# 9 GOALS

The campus portal will ensure that prospective students **discover the Hampshire education** more directly.

Meeting a variety of space needs, the campus portal will be a place that **encourages community**, **collaboration and conversation**.

The campus portal will **enhance the admissions process** and relieve limitations imposed by the current buildings.

The project will **push the bounds of environmental design** by achieving 'living status' under the Living Building Challenge (LBC)

The design should **embody & convey Hampshire College's values**, helping tell the story of a unique, progressive, & experimenting intellectual community.

The architecture of the campus portal should **belong to its context**. A context of New England farmhouses and 'Brutalist' modern architecture, mountain views, and valley vistas. The building should be organized to frame its natural setting.

The design of the portal should be **accessible, flexible, and adaptable**.

The **landscape should invite people** to be around the portal building, not just inside it.

Design and decision making should happen in a **collaborative process** that yields good results while allowing input, investigation, and inquiry.











- 1 ENTRY VESTIBULE
- 2 LOBBY
- **3** OPEN PUBLIC STAIR
- 4 LIVING ROOM
- 5 RECEPTION
- 6 GALLERY
- 7 CLASSROOM
- 8 COFFEE BAR
- 9 ADMISSIONS STAFF
- 10 COUNSELOR OFFICE
- 11 DIRECTOR OFFICE
- 12 REST ROOMS
- **13** ELEVATOR
- **14** INFORMATION SESSION
- 15 WORK AREA
- 16 INTERVIEW
- **17** FILE STORAGE
- **18** NEW STUDENT PROGRAMS
- **19** FINANCIAL AID
- 20 STORAGE
- 21 COMPOST ROOM
- 22 ELECTRICAL ROOM
- **23** IT
- **24** RAINWATER ROOM
- 25 GREYWATER ROOM















Nylon Modular Carpet Tiles on EcoFlex NXT

#### Mohawk Group

Final Assembly: Glasgow, VA, USA Life Expectancy: 15 Years End of Life Options: Take Back Program; Recyclable 100%

#### Ingredients:

Coal Fly Ash (Juliette, GA), Nylon 6 (Dalton, GA), Nylon 6,6 (Camden, SC), Sodium Lime Glass (Cornelius, SC), Limestone (Buchanan, VA), Polyolefin Polymer, Hydrocarbon Resin, Butadiene Acrylate Polymer, Polyethylene Terephthalate & Polypropylene, Polyethylene Terephthalate & Polyamide, 2,5 Furandion Modified Ethylene/Hexane-1-Polymer, Filament Glass Fibers, Calcium Oxide, Soy Lecithin, Carbon Black, Amorphous, Ammonium Lauryl Sulfate, Sodium Polyacrylate, Colorants

#### Living Building Challenge Criteria:

MHK-0009 LBC ZONE 3

09 68 13 Declaration Status 📕 LBC Red List Free LBC Compliant Declared

EXP. 06/01/2015

INTERNATIONAL LIVING FUTURE INSTITUTE









#### ALKYLPHENOLS

Most concerns are focused on alkylphenol ethoxylates (APEs), which bioaccumulate and have been shown to cause endocrine disruption in fish. They are in cleaning products that end up in waterways from wastewater treatment effluent.

#### ASBESTOS

Asbestos is a mineral fiber that is used in a variety of construction materials for its strength and heat resisting capabilities. Asbestos is a known human carcinogen, increasing risks of lung cancer, mesothelioma and asbestosis

#### **BISPHENOL A**

Bisphenol A (BPA) is used to manufacture polycarbonate (clear, hard) plastics and epoxy resins. Most recent testing has shown the largest health-related concern to be potential impacts on the brains, behavior, and prostate glands of fetuses, infants, and small children.

#### CADMIUM

The US Department of Health and Human Services (DHHS)and the International Agency for Research on Cancer have determined that cadmium is a known human carcinogen, associated with lung cancer. Additionally, acute and long-term exposures can lead to lung and kidney damage, bone loss, hypertension. In sufficient quantities, cadmium is lethal. Cadmium's extreme toxicity means that overexposure can occur even when only trace amounts are present, such as during smelting and electroplating activities.

#### POLYETHELENE (chlorinated polyethylene & chlorosulfonated

polyethylene) Chlorinated Polyethylene (CPE) and Chlorosulfonated Polyethylene (CSPE) are Persistent Organic Pollutant Source Materials: due to their carbon-chlorine bases, these products contribute to the creation of dioxins and furans at different points in their life cycle (often manufacturing and/or disposal). According to the World Health Organization, dioxins are some of the most potent toxins known to humans, with no known safe limit for exposure and a strong propensity for bioaccumulation. In addition, dioxins are highly persistent in the environment. Similarly, furans accumulate in animal fat, concentrating as they travel up the food chain.

### **CHLOROBENZENES**

Chlorobenzene is primarily used as a solvent. a degreaser for auto parts, and a chemical intermediary for making other chemicals. Shortterm exposure can cause headaches, sleepiness nausea, numbness, muscle spasms, and in extreme cases, unconsciousness. Chronic (longterm) exposure can cause increased signs of neurotoxicity (numbness, etc.) and irritation of the upper respiratory tract. In animals, chronic exposure has also caused kidney and liver damage. Chlorobenzene is broken down by sun and bacteria in the environment and does not accumulate in the food chain

#### **CHLOROFLUOROCARBONS**

(chlorofluorocarbons & hydrochlorofluorocarbons) According to US Environmental Protection Agency (EPA), the depletion of the Earth's protective ozone layer by chlorofluorocarbons (or CFCs) is responsible for an increased incidence of skin cancer, cataracts. human immune system impairment, and damage to wildlife. CFCs have been banned from production in the United States since 1995.

Hydrochlorofluorocarbons (HCECs) are also potent ozone-depleting compounds. While less destructive than the now-banned chlorofluorocarbons, HCFCs are targeted for gradual phase-out by the US EPA with a total ban going into effect in the year 2030.

#### CHLOROPRENE (NEOPRENE)

oprene is a Persistent Organic Pollutan Source Material. Due to its carbon-chlorine base, it contributes to the creation of dioxins at different points in its life cycle (often manufacturing and/ or disposal). According to the World Health Organization, dioxins are some of the most potent toxins known to humans, with no known safe limit for exposure and a strong propensity for bioaccumulation.

#### CHROMIUM VI

Although chromium is a naturally occurring element and chromium III (trivalent chrome) is an essential nutrient, chromium VI (hexavalent chrome) can cause serious health issues. Long-term or highlevel exposure through inhalation can cause nasal irritation and ulcers, breathing problems, and nasal and lung cancer in unprotected workers. Ingestion can cause anemia and/or stomach tumors. Skin contact can cause skin ulcers and allergic reactions.

#### FORMALDEHYDE

Formaldehyde is classified by the International Agency for Research on Cancer and the State of California as a known human carcinogen. Common health effects at low levels of exposure to this volatile organic compound include irritation and sensitization as well as acting as an asthma trigger. Long-term exposure is associated with nasal cancers and leukemia.

#### HALOGENATED FLAME RETARDANTS

Halogenated Fire Retardants (HFRs) are persistent bioaccumulative toxins, meaning that they accumulate in organisms and the broader environment, often reaching alarmingly high concentrations as they travel up the food chain. Certain halogenated products have been shown to harm humans and other animal species; for example, the toxicity endpoints of concern for Penta-PBDE include adverse effects on neurological development, reproduction, thyroid hormone disruption and possible liver toxicity.

#### LEAD

Lead exposure is damaging to virtually every organ and system in the human body, but is particularly damaging to the brain and central nervous system—profoundly so for young children and developing fetuses. Lead exposure is correlated with decreased IQ and delayed learning in children; scientific research has identified no safe level of lead exposure, and effects are irreversible.

#### MERCURY

According to the World Health Organization (WHO), mercury produces a suite of ill effects, including harm to the nervous, digestive and immune systems, and even death. The WHO lists children and developing fetuses as especially vulnerable to damage from mercury. Mercury bioaccumulates in the environment, eventually reaching concentrations thousands of times more intense than ambient levels.

### POLYCHLORINATED **BIPHENYLS**

Polychlorinated biphenyls (PCBs) manufacturing in the US stopped in 1977 but the compound persists in the environment (mostly in soils) around old manufacturing and disposal sites, in old electrical transformers and electrical devices, and in fish and their predators. PCBs are known to cause cancer in animals and are probable human carcinogens. Health effects also include acne-like skin conditions and neurobehavioral and immunological changes in children

#### PERFLUORINATED COMPOUNDS

Perfluorinated compounds (pFCs) include a variety of chemicals with many uses, such as surface treatments to repel water and stains, acids used in chemistry and research, in the semiconductor industry, and in some medical imaging devices. Many of them are greenhouse gases and bioaccumulate in the environment, but are not stored in human body fat. Animal studies show evidence of endocrine disruption, immune function issues, liver and pancreas damage, and developmental problems.

#### PHTHALATES

Mounting evidence from animal studies show the hormone-disrupting potential of phthalates, prompting the National Research Council to urge the US EPA to pursue a "cumulative risk assessment" of this class of chemicals. Testing by the Centers for Disease Control and Prevention shows that phthalates are nearly ubiquitous in the US population, with the highest concentrations in women and in children aged 6 to 11 years. The endocrine disrupting nature of phthalates has implications for childhood and reproductive development, as well as cancer incidence. The European Union and over a dozen countries have banned the use of phthalates in children's products, as has the State of California.

#### **POLYVINYL CHLORIDE** polyvinyl chloride (pvc), chlorinated polyvinyl

chloride (cpvc), polyvinylidene chloride (pvdc) PVC's vinyl chloride monomer building block is a known human carcinogen according to the US DHHS. In addition, PVC is a Persistent Organic Pollutant Source Material. Due to its chlorine content, PVC often contains other Red List ingredients, such as cadmium, lead, and phthalates. The manufacture and disposal of PVC can result in the production of dioxins. Dioxins, specifically TCDD, accumulate in human and animal tissue and are associated with immune system impairment, damage to developing nervous systems, and damage to the endocrine and reproductive systems TCDD is listed as a "known human carcinogen" by the International Agency for Research on Cancer.

#### SHORT CHAIN CHLORINATED **PARAFFINS** (SCCPs)

SCCPs are most commonly used as lubricants and coolants in metal cutting and forming operations and are also used as secondary plasticizers and flame retardants in plastics such as PVC. SCCPs are persistent and very bioaccumulative in sediment. Toxic effects on mammals include liver, hormone, and kidney damage which may lead to cancer over

#### WOOD TREATMENTS CONTAINING **CREOSOTE, ARSENIC OR** PENTACHLOROPHENOL

Many conventional wood treatments introduce a litany of human health and environmental problems. The traits that make wood treatments effective at retarding rot and insect damage are also effective at damaging many other forms of life. According to the US DHHS, creosote exposure is associated with skin and scrotum cancer in humans, and liver, kidney, and gestational problems in laboratory animals. The DHHS also classifies inorganic arsenic as an acute toxin and known human carcinogen. Pentachlorophenol is linked to liver and immune system damage in humans, and reproductive and thyroid damage in laboratory animals

#### **VOLATILE ORGANIC COMPOUNDS (VOCs) IN WET-APPLIED PRODUCTS**

VOCs are members of a large group of organic chemicals that can evaporate into indoor and air, causing environmental impacts such as photochemical smog. Their health effects vary widely, from respiratory irritants to human carcinogens (such as formaldehyde), which is a concern since they are ingredients in many products used in the built environment. On-site wet applied products (paints, adhesives, and sealants) are of particular concern because they can directly impact the health of installers who may not be using breathing or dermal protection, unlike in-factory wet applied materials that are (usually) applied with worker and environmental protections in place.

# 20 categories over 800 chemicals identified by name and CAS number

## 83.000 substances identified by the Toxic Substances Control Act

62,000 original substances identified in 1976

250 chemicals have been tested today







**ZONE 1** concrete, masonry, metals



