

# **Steward Community Woodland**

## ***Needs Analysis***

***2003 – 2014***

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## Introduction

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The purpose of this report is to analyse the basic needs of the community living at Steward Community Woodland (SCW) in the past and present. There is also a forecast of our needs in the next five years. The main aim of the analysis is to show how much of our basic needs are met from the woodland and the fact that we reside and work in the woodland and how much is met from outside income.

The main table at the end of the report divides these sources of needs as a percentage over the last 6 years, the present year and as a forecast 5 years into the future.

## Summary

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It can be seen from the charts below that our needs met from site **not including shelter** have increased from 34% to 45% from 2004 to 2008. **In 2003 we met 64%** of our needs due to the higher financial income that year with the running of courses and the sale of pole wood. From 2009, this increases to **over 100% by 2011**. This is expected as we now have the expertise and facilities needed to run courses throughout the year (our main source of income). Where needs met from site are above 100%, this means we are producing more income than we need to meet our basic needs.

**Including shelter, we met 78% of our needs in 2008.** It is forecast that we will meet **99% of our needs by 2011**.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Without shelter</b>												
Needs met from outside income	36%	66%	54%	58%	57%	55%	30%	1%	-9%	-8%	-7%	-7%
<b>Needs met from site</b>	<b>64%</b>	<b>34%</b>	<b>46%</b>	<b>42%</b>	<b>43%</b>	<b>45%</b>	<b>70%</b>	<b>99%</b>	<b>109%</b>	<b>108%</b>	<b>107%</b>	<b>107%</b>
<b>With shelter</b>												
Needs met from outside income	20%	28%	23%	24%	26%	22%	13%	4%	1%	1%	1%	2%
<b>Needs met from site</b>	<b>80%</b>	<b>72%</b>	<b>77%</b>	<b>76%</b>	<b>74%</b>	<b>78%</b>	<b>87%</b>	<b>96%</b>	<b>99%</b>	<b>99%</b>	<b>99%</b>	<b>98%</b>

Below is a breakdown of the percentages for 2007 and 2008. Income generated on site has been combined with food subsistence in this table as that is where most of our money is spent.

<b>2007-2008 breakdown of needs met from the land</b>		
	<b>2007</b>	<b>2008</b>
Food and Cash income	18%	17%
Services	77%	83%
Shelter	88%	94%
<b>Average</b>	<b>61%</b>	<b>65%</b>

The average of these percentages calculated individually differs from the other method of calculation because equal weight is given to food, services and shelter rather than shelter having much more influence on the calculation because of the higher figures involved.

These figures show that because most of our needs are met by subsistence, we only need to produce a relatively small amount of cash income to meet all of our basic needs. This seems a very likely

possibility over the next few years.

## ***Method***

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### **Basic needs**

For the purpose of this report basic needs include all the requirements for basic living. This includes food, water supply and sewage, heating and cooking fuel, electricity, and shelter.

Because shelter is a little more complicated and the data available might not be as reliable, I have decided to show results both including and not including shelter.

### **Methods of calculation**

I have assigned monetary values for all the basic needs we require. I have then estimated subsistence as a value in pounds. These values of the different needs are then added together to give a total value for our needs and a total value for our needs met by subsistence. Needs met from living and working on site is then calculated by adding subsistence to our financial income and taking that as a percentage against our total needs.

#### ***Food***

The needs met from living on the land in the case of food are fairly straightforward to calculate. We can simply add up the total annual cost of the food purchased by the community, estimate the value of the food produced on site and calculate a percentage based on that.

In the case of food, 'subsistence' is the estimated value of the food produced on site and 'cash' is the value of the food we have purchased from outside sources.

#### ***Fuel, Water and Sewage, Electricity and Shelter***

There are many ways in which these figures could be calculated, some much more complex than others. For example, with the use of electricity we could simply add up the cost of our self-generated renewable energy using the market value of grid connected power. This would be a very small figure in our case and doesn't represent the true subsistence of our use of power. This is because by living on site in the woodland we can not only generate our own power but due to energy efficiency and using alternatives (such as hand tools and self entertainment) we are able to live with a tiny fraction of the electrical power an average UK household uses. Adding up the value of power saved by conservation and using alternatives is not feasible and therefore it seemed more appropriate to use an alternative model.

After long consideration the following method was chosen. I gathered statistics showing household expenditure for an average UK household. This is because if we were not living in the woodland and were living in conventional housing, this is the amount that we would require to provide these services.

Subsistence is therefore calculated by taking the amount we spent on a service from the average UK expenditure for that service.

## **UK averages**

UK average spending has been acquired from government statistics. Services such as fuel (gas and other), electricity, and water and sewage were taken directly from the statistics for the average UK household and multiplied by the number of households in the woods to represent the costs involved were we all living in conventional accommodation. Shelter costs include rent and mortgage payments, improvement costs and maintenance costs.

## **SCW services and shelter costs**

To calculate the amount we spend providing services such as fuel, electricity, water and sewage, and shelter I have gone through the Company Accounts and peoples personal spending and noted all the purchases for infrastructure needed to provide the service. In the case of communally purchased equipment, the yearly expenditure is represented by the annual depreciation expense plus other minor expenses. For personally bought items, I have divided the item value by the estimated lifespan and spread it out over the years after the item was purchased. This seems a more realistic way of looking at the annual cost of providing the service ourselves rather than having large amounts in some years which does not give a good average over the period.

It can be seen from the tables that our yearly expenditure for these services has increased over the years as we have spent money improving infrastructure. This improvement of infrastructure has made systems more efficient, effective and/or convenient.

Our shelter costs also includes the repayments of loanstock which was raised to purchase the land.

## **SCW fuel costs**

These include the cost of equipment used for processing firewood such as tools and tool maintenance. In more recent years, a chainsaw and Apsen chainsaw fuel are also included in these costs. There is also a cost included for using a small amount of wood from off site. As our firewood is mainly coppice or conifer extraction for which restocking grants have been issued and/or trees for replanting donated, no cost is taken into account for restocking at this time.

## **SCW water and sewage costs**

These include infrastructure for our domestic water systems and compost toilets taken from the annual Accounts.

## **SCW electricity costs**

These include solar panels, hydro turbine and penstock, regulators, inverters, batteries and other minor expenses. Communal items have been represented by depreciation and minor expenses. For personal items, the lifespan has been calculated according to the item. For example, batteries have a short lifespan of 5 years whereas solar panels last 25 years.

## **SCW shelter costs**

These include building, maintenance and improvements costs. Communal structure expenses have been taken from the Accounts. Personal structures were given an estimated lifespan depending on the type of build and costs divided by the number of years as described above. The loanstock repayments have also been added to the shelter costs just as mortgage and rent payments are included in the national average shelter costs.

## **Income generated from site**

This income includes all money made on site as income to the community as a whole (obtained from our annual Accounts) and as income to individuals. It only includes money generated from activities related to the project such as courses, timber and craft sales. It does not include money earned off site or money generated on site not related to the project such as computer work. It does not include donations or grants. These figures are not the same as the profit or loss on the Company Accounts because they include personal income made from activities on the land.

## **Forecasting**

### ***National averages***

I have forecast national averages for years 2008 onwards by taking an average yearly cost increase over the period for which I had data and adding that increase to each year thereafter.

### ***SCW food***

Big improvements have been made to our Growing Area this year with the addition of a series of raised beds and more fruit trees and bushes. With this improvement and more in the coming years, we expect our productivity to increase. We also realise that food prices are likely to increase and for this reason still expect to be spending the same amount on food.

### ***SCW services***

Communal service expenses are expected to remain similar to previous years. I have taken an average of the years for which I have data and assumed future years' expenses at that value. As personal services expense seem to have been increasing over the years we have looked at, I am assuming that these will increase by a similar amount in future years. I have taken an average of the amount of increase and added that to each year thereafter.

### ***SCW shelter***

The shelter cost forecast has been calculated in the same way as the service cost forecast with an average expenditure for the communal expenses and an average increase for personal spending.

### ***SCW Income***

For 2008, I have used accounting information available to January 2009. The income forecast is taken from our Business Plan. We have arranged a number of courses which is our main source of income over coming years. For years 2012 onwards, I have assumed the same income as 2011 as we don't plan to run more courses per year than at that time.

## Average household spending and spending at Steward Community Woodland

Statistics from <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=361>

	Average weekly expenditure per household in the UK					Figures from 2008 are estimated forecast						
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fuel (heating and cooking)	6	7	7	8	9	9	10	10	11	11	11	12
Water and sewage	5	5	5	7	6	6	6	7	7	7	7	7
Electric	6	6	7	8	8	9	9	9	10	10	10	11
<b>Total without shelter</b>												
Rent	24	25	28	28	31							
Mortgage	39	46	49	52	53							
Maintenance	8	7	8	8	8							
Improvements	23	24	25	23	22							
<b>Shelter total</b>	<b>93</b>	<b>102</b>	<b>109</b>	<b>111</b>	<b>114</b>	<b>121</b>	<b>127</b>	<b>133</b>	<b>139</b>	<b>146</b>	<b>152</b>	<b>158</b>
Number of households living in woodland	3	4	5	6	6	7	8	8	8	8	8	8

### Yearly totals for UK average expenditure times number of households living in the woodland

Fuel (heating and cooking)	920	1,352	1,872	2,621	2,746	3,360	4,019	4,197	4,376	4,555	4,734	4,913
Water and sewage	749	1,040	1,378	2,153	1,872	2,257	2,662	2,746	2,829	2,912	2,995	3,078
Electric	936	1,248	1,742	2,340	2,621	3,181	3,777	3,919	4,060	4,202	4,343	4,484
<b>Total services</b>	<b>2,605</b>	<b>3,640</b>	<b>4,992</b>	<b>7,114</b>	<b>7,238</b>	<b>8,798</b>	<b>10,458</b>	<b>10,862</b>	<b>11,265</b>	<b>11,669</b>	<b>12,072</b>	<b>12,476</b>
Shelter	14,555	21,237	28,392	34,601	35,630	43,869	52,765	55,395	58,024	60,653	63,282	65,911
<b>Total with shelter</b>	<b>17,160</b>	<b>24,877</b>	<b>33,384</b>	<b>41,714</b>	<b>42,869</b>	<b>52,667</b>	<b>63,224</b>	<b>66,256</b>	<b>69,289</b>	<b>72,322</b>	<b>75,354</b>	<b>78,387</b>

### Statistics from individuals and Affinity

#### Services

Fuel (personal) (heating and cooking)	32	23	42	56	113	121	135	149	163	177	191	205
Electric (personal)	68	82	82	98	205	299	342	385	428	471	514	557
Service expenses from Affinity	1,175	1,187	1,570	1,860	1,328	1,110	1,622	1,622	1,622	1,622	1,622	1,622
<b>Total services</b>	<b>1,275</b>	<b>1,292</b>	<b>1,693</b>	<b>2,014</b>	<b>1,645</b>	<b>1,530</b>	<b>2,099</b>	<b>2,156</b>	<b>2,213</b>	<b>2,270</b>	<b>2,327</b>	<b>2,384</b>

#### Shelter

Loanstock repayments	1,300	1,300	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236	2,236
Personal building costs	51	120	144	195	242	308	343	377	411	445	480	514
Affinity building costs	211	498	382	522	1,688	145	574	574	574	574	574	574
<b>Shelter total</b>	<b>1,562</b>	<b>1,918</b>	<b>2,762</b>	<b>2,953</b>	<b>4,167</b>	<b>2,689</b>	<b>3,153</b>	<b>3,187</b>	<b>3,221</b>	<b>3,255</b>	<b>3,290</b>	<b>3,324</b>

#### Total with shelter

	<b>2,837</b>	<b>3,210</b>	<b>4,456</b>	<b>4,966</b>	<b>5,812</b>	<b>4,219</b>	<b>5,251</b>	<b>5,343</b>	<b>5,434</b>	<b>5,525</b>	<b>5,617</b>	<b>5,708</b>
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#### Food costs

Yearly Food per person	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040	1040
Number of people	5	6	7	8	9	11	11	11	11	11	11	11
<b>Total cost of bought food</b>	<b>5200</b>	<b>6240</b>	<b>7280</b>	<b>8320</b>	<b>9360</b>	<b>11440</b>						
<b>Estimated value of food produced</b>	<b>500</b>	<b>600</b>	<b>500</b>	<b>700</b>	<b>700</b>	<b>700</b>	<b>1000</b>	<b>1500</b>	<b>2000</b>	<b>2500</b>	<b>3000</b>	<b>3000</b>

<b>Cash Income</b>	<b>3,470</b>	<b>667</b>	<b>2,080</b>	<b>927</b>	<b>1,146</b>	<b>1,380</b>	<b>6,764</b>	<b>13,275</b>	<b>15,755</b>	<b>15,755</b>	<b>15,755</b>	<b>15,755</b>
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## Needs Analysis 2003 - 2014

Needs	2003			2004			2005		
	Total cost	Subsistence	Cash	Total cost	Subsistence	Cash	Total cost	Subsistence	Cash
	1	2		1	2		1	2	
Food	£5,700	£500	£5,200	£6,840	£600	£6,240	£7,880	£600	£7,280
Services	£2,605	£1,330	£1,275	£3,640	£2,348	£1,292	£4,992	£3,299	£1,693
<b>Total without shelter</b>	<b>£8,305</b>	<b>£1,830</b>	<b>£6,475</b>	<b>£10,480</b>	<b>£2,948</b>	<b>£7,532</b>	<b>£12,872</b>	<b>£3,899</b>	<b>£8,973</b>
Shelter	£14,555	£12,992	£1,562	£21,237	£19,319	£1,918	£28,392	£25,630	£2,762
<b>Total with shelter</b>	<b>£22,860</b>	<b>£14,823</b>	<b>£8,037</b>	<b>£31,717</b>	<b>£22,267</b>	<b>£9,450</b>	<b>£41,264</b>	<b>£29,528</b>	<b>£11,736</b>
		<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>	
Cash income from site		£3,470			£667			£2,080	
Income from off-site		£3,005			£6,865			£6,893	
<b>Total financial requirement towards our needs</b>		<b>£6,475</b>			<b>£7,532</b>			<b>£8,973</b>	
<b>Therefore:</b>									
Total needs	£8,305	100%		£10,480	100%		£12,872	100%	
Needs met from outside income	£3,005	<b>36%</b>		£6,865	<b>66%</b>		£6,893	<b>54%</b>	
Needs met from site (subsistence+cash)	£5,300	<b>64%</b>		£3,615	<b>34%</b>		£5,979	<b>46%</b>	
		<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>	
Cash income from site		£3,470			£667			£2,080	
Income from off-site		£4,567			£8,783			£9,656	
<b>Total financial requirement towards our needs</b>		<b>£8,037</b>			<b>£9,450</b>			<b>£11,736</b>	
<b>Therefore:</b>									
Total needs	£22,860	100%		£31,717	100%		£41,264	100%	
Needs met from outside income	£4,567	<b>20%</b>		£8,783	<b>28%</b>		£9,656	<b>23%</b>	
Needs met from site (subsistence+cash)	£18,293	<b>80%</b>		£22,934	<b>72%</b>		£31,608	<b>77%</b>	

(1) The cost of basic living needs has been acquired using national average statistics

(2) Subsistence is the value of the needs met by living and working on the land and providing our own services

Needs Analysis 2003 - 2014

Figures from 2009 onwards are based on estimated data

2006			2007			2008			2009			2010		
Total cost	Subsistence	Cash												
1	2		1	2		1	2		1	2		1	2	
£9,020	£700	£8,320	£10,060	£700	£9,360	£12,140	£700	£11,440	£12,440	£1,000	£11,440	£12,940	£1,500	£11,440
£7,114	£5,100	£2,014	£7,238	£5,593	£1,645	£8,798	£7,268	£1,530	£10,458	£8,359	£2,099	£10,862	£8,706	£2,156
<b>£16,134</b>	<b>£5,800</b>	<b>£10,334</b>	<b>£17,298</b>	<b>£6,293</b>	<b>£11,005</b>	<b>£20,938</b>	<b>£7,968</b>	<b>£12,970</b>	<b>£22,898</b>	<b>£9,359</b>	<b>£13,539</b>	<b>£23,802</b>	<b>£10,206</b>	<b>£13,596</b>
£34,601	£31,648	£2,953	£35,630	£31,464	£4,167	£43,869	£41,180	£2,689	£52,765	£49,613	£3,153	£55,395	£52,208	£3,187
<b>£50,734</b>	<b>£37,448</b>	<b>£13,286</b>	<b>£52,929</b>	<b>£37,757</b>	<b>£15,172</b>	<b>£64,807</b>	<b>£49,148</b>	<b>£15,659</b>	<b>£75,664</b>	<b>£58,972</b>	<b>£16,691</b>	<b>£79,196</b>	<b>£62,414</b>	<b>£16,783</b>
<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>		
	£927			£1,146			£1,380			£6,764			£13,275	
	£9,407			£9,859			£11,590			£6,775			£321	
	<b>£10,334</b>			<b>£11,005</b>			<b>£12,970</b>			<b>£13,539</b>			<b>£13,596</b>	
£16,134	100%		£17,298	100%		£20,938	100%		£22,898	100%		£23,802	100%	
£9,407	<b>58%</b>		£9,859	<b>57%</b>		£11,590	<b>55%</b>		£6,775	<b>30%</b>		£321	<b>1%</b>	
£6,727	<b>42%</b>		£7,439	<b>43%</b>		£9,348	<b>45%</b>		£16,123	<b>70%</b>		£23,481	<b>99%</b>	
<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>		
	£927			£1,146			£1,380			£6,764			£13,275	
	£12,359			£14,026			£14,279			£9,927			£3,508	
	<b>£13,286</b>			<b>£15,172</b>			<b>£15,659</b>			<b>£16,691</b>			<b>£16,783</b>	
£50,734	100%		£52,929	100%		£64,807	100%		£75,664	100%		£79,196	100%	
£12,359	<b>24%</b>		£14,026	<b>26%</b>		£14,279	<b>22%</b>		£9,927	<b>13%</b>		£3,508	<b>4%</b>	
£38,375	<b>76%</b>		£38,903	<b>74%</b>		£50,528	<b>78%</b>		£65,736	<b>87%</b>		£75,689	<b>96%</b>	

Needs Analysis 2003 - 2014

2011			2012			2013			2014		
Total cost	Subsistence	Cash									
1	2		1	2		1	2		1	2	
£13,440	£2,000	£11,440	£13,940	£2,500	£11,440	£14,440	£3,000	£11,440	£14,440	£3,000	£11,440
£11,265	£9,109	£2,156	£11,669	£9,399	£2,270	£12,072	£9,745	£2,327	£12,476	£10,092	£2,384
<b>£24,705</b>	<b>£11,109</b>	<b>£13,596</b>	<b>£25,609</b>	<b>£11,899</b>	<b>£13,710</b>	<b>£26,512</b>	<b>£12,745</b>	<b>£13,767</b>	<b>£26,916</b>	<b>£13,092</b>	<b>£13,824</b>
£58,024	£54,803	£3,221	£60,653	£57,397	£3,255	£63,282	£59,992	£3,290	£65,911	£62,587	£3,324
<b>£82,729</b>	<b>£65,912</b>	<b>£16,817</b>	<b>£86,262</b>	<b>£69,296</b>	<b>£16,965</b>	<b>£89,794</b>	<b>£72,738</b>	<b>£17,057</b>	<b>£92,827</b>	<b>£75,679</b>	<b>£17,148</b>
<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>			<b>Without shelter</b>		
	£15,755			£15,755			£15,755			£15,755	
	-£2,159			-£2,045			-£1,988			-£1,931	
	<b>£13,596</b>			<b>£13,710</b>			<b>£13,767</b>			<b>£13,824</b>	
£24,705	100%		£25,609	100%		£26,512	100%		£26,916	100%	
-£2,159	<b>-9%</b>		-£2,045	<b>-8%</b>		-£1,988	<b>-7%</b>		-£1,931	<b>-7%</b>	
£26,864	<b>109%</b>		£27,654	<b>108%</b>		£28,500	<b>107%</b>		£28,847	<b>107%</b>	
<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>			<b>With shelter</b>		
	£15,755			£15,755			£15,755			£15,755	
	£1,062			£1,210			£1,302			£1,393	
	<b>£16,817</b>			<b>£16,965</b>			<b>£17,057</b>			<b>£17,148</b>	
£82,729	100%		£86,262	100%		£89,794	100%		£92,827	100%	
£1,062	<b>1%</b>		£1,210	<b>1%</b>		£1,302	<b>1%</b>		£1,393	<b>2%</b>	
£81,667	<b>99%</b>		£85,051	<b>99%</b>		£88,493	<b>99%</b>		£91,434	<b>98%</b>	