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COLLEGE

Hartpury College

The "Greenspark" Project

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The plan

1. Measure usage
2. Reduce waste by changing users behaviour
3. Renewable energy options
4. Business case
5. Grant availability
6. Implement

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"Greenspark"

- Planning project delivery
- Measuring devices
- Selecting students
- Selecting buildings
- Installation
- Competition

Collecting data

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Which buildings

- Cost of waste high
- Reduce the variables –same spec
- Committed students
- Measurement costs

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Limbury Hostel

- Self catering with 2 kitchens
- 16 ensuite single bedrooms
- 1994 build to the same spec
- All electric heating & cooking

The Competition

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- 5 Hostels
- 80 students
- Weekly progress reports
- Interim prize
- Results adjusted for empty rooms
- 3 Hostels in a control group (not published) outside the competition

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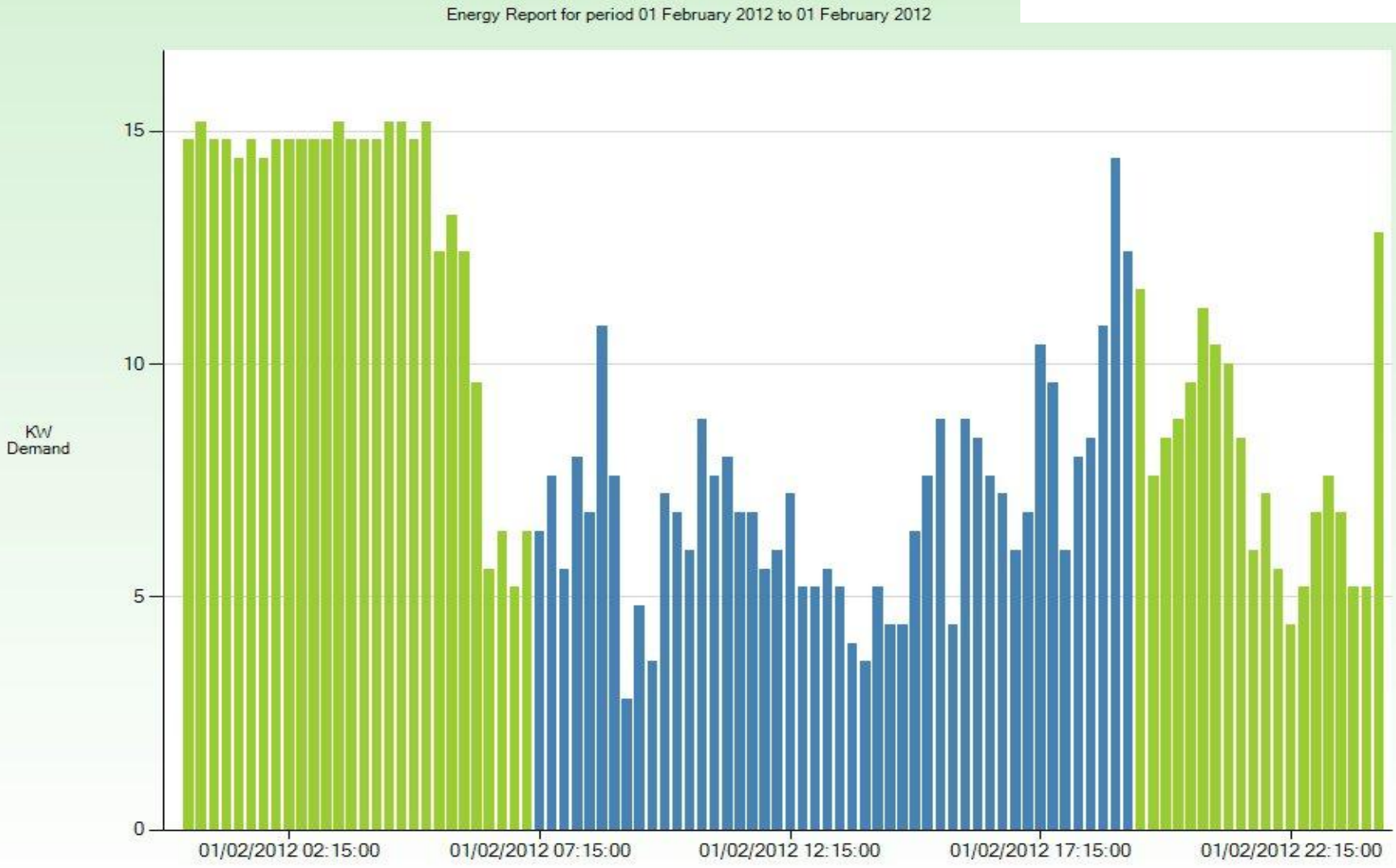

Challenges

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- Time scales –ground work preparation impacted
- Absentee hostel representatives
- Contacting the students (thank heaven for Facebook)
- Patchy enthusiasm
- Identifying the “Movers and Shakers”

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Student Motivation

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- Create team with common goals
- Landlord and tenant challenge
- Environmental appeal
- Training for when they are responsible for paying their own electricity bills
- Prizes
- Some info provided but motivation is key

The results

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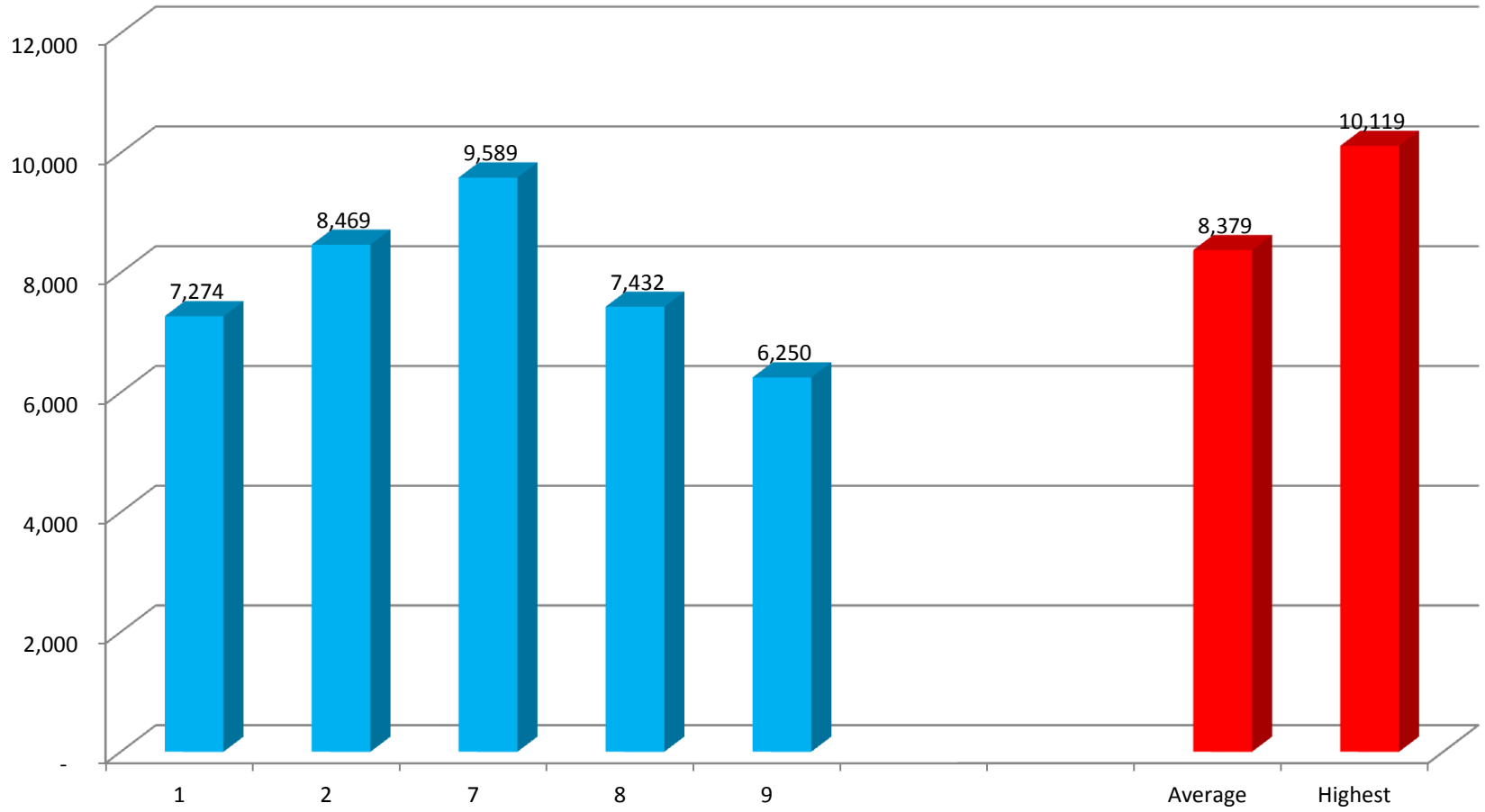
8 weeks electricity consumption in kWh



What we learnt

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- User behaviour is significant in determining waste.
- There was a 13% difference in kWh between the typical competitor hostel compared to the typical hostel in the control group.
- Students enjoyed the challenge and working together
- Accurate data on electricity cost per room
- Need to find enduring incentive to avoid waste.

Project costing

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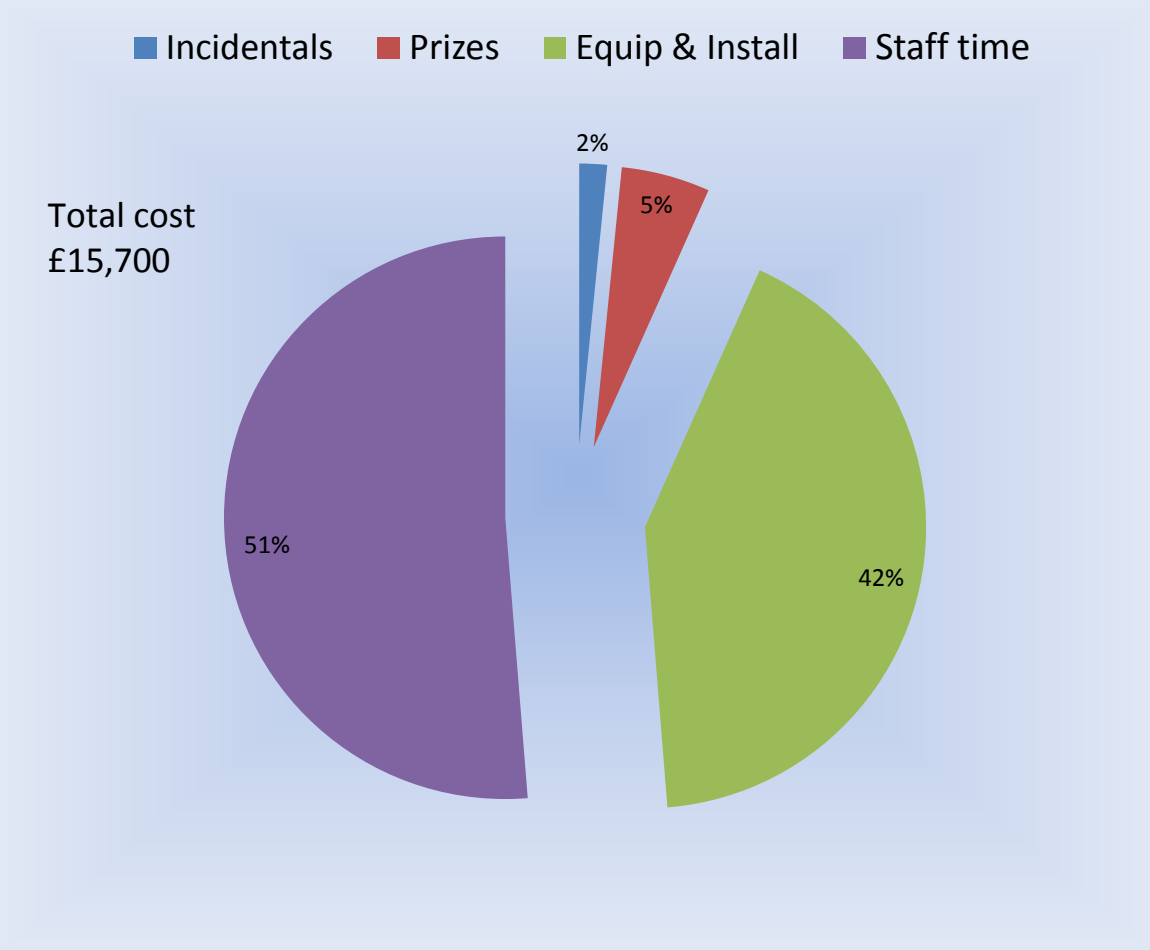

Incidentals	£250
Prizes	£800
Equip & Install	£6,600
Staff time	£8,050
	£15,700

Energy savings Part 2

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- Improve thermal efficiency of building
- Search for a renewable energy solution which has a compelling business case

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Proposals for Renewable Energy

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	Limbury Blocks 1-10					
	No of Blocks	Project cost	Savings + RHI/FIT	Grants	**Payback years**	College * Investment
Biomass boiler	5	£121,298	£25,056	£35,649	3.42	£85,649
Solar PV and Insulation	10	£89,400	£15,994	£30,000	3.71	£59,400
Totals		£210,698	£41,050	£65,649		£145,049