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Evidence presented to the Leeds Scrutiny Inquiry - Sustainable Development

November 2017

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Leeds Scrutiny Inquiry - Sustainable Development.

The origins and definition of the term, "Sustainable Development".

Origins

There have been many competing conceptualisations of sustainable development, though the composite term entered into popular usage in the latter part of the twentieth century (Lafferty 2006; Mebratu 1998). The 1972 Stockholm Conference on the Human Environment, influenced by publications of the time including: Rachel Carson's *Silent Spring* (1962); Garret Hardin's *Tragedy of the Commons* (1986); Paul Ehrlich's *Population Bomb* (1968), and The Club of Rome's, *Limits to Growth* (1972) emphasised the dangers of natural resource depletion beyond ecological limits and acknowledged a role for governments in mediating the tension between population growth, economic development and environmental protection (Mebratu 1998; Du Pisani 2006). The Stockholm conference called for a clearer distinction to be made between quantitatively measured economic growth and qualitatively measured development (Viederman 1993) and a change in course towards the latter, with greater sensitivity to the needs of people and the environment (Du Pisani 2006).

Sustainable development continued to gain prominence throughout the 1970s and '80s, in large part due to its promotion at the international level. The term was reiterated in the influential International Union for the Conservation of Nature's World Conservation Strategy (1980) and was included as a strategic priority by The World Commission on Environment (WCED) in a report prepared for the United Nations in 1987, which included a definition which remains dominant to this day.

The concept has been reiterated in several subsequent United Nations conferences, including the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 which strengthened the mandate for civil society participation through the creation of Agenda 21, identifying nine major groups who should be involved in planning and implementation of sustainable development from environmental NGOs to children and youth to the scientific community (United Nations Conference on Environment and Development 1992). The Johannesburg conference in 2002 expanded upon this, emphasising collective responsibility across local, national and international levels (Kates, Parris and Leiserowitz 2005) and the Rio+20 conference in 2012 catalysed the creation of seventeen Sustainable Development Goals, accompanied by a series of indicators to guide implementation across the world.

Definition

The most commonly used definition is taken from the United Nations report, *Our Common Future* (1987, p.43), also known as the Brundtland Report *(on account of being chaired by then Prime Minister of Norway Gro Harlem Brundtland)* which states that:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The concept of *needs* is emphasised, split into two aspects: the ability of all individuals within society to meet their needs, with particular attention to supporting vulnerable groups, including though not confined to poverty alleviation, to enabling the next generation to meet their needs in order to

ensure that future generations have sufficient access to natural resources, seeking for equity between as well as within generations *(Mebratu 1998).*

Intentionally vague, the Brundtland definition acts as an umbrella term, bringing together diverse actors working across multiple contexts under the pursuit of a common goal. Whilst this facilitates the identification of shared values which can be attractive to those seeking cross-sectoral collaboration, the lack of clear, measurable targets presents an obvious challenge for strategic governance (Lélé 1991; Robinson 2004). Regardless of its intangibility, the concept remains firmly on the political agenda. As such, successful implementation is reliant upon the clarification of context-specific targets based on local needs and priorities. A series of models have been created to support this process.

Sustainable Development Models

Several models now exist, ranging in complexity. A simple three pillar model which portrays sustainable development as a balancing exercise between three, stand-alone, pillars of environmental, social and economic priorities, has evolved into the Venn diagram model which highlights the interrelationship between these spheres as shown in Figure 1.

Figure 1. Common three-ring sector view of sustainable development.
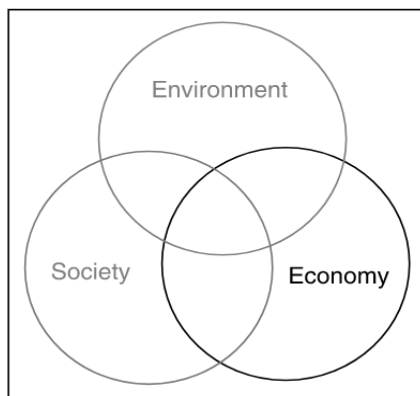
Source: Giddings et al., 2002. p189.

This model is convenient in that its simplicity enables a wide variety of initiatives to be categorised as contributing to sustainable development. However, presenting each category as equally sized can be misleading and in reality, priority is often given to one aspect over the others which as the diagram emphasises is often the economy. This model perpetuates a "weak" sustainability approach (Neumayer 2003), where each sphere is viewed as a form of capital and treated as interchangeable – i.e. social or financial capital can be used as a substitute for natural capital, irrespective of ecological limits. In contrast, the nested dependency model as illustrated in Figure 2 takes a "strong" sustainability approach (Neumayer 2003) emphasising the finite nature of many natural resources and that nesting of economy within society which sits within the environment.

Figure 2. Nested dependency model of sustainable development.
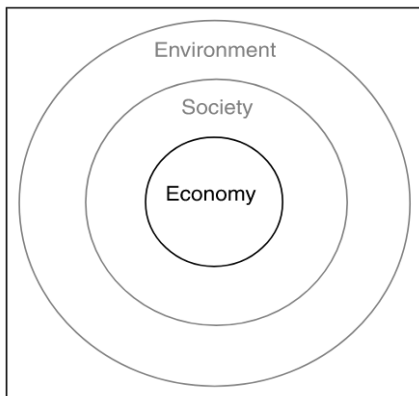
Source: Giddings et al., 2002. p192.

Proponents of this model argue on account of their nested nature, the three aspects of sustainable development cannot be considered equally important to our collective survival. Whilst this model may be closer aligned with natural processes than the first, its simplicity limits its usefulness for policy making. A more recent and detailed model portrays sustainable development as a doughnut (Raworth 2017) as illustrated in Figure 3, mapping out a *"safe and just space"* where human needs are met without breaching ecological limits.

Figure 3. The doughnut of social and planetary boundaries.
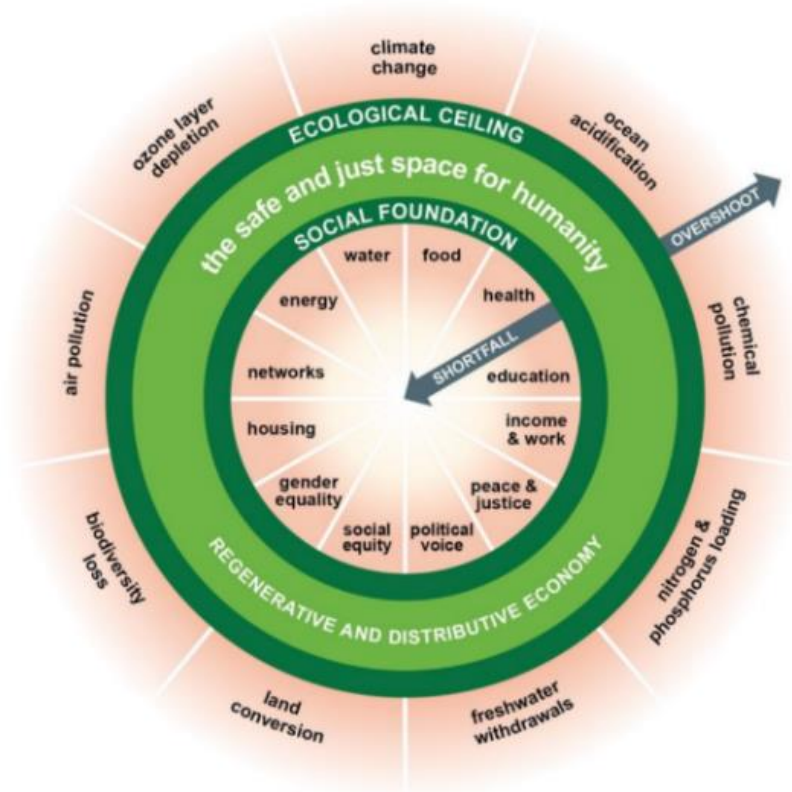
Source: www.kateraworth.com, Exploring Doughnut Economics, 2017.

Raworth argues that poorly-designed policies can push people below the lower limit of the social foundation so that their needs are not being met. The inner ring identifies eleven social indicators

which she believes represent the needs of current and future generations. Policies can also breach the nine planetary boundaries as first conceptualised by Rockström et al. (2009), which form the outer ring of the model and represent firm ecological limits which should be respected.

There is a tendency to favour either the environment or the economy in sustainable development, with lesser recognition given to social sustainability. Raworth, as an economist working with Oxfam seeks to redress this balance, advocating for *integration* of environmental, social and economic priorities within safe limits, beyond merely seeking to *balance* priorities.

Applying the model in a Leeds context

Raworth's model has been critiqued in terms of its relevance across all global contexts, though this is primarily in relation to developing countries. Oxfam have recently published research which tests the doughnut model in a UK context, focusing on its 2012 iteration which has only been slightly tweaked in the version presented as Figure 3. It suggests that many of the ecological boundaries have been breached by a significant margin in the UK, whilst inequality means that many people are living below the safe and just limits.

The model has yet to be tested, however, it has been warmly received by practitioners, particularly amongst those working on the Sustainable Development Goals, for its attempt to clarify some of the more tenuous and difficult to measure aspects of sustainable development which have plagues its implentation over recent decades. Its application in Leeds could therefore form a useful contribution to academic understanding as well as providing guidance to policy makers seeking to achieve sustainable development across the city.
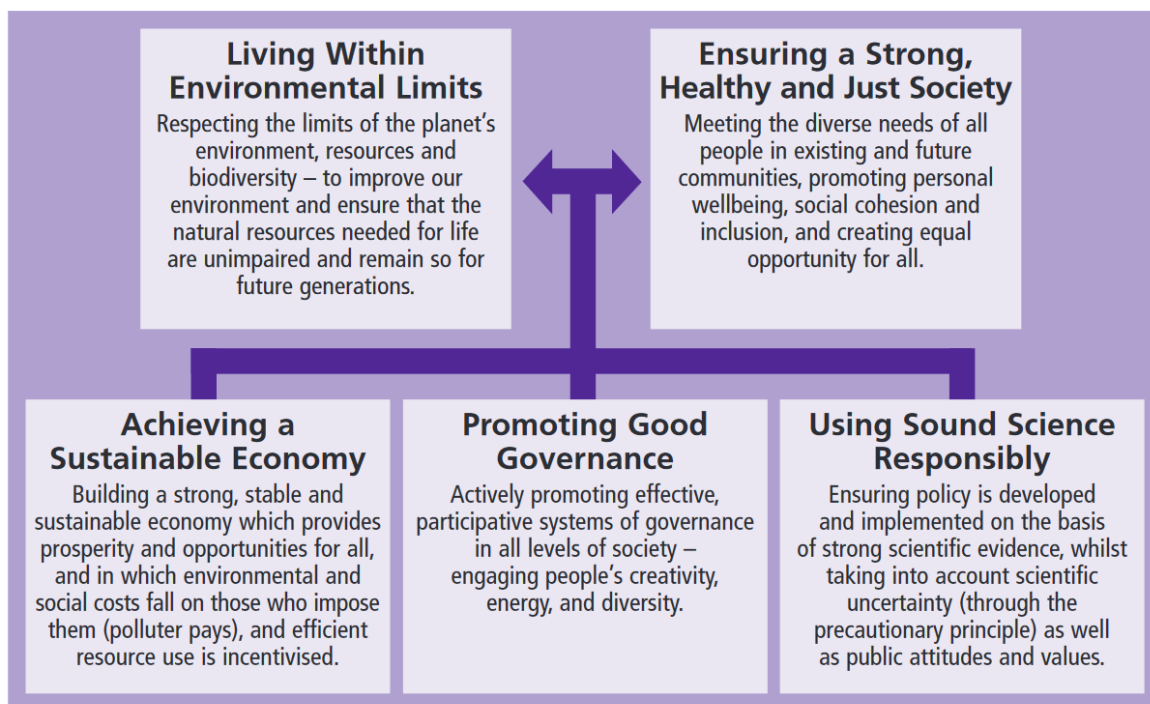
The use of "Sustainable Development" in UK policy since 1992

After the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, sustainable development started appearing in UK policy discussions, particularly in local authorities where Local Agenda 21 provided a process for a range of voices normally excluded from policy making to input different ideas for the visions of how an area should develop. Its local focus and emphasis on participation meant that Local Agenda 21 was "bottom up" and sometimes ran the risk of operating in parallel with more formal, democratically elected, structures.

Sustainable development became visible in national policy making as the term was included in the statutory purposes or duties of a range of public agencies from 1992 onwards. For example, the Office of Rail & Road was given a duty "to have regard to" sustainable development in the Railways Act 1993. This wording was strengthened in the statutory purposes of Regional Development Agencies, each of which were charged, in the 1998 Act which established them, with a fifth purpose "to contribute to the achievement of sustainable development in the United Kingdom where it is relevant to its area to do so". This wording was echoed in the Planning Policy Statement (PPS11, last updated 2004) which provided guidance on the development of regional spatial strategies.

Because planning is a devolved issue for Scotland, the UK has seen divergence in the approach to planning and sustainable development. While English former regions were developing the Regional Spatial Strategies that would be abandoned after 2010, the Planning etc. (Scotland) Act 2006 introduced a requirement that in preparing Scotland's National Planning Framework, Scottish Ministers and local development plans must have the objective of "contributing to" sustainable development. This duty still stands.

In parallel with these changes in regional policy and planning, the UK governments, including the devolved administrations, adopted a working policy framework for sustainability development in 2005. In "Securing the Future", the UK's strategy and framework for sustainable development, five policy principles were established, illustrated below:

Living Within Environmental Limits
Respecting the limits of the planet's environment, resources and biodiversity – to improve our environment and ensure that the natural resources needed for life are unimpaired and remain so for future generations.

Ensuring a Strong, Healthy and Just Society
Meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity for all.

Achieving a Sustainable Economy
Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentivised.

Promoting Good Governance
Actively promoting effective, participative systems of governance in all levels of society – engaging people's creativity, energy, and diversity.

Using Sound Science Responsibly
Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values.

While 'Securing the Future' in theory remains extant as policy, the Conservative/Liberal Democrat Government from 2010 made no use of the framework and disbanded the advisory body who had supported its development (the UK Sustainable Development Commission). This was justified on the basis that sustainable development was now thoroughly embedded in policy and governance and was mainstream, although this rationale was challenged by the findings of a parliamentary Environmental Audit Committee inquiry into the "embedding of sustainable development" in 2011. One of the specific findings of that Inquiry was that Defra was not the right government department to ensure that sustainable development was mainstreamed across development and that CLG and HMT were vital departments in ensuring the emedding of sustainable development in policy.

Following the revocation of regional spatial strategies, and, effectively, regional economic strategies, the National Planning Policy Framework (NPPF) issued in 2012 states (paragraph 7) "The purpose of the planning system is to contribute to the achievement of sustainable development" and goes on in paragraph 8 to describe the three-part model of sustainability in similar terms to the first model described above.

The NPPF has perhaps been most controversial in how it interpretes the "presumption favour of sustainable development", paragraph 14 is reproduced in full in the box below. The intent of this policy is to expedite physical development, with the presumption that such development will contribute to sustainability based on two assumptions:

- no policy maker would deliberately develop policy which did not contribute to sustainability,
- speed of decision making is important to deliver development.

For sustainable development there are tensions between speed of decision making and inclusion of all stakeholder voices, and between local impacts of development and wider impacts beyond an administrative boundary. Climate change is a policy area which illustrates the tension – how can one city's planning guidance respond to challenges generated by emissions generated outwith the city's boundaries, but generated because of the the consumption of goods and services of individuals in that city? This is not spatial planning issue, but neither is it a purely local economic development issue, rather it is to do with the kinds of lives that people within a planning area are enabled and encouraged to live.

This leads directly to the importance of local infrastructure which underpins sustainable ways of living.

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14. At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.

For plan-making this means that:

- local planning authorities should positively seek opportunities to meet the development needs of their area
- Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:
    - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole
    - specific policies in this Framework indicate development should be restricted[4]

For decision-taking this means[5]:

- approving development proposals that accord with the development plan without delay and
- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:
    - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole or
    - specific policies in this Framework indicate development should be restricted

Source: National Policy Planning Framework, 2012. HMSO

The role of infrastrcrure in local sustainable development

Defining infrastructure

Infrastructure is commonly defined in terms of structures and networks, for example: "*The physical assets underpinning the UK's networks for transport, energy generation and distribution, electronic communications, solid waste management, water distribution and waste water treatment*" (ICE 2009). But many have argued that this implies that structures and networks are important in their own right. In reality, these physical assets simply convey people, items and commodities (e.g. vehicles, resources, electricity and data) in a way that enables the services and societal needs that help to provide security, stimulate commercial and industrial activities and allow users to achieve a desired function.

A more integrated definition of infrastructure is needed to capture the important role of infrastructure in delivering societal needs, for example: *infrastructure is the artefacts and processes of the inter-related systems that enable the movement of resources in order to provide the services that mediate (and ideally enhance) security, health, economic growth and quality of life at a range of scales.* (Dawson 2013). This also allows up to extend the scope of assets from just considering large structures, such as electricity generation infrastructure, to include the assets and processes used by individuals and communities to convert resources into needs, for example the technologies and practices used by householders to covert energy into warmth, illumination etc. **Using a broader definition of infrastructure could help Leeds to take a more integrated approach to spatial development.**

Infrastructure and sustainability

If we define it in this way, the role of infrastructure in sustainable development becomes much clearer. Infrastructure assets and structures are required to support the social foundation described in Raworth's 'doughnut' in Figure 3, and importantly, to support balance across these foundations. For example, residents should have access to sufficient energy but this energy should be affordable so that access is socially equitable. Furthermore, infrastructure should support the social foundation in a way that does not endanger environmental limits. To continue the example above, providing sufficient and affordable energy from fossil fuel sources that create air pollution and exacerbate climate change is not sustainable. Infrastructure's role in converting resources to societal needs makes it one of the most important points of influence when considering local sustainability (Creutzig et al. 2016).

The connections between infrastructure and different aspects of sustainability has been recognised in current Leeds City Council documents, such as the Best Council Plan and the draft Inclusive Growth Strategy, where the link between transport, income and work and between reducing emissions and tackling fuel poverty have been made. However, the interaction between different aspects of sustainability is also important. For example, transport systems may positively affect the economy or residents' economic wellbeing if they are able to access jobs but could also negatively affects residents' health because of poor air quality if they are reliant on fossil fuels. In this sense, the goal of improving transport connectivity in isolation is not sustainable. Having a separate goal on low carbon, which implicitly focuses on energy infrastructure, could force a conflict between goals, and encourage silo thinking. Using a more integrated approach to sustainability could help Leeds to maximise the contribution of its infrastructure systems to sustainable development.

An important aspect of sustainability that is often overlooked is political voice or citizen participation. The public is not involved enough in either defining infrastructure need or in deliberating on the means through which to deliver these needs (Green Alliance 2015). Opportunities tend to be limited to asking people to comment on detailed, technical document describing solutions once infrastructure need has been determined, which limits the opportunity to influence the relevance and sustainability of eventual outcomes.

Infrastructure governance

One of the most significant challenges of ensuring that infrastructure contributes to local sustainable development is the limits to the responsibility of the City Council for the design, construction, finance and operation of infrastructure systems. The governance of infrastructure sectors varies dramatically from regulated private sector control (such as energy) to full public responsibility (often with private operation) (Hall et al. 2012). The scale of governance also varies from sectors that operate at a strictly regional level (for example wastewater) to those that operate at several different scales (for example transport, which has national rail and road networks, regional rail and bus operators and local road and cycle systems.

The interaction between private and public sector and across several scales of governance makes it difficult to develop a coherent strategy and make decisions that will deliver on that strategy. The city frequently relies on the actions of others to deliver infrastructure that contributes to local sustainable development. There are examples of where the city has taken a very active role in co-ordinating infrastructure development that does not all lie within their control. For example, the Leeds Flood Alleviation Scheme, Phase 1 of which was undertaken in partnership with the Environment Agency and Phase 2 of which will work with neighbouring local authorities to develop a catchment-wide response. This partnership allowed the council to achieve several sustainability goals, of resilience, biodiversity and place building, as well as flood alleviation.

It is more difficult to manage partnerships for smaller scale projects that influence infrastructure but do not develop large new structures or projects. An example might be the energy system of a new residential or commercial development. Few developments are of a scale where development of low carbon energy solutions are finically viable, but connecting a range of developments to a central energy system, for example a district heat network could make a significant contribution to the cities goals around affordable, low carbon energy.

The Council does have tools available to it to assist with the delivery of infrastructure, having adopted the Community Infrastructure Levy (CIL), in parallel to existing section 106 planning obligations. That the CIL is an optional tool and Leeds in one of only three local authorities in Yorkshire and the Humber who had adopted this in 2015 (Wyatt 2016). The CIL allows the council to charge developers a flat rate based on the area of their development to contribute to the cost of City-wide infrastructure that is required as a result of growth and development in the city (HM Government 2010). The Council must set out a list of those projects or types of infrastructure that it intends will be, or may be, wholly or partly funded through the Community Infrastructure Levy, called a 'Regulation 123' (R123) list. Section 106 obligations or contributions are universal and are negotiated on a development-by-development basis. They were designed to support the recovery of public investment, provision of public services and internalisation and mitigation of negative externalities.

Although they operate in parallel, there two schemes are quite clearly delimited to avoid double counting of contributions. Section 106 obligations or contributions must be scaled back where the CIL has been introduced and cannot include infrastructure that might be covered by the CIL. As a result the measures under section 106, which must be related to a particular development, are generally limited to affordable housing (which cannot be covered by CIL) and minor measures such as open space and play areas (Wyatt 2016). Leeds also took steps to clarify the type of activities that contributed to CIL when it revised its R123 list to clarify this different for example including the phrasing "except for where improvements or additions are necessary as a result of a specific development".

In theory the CIL and section 106 planning obligations provide a sound means for the Council to invest in infrastructure that could contribute to sustainable development but its potential to do so is limited by a range of factors:

- It is not clear how the projects on the current R123 list contribute to sustainable development as defined above, particularly the balance between social, environmental and economic factors and the need for political voice (i.e. to what extent was the public engaged in the development of this list?).
- Income from the infrastructure levy will not cover all of the projects on the R123 list so additional funding will need to be sought[1]. Aligning the timescales of funding sources may be problematic and some project may be more likely to secure additional funding but less likely to contribute to sustainable development. Therefore, the prioritisation of projects could be affected but funding constraints and smaller projects and/or those more likely to secure funding could be prioritised to the detriment of those more likely to contribute to sustainable development.
- There may be a disconnect between where the levy is collected and where it is spent, so those that suffer the costs of development (such as increased congestion or air pollution) may not immediately receive benefits. This presents both a political issue of justifying this disconnect and a sustainability issue of social equity.
- Not all infrastructure is independent of development projects and developers may need to put in place internal, additional infrastructure for the CIL-funded scheme to be effective (for example internal networks to connect to a city-wide heat network). This may affect the viability of a development project, particularly if the opportunity is identified late in the development process.
- A proportion of the CIL goes to local communities (which may address the potential for disconnect somewhat) but there is no due process to determine how this spending (which is considerable and up to 25% of the CIL) contributes to sustainability. Furthermore, it is not clear how the local priorities are balanced with city/national priorities or how local residents have a say in this decision making process.

The CIL alone is not sufficient to ensure that infrastructure investment in Leeds contributes to sustainable development and additional layers of governance are needed to support this process. This should include:

- mechanisms to engage citizens in all stages of infrastructure decision making;

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[1] Note that retained CIL receipts for 2015/16 were £93,992.20 (Leeds City council 2016).

- mechanisms to strategically plan infrastructure systems, particularly those which have elements outside the direct control of the Council;
- mechanisms to enable decisions that consider integration across different aspects of sustainable development; and
- and mechanisms which enable strategic partnership activities.

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