

'Diamonds' Ecological Footprint Reduction: Preparation of Guidance Material for Footprint Reduction at Local and Sub-regional Level

Client: SEEDA/South East Diamonds for Investment & Growth

Donor: SEEDA

Consultancy Partners: Best Foot Forward, Levett-Therivel, Colin Tingle (The NR Group)

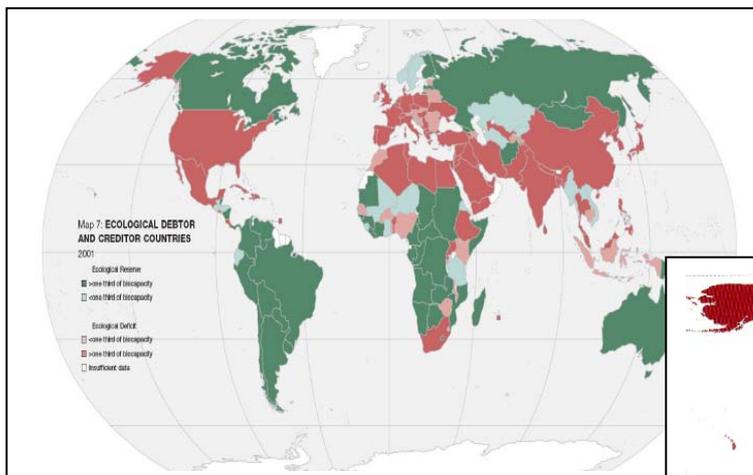
Project Management: Craig Simmons (Best Foot Forward)

Consultancy Team: Craig Simmons, Richard Sheane, Rebeca Laorga [Best Foot Forward], Roger Levett [Levett-Therival], Colin Tingle [The NR Group]

Ecological footprint (or EF) analysis provides a broad measure of the land and sea area required to sustainably support a particular lifestyle or community. It is measured in world average productive hectares, referred to as 'global hectares' (gha). The use of area as an environmental measurement unit makes it a powerful and resonant means of communicating environmental impact and assessing progress towards sustainability. It also allows for benchmarking across cities, regions and nations, highlighting where consumption of energy and materials is exceeding environmental limits and provides a measure for "one planet living" – currently 1.8 gha per person.

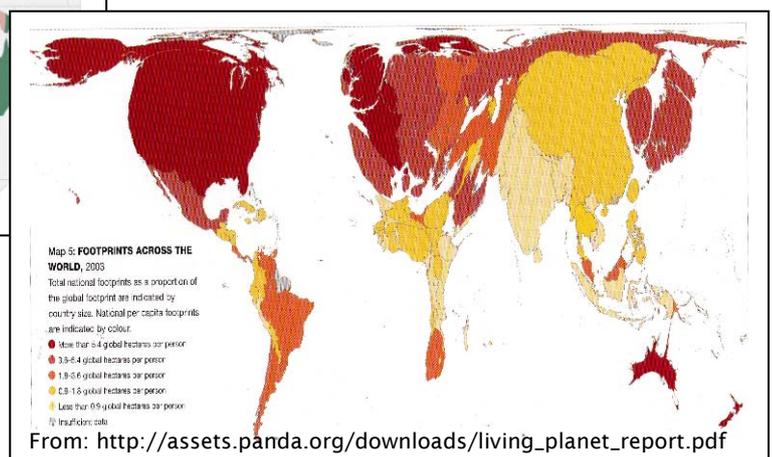


The UK has an EF of 5.3 gha/person (based on 2004 figures), meaning that if everyone in the world lived like the average UK citizen, we would require almost 3 planets to sustain us all. Lifestyles in the south east of England are even less sustainable, with an average EF of 5.63 gha.



From a natural resource management viewpoint, EF analysis is a valuable tool for development that provides a measure of what needs to be achieved through tackling "over-consumption" in the north, whilst simultaneously addressing poverty in the south

When the area of a country is portrayed as its national ecofootprint expressed as a proportion of the total global ecofootprint, inequities around the globe become starkly clear.



Background

The South East Diamonds for Investment and Growth (SEDFIG) is a coalition of cities, towns and their surrounding areas committed to realising their potential for sustainable economic and community growth in the south east of England. The SE Diamonds originated in South East England Development Agency (SEEDA)'s 2006 Regional Economic Strategy (RES). They were there identified as the 'sub-regional functional areas' with the greatest potential for significant contributions to economic growth in the south east. SEEDA's designation of the SEDFIG was based entirely on economic evaluation – GVA (Gross Value Added) is the dominant feature of the assessment made, alongside a variety of other financial flow data, with no accompanying use of indicators of ecological sustainability. Given the high resource consumption historically involved in delivering conventional GVA growth, the first headline target of the South East Plan (SEEDA, 2007) and RES Implementation Plan - achieving an average annual increase in GVA per capita of at least 3% - is potentially in conflict with the third headline target, which addresses the need to reduce the ecological footprint.

In order to tackle this potential target divergence and through the work of the “Tackling Ecological Footprint (TEF) Policy Group” (see Context below), targets have been adopted by SEDFIG to accelerate reduction of the ecological footprint of the Diamonds and the Local authorities (LAs) within them.

To illustrate the extent of the challenge facing the Diamonds in terms of Ecological Footprint (EF), of the top 20 highest footprint local authorities in the UK, five are within the SE Diamonds. Looking at the individual components of the footprint; for housing EF, three out of the top 20 are from the Diamonds; for transport four of the top 20 are from the Diamonds and, for Food, one out of 20 is a Diamond local authority. No Diamond LAs feature in the bottom 20 for overall, housing, food or transport EF.



'Diamond' Local authorities are highlighted in red

Top 20 – total ecological footprint		
NAME	REGION	EF TOTAL
City of London	L	7.18
Kensington & Chelsea	L	6.39
Richmond upon Thames	L	6.38
Mole Valley	SE	6.30
South Bucks	SE	6.29
Westminster	L	6.25
Elmbridge	SE	6.24
Chiltern	SE	6.23
Waverley	SE	6.17
South Oxfordshire	SE	6.12
Surrey Heath	SE	6.11
Macclesfield	NW	6.06
Windsor & Maidenhead	SE	6.06
Tandridge	SE	6.06
Uttlesford	E	6.05
St. Albans	E	6.02
Brentwood	E	6.00
Sevenoaks	SE	5.99
Woking	SE	5.99
East Hampshire	SE	5.98

To assist SEDFIG and its component LAs in achieving the accelerated targets they have set for themselves, SEEDA commissioned an ecofootprint (EF) analysis of the Diamonds and the production of Guidance material on reductions in EF, carbon emissions, water use and waste. The primary goal of this project was to offer information of practical assistance to the Diamonds to enable the LAs within them to deliver the challenging, accelerated targets relating to Ecofootprint reduction and natural resource management, agreed by the South East Diamonds leaders.

Context

The SEDFIG partnership exists across the eight Diamond areas, serving as a forum for the exchange of best practice, research into the impacts and drivers of growth and a platform for lobbying and profile-raising for the Diamond areas. The formulation of executive policy and delivery of sub-regional and local targets rests with the individual Diamond areas and the various partners that constitute them.

This stratified approach is complemented by the work of three SEDFIG policy groups, focused upon:

- Skills & Employability (S&E)
- The Knowledge Economy (KE)
- Tackling Ecological Footprint (TEF)

These groups are designed to share expertise, increase capacity and take forward key challenges through partnership, thereby enhancing local authority capacity. Colin Tingle is a member of the TEF policy group.

Project Aims

The key aim of this project was to assist individual local authorities in achieving all the Diamond targets through the provision of:

- ◆ Up-to-date baseline ecological footprint assessments (by authority and by Diamond) using the Resource & Energy Analysis Programme (REAP)
- ◆ An interpretation of footprint results identifying key variables and ‘big hitters’ (by authority and Diamond)
- ◆ Generic building blocks, practical actions and policy guidance, to assist LAs in developing a local Action Plan or ‘Route Map’ to address the key variables and ‘big hitters’ and so deliver the accelerated targets- to include advice on monitoring progress using existing or supplementary indicators
- ◆ Case studies of ‘best practice’ in eco-, carbon- and water-footprint reduction from within and outside the South East

Consultancy Roles

The Natural Resources Group (in the person of Colin Tingle) are providing consultancy input into the production of the EF analysis and of the Guidance material for Ecofootprint reduction for the South East Diamonds and the Local Authorities located therein.

Best Foot Forward led on EF analysis; Levett-Therivel on policy guidance material. Colin led on governance issues relating to EF reduction in SEDFIG and was involved in training other team members in the use of REAP (Resource & Energy Analysis Programme - the EF tool developed by the Stockholm Environment Institute (SEI) & others, identified as that most appropriate for use in this study), researching case study examples of EF reduction policies &/or initiatives for inclusion assessment by Levett-Therivel; researching relevant water consumption data and water footprinting information for use by Best Foot Forward in the EF analysis; researching indicators for EF reduction in relation to National Performance Indicators (NIs); providing input to the reports to SEEDA, including a section on governance relating to Diamonds working groups.



Figure 2.3.3: Ecological Footprint per capita of the South East Diamonds

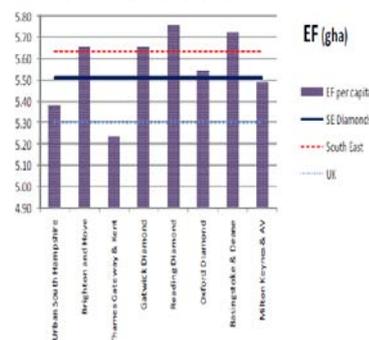
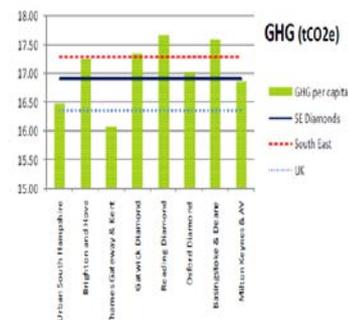


Figure 2.3.4: Carbon Footprint per capita of the South East Diamonds



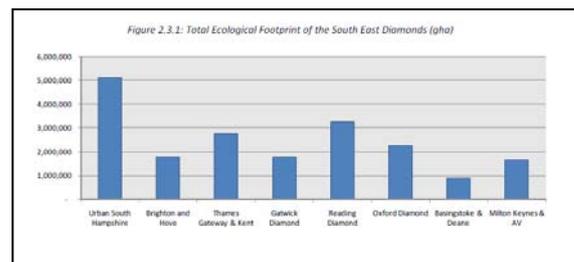
Project outputs

All outputs were focused on providing practical advice and guidance as opposed to in-depth data analysis.

The project report delivers the baseline REAP analyses (which takes a consumption-based approach to footprinting) for the ecological and carbon footprint, supplemented by additional direct carbon emissions, water and waste analyses – all presented for each Diamond.

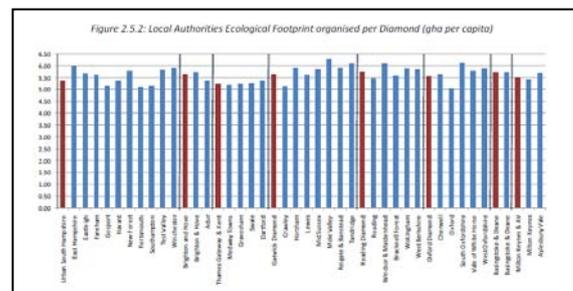
Useful inputs into the “No-Nonsense Guide” and associated Action ‘catalogue’ include:

- **The profiles of carbon and ecological footprint results are similar.**
 - There is little benefit in differentiating between them in Action Plans.
- **The majority of SE Diamonds show a footprint above UK average.**
 - The Diamonds could usefully learn from regional best practice.
- **Diamonds with the largest total footprints are PUSH, Thames Gateway & Kent (TG) and Reading**



- Percentage reductions in these Diamonds will yield the greatest carbon savings (largely due to their size and population, in the first 2 cases). Reading has the highest total and per capita footprint and should therefore be a top priority for any geographically focused actions.

- **There is relatively little variation in consumption- based ecological & carbon footprint totals between Diamonds. Variation is typically around 10%.**
 - On this basis, there would seem to be little merit in tailoring Action Plans geographically at the Diamond level.
- **At component level the variation is higher, up to 15%. The ‘big hitters’ are universally housing, transport and food (between them accounting for typically 60- 70% of the footprint).**
 - Action Plans should focus on initiative to reduce these components of individual consumption.
- **There is a considerable variation in LA footprints within Diamonds, especially in larger ones. This variation is more than 20% (more than the average variation between Diamonds).**



- Action Plans need to be flexible enough to recognise variability at the LA level within each Diamonds. However, this should be balanced against the need for concerted action to tackle the cross-cutting themes of housing, transport and food.

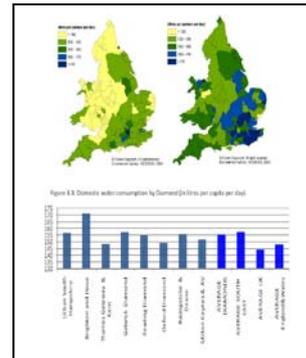
- **Direct emissions data showed that industrial and commercial activities can impact significantly on the footprint of an area and lead to greater differentiation than consideration of personal consumption alone.**

- Action Plans need to take account of the type and nature of each Diamond’s economy.

Diamonds	Electricity Domestic	Electricity Industrial	Gas Domestic	Gas Industrial	Personal Transport	Freight Transport	FP/AL
Urban South Hampshire	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Brighton and Hove	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Thames Gateway & Kent	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Gatwick Diamond	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Reading Diamond	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Oxford Diamond	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Basingstoke & Deane	0.12	0.02	0.18	0.02	0.22	0.12	1.12
Milton Keynes & AV	0.12	0.02	0.18	0.02	0.22	0.12	1.12
UK Average	0.12	0.02	0.18	0.02	0.22	0.12	1.12

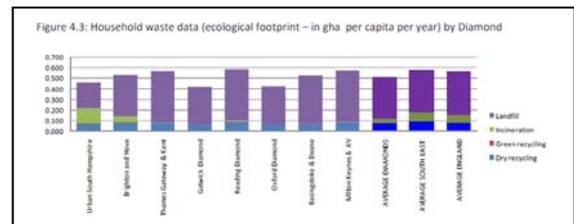
- **Water use is high throughout the SE Diamonds. Brighton and Hove stands out as the area of highest consumption personal consumption alone.**

- Some Actions should be developed targeted at water. A detailed water case study would also be useful. The B & H Diamond would be the best place to trial any new schemes.



- **Waste impacts are similar to, or less than, the English average. However, waste arisings and management practices vary considerably throughout the Diamonds.**

- Some Performance on waste is relatively good. However, the data shows that there is still considerable room for improvement. Actions should build on best practice within the South East.



- **Governance: Policy groups**

- TEFGP needs more contact with the other two PG's - to ensure a consistent approach to sustainability and avoid potentially damaging policy decisions on housing, transport & food.

The initial selection of case studies for inclusion in the Guide is also described with guidance on where to draw on national versus local examples of best practice alongside advice on delivering change; both from the perspective of improving governance and the ongoing monitoring of progress.

A further output - a 'Dashboard tool' that readily and accessibly display results from the footprint analyses - is also presented. This tool was developed by Best Foot Forward and has been very well received by all that have seen and used it, with the result that it has been additionally provided to SEI for use in displaying all results from REAP in the future.

Screenshot of REAP Diamonds dashboard tool



Several recommendations are made on how to best take forward this work; to ensure both widespread dissemination and ease of future reporting.

- Closer working is needed between Diamond policy groups to embed environmental targets into decision-making
- The content of the No-Nonsense Guide should be communicated to a wide stakeholder group
- A monitoring frameworks needs to be established to ensure effective and consistent measurement and reporting of all the Diamond targets

Guidance material has been provided in the form of a “No-Nonsense Guide ‘wiki’” to assist the Diamonds and their component LAs to taking policy actions to produce accelerated reduction in their EF and carbon footprints, their water usage and waste production & management.

The Guide is designed to

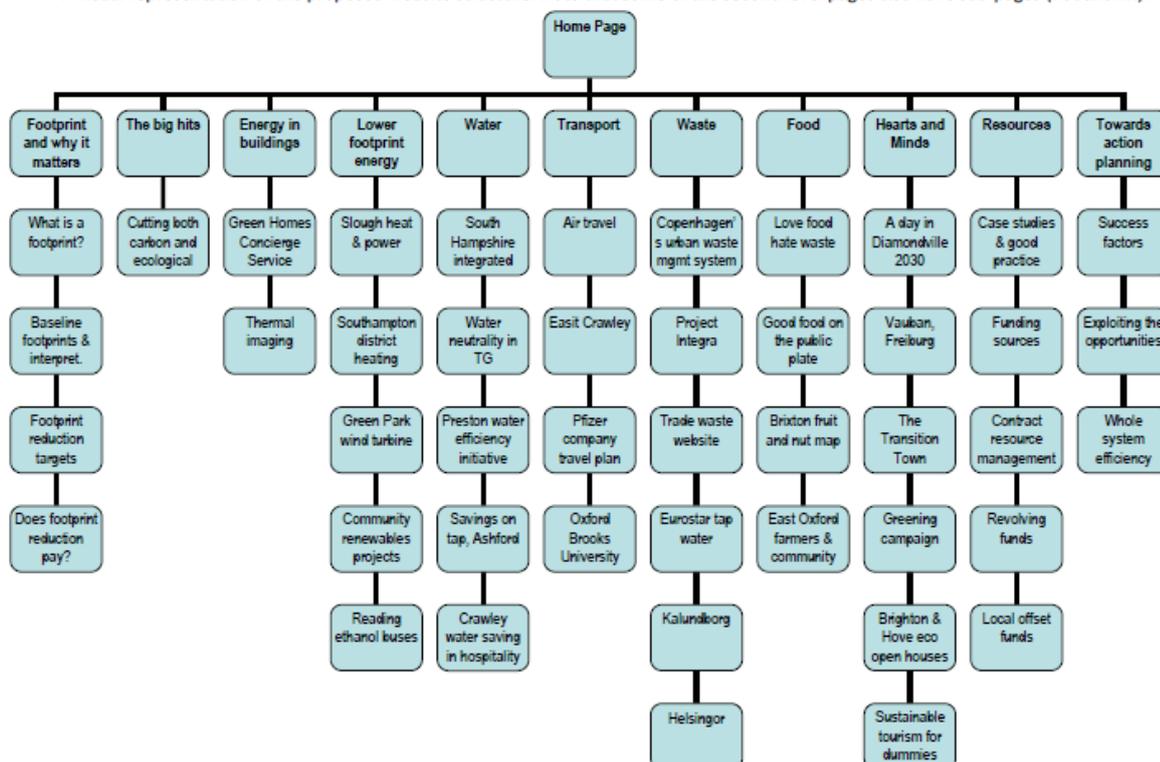
- Help Council leaders and other busy top decision takers in the South East Diamonds make effective strategy to reduce their carbon footprint and ecological footprint
- Signpost practical expertise in depth to help practitioners deliver this strategy
- Identify the help the Diamonds will need to achieve the targets.

The site is designed to help readers go in to the material at whatever level they wish, from quick overview to strategic decision to practical detail. Each section has a top-level page offering an overview and links to further pages, in the site and/or externally, which give progressively more specialised and detailed information.

- Section 1 gives **background on footprint and reasons and targets to reduce it.**
- Section 2 lists the **‘big hits’** for footprint in the Diamonds.
- Sections 3 – 8 give **examples of actions** to tackle each of these.
- Section 9 presents **ways to raise awareness and motivate people to act**
- Section 10 outlines **resources available for footprint reduction and sources of finance.**

The site map below shows the summary structure.

A visual representation of the proposed website structure. Note that some of the second level pages also have sub-pages (not shown).



The Pages titled “Towards action planning” draw out some messages, under a number of key headings to help Diamonds develop effective action plans

Success factors are identified which provide some generic lessons from the range of practice reviewed (at various levels of depth) for the other sections of the Guide. Every example is different, thus judgment has been needed to draw out common threads from projects in different fields, and there may well be counter examples to all the generalisations offered.

The lessons are:

- _ 11.1.1 Partnership - It is a truism that significant moves towards sustainability cannot be achieved by any one organisation in isolation, but require partnership between public agencies, commercial companies and households. The examples in this Guide confirm this.
- _ 11.1.2 Support from the top – explores the role of champions and shared credit for success and effort
- _ 11.1.3 A stimulating crisis - Being really bad can be a springboard to becoming really good. Examples are given of projects precipitated by some specific threat or crisis that provided the impetus to overcome the barriers to action
- _ 11.1.4 Getting over the entry barriers – is explored under the headings: Pushing over the hump; Use grants and soft funding; Lower the hump; Take advantage of an opportunity; Build incrementally on existing projects; Clone, or copy, an existing success; Provide enabling policy ‘hooks’
- _ 11.1.5 Critical mass – examples of projects whose success depended on building up a critical mass of participants
- _ 11.1.6 Exploiting the recession - This section argues that during recession, sustainability action is more important than ever and is an essential component of economic recovery.

each of which is examined and explored so as to identify pointers to stimulate and support action, NOT to provide rules that must be rigidly followed or that can guarantee success. Many points are interconnected.

Related pages look at ‘Exploiting the Opportunities’ to bring about footprint reduction, with sections discussing:

- _ 11.2.1 New funding mechanisms
- _ 11.2.2 Turning the economic crisis to advantage
- _ 11.2.3 Smart partnership
- _ 11.2.4 Trigger points

For each of these, we suggest possible actions by Diamonds, by SEEDA and by central Government to bring forward footprint reductions across the various areas identified by the analysis and investigated throughout the Guidance material.

As yet, neither the report on the EF analysis nor the No-Nonsense Guide are in the public domain. They are in the process of being rolled out across the Diamonds, as a priority, and will then go into the public domain for wider consumption and use watch this space!