

THERMOGRAFIX

consulting corporation

September 9, 2010

Government of Canada

Att: Member of Parliament Ron Cannan

cc: Environment Commissioner

Re: Urgent Information on Urban Heat Islands, Climate Change & Emissions

Dear Mr. Cannan,

There have been advances in science that have uncovered a very serious building problem that couldn't be seen before and it requires the attention of the federal government because of the national as well as international scope. Urban Heat Islands are well documented for being slightly warmer and that there are significant yearly energy costs creating more emissions reacting to them. What we couldn't see is that each building was being radiated by the same UV that burns our skin and generating extreme heat buildings aren't designed or insulated for.

Environment Canada contributes critical regional climatic data through building codes so we build sustainably, conserve natural resources, consume less energy, produce less emissions, fire safety, health and investment. Building codes tell us to watch out for solar radiation because interaction can cause buildings to exceed design and insulated temperatures. At the end of the day the entire process is signed off as compliant with building codes because we couldn't see it. Academia is literally blind to temperature, we use calculators for building and energy consumption. **Blind science = Blind policy**

Extensive infrared imaging of buildings across 7 provinces and 24 states produced the same results with buildings being radiated as a rule. Professionals are responding to the symptoms with energy waste and considerable emissions.

The accuracy of the infrared imaging application was +-2%. Thermografix employs the most advanced infrared imaging applications in the world and has provincial as well as national credentials in electrical energy provision. DFO has used our aerial infrared imaging of groundwater as their standard in RFP.

Canada's Defence Minister cleared us on a consultation where Canada had vulnerability after 9/11 and we presently lecture medical academia in the US and Canada where medical professionals get education credits they need for licensing. We have consulted for oil, gas, energy, lumber, fire, forestry, governments, etc and their insurers by providing sight of their temperature objectives. That saved lives, production and economy with the point being we bring qualified, objective science to the table.

Canada and the UN Membership wouldn't be discussing heat trapping gases atmospherically if they knew we were generating heat close to boiling temperature on the surface of the planet. Every new building is a new heat sink contributing to climate change before emissions are produced responding to the symptoms.

Leed Buildings, geothermal, alternative energy or carbon capture isn't addressing the source of the problem. Code is specific to reflect or protect from solar radiation to stay within code criteria and can be achieved with paints, shade or low-e finishes on the exterior at the builder's expense, not taxpayers after the fact.

This is an unprecedented environmental emergency we couldn't see before. Would banks, insurers or government support buildings grossly exceeding design temperature? It isn't sustainable under the Auditor General's Act on Sustainability but can be dealt with within existing building codes.

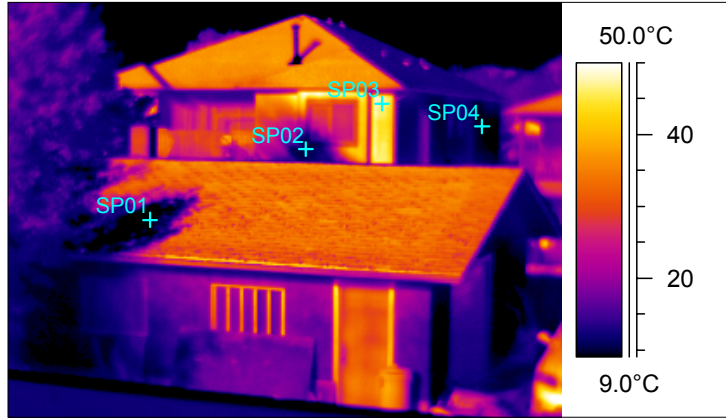
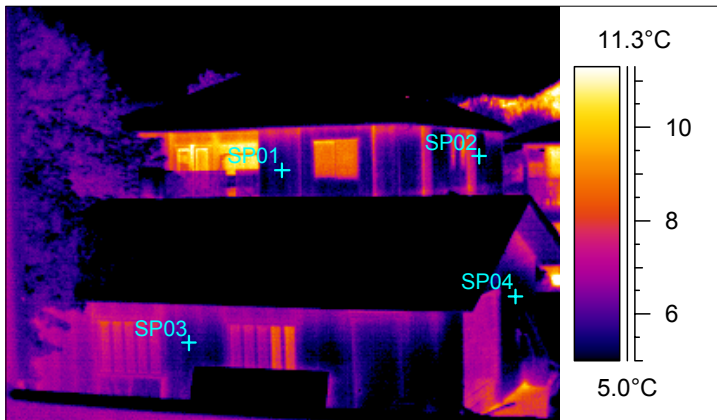
What is the process to present this information for Parliament as an objective nationally qualified professional? This is the only source of the information and every day that goes by compounds existing problems globally. Once you generate heat, it is here to stay and it is happening year round.

I have copied this correspondence to the Commissioner of the Environment for their assistance as it isn't sustainable and needs to be addressed immediately. This correspondence doesn't reflect the extensive library and years of advanced work on the subject. We look forward to substantiating the science and answering any questions for your professionals. We have the same educations, they are still using a calculator and are otherwise blind.

I look forward to hearing from you at your earliest convenience.

Sincerely,

Curtis Bennett
Thermografix Consulting Corporation
Building Engineering/Electrical Energy Provison
www.thermoguy.com/urbanheat.html

**Before Sunrise****After Sunrise**

IR information	Value
Date of creation	9/2/2010
Time of creation	6:53:51 AM
Object parameter	Value
Atmospheric temperature	5.0°C
Relative humidity	0.92
Label	Value
SP01	5.3°C
SP02	5.0°C
SP03	5.4°C
SP04	4.6°C

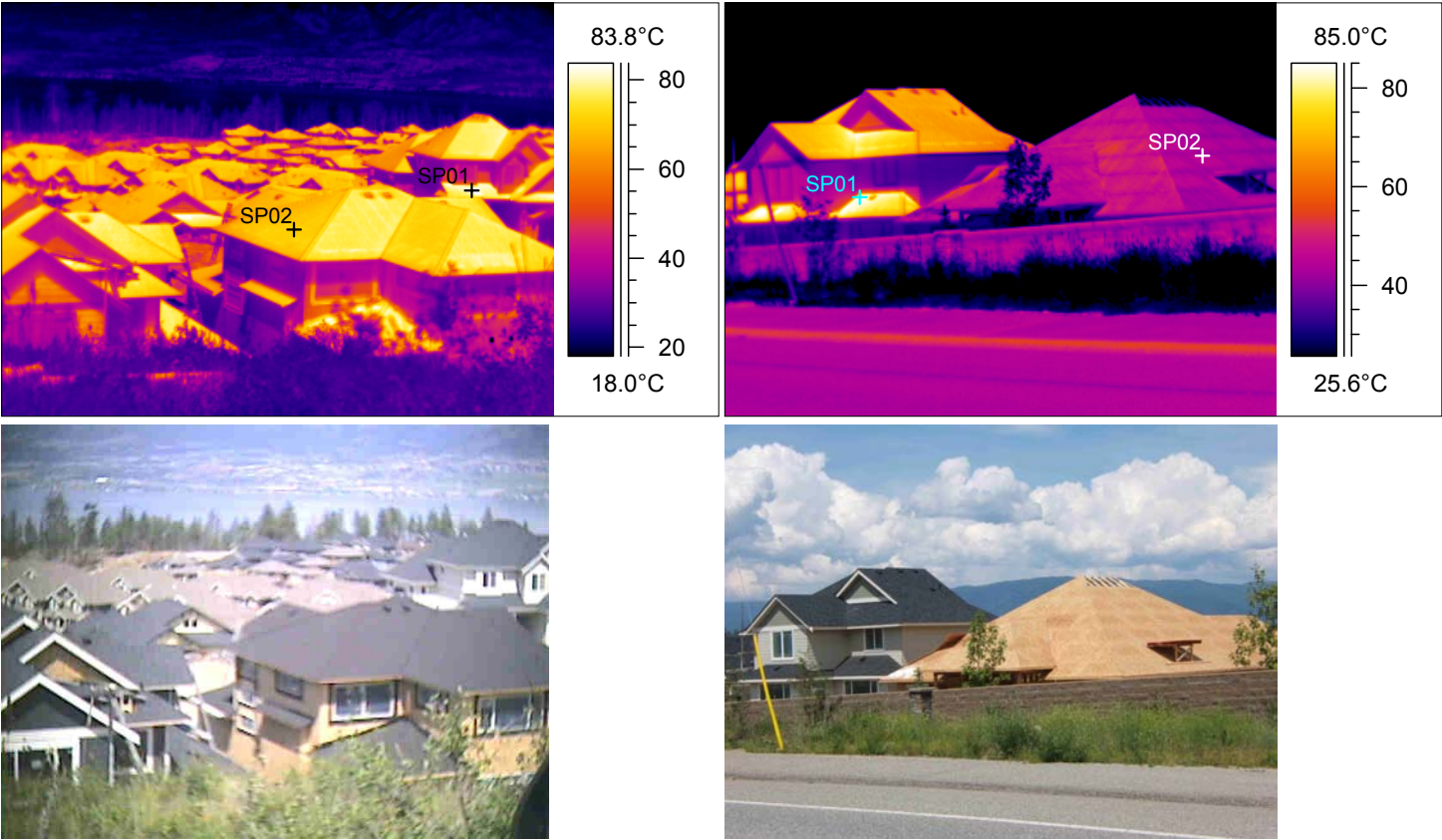
IR information	Value
Date of creation	9/2/2010
Time of creation	8:18:29 AM
Object parameter	Value
Atmospheric temperature	9.0°C
Relative humidity	0.81
Label	Value
SP01	9.0°C
SP02	10.1°C
SP03	47.1°C
SP04	9.1°C

Building Code tells us to watch out for solar radiation. If solar radiation isn't reflected, the building will be radiated and generate heat. At the end of the day, the entire national to municipal process is signed off as code compliant because we are blind to the temperatures we design for.

The images above were taken before and after sunrise to see if the buildings were reflecting solar radiation or being radiated. In the infrared image top left, you can see the building is fluctuating with temperatures reported by the weather station. In the infrared image top right, you can see the buildings are exceeding the 9 deg. C reported at the weather station.

The buildings are actually exceeding the maximum design temperature supplied through building code just after 8:00 A.M. They are heating the atmosphere without emissions produced however, later in the day energy waste and emissions will be used responding to the symptoms of the building being radiated.

Here is a link to a [time-lapsed infrared video](#) showing what happened in 2 minute increments.



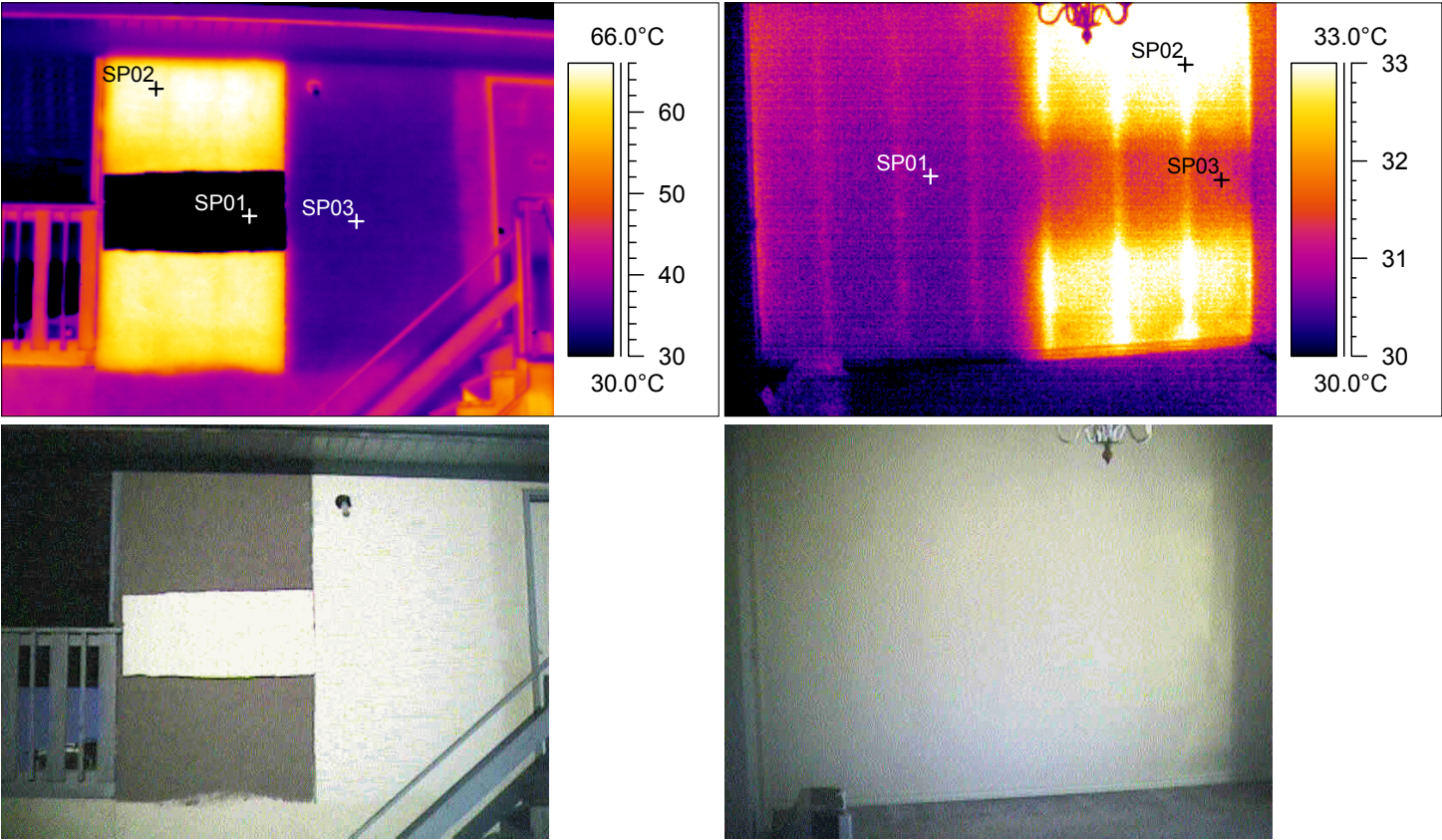
Exterior Wall		Inside Exterior Wall	
IR information	Value	IR information	Value
Date of creation	6/20/2010	Date of creation	6/20/2010
Time of creation	11:41:18 AM	Time of creation	12:01:44 PM
Object parameter	Value	Object parameter	Value
Atmospheric temperature	23.0°C	Atmospheric temperature	23.0°C
Relative humidity	0.39	Relative humidity	0.39
Label	Value	Label	Value
SP01	86.2°C	SP01	85.0°C
SP02	71.6°C	SP02	42.9°C

According to building code, buildings are supposed to reflect solar radiation or buildings will be radiated and generate heat they aren't insulated or designed for.

If buildings were reflecting solar radiation, they would stay atmospheric temperature. Air conditioning is used to react to the indoor symptoms of the exterior being radiated and it is a waste that costs Los Angeles alone over 100 million dollars a year in energy costs.

The infrared image top right shows new building development at different stages of completion with solar interaction. The buildings are insulated for a maximum of 33 deg. C or 92 deg. F. Any temperature hotter than that affects the indoors where we are responding with energy waste.

These buildings are 3 times atmospheric temperature, heating the atmosphere and contributing to lower air pressure which causes climate change without emissions.



Exterior Wall		Inside Exterior Wall	
IR information	Value	IR information	Value
Date of creation	8/11/2005	Date of creation	8/11/2005
Time of creation	7:18:13 PM	Time of creation	7:21:52 PM
Object parameter	Value	Object parameter	Value
Atmospheric temperature	30.0°C	Atmospheric temperature	30.1°C
Relative humidity	0.24	Relative humidity	0.29
Label	Value	Label	Value
SP01	27.9°C	SP01	30.5°C
SP02	65.1°C	SP02	34.4°C
SP03	34.1°C	SP03	31.5°C

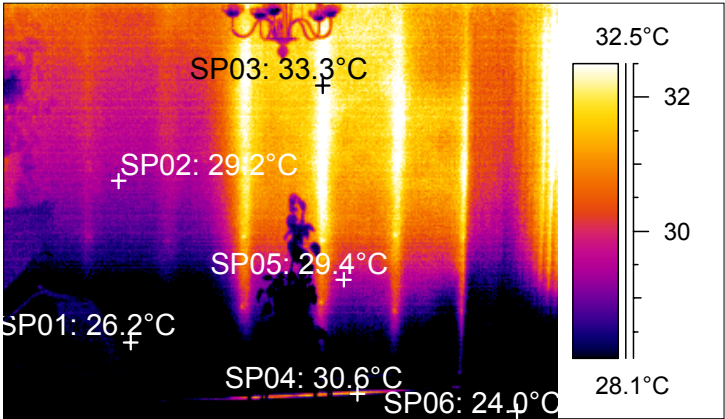
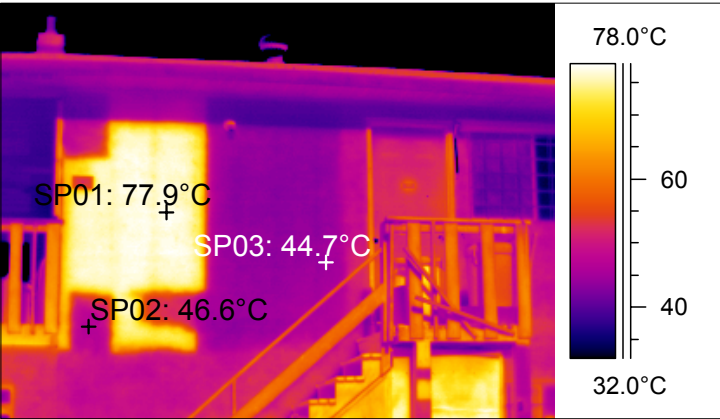
Buildings are supposed to reflect solar radiation or they will be radiated. The infrared image shows the solar interaction with brown and white paint. There is a white piece of styrofoam placed in the middle of the darker paint to further demonstrate solar interaction with different types of materials.

You can clearly see solar interaction after 7 PM is significant and capable of generating heat exceeding building codes.

The infrared image top right shows the same wall inside the building and you can see how the building has become a source of heat when the building generates heat it isn't insulated for.

The exterior of the building is still heating the atmosphere without emissions produced and contributing to lower air pressure or climate change.

The next page will show the same building inside and out with air conditioning.



IR information	Value
Date of creation	7/11/2007
Time of creation	6:02:40 PM
Object parameter	Value
Emissivity	0.90
Atmospheric temperature	32.0°C
Relative humidity	0.31
Label	Value
IR : max	78.4°C

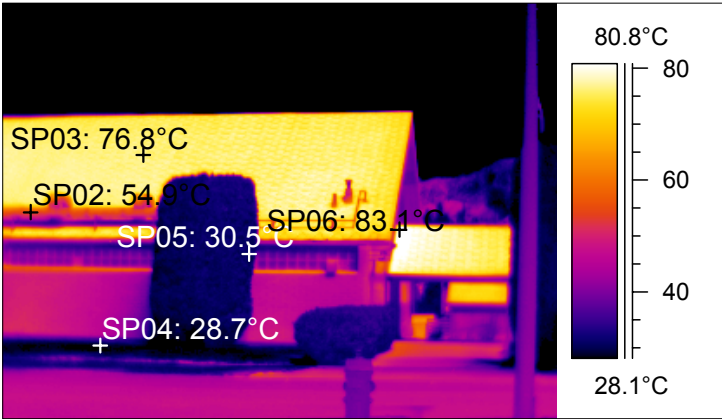
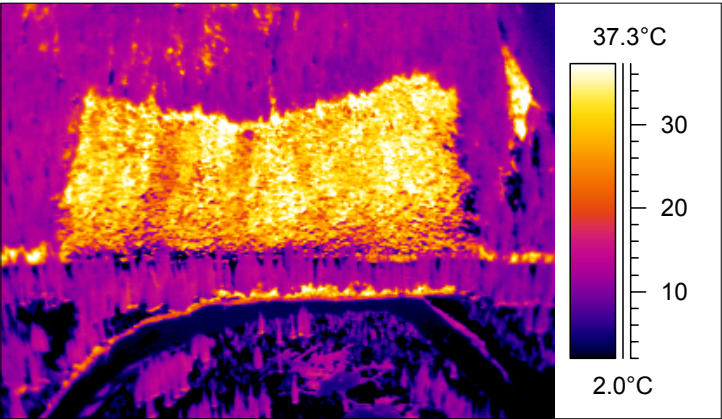
IR information	Value
Date of creation	7/11/2007
Time of creation	7:52:02 PM
Object parameter	Value
Atmospheric temperature	27.8°C
Relative humidity	0.40
Label	Value
IR : max	35.1°C
IR : min	22.3°C

The images above are the same area outside and inside the building. In the image top left we have painted the building exterior brown and white.

If building development doesn't reflect or protect from UV, the building will be radiated. Polarizing at high speeds generates heat that exceeds insulated values and you can see the effects on the image top right.

The dark, colder areas at the bottom of the wall in the infrared image top right is the air conditioned air. Air conditioning is really refrigeration and in this application 3000 watts/hour of electrical energy has to be produced every hour to react to the exterior of the building interacting with solar radiation. Cold air is heavier, sits on the floor while the wall continues to heats the interior.

Our national as well as international objectives are to reduce energy consumption and don't heat the atmosphere. We couldn't see this before and this isn't a good representation of forest products.



IR information	Value
Date of creation	4/10/2004
Time of creation	12:05:23 PM
Object parameter	Value
Atmospheric temperature	12.0°C
Relative humidity	0.41
Label	Value
IR : max	42.9°C

IR information	Value
Date of creation	7/18/2002
Time of creation	12:19:22 PM
Object parameter	Value
Atmospheric temperature	28.0°C
Relative humidity	0.32
Label	Value
IR : max	84.8°C

The infrared image top left shows a forestry cutblock being radiated after ground cover removed. Heat generated in the summer has produced higher temperatures and dialog questioning germination at extreme temperatures. The cutblock is also heating the atmosphere and contributing to lower air pressure.

The building top right is a church that is generating over 80 deg. C heat just after 12 noon. The church isn't insulated for these temperatures so the brown duct on the roof is for air conditioning. Note the temperature of the green space as the lawn and trees are close to atmospheric temperature. Reflect solar radiation as per building code or buildings will be radiated.