

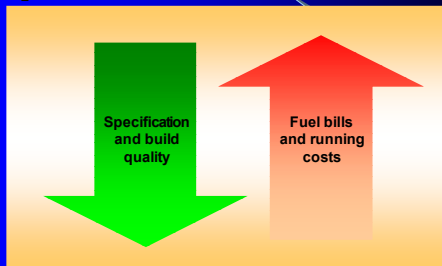
## Affordable to Build Affordable to Heat



## Partnering Route

- Selection of contractor and consultants
- Client's Charter
- EcoHomes

## Construction Specification



## Cost & Sustainability

- Construction cost: -
  - Design
  - Economies
  - Budget
- Sustainability: -
  - Social
  - Environmental
  - Economic

## EcoHomes

- Energy
- Transport
- Materials
- Water
- Land use and ecology
- Health and well-being
- Pollution

## EcoHomes: Energy

- CO<sub>2</sub> production
- Building fabric performance
- Provision of drying space
- Eco-labelled goods
- External lighting

### **EcoHomes: *Transport***

- Public transport
- Cycle storage
- Local amenities
- Home office

### **EcoHomes: *Pollution***

- HCFC emissions (greenhouse gases)
- NO<sub>x</sub> emissions
- Reduction of surface runoff

### **EcoHomes: *Materials***

- Timber for basic building elements
- Timber for finishing elements
- Recycling facilities
- Environmental impact of materials (Green Guide to Materials)

### **EcoHomes: *Water use***

- Internal water use
- External water use

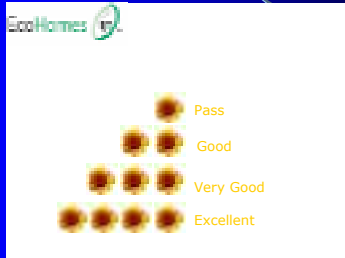
### **EcoHomes: *Land use & ecology***

- Ecological value of site
- Ecological enhancement
- Protection of ecological features
- Change of ecological value of site
- Building footprint

### **EcoHomes: *Health & well-being***

- Day-lighting
- Sound insulation
- Private space

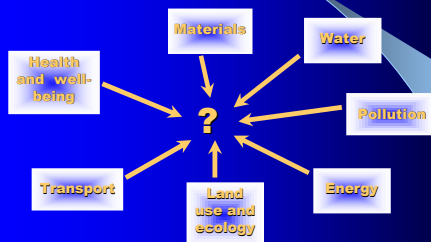
## EcoHomes: Rating



## Achieving the balance

- Sustainability 1<sup>st</sup> principles: -
  - High density
  - Energy efficient buildings
  - Transport nodes
  - Recreation
  - Wildlife

## Achieving the balance



## Fuel costs

- Method of construction
- Insulations
- Glazing
- Heating

## Method of construction

- Traditional brick and block
- Timber frame: -
  - Higher thermal performance
  - Lower fuel bills
  - Green
  - Reduced construction times

## Insulations & Glazing

- Building Regulations – Part L: 2002
  - Insulations
  - Low-e glass
- CFC emissions

## Heating

- Boiler
- Controls

## The way forward

- Lower fuel costs through sustainability
- EcoHomes as a design aid
- Bio Regional Development Group “*Study into the development of sustainability issues throughout the housing market*”: -
  - Planning requirements
  - Building regulations
  - Stamp duty