



Low Emissions Strategies Assessment Method – Scoping Report

CAG Consultants in collaboration with Sustainable
Transport Solutions

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Executive Summary

CAG Consultants and Sustainable Transport Solutions (STS) have been invited by the Low Emissions Strategies Partnership (LESP) to undertake a scoping study on the development of a **Low Emissions Strategies Assessment Method (LESAM)** to assist local authorities and developers.

LESAM is proposed as '*a national methodology for assessment and classification of packages of measures to mitigate transport emissions at a development site.*' This Scoping Report sets out the research undertaken and a suggested way forward for the development of a LESAM. It identifies **4 options** for the development of a LESAM:

- A 'Do nothing' option
- The development of new resources that help support better transport and air quality outcomes for new developments
- The development of a new 'stand-alone' scheme
- The inclusion of a more rounded transport and air quality assessment within an existing scheme or method

These options were appraised. Based on this analysis, the recommended course is for the LESP to undertake an incremental, three stage process. The three stages are:

Stage 1 – to further develop the method and scoring approach. A 'front end' or a guidance document would take the user through an emission based assessment and how it can be integrated with local authority policies – it could also address gaps in current provision, link with the LET and the low emissions hub, and provide a pilot scoring system. This initial material would then be piloted with a number of LESP members to test its appropriateness. Stage 1 would also see further discussions and assessment of options undertaken with:

BRE – to determine the potential for integration of transport and air quality concerns into BREEAM; the role the LESP could have in further developing BREEAM in this direction, and any financial arrangements that could lead to revenue streams. Engagement with those responsible for other tools could also be undertaken.

Government – to see if funding is available for the development of a standalone LESAM tool or for further adaptation of the Code for Sustainable Homes

The **LESP** – to determine the scope for development of current and future resources, such as the LET and the Low Emissions Hub, and the potential for these to become part of a LESAM.

Stage 2 –To finalise development of the LESAM method and scoring approach after the initial piloting, and the production of a self-assessment system or tool for developments that would have agreed levels or ratings.

Stage 3 - where, if desired and agreed with partners, a fully verified assessment process would be developed. Based on the analysis undertaken, this would be based on one of two options, either (a) a full external assessment or (b) the integration with BREEAM and potentially CSH and/or other tools.

A methodology and management plan is summarised in the report and provided in detail in the appendices.

1. Introduction

CAG Consultants and Sustainable Transport Solutions (STS) have been invited by the Low Emissions Strategies Partnership (LESP) to undertake a scoping study on the development of a **Low Emissions Strategies Assessment Method (LESAM)** to assist local authorities and developers.

LESAM is proposed as '*a national methodology for assessment and classification of packages of measures to mitigate transport emissions at a development site.*' It would provide certification for, in the first instance, new developments but could be extended to other types of developments over time. It would cover both air quality (e.g. PM₁₀) and also greenhouse gases (GHGs), and address both the design and operation of a broad range of new developments.

This Scoping Report sets out the research undertaken and a suggested way forward for the development of a LESAM.

1.1 Background and aims of this study

Air pollution is one of the greatest health challenges facing the UK, while transport is responsible for a growing proportion of our greenhouse gas emissions. The designing of an effective assessment methodology for new development thus has significant potential to improve quality of life and promote sustainable development.

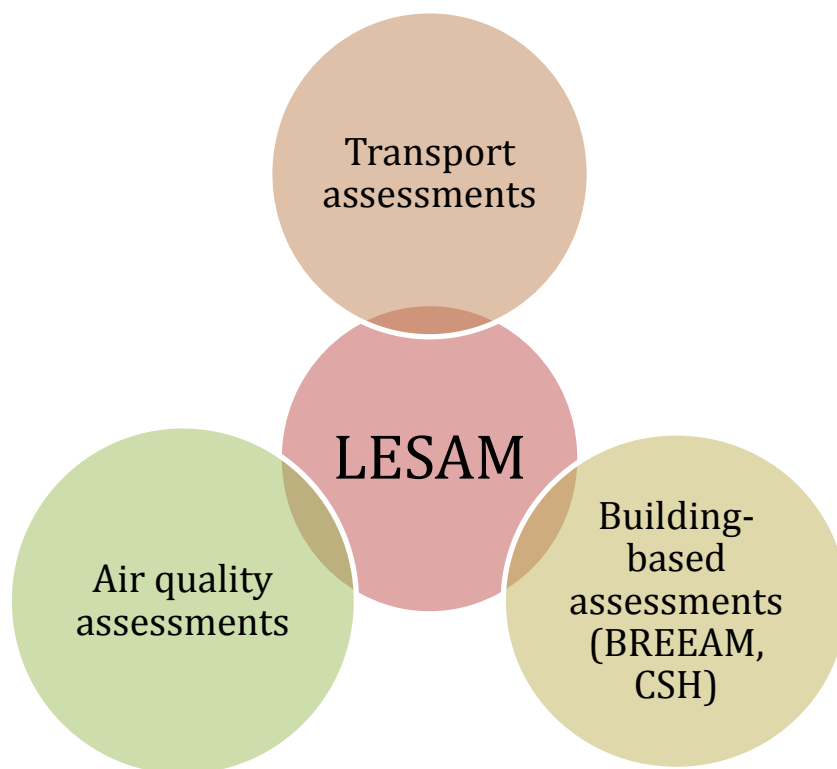
An array of approaches (covering assessment methods, schemes and tools) that address aspects of transport and air quality already exist, with these being assessed in Chapter 3:

- **transport assessments** – which provide detail of the impact of developments on transport and traffic conditions, and identify mitigation such as travel plans and delivery and servicing plans
- **building sustainability assessments** - such as BREEAM, Code for Sustainable Homes (CSH) or the American LEED systems (Leadership in Energy and Environment Design), some of which include elements of transport and emissions
- **air quality impact assessments** - which use emission data and dispersion models to assess the expected impact of transport emissions on the concentration of air-borne pollutants in different locations.

These assessments have some or all of the following components:

- Performance criteria/levels
- Assessment methods
- Calculators/tools
- Scheme administration

Figure 1: LESAM providing an integration of existing assessment methodologies



The methodology for this study is set out below. The paper also includes:

- An overview of the policy context and previous relevant work of the LESP along with definitions of the key terms used
- An assessment of the existing tools available and their applicability to a LESAM
- A proposed methodology and management plan for the next stages of LESAM development – provided in summary form in the body of the report and in full in the Appendices

1.2 Methodology

This research was based around a **contextual review** and a detailed **option appraisal** leading to an outline of a **preferred approach** for consideration by the LESP and partner local authorities.

The **contextual review** involved a desk based study of relevant information on the policy environment, the previous work of the LESP and existing assessment methods; and the development of a typology of measures and interventions:

Policy	An analysis of the key aspects of policy including the Community Infrastructure Levy, the Localism Act, and the new National Planning Policy Framework (NPPF) and associated local and regional changes. The aim of this is to determine the drivers for this work, the links with a changed framework for local authorities and the potential for action in this area to meet other local authority goals.
The LESP	A review of contextual materials already prepared by the LESP including: <ul style="list-style-type: none"> • The draft design concept for the LESAM • Low emission strategies good practice guidance • The Low Emissions Toolkit (LET) • LESP guidance on Supplementary Planning Documents • LESP typology of measures and emission performance levels
Existing assessment methods and assurance systems	An assessment of existing assessment methods in related areas: transport assessments, building assessments (e.g. BREEAM, Code for Sustainable Homes or the American LEED) and air quality impact assessments. Our assessment has looked at their structure and scope and the potential for LESAM to be linked to them.
Draft Typology of Low Emission Planning measures/ interventions	Relevant transport actions and themes to be covered by the assessment were mapped out. The areas considered were design aspects, financial measures, infrastructure issues, travel planning and engagement with building users and visitors, and locational aspects. The full typology is provided in Appendix 1 as part of the recommended Methodology.

In parallel to the desk review a series of phone interviews were undertaken. The interviews explored the best means of taking forward the LESAM concept and gained insight into how it can be tailored to local authority and developer needs.

Four interviews were undertaken with local authority officers (concerned with planning, transport and climate change). Interviews were also held with the Building Research Establishment, to explore the compatibility of a LESAM with BREEAM; and with Barratt to discuss transport and air quality appraisal at their sustainable

Hanham Hall development near Bristol. The key points to emerge are summarised in Appendix 4 and also noted in Section 2.3.

Drawing on the contextual review, an **option appraisal** was undertaken. As a first stage, existing tools and methods for transport, air quality and building assessment were evaluated. These were assessed in terms of their scope, usage and potential to form the basis for all or part of a LESAM.

This paper explores four possible options:

- A 'Do nothing' option
- The development of new resources that help support better transport and air quality outcomes for new developments. These could either help draw together existing resources or fill gaps in existing provision. Such 'guidance' would also be required to support the development of new or amended schemes as below
- The development of a new 'stand-alone' scheme
- The inclusion of a more rounded transport and air quality assessment within an existing scheme or method

An options paper was developed that set out aspects of the methodology of a LESAM and an analysis of the relative merits of different approaches. The paper formed the basis of a discussion with the LESP and local authority experts held in Birmingham on the 9th July 2012. A note of the key points of the meeting was written up (Appendix 3) and used to inform this Report.

2. Context and issues

2.1 The policy context

For the LESAM to be widely taken up, and for it to be most effective, it has to work with the current policy context for local government in terms of planning, climate change, transport and air quality.

The last few years have seen radical changes in this policy framework, and also significant developments in national policy around planning, transport, air quality and climate change. The following, all former drivers of action, are no longer applicable:

The National Indicators set included a raft of indicators of transport,	<ul style="list-style-type: none">• Access to services and facilities by public transport, walking and cycling (NI175)• Working age people with access to employment by public transport (and
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carbon and air quality	<p>other specified modes) (NI176)</p> <ul style="list-style-type: none"> Local bus passenger journeys originating in the authority area (NI177) Bus services running on time (NI178) Per capita CO₂ emissions (NI186) and CO₂ reduction from local authority operations (NI185) Level of air quality – reduction in NOx and primary PM¹⁰ emissions through local authority estate and operations (NI194)
Local Area Agreements (LAAs) and regional support organisations	Local Area Agreements (LAAs) have been scrapped as have the organisations that support action on climate change and sustainable development at the English Regions level.
Planning Guidance	Government has radically streamlined planning, rendering much pre-existing planning guidance obsolete, including the detailed Policy Planning Statements on Transport and Air Quality.

Despite this there remain a range of drivers of this work. European air quality standards have required action at the local level in the UK. There are also a range of UK policy levers, and in addition local authorities now have greater freedom to move the agenda forward as they see fit and become leaders in this field.

2.1.1 Localism

The **Localism Act** received Royal assent in November 2011. The key new measures in the Localism Act of relevance in this context are:

- General power of competence for all English local authorities, including eligible parish councils. Councils can now legally do anything an individual could do unless specifically prohibited by law.
- Community Right to Build giving communities a new way to deliver development they want.
- Abolition of the Infrastructure Planning Commission - major planning decisions are returned to Government Ministers.

While not specifically related to transport and air quality, Localism does enable councils to take a real lead in driving forward a sustainable approach to transport, planning and air quality, drawing also on the other elements of the political landscape outlined below.

2.1.2 Planning

All planning should now be guided by the new **National Planning Policy Framework (NPPF)**. The NPPF represents a significant change to the planning system in England. It seeks to radically streamline planning and has rendered much pre-existing planning guidance obsolete, including the detailed Policy Planning Statements on Transport and Air Quality.

The NPPS is based around a 'presumption in favour of sustainable development'. It defines these two words as follows:

- **Sustainable** means ensuring that better lives for ourselves don't mean worse lives for future generations
- **Development** means growth. We must accommodate the new ways in which we will earn our living in a competitive world. We must house a rising population, which is living longer and wants to make new choices, we must respond to the changes that new technologies offer us. Our lives, and the places in which we live them, can be better, but they will certainly be worse if things stagnate.

The NPPG is also clear as to the importance of protecting the natural and historic environment and promoting high quality design. It removes regional planning structures and promotes neighbourhood planning. It also gives responsibility for nationally significant infrastructure back to central government.

In terms of core principles for planning, the NPPF includes a number that support the use of a LESAM, namely that planning should:

- Support the transition to a low carbon future
- Contribute to conserving and enhancing the natural environment
- Actively manage development to maximise use of public transport, walking and cycling
- Take account of and support local strategies to improve health, social and cultural well-being

The NPPF is also supportive of the use of Strategic Environmental Assessment and Sustainability Appraisal (SA) and encouraging of the use of other assessment tools.

The **Community Infrastructure Levy** is a new levy that local authorities in England and Wales can choose to charge on new developments in their area. The money can be used to support development by funding infrastructure that the council, local community and neighbourhoods want - for example new or safer road schemes or other transport infrastructure. It applies to most new buildings and charges are based on the size and type of the new development.

The Levy came into force on 6 April 2011. The regulations have been amended to ensure local authorities have more control over the processes for operating the levy by removing the centrally prescribed arrangements for payment, removing the threshold for in kind payments of land, and making minor amendments to improve how the levy system works. The Levy, along with the existing powers available through Section 106, offers local authorities significant scope to enhance the sustainability of transport infrastructure in new developments, and potentially to generate income. LESP member authorities including Mid Devon and Greenwich have already shown the potential for using S106 to deliver air quality and transport improvements.

While there is scope to use the CIL to support action in this area, it should be noted that the Levy may have implications for how easily contributions can be secured for off-site offsetting of transport emissions. This issue, also faced in terms of carbon management aspects of developments, has potential implications for the LESAM. Where LESAM might be used to encourage offsite measures there need to be thought given as to how that be best integrated with CIL.

2.1.3 Climate Change

Through the **Climate Change Act 2008** the UK now has statutory targets for cutting emissions by 34% by 2020 and 80% by 2050, along with 5 year carbon budgets. Transport contributes around ¼ of all UK carbon emissions and is the one sector where emissions are not falling.

The **UK Low Carbon Transition Plan (2009)** was accompanied by a suite of documents including **Low Carbon Transport: A Greener Future**. These documents make it clear that a move to electric vehicles and other means of cutting the carbon footprint of transport will be required to meet the climate change targets - such measures would also yield huge local air quality benefits. The **UK Renewable Energy Strategy (2009)** also sets a target that 10% of the energy for transport will be from renewable sources by 2020, something that will require huge investment in appropriate infrastructure.

A significant new development for local authorities will be the new LGA/DECC **Climate Local** resources on Climate Change, drawing on the lessons learned in the **Local Carbon Frameworks** pilot programme¹ which involved around 30 English councils. The new resources will include a topic guide on transport (not yet published). The Local Carbon Frameworks Pilot included a number of transport

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http://www.decc.gov.uk/en/content/cms/tackling/saving_energy/what_doing/local_councils/carbon_frames/carbon_frames.aspx

projects – in Bournemouth, Poole and Dorset there were studies on electric vehicles and travel behaviour and also a travel to school project².

Many local authorities are signatories to the **Nottingham Declaration on climate change** and thus committed to action across their corporate estate, services and community. There is also scope to build action on climate change, transport and air quality into the work of **Local Economic Partnerships (LEPs)**, many of which have identified low carbon growth as a core objective³.

The **Carbon Reduction Commitment Energy Efficiency Scheme** is now a requirement for most local authorities. However this does not at present apply to transport emissions.

2.1.4 Transport and Air quality

Transport and air quality policy has so far remained largely unchanged by the current Government. Transport policy is still guided by the **Future of Transport White Paper (2004)** though a new 'vision' for transport was published in 2011. Both support the move to low carbon transport and the need for infrastructure that promotes sustainable choices and good air quality.

Air quality policy is guided by the **UK Air Quality Strategy (2007)** and supported by **An Economic Analysis to inform the Air Quality Strategy**. Defra has published a range of guidance on air quality management⁴ including:

- Local Air Quality Management Policy Guidance (PG09)
- Local Air Quality Management Technical Guidance (TG09)
- Local Air Quality Management Practice Guidance 1: Economic Principles for the Assessment of Local Measures to Improve Air Quality
- Local Air Quality Management Practice Guidance 2 Practice Guidance to Local Authorities on Low Emissions Zones
- Local Air Quality Management Practice Guidance 3 Practice Guidance to Local Authorities on Measures to Encourage the Uptake of Low Emission Vehicles
- Local Air Quality Management Practice Guidance 4 Practice Guidance to Local Authorities on Measures to Encourage the Uptake of Retro-Fitted Abatement Equipment on Vehicles
- The **LES Good Practice Guidance**, published jointly by Defra and the LESP, is also available on the Defra site (see below) and shows how all these can be effectively integrated into local planning policies.

² <http://www.cagconsultants.co.uk/news/local-carbon-framework-pilots.html>

³ Again see the Local Carbon Frameworks Pilot report – link as above

⁴ <http://www.defra.gov.uk/environment/quality/air/air-quality/air-quality-publications/>

This guidance is clear as to the need to integrate air quality concerns into local planning. Defra and the devolved administration have also published **Air Pollution: Action in a changing climate** which makes the links between the need to curb local air pollution and tackling climate change. Action on air quality is also informed by the **UK national ecosystem assessment** and the recent **Natural Environment White Paper**.

2.1.5 Procurement

Defra has developed **Government Buying Standards for transport**⁵ and a **Sustainable Procurement Action Plan** and encourages local authorities to do likewise. The LGA and IDeA have developed a **sustainability and local government procurement guide**⁶ that encourages best practice including on transport.

At EU level the Directive on the **Promotion of Clean and Energy Efficient Road Transport vehicles** supports considerations of lifetime emissions and energy use to be taken into account in all purchasing decisions for new vehicles.

2.2 Local authority leadership and LESP support

As noted in 2.1, the Localism Act gives local authorities far greater scope to act freely in ways which best meet local needs, building on the wide variety of good practice local authorities are already taking to address transport emissions through planning.

Examples include:

- Oxford City Council, which has developed the Natural Resources Impact Assessment (NRIA), a low emissions assessment tool used on all developments comprising more than 10 dwellings or 2,000m² of commercial floors space
- The London Borough of Greenwich which has pioneered the use of S106 agreements to mitigate the effects of transport pollution, giving rise to the concept of low emission strategies
- Mid-Devon Council's use of Supplementary Planning Guidance (SPD) to drive contributions from new developments towards the cost of measures within the Air Quality Action Plan. Other councils have also used this approach – the SPD can cover planning requirements related to transport assessments and travel plans, cycle and car parking standards, and other initiatives related to sustainable travel such as policies on car clubs, electric vehicles etc.

⁵ <http://sd.defra.gov.uk/advice/public/buying/products/transport/>

⁶ <http://www.idea.gov.uk/idk/core/page.do?pageId=1707115>

- The development of Low Emission Strategies, at different scales and in different contexts, by local authorities including Wigan, Liverpool, Leeds, York, Sussex and Leicester

Supporting local authorities in this work is the **Low Emissions Strategies Partnership (LESP)**. Since its inception it has been successful in promoting the development of a 'low emission strategy' community among councils and in building understanding of the concepts around such strategies.

LESP has also been active in the development of tools, guidance, case studies and other materials that help local authorities in this work.

The **Low Emission Toolkit (LET)** enables the transport emissions from development sites to be estimated and the abatement options to be assessed in terms of different scenarios. The LET covers aspects of travel planning, car clubs, fleet transformation, the provision of low emissions infrastructure, vehicle substitution and user-based charging. More information on the LET is provided in the next section.

The **Low Emission Strategies Good Practice Guidance and SPD guidance** supports local authorities in using the planning system to reduce transport emissions. It sets out the key principles of low emissions strategies and provides case studies of good practice.

The SPD guidance, published in 2011, shows councils how to:

- Move away from exclusive consideration of pollutant concentrations towards including explicit emission reduction strategies
- Better integrate air quality and climate change
- Promote a clear list of Authority-friendly mitigation options

While the good practice guidance is for local authority planners rather than developers, it offers part of a framework of support for LESAM. The guidance also addresses how LES can be linked with Transport Assessment, again relevant to a LESAM.

2.3 Challenges facing local authorities

Those present at the LESAM workshop, and others interviewed for this research, highlighted a range of challenges facing local authorities in supporting a LESAM and developing new action on transport and air quality.

Key points were that:

- S106 and CIL are useful but some local authorities are currently wary about their use given the depressed state of the construction industry and the

significant number of successful challenges to S106 that developers were making

- Budget cuts in councils were causing real pressure on non-statutory requirements. Some air quality funds were also not being collected.
- Elected Members and Senior Managers did not see the issues covered by a LESAM as a priority area for action, and over-stretched planning departments were likely to be reluctant to anything that might add to their workload

Despite this it was felt that a LESAM could overcome these issues if it was:

- Designed to reduce costs or lead to better outcomes, for example through integration with an existing tool (e.g. BREEAM) or through reducing the need for other existing assessments such as AQA
- That clear benefits in terms of the community could be demonstrated – through reduced congestion, better health and air quality and economic vitality

2.4 Overview of Contextual review

The contextual review demonstrated the range of policy support underpinning the development of a LESAM and the clear links between an Assessment Method and UK Government objectives *inter alia* on air quality, climate change, transport, procurement and health. A LESAM could enhance the delivery of national policy and also meet the objectives of many local authorities.

Despite this, challenges would be faced in ensuring significant usage of a LESAM. The national drivers for local authority action in this area have largely been removed, and many local authorities are facing a number of years of spending and staff cuts.

This means that a new Assessment Method is likely to be most successful if it is affordable, can demonstrate real benefits, and where possible add to or help rationalise approaches based on existing tools and methods.

3. Concept and Option Appraisal

A desktop review was undertaken of a selection of existing tools, assessment methods and schemes, to understand how they might relate to any future LESAM. For each tool/process, the review specifically explored the:

- **Nature of the tool/method/scheme** including background to its development; situations in which the tool is used; and topics covered by the tool.
- **Degree to which transport and emissions are covered** including transport data collected, and mitigation measures covered.
- **Relevance to the LESAM** including the potential for post construction monitoring and the further integration of transport and emissions.

This review was then used to inform the option appraisal (Chapter 4).

3.1 Tools/processes reviewed

The following **tools/methods/schemes** were reviewed in-depth:

- Building Research Establishment Environmental Assessment Method (**BREEAM**)
- Code for Sustainable Homes (**CSH**)
- Leadership in Energy and Environmental Design (**LEED**)
- Air Quality Assessment (**AQA**)
- Low Emissions Toolkit (**LET**)
- Transport Assessments/ Travel Plan tools (**TAs/TPs**)
- ATTrBuTE (a Travel Plan assessment tool)
- Planning Emissions and Reduction Assessment Tool (**PERAT**)

At the workshop held on the 9th July it was also suggested that the **iTRACE**, a travel plan management application developed for Transport for London, be reviewed⁷. iTRACE provides a means of helping ensure that developments achieve what was set out in the travel plan/ any accompanying S106 Agreement and is of relevance to the post occupation element of LESAM. An emissions element could potentially be added to an iTRACE-type tool for post occupation monitoring.

The phone interviews also identified another method, **CEEQUAL**⁸. CEEQUAL is a sustainability standard that does cover some transport elements with a focus on the public realm. It could potentially be a complement to BREEAM and so therefore may be worth considering as an element of a LESAM.

Findings were reported for each item using a standard template. A summary of key aspects from the tools/ processes reviewed in-depth is provided in Table 1.

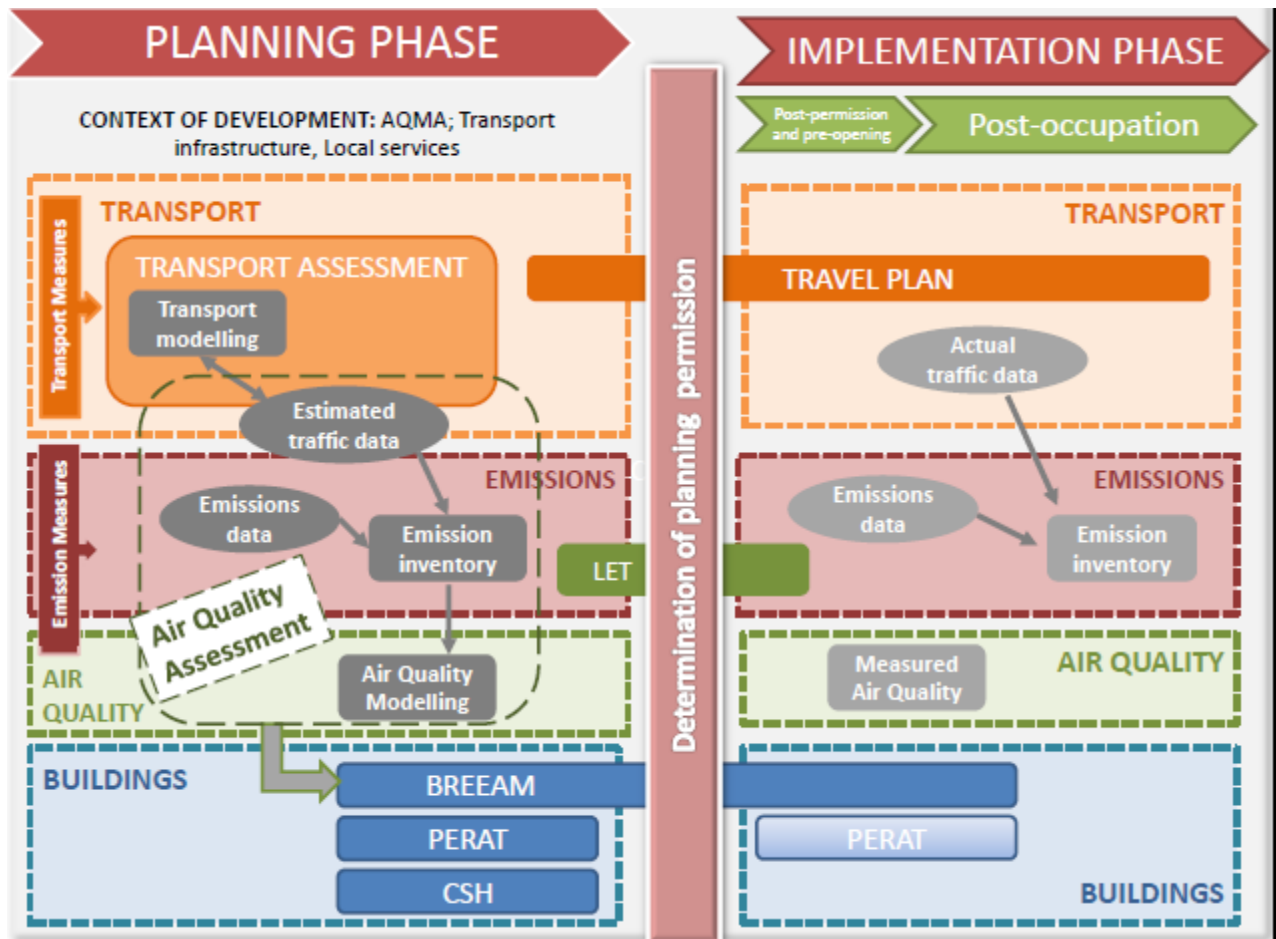
⁷ <http://www.itrace.org.uk/aboutus.aspx>

⁸ <http://www.ceequal.com/structure.html>

TABLE 1: EXISTING ASSESSMENT TOOLS/ PROCESSES: A SUMMARY OF KEY FINDINGS

	BREEAM	CSH	LEED	AQA	LET	TAs/TPs	ATTrBuTE	PERAT
Owner	BRE	HMG (managed by BRE Global)	US Green Building Council	Defra	LESP	DfT	Transport for London (TfL)	Croydon
Main Functions	Rating System Certification	Rating System Certification	Rating System	Impact Assessment	Impact Assessment Mitigation Design Physical Data Tool	Impact Assessment Method	Mitigation Design Benefits Assessment	Impact Assessment Method Physical Data Tool
Level of Use	High (UK & Global)	High, but selective	Not in UK	High (impact trigger)	Developmental Tool	High (impact trigger)	London only	Developmental Tool
Development Type	Different versions for a range of developments	Homes	Buildings Homes Neighbourhoods	All development	All development	All development	Site Travel Plans	All development
Building or Site Level	Building	Building	Building	Site	Site	Site	Site	Site
Land Use Types	Different versions for different situations	New housing only	Content is tailored according to nature of the development	All new build	All new build All current stock	Content is tailored according to nature of the development	Different versions for different situations	New build
Assessment Scope	All Environment	All Environment	All Environment	AQ Concentrations	AQ & CO2 Transport Emissions	Transport Activity	Travel Plans	Building Emissions
Transport Included?	Yes	No	No	Yes	Yes	Yes	No	To some extent (but outside tool)
Transport Data	none	n/a	n/a	Detailed fleet composition, but <u>local</u> activity only	Fleet composition and <u>footprint</u> activity	Peak period traffic counts	n/a	n/a
Assessment Method	Process based scores for facilities, amenities and location	n/a	n/a	Emission inventory and dispersion modelling	Fleet and emissions database/calculations	Uses the TRICS database and survey data	Web based application that checks travel plans	Emissions database and calculations
Scoring Approach	Process based score Qualitative Standards	1 to 6 star rating based on measures	Rating system based on a range of possible measures	Quantitative impacts. No formal standards (tho see EPUK sig. TH's)	Quantitative impacts. Standards in dev.	Quantitative impacts, No formal standards	Process based score Qualitative Standards	Quantitative impacts, reported against 'previous use' emissions.
Transport Mitigation?	Yes, but limited and not in considerable detail	No	No	Rarely dealt with in detail.	Yes	Yes, though does not cover all aspects of the typology	Yes, to an extent.	No
Certification	Yes (network of trained assessors)	Yes	Yes (Green Building Certification Institute)	No	No	No	No	No
Post occupancy monitoring	Yes, for some elements but not for transport	No	Yes, for some elements but not for transport	Yes in principle. Rare in practice.	Yes in principle. Practice in dev.	Yes in principle. Rare in practice (but becoming less so?)	Yes in principle. Rare in practice (but becoming less so?)	Yes in principle. Practice in dev.
Development opportunities	- Increasing transport weighting - expand measures	-transport could be included if agreed with HMG/BRE	- Potentially, but less attractive than other options available in the UK	- Adopt emission-based outcome metrics - strengthen mitigation measures/framework	- Covers significant aspects of a LESAM - integrates all types of measures	- Adopt stronger emission dimension	- Adopt stronger emission dimension	- integration with LET to provide an overall assessment

A summary of the links between existing tools reviewed and their associated data is provided in the diagram below. It can be seen that the majority of tools reviewed are used during the planning phase and focus mainly on the predicted impact of the development, although some tools are also used following occupation (or there are opportunities for the tool to be used following occupation e.g. PERAT), providing potential for assessing the actual impacts of the development.



4. Appraisal of different options

Drawing together all the research undertaken and discussions with the LESP, local authorities and other experts, four options were identified for appraisal:

'Do Nothing'	There are a number of existing tools and methods that combined could deliver the appraisal required to meet many of the objectives of the LESAM. One option is therefore to conclude that this is enough and there is no need to for new resources. However, at present there does not seem to be coherence to how these tools are used or a clear integrated approach to emissions based assessment.
Development of new resources	<p>The LESP could prepare new resources to help work in this field. This could involve the development of a prototype self-assessment method supported by guidance that helped draw together existing resources or fill gaps in current provision. Guidance could potentially be analogous to the EPUK Guidance developed for AQA and potentially cover:</p> <ul style="list-style-type: none"> a. TA and traffic data and how this can be used b. Emissions calculation tools such as LET and those used in AQA c. Guidance on measures and contextual factors, including the measure typology
A stand-alone LESAM	<p>This would be a new scheme, akin to BREEAM, that set out a full assessment, scoring and rating approach covering all required elements. Within this there are potentially 2 sub approaches:</p> <ul style="list-style-type: none"> a. <i>A self-assessment system</i> - where the approach and rating is developed and set out in a guidance document and perhaps tools. These would be freely available for others to use to provide a LESAM assessment of a development. This is in line with the LET or PERAT tools b. <i>An external assessment system</i> – where the LESAM assessment is carried out by an external third party trained and certified assessor so that it is independent. This is the route adopted for BREEAM
Integration of LESAM into another scheme	<p>No current scheme or tool covers all the areas required for a LESAM. However there is clear potential to develop an existing tool to incorporate a full transport and air quality assessment.</p> <p>Several of the methods considered have the potential to be developed to meet the needs of the LESAM. Based on the appraisal of existing resources and feedback from local authority officers the most promising existing option for development is BREEAM. This is based on the fact that BREEAM is widely known and understood by developers, written into many planning documents as a requirement, and supported by a network of assessors.</p> <p>A crucial issue here is whether BRE, as managers of BREEAM, would consider adapting their existing tool; also whether BREEAM, as a building</p>

	<p>based tool, will ever meet the needs of a LESAM fully.</p> <p>BREEAM standards are primarily used for non-domestic buildings, so there may also be a need to consider integration of LESAM into other standards, such as the Department of Communities and Local Government’s Code for Sustainable Homes, or the civil engineering standard CEEQUAL. It is also the case that, if the LESP wished, other avenues could be explored such as the integration of the LESAM with TA/AP and/or AQA. The same questions and issues outlined in the preceding paragraph would apply to these options as to BREEAM.</p>
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A simple summary of these approaches in terms of data and existing resources is shown in Table 2 below. This diagram indicates how each of the elements is handled in the different approaches. This underlines the fact that the approach taken with LESAM and the elements included are related.

Table 2: LESAM approaches and data requirements

	Traffic	Emissions	Context	Measures
Do Nothing	TA data available	AQA and LET tools available		TA/Travel Plan LET tool LES guide
New resources to support emissions assessment	Signpost TA and how data used	Signpost AQA and LET and how to use	Guidance on location issues	Typology, guidance and sign post
Stand alone LESAM	Calculate metric and benchmark	Calculate metric and benchmark	Check list and score	Check list and score
Integrate LESAM into BREEAM	Calculate metric and benchmark	Calculate metric and benchmark	Check list and score	Check list and score

4.1 Appraisal of options

The four options were then appraised against ten criteria, drawn from the tender brief provided by the LESP. The appraisal draws on the various strands of the research undertaken.

4.1.1 Resources required to develop and maintain the option

The level of management and resources required potentially increases as we move through the different approaches. In a simple form the management requirements can be summarised as:

Do nothing	No management or resource requirements.
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New resources	Resources required to develop and pilot self-assessment process and produce guidance, and any future updates. No on-going management required to administer scheme.
A stand-alone LESAM	In terms of the two sub-options: <i>A full self-assessment system</i> - resources required to produce support materials and future updates. Any tools could be developed from existing resources including LET and the low emissions hub. Review will be required to check how system works in practice. <i>An external assessment system</i> - resources required to set-up and develop scheme and associated guidance. A management system and resources will be required to train assessors and administer. Some or all of the on-going costs could be met from charging for training and certification.
Integrate LESAM into BREEAM and/or other standards	Resources required to develop materials and work with BRE to integrate into BREEAM. On-going management likely to be covered by BRE through their training and certification income. No income stream for LESP unless agreement could be reached with BRE.

4.1.2 Potential to meet all aspects of the LESAM

The central aim of the LESAM is to provide an integrated and comprehensive assessment. Any new provision must cover all aspects of transport and air quality.

Do nothing	Many though not all aspects of a LESAM are already covered in some way but with no coherence or integration. Areas not covered at present include (i) performance criteria/standards and (ii) a standard technical method, both important to a successful method.
New resources	The new resources would both signpost users to the range of materials and support already available, and also address gaps in current provision. Through doing so this could meet all aspects of a LESAM but may result in a complex and hard to use approach that would not be popular.
A stand-alone LESAM	Would cover all aspects if designed to do so for both sub-options.
Integrate LESAM into BREEAM and/or other standards	Would cover all aspects if designed to do so. Working with a third party would reduce control over the nature of the adopted method/scheme. The LESAM aspects could be 'swamped' by the rest of BREEAM criteria (e.g. could get a good BREEAM score with little action on LESAM element).

4.1.3 Data availability

The LESAM will involve both quantitative and qualitative aspects. Data availability is therefore crucial – either provided through existing mechanisms (such as TA) or generated by the tool itself.

Do nothing	Data covering most aspects of a LESAM is available but may prove hard to find and pull together.
New resources	These would signpost all existing data, and new data to fill gaps could also be developed.
A stand-alone LESAM	As part of the process of developing a LESAM, data needs could be analysed and the Assessment Method designed to provide all data requirements.
Integrate LESAM into BREEAM and/or other standards	As with a stand-alone LESAM, this option could ensure that all data is provided. Working with a third party would reduce control over the nature of the adopted method/scheme.

4.1.4 Likelihood of wide adoption

As the project brief notes, to be successful, the methodology must have potential for rapidly achieving a good level of adoption by local authorities and good levels of awareness/acceptance by developers.

Do nothing	Unlikely to lead to wide adoption. There is little evidence that many local authorities have or plan to develop a coherent assessment method.
New resources	Given the LESP network, there is ample scope to pilot new resources and to encourage their uptake once finalised. May be difficult to widen uptake beyond the network without other drivers being in place. May also be seen as just another burden and not be taken up by resource constrained LA officers.
A stand-alone LESAM	As above – there is a ready network of interested local authorities through the LESP. However, if there is a charge for the tool then may prove difficult to achieve wider uptake in present economic conditions.
Integrate LESAM into BREEAM and/or other standards	BREEAM is widely used and supported. Requirements to meet BREEAM standards (e.g. 'Very Good' or 'Excellent') are already written into many planning documents, as are requirements for different levels of the Code for Sustainable Homes. Uptake of measures and achievement of benefits would be contingent on the Revised BREEAM (or other) schemes effectively integrating with

	the LESAM approach, aims and level of ambition.
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4.1.5 User friendliness

To achieve high uptake and to ensure the best outcomes, the LESAM must be easily understood and used by local authority officers and developers.

Do nothing	It is unlikely that such an approach would be use-friendly, requiring as it would a knowledge of a wide variety of existing tools and how they fit together.
New resources	The framework created would help users to see how different resources could be applied in parallel and could address gaps in current provision. It would still be less user friendly than an integrated option.
A stand-alone LESAM	A new stand-alone LESAM would, if designed properly, be a user friendly and integrated resource tailored specifically to the needs identified by the LESP. The LESP already has a track record of designing tools and methodologies.
Integrate LESAM into BREEAM and/or other standards	<p>BREEAM is a tried and tested approach understood by many, with new versions taking on board feedback from previous ones.</p> <p>If all transport and air quality issues could be integrated with BREEAM this would have the potential of being user friendly; though the focus of BREEAM may always be on buildings rather than wider impacts, a concern expressed by some involved in this scoping study.</p> <p>Similarly, the Code for Sustainable Homes is widely used to assess sustainability for housing developments. The level of take-up of CEEQUAL has yet to be determined.</p>

4.1.6 Funding for Piloting

The tender brief identifies the need for a piloting phase where the Methodology and an associated Management Plan be developed using grant (or other) development funding to a point where it can be fully launched, maintained and further developed on a self-sustaining basis.

Do nothing	No funding required.
New resources	Limited funding required. Could either be written in house or tendered for via a consultancy. Work undertaken in developing new resources could be integrated with a later decision to develop a 'stand alone' LESAM.
A stand-alone LESAM	The cost of developing a LESAM from scratch could be significant. However the LESP already holds a significant amount of knowledge

	and has experience in method development, which would be expected to keep costs manageable.
Integrate LESAM into BREEAM and/or other standards	<p>Significant resources may be required to develop a scheme for integration into BREEAM. However, funding may be forthcoming from BRE if it could be integrated into a general 'refresh' of BREEAM. There may not be a cost to the LESP although this would not become clear without further discussion with BRE.</p> <p>There may also be scope for encouraging CLG to consider transport and emissions issues in their current review of the Code for Sustainable Homes.</p>

4.1.7 Potential for income generation for LESP

A widely used LESAM would have the potential to not only encourage sustainable transport and better air quality, but also to provide an income stream for the LESP that could support other work.

Do nothing	No scope for income generation.
New resources	Theoretical potential for some revenue raising but unlikely in practice that could be charged for if the aim was for high levels of uptake.
A stand-alone LESAM	Significant potential for income generation but only if LESAM is taken up by a significant number of local authorities. This could prove challenging in the current economic climate where local authorities would be reluctant to pay or to add to requirements on developers.
Integrate LESAM into BREEAM and/or other standards	Not clear. BREEAM is widely used and generates large income streams for BRE. Whether BRE would be willing to share a portion of income with the LESP, in return for support in the development and review of new versions of BREEAM, will only become clear through further discussion. Also some concerns about loss of IP to BRE for existing LESP research and tools.

4.1.8 Application to different types of development

The intention is for LESAM to be initially applied to new developments but there may be scope to extend it in future. There is also potential for it to be applied to smaller as well as larger developments, and residential as well as commercial projects.

Do nothing	Tools currently available do cover different types of development although TA and AQA only cover larger developments as a matter of course.
New resources	Guidance could show how different tools and methods could be applied

	in different contexts.
A stand-alone LESAM	Has potential to be applied to all types and scales of development. Decisions on this would form part of the discussion at the design phase. From the feedback from officers it appears there is support for concentrating on larger developments to begin with though the proposal below offers a light touch and more detailed appraisal depending on development size.
Integrate LESAM into BREEAM and/or other standards	BREEAM is usually only mandated (through planning) for buildings within a development rather than the development as a whole. However, different versions of the approach are in existence tailored to different types of development, specifically BREEAM for Communities designed to provide assessments at the development level.

4.1.9 Consistency, compatibility and where appropriate/advantageous ability to be integrated with existing provision (e.g. BREEAM).

Do nothing	Makes no changes to existing provision so no compatibility issues.
New resources	Seeks to clarify and integrate existing tools so should assist in promoting consistency although would not address all tensions with, for example TA or AQA.
A stand-alone LESAM	Would represent a new method. As with existing LESP work could be designed to integrate and add to existing provision but may provide some degree of overlap with current and future versions of BREEAM. Doesn't eliminate known tensions with TA and AQA and these method issues would need to be addressed.
Integrate LESAM into BREEAM and/or other standards	Would be part of BREEAM and/or other standards so no compatibility issues. Doesn't eliminate known tensions with TA and AQA and these method issues would need to be addressed.

4.1.10 Potential for future proofing (especially in the light of changes to national and regional planning policy)

Do nothing	Dependent on those responsible for individual methods and tools updating them in line with changes in policy.
New resources	Would need regular updating to remain consistent with the policy environment. As above, dependent on those responsible for individual methods and tools updating them in line with changes in policy.

A stand-alone LESAM	Would need regular updating to remain consistent with the policy environment.
Integrate LESAM into BREEAM and/or other standards	Would need regular updating to remain consistent with the policy environment.

The appraisal illustrated a range of opportunities and challenges for each of the options under consideration.

Overall it can be concluded that:

- The **'Do Nothing'** option will not achieve the objectives set for a LESAM as there are significant gaps in current coverage including (i) performance criteria/standards and (ii) a standard technical method, both important elements of a coherent approach.
- The **'new resources'** option does offer the potential for greater coherence in work on this area. It is also something that could be achieved relatively quickly and could help underpin any future work undertaken. On its own it would not create a truly integrated option that addresses all transport and air quality issues
- The **'Stand-alone'** LESAM would result in a tailored method either based on *self-assessment system* or an *external assessment system* where the LESAM assessment is carried out by an external third party trained and certified assessor:
 - **Self-Assessment** could evolve from action undertaken under the 'new resources' option. It would address all issues and would be less resource intense to manage (though also would not generate any income). This could be developed before a decision is made to develop a full External Assessment.
 - **External assessment** is the route adopted for BREEAM that would cover all issues and be specifically designed to meet the objectives of the LESP. There are some questions regarding likely uptake. It would also require significant resource input, although would build on existing work such as the LET and developing LESP Knowledge Hub. If an external assessment approach were adopted it would also require on-going support for a network of assessors, but might lead to some revenue generation in the longer term.

- The '**BREEAM and/or other standards**' option offers scope to link in with a widely used method that is already required by many planning authorities. BREEAM and CSH have an existing network of assessors and a range of other support processes. There are, however, some concerns about the prominence and independence of LESAM in BREEAM/other standards. Going forward this option is dependent on partners (BRE or others) co-operation and agreement – it may also mean that income generated flows exclusively to the partner rather than the LESP. Many issues around this option will only become clear following discussion with BRE and other potential partners. As noted earlier opportunities to integrate the LESAM with other existing standards and methods could also be explored.

Based on this analysis a preferred approach is proposed.

5. Preferred Approach

5.1 Outline

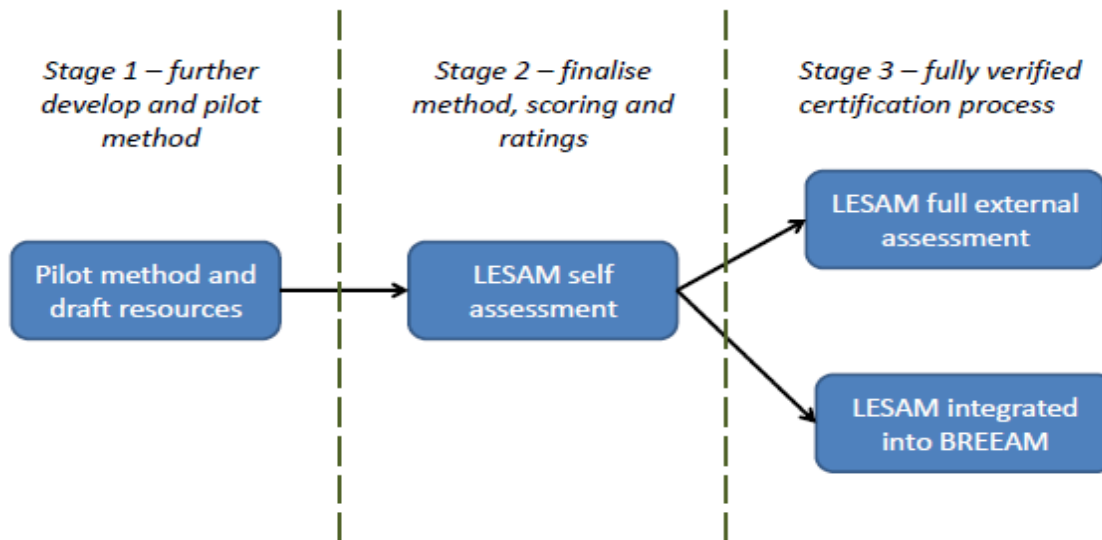
The four options appraised above were as set out in the Options paper. However, our analysis and discussion with local authority experts has pointed to an approach that draws on a number of these options which could all form part of a sequential approach through which a LESAM could develop over time.

It is proposed that a staged approach to the development of a LESAM is undertaken, as illustrated in figure 2 overleaf. This would allow flexibility in the pace of the development of a full LESAM and enable a range of options to be considered at every stage. This should be helpful in managing LESP resources and ensuring long term robustness of the approach.

The 'pathway' has three stages:

Stage 1 – which could be started immediately, would be to further develop the method and scoring approach. A 'front end' would take the user through an emission based assessment and how it can be integrated with local authority policies – it could also address gaps in current provision, link with the LET and the low emissions hub, and provide a pilot scoring system. This initial material would then be piloted with a number of LESP members to test its appropriateness.

Figure 2: Incremental approach to developing a LESAM



Stage 1 would also see further discussions and assessment of options undertaken:

- With **BRE** – to determine the potential for integration of transport and air quality concerns into BRE; the role the LESP could have in further developing BREEAM in this direction, and any financial arrangements that could lead to revenue streams. Discussions could also be undertaken with those involved in the development of other tools if these were felt to offer potential.
- With **Government** – DfT and DCLG in particular – to see if funding is available for the development of a standalone LESAM tool or for further adaptation of the Code for Sustainable Homes
- Internally, **within the LESP** – to determine the scope for development of current and future resources, such as the LET and the Low Emissions Hub, and the potential for these to become part of a LESAM. External resources, such as PERAT, could also be considered further

There would also be a significant element of engagement with local authorities and stakeholders to pilot resources and gain their feedback and views on what further steps, if any, to take.

Stage 2 – This would see the final development of the LESAM method and scoring approach after the initial piloting, and the production of a self-assessment system or tool for developments that would have agreed levels or ratings.

Stage 3 - where, if desired and agreed with partners, a fully verified assessment process would be developed. Based on the analysis undertaken, this would be based on one of two options, either (a) a full external assessment or (b) the integration with BREEAM or CSH and/or other tools.

It should be noted that there is potential for a degree of overlap between certain aspects of Stages 2 and 3. There is also a degree of flexibility as to how exactly the

LESAM is developed over time – the LESP may wish to revise the option structure as the LESAM develops based on the opportunities presented at each stage.

5.2 Summary of preferred methodology

Appendix 1 sets out the core methodology of the proposed LESAM. Key elements of the methodology are:

Definition: The overall concept and objective of the LESAM is a method to assess and rate the transport emissions performance of a development. An important part of the concept is that it is a standardised rating or 'badge' that is achieved for a development, rather than an assessment which is used to justify or support a development like a transport or air quality assessment. Hence it is envisaged in a similar fashion to the BREEAM where a given performance level or rating is achieved.

Boundaries: LESAM is focused purely on transport related emissions of a development and measures designed to mitigate or reduce these emissions. In terms of the geographical boundaries of the emissions related to a development LESAM will use the concept of '*footprint*' emissions. This ensures that the wider impacts of the development are considered.

Constraints: The key direct constraint to the use of LESAM will be the resources and time required to carry out the assessment for both developers and local authorities. There is a wider economic constraint related to the potential costs of adopting measures to reach an agreed LESAM score. These costs could be a significant constraint on uptake, particularly for the full Level 2 assessment.

Assessment criteria: Four areas of transport emissions related performance that will be assessed in the proposed LESAM methodology covering traffic activity and transport emissions (outcome based); and mitigation measures and contextual factors (measures based)

Assessment method: It is proposed that the 'outcome-based' assessment criteria are assessed using a direct quantitative calculation of the outcome, and the 'measures-based' criteria are assessed with a qualitative scoring approach.

Performance standards: The proposal going forward is to have two levels of rating within LESAM:

- *Level 1* - a simple 'measure-based' rating using just check list scoring of a development.
- *Level 2* - a full 'measure-based' and 'outcome-based' assessment using both the measures check list and the calculation of outcomes.

Data needs: The data needs for a level 1 assessment are fairly limited as they relate simply to a check list and scoring of measures as set out in the development design or in the final build. The main data needs arise when doing a full level two

assessment with the assessment of outcomes including the impact of mitigation measures.

5.3 Summary of Management Plan

The management plan is set out in appendix 2. There are a number of uncertainties in terms of how the methodology will be taken forward, which has made certain aspects of the management plan impossible to provide at the present time.

A 'phased' approach to development would appear to be the best option, with a pilot stage to develop the approach further and test, before a final decision is made as to whether to opt for the BREEAM option or a 'stand-alone' LESAM. Key aspects of the process can be summarised:

1. A self-assessment scheme, supported by resources which could act as the 'front end' should be prepared.
2. The two key options for the assessment method, for further exploration, should be:
 - BREEAM, or another tool or method
 - An evolution and combination of existing resources including the LET and Low Emissions Hub to be developed into either *Level 1* or *Level 2* as outlined above

The scale of potential development and on-going management costs needs to be further explored. Once a favoured approach is chosen it will ultimately need to be market tested. As noted above, the recommended approach enables the LESP to consider changes to the exact nature of the stages of the process and how they develop over time.

Appendix 2 sets out the likely implications of the different options under consideration on each aspect of the Management Plan.

6. Recommendations and Next Steps

Based on the analysis undertaken and discussions with the LESP, local authority practitioners, we recommend a phased approach is adopted: A pilot stage to develop the approach further and test, before a final decision is made as to whether to opt for the integration option (with BREEAM or potentially another method) or a 'stand-alone' LESAM – either a self-assessment option or a full method supported by accreditation and assessors.

It is recommended that the LESP review the contents of this report, and our recommendations, and consider how best to proceed with Stage 1 and beyond. Work on stage 1 will require further detailed discussions with LESP members and other local authorities to determine the desire for a LESAM and what options would receive the most support. Discussions should also be undertaken with BRE, the Government and others to assess the scope for further Stages and the potential for funding and institutional support. Detailed costs, which cannot be made at this stage, should also be prepared.

This Scoping Report sets the scene for future development work, and provides a methodology and management plan to move the LESAM forward. It is designed to be flexible and there is potential, based on the views of the LESP and the discussions undertaken with partners, to adopt a different development path that still draws on elements of what we propose.

APPENDICES

Appendix 1: Methodology

This appendix sets out the core methodology of the proposed LESAM covering:

- Key boundaries and constraints;
- The components/sub-components of the preferred methodology;
- Data needs, knowledge gaps and areas for development.

LESAM definitions, boundaries and constraints

The overall concept and objective of the LESAM is a method to assess and rate the transport emissions performance of a development. An important part of the concept is that it is a standardised rating or 'badge' that is achieved for a development, rather than an assessment which is used to justify or support a development like a transport or air quality assessment. Hence it is envisaged in a similar fashion to the BREEAM where a given performance level or rating is achieved.

In setting the methodology we first need to clarify the key definitions and boundaries that apply to LESAM.

Definitions

Term	Definition
Development	A building or group of buildings, and the related infrastructure such as roads and vehicle charging points. The development may comprise buildings for a single land use, such as a residential development, or a mix such as a residential and retail.
Measures	Elements or proposals within a development which are expected to contribute to mitigation of transport emissions and air quality impacts (e.g. cycle storage facilities;; charging points for electric vehicles)
Assessment Criteria	The aspects of a new development that will be checked by LESAM, which will include the range of measures to be implemented, contextual factors around the development and predicted or actual outcomes (e.g. transport emissions, air quality).

Assessment Method	The method used to assess these criteria, which may be quantitative (e.g. based on modelling of emissions or air quality outcomes) or qualitative (e.g. scoring based on whether particular measures or contextual factors are present in the development proposals).
Performance Standards	Defined levels of performance to which new developments can aspire, based on benchmarks for poor/average/good/excellent levels of performance in tackling transport emissions.
Certification Scheme	A system for certifying new developments according to the agreed performance standards, resulting in the award of a certificate of performance to each development

Boundaries

LESAM is focused purely on transport related emissions of a development and measures designed to mitigate or reduce these emissions. In terms of the geographical boundaries of the emissions related to a development LESAM will use the concept of *'footprint'* emissions.

Our definition of 'footprint' emissions is as follows:

'The emissions related to vehicle trips generated by or attracted to a development over their entire trip length'.

As such the emissions are not restricted to a geographical boundary around the site, as could be the case for an AQA, but encompass the emissions associated with all traffic activity related to the site. This ensures that the wider impacts of the development are considered.

Constraints

The key direct constraint to the use of LESAM will be the resources and time required to carry out the assessment for both developers and local authorities. For developers this could be an additional cost that they will resist paying and for local authorities it may be a resource in terms of reviewing and following through that they cannot afford. Related to the resource constraint will be the availability of data to carry out an assessment and the resources required to obtain this for the developer and/or his consultant.

At a wider level is the economic constraint related to the potential costs of adopting measures to reach an agreed LESAM score or get an improved score. These costs could be a significant constraint to uptake of the method or achieve high standards. Similarly, politically it can be difficult for local authorities to set high standards which

may make it unattractive for developers to come forward to implement potential necessary housing or retail schemes.

To reduce the burden on developers and local authorities the LESAM could be seen as an alternative to all or elements of an AQMA where air quality is considered to be a significant issue for a new development.

In addition it is proposed to have two levels of assessment, a light weight level 1 assessment and a full level 2 assessment. The definition of a level 1 and level 2 assessment is given in more detail in the section below on performance standards and rating.

It is proposed to have two levels in order to maintain the simplicity of the approach. However it is accepted that the level 2 assessment could be further subdivided or qualified depending on level of data used for the assessment (generic or more site specific).

A suggestion of when the different levels of assessment are applicable is set out below:

Assessment level	Development Size*	Transport	Emissions	Contextual triggers
No assessment	< 30 dwellings and/or <1,000m ² Floor area	No significant impact on site traffic footprint (Vkm)	No significant Site Emissions Footprint	
Level 1	30-80 dwellings and/or 1,000m ² to 2,000m ² floor area	Significant impact on site traffic footprint (vkm)	Significant Site Emissions Footprint	LA has AQ and/or climate change strategy covering emissions from new developments
Level 2	80 plus dwellings and/or greater than 2,000m ² floor area	Very Significant impact on site traffic footprint (vkm)	Very Significant Site Emissions Footprint	Development located within or near an AQMA, pollution hot spot and/or sensitive receptor

This suggests an approach where the LESAM is applied for a development of a certain size, transport/emissions impact or for specific contextual factors. The development size threshold is indicative, for the full LESAM this should be related to land use e.g. retail, office space, etc.

For transport and emissions an indication of threshold emissions per m² would need to be developed and like the development size this would likely be set by development type. However, in all cases these thresholds and triggers would be

provided as a guide of which LESAM assessment level to require of the development, with local planning offices making local decisions.

LESAM components

The LESAM will consist of three main components:

- Assessment criteria;
- Assessment methods and 'scoring metrics' used for each criteria;
- Performance standards and rating.

Assessment criteria

There are 4 areas of transport emissions related performance that will be assessed in the proposed LESAM methodology. The 4 criteria cover two 'outcome-based' criteria and two 'measures-based' criteria defined as follows:

Outcome-based

- *Traffic activity* - traffic activity generated by the development, in terms of both:
 - total trips and vehicle km generated;
 - and mode and vehicle type split.
- *Transport emissions* - transport emissions generated by the development covering CO₂, PM and NO_x, and defined in terms of:
 - Total transport emissions;
 - and normalised emissions per unit floor area of development.

Measures-based

- *Mitigation measures* - assessment of appropriate measures to minimise transport emissions. These will be assessed within a clear framework or typology of measures as set out below. This will both encourage adoption of measures and allow assessment of the measures adopted.
- *Contextual factors* - in terms of proximity to transport infrastructure and amenities that will affect the performance and success of a development in terms of emissions generated.

The proposed typology of mitigation measures and contextual factors is set out in figure A1 below. The measures are categorised as those that reduce transport demand by either shifting mode (S) or reducing demand (R), and those that directly improve the emissions performance of vehicles (I). The table also indicates those measures that more directly reduce emissions and those that are supporting. The impact of supporting measures and contextual factors, although not direct, are still important considerations in terms of the effectiveness of other measures and potential of the development overall.

Figure A1: Proposed typology of measures

T Code	Type	I Code	Measure description	Transport		Emissions
				R	S	I
A	Information and management	A1	Travel Plans	Y	Y	
		A2	Delivery and service plans	Y	Y	
		A3	Ecodriver training and advice			Y
B	Vehicle Share/Rental Schemes	B1	Bicycle/E- bike rental scheme	Y	Y	
		B2	Standard car clubs/pool cars	Y	Y	
		B3	Low Emission car club/pool cars	Y	Y	Y
C	Fleet Transformation Incentives	C1	Emission based parking allocation			Y
		C2	Emission based parking charges/fees			Y
		C3	Site Low Emission Zone			Y
		C4	Low Emission Taxi Rank			Y
		C5	Emission based access/user charge			Y
D	Low emission site fleets	D1	Green Fleet Investment			Y
		D2	Fleet management practices			Y
E	Design and Infrastructure	E1	Cycle lanes and related provision	Y	Y	
		E2	Walking related provision	Y	Y	
		E3	Public transport related provision	Y	Y	
		E4	Parking provision and management	Y	Y	
		E5	IT and workspace	Y		
		E6	Electric infrastructure			Y
		E7	Gas/Biomethane infrastructure			Y
F	Off Site Financial Contributions	F1	S106 or CIL contributions	Y	Y	Y
G	Contextual factors	O1	Proximity to AQMA or sensitive receptors			
		O2	Proximity to transport infrastructure	Y	Y	
		O3	Proximity to services	Y		
		O4	Availability of local low emission infrastructure			Y
	Direct measure					
	Supporting measure					

Assessment methods

It is intended that LESAM should have the option of being used:

- at the design stage as part of planning and so be assessed prior to construction and occupation;
- after construction and prior to occupation to confirm planning conditions have been discharged;
- with existing occupied buildings.

It is proposed that the 'outcome-based' assessment criteria are assessed using a direct quantitative calculation of the outcome, and the 'measures-based' criteria are assessed with a qualitative scoring approach.

Quantitative assessment of 'outcome-based' criteria

- *Traffic activity* - it is anticipated that this will be assessed using:
 - default national data such as that in the LET to provide benchmark results;
 - more site specific data from the Transport Assessment and any additional assumptions to get full 24hr and annual traffic flows during the planning stage, to provide the *anticipated* impact of the development;
 - observed traffic activity following occupation of the development, which will provide the *actual* impact of the development.
- *Emissions performance* - will require both the use of traffic data from above and vehicle emissions data. It is anticipated this can then be used to provide the emissions calculation either:
 - as part of an air quality assessment, which will require an emissions inventory step;
 - or using the Low Emissions Toolkit as either a separate tool or linked directly to the LESAM.

Qualitative assessment of measures-based criteria

In this case the approach proposed is to use a checklist and score a value for the inclusion of a given measure. For example scoring 1 for having electric charging points and 2 for more than 5 charging points.

The checklist will use the measures set out in the typology of measures described above as the basis of the assessment. For each measure a metric will be defined to assess the level adoption of the measures and provide a score. A set of initial metrics is proposed as shown in Figure A2 below.

At this stage the metrics are indicative and will need to be considered further in the development of the pilot LESAM scheme. Also the actual score assigned will need to be developed further. The development of these metrics and standards should build on existing standards such as for vehicles emissions in the Government buying standards, LESP charging point standards and the ECO stars fleet standards.

Figure A2: Suggested scoring metrics for the typology of measures

T Code	Type	I Code	Measure description	Scoring approach*
A	Information and management	A1	Travel Plans	Relate to TfL ATTRBuTE Tool
		A2	Delivery and service plans	
		A3	Ecodriver training and advice	Number of drivers trained as % of total
B	Vehicle Share/Rental Schemes	B1	Bicycle/E- bike rental scheme	Number of bikes/m2
		B2	Standard car clubs/pool cars	Number of cars/m2
		B3	Low Emission car club/pool cars	Relation to Euro standard (inc zero emission)
C	Fleet Transformation Incentives	C1	Emission based parking allocation	Relation to Euro standard (inc zero emission)
		C2	Emission based parking charges/fees	Relation to Euro standard (inc zero emission)
		C3	Site Low Emission Zone	Relation to Euro standard (inc zero emission)
		C4	Low Emission Taxi Rank	Relation to Euro standard (inc zero emission)
		C5	Emission based access/user charge	Relation to Euro standard (inc zero emission)
D	Low emission site fleets	D1	Green Fleet Investment	Relate to vehicle technology/emission standard
		D2	Fleet management practices	have sub-check list for specific techniques
E	Design and Infrastructure	E1	Cycle lanes and related provision	Key elements and number per m2
		E2	Walking related provision	Key elements and number per m2
		E3	Public transport related provision	Key elements and number per m2
		E4	Parking provision and management	Number per meter squared and allocation criteria
		E5	IT and workspace	Key elements and number per m2
		E6	Electric infrastructure	Number of charge points per m2
		E7	Gas/Biomethane infrastructure	Number of refuelling points per m2
F	Off Site Financial Contributions	F1	\$106 or CIL contributions	amount per m2
G	Contextual factors	O1	Proximity to AQMA or sensitive receptors	In, near, away from
		O2	Proximity to transport infrastructure	Relate to accessibility measures such as TfL PTAL measure
		O3	Proximity to services	Relate to accessibility measures or data
		O4	Availability of local low emission infrastructure	Min dist to infrastructure

* Scoring would need to reflect development type

Performance standards and rating

The next step after assessment, or along with assessment, is how to rate a development with the LESAM system in terms of how well it performs. The proposal going forward is to have two levels of rating within LESAM:

- *Level 1* - a simple 'measure-based' rating using just check list scoring of a development.
- *Level 2* - a full 'measure-base' and 'outcome-based' assessment using both the measures check list and the calculation of outcomes.

A level 1 assessment would be carried out where a development was small and a full assessment could not be justified on cost and resource ground, or where emissions and air quality are not a major consideration. A level 2 assessment would be carried out for larger developments and where air quality and emissions are considered more significant such as in or near an AQMA.

In both cases the assessment can be carried out both pre and post construction and occupation. This would allow planning to set a level at the design stage and require this is also achieved post construction and occupation.

Level 1 - 'measure-based' rating

The measure based rating will be calculated between 100% and 0% where 100% is the maximum score possible for measures for that development and 0% is the minimum score. The rating of the development would then be defined in the following way:

Rating	Score	Performance description
Poor	<30%	Worse than current standard practice
Average	30-49%	Current standard practice
Good	50-69%	Good practice
Very Good	70-80%	Best practice
Excellent	>80%	Exemplar

In fully developing this rating scheme for the pilot LESAM expert views and consensus will be required to defined current practice, best practice, etc and to align the measure scoring to this consensus.

Level 2 - 'outcome and measure based' rating

For a level 2 LESAM rating the proposal is to achieve both a given measure score and an emissions performance score. At this stage it is not proposed to use the transport activity out-comes as a direct part of the rating, but as an indirect part of the rating as a step to the assessment of the emissions score.

The process for calculating the emissions score would be via the following metric as follows:

1. calculate vkm's generated by the development for each key mode;
2. apply emission factors to calculate total CO₂, NO_x and PM emissions footprint from the development
3. normalise by development floor area or number of dwellings
4. combine emissions into a single normalised value using damage cost data for each pollutant.

Step 4 is a suggested approach giving a single emissions metric and score, rather than one for each pollutant. However, this may undervalue the importance of NO_x emissions which is the pollutant causing most limit value breaches. An alternative weighting could be developed or the combined emissions metric could be complemented by providing the component pollutants results as part of the overall output of the assessment.

The rating would then be calculated by first setting a benchmark emissions metric for the given development. This benchmark would be expected to represent current practice for the development and would be defined as follows:

- Benchmark vkm - defined using standard trip generation data from the TRICS/TRAVL databases and using average trip length data.
- Benchmark emissions - using the benchmark vkm, apply current national average fleet emissions factors for given year.
- Convert benchmark emissions into metric described above.

Secondly an emissions metric is calculated for the specific site accounting for any proposed mitigation measures and their impact of traffic levels and vehicle emissions.

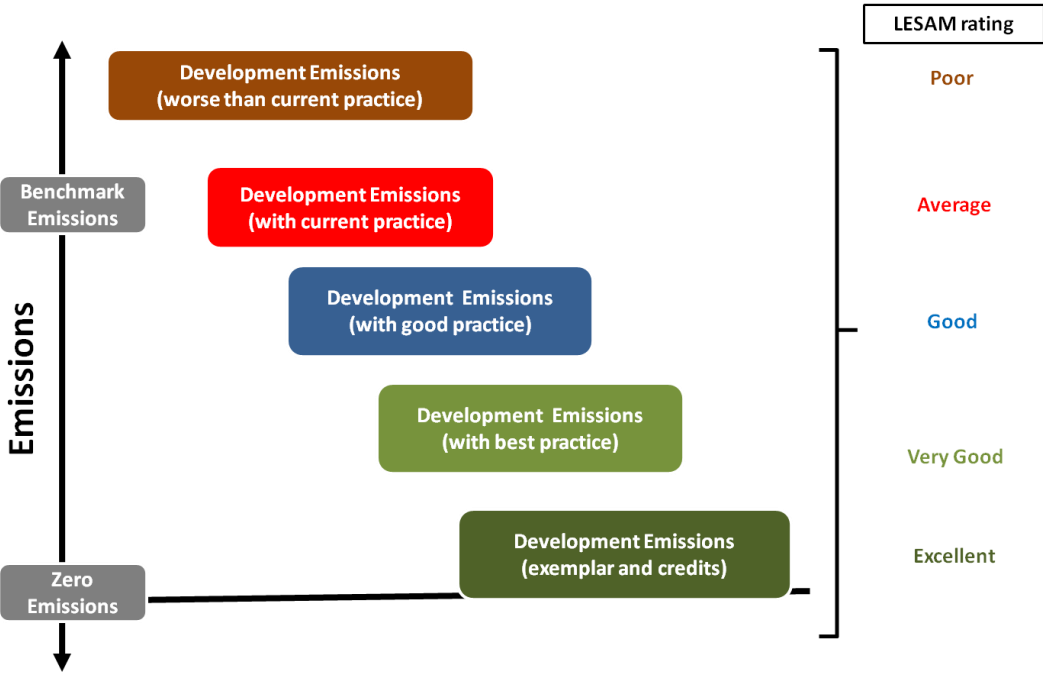
The data for calculating the benchmark and site specific emissions metric is already available in the LESP Low Emissions Toolkit (LET). It is proposed that the LET is used as the base calculation module for the emissions metric, with the option of using bespoke data or actual data if available from TA's or post occupation measurement data. The calculation of the site specific emissions metric can therefore be based on different levels of input data from just generic data to increasingly site specific. The level of input data could be recognised in a qualification or subdivision of the level 2 rating.

The emissions rating would then be expressed as the percentage difference between the benchmark and site specific emissions metric. A suggested rating based on this percentage difference is suggested below:

Rating	Measure Score	Percentage of emissions metric
Poor	<30%	>110%
Average	30-49%	109%-81%
Good	50-69%	80-51%
Very Good	70-80%	50-30%
Excellent	>80%	<30%

To achieve a given rating a development would have to achieve both the measure score and the emissions performance score. In calibrating the final LESAM rating approach it might be sensible to use the LET to assess the measure score on emission reduction to try and get some level of compatibility between the measure score and the emissions metric performance. However, it needs to be recognised that supporting and contextual measures will not be reflected in a direct impact assessment using LET, and so complete comparability will not necessarily be possible.

Figure A3 LESAM rating scheme



In the longer term use of post construction LESAM ratings, using actual traffic and fleet data will help evaluate the comparability of the measure Score and emission metric and also provide feedback on the effectiveness of given packages of measures.

This overall approach to the LESAM rating scheme is shown indicatively in Figure A3 above. This shows an average rating being achieved for current standard practice and hence with an emissions score close to the benchmark score. This improves through good and best practice developments to exemplar developments that will approach zero emissions.

Data needs

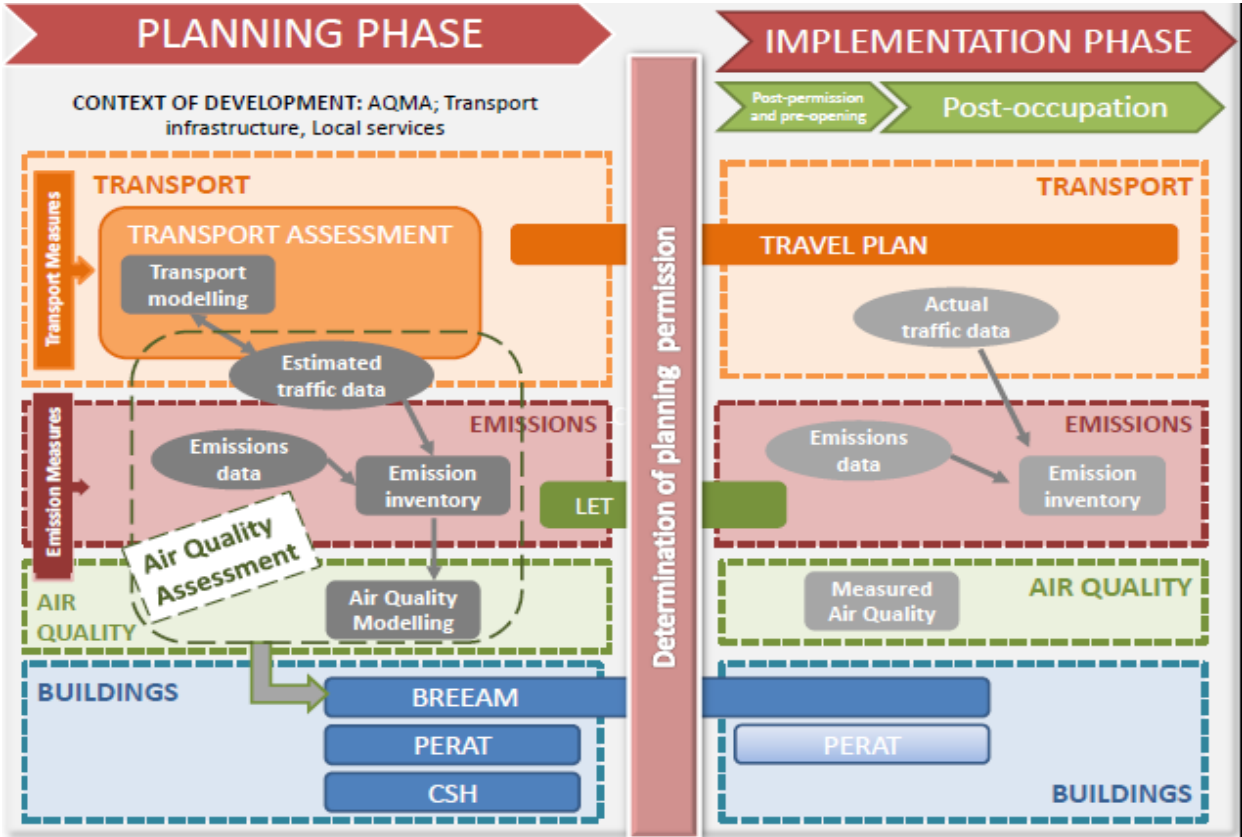
The data needs for a level 1 assessment are fairly limited as they relate simply to a check list measures as set out in the development design or in the final build. The main data needs arise when doing a full level 2 assessment with the assessment of outcomes including the impact of mitigation measures. A summary of the key data needs and availability is set out below:

Data requirement for assessment/calculation of	Data availability at the design stage	Data availability post construction/occupation
Development traffic activity <ul style="list-style-type: none"> • VKM • Mode/vehicle split 	Generic data or data from transport assessment (may need some additional assumptions to turn peak traffic into annual averages to give full footprint)	Travel plan surveys, traffic count data
Traffic benchmark (against which to rate development)	TRICS/TRAVL data National average trip lengths	TRICS/TRAVL data National average trip lengths
Emissions metric for development <ul style="list-style-type: none"> • Fleet data • Emission factors 	Data from AQA inventory step or tools such as LET	Actual fleet data, tools such as LET
Emissions benchmark (against which to rate development)	National average fleet data	National average fleet data
Measures adopted in the development	Check list from design	Check list of actually implemented measures
Measure impact	Potentially available from a range of sources, but includes LET, LESP Hub, and government guidance on best practice.	Actual data on traffic and fleet composition, if possible to disaggregate impact of individual measures.

A range of this data is already generated from existing assessment and evaluation processes required for new developed primarily in Transport Assessments and Air Quality Assessments. The links and flows of data between these assessment processes and relevance to LESAM is indicated in Figure A4 below.

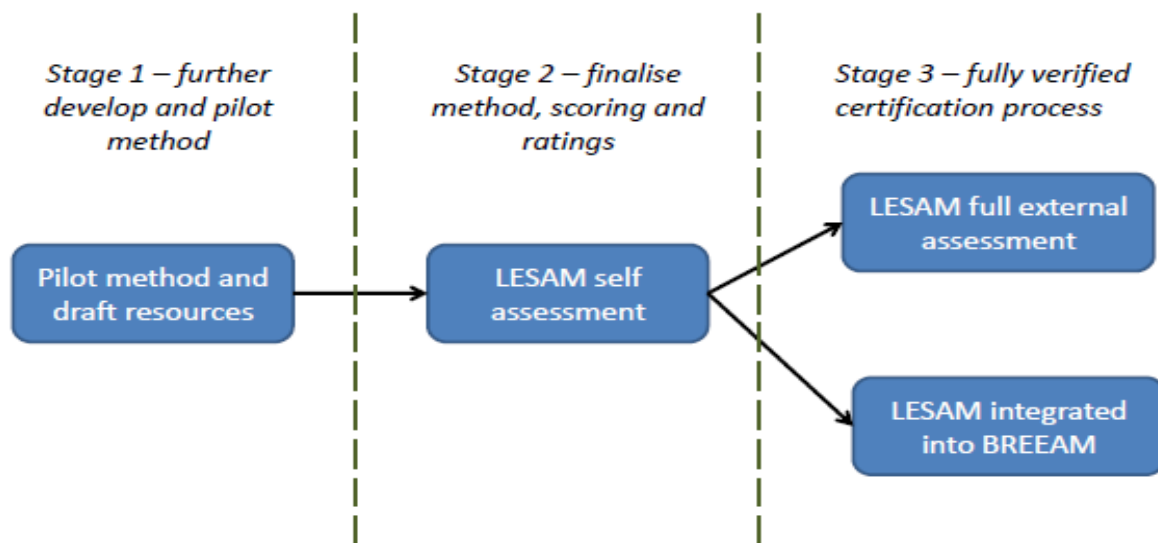
Essentially traffic data will be available from the transport assessment and flow into air quality assessments. The air quality assessment will provide emissions calculations, along with the LET. These provide the core data necessary for the LESAM outcome based assessment. In addition it shows that the data sets are slightly different from the design and planning stage to the post construction and occupation stage. However, there is a link between these two stages, especially around the validation of a design in terms actual performance. Also a full LESAM could span both phases with a LESAM standard to be achieved at planning stage and confirmed when built and occupied.

Figure A4 Data flows and availability from existing assessment processes



Appendix 2: Management Plan

This research, and conversations with local authority practitioners and other experts, has highlighted a range of options for a LESAM, all of which have merits and also disadvantages.



Based on the analysis the above 'pathway' approach is proposed. The benefit of this is that it allows current resources to be strengthened while keeping options open as to the end point, depending on how discussions with various parties develop.

The 'pathway' has three stages:

Stage 1 – which could be started immediately would be to develop a draft self-assessment LESAM and pilot this with LESP members and others.

Criteria/standards, a detailed technical method and supporting documentation and guidance should be developed. Stage 1 could also see, in parallel, further discussions and assessment of options undertaken:

- With BRE – to determine the potential for integration of transport and air quality concerns into BRE; the role the LESP could have in further developing BREEAM in this direction, and any financial arrangements that could lead to revenue streams
- With Government – DfT and DCLG in particular – to see if funding is available for the development of a standalone LESAM tool or for further adaptation of the Code for Sustainable Homes
- Internally, within the LESP – To determine the scope for development of current and future resources, such as the LET and the Low Emissions Hub, and the potential for these to become part of a LESAM. External resources, such as PERAT, could also be considered further

Engagement with local authority practitioners and others will be critical to the success of this Stage. Engagement will be needed:

- To establish the views of practitioners, based on their own views and this Scoping study, as to their preferred options; gauge their support and buy-in to the process; and raise awareness and the profile of the LESAM and its principles/aims
- To trial, test and refine the approach through practical testing throughout Stage 1

Stage 2 – This would see the final development of the LESAM method and scoring approach after the initial piloting, the production of a self-assessment system or tool for developments that would have agreed levels or ratings, and a management plan for this self-assessment system.

Stage 3 - where, if desired and agreed with partners, a fully verified assessment process would be developed. Based on the analysis undertaken, this would be based on one of two options, either (a) a full external assessment or (b) the integration with BREEAM and potentially CSH.

Components of a management plan

The management plan covers:

- Oversight, administrative and management mechanisms for national roll out of the methodology
- Pre/post development assurance (including certification, quality assurance processes, trained assessors)
- Requirements and mechanisms for benefits demonstration/enforcement
- Requirements and mechanisms for integration with other related methodologies, the wider planning process and LA policies/plans
- Assessment of implementation costs for (i) local planning authorities (ii) Developers and (iii) the LESAM administrator
- Potential and preferred funding models for all identified costs
- Projected benefits for national adoption plus Major Risks Appraisal (including critical knowledge gaps and recommended steps to address them)
- All other components necessary to establish, implement and maintain an effective methodology

More on each of these is provided under the headings below. For some issues it is not possible to provide detail at present given that the recommended approach involves further discussion and refinement of options.

Outline of each aspect of methodology and management plan

This section describes how each aspect of the Management Plan could be developed and implemented.

Oversight, administrative and management mechanisms for national roll out of the methodology

Significant elements of the future path will be decided by the LESP and partners depending on the outcome of discussions. The following approach is proposed, but may be subject to alteration based on the exact nature of discussions undertaken.

Key stages will be:

- Full consultation on the final Scoping Report among the wider LESP network and with partners. In particular it will be important to review the typology and the threshold levels set along with other comments on the viability and desirability of the various options appraised and the scope for funding
- Review of feedback from the consultation
- Development of pilot approach and materials to trial with LESP members and act as basis for final LESAM
- Parallel discussions to be held:
 - With BRE- to determine the potential for integration of transport and air quality concerns into BREEAM; the role the LESP could have in further developing BREEAM in this direction, and any financial arrangements that could lead to revenue streams
 - With DoT and DCLG – to see if funding is available for the development of a standalone LESAM tool or (potentially) for further adaptation of the Code for Sustainable Homes
 - Internally, within the LESP – To determine the scope for development of current and future resources, such as the LET and the Low Emissions Hub, and the potential for these to become part of a LESAM. External resources, such as PERAT, could also be considered further

The administration of this process should either be undertaken directly by the LESP or overseen by the LESP Board.

Pre/post development assurance (including certification, quality assurance processes, trained assessors)

As noted above, the proposal going forward is to have two levels of rating within LESAM:

- *Level 1* - a simple 'measure-based' rating using just check list scoring of a development.
- *Level 2* - a full 'measure-base' and 'outcome-based' assessment using both the measures check list and the calculation of outcomes.

A level 1 assessment would be carried out where a development was small and a full assessment could not be justified on cost and resource ground, or where emissions and air quality were not a major consideration. A level 2 assessment would be carried out for larger developments and where air quality and emissions are considered more significant.

In both cases the assessment can be carried out both pre and post construction and occupation. This would allow planning to set a level at the design stage and require this is also achieved post construction and occupation.

The exact nature of assurance processes cannot be determined until a decision is made on the process that is adopted. If the BREEAM option is pursued then certification, quality assurance and assessment processes already exist and would be applied to an updated BREEAM covering transport and air quality. BREEAM has certified over 200,000 buildings worldwide and has many hundreds of trained assessors throughout the UK. BRE provides training and reviews the quality of assessments undertaken by new assessors.

If the option to develop a 'stand-alone' LESAM is taken then decisions as to certification, quality assurance and assessment will need to be taken. The LESP – either directly or through a contract with a 3rd party – would appear to be the obvious home for certification and quality assurance. The development of a network of trained assessors could prove challenging - however this could grow over time as the LESAM becomes more widely adopted. Again it would be appropriate for the LESP to oversee assessors.

As noted earlier, the discussions around the adaptation of other tools may also be felt to be appropriate. The adaptation of other tools is likely to present similar benefits and challenges to the adaptation of BREEAM.

Requirements and mechanisms for benefits demonstration/enforcement

BRE checks the assessments undertaken by new assessors. As BREEAM is based on a scoring system there is a reliance on the proper recording of measures at design stage and that these measures are properly delivered in the final design. This would be true also of a 'self-assessment' scheme or a stand-alone LESAM.

Requirements and mechanisms for integration with other related methodologies, the wider planning process and LA policies/plans

BREEAM is already a requirement of many LA policies and local planning documents. If transport and air quality become mandatory aspects of a revised BREEAM then through BREEAM there will be a requirement for them to be addressed.

If the alternative approach is taken then a strategy will have to be developed to:

- Encourage local authorities to adopt the LESAM as a requirement for developments alongside or as an alternative to AQA

- Establish mechanisms to ensure that the LESAM is revised at regular intervals to take into account developments in other methodologies and in the wider planning environment

Assessment of implementation costs for (i) local planning authorities (ii) Developers and (iii) the LESAM administrator

This Scoping Report recommends an incremental approach that can be developed as and when opportunities and funding become available.

In terms of (i) cost to local planning authorities:

- There will be no costs to Stage 1 except in offers time to help with development
- There will be only limited resource costs (in terms of staff time) for the self-assessment. Given current financial conditions it is unlikely that the LESP will be able to charge for a self-assessment tool so there will be no financial costs. However, this cannot be determined without full consultation with local authorities as to their willingness to use and to pay for a self-assessment or other tool
- The costs of a full Stage 3 LESAM will be borne by developers with only limited resource costs to local authorities. These will be largely in terms of office time in overseeing the use of the LESAM by local developers and monitoring on-going action post -development. It is hard to assess these costs without knowing the exact nature of the approach adopted but is in not likely to require more than a few hours per development

For (ii) Developers:

- The checklist approach would involve no significant costs except some staff time
- There are two aspects to the cost of a full LESAM - the actual assessment whether done in house, by consultants or by external verifiers; and the certification cost (i.e. stamp of approval) from LESP or BRE. For a BREEAM assessment the assessor has a charge and has to pay a fee to BRE. The cost of a BREEAM assessment is not fixed but likely to be in the order of £2-3,000 – a stand alone LESAM is likely to be able to charge a similar figure.
- There is scope for the cost to be offset by a removal of a requirement for a TA or AQA. The costs of these vary significantly between different sizes of development.

For (iii) the LESAM administrator:

The costs of developing the pilot method/tools and guidance would depend on whether this is done through the LESP (as part of an existing contract for support) or is tendered more widely.

The next step will be to further develop the method and links with LESP resources and develop a pilot method/guidance for trialling with LESP members. Without a clear specification for this work it is difficult to estimate cost. However is likely to be in the region of £30-50,000 if tendered to a consultancy, based on an assessment of the number of days worked required to map existing provision, develop the outline self-assessment tool and guidance and address gaps in data and guidance. There would also be costs for piloting and consultation with stakeholders. The cost of undertaking all or part of this work 'in house' may be less.

The cost implications of the development of a full LESAM also cannot be quantified at this stage.

- If the BREEAM option is taken then the cost to the LESP will be dependent of the arrangement negotiated with BRE – this will involve decisions on the costs of developing the Method and the sharing of income from the revised BREEAM
- If the 'stand-alone' LESAM option is taken then there will be costs. However these may be met in part or wholly by grants or support or recouped through charging for the product when ready

Once the final approach is agreed a full costing of the preferred option will have to be taken.

Potential and preferred funding models for all identified costs

If integrated with BREEAM then the cost burden of the assessment will, as now, fall on developers – though it is up to individual authorities to decide how this may be applied in practice.

If a stand-alone LESAM is developed then the development costs could be sought from Government or other sponsors. There would be the potential to recoup costs through sale of the tool through further research would be required on what costs could be borne and what demand was likely to be. Feedback from local authorities and developers is that there is not likely to be widespread demand for this at present.

Projected benefits for national adoption

The exact benefits of national adoption will only become clear when the final approach is agreed. The clear headline benefits would be:

- Better outcomes in terms of transport and air quality
- Most sustainable design and management of buildings
- Economic benefits in terms of reduced congestion and reduced costs of treatment for air pollution related complaints; also boosting the resilience of the economy through boosting infrastructure for a low carbon future
- Cutting greenhouse gas emissions
- Wider health benefits through reduced air pollution and noise levels and higher levels of exercise

All other components necessary to establish, implement and maintain an effective methodology

The outline of the methodology, detailing the components of the LESAM, is provided in the section above (Appendix 1).

Knowledge gaps and risk

They key knowledge gaps in relation to the LESAM process are:

- *Uncertainly on the impact of measures* - the evidence base on this is growing and there is significant data in the LET, various studies and Government reports and the LESP Hub. A particular area of weakness is in the impact of indirect and soft measures.
- *Definition of the measure scoring* - refining the initial ideas set out here and relating to expert consensus on current practice, good practice and best practice. This should be seen as a key task in the next stage of the development of LESAM.
- *Refine the emissions metric* - building on the initial ideas given here detail the calculation of the emissions metric using agreed damage costs, and refine the percentage changes on this in relation to the baseline value and the suggested performance rating.
- *Explore the relationship between the measures score and the emission metric* - this effectively ties together all three of the above points. Testing and exploring this relationship with the LET tool will help get a better balance between the measure score and the emission metric, and help understand the level of data and understanding on measure impacts.

The next phase of development and piloting of the LET should focus on these last three points together with the development of a process guidance to act as the 'front end' of a LESAM tool or approach.

In terms of risks, the most significant are:

Management and LESAM development risks

- BRE (or those managing other appropriate methods or tools) do not wish to pursue this option or only wish to pursue it in part, and thus close off this option
- The LESP cannot raise the funding to develop a stand-alone LESAM
- That uptake is low resulting in the need to offer the assessment method for little or no cost while also having little impact on emissions

Risks related to technical issues

- Data availability /compatibility issues – The data required for a LESAM will be drawn from a variety of sources and be developed using a range of methodologies. Care will have to be taken that the final LESAM provides a viable technical method at acceptable cost, accurate assessments of actions and approaches and allows appropriate comparability.
- Travel plans and emissions performance approaches - It is worth noting that 'travel plans' increasingly comprise a package of hard and soft measures, which cross over boundaries within the proposed LESAM typology. This creates a tension between treating travel plans as a package (for implementation purposes) and breaking them down into constituent parts (for emission assessment purposes). This 'boundary tension' needs to be borne in mind.
- Two levels of assessment have been proposed as these provide significantly different approaches (in terms of data and time) but maintain a simple structure. In terms of Level 1 and 2 assessments there are risks that Level 1 could become a 'tick box' exercise while Level 2 could be too onerous or intensive. As noted in the text the LET provides options for graduating the amount of detail required for Level 2 assessment thereby helping to mitigate this risk.
- The measure score and the performance score need to be generally comparable. However, this will not be entirely possible since 'supporting measures' will score as measures, but may not provide direct emission benefits proportionate to their overall value (For example the installation of EV charging points primarily improve infrastructure for future action). It is also therefore important that Level 2 assessment retains an element of the measure score alongside the quantitative emissions performance score, to ensure that support measures are given appropriate weighting/credit.
- The Community Infrastructure Levy potentially constrains the ability to seek proportionate contributions to offsite measures. This issue, also faced in other aspects of carbon management, has potential implications for LESAM. Where LESAM might be used to encourage offsite measures then there need to be thought as to how that be best integrated with CIL.

Appendix 3: Note of LESAM Workshop

Workshop attendees: Mark Wolstencroft, Birmingham CC, Paul Cartmell, Lancaster CC, Gary Mahoney, Sefton Borough Council, Lynn Fawthrop, Dudley Council, Rob Pilling, Green Sphere, Phil Matthews, CAG, Guy Hitchcock, STS

1. Introduction

As part of the scoping study on a Low Emission Strategies Assessment Model (LESAM) a workshop with local authority practitioners was held in Birmingham on the 9th July. This paper summarises the discussion and the key points raised and will feed into the preparation of the final report.

2. Context

The operating environment for local government has changed significantly over recent years. Many of the drivers and support mechanisms that drove action on transport and air quality have been removed, the key ones being the National Indicators (NIs), the regional support structures on climate change, planning and sustainable development and the removal of a PPS on transport and air quality.

In their place has come the Localism Act, which frees local authorities to act in ways which they were previously prevented from. Other new powers and responsibilities relate to the Duty to Co-operate and powers to raise funds through the Community Infrastructure Levy (CIL). The new National Planning Policy Framework (NPPF) provides a slimmed down framework for planning decisions but one which is underpinned by sustainable development and requires developments to consider public transport, air quality and climate change impacts.

Those present expressed concern as to how this changing environment would affect their ability to require use of a LESAM for new developments. Officers felt that:

- The S106 and CIL were useful but local authorities were currently wary about their use given the depressed state of the construction industry and the significant number of successful challenges to S106 that developers were making
- Budget cuts in councils were causing real pressure on non-statutory requirements. Air quality funds were also not being collected.
- Elected Members and Senior Managers did not see this as a priority area for action and over-stretched planning departments were likely to be reluctant to anything that might add to their workload

However it was felt that LESAM could overcome these issues if it was:

- Designed to reduce costs or lead to better outcomes, for example through integration with an existing tool (e.g. BREEAM) or through reducing the need for other existing assessments such as AQA
- That the clear benefits in terms of the community could be demonstrated – through reduced congestion, better health and air quality and economic vitality

3. Aspects of a LESAM

a. Typology

The typology was felt to cover all issues that should be addressed by a LESAM.

b. Technical issues

It was agreed that the LESAM should encompass both quantitative and qualitative elements and consider both on and offsite impacts. Other issues that were raised were:

- Particularly given the current economic climate, the assessment should encourage cost effective measures where possible
- Some good measures, for example the installation of EV charging points, will not lead to immediate impacts on emissions but are an essential part of future infrastructure provision. The LESAM must address this issue.
- There is a need to ensure that LESAM drives a 'rounded' approach that doesn't lead to perverse effects – for example the priority should be onsite interventions and off-site interventions should only be considered if adding real value – they should not be done on the basis solely of being a cheaper alternative.
- Foot-printing is a valid approach but there is a risk that it will complicate integration with AQA and TA

c. Size of developments covered by LESAM

It was suggested that the LESAM should be flexible and thus used for both small and large developments – it could be a mandatory requirement above a certain size. It was noted that large developments are already undertaking AQA and Transport Assessments. Councils could propose to developers that they use LESAM as an alternative to these requirements to reduce the regulatory burden.

d. Guidance

New guidance was felt to be useful regardless of what decision was taken regarding the LESAM. The guidance would:

- Explain all existing tools
- Show how they fit together to maximise overall effectiveness

It was proposed that guidance could become a simple and user friendly 'front end' for the LESAM which would explain the context, show how existing tools and requirements could be combined and sign-post other resources and examples of good practice. Once guidance had been developed then other options could be explored.

4. Assessment of existing tools: BREEAM

Some of those present saw the adaptation of BREEAM as the best option for taking forward the LESAM. The reasons given were that:

- It was established and widely used
- Requirements to meet BREEAM standards (e.g. 'Very Good' or 'Excellent') were already written into many planning documents – therefore if transport and air quality considerations were better incorporated into BREEAM and became a mandatory part of the assessment a significant impact could be achieved
- The setting of different levels within BREEAM (and CSH) allowed different levels to be set for developments giving a flexible approach
- There was widespread understanding of BREEAM backed by guidance and a network of assessors
- An existing tool could be developed quickly if the right backing is forthcoming
- There was scepticism on alternatives – e.g. some felt that it was unlikely in the current environment that a new tool would gain traction or be widely used

However others voiced a concern that BRE's focus was on buildings and it was unlikely that transport and air quality could ever be significant aspects of BREEAM. It was also not clear how much scope there would be for post construction monitoring of performance and whether an adapted BREEAM would really meet the technical and wider needs of LESP members.

It was agreed that the integration into BREEAM would only be possible with the agreement of BRE – a conversation with BRE would therefore have to be undertaken before any decision on the viability of this option was made.

5. Alternatives to BREEAM

With some of those present sceptical as to the scope for BREEAM to deliver, alternative tools and approaches were commented on. Key points were:

Code for Sustainable Homes – only very limited coverage of transport at present and not felt to have much potential in terms of a LESAM

Low Emissions Toolkit

The development of the LET and its combination with other existing or planned support was felt to offer potential. LET:

- Enables the setting on benchmarks
- Allows you to ramp up measures over time
- Covers emissions footprint not just on site

It was also suggested that:

- A combination of LET and PERAT could have potential if supported by guidance showing how to link them.

- The Low emissions hub, under development by Rob and colleagues, had potential to be used in combination with LET. New Guidance could sit on top of the Hub and show how different tools could be combined.

6. Summary

There was general agreement that:

3. Guidance which could act as the 'front end' should be prepared.
4. The two key options for the assessment method, for further exploration, should be:
 - BREEAM
 - An evolution and combination of existing resources including the LET and Low Emissions Hub

A 'phased' approach to development would appear to be the best option, with a pilot stage to develop the approach further and test, before a final decision is made as to whether to opt for the BREEAM option or the LET 'front end' option.

CAG/STS will prepare a Scoping Report based on a more in-depth consideration of these two options and conversation with BRE to determine the scope for BREEAM to be adapted.

Appendix 4: Key points from phone interviews

All interviews were conducted under the Chattam House Rule but the key points to emerge were:

Resources: Local authority officers are under significant time and resource pressures at present. They felt that it would be desirable if a LESAM could be integrated with existing tools or methods if possible. If not then costs should be kept to a minimum and if possible central government should fund the development and the operation new resources.

Existing tools There is awareness of a range of existing tools. However:

- There is concern that developers are managing to avoid undertaking AQAs or TAs even when they are a requirement. It was suggested that it may be good as a first step simply to make the current system work better
- Some local authorities already require BREEAM or Code for Sustainable Homes (CSH) assessments within their local plan. There is an attraction to BREEAM as the work is done by an assessor and it is paid by the developer. There is scope to build on this with a BREEAM that better addresses transport and air quality
- There is an expectation that Localism and the removal of national indicators may result in a plethora of local standards. Some local government officers feel that this is not desirable – would require too much duplication of work. Developers also want a national standard as it is simpler for them to engage with.

The work of the LESP Local authority officers felt that the Low Emissions Toolkit has many strengths but some thought it rather too complicated given real world time pressures. There was support for the development of more guidance but again this should be user friendly and accessible..

The way forward There was support for an incremental approach and for it to concentrate only on larger developments to start with – though also recognition of the cumulative impact of many smaller developments needs to be addressed.