Alberni-Clayoquot Regional District

WEST COAST COMMITTEE MEETING
TUESDAY, MAY 31, 2016, 12:00PM
BEST WESTERN TIN WIS RESORT LODGE, NUU-CHIN-INK BOARDROOM
119 PACIFIC RIM HIGHWAY, TOFINO, BC

AGENDA

PAGE #

1. CALL TO ORDER

Recognition of Traditional Territories.

2. APPROVAL OF AGENDA
(motion to approve, including late items requires 2/3 majority vote)

3. INVITED GUESTS
Tla-o-qui-aht First Nation
West Coast Multiplex Society

4. ADOPTION OF MINUTES

a. **West Coast Committee Meeting – Monday, April 18, 2016.** **3-5**

THAT the minutes of the West Coast Committee Minutes held on Monday, April 18, 2016 be adopted.

5. REPORTS

a. **West Coast Multiplex Facility** **6-34**
- Sprung Structures Energy Comparison Study.
- Next Steps – Business Plan, Preliminary Design and Construction Cost Estimate.

b. **Tla-o-qui-aht First Nation,** March 29, 2016 correspondence regarding Float Homes in the Tla-o-qui-aht Haahuulthii. **35**

c. **Long Beach Airport Zoning Update** (M.Irg)
- Input from Tla-o-qui-aht First Nation

THAT the West Coast Committee receive reports a-c.

6. REQUEST FOR DECISIONS & BYLAWS

a. **REQUEST FOR DECISION** **36**
Re: Long Beach Airport Branding and Marketing Strategy

THAT the West Coast Committee recommend to the Alberni-Clayoquot Regional District Board of Directors award the Long Beach Airport Branding and Marketing contract to Primal Communications for a contract price of $13,200, plus GST.

b. **REQUEST FOR DECISION** **37-39**
Re: Lease Agreement- Bolton Spice

THAT the West Coast Committee recommend the Alberni-Clayoquot Regional District Board of Directors renew Boulton Spice's lease agreement for a three (3) year term to operate a spice blending business in exchange for repairs and upgrades to the Weather Station building.

7. ONGOING BUSINESS

a. **Regional Emergency Planning,** Russell Dyson, Verbal Report.

8. ADJOURN

Alberni-Clayoquot Regional District

MINUTES OF THE WEST COAST COMMITTEE MEETING
HELD ON MONDAY, APRIL 18, 2016

Activity Room 2, Ucluelet Community Centre, 500 Matterson Drive, Ucluelet, BC

MEMBERS PRESENT: Dianne St. Jacques, Chairperson, Mayor, District of Ucluelet
Josie Osborne, Mayor, District of Tofino
Tony Bennett, Director, Electoral Area "C" (Long Beach)
Alan McCarthy, Member of Legislature, Yuułuʔiłʔatḥ Government

STAFF PRESENT: Wendy Thomson, Manager of Administrative Services
Mike Irg, Manager of Planning & Development
Mark Fortune, Airport Superintendent

1. CALL TO ORDER

The Chairperson called the meeting to order at 1:36 pm.

The Chairperson recognized the meeting is being held in the Yuułuʔiłʔatḥ Government Traditional Territory.

2. APPROVAL OF AGENDA

MOVED: Director Bennett
SECONDED: Director McCarthy

THAT the agenda be approved as circulated with the addition of the following late item: Central West Coast Forest Society request for waived tipping fees.

CARRIED

3. ADOPTION OF MINUTES

a. **West Coast Committee Meeting – February 24, 2016**

MOVED: Director Osborne
SECONDED: Director Bennett

THAT the minutes of the West Coast Directors Committee meeting held on February 24, 2016 be received.

CARRIED

4. ADMINISTRATIVE MEMORANDUMS

a. **ADMINISTRATIVE MEMORANDUM**
Re: Long Beach Airport Land Lease

The Airport Superintendent outlined on a map the lease areas being considered at the Long Beach Airport. M. Irg discussed designated uses at the Long Beach Airport. The Committee asked staff to provide a copy of the Long Beach Airport Plan that was developed several years ago. Regional District staff will bring a report to the next West Coast Committee with a plan for designated uses at the airport and steps to move forward including a map of potential lease lot areas.

MOVED: Director Bennett
SECONDED: Director McCarthy

THAT this Administrative Memorandum and verbal report be received.

CARRIED

5. IN-CAMERA

MOVED: Director McCarthy
SECONDED: Director Bennett

THAT this meeting be closed to the public to discuss matters relating to:

i. Information that is prohibited from disclosure under Section 21 of the Freedom of Information and Privacy Act.

CARRIED

The meeting was closed to the public at 2:05 pm.

6. RE-OPEN MEETING TO THE PUBLIC

The meeting was re-opened to the public at 3:29 pm.

7. CORRESPONDENCE

a. Tla-o-qui-aht First Nation, March 29, 2016 regarding request for support from the Alberni-Clayoquot Regional District in addressing the issue of Float Homes in the Tla-o-qui-aht Haahuulthii.

MOVED: Director Osborne
SECONDED: Director Bennett

THAT the West Coast Committee respond to the Tla-o-qui-aht First Nation (TFN) clarifying the role of local government in regulating float homes and requesting a

meeting with TFN to further discuss engagement with the Province on float home issues in Clayoquot Sound.

CARRIED

8. LATE BUSINESS

a. Central West Coast Forest Society request for waived tipping fees at the West Coast Landfill.

MOVED: Director Osborne
SECONDED: Director Bennett

THAT the West Coast Committee waive tipping fees at the West Coast Landfill for the Central West Coast Forest Society Harbour Mouth beach clean-up on May 7, 2016.

CARRIED

9. ADJOURN

MOVED: Director Bennett
SECONDED: Director McCarthy

THAT this meeting be adjourned at 3:45 pm.

Certified Correct:

_____ _____

Dianne St. Jacques,
Chairperson

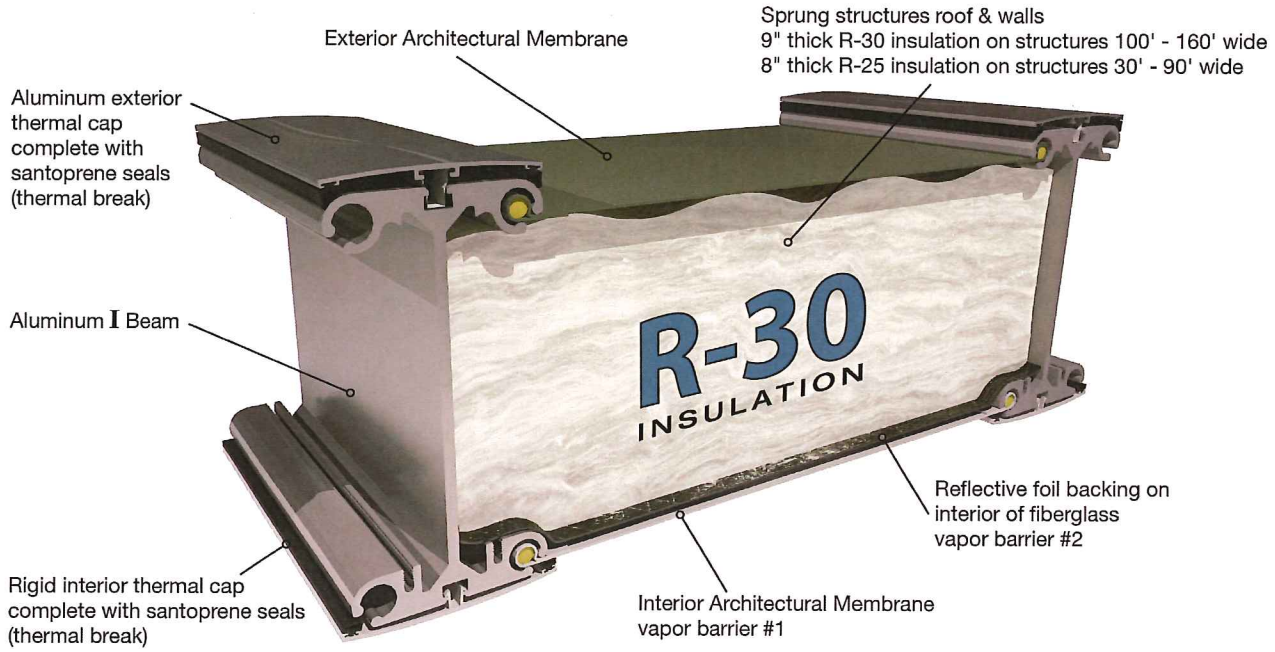
Wendy Thomson,
Manager of Administrative Services

High Performance Building Solutions

March 7, 2016

Re: Sprung Structures – Alberta Energy Code

The Sprung structure's wall section consists of an outer membrane, fiberglass insulation and an inner membrane or liner. The insulation is complete with a foil backing which is taped together and taped as well to the aluminum I beam providing a vapour barrier. The inner membrane or liner acts as an additional vapour/air barrier. The aluminum section consists of either a 5"X10" or 8"X12 I beam which has been thermally broken by way of an aluminum architectural cap which is situated on the outside flange of the I beam and a PVC cap which is attached on the inside flange of the I beam. The outside cap is held in place using a series of spring clips which interface to the bolt chase of the I beam. The interior PVC cap is held in place by two tabs which interface on the interior bolt chase of the I beam. Both architectural caps utilize continues neoprene wipers which ensure that the caps are not in contact with the aluminum beam



Sprung Instant Structures retained Morrison Hershfield to review the building science aspect of Sprung structures. They conducted two studies. The first of these was a thermal review of the structure envelope in 2010. The latter dealing with modelling the energy consumption of structures and comparing them with the provisions as outlined in the 2011 National Energy Code of Canada.

By design, the Sprung structure is a well-sealed building envelope which allows minimal air infiltration. Based on studies in both Canada and England on actual structures it was found that the building envelope had a significantly lower infiltration rate as compared to the allowable as outlined in ASHREA 90. For the typical structures analyzed, Morrison Hershfield has identified that with the improvements in air tightness shown in the tested Sprung structures, which are currently over the accepted standard values of air tightness. The energy penalty caused by lower than code roof and wall R values is more than made up.

It is the opinion of Morrison Hershfield that the Sprung structure can achieve the energy performance requirements of the National Energy Code while using a lesser amount of thermal insulation in the structure envelope than specified in the prescriptive portion of the energy code, by;

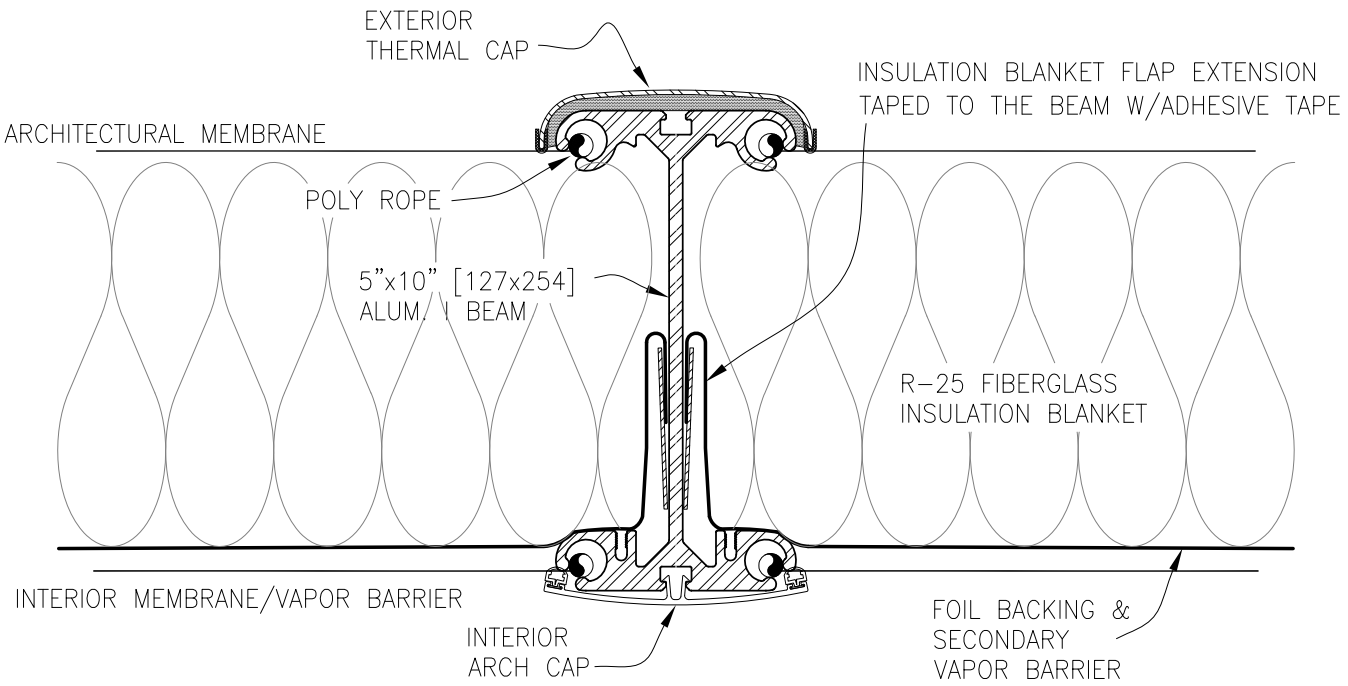
a) Accounting for the reduction in energy use due to reduced infiltration (based on blower door testing of Sprung structures), and or by

b) Using a higher efficiency mechanical system than specified in the prescriptive portion of the Energy Code, if ignoring the superior performance of the building envelope.

Based on the above, Sprung structures can be considered to meet the intent of the current National Energy Code and the next addition of the Alberta Building Code for energy performance requirements.

Sincerely,
SPRUNG INSTANT STRUCTURES LTD.

Peter J. Bos
Department Manager
Engineering & Design



5"x10" INSULATED BEAM SECTION

SIGNATURE SERIES

sprung

5"x10" ALUMINUM I BEAM
INSULATED SECTION
W/ INSULATED THERMAL CAP

DATE	SCALE
02/18/2016	AS NOTED

DRAWING #
5X10 BEAM

Sprung Instant Structures

This Guarantee is presented to:

The architectural membrane and aluminum materials utilized in Sprung Structures have been selected for their proven strength, durability and longevity. To show our sincere confidence in our product, Sprung Instant Structures is pleased to issue the following guarantees.

ARCHITECTURAL MEMBRANE WITH TEDLAR PVF FILM or KYNAR COATING

All membranes used are water and mildew resistant, insect proof and flame retardant. These membranes withstand extreme climatic variations and contain ultra-violet inhibitors to reduce degradation by the sun's rays. Flame retardant status has been warranted by the membrane suppliers.

Sprung Instant Structures guarantees to supply new replacement membrane, on a pro-rata basis at the then current price, for all colors of Tedlar or Kynar coated membrane which deteriorate from any of the aforementioned factors within TWENTY (20) YEARS from the date of delivery of the structure(s).

EXTRUDED ALUMINUM SUBSTRUCTURE AND COMPONENTS

Aluminum used is professionally engineered and is of the highest quality and structural capability. Sprung Instant Structures guarantees to replace, on a pro-rata basis at the then current price, any aluminum which deteriorates from normal usage within THIRTY (30) years from the date of delivery of the structure(s).

The guarantee will not be valid if a Sprung technical consultant is not present during all erections and dismantling's of the structure during the guarantee period or if any payments associated with the structure(s) are not made on time.

PHIL SPRUNG - PRESIDENT

DMBS

ENERGY COMPARISON STUDY

1200m² SPORTS AND LEISURE BUILDING

Sprung Structure
Versus
Traditional Method

November 2011

OFFICIAL ISSUE

DMBS Design Ltd
United Kingdom
www.dmbs.co.uk

WE EMPLOY LOW CARBON CONSULTANTS

LOW CARBON ENERGY ASSESSORS CIBSE Certification Ltd.

AMENDMENT SHEET

Revision	Description	Date	Author
-	Official Issue	Nov 2011	D. Maude

Contents

1 Executive summary

We have been instructed to carry out a comparison study between two different construction methods, to simulate the likely differences in energy usage and overall building performance based on a 1200m² gross internal floor area Sports and Leisure Facility. The two construction methods are based on the following;

- *Traditional Construction*
  (Steel frame, brick/block walls, lightweight high level walls/roof – 6.0 Air Permeability)
- *Sprung Construction*
  (Aluminium frame, fabric tension membrane – 2.5 Air Permeability)

Summary Table

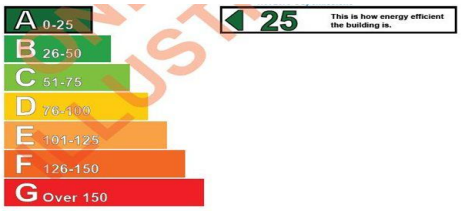
The results highlighted in **RED** indicate which construction method has the highest energy performance and/or rating from that particular area of study.

	SPRUNG Structure	TRADITIONAL Structure
Energy Performance Rating*	**A Rating**	B Rating
Building Carbon Emission Rate (BER)*	**62.2 kgC02/m²**	65.6 kgC02/m²
BREEAM 2008 Credit Ene1 Scoring*	**10 Credits**	9 Credits
Predicted Energy Consumption/annum**	**Gas-70,200 kWh Elec-56,842 kWh**	**Gas-178,416 kWh Elec-70,810 kWh**
Predicted Carbon Emission***	**Gas-10,810 kgC02 Elec-30,978 kgC02**	**Gas-27,476 kgC02 Elec-38,591 kWh**
Predicted Energy Costs/annum** (inc. CRC Charge)	**Gas- £3,800 Elec-£7,700**	**Gas- £10,000 Elec-£9,800**
POTENTIAL Saving on Energy Consumption/annum**	**- 42% LESS Per Annum**	**---------**
POTENTIAL Financial saving over 20 Years****	**- £ 200,000 SAVING**	**---------**

* The indicated scoring, rating, usage results, is to be used as a guide, for the purpose of this study only.
**The figures are based on the gas/electricity consumptions for the use of heating and lighting only, and do not include consumption for hot water generation, catering, small power etc (constants whichever building type). Final bottom line consumption costs/figures to be used as a comparable on the building types only, as part of this report, and NOT as the likely consumption figure for an 'as built' building, as too many variables (energy costs, usage etc)
*** Building Regulations 2010 Conversion Factors 0.154 kgC02/kWhr (Gas) and 0.545 kgC02/kWhr (Electricity)
**** Inclusive of above average inflation rates on natural gas over a 20 year period given the demise of fossil fuel stocks. GUIDE ONLY.

Energy Performance Summary

- Sprung Structure



The Sprung Instant Structure would achieve an **'A' RATING** Energy Performance.

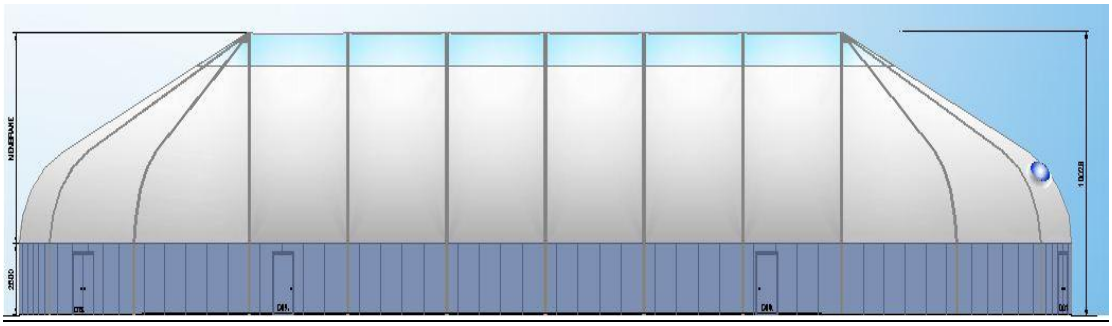
2 Introduction

2.1 Background

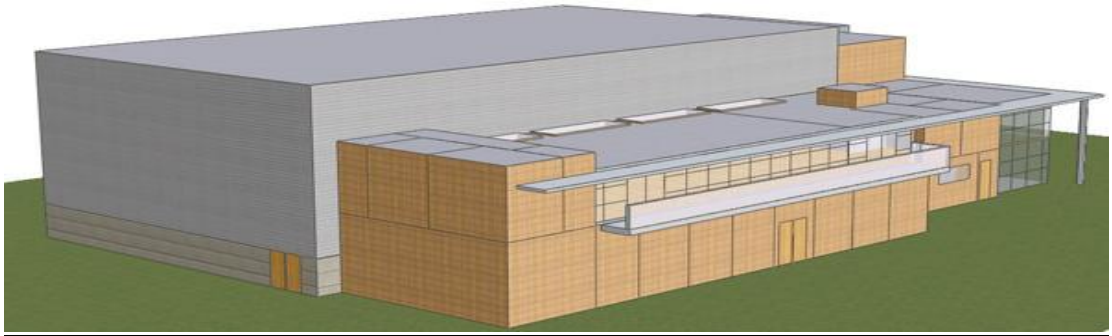
We have been instructed to carry out a comparison study between two different construction methods, to simulate the likely differences in energy usage and overall building performance.

The two different methods of construction have been based on a traditional build construction consisting of a steel frame, lightweight roof and a mixture of brick/block and lightweight wall structure. The comparison is against a modern method of construction (MMC) being a Sprung Instant Structure consisting of a 'rapid build' fabric tension membrane and aluminium frame.

The assessment has been carried out using the United Kingdom industry standard software Bentley Hevacomp V8i using the current '*interface Simplified Building Energy Model*' (iSBEM) v4.1.c.



Elevation of typical Sprung Sports Structure



3D Image of typical Traditional Sports Structure

2.2 Methodology

The methodology of the report shall be based on a 1200m² Sports and Leisure educational facility located in the Thames Valley area of the United Kingdom.

The main factors assessed are the following;

- Energy Performance
  Likely differences in 'Her Majesty's Government Building Regulations '*L2A Conservation of Fuel and Power*' Approved Document edition 2010 for Energy Performance

- BREEAM
  Likely differences in the 'Building Research Establishment's Environmental Assessment Method' 2008 Education (BREEAM 2008) for Energy Scoring Credit *Ene1*

- Annual Energy Consumption
  Likely differences in the annual energy consumption and carbon emission

To ensure the assessment is a fair comparison, the Building Services strategy for both building types together with floor areas, room types, window areas etc., are the same and have been used as a template for both construction method models.

The generic template used for the sports building is summarised as follows:

GIFA:	1200m²
Room Types:	Dry Sports Hall (840 m²)
	Classroom
	Fitness Suite (80m²)
	Circulation areas
	Office
	Store
	Toilet/Changing Facilities
Fuel Source:	Natural Gas
	Grid Electricity
Renewables:	Not Included
Heating:	High Efficiency Gas Condensing Boilers (95%)
Lighting:	High Frequency/Low Energy Lamps (auto/photocell controls)
Ventilation:	Local Extract to Toilet/Changing Areas
	Natural Ventilation Strategy to Sports Hall and Areas
	Heat Recovery System to Fitness Suite
Air Conditioning:	Fitness Suite Only
Controls:	Building Energy Management System (aM&T software)

3 Design Criteria – Sprung Structure

3.1 Specific Building Data - Sprung

Project Building Data

Construction:	Modern method (tension membrane - fabric)
Building type:	Leisure/Sports Facility
GIFA:	1200 m²
Air permeability @ 50Pa:	2.5 m³/h/m² (2.01 m³/h/m² achievable; see Appendix E)
Thermal bridges:	Accredited details

Transparent Constructions

Name of transparent construction	Thermal Resistance	How this information is entered into iSBEM
Roof Lights (Polycarbonate Panel between translucent fabric)	0.14 U-Value* 7.00 R-Value*	Import own values

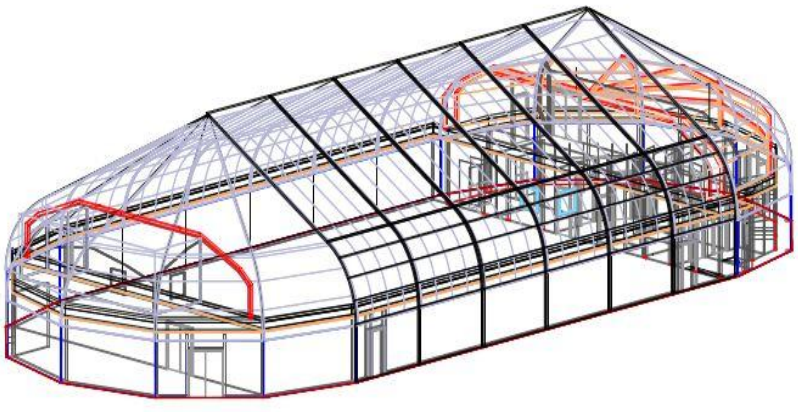
* U/R Values provided by Sprung Structures Inc.

Opaque Constructions

External wall; Tension membrane structure, consisting of aluminium sub frame with exterior architectural fabric membrane,

Name of Opaque construction	Thermal Resistance	How this information is entered into iSBEM
External Wall (Fabric)	0.18 U-Value* 5.55 R-Value*	Import own values
Ground Floor (concrete)	0.25 U-Value* 4.00 R-Value*	Import own values
Roof (Fabric)	0.18 U Value* 5.55 R-Value*	Import own values

* U/R Values provided by Sprung Structures Inc.



3D image of typical Sprung Sports Structure

4 Design Criteria – Traditional Structure

4.1 Specific Building Data - Traditional

Project Building Data

Construction:	Traditional (Brick/Block with lightweight roof)
Building type:	Leisure/Sports Facility
GIFA:	1200 m²
Air permeability @ 50Pa:	6.0 m³/h/m²
Thermal bridges:	Accredited details

Transparent Constructions

Name of transparent construction	Thermal Resistance	How this information is entered into iSBEM
Roof Lights (double glazed unit)	2.00 U-Value* 0.50 R-Value*	Import own values

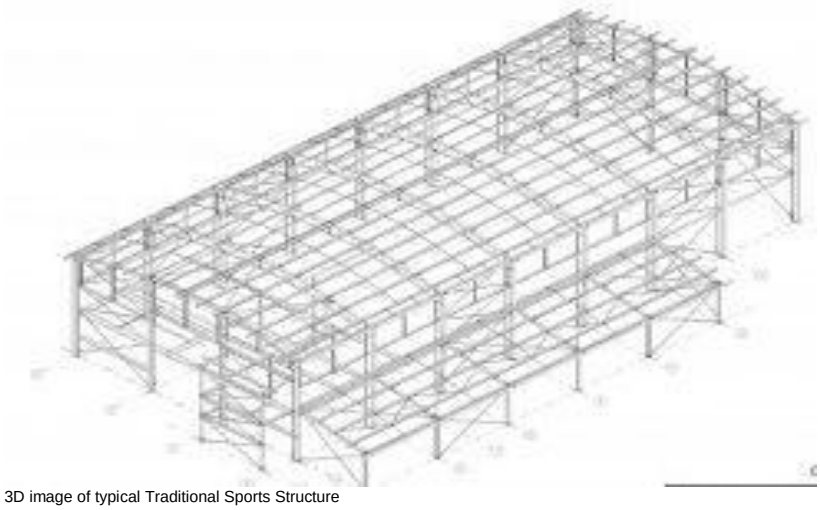
* U/R Values provided by Sprung Structures Inc.

Opaque Constructions

External wall;	Brick 105mm, air gap, fibre insulation, aerated concrete block up to 3.0m high. Steel sheet above 3.0m
Roof;	Steel sheet, insulation board, Steel sheet

Name of Opaque construction	Thermal Resistance	How this information is entered into iSBEM
External Wall (cavity)	0.35 U-Value* 2.80 R-Value*	Import own values
Ground Floor (concrete)	0.25 U-Value* 4.00 R-Value*	Import own values
Roof (steel)	0.25 U Value* 4.00 R-Value*	Import own values

* U/R Values provided by Sprung Structures Inc.



3D image of typical Traditional Sports Structure

5 Comparison 1 – Energy Performance

5.1 Traditional Structure

Annual Carbon Emission

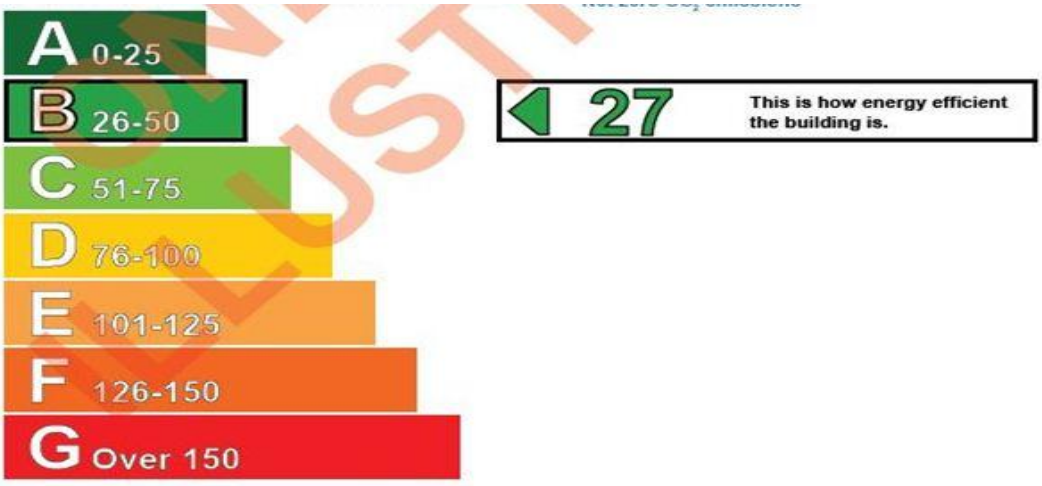
Please find below the output data given by the Building Regulations Part L2A for the building. The approved software would indicate the building would meet the requirement for the Building Emission Rate (BER), therefore fully compliant with Building Regulations Part L2A. Please note the SBEM software is not to be used as a design tool, please refer to section 7 for estimated consumption figures.

Criterion 1: The calculated CO_2 emission rate for the building should not exceed the target

1.1	CO_2 emission rate from the notional building, $kgCO_2/m^2.annum$	65.6
1.2	Target CO_2 emission rate (TER), $kgCO_2/m^2.annum$	65.6
1.3	Building CO_2 emission rate (BER), $kgCO_2/m^2.annum$	65.6
1.4	Are emissions from the building less than or equal to the target?	BER =< TER
1.5	Are as built details the same as used in the BER calculations?	Separate submission

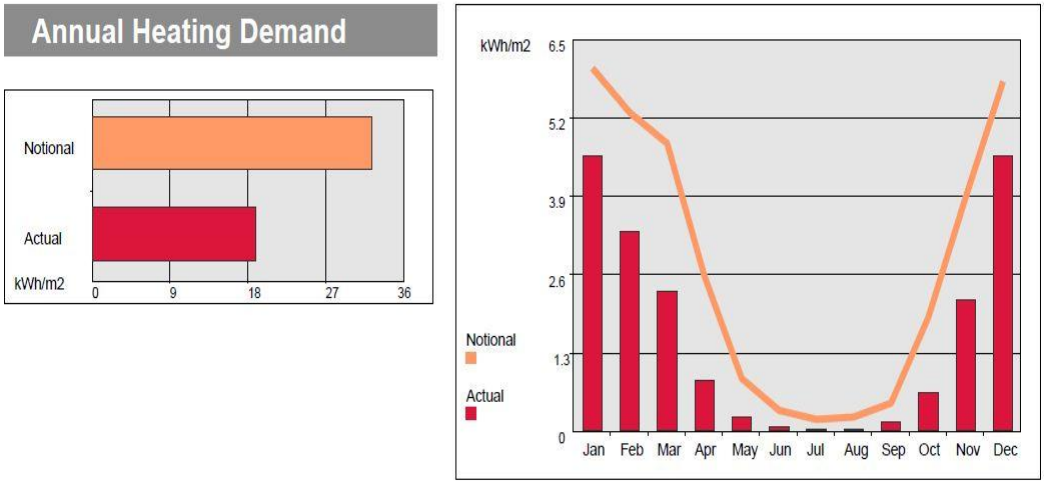
Traditional - Energy Performance Rating – 'B' RATING

The building would achieve a 'B' rating under the Energy Performance Certificate;



Traditional - Annual Heating Demand

The graphs below give guidance on the building performance with reference to the annual heating demand per annum against Building Regulations Part L2A Conservation of Fuel and Power 'Notional' Building.



5.2 Sprung Structure

Sprung - Annual Carbon Emission

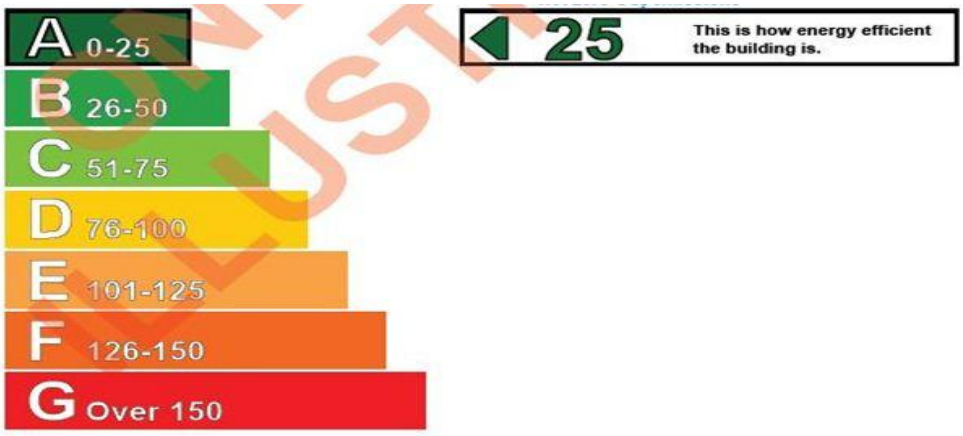
Please find below the output data given by the Building Regulations Part L2A for the building. The approved software would indicate the building would meet the requirement for the Building Emission Rate (BER), therefore fully compliant with Building Regulations Part L2A. Please note the SBEM software is not to be used as a design tool, please refer to section 7 for estimated consumption figures.

Criterion 1: The calculated CO_2 emission rate for the building should not exceed the target

1.1	CO_2 emission rate from the notional building, $kgCO_2/m^2.annum$	65.8
1.2	Target CO_2 emission rate (TER), $kgCO_2/m^2.annum$	65.8
1.3	Building CO_2 emission rate (BER), $kgCO_2/m^2.annum$	62
1.4	Are emissions from the building less than or equal to the target?	BER =< TER
1.5	Are as built details the same as used in the BER calculations?	Separate submission

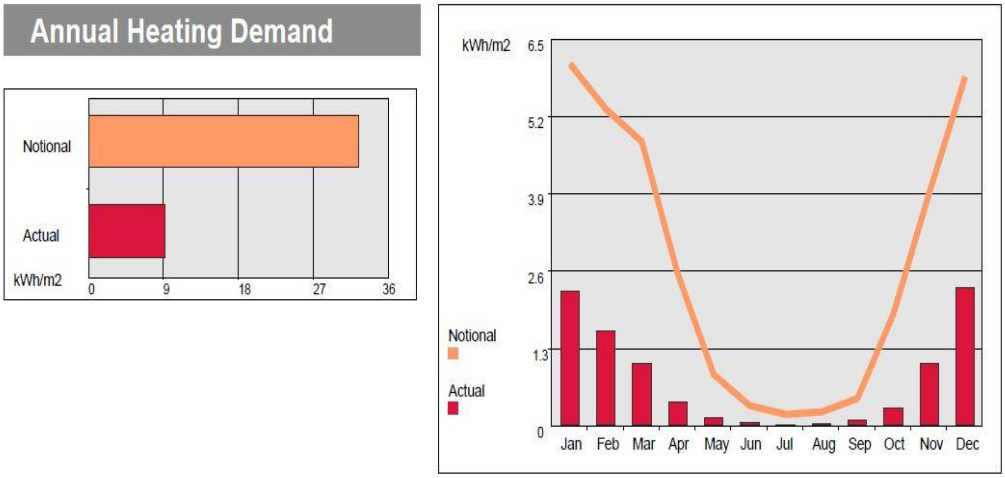
Sprung - Energy Performance Rating – 'A' RATING

The building would achieve a 'A' rating under the Energy Performance Certificate;



Sprung - Annual Heating Demand

The graphs below give guidance on the building performance with reference to the annual heating demand per annum against Building Regulations Part L2A Conservation of Fuel and Power 'Notional' Building.



6 Comparison 2 – BREEAM

6.1 What is BREEAM?

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's leading and most widely used environmental assessment method for buildings, with over 115,000 buildings certified and nearly 700,000 registered. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

Credits are awarded in ten categories according to performance. These credits are then added together to produce a single overall score on a scale of Pass, Good, Very Good, Excellent and Outstanding. The operation of BREEAM is overseen by an independent Sustainability Board, representing a wide cross-section of construction industry stakeholders.

Aims of BREEAM:

- To mitigate the impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits
- To provide a credible, environmental label for buildings
- To stimulate demand for sustainable buildings

Objectives of BREEAM:

- To provide market recognition to low environmental impact buildings
- To ensure best environmental practice is incorporated in buildings
- To set criteria and standards surpassing those required by regulations and challenge the market to provide innovative solutions that minimise the environmental impact of buildings
- To raise the awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment
- To allow organisations to demonstrate progress towards corporate environmental objectives

6.2 Traditional Structure

Energy Performance Rating – 28 (B Rating)

Issue ID	Issue Title	No. of credits available	Minimum standards
Ene 1	Ene 1 Reduction of CO_2 Emissions	15	Yes

Aim

To recognise and encourage buildings that are designed to minimise the CO_2 emissions associated with their operational energy consumption.

Assessment Criteria

The following demonstrates compliance:

1. The number of credits achieved is determined by comparing the building's CO_2 index (EPC Rating), taken from the Energy Performance Certificate (EPC), with the table of benchmarks below:

Table 9 CO_2 index benchmarks and BREEAM credits

BREEAM Credits	CO_2 Index (EPC Rating)	
	New Build	Refurbishment
1	63	100
2	53	87
3	47	74
4	45	61
5	43	50
6	40	47
7	37	44
8	31	41
9	28	36
10	25	31
11	23	28
12	20	25
13	18	22
14	10	18
15	0	15
Exemplar credit 1	<0	≤0
Exemplar credit 2	*True zero carbon building*	

For buildings that are part new-build part refurbishment refer to Compliance Notes.

The above table is taken from BREEAM 2008 'Education' Assessment Criteria for the ENERGY section under credit *Ene1*.

The Traditional Building would likely achieve 9 Credits under Energy Performance Scoring (circled in the RED)

TRADITIONAL Building Likely Scoring under Credit Ene1: **9 CREDITS**

6.3 Sprung Structure

Energy Performance Rating – 25 (A Rating)

Issue ID	Issue Title	No. of credits available	Minimum standards
Ene 1	Ene 1 Reduction of CO_2 Emissions	15	Yes

Aim

To recognise and encourage buildings that are designed to minimise the CO_2 emissions associated with their operational energy consumption.

Assessment Criteria

The following demonstrates compliance:

1. The number of credits achieved is determined by comparing the building's CO_2 index (EPC Rating), taken from the Energy Performance Certificate (EPC), with the table of benchmarks below:

Table 9 CO_2 index benchmarks and BREEAM credits

BREEAM Credits	CO_2 Index (EPC Rating)	
	New Build	Refurbishment
1	63	100
2	53	87
3	47	74
4	45	61
5	43	50
6	40	47
7	37	44
8	31	41
9	28	36
10	25	31
11	23	28
12	20	25
13	18	22
14	10	18
15	0	15
Exemplar credit 1	<0	≤0
Exemplar credit 2	*True zero carbon building*	

For buildings that are part new-build part refurbishment refer to Compliance Notes.

The above table is taken from BREEAM 2008 'Education' Assessment Criteria for the ENERGY section under credit *Ene1*.

The Sprung Building would likely achieve 10 Credits under Energy Performance Scoring (circled in the RED)

SPRUNG Building Likely Scoring under Credit Ene1: **10 CREDITS**

7 Comparison 3 – Annual Energy Consumption

7.1 Traditional Structure

We have calculated the predicted energy consumption of a typical *Traditional* Sports Facility (1200m²), in accordance with the specific design criteria in section 4 of this report. This will give an estimate in the likely difference between the building types, considering the differing thermal properties and use of natural daylight.

We have considered the use of natural gas, to meet the heating demand, and electricity through artificial lighting annual consumption, as these both will vary between both building types.

Please note; both building types will consume more energy with the use of hot water, small power, catering etc., but these have been excluded from the estimated consumption figures below, as these will be the same and are not be affected by differing building materials/thermal performance.

The following assumptions are based on CIBSE TM41:2006 Degree Days, Theory & Application using standard mean monthly temperature data and heatloss calculations from the Bentley Hevacomp Design Database V8i.

NATURAL GAS

1. Heating

Degree Days based on Met Office 20 year average (1971 to 1991) in the UK

Calculated Heating for Sports Facility	= 62.5 kW (52.1 Watts/m2)
Building Class	= 4A
Degree Day Area	= Thames Valley
Degree Days	= 2130
Indoor Design Temperature	= 19˚C
Outdoor Design Temperature	= -4˚C
Usage of Heating Plant	= 16 hours
Building Occupancy	= 7 Days/week, 12 Hours/day

No Correction Factor from 15.5˚C for internal temperature of 18.5˚C

Full Load $\frac{24 \times 2130}{19 - (-4)}$ = 2223 hours

(a) 7 day week	= 1.0
(b) Continuous (light Building)	= 1.0
(c) 16 hour day	= 1.22

2223 hours x 1.0 (a) x 1.0 (b) x 1.22 (c) = 2712 hours

$\frac{2712 \times 62.5 \times 3600}{1\,000\,000}$ = 610.2 GJ/year

Seasonal Efficiency using Conventional Boilers; 95%

610.2 = 642.3 GJ/year
0.95

642.3 = **178 416 kWhr/annum**
3.6 x 10^{-3}

- Note 1; We have excluded the energy consumption by domestic hot water, as this will be the same whichever the building type

- Note 2: We have excluded the energy consumption by mechanical ventilation, as this is a natural ventilation strategy with only mechanical extract ventilation from toilet areas

Grid Electricity

1. Lighting

Lighting:	Sports Hall	=	12.6 KW (no natural light)
	Fitness Suite	=	1.20 KW (no natural light)
	Other Areas	=	5.60 kW (no natural light)

Assume:
Lighting Operation on 10 hours/day in Sports Hall x 365 days = 3650 hours
= **3650 hours**

Therefore energy used = 19,400 W x 3650 hours = 70 810 kWh

TOTAL Electricity Annual Consumption (Lighting only)

Total energy used kWh = 70 810 KW/h

70 810 KW/h/annum

- Note 1; We have excluded the energy consumption by small power, as this will be constant whichever the building type

- Note 2; We have excluded the energy consumption by ventilation plant, as this will be constant whichever the building type

7.2 Sprung Structure

We have calculated the predicted energy consumption of a typical *Sprung Instant* Sports Facility (1200m²), in accordance with the specific design criteria in section 3 of this report. This will give an estimate in the likely difference between the building types, considering the differing thermal properties and use of natural daylight.

We have considered the use of natural gas, to meet the *variable* heating demand, and electricity through the *variable* artificial lighting consumption, as these both will vary between both building types.

Please note; both building types will consume more energy with the use of hot water, small power, catering etc., but these have been excluded from the estimated consumption figures below, as these will be the same and are not be affected by differing building materials/thermal performance.

The following assumptions are based on CIBSE TM41:2006 Degree Days, Theory & Application using standard mean monthly temperature data and heatloss calculations from the Bentley Hevacomp Design Database V8i.

NATURAL GAS

1. Heating

Degree Days based on Met Office 20 year average (1971 to 1991) in the UK

Calculated Heating for Sports Facility	= 30.0 kW (25.0 Watts/m2)
Building Class	= 4A
Degree Day Area	= Thames Valley
Degree Days	= 2130
Indoor Design Temperature	= 19˚C
Outdoor Design Temperature	= -4˚C
Usage of Heating Plant	= 16 hours
Building Occupancy	= 7 Days/week, 12 Hours/day

No Correction Factor from 15.5˚C for internal temperature of 18.5˚C

Full Load $\frac{24 \times 2130}{19 - (-4)}$ = 2223 hours

(a) 7 day week	= 1.0
(b) Continuous (light Building)	= 1.0
(c) 16 hour day	= 1.00

2223 hours x 1.0 (a) x 1.0 (b) x 1.00 (c) = 2223 hours

$\frac{2223 \times 30.0 \times 3600}{1\,000\,000}$ = 240.0 GJ/year

Seasonal Efficiency using Conventional Boilers; 95%

240.0 = 252.7 GJ/year
0.95

252.7 = **70 200 kWhr/annum**
3.6 x 10^{-3}

- Note 1; We have excluded the energy consumption by domestic hot water, as this will be the same whichever the building type

- Note 2: We have excluded the energy consumption by mechanical ventilation, as this is a natural ventilation strategy with only mechanical extract ventilation from toilet areas

Grid Electricity

1. Lighting

Lighting:	Sports Hall	=	12.6 KW (integrated roof lights)
	Fitness Suite	=	1.20 KW (integrated roof lights)
	Other Areas	=	5.60 kW (integrated roof lights)

Assume:
During Summer lighting on 6 hours/day x 90 days = 540 hours

During Spring/Autumn lighting on 8 hours/day x180 days =1440 hours

During Winter lighting on 10 hours/day x 95 days = 950 hours
= **2930 hours**

Therefore energy used = 19,400 W x 2930 hours = 56 842 kWh

TOTAL Electricity Annual Consumption (Lighting only)

Total energy used kWh = 56 842 KW/h

56 842 KW/h/annum

- Note 1; We have excluded the energy consumption by small power, as this will be constant whichever the building type

- Note 2; We have excluded the energy consumption by ventilation plant, as this will be constant whichever the building type

8 Conclusion

8.1 Conclusion

It is evident from the study, the Sprung Structure using the 'modern method of construction' methodology is the most energy efficient solution when compared with a traditional method. Both construction methods were based on a Sports and Leisure Facility with 1200m² GIFA. This is likely to be as a result of the following main factors being 'better than average' thermal properties and performance of the Sprung Structure;

- *Low air permeability* rating (2.5 m³/h/m² @ 50 Pa); as the building has a higher air tightness, heat loss through air infiltration is dramatically reduced. Similarly heat gains are reduced during peak ambient conditions, reducing energy consumption through comfort cooling systems. The Sprung Instant structure has been proven to achieve an 'actual' air *permeability* rating of 2.0 m³/h/m² @ 50 Pa, at their Sports Facility in Cambridgeshire. Please refer to Appendix E of this report, for copy of air test certification.

- *Very Low U Values with use of high thermal performance fabric insulated external walls (0.18 W/*m².K); this will assist in reducing the building heat loss, reducing energy consumption of the building

- *Very Low U Values with use of high thermal performance fabric insulated roof (0.18 W/*m².K); this will assist in reducing the building heat loss, reducing energy consumption of the building

- *Very Low U Values with use of high thermal performance Translucent Fabric and Polycarbonate roof lights (0.14 W/*m².K); this will assist in reducing the building heat loss, and reduce the usage of artificial lighting with the inclusion of integrated roof lights, reducing energy consumption of the building

- *Reduced* plant sizing and selection for heating and cooling systems as a result of the above factors, concluding in reduced capital and running costs and subsequent lesser building carbon emission rates.

Overall the Sprung Instant Structure is considerable more efficient when compared against the Traditional building type. The main advantages are as follows;

- Potential to achieve ***A RATING under the Energy Performance Rating*** with a Sprung Instant Structure

- Potential to achieve an ***EXTRA 1 Credit*** under Ene1 criteria for BREEAM 2008 Education with a Sprung Instant Structure. The Sprung Sports Facility built in Leicestershire (UK) in 2008, was successful in achieving 'EXCELLENT' for BREEAM 2006.

- Potential to ***REDUCE the Annual Running Costs by 42%*** with a Sprung Instant Structure, compared against the Traditional method of construction.

Appendix A - Energy Performance Certificate (Sprung)

Energy Performance Certificate
Non-Domestic Building

HM Government

Certificate Reference Number:
0000-0040-0030-9000-0103

This certificate shows the energy rating of this building. It indicates the energy efficiency of the building fabric and the heating, ventilation, cooling and lighting systems. The rating is compared to two benchmarks for this type of building: one appropriate for new buildings and one appropriate for existing buildings. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Asset Rating

More energy efficient

A+

Net zero CO_2 emissions

A 0-25
B 26-50
C 51-75
D 76-100
E 101-125
F 126-150
G Over 150

25 This is how energy efficient the building is.

Less energy efficient

Technical information

Main heating fuel:	Natural Gas
Building environment:	Air Conditioning
Total useful floor area (m^2):	1200
Building complexity (NOS level):	3
Building emission rate ($kgCO_2/m^2$):	62.03

Benchmarks

Buildings similar to this one could have ratings as follows:

27 If newly built

71 If typical of the existing stock

Appendix B - Energy Performance Certificate (Traditional)

Energy Performance Certificate
Non-Domestic Building

HM Government

Certificate Reference Number:
0000-0040-0030-9000-0103

This certificate shows the energy rating of this building. It indicates the energy efficiency of the building fabric and the heating, ventilation, cooling and lighting systems. The rating is compared to two benchmarks for this type of building: one appropriate for new buildings and one appropriate for existing buildings. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Asset Rating

More energy efficient

Less energy efficient

Technical information

Main heating fuel:	Natural Gas
Building environment:	Heating and Natural Ventilation
Total useful floor area (m^2):	1200
Building complexity (NOS level):	3
Building emission rate ($kgCO_2/m^2$):	65.62

Benchmarks

Buildings similar to this one could have ratings as follows:

27 If newly built

71 If typical of the existing stock

Appendix C - BRUKL Output Document (Sprung)

BRUKL Output Document

HM Government

Compliance with England and Wales Building Regulations Part L 2010

Project name

1200m2 Sprung As designed

Date: Thu Oct 20 15:59:24 2011

Administrative information

Building Details

Address: ,

Certification tool

Calculation engine: SBEM

Calculation engine version: v4.1.c.2

Interface to calculation engine: iSBEM

Interface to calculation engine version: v4.1.c

BRUKL compliance check version: v4.1.c.2

Owner Details

Name: Information not provided by the user

Telephone number: Information not provided by the user

Address: Information not provided by the user, Information not provided by the user, Information not provided by the user

Certifier details

Name: Dean Maude

Telephone number: 07817612157

Address: 7 Portland Road, Retford, DN22 7NR

Criterion 1: The calculated CO_2 emission rate for the building should not exceed the target

1.1	CO_2 emission rate from the notional building, $kgCO_2/m^2.annum$	65.8
1.2	Target CO_2 emission rate (TER), $kgCO_2/m^2.annum$	65.8
1.3	Building CO_2 emission rate (BER), $kgCO_2/m^2.annum$	62
1.4	Are emissions from the building less than or equal to the target?	BER =< TER
1.5	Are as built details the same as used in the BER calculations?	Separate submission

Criterion 2: The performance of the building fabric and the building services should achieve reasonable overall standards of energy efficiency

2.a Building fabric

Element	$U_{a\text{-}Limit}$	$U_{a\text{-}Calc}$	$U_{i\text{-}Calc}$	Surface where the maximum value occurs*
Wall**	0.35	0.18	0.18	Sports Hall/s
Floor	0.25	0.12	0.17	Toilets/f
Roof	0.25	0.18	0.18	Sports Hall/c
Windows***, roof windows, and rooflights	2.2	0.14	0.14	Sports Hall/c/g
Personnel doors	2.2	-	-	"No heat loss personnel doors"
Vehicle access & similar large doors	1.5	-	-	"No heat loss vehicle access doors"
High usage entrance doors	3.5	-	-	"No heat loss high usage entrance doors"

$U_{a\text{-}Limit}$ = Limiting area-weighted average U-values [$W/(m^2K)$]
$U_{a\text{-}Calc}$ = Calculated area-weighted average U-values [$W/(m^2K)$] $U_{i\text{-}Calc}$ = Calculated maximum individual element U-values [$W/(m^2K)$]

* There might be more than one surface where the maximum U-value occurs.
** Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.
*** Display windows and similar glazing are excluded from the U-value check.
N.B.: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air Permeability	Worst acceptable standard	This building
$m^3/(h.m^2)$ at 50 Pa	10	2.5

Appendix D - BRUKL Output Document (Traditional)

BRUKL Output Document

HM Government

Compliance with England and Wales Building Regulations Part L 2010

Project name

1200m2 Traditional As designed

Date: Tue Oct 18 21:30:17 2011

Administrative information

Building Details

Address: ,

Certification tool

Calculation engine: SBEM

Calculation engine version: v4.1.c.2

Interface to calculation engine: iSBEM

Interface to calculation engine version: v4.1.c

BRUKL compliance check version: v4.1.c.2

Owner Details

Name: Information not provided by the user

Telephone number: Information not provided by the user

Address: Information not provided by the user, Information not provided by the user, Information not provided by the user

Certifier details

Name: Dean Maude

Telephone number: 07817612157

Address: 7 Portland Road, Retford, DN22 7NR

Criterion 1: The calculated CO_2 emission rate for the building should not exceed the target

1.1	CO_2 emission rate from the notional building, $kgCO_2/m^2.annum$	65.6
1.2	Target CO_2 emission rate (TER), $kgCO_2/m^2.annum$	65.6
1.3	Building CO_2 emission rate (BER), $kgCO_2/m^2.annum$	65.6
1.4	Are emissions from the building less than or equal to the target?	BER =< TER
1.5	Are as built details the same as used in the BER calculations?	Separate submission

Criterion 2: The performance of the building fabric and the building services should achieve reasonable overall standards of energy efficiency

2.a Building fabric

Element	$U_{a\text{-}Limit}$	$U_{a\text{-}Calc}$	$U_{i\text{-}Calc}$	Surface where the maximum value occurs*
Wall**	0.35	0.35	0.35	Sports Hall/s
Floor	0.25	0.12	0.14	Cardio/Fitness Suite/f
Roof	0.25	0.25	0.25	Sports Hall/c
Windows***, roof windows, and rooflights	2.2	1.5	1.5	Sports Hall/c/g
Personnel doors	2.2	-	-	"No heat loss personnel doors"
Vehicle access & similar large doors	1.5	-	-	"No heat loss vehicle access doors"
High usage entrance doors	3.5	-	-	"No heat loss high usage entrance doors"

$U_{a\text{-}Limit}$ = Limiting area-weighted average U-values [$W/(m^2K)$]
$U_{a\text{-}Calc}$ = Calculated area-weighted average U-values [$W/(m^2K)$] $U_{i\text{-}Calc}$ = Calculated maximum individual element U-values [$W/(m^2K)$]

* There might be more than one surface where the maximum U-value occurs.
** Automatic U-value check by the tool does not apply to curtain walls whose limiting standard is similar to that for windows.
*** Display windows and similar glazing are excluded from the U-value check.
N.B.: Neither roof ventilators (inc. smoke vents) nor swimming pool basins are modelled or checked against the limiting standards by the tool.

Air Permeability	Worst acceptable standard	This building
$m^3/(h.m^2)$ at 50 Pa	10	6

Appendix E - Air Tightness Certificate - Sprung

1. INTRODUCTION

This report details the results of the envelope air tightness test carried out by HRS Services Ltd at:

Sports Hall
HMP Littlehey
Crow Spinney Lane
Perry
Huntingdon
PE28 0SR

The estimated year of construction was 2009.

The test was commissioned by David Bucknall.

2. TEST CONDITIONS AND RESULTS

The worst acceptable building air permeability performance criteria as defined in Section 2 of the Building Regulations 2000 (as amended), Part L2A Conservation of Fuel and Power in New Buildings Other Than Dwellings is $10m^3/(h.m^2)$ @ 50Pa.

The test was carried out on 30.10.09, between 12.45 and 13.15. The result is representative of the building as tested on this day.

The type of HVAC was mechanical.

The envelope area for air permeability is defined as the area of the external walls plus the area of the roof and the ground floor. The envelope area was calculated by the client.

The whole area of the building was tested.

The envelope area of the test area was $2485.5m^2$.

The following air permeability was determined at 50Pa.

$2.01m^3/(h.m^2)$

The test area therefore **passed** the specified air permeability performance criteria

Summary of Temporary Sealing

Temporary sealing was applied to unfinished elements, see table overleaf for full details. It should be noted that temporary seals may, in practice, be more airtight than the element they replace. The finished elements should therefore be of an equal standard of airtightness for the quoted test result to remain unchanged.

Appendix F - Study Summary Sheet

Project: New Build

1200m² Prototype Sports Facility

DMBS Design Ltd

New 1200m² Sports Facility

We have been instructed to carry out a brief comparison between a traditional build construction and a Sprung Instant Structure (modern method of construction) of a 1200m² Sports Facility located in the Thames Valley area. The main factors assessed have been the following:

- Likely Building Regulations Part L2A 2010 'Building Emission Rate' (BER)
- Likely BREEAM 2008 Scoring
- Likely Annual Running Costs

To ensure the assessment is a fair comparison, the Building Services strategy for both building types together with floor areas, room types, window areas etc., are the same for both construction methods.

The provisional assessment does not include any Renewable Energy or Low Zero Carbon technologies, as a full feasibility study would be required. We would anticipate the use of Biomass, Photovoltaics, Combined Heat and Power (CHP) and Ground Source Heat pumps may be favourable for this building type.

This assessment is to be used as guidance only, as the information is based on estimations and provisional information at this early stage, and subject to change.

Executive Summary

- Potential to achieve ***A RATING under the Energy Performance Rating*** with a Sprung Instant Structure
- Potential to achieve an ***EXTRA 1 Credit*** under Ene 1 criteria for BREEAM 2008 Education with a Sprung Instant Structure
- Potential to save nearly ***42% LESS*** on running costs

Building Services Strategy (Generic)

- Natural Gas
- Grid Electricity
- High efficiency Condensing Boilers
- Building Management System
- Low Energy Light Fitments
- Underfloor Heating System
- Natural Ventilation Strategy

Traditional Building

Criteria

Construction:	Steel Frame
GIFA:	1200.0 m²
External Walls:	0.35 W/m².K
Roof:	0.25 W/m².K
Floor:	0.25 W/m².K
Windows:	2.0 W/m².K
Air Permeability:	6.0 m³/h/m²

Provisional Results

- Building Regulations Part L2A 2010: ***65.6kg/CO2/m²/yr***
- BREEAM 2008 Ene1 Score: ***9 Credits (EPC Rating 27)***
- Estimated Annual Running Costs

GAS £ 10,000 (178,416 kWhr/annum)
ELEC £ 9,800 (70,810 kWhr/annum)

Sprung Instant Structure

Criteria

Construction:	Tension Frame
GIFA:	1200.0 m²
External Walls:	0.18 W/m².K
Roof:	0.18 W/m².K
Floor:	0.25 W/m².K
Windows:	0.14 W/m².K
Air Permeability:	2.5 m³/h/m²

Provisional Results

- Building Regulations Part L2A 2010: ***62.2kg/CO2/m²/yr***
- BREEAM 2008 Ene1 Score: ***10 Credits (EPC Rating 25)***
- Estimated Annual Running Costs

GAS £ 3,800 (70,200 kWhr/annum)
ELEC £ 7,700 (56,842 kWhr/annum)

DMBS Design Limited
7 Portland Road
RETFORD
Nottinghamshire

Contact: Dean Maude
Website: www.dmbs.co.uk

WE EMPLOY LOW CARBON CONSULTANTS

LOW CARBON ENERGY ASSESSORS CIBSE

Tla-o-qui-aht First Nation

P.O. Box 18
Tofino, BC.....V0R-2Z0
Fax: (250) 725-3352 Ph: (250) 725-3350

March 29, 2016
Alberni Clayoqout Regional District
Port Alberni, BC
Email pdf: Josie Osborne - Chairperson

Re: Float Homes in Tla-o-qui-aht Haahuulthii

This letter is to request support from the Alberni-Clayoquot Regional District in addressing a pressing issue for our Nation. Tla-o-qui-aht is concerned that float-homes continue to be built and/or launched locally, only to be illegally anchored and located in our waters without consultation.

No float-home or flotilla should be created locally, nor should it be launched here, unless it is associated with a legal foreshore permit. It is foreseeable that aquaculture tenures may require some sort of structures located on-site, but this does not negate the duty to consult either.

We would like to seek ACRD support in restricting any construction of float-homes and/or launching of float-homes in the Region. This includes all marinas in the District of Tofino, the Grice Bay Boat Launch, and all other fresh water boat launches in Kennedy Lake.

There are many outstanding issues with the current float-homes that are illegally located in the Tla-o-qui-aht Haahuulthii. Many float-homes are located in the same safe harbours that are suitable for Clam-Digging. Some float-homes are located above productive eel grass. There are concerns that without a comprehensive management plan for these homes/cabins, the industry will negatively impact our aboriginal interests in our Haahuulthii.

Furthermore, not a single float home has an operating protocol with our Nation. A number of years ago, the province met with the local float-home-association, whilst TFN was in the process of working on Marine Spatial planning, and demanded that float homes pay a fee to BC and not to TFN. This remains an outstanding issue between our Nation and the province of BC. We seek your support in working towards solutions to this industry/land-use.

If you have any questions with regards to this letter, or to coordinate a meeting with our delegates, please call me at (250) 726-5076 or respond to this letter for follow up.

Tleko-Tleko, (respectfully, Thank you)

Saya m. Masso
Natural Resources Dir

Without Prejudice

ALBERNI-CLAYOQUOT REGIONAL DISTRICT

3008 Fifth Avenue, Port Alberni, B.C. CANADA V9Y 2E3 Telephone (250) 720-2700 FAX: (250) 723-1327

REQUEST FOR DECISION

To: West Coast Committee

From: Janice Hill, Environmental Services Coordinator
Mark Fortune, Airport Superintendent

Meeting Date: May 31, 2016

Subject: Long Beach Airport Branding and Marketing Contract

Recommendation:

THAT the West Coast Committee recommend to the Alberni-Clayoquot Regional District Board of Directors award the Long Beach Airport Branding and Marketing contract to Primal Communications for a contract price of $13,200, plus GST.

Summary:

At the request of the Long Beach Airport Advisory Committee staff advertised a Request for Proposals for the Branding and Marketing for Long Beach Airport. Eight (8) proposals were received before the deadline. All eight proposals were reviewed by 4 members of the committee and Primal Communications was selected to be the best fit for the project.

Background:

The Long Beach Airport Advisory committee was formed in 2013 and one of their objectives is to promote and improve air services to the airport. The committee agreed that they airport would benefit from having its own brand and required marketing, the plan has been budgeted for the past two years.

Time Requirements – Staff & Elected Officials:

Minimal staff time to work with the committee and contractor on this project.

Financial:

Funds for this project are included in the 2016 – 2020 Financial Plan.

Policy or Legislation:

As per ACRD's purchasing policy.

Submitted by: _____
Janice Hill, Environmental Services Coordinator

Approved by: _____
Russell Dyson, Chief Administrative Officer

ALBERNI-CLAYOQUOT
REGIONAL DISTRICT

3008 Fifth Avenue, Port Alberni, B.C. CANADA V9Y 2E3 Telephone (250) 720-2700 FAX: (250) 723-1327

REQUEST FOR DECISION

To: West Coast Committee

From: Janice Hill, Environmental Services Coordinator
Luc Stefani, Building Maintenance Coordinator

Meeting Date: May 31, 2016

Subject: Boulton Spice Lease at Long Beach Airport

Recommendation:

THAT the West Coast Committee recommend the Alberni-Clayoquot Regional District Board of Directors renew Boulton Spice's lease agreement for a three (3) year term to operate a spice blending business in exchange for repairs and upgrades to the Weather Station building.

Summary:

Boulton Spice has occupied a space in the Weather Station building at the Long Beach Airport since 2013. In continuation with a previous lease agreement between the ACRD and Boulton Brothers Construction Ltd., staff at the ACRD reviewed a summary of work completed by Boulton Brothers. This remedial work was the basis of a 3-year lease agreement which matured in early 2016; an exchange of labour and remedial work in lieu of rental charges. The work completed was found to be consistent with that agreement

The previous arrangement proved successful and renewing the lease agreement will support further construction/repair or remedial work that will be completed by Boulton Brothers in exchange for ACRD withholding lease charges for a 3-year term. It is understood that lease rates for a 3-year duration would be in excess of $ 12,600.00.

Work to be completed will include the following:

- **NAV CAN kitchen area:** Replace and connect the kitchen sink drain/waste piping to the building drain/sanitary line. Remove all cabinetry and countertops. Re-paint interior walls, ceiling and trim. Provide water-resistant floating floor over old flooring. Provide new millwork and countertop and supply and install new double sink and faucet. Millwork and electrical to allow for a small utility refrigerator, microwave, and additional electrical outlets. Replace base boards. All electrical to have GFCI. $6,300.00

- **Men's Washroom:** Terminate/seal all plumbing fixtures in men's washroom, including drain, waste and vent piping for water closets, sinks, any other fixtures and water supply lines. Remove all interior partitions. Cover openings where plumbing used to penetrate and re-finish

and paint walls. Cover and seal vinyl flooring with new subfloor and provide new and durable flooring. $2,000.00

- **Women's washroom:** Remove all interior partitions. Re-configure plumbing as required to construct an accessible washroom designed as a universal toilet room (BC Building Code Requirements) to serve both sexes. Add an exhaust fan. Provide new drywall layer on walls. Cover old flooring with new subfloor and provide a water resistant floor material. Provide new fixtures and millwork as required and finish/paint walls and ceiling.
  $4,300.00

Time Requirements – Staff & Elected Officials:

Staff time to prepare agreement and ACRD Building Maintenance coordinator/Building Inspector time to follow up and inspect the work completed by Boulton Bros.

Financial:

The repairs are fair value of the work that is being completed and would have been expended at some point in the regular repair and maintenance of the building.

Policy or Legislation:

The Board of Directors must approve lease agreements in accordance with the Local Government Act and the ACRD purchasing policy.

Options Considered:

Two options were provided and the second option was:

- **NAV CAN kitchen area:** Replace and connect the kitchen sink drain/waste piping to the building drain/sanitary line. Supply and install new double sink and faucet. All electrical to be GFCI protected. $1,000.00
- **Men's Washroom:** Terminate/seal all plumbing fixtures in men's washroom, including drain, waste and vent piping for water closets, sinks, any other fixtures and water supply lines. Remove all interior partitions. Cover openings where plumbing used to penetrate and re-finish and paint walls. Cover and seal vinyl flooring with new subfloor and provide new and durable flooring. $2,000.00
- **Women's washroom:** Remove all interior partitions. Re-configure plumbing as required to construct an accessible washroom designed as a universal toilet room (BC Building Code Requirements) to serve both sexes. Add an exhaust fan. Provide new drywall layer on walls. Cover old flooring with new subfloor and provide a water resistant floor material. Provide new fixtures and millwork as required and finish/paint walls and ceiling.
  $4,300.00
- **Utility Room:** Replace structural beam under floor joists and provide new framing as required. $1,000.00
- **Tower Room:** Ventilate as required then bleach, seal and paint. $2,500.00

- **East Wall:** Replace window and re-sheath exterior wall as required. $1,800.00

The Building Maintenance Coordinator has reviewed the proposal and found the selected option to be the desired outcome for this lease arrangement.

Submitted by: _____
Janice Hill, Environmental Services Coordinator

Submitted by: _____
Luc Stefani, Building Maintenance Coordinator

Approved by: _____
Russell Dyson, Chief Administrative Officer