



Common International Targets

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ONE
PLANET
COMMUNITIES

BioRegional



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Introduction

The aim of the One Planet initiative is to create a future where it is easy, attractive and affordable for people to lead happy and healthy lives within a fair share of the earth's resources – what we call One Planet Living. The initiative uses 10 guiding principles as a framework to help our partners examine the sustainability challenges they face and develop appropriate solutions. These principles were developed as a result of lessons learned from BioRegional's work at the pioneering BedZED eco-village in south London.

As part of the One Planet Communities programme, BioRegional applies the 10 One Planet principles to support the development of flagship sustainable communities on every inhabited continent. These One Planet Communities are intended to be places where residents can live a One Planet lifestyle by 2020, should they choose to.

This document is aimed at both organisations starting out on the journey of joining the One Planet Communities network and as a reference document for existing members. The Common International Targets are supported by a set of detailed guidance notes and position papers, available from BioRegional, which cover the application of these targets in more detail.

Environmental drivers behind the One Planet initiative

A sustainable future will need to consider environmental, social and economic factors and the 10 One Planet principles and their associated Common International Targets have been developed in recognition of this. However, we subscribe to the view that society or the economy cannot exist long term outside of a healthy environment and consequently there are three overarching environmental drivers behind the One Planet initiative:

- sustainable ecological footprint;
- sustainable carbon footprint; and
- clean (non-polluting) activities.

Sustainable ecological footprint

Ecological footprinting measures our consumption of natural resources in global hectares of land and sea. Research tells us that our global footprint now exceeds the world's capacity to regenerate by about 50%¹. If our demands on the planet continue at the same rate, by 2030 we will need the equivalent of two planets to maintain our lifestyles.

One Planet Communities make it easy, attractive and affordable for their residents to live within a fair share of the earth's resources which, according to current calculations, will be no more than 1.2gha per person by 2020².

The graph below shows the trajectory for the global ecological footprint if we continue to consume at current levels in comparison to a rapid reduction in footprint.

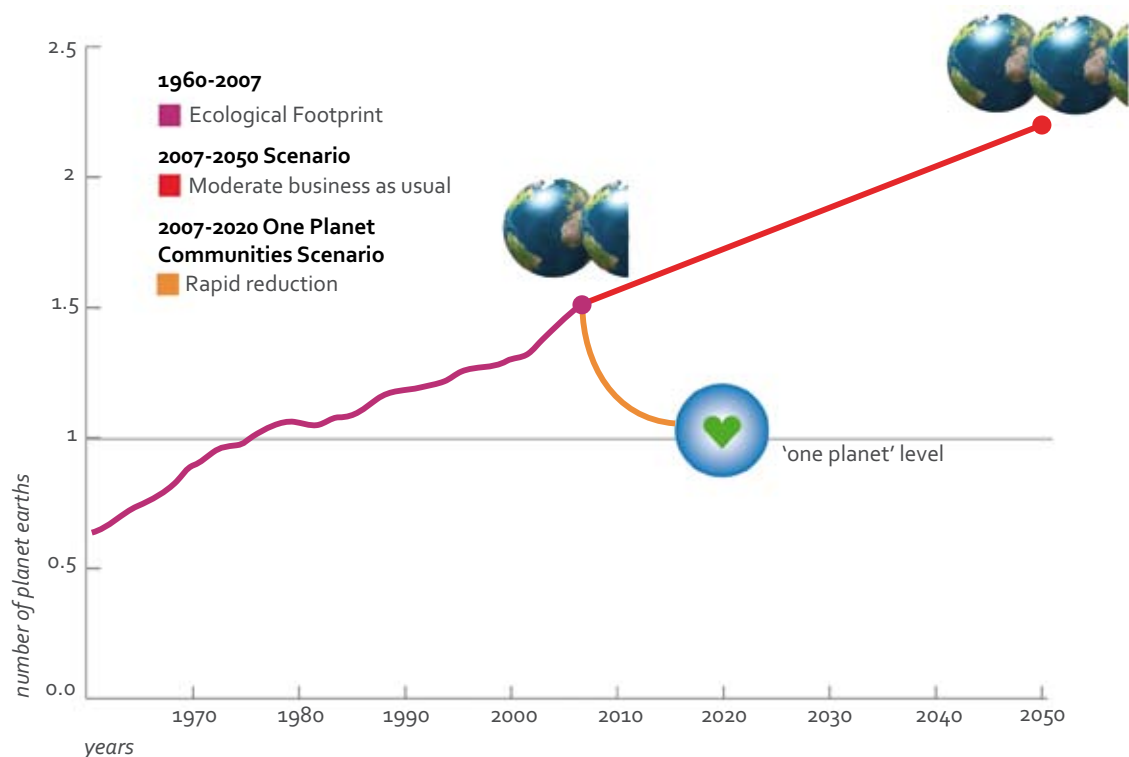


Figure 1: Ecological Footprint trajectory to one planet level (source: adapted from Global Footprint Network 2010).

This global trajectory, however, masks the fact that the goal of achieving a One Planet level of consumption will require trajectories which vary greatly depending on the country in which the community is based. For example, in the USA the average footprint is currently 8.0 gha per person whereas in China it is only 2.2 per person. Furthermore average national footprints themselves mask great differences within a country. For example in China the footprint in urban areas is close to the European average of 4.7 gha per person but in rural areas it may be lower than 2.0 gha per person.

One Planet Communities aim to follow country specific trajectories, agreed with BioRegional, which take into account differences between and within countries.

1) Global Footprint Network, WWF & Zoological Society of London (2010). Living Planet Report.

2) Based on a population of 7.67 billion, a biocapacity of 1.6gha per person and allowing 20% space for wildlife

Sustainable carbon footprint

The One Planet initiative uses 'consumption-based' carbon footprinting to inform a holistic picture of what causes our greenhouse gas emissions and the most appropriate strategies for reducing them. Consumption based emissions are those that arise all the way through the supply chain. These include not just 'direct emissions' caused by fuel and electricity consumption, but also embodied emissions in goods and services purchased including food, manufactured items and construction materials.

Climate science tell us that in order to avoid runaway climate change, global greenhouse gas emissions need to be reduced by 50% from 1990 levels by 2050³. In order for this to happen CO₂ emissions will have to be no more than 1 tonne per person per annum. What is more, we know that emissions are building up cumulatively in the atmosphere which leads to the use of a carbon budget over time⁴. Carbon budgeting shows us that the faster emissions cuts can be made the greater chance there is of stabilising atmospheric concentrations. This means we have to create communities as fast as possible that are powered by renewable technologies and are not locked into ongoing fossil fuel use.

In line with this, the One Planet initiative adopts the principle of Contraction and Convergence which means that countries with high per capita emissions will have to reduce their emissions much more rapidly than countries that currently have low per capita emissions. The end result being that per capita emissions from each country will converge at a more equitable level and the global total of emissions will contract.

BioRegional will work with partners to agree community specific trajectories. For example, for communities in developing countries a suitable trajectory will have to take into account whether the development is targeted at residents with high impact lifestyles or very low income residents with low carbon emissions.

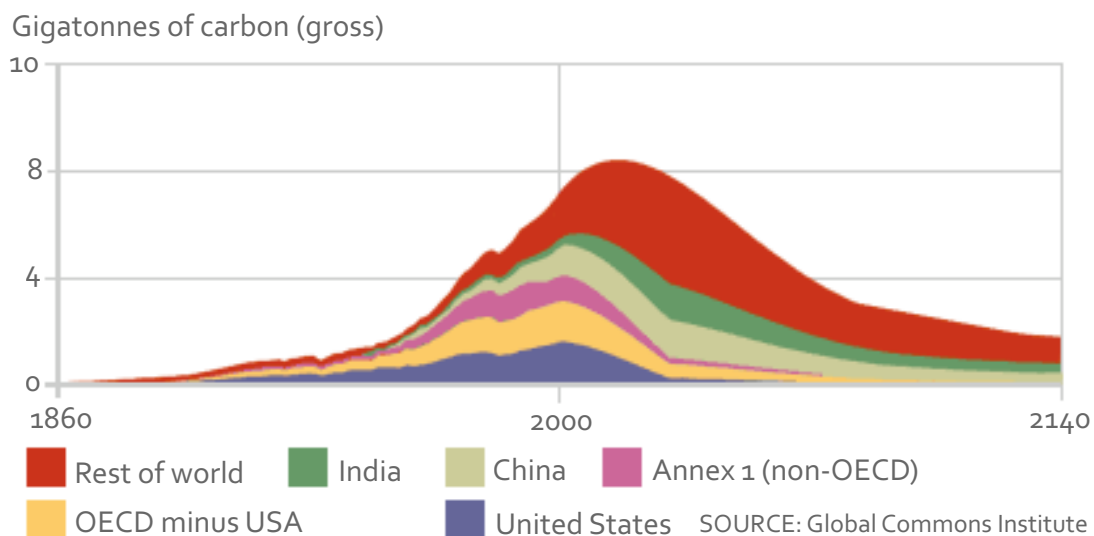


Figure 2: Illustration of contraction and convergence trajectories (source: Global Commons Institute).

3) Climate Change Committee. <http://www.theccc.org.uk/topics/science-and-environment/climate-targets-a-global-emissions-trajectories>.

4) Based on work done by both the Tyndall Centre, University of Manchester on UK carbon budgets and Meinshausen et al on the global budget.

Clean activities

Each One Planet Community has an ongoing and evolving strategy for avoiding any pollution to air, land or water as a result of activities associated with the community. Energy generation equipment, construction or refurbishment activities, transport vehicles, domestic and non-domestic activities all aim to meet international best practice on pollution prevention. Purchasing systems for materials, equipment, goods or food should check for upstream pollution impacts and choose suppliers with strong environmental track records supporting the emergence of a green supply chain.



Applying the Common International Targets

The programme uses a set of Common International Targets against each of the 10 One Planet principles to ensure that our partners' projects are guided towards a shared end-point by 2020 and to determine what level of performance is required for a development to be endorsed.

In recognition that the solutions for a sustainable future are context specific, the Common International Targets are not intended to be prescriptive but instead provide a guide of how the vision of the One Planet Communities programme can be translated into reality. The targets can be applied flexibly to cope with the unique challenges faced and can be expanded upon to develop more detailed targets for specific countries.

The Common International Targets are supported by a set of guidance notes and position papers, available from BioRegional, which cover the application of these targets in more detail.



Writing a One Planet Action Plan

The One Planet Communities programme asks partner organisations to create an Action Plan for a proposed development, usually with support from BioRegional, which addresses each of the 10 One Planet principles and the corresponding Common International Targets. This Action Plan, and its response to the Common International Targets, forms the basis of BioRegional's decision to grant endorsement and use of the 'planet with a heart' logo to a project or partner.

Once a project has been endorsed, the partner organisation develops a monitoring plan to assess progress against the Action Plan. Monitoring is vital to gain an understanding of how the communities are working and what strategies are most successful in meeting the Common International Targets. A separate guidance note covers development of a monitoring plan.

For full details on the endorsement process and monitoring please refer to One Planet Endorsement and Quality Assurance document.

Spheres of influence

It is understood that in some cases it may not be possible for our partners to meet certain aspects of the targets because of factors outside their control e.g. government regulation on energy supply. In these instances, BioRegional's approach is to document the barrier and support the partner in their attempts to overcome it, for example by engaging with government or by disseminating information and securing wider support.

By way of example, the diagram below illustrates where the greenhouse gas emissions of an average UK resident arise from and the influence that different parties have on this footprint. A developer will need to influence and work with all these parties to produce a truly holistic implementation of the Common International Targets.

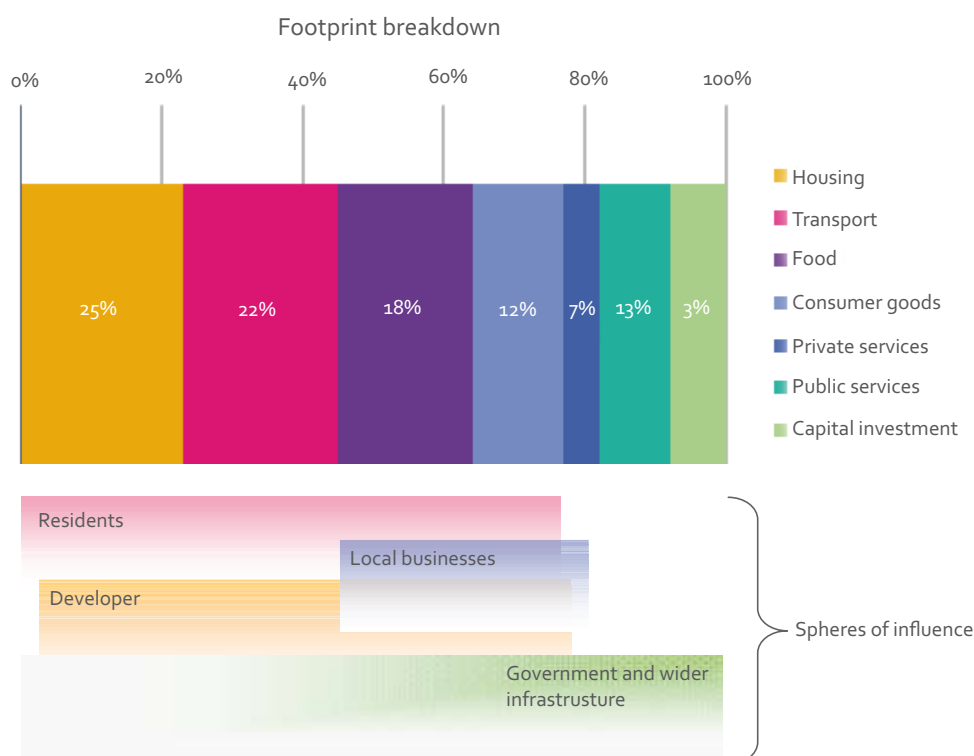
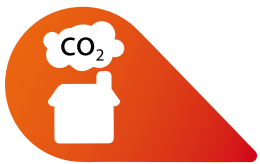


Figure 3: Breakdown of an average UK carbon footprint and the sectors which have an influence over reduction.



The Common International Targets



Zero carbon

The One Planet vision is that all buildings will be energy efficient and run completely from renewable energy.

In order to achieve this, all buildings and structures will be 'net zero carbon' by 2020; powered and heated by a combination of on and off site renewable energy, using fossil fuels only as back up.

All buildings and structures are designed or retrofitted to be energy efficient to country-specific best practice standards and assessed using a specified green building standard such as LEED, BREEAM or Green Star (though these need not always achieve the highest ratings in these systems where the costs outweigh the environmental benefits).

Having minimised energy demand through good design and energy efficiency measures, all the remaining energy demand (including all electricity demand from plug loads) will be met by renewables, for example wind, solar and biomass. Consideration is given to onsite renewable energy generation, particularly heat and hot water, as far as is practically and economically feasible. Adequate levels of onsite generation will be assessed on a project by project basis but all opportunities for renewable generation should be considered.

There should be no fossil fuel energy supplies onsite except as backup to a renewable supply. Any remaining energy demands may be met from offsite renewable energy that, where possible, represents newly installed capacity, or bought through renewable energy power purchase agreements or mechanisms such as the purchase of 'renewable energy certificates'.

The guidance notes provide more detailed advice about permitted renewable energy sources, appropriate use of 'green tariffs' and feed in tariff mechanisms which may apply.



Zero waste

The One Planet vision is of a future where resources are used efficiently, waste levels are close to zero and ultimately zero waste is sent to landfill.

The waste management system for a One Planet Community is designed around the waste hierarchy, prioritising waste prevention first, then re-use, recycling and composting and lastly, energy recovery before disposal to landfill.

There is a presumption of promoting resource efficiency and avoiding wasteful consumption. One Planet Communities promote recycling of waste to high value uses, fostering 'closed loop' recycling and avoiding down-cycling to lower value uses.

A clean energy from waste plant may form part of the zero waste strategy provided international best practice standards on operations and emissions are employed. Energy from waste treatment is only appropriate if treating truly residual waste and therefore not compromising reuse or recycling.

By 2020, at least 70% of domestic waste by weight generated will be reclaimed, recycled or composted. Ideally no more than 2% of waste by weight should be sent to landfill. Country specific targets for total waste production per capita will be set.

The approach to construction waste will include application of a Reuse - Deconstruct - Demolish hierarchy meaning waste from existing buildings is retained and reused in situ wherever possible. Best practice standards in waste minimisation during construction will be employed. At least 95% of waste by weight generated by construction and demolition will be reclaimed or recycled.

Businesses and industries should be able to achieve even higher recycling rates than domestic properties. Consideration will be given to the provision of recycling facilities when building business units and commercial tenants engaged through mechanisms such as green leases and training to ensure the waste hierarchy is followed. Waste arisings will be monitored and benchmarked against good practice in their sector. All waste arisings will follow a trajectory towards zero waste by 2020.



Sustainable transport

The One Planet vision is one where it is easy for people to walk and cycle and low and zero carbon modes of transport are provided. Communities create a green transport plan that results in carbon emissions consistent with the overarching greenhouse gas emissions reduction target.

The green transport plan will consider how best to reduce the need for people to travel by car. Site selection will consider the proximity of local services such as schools, healthcare, business districts, shops and leisure facilities. On site facilities complement local facilities as appropriate.

Having reduced the need to travel, the development provides access to sustainable transport modes. Access to pedestrian and cycle networks, public transport hubs, car clubs and car sharing will all be prioritised.

Consideration should also be given to future green technologies and how the site could be developed to enable these technologies to be incorporated at a later date – for example by installing electric vehicle charging points.

Biofuels may be used to help meet the transport target, but there must be robust proof it is derived from sustainable sources, to be assessed on project by project basis. For example biofuels locally grown on marginal land or waste cooking oil could be considered sustainable.

As an indicator, in the UK a 70% cut in the carbon footprint by 2020 would lead to the transport emissions being approximately 1 tonne per person, per year.



Sustainable materials

The One Planet vision is one where all goods and materials used - for construction or consumer goods - are made from renewable or waste resources with low embodied energy and, wherever possible, sourced locally.

Construction and refurbishment activities will be designed to minimise the impact of the materials used and the maintenance required. Project specific targets will be developed for these strategies.

One Planet Communities will:

- Make optimum use of all existing buildings and infrastructure and think creatively about designing out the need for some conventional built requirements – e.g. reducing paved areas and hard landscaping, avoiding suspended ceilings, etc.;
- Measure (or at least have a strategy in place to assess) the embodied CO₂ of materials throughout the design and construction processes and use this as one of the decision making criteria from the outset; have strategies in place to minimise the embodied CO₂ of any construction and refurbishment work;
- Prioritise construction materials that are low impact, durable, local and reclaimed. Where possible high impact or polluting materials (for example PVC and aluminium) will be avoided. The key impact areas will be identified and plans developed to reduce the impact of these materials;
- Consider the life cycle impact of buildings in design. This means design and materials choices that enable easy maintenance and longevity. Buildings will be designed with consideration for deconstruction so that on decommissioning the materials can be recovered and re-used.

Strategies to enable residents and workers to reduce consumption and choose low impact goods will be implemented. Options could include:

- Providing information on reducing the impact of goods through community information services e.g. welcome packs and a community intranet;
- Providing services that facilitate the sharing of goods, especially goods that are used infrequently but have a high embodied energy for example power tools;
- Providing access to durable goods, electrical appliances and furniture, with low impact in manufacture;
- Attracting property management companies and other service providers to the community who will support the One Planet approach.





Local and sustainable food

The One Planet vision is one where people are able to eat diets high in local, seasonal and organic produce, as well as healthy diets high in vegetable protein and lower in animal protein than is the norm in many countries with a high ecological footprint.

One Planet Communities will develop strategies to enable and encourage residents to adopt a One Planet diet, through education and agreements with onsite retailers and caterers.

Onsite facilities, including retail and catering facilities, will strive to minimise packaging in line with zero waste targets, and minimise consumption of processed foods which have high a ecological footprint. Food waste from all residents, tenants, businesses, restaurants and shops will be minimised.

Food growing will be integrated onsite where appropriate such as through space for 'urban farming', allotments and window boxes. Strategies will be put in place to enable and encourage residents to take up food growing onsite. Local food mapping will be undertaken and links will be developed with local producers to establish regular supplies and to work with them to further reduce their impacts.

Purchasing systems will be established to ensure food provided does not contribute to deforestation, over-fishing or pollution and minimises other negative impacts, for example, through Marine Stewardship Council seafood or sustainably sourced palm oil.



Sustainable water

The One Planet vision is that we use water much more efficiently in buildings and in the products we buy; and manage water in such a way as to support healthy land-use, avoid local flooding and avoid pollution to watercourses.

Best practice standards in water conservation, water efficiency, recycling and surface water management will be adopted taking into account the local context. Where there is no country specific best practice the water strategy will need to consider local issues such as water availability and typical consumption levels to establish a target for the project. The key aspects are:

- All residents have access to safe potable water;
- The water strategy will look to reuse water where there is no adverse energy impact from doing so;
- Communities assess the carbon impacts of their water strategy;
- Communities implement a water reduction and re-use strategy to engage residents and tenants long term;
- In areas of flood risk, communities should have an acceptable 200 year flood risk strategy;
- Communities consider, and are designed to adapt to, climate change;
- In areas prone to flood risk, communities adopt a best practice approach to water drainage and storm water, ensuring that peak run off rates and annual run off volumes will be no greater than the previous conditions for the site. Examples of these systems include Sustainable Urban Drainage Systems, Water Sensitive Urban Design and Best Management Practice.

It is acknowledged that the emerging concept of 'embodied water' (water used in the production of food and manufactured goods) is becoming more important and will be an increasingly important consideration of the Local and Sustainable Food and Sustainable Materials principles.



Land use and wildlife

The One Planet vision is of communities that contribute to an overall increase in biodiversity and biological productivity, as well as supporting beautiful landscapes.

To ensure a net positive contribution to local native biodiversity and natural habitats a management plan will be developed, resourced and financed alongside the property management plan. Such a plan will:

- Support collaboration between professional ecologists and project landscape architects with long term input from local conservation groups;
- Identify key species that are either protected or locally significant and monitor these to increase their presence;
- Include a comprehensive planting scheme with a selection process that benefits local wildlife, addresses local climate issues (e.g. drought tolerance) and avoids invasiveness species;
- Have a demonstrable positive impact of the ecosystem services to people living at, and outside of, the community such as: through provision of food & timber, climate regulation, water management, water quality, recreational spaces, good aesthetics, spiritual benefits, soil formation and carbon sequestration.

Opportunities for education around land-use and ecosystems will be identified.

At least one opportunity will be identified as a showcase to publicly report on actions taken to benefit biodiversity within the development and lessons learned. In addition, at least one opportunity must be identified to regenerate degraded local natural resource stocks (soils, trees, fisheries, etc) either on or off site and a plan implemented.

Leading ecologists suggest that there is a global need for 20% of biologically productive land to be left for wildlife, this would equate to 0.3 ha of wildlife habitat per resident somewhere in the world. The developer will look for ways to showcase how they are contributing to this global target by facilitating the establishment or enhancement of valuable wild space on site or elsewhere.





Culture and heritage

The One Planet Vision is one where a culture of sustainability and community has been nurtured. Endorsed communities will build on local cultural heritage to foster a sense of place and belonging.

One Planet Communities endeavour to develop a thriving sense of place and build connectedness and social capital. This has been shown scientifically to improve health and reduce crime (and fear of crime).

A site specific plan to maintain, enhance and revive valuable aspects of local culture and heritage will be developed. Community involvement in the writing and delivery of the plan is central to the process. In addition, two locally specific showcase projects that deepen the local sense of culture and heritage will be identified and delivered. The approach and scale of the showcase projects will be agreed on a project by project basis and will be at a scale commensurate with that of the development.

A One Planet Centre will be provided (perhaps as part of a broader community centre) to inform residents and visitors and to help create a new culture of sustainability.

A key measure of the strength of a community is the number of the neighbours known by name. This will be surveyed annually in endorsed communities.





Equity and local economy

The One Planet vision is one where thriving, diverse and resilient local economies support fair employment, inclusive communities and international fair trade.

One Planet Communities adopt strategies for the key themes below and aspire to global best practice in both the construction and operational phases:

- Employment - in particular promoting jobs in the green economy;
- Equity and inclusiveness - physically and socially;
- Participation;
- Ownership and affordability;
- Certified Fairtrade goods.

One Planet Communities aim to improve the welfare of selected disadvantaged groups. Two priority groups within the local context will be identified and through discussion with them or their representatives, actions taken to improve their welfare. The approach and level of support will be determined on a project by project basis but should be provided at a scale commensurate with that of the development.



Health and happiness

The One Planet vision is to create a future where it is easy, attractive and affordable for people to lead happy and healthy lives within a fair share of the earth's resources.

A plan for promoting the health and happiness of residents will be produced, building on emerging findings from health promotion and happiness research. One Planet Communities are expected to adopt an exemplar approach during construction and long term community management, aspiring to global best practice.

One Planet Communities will complete two showcase initiatives to promote health and happiness in the community. Suitable projects will be identified using baseline data to benchmark the local context, identifying specific areas of need. The approach and level of support will be determined on a project by project basis but will be provided at a scale commensurate with that of the development.

Examples of showcase projects could include:

- Supporting people in overcoming chronic illness and unhealthy lifestyles through promoting active travel and healthy diets;
- Facilitating inter-generational skills sharing or activities;
- Provide the tools and facilities to create an enterprising community that benefits the local economy;
- Ways for people to take responsibility for their own happiness for example through positive psychology and meditation.

Residents' satisfaction levels will be monitored on an annual basis.

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