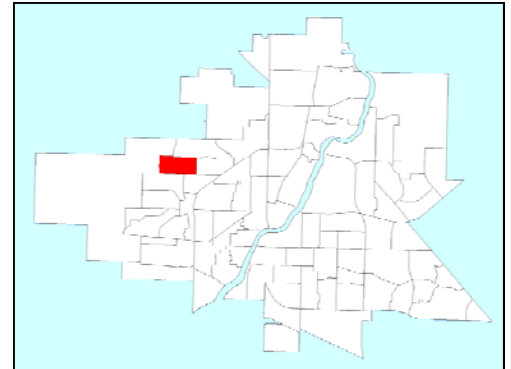


Dundonald



The **Smart Cities, Healthy Kids** research project looks for solutions to childhood obesity by investigating how neighbourhood design affects children's ability to be physically active. Research suggests that safety from traffic and crime, the presence of destinations and built features supporting an active lifestyle (eg. parks, playgrounds, and bike lanes), a neighbourhood's attractiveness, and its accessibility are all very important in determining whether people will be active there. To determine which Saskatoon neighbourhood designs are the most supportive of active living, researchers walked each neighbourhood in Saskatoon in the summer months of 2009/2010, collecting data on these areas using two research surveys: the Neighbourhood Active Living Potential (NALP) and the Irvine-Minnesota Inventory (IMI).



Dundonald in Saskatoon

NALP consists of 22 items within four areas: Activity Friendliness, Safety, Density of Destinations, and Universal Accessibility. Using this method, observers rated each item on a 6-point scale after walking a pre-defined route in each neighbourhood that connected 10 randomly-selected street segments. The route, typically 4 to 5 kilometres in length, is shown in red on the map.

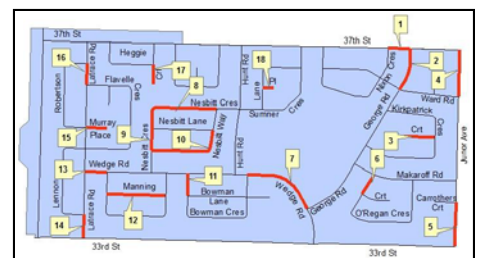


NALP Route Map

IMI consists of a 229-item inventory of neighbourhood features within five areas: Attractiveness, Diversity of Destinations, Pedestrian Access, Safety from Traffic, and Safety from Crime. Twenty percent of street segments in each neighbourhood were randomly selected and observed. Each segment is the two facing sides of a street block and is indicated by a numbered flag on the map.

IMI consists of a 229-item inventory of neighbourhood features within five areas:

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IMI Segments Map

The NALP tool is more subjective in nature and takes into account the impression of the entire neighbourhood based on the systematic observations of the researchers. In contrast, the IMI is more objective in nature and is based on observations of each individual segment. The following report will discuss how the characteristics of Dundonald compare to Saskatoon neighbourhoods in general.

Smart Cities Healthy Kids

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Dundonald Overview

Dundonald is bordered by 37th Street, Junor Avenue, 33rd Street, and Hughes Drive. Dundonald was designed under the Municipal Development Plan of 1982. This plan focused on low-density development and separated single-family homes from all other forms of land use except parks, churches, and schools in order to protect property values. Development of high density, mixed-use, and neighbourhood commercial was not supported by home buyers and therefore not incorporated into neighbourhoods developed during this period. Indeed, Dundonald is predominantly single-family residential, although there are pockets of medium-density housing.



Dundonald street view



Well marked crosswalk in a School Zone

Safety

We rated each neighbourhood according to the presence or absence of certain neighbourhood elements that increase or detract from a feeling of personal security. Observing both the physical and social characteristics of the neighbourhood, security was measured both in terms of traffic and crime. These ratings suggest whether safety concerns affect an individual's related active living decisions in their neighbourhood.

- Out of a possible highest rating of 10, Dundonald rated **6.21** for Safety from Traffic, above Saskatoon's average rating of **6.06**. (IMI)
- Out of a possible highest rating of 10, Dundonald rated **9.48** for Safety from Crime, above Saskatoon's average rating of **8.46**. (IMI)
- Out of a possible highest rating of 6, Dundonald rated **4.25** for Safety, above Saskatoon's average rating of **3.81**. (NALP)

Dundonald's safety ratings suggest that pedestrian and vehicular travel areas are fairly well defined and moderately safe to navigate and that there are only few elements that reduce feelings of personal security. For example, most observed intersections were not marked for pedestrian crossing, even though many observed streets had high traffic levels. Speed bumps and other traffic calming measures were in place in some areas to slow down traffic. However, Dundonald could benefit from greater attention to the safety of pedestrians from traffic. In terms of safety from crime, well maintained homes, an absence of graffiti and concealed spaces for lurking, and plenty of opportunities for casual surveillance of the street by home owners all contribute to the perception of personal security.



Speed Bump sign

Destinations

We rated each neighbourhood according to the number, diversity, and density of its destinations. These ratings suggest whether destinations in a neighbourhood can motivate deliberate, localized active living choices by providing a place to go and a means to interact with others.



Dundonald Strip Mall

- Out of a possible highest rating of 10, Dundonald rated **5.00** for Diversity of Destinations, below Saskatoon's average rating of **6.26**. (IMI)
- Out of a possible highest rating of 6, Dundonald rated **3.44** for Density of Destinations, below Saskatoon's average rating of **3.92**. (NALP)

Dundonald's destination ratings suggest that there are some destinations of a moderate variety. For example, observed destinations in Dundonald include two schools, a community park with playgrounds, playing fields, and nature trails as well as a strip mall with a restaurant, a convenience store, and professional services.



Playground

Activity Friendliness

We rated the activity friendliness of each neighbourhood based on specific features that encourage or present barriers to an active lifestyle. These ratings suggest whether a neighbourhood assists or limits the opportunities for physical activities such as walking, cycling, or skateboarding.



Wide streets are supportive of cyclists

- Out of a possible highest rating of 10, Dundonald rated **5.01** for Pedestrian Access, below Saskatoon's average rating of **5.08**. (IMI)
- Out of a possible highest rating of 6, Dundonald rated **4.08** for Activity Friendliness, above Saskatoon's average rating of **3.67**. (NALP)



Pedestrian access way

These activity friendliness ratings suggest that Dundonald has both supports and obstructions for pedestrians. For example, all observed streets have sidewalks on both sides of the street. Further, wide streets provide adequate room for cyclists, and bike parking at the park considerably increases bike friendliness. The street design with several crescents and culs-de-sac limits the route choices and access for pedestrians and cyclists. However, pedestrian access ways in some areas join disconnected streets and increase route choice for pedestrians.

Attractiveness

We rated each neighbourhood based on specific features that could potentially increase or decrease the attractiveness of the neighbourhood. This rating suggests whether the level of attractiveness for each neighbourhood itself can encourage or discourage individuals to participate in an active lifestyle.



Dundonald Park

- Out of a possible highest rating of 10, Dundonald rated **5.17** for Attractiveness, above Saskatoon's average rating of **4.80**. (IMI)

Dundonald's attractiveness rating suggests that both attractive and unattractive features are present in the neighbourhood. For example, street trees are present on many streets, providing partial shade for the sidewalk. Sidewalk amenities, such as benches or well-kept garbage cans, were only present in the parks. Well maintained houses, pleasant landscaping, and the neighbourhood park considerably increase the attractiveness of the neighbourhood.

Universal Access

We rated the universal accessibility of each neighbourhood according to the presence or absence of specific features that help or prevent safe movement for those with mobility, visual, or hearing impairments. These ratings suggest whether people with reduced mobility are able to travel in the neighbourhood safely without assistance.



A street level passage provides universal access to this pedestrian refuge.

- Out of a possible highest rating of 6, Dundonald rated **2.17** for Universal Accessibility, below Saskatoon's average rating of **2.19**. (NALP)

This universal accessibility rating indicates that Dundonald has some elements that enable safe movement for those with reduced mobility. For example, almost all sidewalks in Dundonald are mountable, and there are graded curb cuts present at many intersections. However, none of the observed pedestrian crossings are adapted for individuals with visual or hearing impairments.

The principal investigator for this project is Nazeem Muhajarine, PhD. For a complete list of contributing researchers, partner organizations, project staff, and more information, please visit our website: www.smartcitieshealthykids.com

If you have any further questions about the project, please contact our research co-ordinator tracy.ridalls@usask.ca or call 966-2237.



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