**

The clubhouse, pro shop, starter house and maintenance buildings will be tied into the existing nearby municipal sewer and water services. Hydro and gas services will be extended to the clubhouse, pro shop and maintenance building. Garbage hauling services will be arranged through an appropriate contractor. Garbage receptacles will be placed throughout the golf course and will be emptied as required and brought to a central location near the clubhouse for pick-up. A main collection area for post-consumer products (i.e., cans, pop bottles, papers, certain plastics, cardboard, etc.) will also be established at the clubhouse for recycling. Composting toilets may also be used on site.

## **2.3 Decommissioning, Site Restoration and Rehabilitation**

At present, there are no decommissioning plans for the golf course. During initial start-up of play on the golf course, temporary structures may be required for the starter hut and clubhouse facilities until all permanent structures have been built.

Site restoration and rehabilitation measures for areas disturbed during construction will be included as part of the tender documents and will be completed prior to the start of operation of the course. Ponds developed as part of the drainage and irrigation system will be used for clean fill materials during construction and will not require restoration.



## **3.0 ENVIRONMENTAL SETTING AND EXISTING LAND USE**

### **3.1 Biophysical Environment**

#### **3.1.1 Ecological Land Classification**

The proposed project is located within the Winnipeg Ecodistrict of the Lake Manitoba Plain Ecoregion, which is encompassed by the broader Prairies Ecozone. The Ecozone is a broad geographical mapping unit indicating comparative differences in macroscale physical geography including substrate structure, climate, soil zones, and plant formations (Smith et. al., 1998). Ecoregions are subdivisions of Ecozones and according to Poston et al. (1990); each Ecoregion can be defined as regional landforms with “ecologically distinct soils, fauna, and micro climatic influences. Each reflects a combination of gradients such as elevation, surface materials, and vegetation” (Poston et. al., 1990). The following sections provide a description of the project area environment within the above context.

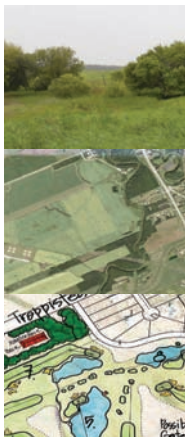
#### **3.1.2 Physiography and Drainage**

The general project area is located in the central lowland of the Red River Plain (Smith et. al., 1998). It is characterized as being smooth, level to gently sloping, clayey glaciolacustrine plain with a mean elevation of about 236 metres above sea level (masl). The Red River meanders northward through the centre of the plain and empties into Lake Winnipeg. Slopes tend to range from level to less than 2 percent and are smooth and long (exceeding 150 m). The major tributary to the Red River in the project area is the La Salle River. This river, along with the Red River (and other associated major tributaries) is part of the Red River drainage system which overall, is considered part of the Nelson River drainage system.

Specifically, contour levels at the proposed golf course site are generally uniform as the site is relatively flat. Some slight changes in relief are noted along a principal natural drainage in the northern part of the site and southeast of the proposed clubhouse location where the land slopes moderately down towards the La Salle River.

#### **3.1.3 Surficial and Bedrock Geology**

The Manitoba Plain Ecoregion (in which the project area is located) is described as being the lowest and most level Ecoregion located in the Prairies Ecozone (Smith et. al, 1998). This Ecoregion is underlain by low relief, flat lying Paleozoic limestone bedrock that is covered by glacial till and silts and clays deposited by glacial Lake Agassiz. Overburden thicknesses in the project area generally range from 15 to 20 metres, with a small area located near the Trappist Monastery ruins where



bedrock potentially may be located less than 15 metres from surface (Bezys, R.K. et. al., 2002). Alluvial deposits (that may consist of sand, silt and clay deposits) can be found along the major rivers in the project area (i.e., Red River and La Salle River).

Bedrock geology of the project area is classified as being part of the Red River Formation, specifically the Fort Garry Member, which is characterized as being massive to laminated dolomite, with minor argillaceous dolomite and high calcium limestone that in part is cherty. Intrusions of the Lower Fort Garry Member (Red River Formation) can be found near the La Salle River and is characterized as being dolomite mudstone that is brecciated (i.e., pertaining to sedimentary rocks that are made up of largely angular fragments [Manitoba Energy and Mines, 1990]).

### **3.1.4 Groundwater and Hydrological Description**

The principle sources of water in the Winnipeg Ecodistrict are from the major rivers and streams (Smith et. al, 1998). Limited supplies of variable quality groundwater for domestic and livestock uses are available from small, sandy and gravelly near-surface aquifers that are associated with till underlying the surface clayey deposits. There are limited supplies of variable quality groundwater under artesian pressure from Ordovician and/or Silurian limestone bedrock. There are no groundwater pollution hazard areas in the proposed project area (Department of Mines, Resources and Environmental Management, 1976.).

Bedrock aquifer maps of southern Manitoba indicate carbonate rocks (limestone and dolomite) in the project area that results in a bedrock aquifer that is continuous and is formed by thick and extensive carbonate rock beds with minor shale beds (Rutulis, 1986b). Domestic wells generally yield more than 1.0 litres per second (L/s) and the potential for intermittent yields of high capacity wells may be more than 100 L/s in several areas. In the project area, slightly saline to salty water may be found in the bedrock aquifer. This water is not potable, but may be acceptable for some livestock and other uses. It was further reported that the groundwater in the St. Norbert area is salty, with conductivity greater than 5,000 micro Siemens per centimetre ( $\mu\text{S}/\text{cm}$ ) This water is not suitable for irrigation of turf grasses at the golf course (E. Carlson, Manitoba Water Stewardship, Pers. Comm. July, 2007).

Sand and gravel aquifer maps of southern Manitoba indicate areas with very few widely scattered minor sand and gravel aquifers in the project area as a result of surficial deposits that consists mainly of low permeability clays and tills (Rutulis, 1986a). Areas along valleys and meander belts (i.e., La Salle River) may have the presence of alluvial and glaciofluvial sand and gravel aquifers which range in size from very small thin pockets to some fairly thick and extensive aquifers with well yields ranging from 0.1 L/s to 50 L/s. Water quality ranges from poor to good.



The potential for damage (contamination) to a fresh water aquifer in the project area is considered to be very low. The aquifers in the project area are overlain by a thick clay and glacial till layer that prevents aquifer pollution by infiltration from the surface (Rutulis, M. 1986c).

#### **3.1.4.1 La Salle River**

The La Salle River in Manitoba is located at 49° 43' 17" N (latitude) and 97° 14' 36" W (longitude). It has a gross drainage area of 2,360 km<sup>2</sup>. The La Salle is a regulated river with a series of dams located upstream of the project site and has 24 years of recorded water and stream flow statistics (1983 to 2006). The closest gauge to the project study area is on the La Salle River above the St. Norbert Dam (southwest of the project site). Based on 24 years of recorded data from this location, the maximum daily water levels have occurred over two peak periods (i.e., April to mid May and July to August) with a smaller peak in between (i.e., mid May to mid June).

By comparison, the minimum daily water levels over the same 24-year period have been recorded from May through to December. There is no gauge on the stretch of the La Salle River downstream of the St. Norbert Dam to its confluence with the Red River in the City of Winnipeg, including the portion of the La Salle River that is adjacent to the project site. According to Manitoba Water Stewardship, the La Salle River is classified as an intermittent river because the river can dry up over a prolonged drought period (S. Herbert, Pers. Comm., June 2007). The backwater effect from the Red River may also affect the water levels near the northern portion of the golf course property.

Information was extracted from a study done by the Manitoba Water Resources Branch (Smith, 1984), in order to create a channel profile of the La Salle River. A graph showing the La Salle River channel profile as well as historic river flows can be found in Appendix D.

#### **3.1.5 Climate**

The Winnipeg Ecodistrict is characterized as being the most humid subdivision of the Grassland Transition Ecoclimatic Region in southern Manitoba (Smith et. al, 1998). The climate is characterized by short, warm summers with long, cold winters. The mean annual temperature is about 2.4° C, the average growing season is 183 days and growing degree-days number about 1,720.

Mean annual precipitation is approximately 515 mm of which less than one-quarter falls as snow. Precipitation varies greatly from year-to-year and is highest from late spring through summer. The average yearly moisture deficit is about 200 mm. Table 1 shows selected climate data for the Winnipeg Airport.



**Table 1: Selected Climate Data for Winnipeg Airport**

	<b>Year</b>	<b>June-Aug</b>	<b>May-Sep</b>	<b>July</b>	<b>Jan</b>
Temperature (°C)	2.4	18.3	15.8	19.8	- 18.3
Precipitation (mm equiv.)	504.4	231.1	342.2	72.0	19.3
Rain/Snow (mm/cm)	404.4/114.8	231.1/0.0	339.8/2.4	72.0/0.0	0.3/22.6
Growing degree-days >5°C	1802.0	1229.0	1667.0	457.6	0.0

Source: Environment Canada, Canadian Climate Normals, 1961-1990.

### 3.1.6 Soils

#### 3.1.6.1 General Soils Information in the Project Area

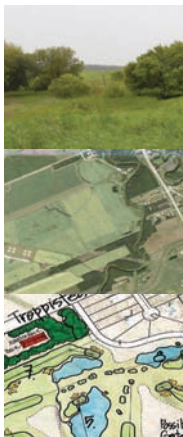
Soils in the Winnipeg Ecodistrict are predominantly imperfectly Gleyed Humic Vertisols and Gleyed Vertic Black Chernozems, and poorly drained Gleysolic Humic Vertisols and Humic Gleysols that have developed on calcareous, clayey glaciolacustrine sediments (Smith et. al, 1998). These sediments range in thickness from more than 60 m deep near the U.S. border to less than one metre locally in the northern part of the basin (Smith et. al.)

Gleyed Rego Black Chernozemic and gleysolic soils also occur on shallow, extremely to very strongly calcareous, loamy to silty sediments. These medium textured soils are found northwest of Winnipeg and in the southern and eastern sections of the basin.

The Reconnaissance Soil Survey of Winnipeg and Morris Map Sheet Areas Report (Ehrlich, W.A. et. al., 1953) classifies soils in the project area as dominantly being St. Norbert Clays, with intrusions of Red River Clays. Along the La Salle River, dominant soils are the Riverdale Silty Clays.

#### ***St. Norbert Clays***

St. Norbert Clay soils considered “wooded associates” of the Red River association. “Wooded associates” is an old term for soils today commonly found in the Luvisolic Order. The St. Norbert Clay soils primarily occur along river channels where trees such as oak, aspen and hazel tend to grow. These soils tend to have a brown leaf mat; a very dark grey clay horizon (A1 horizon) up to 2 inches thick and granular and neutral in reaction, followed by a dark grey clay horizon (A2 horizon) 1 to 4 inches thick, ash-like and slightly acid in reaction. The “B” horizon is approximately 12 to 20 inches in thickness, cloddy to massive, very hard when dry, plastic when moist and slightly acid in reaction in the upper portion. Vertical cracking occurs when the soil dries and may become



columnar in appearance. The “C” horizon is dark brown to dark greyish brown clay that is massive, alkaline in reaction and contains carbonate concretions.

Any variations in the degree of development of “wooded” soil profiles exist and all variations between Chernozemic soils and “wooded” (Luvisolic) soil profiles described above can be found. Within the St. Norbert soil areas, small occlusions of Red River Clay profiles can be found.

### ***Red River Clays***

The Red River Clay soils are representative of Chernozemic soils of the Red River association and are classified as being well to intermediately drained. These soils are characterized by a black to very dark grey “A” or surface horizon 8 to 12 inches thick, neutral in reaction, rich in organic matter, and with granular microstructures that tends to form columnar aggregates when dry. The “B” or transition horizon is 4 to 6 inches thick, dark greyish brown in color and slightly alkaline in reaction. This horizon grades into a light greyish brown horizon of clay that effervesces feebly (i.e., weak bubbles form) with acid. This type of soil is found on the crests of the low clay ridges or adjacent to stream channels where drainage is better than average.

### ***Riverdale Silty Clays***

These soils are very juvenile, highly fertile soils found on the terraces and flood plains along the Red and La Salle rivers in the project area, and other tributaries in the Winnipeg Ecodistrict. These soils are recent alluvial deposits with feeble or no development of soils horizons, grayish brown throughout and ranging in texture from fine sand loam to silty clay. These grey-brown deposits are naturally found under fairly dense deciduous forest consisting of elm, basswood, ash, cottonwood, and Manitoba maple. The Riverdale soils are slightly alkaline in reaction, and highly productive.

### **3.1.6.2 Detailed Soil Investigation and Classification**

A soil investigation was conducted of the proposed project area on May 15, 2007 (ND LEA Inc, 2007). Three soil pits were dug by an excavator at predetermined locations in the project area (Figure 7) and resulted in soil pits approximately 10 to 12 ft deep, by approximately 4 ft wide and approximately 10.5 ft in length.

Soils examined in the project area were classified in the field, and were found to be characteristic of Dark Gray/Black Chernozems group (Soil Classification Working Group, 1998). These soils tend to have a distinguishable Ah horizon, followed by a distinguishable B horizon and distinguishable C horizon.



The texture of these soils was dominantly clay and the depth to heavy clay at each soil site investigated was approximately 7 to 8 feet. It is anticipated that soils located in depressions on the proposed site will encounter clay at a shallower depth (i.e., 6 ft).

### **3.1.7 Aquatic Environment and Fisheries**

#### **3.1.7.1 La Salle River**

The proposed project is located entirely within the Red River drainage division (which is part of the Nelson River drainage system). The major water body encountered in the vicinity of the project area is the La Salle River.

The La Salle River, which is part of the La Salle Redboine Conservation District, originates near Portage La Prairie and terminates into the Red River south of the City of Winnipeg. The La Salle flows predominantly through agricultural land and through much of its course it is a turbid, slow moving, meandering prairie river with erodible, undercut banks, and variable water depths (North/South Consultants Inc., 2006).





Legend

- Soil Investigation Sites

Figure 7: Location of Soil Investigation Sites



The La Salle River is bordered by thick groves of trees in the vicinity of the project area. This is a riverbottom forest, dependent on spring floods to deposit silt and help replenish the soil with nutrients. Roots from the existing vegetation (riparian zones) help to stabilize the riverbank, which aids in reducing erosion. These riparian zones provide critical habitat and maintain biodiversity. Near the edge of the water, grasses, wildflowers and trees such as oak, poplar, willow and cottonwood generally dominate the riverbank. On the floodplain, located above the riverbank, numerous species of shrubs, trees (i.e., American Elm, basswood, green ash, and Manitoba maple) along with flowers and grasses can be found. Above the floodplain, the river terraces (the highest point of the riverbottom forest), support plants that require a drier environment (Manitoba Recreational Trails Association Inc website, 2007).

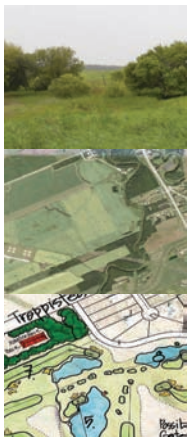
As a tributary to the Red River, there is a potential for 53 species of fish that occur in the Red River to also occur within the La Salle River (North/South Consultants Inc., 2006). The provincial Manitoba Fisheries Inventory and Habitat System (FIHCS) lists 13 species of fish identified in the La Salle River (North/South Consultants Inc., 2006). Some of the species include, but are not limited to: white sucker (*Catostomus commersoni*), black crappie (*Pomoxis nigromaculatus*), carp (*Cyprinus carpio*), northern pike (*Esox lucius*), white bass (*Morone chrysops*), and walleye (*Sander vitreus*).

### **3.1.7.2 Potential Species of Concern in the Project Area**

Documentation describing the occurrence of potential species of concern within the project area was obtained from the Manitoba Conservation Data Centre (MCDC). One aquatic species of concern was identified by MCDC in the project area.

Silver Chub (*Macrhybopsis storeriana*), was ranked as S3 by the MCDC, which has identified the species as being uncommon throughout its range or in the province with 21 to 100 occurrences. This species has been recorded in the La Salle River, which is one of the major tributaries found in the project area. The Silver Chub is also ranked by the federal Species-at-Risk Act (SARA) and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (as of May 2001) as species of special concern. This species has been designated a species of special concern because it has a disjunctive Canadian distribution, has been impacted by deteriorating water quality and appears to be in decline in parts of its range in Manitoba. The MCDC also noted that although the species has been identified based on observations in the St. Norbert area, they may or may not be found in the specific project area.

In August 2007, the Department of Fisheries and Oceans (DFO) Canada approved the design for the installation of the water intake pipe that will aid in the irrigation of the proposed golf course.



### 3.1.8 Vegetation

The native vegetation of the Winnipeg Ecodistrict originally consisted of tall grass prairie, meadow prairie grass and meadow grass communities depending on natural drainage conditions (Smith et. al, 1998). As a result of cultivation and the development of an extensive network of drainage ditches, the natural vegetation has largely disappeared. Only local pockets remain in some poorly drained locales, and as small portions of land that due to their size or limited access have not been broken. In most of the Ecodistrict, trees grow naturally only as a fringe along stream channels. On the better-drained sites above and usually some distances away from the channels, bur oak and trembling aspen with undergrowth of snow berry, hazelnut and red-osier dogwood can be found. On the alluvial floodplain deposits and lower river terraces, white elm, basswood, cottonwood, Manitoba maple and green ash with undergrowth of willow, ferns and associated herbaceous plants are found. Shrubs such as Saskatoon, high bush cranberry and nannyberry are found both on the floodplain and on the highest terraces.

Vegetation in the project area has largely been replaced by agricultural land. Treed areas with understory growth are located along the La Salle River and within the Trappist Monastery Historic Park.

#### 3.1.8.1 Potential Species of Concern in the Project Area

Documentation describing the occurrence of rare plants within the project area was obtained from the MDC. Five plant species of concern were identified by the MDC in the project area. Information from The Manitoba Endangered Species Act (MESA) and SARA for the five plant species of concern was obtained and reviewed. Table 2 lists the five species of concern as well as their MDC species rank. These species were not listed under either of the SARA or MESA.

**Table 2: List of Species of Concern Found in the Proposed Project Area**

Scientific Name	Common Name	MDC Species Rank
<i>Amorpha fruticosa</i>	False Indigo	S1S2
<i>Carex cristatella</i>	Crested Sedge	S2
<i>Carex emoryi</i>	Emory's Sedge	S2
<i>Nassella viridula</i>	Green Needle Grass	S3
<i>Sisyrinchium campestre</i>	White-eyed Grass	SU

False Indigo (*Amorpha fruticosa*) is ranked as S1/S2 by the MDC. This species is considered very rare to rare throughout its range or in the province (with <5 to 20 occurrences). This species is considered especially vulnerable to extirpation. Crested Sedge (*Carex cristatella*), and Emory's Sedge (*Carex emoryi*) are ranked as S2, which are identified as being rare throughout their range or in the province (with 6 to 20 occurrences). This species is also considered vulnerable to extirpation.



Green Needle Grass (*Nassella viridula*) is ranked as S3, which is considered to be uncommon throughout its range or in the province (with 21 to 100 occurrences). White-eyed Grass (*Sisynchium campestre*) is ranked as SU, which is identified as a species that may possibly be in peril, but its status is uncertain and more information is needed.

A ground reconnaissance survey of the project area and areas along the La Salle River was conducted on July 4, 2007 by a trained botanist. None of the plant species of concern listed above were found in or adjacent to the project area.

### **3.1.9 Wildlife Species**

The Lake Manitoba Plain Ecoregion includes habitat for white-tailed deer, coyote, rabbits, ground squirrels and waterfowl (Smith et. al, 1998). Other species such as Richardson's ground squirrel and northern pocket squirrel may also be found in this Ecoregion. Bird species characteristic of this Ecoregion (and specifically the Prairies Ecozone, which the Lake Manitoba Plain Ecoregion is part of) include ferruginous hawks, sage grouse, great blue heron, brown thrashers and Baltimore orioles.

The red-sided and western garter snakes are common and widespread throughout the Ecoregion. Other reptiles and amphibians are also present including the blue-tailed skink, gray salamander and various other toads and frogs.

#### **3.1.9.1 Potential Species of Concern in the Project Area**

Documentation describing the occurrence of potential species of concern within the project area was obtained from the MCDC. One wildlife species of concern was identified by the MCDC for the project area.

The Barred Owl (*Strix varia*) is ranked by the MCDC as S3/S4 which is identified as being uncommon (S3 – 21 to 100 occurrences) to widespread and abundant and apparently secure (S4) throughout its range or in the province with many occurrences (>100 occurrences). This species is also ranked by SARA as being a species of special concern.

A ground reconnaissance survey for wildlife in the project area and areas along the La Salle River was conducted on July 4, 2007. The Barred Owl, or any other wildlife species of concern, was not observed during the field survey.



## 3.2 Socio-Economic Environment

### 3.2.1 Population and Settlement

The proposed golf course is located in the St. Norbert area south of the Perimeter Highway in the city of Winnipeg, Manitoba, located west of the La Salle River and south of Rue des Trappistes (Figure 8). St. Norbert is a heavily bilingual neighbourhood that began as a Métis settlement dating back to 1822. The 2001 census data (Statistics Canada) indicates the ward population of St. Norbert is approximately 46,000 and the community population of St. Norbert is approximately 5,700.

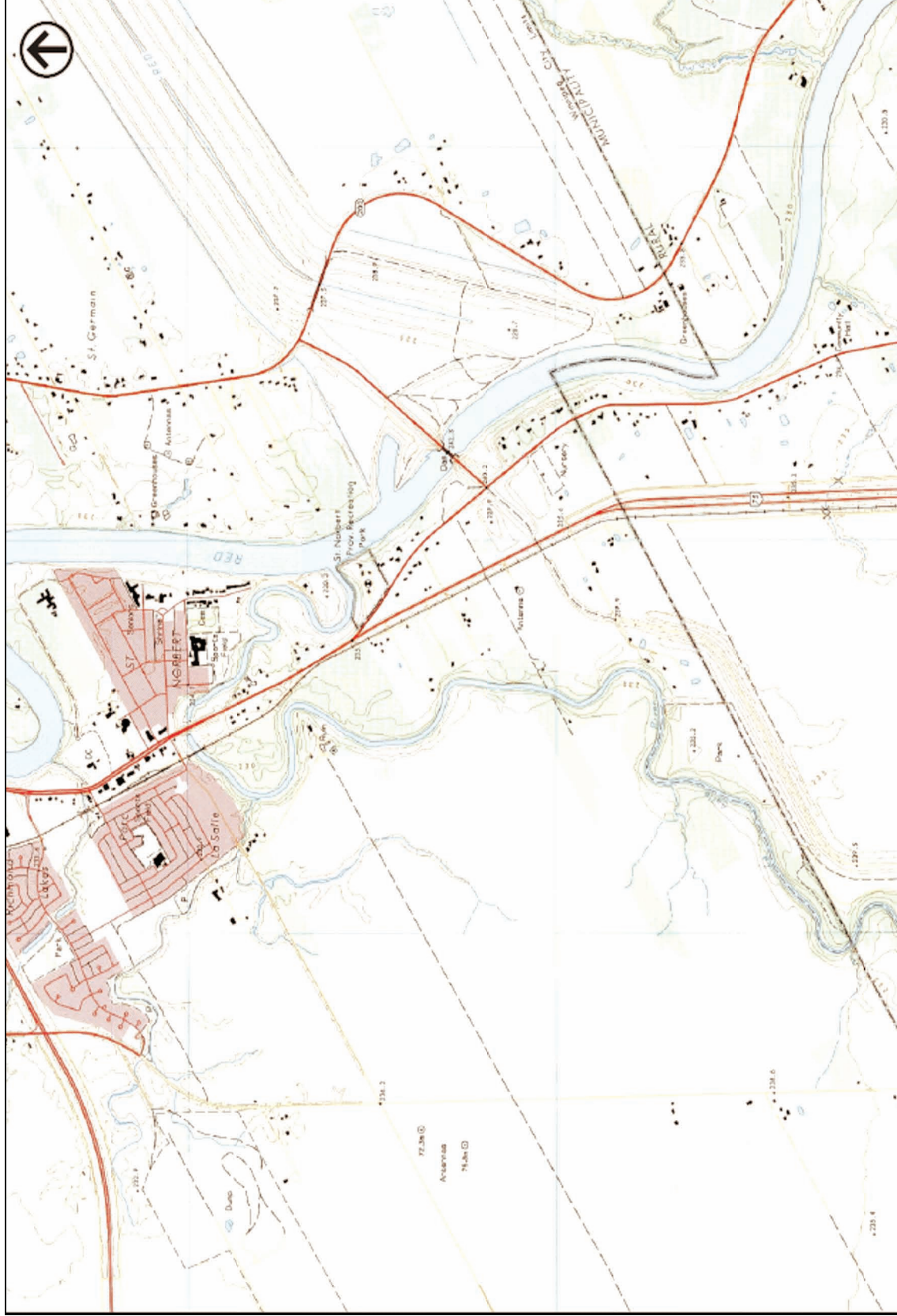
### 3.2.2 Local Economy

Due to the location of St. Norbert, south of Winnipeg's perimeter at the junction of the Red and La Salle rivers, this community serves as the southern gateway to Winnipeg, providing significant drive-through traffic from Southern Manitoba and the United States.

This, combined with St. Norbert's ability to draw upon the largely affluent population of South Winnipeg, has meant that local businesses enjoy a large customer base. Notable business opportunities in St. Norbert include: a fine dining restaurant, bakery, boutique stores, specialty foods retailer and a sporting goods retailer.

St. Norbert is also home to the ruins of a Trappist Monastery, Our Lady of the Prairies, which has become a local attraction. The area also hosts the St. Norbert's Farmer's Market every summer, and other attractions include the St. Norbert Provincial Heritage Park and the Red River Flood Gates.





SOURCE: SURVEYS AND MAPPING, 1990

Figure 8: Local Environmental Setting

### **3.2.3 Existing Land Use and Land Use Designation**

The dominant land use in the proposed project area is agriculture, with seeded crops of sunflowers and legumes. A low wetted channel is visible in the northern third of the site running to the north to Rue des Trappistes. Remaining areas not under crop production includes grassed over areas and pockets of shrub and tree cover.

The subject property is designated as a “Rural” Policy Area under Plan Winnipeg ... 2020 Vision. Areas with this designation are primarily devoted to agricultural uses and related support functions until such time that these lands are required for redesignation for future development. The property is currently zoned as “A Agricultural District” under the City of Winnipeg’s Zoning By-Law No. 6400/94 that regulates land use. The “A” district is intended to conserve land for general agricultural and compatible activities in areas designated as “Rural” in Plan Winnipeg. Since the subject area is intended for redevelopment as a golf course, such a use is conditional use under the zoning district.

#### **3.2.3.1 Residences**

The properties adjacent to the site can be seen on Figure 1. Lands further to the west are also under agricultural production. Residential homes are located to the northeast backing on to Rue Des Ruines du Monastere. Other residential homes line Rue des Trappistes east to Pembina Highway. The Trappist Monastery Historical Site and the St. Norbert Arts and Cultural Centre are located to the east and immediately adjacent to the subject property. A treed parcel of land owned by Manitoba Hydro borders the subject site on the south. A multi-use baseball diamond facility is located to the southwest of the subject property. Additional residential homes were visible to the east of the site across the La Salle River.

#### **3.2.3.2 Mineral and Aggregate Resources**

There are no mineral occurrences, mining claims, mines or quarry leases in the proposed project area (Manitoba Industry, Trades and Mines, 2001). Similarly, there are no aggregate deposits, private or crown gravel pits or bedrock quarries in the proposed project area (Manitoba Energy and Mines, 1988).

#### **3.2.3.3 Ecologically Significant Lands**

The City of Winnipeg has an Ecologically Significant Natural Lands Strategy & Policy (February 2007) through which natural heritage sites that are important to “creating a vibrant and healthy city which places its highest priority on quality of life for all its citizens” are identified (Plan Winnipeg 2020 Vision). Ecologically Significant Natural Lands (ESNL) are natural lands that the City of Winnipeg has acquired. These lands are to be zoned PR1 and are to be managed according to



procedures as stated in the Strategy. ESNL can also be managed on private lands through conservation agreements or easements. The Strategy encourages and provides incentives for private landowners to act as stewards of natural lands on their property.

Mapping, produced by the City of Winnipeg, Public Works – Naturalists Services Branch showing City of Winnipeg Natural Areas was reviewed for this subject property given its location along the La Salle River. A tree-covered portion of the property south of Rue des Trappistes and west of Rue des Ruines du Monastere was identified as a natural area (Grade B/C [light to moderate disturbance]). Additional natural areas have been identified in the vicinity of the subject site including: a stretch of riparian habitat along the west side of the La Salle River south of the Trappist Monastery site (noted as Grade C/D [moderate to heavily disturbed site]); and an adjacent section of continuous block of tree-cover, east of the La Salle River and the Trappist Monastery (identified as Grade A [virtually undisturbed natural area]). A meeting was held with the City of Winnipeg Naturalist on July 16, 2007 to discuss the options for the water intake location required to irrigate the proposed golf course. Information from this meeting can be found in Section 4.3 and in Appendix E.

#### **3.2.3.4 First Nation/TLE Entitlement Lands**

There are no Reserve Lands, treaty land entitlements or First Nation Community Interest Zones (CIZ) at or in the vicinity of the project study area.

### **3.2.4 Infrastructure**

#### **3.2.4.1 Roads**

Provincial Trunk Highway (PTH) 75 is located east of the proposed project area and the La Salle River. PTH 75 (Pembina Highway inside the perimeter) runs from the city of Winnipeg south to the United States. The proposed project site is approximately 400 m west of PTH 75.

#### **3.2.4.2 Railways**

The Canadian National rail line runs parallel to PTH 75 in the vicinity of the proposed project area. The rail line is also located approximately 400 m from the proposed project site.

#### **3.2.4.3 Waste Disposal Grounds**

A review of historic mapping of landfill sites within the City of Winnipeg, produced by the Planning, Property & Development Department, shows no former landfill sites at or in the vicinity of the subject property. The nearest landfill to the subject property is the City of Winnipeg's Brady Road Landfill located to the northwest of the site.



#### **3.2.4.4 Other Utilities**

In the vicinity of the proposed project site (immediately southeast of the project area) there is an existing Manitoba Hydro distribution line. Manitoba Hydro also currently owns a treed parcel of land that borders the south end of the project site.

There is also an existing TransCanada Pipeline (TCPL) that borders the southwest portion of the larger agricultural site (which is outside the subject area).

Within the residential areas located adjacent to the proposed project area, there are numerous other distribution lines as well as gas pipelines. Waterlines would also be located in the residential areas. There is a hydrant located on the monastery grounds and a water line that services the Trappist Monastery Heritage Park.

#### **3.2.5 Outdoor Recreational Resources**

##### **3.2.5.1 Trappist Monastery Provincial Heritage Park**

In 1892, five Cistercian monks from the Abbey of Bellefontaine, France, founded Our Lady of the Prairies Trappist Monastery in St. Norbert. For eighty-six years the site provided the Trappists with tranquility and sustenance for their lives of prayer and manual labour. The monks of Notre-Dame built the monastery into a prosperous agricultural operation complete with a sawmill, forge, apiary, cheese house, bakery and green houses. Most of these products were sold to the outside community (St. Norbert Arts Centre, 2007).

The first monastery building built in 1892, was a three-storey wooden structure on a stone foundation, which featured a chapel, porch and bell tower. It was adapted as a house for guests in 1904 when the monks moved to a larger residence built nearby. In 1912, the guesthouse was destroyed by fire and the monks replaced it immediately with a new guesthouse, which today is occupied by the St. Norbert Arts Centre.

Due to encroaching urbanization, increased traffic in and through St. Norbert, the Trappists decided to relocate to a more secluded location near Holland, Manitoba (145 km southwest of Winnipeg). By 1978, most of the outbuildings had been taken down or moved. Only the chapel, monastic wing, guesthouse and gatehouse remained.

Local residents acting through the non-profit organization Heritage St. Norbert Inc. tried to preserve the site's historical and cultural character. In 1980, the group secured from the City of Winnipeg a historic designation for the chapel and monastic wing. In 1983, fires started by vandals gutted the vacant chapel and monastery. The guesthouse, located some distance away, was spared.



Heritage St. Norbert decided to try to preserve the remains of the site and in 1987 the property was set-aside as a provincial heritage park. In 1988, as a result of the efforts of Heritage St. Norbert, the Province of Manitoba designated the guesthouse and the surrounding land as a heritage site.

Today, the monastery ruins (see photo below) are located on provincial park land which is approximately eight acres in size.



*Remains of Trappist Monastery at the Trappist Monastery Provincial Heritage Park*

### **3.2.5.2 St. Norbert Arts and Cultural Centre**

St. Norbert Arts and Cultural Centre (SNAC), incorporated in 1991, is a non-profit, volunteer-run organization with a Board of Directors and a volunteer run management collective, the Living Earth Collective. They are located on the historical site of the Trappist Monastery and are currently housed in the 17,000 square foot turn-of-the-century guesthouse, built by the Trappist monks in 1912. The guesthouse has been declared a provincial and municipal historic site, and has undergone over \$1 million of renovation and revitalization (St. Norbert Arts Centre, 2007).

The SNAC building hosts a residency program for people working on projects at the site. On the site looked after by SNAC, gardens with food and medicine plants can be found, as well as a barnyard with goats, pigs and chickens. A community compost demonstration site is an active part of the gardens and the river (La Salle) is accessible by a dock.





*St. Norbert Arts Centre*

*Log Home located in St. Norbert Provincial Heritage Park*

### **3.2.5.3 La Salle River**

The La Salle River is the major water body located in the vicinity of the proposed project. The La Salle River runs north/south adjacent to the Trappist Monastery Provincial Heritage Park, which is located immediately adjacent to the proposed project site. The La Salle has been characterized as a peaceful, winding river that is bordered by thick groves of trees. Different vegetation communities can be found along the river that provide critical habitat and maintain biodiversity of the area.

In terms of recreation, the La Salle River is popular with snowmobilers and cross-country skiers in the winter, and canoeists and kayakers in the summer. The La Salle is considered a navigable watercourse.



*The La Salle River near the Trappist Monastery Provincial Heritage Park*



### 3.2.6 Heritage Resources

A request was made to Manitoba Historic Resources Branch with respect to the location of heritage resources on the subject property. Mr. Gord Hill, Impact Assessment Archaeologist with the Branch, examined branch records for areas of potential concern. In correspondence received, it was noted that the potential to impact significant heritage resources is low and, therefore, the Branch had no concerns with the project (Appendix E). Mr. Bruce Donaldson of the Historic Resources section was also contacted with respect to any historical information the Branch may have with respect to any farm outbuildings associated with Monastery. No reports or historical documentation were found on any associated farm outbuildings.



## 4.0 PUBLIC NOTIFICATION AND CONSULTATION

### 4.1 Local Residents

In early June 2007, invitations to an open house regarding the proposed Southwood Golf Course were hand delivered to residents living on Rue Des Trappistes and on Rue Des Monastere (see Appendix F). The open house was held for residents to inform them of the development, planning and environmental processes and to address any potential concerns or questions regarding the proposal to relocate the golf course and club.

Roundtable discussions were held with local residents on June 27, 2007, at the Astoria Hotel on Pembina Highway in Winnipeg. Approximately 34 residents, as well as representatives from Southwood Golf and Country Club and MMM Group were present at the open house.

A brief summary of the current status of the Southwood Golf and Country Club and requirement for a new location for the golf course was provided to the residents. An overview of the development process and opportunities for public participation was also outlined. Questions and comments raised by the residents fell into seven different categories:

- Traffic and Roadway
- Club Membership
- Proposed Golf Course
- Noise
- Feedback from St. Norbert Arts Council (SNAC)
- Environmental
- Other

A summary of the questions and comments raised at the open house can be found in Table 3, Appendix F.

A follow-up formal meeting with approximately 17 local residents regarding the proposed Southwood Golf Course development was held on July 19, 2007. Representatives from Southwood Golf and Country Club and MMM Group were also present at the meeting. An update on the project development process was provided. An overview of the traffic analysis completed for the proposed project was also outlined. Information regarding the City of Winnipeg hearing date was also provided. Question and comments raised by the residents fell into two categories:

- Traffic and Roadway
- Proposed Golf Course



A summary of the questions and comments raised at the follow-up meeting can be found in Table 4, Appendix F.

An on-site-field visit was held on July 20, 2007 between residents and a representative from the Southwood Golf and Country Club. Concerns raised by the residents during the on-site- visit can be found in minutes of the meeting in Appendix F.

Throughout the duration of the proposed project, any concerns or questions raised by the public will continue to be addressed by the proponent.

## **4.2 St. Norbert Arts Council (SNAC)**

On June 27, 2007 a formal meeting was held with SNAC and Heritage St. Norbert to discuss the proposed Southwood Golf Course development. Representatives from Southwood Golf and Country Club as well as MMM Group were also present.

A background on the current golf course and the requirement for a new location for the golf course was provided to SNAC and Heritage St. Norbert. A presentation was delivered by SNAC which outlined topics such as (but not limited to) the history of the ruins; current SNAC practices regarding the historic site (i.e., no pesticide use in the gardens); and history of site stewardship (i.e., Municipal and Provincial Heritage designation).

Points of discussion during the roundtable meeting fell under four categories:

- Design
- Shared Eco-System
- Infrastructure
- Community Decision Making

Information shared during these discussions can be found in minutes of the meeting in Appendix F.

A follow-up formal meeting with SNAC regarding the proposed Southwood Golf Course development was held on July 19, 2007. A presentation on the golf course layout and philosophy was presented by MMM Group. SNAC commented on several issues discussed during the meeting (i.e., road location and development of a walking path). MMM Group provided an overview of the servicing research and progress including City sewer and water, hydro, upgrading, and road access. Minutes of the meeting can be found in Appendix F.



On going consultation with SNAC and Heritage St. Norbert will occur throughout the duration of project development.

### **4.3 Meeting with the City of Winnipeg Naturalist**

A meeting with the City of Winnipeg naturalist was held on July 16, 2007 to discuss the options for the water intake. Information will be provided by the City of Winnipeg Naturalist on native species to incorporate into the golf course. The City of Winnipeg Naturalist also advised that bank stability should be investigated regarding the intake location. Minutes from the meeting can be found in Appendix F.

### **4.4 Public Hearing**

A public hearing regarding the conditional use of the land for the proposed golf course was held on August 1st, 2007. The application was approved and the Notification of Approval can be found in Appendix F.



## **5.0 ENVIRONMENTAL IMPACT ASSESSMENT AND PROPOSED IMPACT MANAGEMENT**

The potential environmental effects associated with the construction and operations of the golf course are described below. The proposed Southwood Golf Course is in a preliminary conceptual design stage and therefore construction details and specifications have not been finalized. General assumptions regarding environmental effects during the construction, operation and maintenance have been made based on existing knowledge of environmental impacts associated with golf course projects at other locations in Manitoba as well as interviews and discussions held with proponent representatives (i.e., current Golf Superintendent at Southwood) and potentially affected parties (i.e., SNAC).

The subsections below are categorized by the nature of impacts under consideration. Each subsection includes comments and conclusions respecting the overall golf course proposal.

The construction and site clearing as well as the operation and maintenance (O & M) of the proposed golf course will be conducted in accordance with applicable Best Management Practices (BMPs) to ensure that environmentally responsible protection measures are applied during project development and as part of ongoing maintenance practices for day-to-day golf course operations. As much as practical, the Southwood Golf Course intends to follow the Standard Environmental Management Practices that are generally applicable to all golf courses and which form the basis for the Audubon Cooperative Sanctuary Program (ACSP). The proponent is committed to incorporating as many of these standards as practical in balancing the demands of golf with their responsibility to the natural environment.

### **5.1 Biophysical Environment**

#### **5.1.1 Site Clearing and Construction**

##### **5.1.1.1 Air Quality**

There will be a temporary increase in vehicular and equipment traffic during clearing and construction resulting in higher vehicle emissions and potential dust problems in the project area. Water spraying is a procedure that can be used and applied, as required, to alleviate potential dust problems on local roads.



However, the impacts to air quality are not considered to be a concern given that they will be short-term in duration. Clearing and construction traffic will use Waverley as per the conditional use order.

#### **5.1.1.2 Terrain and Soils**

Terrain and soils potentially affected by the proposed golf course are confined to the project site. Potential impacts relate to soil erosion and siltation of existing land drainage systems, potential fuel spills and contamination of soil as a result of such activities as refuelling of equipment.

Rapid surface stormwater runoff can lead to erosion of local soil resources and to siltation of existing land drainage systems. During clearing and construction, on-site control of surface runoff in areas susceptible to erosion or when construction activity increases the potential for runoff, will help prevent sediment from entering the drainage systems. Existing drainage patterns at the proposed site should not intentionally be altered. Due to the high presence of clay to heavy clay content in the soils, construction activities should cease during wet conditions (i.e., rain events) to reduce the potential for rutting and compaction. Increased rutting and compaction of these soils in the project area may affect the growth potential for grasses seeded on the golf course. Adequate mitigation measures should be specified in the contract tender documents to address these potential effects.

The use of heavy equipment for the project will be limited to earth moving equipment and will be for a relatively short period of time. Therefore, it is likely that on-site fuelling of equipment will be minimal, thus minimizing the chance of fuel spills and the size of any spills should they occur. In any event, the soils are relatively impervious and movement of contamination through the soil would be relatively slow, allowing time for mitigation. The impacts are expected to be minimal and mitigable. The on-site contractor will develop and implement an emergency response plan to deal with any potential spills.

#### **5.1.1.3 Surface and Groundwater**

There is potential for impacts to surface and groundwater through construction activity and through accidental spills and leakage from equipment. All site clearing and construction activity associated with the development of the proposed golf course will be subject to the application of Best Management Practices and adequate mitigation measures specified in the contract tender documents.

General site drainage will be maintained during clearing and construction, and all drainage will be directed to existing drainage systems. The use of sediment basins will minimize the amount of sediment that reaches the drainage systems. During construction, the project site will be kept



graded such that runoff is not allowed to drain onto adjacent properties. Final grading of the project site could also create the potential for sediment to be transported as wind-blown dust or as stormwater-eroded soil. These potential effects are temporary and can be mitigated by sediment fencing and on-site drainage swales that will help control the transport of sediment. The potential impacts are considered minor and manageable. The activities on-site, which might contribute to the generation of sediment during construction, will be monitored by the Contractor.

The risk of accidental spills during clearing and construction is considered minimal given the adherence to adequate protection measures. Servicing and refuelling will be conducted in accordance with appropriate Provincial regulations. Due to the presence of relatively impervious layers of clay found in the soils in the project area, the potential for contamination of groundwater in the project area is considered to be very low. Aquifers in the area tend to be overlain by a thick layer of clay and glacial till that prevents aquifer pollution by infiltration from the surface (Rutulis, M. 1986c).

There are also no groundwater pollution hazard areas in the proposed project area (Department of Mines, Resources and Environmental Management, 1976.).

#### **5.1.1.4 Loss of Vegetation and Habitat**

During clearing and construction for the golf course, some vegetation and habitat will be lost. Since the majority of the proposed golf course development occurs on agricultural land the loss of vegetation and habitat will be minor and mitigable.

The current design concept for the proposed golf course emphasizes minimizing the amount of clearing required and intends to leave as much of the natural areas as possible on the course itself. A stand of trees located north of the proposed site (west of the entrance road to the ruins) will require some clearing for the placement of a maintenance shed. Large, old-growth trees will be surveyed and flagged prior to clearing and construction to ensure that they are not damaged so they can be incorporated into the golf course design.

A water well pumphouse and screened pump intake line from the La Salle River is required for irrigation. The intake line will extend approximately 190 m from the La Salle River to a settling pond and is proposed to be buried in the ground. During installation and construction, site clearing will be required resulting in a loss of vegetation cover. Construction will occur during the winter to minimize the potential effects on stream bank vegetation. Minimal clearing should occur along the riverbank as well as the entire length of the buried intake line. Erosion control methods (i.e., erosion control blankets, rip-rap) should be applied to reduce the potential for bank erosion and



sedimentation into the La Salle River. Re-vegetation of the riverbanks and trench will occur to re-stabilize areas disturbed during installation of the intake line. The intake line will be installed into the river by horizontal directional drilling. Open cut trenching will not be used within 25 m of the riverbank. All construction techniques for the intake pipe will be conducted as per the City of Winnipeg's approval.

A rare plant survey was conducted for the project area in July 2007. No species of concern were noted during the survey.

#### **5.1.1.5 Wildlife**

Potential impacts to wildlife in the project area relate to habitat loss and disturbance during the clearing and construction stage. Construction activities are expected to have minor to negligible and mitigable effects on wildlife species in the area.

The construction of the maintenance shed, in the forest stand immediately south of Rue Des Trappistes will be required. A wildlife survey was conducted in this area on July 2007, and no wildlife species of concern were found. Clearing in this area will be minimized and the Contractor will undertake removal of trees/slash. Disposal of trees/slash should be in accordance with applicable Municipal (City of Winnipeg Forestry Branch) and Provincial legislation. Clearing activities should take place outside of the bird-breeding season, which occurs between March and June.

Removal of vegetation as a result of the construction of the intake line could result in a decrease of biodiversity for wildlife in the area. Clearing of vegetation should be kept to a minimum. Re-vegetation of disturbed areas should occur to allow for re-growth and an increase in biodiversity in these areas. The use of directional drilling within 25m of the riverbank will reduce the amount of clearing required.

During construction, there is a potential for noise, vibration and human presence to disturb birds and mammals that may be transitory within or adjacent to the study area. Species that are less tolerant of the disturbance may move farther away from the disturbance. The timing of construction may have an effect on wildlife in the area, especially the seasonal nature of some species. Once the disturbances cease, it is expected that wildlife would return to the area.

#### **5.1.1.6 Fish and Fish Habitat**

An intake line to be used for irrigation will be constructed in the La Salle River. Construction activities may impact fish and fish habitat (i.e., during spawning periods, creation of excessive sedimentation). An application for construction of the intake, which contains information on the



location of the intake and intake design (i.e., screen size), has been submitted to the Department of Fisheries and Oceans Canada for approval (under the Fisheries Act). In August 2007, approval for the water intake pipe was received from the Department of Fisheries and Oceans (Appendix A). To reduce or negate the potential for fish impingement at the intake, a proper screen size (subcarangiform criteria) will be specified in accordance with the Freshwater Intake End-of-Pipe Fish Screen Guide (1995) and any advice received from DFO (Appendix A).

The La Salle River is also a navigable watercourse. Application for approval to construct the intake structure has been submitted to the Navigable Waters Protection Branch (Transport Canada) to ensure the intake line meets the requirements of the Navigable Waters Protection Act.

Additional mitigative measures that will be followed to reduce potential impacts of the construction of the intake include, but are not limited to:

- Use appropriate measures to control erosion on all slopes that require clearing;
- Staging and work areas will be clearly marked to ensure all work activities are restricted to designated areas;
- Where banks have been destabilized, measures will be taken immediately to control and minimize erosion;
- Conduct construction of the intake structure in the river during the winter months; and
- Install the intake pipeline using horizontal directional drilling

All legislation and regulations will be adhered to including the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (Fisheries & Oceans Canada and Manitoba Natural Resources 1996). Of importance is Section 35 and 36 of the Fisheries Act which prohibits the harmful alteration, disruption or destruction of fish habitat and the deposits of any deleterious substance to fish habitat.

### ***Erosion and Sedimentation***

Since some construction will occur within the La Salle River (i.e., installation of intake), there is the potential for increased sedimentation and erosion. The intake structure will be installed during the winter from ice cover to minimize potential disturbance to fish species. The intake pipeline will be constructed using horizontal directional drilling. Adequate mitigation measures should be specified in the construction tender to address this potential during construction.

Polishing ponds (used to filter sediment using natural vegetation) will be constructed to receive drainage from any other retention ponds constructed during the golf course design. The retention



ponds would be used to collect any surface runoff from the golf course and would drain into the polishing ponds prior to final discharge.

Other mitigative measures to be considered (but not limited to) include:

- Provide temporary drainage and pumping necessary to keep all excavations and the site free of water;
- Water containing suspended materials should not be pumped into waterways or drainage systems;
- Runoff should be managed in accordance with provincial and municipal legislation; and
- Existing drainage patterns should not be intentionally altered and appropriate measures should be taken in the vicinity of the La Salle River to provide proper erosion control to prevent excessive siltation and sedimentation.

## **5.2 Socio-Economic Environment**

### **5.2.1 Site Clearing and Construction**

#### **5.2.1.1 Property Impacts**

The Southwood Golf and Country Club will purchase the golf course property from the landowner. No other property owners will be directly affected by the proposed project.

#### **5.2.1.2 Noise and Vibration**

Potential effects during clearing and construction include increased noise, disturbance and inconvenience to local residents. The construction on-site (e.g., earth works) could extend from 7:00 a.m. to 7:00 p.m. and could include weekend work when necessary to complete the project on time. Construction activities will adhere to City of Winnipeg noise by-laws.

The operation of heavy earth moving equipment on-site will generate some vibrations on the site, but these will generally not be distinguishable from the operation of other vehicles or trains in the area. The impacts are expected to be minimal and of short duration.

#### **5.2.1.3 Economic Benefit**

The development of the proposed golf course will have a positive effect on the local economy. There will be short-term employment benefits for contractors used during the construction phase. Local businesses that supply sand and gravel will also benefit from golf course construction. Local businesses in the community may also see increased sales as a result from the increase in the number of people in the area (i.e., restaurants, shops).



#### **5.2.1.4 Residences**

Construction-related activities during the project (principally equipment noise and traffic) may generally have some short-term impact on some occupied residences in the vicinity of the proposed project. However, construction-related impacts (presence of workforce, equipment, vehicles) are generally minor and will be short-term in nature. Construction activities will be restricted to daylight hours to avoid undue noise effects and will be required to use Waverley as per the conditional use order. Issues related to public safety from the golf course construction will be addressed through the application of safety protocols and procedures that meet or exceed Provincial regulatory requirements.

#### **5.2.1.5 Existing Land Use**

During construction the movement of heavy equipment and any storage of construction materials could have an impact on adjacent properties. Specific portions of the construction site (i.e., compounds) may be fenced for security reasons. The impacts on land use will be minimal and limited to the property to be purchased by the proponent from the vendor.

Aesthetic impacts associated with the construction of the golf course are considered to be minimal. Construction activities are expected to be short-term in nature and will result in the creation of a recreational use landscaped area that is not inconsistent with the area's rural character.

#### **5.2.1.6 Infrastructure**

There will be an increase in vehicular traffic along Waverley during clearing and construction. However, the increased traffic will be the result of specific activities at the site and normally for short durations only. Construction activities will not require the diversion of traffic in the area. The impacts are expected to be minor and mitigable. Signage will warn non-construction traffic of activities in the area. Flag persons will be provided, as required, for construction traffic entering and exiting the site. The Contractor will monitor the construction traffic.

Apart from vehicle and equipment road access during the clearing and construction period, the development of the proposed golf course will have little impact on area infrastructure. An access road to the golf course will be constructed from the existing road that services the Trappist Monastery. The City of Winnipeg will be consulted with respect to road development. The proponent will meet all operating and safety requirements associated with the development of this project.

#### **5.2.1.7 Outdoor Recreational Resources**

Potential effects on outdoor recreational resources are considered to be minor to negligible for the clearing and construction of the proposed golf course. The closest outdoor recreational resources



to the proposed project site are the Trappist Monastery Provincial Heritage Park, the St. Norbert Arts and Cultural Centre (SNAC) and the La Salle River, all located to the east of the project site.

### ***Trappist Monastery Provincial Heritage Park and SNAC***

Impacts to the Trappist Monastery Provincial Heritage Park and SNAC tend to be minor and short term in nature and include increased noise level, traffic and dust during construction activity. Related impacts are largely restricted to aesthetics associated with any tree/shrub clearing for the maintenance building and the water intake pipe to the La Salle River. Any required clearing for project development will be kept to the minimum amount necessary. Application of adequate environmental protection measures will serve to limit the effects on the natural environment as much as possible.

### ***La Salle River***

The La Salle River is a navigable watercourse. In terms of recreation, the La Salle River is popular with snowmobilers and cross-country skiers in the winter, and canoeists and kayakers in the summer. The irrigation intake structure is required to meet the requirements and receive approval from the Navigable Waters Protection Branch (Transport Canada).

Construction of the intake in the La Salle River will be conducted according to the advice received from Transport Canada so as not to impede or hinder recreational activities (i.e., canoeing, snowmobiling).

#### **5.2.1.8 Heritage Resources**

A review of the heritage resource records of the project area, by the Manitoba Historic Resources Branch, indicated that the potential to impact significant heritage resources is low (G. Hill Manitoba Historic Resources Branch, Appendix E). The construction phase of the project has the greatest potential to unearth unknown heritage resources.

Several former farm outbuildings/concrete slab remains associated with the Monastery, were observed at the project location.

If unknown heritage resources are encountered during the clearing and construction phase of the project, all work will be stopped at that location and the Historic Resources Branch contacted immediately for direction pursuant to The Heritage Resources Act. An archaeologist should be called to the site to provide mitigative action if unknown heritage resources are expected to be impacted.



## 5.3 General Mitigation Measures and Procedures

The following sections outline the general mitigation measures that are applicable to prevent or minimize adverse environmental effects of golf course site clearing and construction activities.

### 5.3.1 Site Clearing and Access

- Burning of any cleared material will not be permitted. Any materials or vegetation is to be removed to a licensed disposal facility.
- Protect vegetation at all locations on-site unless designated for clearing. Roots of designated trees to remain will be protected to their dripline and a minimum setback of 6 metres maintained.
- Water spraying of gravel roads will be conducted to control dust problems.
- If heritage resources or objects (including human remains) are uncovered during the course of any work, the work at that location is to be stopped immediately until the appropriate authorities have been notified and instructions provided to the Contractor. Notification should be provided to the City of Winnipeg Police Services (if human remains are present) and Manitoba Historic Resources Branch.

### 5.3.2 Fuel, Lubricant and Hazardous Material Storage and Spills

There is a potential for spills to occur as a result of the presence of fuel for construction activities at the proposed site. The following mitigation measures should be followed:

- During construction, vehicles will only be refuelled at the designated re-fuelling depot (set up on-site) to avoid the potential for fuel spills on the golf course site.
- Disposal of volatile materials, oil or fuel shall not be permitted upon the ground or in any waterways or drainage courses.
- Construction vehicle maintenance and storage of construction materials and fuels should occur far enough away from all watercourses. There shall be no refuelling or oil changes within 100 m of any watercourses, nor shall there be any bulk storage of fuels or lubricants within 100 m of any watercourse.
- When servicing requires the drainage or pumping of lubricating oils, or other fluids from the equipment, a groundsheet of suitable material and size shall be spread on the ground to catch all fluid in the event of a leak or spill.
- An adequate supply of suitable absorbent material and other supplies and equipment necessary to immediately clean up spills must be available on site.



- Storage and disposal of liquid wastes and filters from equipment maintenance, and any residual material from spill clean-up must be contained in an environmentally safe manner and in accordance with Provincial and Federal regulations (e.g., MR 188/2001R [formerly 97/88R] – Storage and Handling of Petroleum Products and Allied Products).
- Waste oils, fuels and hazardous wastes (if any) shall be handled in a safe manner. Transport, store and handle all such substances as recommended by the suppliers and/or manufacturers and in compliance with all applicable Municipal, Provincial and Federal regulations.
- Manitoba Conservation shall be notified immediately if a reportable spill occurs.

### 5.3.3 Waste Disposal

- All waste disposal shall be in accordance with existing regulations and removed to approved disposal sites.
- Contractors should be required to conduct all day-to-day operations in such a manner as to avoid creating unpleasant appearances or any conditions that will be detrimental to the surrounding areas.
- Waste materials and refuse should be promptly disposed of in a manner that will not contaminate or impair the surrounding area.
- Waste debris should be prevented from entering watercourses and drainage areas.

### 5.3.4 Sewage Containment and Disposal

- Green washrooms are being considered for construction activities.
- During construction activities for the proposed golf course development, if portable toilets are required, these facilities will not be located near any watercourse or drainage areas.
- Washroom facility wastes will be removed from the site in accordance with the company supplier's regulations. All related legislation will be followed regarding temporary washroom facilities on site.
- "Green" washroom facilities located at the Trappist Monastery Historic Site are available for public use.



## 5.4 Operations and Maintenance

### 5.4.1 Biophysical Environment

#### 5.4.1.1 Air Quality

There will be an increased amount of vehicular traffic to the site as a result of the operation of the golf course and the associated potential for higher vehicle emissions and dust problems in the area. The number of vehicles accessing the site will be spread out during the day lessening the potential effects. The new access road into the golf course from Rue Des Ruins du Monastere may be paved. East of the access road on Rue Des Trappistes is to be paved. In other sections where the gravel road is to remain, water spraying is a procedure that can be used and applied, as required, to alleviate potential dust problems.

#### 5.4.1.2 Groundwater and Surface Water

##### *Sewage Systems*

The current options for sewage systems for the proposed golf course development include: connecting into an existing municipal wastewater collection and treatment system (i.e., part of the system servicing nearby residential areas) or to contain sewage in holding tanks for storage and subsequent pump-out.

There will be no impact to groundwater or surface water should the golf course sewage system connect to the existing municipal system. If holding tanks are to be used to store sewage during the life span of the golf course or used to contain sewage prior to connecting into the municipal system, there is the potential to impact surface and groundwater.

To mitigate the potential for surface and groundwater contamination from the presence of holding tanks, the system will be operated and maintained according to applicable Provincial legislation and regulations. The proponent should also assess the long-term alternative that favours connecting to the municipal sewage system as early as possible to reduce the risk of contamination.

If holding tanks are required in the short-term (i.e., connection to municipal sewage system is delayed) then short-term facilities such as composting toilets may be considered.

No sewage shall be permitted to enter watercourses or natural drainage areas. Disposal of sewage from holding tanks should be in accordance with good environmental practices and should not impact groundwater or surface water. The removal of sewage from the site will also be in accordance with Municipal and Provincial legislation.



### ***Pesticide, Herbicide and Fertilizer Use***

There is the possibility that runoff from the golf course containing fertilizers and herbicides could impact the soil, groundwater and surface water.

No pesticide, herbicide or fertilizer use shall be conducted near water bodies, or ponds. Water quality in the settling pond should be monitored and tested regularly to ensure compliance with the appropriate water quality guidelines for discharge to the existing drainage systems and the La Salle River.

Pesticide, herbicide and fertilizer use should be carried out in accordance with Municipal and Provincial regulations and permits.

### ***Fuel Storage and Spills***

Impacts on surface and groundwater may potentially result from accidental spills or leakage of stored fuels and chemicals. The risks of impacts to surface and groundwater are expected to be negligible with adherence to proper design parameters and standard Best Management Practices.

### ***Energy and Water Consumption***

The proposed golf course requires water for irrigation and therefore the irrigation system will be designed to maximize the benefit of irrigation with the minimum amount of water use. A computer-controlled system will be included to ensure that excess water use is prevented. Regular energy and water audits will be conducted to ensure that the resources are not being wasted.

#### **5.4.1.3 Vegetation and Habitat**

The operations and maintenance of the proposed golf course are not expected to have any effect on the existing vegetation and habitat remaining on-site. Through discussions with the University of Manitoba and Manitoba Hydro, there is a possibility that trees from the existing golf course may be removed and replanted at the new proposed golf course location. Purchasing of additional trees may also be required for the new golf course landscaping. As landscaping will likely involve the use of herbicides and pesticides, an integrated approach to weed and pest management will be implemented to mitigate any potential effects. The potential effects are considered minor and mitigable.

The proponent will investigate the potential use of organic fertilizers in maintaining the golf greens. Generally, greens and fairways will be fertilized with a standard fertilizer mix. Special care will be taken around shorelines and natural drainages to prevent fertilizer from entering a water body or



running off-course. Only a light amount of fertilizer should be used in order to protect the natural environment as much as possible.

#### **5.4.1.4 Wildlife**

Operating golf courses often provide favourable habitat for a number of species and it is expected that local deer, small mammals, waterfowl and other bird species may utilize some parts of the golf course once it is developed.

Proper garbage containment and regular waste disposal will be implemented during golf course operation. This will ensure that less desirable species, such as skunks and raccoons, do not become enticed and habituated to the proposed site.

The buffer zone along the riverbank of the La Salle River will not be infringed upon. This will ensure that wildlife and habitat along the riverbank will not be disturbed by operation and maintenance activities. Potential impacts are considered negligible.

#### **5.4.1.5 Fish and Fish Habitat**

The operation of the irrigation system has the potential to impact fish species through impingement at the intake pipe. To reduce or negate the potential for fish impingement a proper screen size will be installed in accordance with the Freshwater Intake End-of-Pipe Fish Screen Guide (1995) and any advice received from DFO. The condition of the intake pipe will be inspected on a regular basis and proper maintenance will be conducted as required.

### **5.4.2 Socio-Economic Environment**

#### **5.4.2.1 Property Impacts**

Once the golf course is developed, no other property owners will be directly affected by the ongoing operation of the facility.

#### **5.4.2.2 Noise and Vibration**

Potential effects during operation of the golf course may result from increased noise, disturbance and inconvenience to local residents. Noise generated during the operation of the golf course will come from air conditioning units used to cool the clubhouse and associated buildings, public address system noise during events and use of maintenance equipment. Any noise generated will be masked by the ambient noise from other activities and traffic in the area and the proponent is required to adhere to Municipal and Provincial noise regulations and By-laws. These potential impacts are expected to be minimal and mitigable.

No potential impacts as a result of vibrations are anticipated during the operation of the golf course.



#### **5.4.2.3 Economic Benefit**

The development of the proposed golf course will have a positive effect on the local economy. There is a potential economic spin-off for local businesses and local tourist sites as a result of the golf course operation.

It is expected that current staff working at the existing Southwood Golf and Country Club will move to the new golf course location and therefore employment effects would be neutral (neither positive/negative).

The golf course facility at its new location will continue to see most activity in the seasonal use period from May to October. There will be limited opportunities for events to occur at the site over winter.

#### **5.4.2.4 Residences**

Operation and maintenance activities, once the golf course is constructed, will principally relate to maintenance equipment noise and vehicle traffic. However, potential impacts to occupied residences in the vicinity of the project area will be generally minor in nature. Operation and maintenance activities (except sprinklers) will be restricted to daylight hours to avoid undue noise effects. Issues related to public safety from the golf course operation and maintenance will be addressed through the application of safety protocols and procedures that meet or exceed Provincial regulatory requirements.

#### **5.4.2.5 Existing Land Use**

The operation and maintenance of the facility will be confined to the project site and will not adversely affect other land uses or the area's aesthetic qualities.

#### **5.4.2.6 Infrastructure**

There will be an increase in vehicular traffic along Rue Des Trappistes and Rue Des Ruines du Monastere once the golf course is in operation. However, the increased traffic will be spread out over the daylight hours when the course is open for play. Operation and maintenance activities will not disrupt other local traffic in the area. The impacts are expected to be negligible.

Apart from vehicle and equipment road access during operations and maintenance, the proposed golf course will have little impact on area infrastructure. An access road to the golf course will be maintained from the existing road that services the Trappist Monastery. The City of Winnipeg will be consulted with respect to road maintenance. The proponent will meet all operating and safety requirements with respect to this project.



A traffic analysis was conducted for the proposed golf course between July 11 to July 16, 2007 and notes that golf course-generated traffic volumes are estimated to be an average of 825 vehicles per weekday over a 24-hour period (during a major tournament event, lower during normal weekday operations). During Saturday and Sunday, estimated volumes at the proposed golf course are 800 (based on a special event on Saturday evening) and 650 vehicles respectively over a 24-hour period. Volumes on Rue Des Trappistes between Pembina Highway and Rue Des Ruines du Monastere, adjusted to include seasonal golf traffic, are estimated to be well below the City of Winnipeg's Collector Street Guidelines (up to 5,000 vehicles per day for a two lane undivided collector street). Volumes ranged from 1,200 to 2,025 vehicles per day for the average weekday. Saturday and Sunday volumes ranged between 1,225 to 2,475 vehicles per day and 875 to 700 vehicles per day respectively. Event-related traffic to the golf course will drop once the golf season is over for the year. This traffic analyses was conducted during a major tournament event. The traffic analysis is included in Appendix G.

A second traffic analysis was conducted between July 25 and July 30, 2007 during normal weekday operations. The analysis notes that golf course-generated traffic volumes are estimated to be an average of 763 vehicles per weekday over a 24-hour period. During Saturday and Sunday, estimated volumes at the proposed golf course are 551 and 567 vehicles respectively over a 24-hour period. Volumes on Rue Des Trappistes between Villeneuve Boulevard and Rue Du Monastere ranged from 649 to 1410 vehicles (with Southwood traffic) per day for the average weekday. Saturday and Sunday volumes ranged between 672 to 1220 vehicles (with Southwood traffic) per day and 628 to 1200 vehicles (with Southwood traffic) per day respectively. The traffic analysis is included in Appendix G.

#### **5.4.2.7 Outdoor Recreational Resources**

Once the golf course is operating, there will be increased traffic to the area, however, the potential impacts are expected to be positive in nature, since there is a potential economic spin-off for local businesses and tourist attractions (i.e., St. Norbert Farmers Market, the Trappist Monastery Heritage Park site, and the St. Norbert Arts and Cultural Centre) from the golf course presence.

#### **5.4.2.8 Heritage Resources**

The presence of the golf course at the proposed project site is not expected to have any additional impacts on heritage resources as a result of ongoing operation and maintenance of the facility.



## 5.5 General Mitigation Measures and Procedures

The following sections outline the general mitigation measures that are applicable to prevent or minimize adverse environmental effects of golf course operation and maintenance activities.

### 5.5.1 Fuel and Chemical Storage and Spills

There is a potential for accidental spills or leakages to occur as a result of the storage of chemicals or fuels. The following mitigation measures should be followed:

- All handling, transport and application of any pesticides, fertilizers, herbicides and fungicides, as well as the disposal of any containers for said products shall adhere to Manitoba Pesticides Regulation 94/88 R.
- Any accidental spills of chemicals shall be contained and cleaned up immediately.
- Mowers and other fuel-powered equipment shall be fuelled at the maintenance building.
- Golf carts will be electric powered. Batteries for the golf carts will be stored in a heated area within the maintenance building during the fall/winter period. A licensed operator will collect any used batteries for proper disposal.
- Equipment oil and filters will be changed at a dedicated area within the maintenance building. Used oil and filters will be collected within a 45-gallon drum for recycling and proper disposal.

### 5.5.2 Application of Pesticides and Herbicides

- Buffer zones near watercourses and natural drainages will be established that will not be treated with chemicals.
- All application of chemicals shall conform to the procedures set out by the manufacturer. Pesticide applications must be carried out by a certified contractor and are subject to a yearly "Pesticide Use Permit" issued by Manitoba Conservation.

### 5.5.3 Waste and Sewage Disposal

To minimize the potential for refuse on the proposed golf course (and surrounding areas) the following mitigative measures will be followed:

- Garbage receptacles will be placed throughout the golf course and will be emptied as required and brought to a central location near the clubhouse for pick-up.
- Garbage hauling services will be arranged through an appropriate contractor.
- A main collection area for post-consumer products (i.e., cans, pop bottles, papers) will also be established at the clubhouse for recycling.



- Disposal of sewage, should holding tanks be used, will be in accordance with good environmental practices so as not to impact surface and groundwater.

#### 5.5.4 Irrigation Water Withdrawal

- Water consumption will be monitored and efforts made to conserve water use as much as possible.
- The irrigation water intake line will be inspected and maintained on a regular basis to ensure the pipe meets the requirements of the Fisheries Act and the Navigable Waters Protection Act.
- Water consumption records will be required and submitted to Manitoba Water Stewardship on an annual basis. All conditions of the Permit to Use and Divert Water must be met.
- The water quality in the settling pond will be monitored and tested regularly to ensure compliance with appropriate water quality guidelines for discharge to the La Salle River.



## 6.0 SIGNIFICANCE OF RESIDUAL ENVIRONMENTAL EFFECTS

There are no residual impacts predicted for the clearing and construction of the proposed Southwood Golf Course after mitigation measures outlined in Section 5 are implemented.

There will be some residual impacts expected for adjacent residences and uses in the area from the operation of the golf course with respect to an increase in noise and traffic over the existing conditions. However, the proposed development will have a small, incremental effect in terms of noise. Noise from the facility will predominantly occur during the day and early evening hours. Noise complaints will be responded to and adjustments made where possible. The issue will continue to be monitored by Southwood Golf and Country Club.

An increase in area traffic to the golf course is expected. Traffic patterns and usage in the area is not expected to exceed the current City of Winnipeg Collector Street guidelines applicable for Rue Des Trappistes. As such, the residual impacts are considered to be negligible.

The maintenance of the golf course will be subject to ongoing monitoring procedures and proper maintenance of equipment and services (i.e., Best Management Practices) as undertaken by Southwood Golf and Country Club. A trained, experienced greens superintendent is in place and support grounds staff will be provided with the appropriate training in operations and maintenance procedures. As such, no residual impacts are expected for the continued maintenance of the golf course.



## 7.0 FOLLOW-UP PROGRAM

Minimal short-term and long-term monitoring will be required for the proposed project. Mitigation measures related to project clearing and construction will be incorporated into Contract tender documents. The Design Consultant and the Contractor will conduct site inspections during the clearing and construction period.

All monitoring activities required for golf course operation and maintenance are to be undertaken by the golf course superintendent and support staff. This EIS will, after acceptance, be referenced in/and form part of the operational plan for the proposed golf course. All license and permit conditions issued by the regulatory authorities for the project (Manitoba Environment Act License, Permit to Use and Divert Water, and advice received from DFO and NWPB) will also form part of the operational plan for the golf course.



## 8.0 REFERENCES

- Bezys, R.K., Bamburak, J.D. and Conley, G.G., 2002. Bedrock mineral resources of Manitoba's Capital Region; Manitoba Industry, Trade and Mines, Manitoba Geological Survey, Geoscientific Report GR2002-1, [1 v.] plus 16 maps at 1:50,000 scale and 1 CD-ROM.
- City of Winnipeg. 1994. City of Winnipeg Zoning By Law 6400/94.
- City of Winnipeg. Plan Winnipeg 2020 Vision.
- Committee on the Status of Endangered Wildlife in Canada. 2007. Website: <http://www.cosewic.gc.ca>.
- Department of Mines, Resources and Environmental Management. 1976. Ground Water Pollution Hazard Map Winnipeg Area. 1:250,000 map.
- Ecologically Significant Natural Lands Strategy and Policy. February 2007. City of Winnipeg.
- Ehrlich, W.A., Poyser, E.S., Pratt, L.E., and Ellis, J.H. 1953. Report of Reconnaissance Soil Survey of Winnipeg and Morris Map Sheet Areas. Manitoba Department of Agriculture, Soil Report No. 5.
- Environment Canada. 1998. Canadian Climate Normals, 1961 - 1990. Atmospheric Environment Service.
- Environment Canada. 2007. Species-at-Risk. Webpage: <http://www.speciesatrisk.gc.ca>
- Manitoba Conservation Data Centre. 2007. Electronic Files.
- Manitoba Endangered Species Act. 2007. Species listed under the Manitoba Endangered Species Act. Website: <http://www.gov.mb.ca/conservation/wildlife/managing/sar>.
- Manitoba Energy and Mines. 1988. Aggregate Resources Compilation Map Series, Map AR88-1-2, Winnipeg, NTS 62H, 1:250 000 map.
- Manitoba Energy and Mines, 1990; Bedrock Geology Compilation Map Series, Winnipeg, NTS 62H, 1:250,000.
- Manitoba Industries and Mines. 2001. Mineral Disposition and Quarry Lease Compilation NTS 62H Winnipeg. 1:250 000 map. Mines Branch.
- Manitoba Recreational Trails Association Inc. 2007. St. Norbert Heritage Trails. Website: <http://www.mrta.mb.ca/StNorbertGuideMap>.
- MMM Group. 2007. Proposed Southwood Golf Course Rare Vascular Plant Survey.
- MMM Group. 2007. Proposed Southwood Golf Course Wildlife Species of Concern Survey.



- Munsell Soil Color Charts, 1994 Revised Edition. Macbeth Division of Kollmorgen Instruments Corporation. New Windsor, NY.
- MMM Group 2007. Soils Investigation for the Proposed Southwood Development.
- North/South Consultants Inc. 2006. La Salle Redboine Conservation District: La Salle River Watershed Assessment Survey – With Emphasis on La Salle River, Elm River, Elm Creek Channel, and the King Drain – 2005. Report prepared for the La Salle Redboine Conservation District.
- Poston, B., D.M. Ealey, P.S. Taylor, and G.B. McKeating. 1990. Priority Migratory Bird Habitats of Canada's Prairie Provinces. Habitat Conservation Section, Canadian Wildlife Service. Environment Canada. Edmonton, Alberta.
- Rutulis, M. 1986a. Aquifer Maps of Southern Manitoba Map 1 of 2 Sand and Gravel Aquifers. Department of Water Resources, Water Resources Branch. Winnipeg, Manitoba.
- Rutulis, M. 1986b. Aquifer Maps of Southern Manitoba Map 2 of 2 Bedrock Aquifers. Department of Water Resources, Water Resources Branch. Winnipeg, Manitoba.
- Rutulis, M. 1986c. Aquifer Pollution Hazard Areas in Southern Manitoba. Department of Water Resources, Water Resources Branch. Winnipeg, Manitoba.
- Smith, Morley. 1984. La Salle river Backwater Study. Province of Manitoba Department of Natural Resources, Water Resources Branch.
- Smith, R.E., H. Veldhuis, G.F. Mills, R.G. Eilers, W.R. Fraser, and G.W. Lelyk. 1998. Terrestrial Ecozones, Ecoregions and Ecodistricts of Manitoba, An Ecological Stratification of Manitoba's Natural Landscapes. Agriculture and Agri-Food Canada, Research Branch, Brandon Research Center, Land Resources Unit, Winnipeg, Manitoba. Report and 1:1.5 M scale map (draft version).
- Soils Classification Working Group, 1998. The Canadian System of Soil Classification, 3rd ed. Agriculture and Agri-Food Canada Publication 1646, 187 pp.
- Species-at-Risk-Act (SARA). 2002. Canada Gazette Part III, Vol. 25, No.3. Statutes of Canada, Chapters 24 to 29. Website: <http://www.sararegistry.gc.ca>.
- St. Norbert Arts Centre. 2007. Website: <http://www.snac.mb.ca/info/history>.
- Statistics Canada. 2001. Population and Dwelling Counts for Census Subdivisions, Province of Manitoba – 100% Data. 2001 Census, Ottawa.



APPENDIX A

DEPARTMENT OF FISHERIES AND  
OCEANS APPROVAL







Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Freshwater Institute  
Prairies Area, Manitoba District  
501 University Crescent  
Winnipeg, Manitoba  
R3T 2N6  
(204) 983-5163

Institut des eaux douces  
Secteur des Prairies, District du Manitoba  
501 University Crescent  
Winnipeg, (Manitoba)  
R3T 2N6  
(204) 983-5163

Your file      Votre référence

14 August 2007

Our file      Notre référence  
WI-07-2054

Mr. Ron Amann  
c/o Southwood Golf and Country Club  
101 Markham Road  
Winnipeg MB R3T 5V2

Dear Mr. Amann:

**Subject:** Proposed works or undertakings will not likely result in negative effects to fish habitat if additional protection measures are implemented.

Fisheries and Oceans Canada (DFO) received your proposal on 25 July 2007, concerning the installation of a water intake pipe into the La Salle River at the Southwood Golf and Country Club, St. Norbert, Manitoba. To expedite future correspondence or inquiries, please refer to your referral title and file numbers when you contact us.

Referral File No.:    **07-HCAA-CA1-000-002054**  
Habitat File No.:    **WI-07-2054**  
Referral Title:        **Water Intake Pipe - Southwood Golf and Country Club,  
St. Norbert**

It is our understanding that your proposal consists of:

- *Installing a water intake pipe at the Southwood Golf and Country Club into the La Salle River.*
- *The intake will be directionally drilled in the winter of 2008/2009.*
- *The intake structure will be lowered and attached in place from the ice cover using divers.*

as outlined in the following plans:

- *DFO Request for Project Review form, project description and photos, submitted by Bill Krawchuk (MMM Group) and dated 24 July 2007.*

If the above plans have changed since the time of submission, the advice in this letter may no longer apply and you should consult with us to determine if further review is needed.

**Canada**



WI-07-2054  
Page 2 of 3

We have concluded that the proposed works and undertakings are adequate to protect fish and fish habitat provided that the work is carried out as described in your plans and the following additional measures are implemented:

- *No rock armouring is required for the waterline installation.*
- *No drilling is to occur during the restricted activity timing window to protect fish during spawning and incubation periods which for the La Salle River is from April 1 to June 15.*
- *Design the drill path to an appropriate depth below the water body to minimize the risk of a frac-out (the escape of drilling fluids and sediment through the bed material into the water body), and to prevent the waterline from becoming exposed due to natural scouring of the shoreline. Ensure the drill entry and exit points are far enough from shoreline to minimize disturbance to riparian areas and banks, to reduce the risk of frac-outs into the water body, and enable the containment of sediment laden water and other deleterious substances outside of the water body.*
- *Only water is used as a drilling fluid. As the drill approaches the exit point (within approximately 1 metre of the lake or river bottom), drilling fluid pressure and rotation are stopped and the drill is pushed the remaining distance to minimize sediment released. When the waterline is being pulled back to the drill, the drilling fluid pressure and rotation are not started again until the drill head is approximately 1 metre below the bottom.*
- *Water intakes (e.g. for drilling pumps) should be screened and operated in accordance with DFO's "Freshwater Intake End-of-Pipe Fish Screen Guideline" (Department of Fisheries and Oceans, 1995).*
- *The deposit of deleterious substances into water frequented by fish is prohibited under the Fisheries Act. Appropriate precautions must therefore be taken to ensure that potentially deleterious substances (such as fuel, hydraulic fluids, oil, sediment etc.) do not enter any water body.*
- *Operate machinery on land and in a manner that keeps disturbance away from the banks of the water body. Machinery is to arrive on site in a clean condition and is to be maintained free of fluid leaks. Wash, refuel and service machinery and store fuel and other materials for the machinery away from the water to prevent deleterious substances from entering the water. Keep an emergency spill kit on site in case of fluid leaks or spills from machinery.*
- *Monitor the water body to observe signs of surface migration of sediment from drilling (frac-out) during all phases of the work.*
- *For the duration of the work, keep on-site and readily accessible in the event of a frac-out, all material and equipment needed to contain and clean-up releases of sediment, cuttings and other waste materials.*
- *Shoreline vegetation is retained to the greatest extent possible to maximize the stability of the bank. Aquatic vegetation should not be removed.*
- *Stabilize and vegetate any disturbed soils by planting and seeding preferably native trees, shrubs or grasses and cover such areas with mulch to prevent soil erosion and to help seeds germinate. If there is insufficient time in the*



WI-07-2054  
Page 3 of 3

*growing season remaining for the seeds to germinate, stabilize the site (e.g., cover exposed areas with erosion control blankets to keep the soil in place and prevent erosion) and then vegetate the following spring.*

- *Maintain effective sediment and erosion control measures until complete re-vegetation of disturbed soils is achieved. Make all necessary repairs and adjustments if any damage is discovered or if these measures are not effective in controlling erosion and discharge of sediment.*

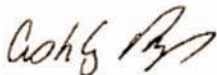
By implementing these additional measures and those already outlined in your plans, it is our opinion that the proposed works and undertakings will not likely result in the harmful alteration, disruption or destruction (HADD) of fish habitat, which is prohibited unless authorized by DFO. These are recommendations to ensure that the proposed works will likely not result in a HADD of fish habitat. Therefore a subsection 35(2) Authorization is not necessary.

You could contravene subsection 35(1) of the *Fisheries Act* if a HADD of fish habitat results from any change in your proposed plan or from failure to properly implement these additional measures. Subsection 35(1) states, "no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

This letter of advice does not permit the deposit of deleterious substance (section 36 of the *Fisheries Act*) into waters frequented by fish nor does it release you from the responsibility to obtain any other federal (for example, the *Navigable Waters Protection Act*), provincial, territorial, or municipal approvals.

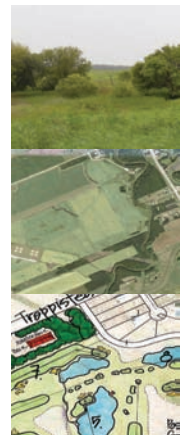
We request that you notify us at least 10 working days before starting the work and that a copy of this letter be kept on site while work is in progress. If you have any questions concerning the above, or if my understanding of the proposal is either incorrect, incomplete, or if there are changes to the proposed works or undertakings, please contact myself directly by telephone at (204) 984-0405, by fax at (204) 984-2402, or by e-mail at [PresengerA@dfo-mpo.gc.ca](mailto:PresengerA@dfo-mpo.gc.ca).

Yours sincerely,



Ashley Presenger  
Fish Habitat Biologist  
Prairies Area, Winnipeg Office

c.c.: DFO Distribution  
B. Krawchuk (MMM Group, Winnipeg)  
J. Hunt (MB Water Stewardship, Winnipeg)  
R. Romaniuk (MB Conservation, Winnipeg)



# APPENDIX B

## CERTIFICATE OF TITLE



DATE: 2007/05/10  
TIME: 08:50

**MANITOBA**  
**STATUS OF TITLE**

TITLE NO: 1664110

PAGE: 1

STATUS OF TITLE..... ACCEPTED  
ORIGINATING OFFICE..... WINNIPEG  
REGISTERING OFFICE..... WINNIPEG  
REGISTRATION DATE..... 1999/07/16  
COMPLETION DATE..... 1999/07/26

PRODUCED FOR.. NO LEA  
ADDRESS.....

PRODUCED BY... M.DERKSEN

**LEGAL DESCRIPTION:**

OFFSPRING FARMS LTD.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON, IN THE FOLLOWING DESCRIBED LAND:

FIRSTLY: SP LOT 8 PLAN 26397 WLTO  
IN RL 75 TO 80 PARISH OF ST NORBERT.

SECONDLY: PARCELS "C", "D" AND "E" PLAN 31578 WLTO  
IN RL 75 TO 82 PARISH OF ST NORBERT.

**ACTIVE TITLE CHARGES:**

191015 WPG ACCEPTED DESCRIPTION: FROM/BY: TO: CONSIDERATION:	CAVEAT AFFECTS PARCEL 3 AND 4 MANITOBA TELEPHONE SYSTEM	REG'D: 1963/11/05	NOTES: LOT 8 & PT PCLS C & D
1812695 WPG ACCEPTED DESCRIPTION: FROM/BY: TO: CONSIDERATION:	CAVEAT EASEMENT THE MANITOBA TELEPHONE SYSTEM	REG'D: 1994/06/30	NOTES: C & D WTN LTS R/W 31198
2259678 WPG ACCEPTED FROM/BY: TO: CONSIDERATION:	MORTGAGE 3822061 MANITOBA LTD. ROYAL BANK OF CANADA \$150,000.00	REG'D: 1998/05/11	NOTES:

ACCEPTED THIS 16TH DAY OF JULY, 1999  
BY G.BILODEAU FOR THE DISTRICT REGISTRAR OF  
THE LAND TITLES DISTRICT OF WINNIPEG.

UNCERTIFIED EXTRACT PRODUCED FROM THE LAND TITLES DATA  
STORAGE SYSTEM ON 2007/05/10 OF TITLE NUMBER 1664110.

