

Introduction to the Sustainability Appraisal Framework for Arcola Theatre / the Future Arcola Project

Juhi Shareef & Mariane Jang

December 2009

*This is an early working draft, the purpose of which is to elucidate structure and purpose.
Please do send comments to saf@arcolatheatre.com*

Executive Summary

“Future Arcola” is the project name for the new Arcola Theatre development planned for Dalston, London. Future Arcola aims to: *make the invisible visible* by showcasing, not hiding, the energy-efficient and sustainability aspects of the new buildings for visitors; *form a cultural ecosystem* to train young people; *curate sustainability* through the theatre’s activities in Dalston/on tour; and be a *cultural catalyst for regeneration*.

To achieve its high sustainability aspirations, Future Arcola will be designed, built and operated using a decision-support framework that helps to measure sustainability performance: a Sustainability Appraisal Framework (“SAF”).

The Future Arcola SAF is a bespoke tool that will respond to the sustainability vision for the project and its local socio-economic, political / legislative and cultural context by setting sustainability objectives and developing key performance indicators (KPIs) to measure performance against the objectives and targets.

The Objectives for Future Arcola are based on the following sustainability issues, or themes: Climate Change Mitigation, Waste, Water, Climate Change Adaptation, Biodiversity, Transport & Accessibility, Heritage, Pollution, Work, Employment & Economy, Youth engagement & Community Infrastructure, Cultural catalyst and Regeneration, Economic Viability and Governance.

The KPIs are based on a number of scoring mechanisms including LEED and BREEAM, and the Bioregional / WWF ‘One Planet Living’ principles.

Two example issues / themes with related objectives and key performance indicators:

Example Issue / Theme: Climate Change Mitigation

Related Objective: Reduce our contributions to climate change, and communicate the message of sustainable development widely to influence others’ contributions to climate change.

Key Performance Indicators:

- Proportion of gross floor area that is real-time metered with live displays for occupants
- Proportion of energy used in buildings and infrastructure that is provided by renewable sources
- Proportion of building requiring zero heating or cooling
- Proportion of buildings fitted to allow future installation of integrated renewable energy and decentralised low energy technologies

Example Issue / Theme: Community Infrastructure & Youth Engagement

Related Objectives: Build capacity at all levels within the local community (family, youth and elderly), create opportunities for the local community to engage in arts and capacity building, and contribute to local wellbeing and economic activity.

Key Performance Indicators:

- Number of activities organised that engage young people in the arts and sustainability
- Number of young people progressing through more than one programmes
- Number of activities organised that engage the elderly in the arts and sustainability
- Number of internships/volunteer placements

The SAF is currently at draft stage, and there is a two-stage project to fully develop the SAF into a robust, live and practical tool. Stage 1 includes developing the sustainability objectives and KPIs. Stage 2 includes reviewing the objectives and KPIs and developing challenging but achievable targets in collaboration with technical teams. This document is a summary output of Stage 1.

Contents

Introduction: Arcola – More than a theatre

The challenges ahead

The local socio-economic context

The policy and legislative context

The cultural context

Meeting the challenges: Arcola's Vision & Mission

Achieving the Vision & Mission: Sustainability Appraisal Framework (SAF)

Overview of the Sustainability Appraisal Framework (SAF)

Sustainability Objectives

Key Performance Indicators

Conclusions

Next Steps

Introduction: Arcola - more than a theatre

Located in central Dalston, Arcola Theatre consistently hosts and produces award-winning, world-class theatre. However, Arcola is more than just a theatre. It is also a community hub, a host for youth theatre, music programmes and Green Sundays (to engage local people in sustainable development), a renewable energy technology incubator, and a venue aiming to be the most sustainable theatre in the world. Arcola even brings Brazil to Hackney through its capoeira troupe, Arcola JINGA. In short, Arcola is a force for change.

"Future Arcola" is the project name for the new Arcola Theatre development planned for Dalston. It is an ambitious and exciting project that will face the challenge of developing a new theatre for the area while retaining authenticity and accessibility for local communities.

Future Arcola aims to

- **Make the invisible visible** by showcasing, not hiding, the energy-efficient and sustainability aspects of the new buildings for visitors;
- **Form a cultural ecosystem**, enabling local young people to become confident and skilled through programmes training them in technical theatre skills, theatre and music production and sustainability, so that they can access Future Arcola's professional productions and beyond;
- **Curate sustainability** through their activities in Dalston and on tour. The Arcola team understand the power of the arts to communicate complex concepts such as sustainability, not only through the content of productions but also in the way in which the content is produced. Future Arcola will use successful models from the museums and arts sectors to curate and showcase best practice to new, international audiences;
- **Be a cultural catalyst for regeneration.** New cultural venues are often built in the hope that they will attract new audiences and services to a local area, helping the area to transform economically and socially. Future Arcola aims to achieve the balance between regeneration and gentrification, bringing people into the heart of Hackney while maintaining its links with the local community: the lifeblood of the area.

The challenges ahead

The local socio-economic context

In addition to the balancing act required to move towards a sustainable future - weighing up potential benefits against potential negative impacts - Hackney offers its own unique set of socio-economic challenges and benefits.

Crime	Hackney ranked 4 th of all London Boroughs according to overall rate of crime per 1,000 resident population
Deprivation	In 2004, Hackney's average ranks (based on Super Output Areas / SOAs), make it the most deprived local authority in England, ahead of Tower Hamlets (2 nd), Manchester (3 rd), Islington (4 th) and Liverpool (5 th). 89% of Hackney's areas – the highest proportion out of all 354 local authorities in England – are in the top 20% most deprived SOAs nationally. ¹
Unemployment	Hackney average: 7.9% London average: 4.1% England average: 3.2% ²
Languages	It is estimated that around 100 languages are spoken in the borough. 66% of households stated that English was the only language spoken at home; 22% said it was their main language and a further 12% said that they did not speak English at home. The most widely spoken languages after English were: Turkish, Yiddish, French, Gujerati, Bengali and Yoruba.

The policy and legislative context

As a building and community project that aims to be a leading example of a holistic sustainable development, the project has reviewed and referred to national, regional, city and local guidance to inform a best practice framework against these benchmarks. In some cases the policies and legislation will directly influence the project. In other cases, Future Arcola has looked to policies to understand and build on existing best practice. In particular, policies relating to sustainable development, climate change, sustainable communities and regeneration speak to the heart of Future Arcola's aspirations.

¹ The latest study, The Indices of Deprivation 2004, is based on newly created small areas called Super Output Areas (SOAs). The previous studies in 1998 and 2000 were both based on wards. Hackney has 137 SOAs and each one contains, on average, 1,500 residents.

² Claimant count rates for May 2007, Source: Office for National Statistics and GLA estimates

The sustainable development and climate change adaptation agenda has been shaped nationally by the Government strategy *Securing the Future* and the Climate Change Act - which sets the carbon reduction target for the UK at 80% against 1990 levels by 2050. At a regional level, the Mayor's Climate Change Action Plan commits London to achieving a 60% CO₂ emissions reduction against 1990 by 2025, and the Mayor's London Plan sets out broader plans for sustainable development in London. Hackney Borough has produced a draft Climate Change Strategy to address these issues for Hackney. The most relevant priorities of the draft Strategy for Arcola include, Raising Awareness, Leading by Example, Promoting and Delivering Energy Efficiency in Existing Building Stock and Ensuring Sustainable Design and Construction. The Strategy also proposes that all new developments in Hackney should be zero carbon by 2016.

In the context of the built environment, Buildings Regulations and Planning and Policy Guidance have set the national, legislative standards for the quality of Future Arcola's built form. Regionally, the London Plan, Climate Change Action Plan, Sustainable Design and Construction SPG and London's Urban Heat Island have all been reviewed to ensure Future Arcola meets these standards. This means committing to offsetting a minimum of 20% of CO₂ emissions from the new theatre through on-site renewables. At borough level, the draft Core Strategy of Hackney Borough's Local Development Framework (LDF) stipulates key requirements for good design and construction of buildings, including "good and optimum arrangement of the site in terms of form, mass and scale, including usable amenity space where appropriate and consideration of biodiversity". Hackney is currently developing guidelines to achieve this in the form of Sustainable Standards for the Built Environment Supplementary Planning Document, and the LDF refers to good practice building standards in the form of BREEAM³, which Future Arcola's approach seeks to include.

In the context of sustainable community and regeneration, the Government has provided legislation in the form of the Sustainable Communities Act which confers more power to communities via local authorities, and the Single Equality Bill which will require public bodies to consider the diverse needs of any community when developing services, with respect to race, sex, disability, religion, sexual orientation and age. Hackney Borough has responded by producing a Sustainable Community Strategy for 2008-2018, which sets out a long term vision for a Hackney that:

- Reduces poverty by supporting residents into sustainable employment and promoting employment opportunities;
- Helps residents to become better qualified and raising educational aspirations;
- Promotes health and wellbeing for all, supporting independent living and reducing health inequalities;
- Makes the borough safer, and helps people to feel safe in Hackney;
- Promotes mixed communities in well-designed neighbourhoods, where people can access high quality, affordable housing;
- Creates a sustainable community, where all citizens take pride in, and take care of Hackney and its environment, for future generations.

Future Arcola will positively and proactively contribute to this agenda and welcomes these guidelines.

³ BREEAM: Building Research Establishment Environmental Assessment Method, <http://www.breeam.org>

The cultural context

The previous and current Mayors of London, Ken Livingston and Boris Johnson, understood the significance of the cultural sector and its role in climate change. As part of the London Plan, Ken Livingston developed an ‘umbrella’ Climate Change Action Plan for London, and some sector-specific ‘daughter’ Climate Change Action Plans that were endorsed and communicated by Boris Johnson. These included: *Green Theatre*, *Green Screen* and *Green Music*. Arcola Theatre is mentioned several times in the Green Theatre document (for example as a case study on the use of energy efficient LED lighting versus tungsten). Although London’s theatres produce only 2% of its carbon footprint (approximately 50,000 tonnes of CO₂e)⁴, the disproportionate power of theatre to communicate was appreciated by the Greater London Authority (GLA). The GLA consequently supported the development of the Greening Theatre Steering Group, for which the Arcola held the Secretariat role; the Steering Group is intended to embed sustainability and the reduction of greenhouse gas emissions firmly into the theatre industry.

The local context of Dalston is culturally significant. The level of deprivation and crime has, until recent development, kept rents relatively low for London. This has attracted artists, filmmakers and cultural organisations to the area. Ashwin Street has particular potential to become a cultural district, thus attracting new audiences and services that would regenerate the area and support the local economy.

Meeting the challenges: Arcola’s Vision & Mission

Arcola Theatre has already shown that it is committed to meeting local challenges. Its work to engage local communities in culture and sustainability through programmes and an unofficial ‘open door’ policy is exemplified in the Arcola Vision and Mission statement:

Arcola Vision:

Arcola Theatre’s vision is of a genuinely radical theatre constantly reinventing itself to respond to, interpret and have relevance to an ever changing contemporary Britain.

Arcola Mission:

Arcola’s mission is to imagine and build a theatre that flourishes within a cultural and scientific centre for its diverse local community. One that builds new audiences, generates its own powerful productions and creates a home for the very best of UK and international theatre companies to visit, whilst simultaneously, through experimentation, developing, demonstrating and deploying technologies and techniques for a sustainable future.

⁴ Not including audience travel

Achieving the Vision & Mission: The Sustainability Appraisal Framework (SAF)

A sustainability vision is essentially an aspiration to achieve a certain level of sustainability performance, which ranges from legal compliance to ‘early adopter’, regional leader, market leader or global leader / world class. In terms of sustainability, Arcola’s Vision and Mission statement sets the level of aspiration for sustainability performance of this unique development: Future Arcola.

In order for the Vision and Mission to be achieved in the new development, sustainability must be fully integrated into Future Arcola, directly influencing not only the design but also the site selection, construction and operation of the theatre. In addition, there must be a quantifiable means of demonstrating this commitment to sustainability and continual improvement over time.

In the context of climate change and the need for sustainable development, how can technical teams translate aspirational language into something robust? Inspiring ambitions can only be delivered through good decision-making, supported by robust tools, systems and processes.

Overview of the Sustainability Appraisal Framework (SAF)

Future Arcola will use a Sustainability Appraisal Framework, or a “SAF” as a framework for measuring sustainability performance. A SAF incorporates Social, Environmental, Governance and Economic objectives for a project, key performance indicators (KPIs) to measure performance against objectives and, finally, specific and measurable targets.

Note: A SAF sits alongside and supports, but does not replace, statutory environmental processes requirements such as an Environmental Management Plan used during construction, and voluntary environmental / sustainability management systems such as BS EN ISO 14001⁵ and BS 8901⁶.

A robust Vision and Mission statement informs a SAF by:

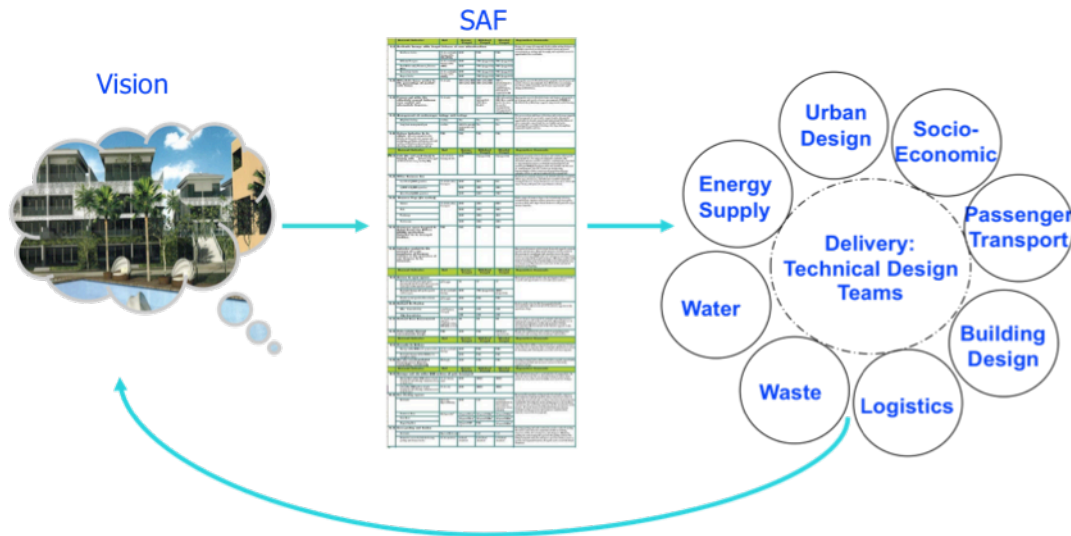
- Providing a common focus (i.e. ensuring that everyone involved in a project is “singing from the same hymn sheet”)
- Setting the level of aspiration re. sustainability performance
- Informing the level and scope of sustainability performance of the project
- Informing the sustainability objectives
- Determining the targets that should be set for the sustainability performance of a project

A SAF ensures that the aspirations of a Vision or Mission are defined in technical terms, enabling technical teams to embed sustainability into all their decisions and activities.

⁵ BS EN ISO 14001 is an international standard that specifies a process for controlling and improving an organization’s environmental performance

⁶ British Standard 8901:2009 is a specification for a sustainability management system for events

Diagram 1: Example of how a Vision (and Mission) informs a SAF and the SAF ensures the delivery of the Vision



Why use a SAF rather than another methodology?

The SAF being developed is bespoke to Future Arcola. The sustainability *issues*, or *themes* identified are common to many projects (Energy, Water, Waste etc) but the Objectives, Key Performance Indicators and Targets specifically reflect Future Arcola's aspirations and priorities. In addition, the SAF currently being developed addresses certain areas of activity that are unique to Future Arcola's role as a cultural catalyst, a community hub and a technology incubator. The SAF is intended to be the framework for monitoring and measuring the impacts of all the activities in the Future Arcola project, from community and youth engagement to heritage and pollution issues. In this way, sustainability will be a primary consideration for Future Arcola, and will be embedded into each phase of its development.

It is important to note that a SAF does not specify or recommend specific technical solutions. Rather, it provides a methodology that clearly sets out issues, anticipated and real impacts and priorities, it allows technical teams to appraise different technical solutions and trade-offs in order to derive an optimum solution for Future Arcola. In this way, it is a valuable decision support tool.

A SAF:

- Enables and demonstrates continuous improvement
- Informs decision-making re. design options
- Coordinates sustainability across technical teams by helping to coordinate and integrate technical design inputs (which can help to reduce costs)
- Provides design/technical teams with targets in line with the client's vision, and an informed understanding of the project's aspirations
- Facilitates iterative testing and refinement of design solutions
- Encompasses site selection, design, construction and operation phases
- Provides the structure to appraise the sustainability performance of a masterplan
- Serves as a basis for reporting sustainability performance

Sustainability Objectives

Bespoke sustainability objectives have been developed for Future Arcola based on the sustainability practices of **stakeholder engagement** and **continuous improvement** and the following sustainability principles⁷: **Integrity, Inclusivity, Transparency** and **Stewardship**. These Objectives cover the key elements of sustainability: social, economic, environmental and natural resources as well as cultural issues relevant to theatre. The Objectives establish the scope of the Sustainability Appraisal Framework (SAF).

The Objectives are based on the following sustainability issues, or themes (which may evolve as the project develops):

- Climate Change Mitigation
- Waste
- Water
- Climate Change Adaptation
- Biodiversity
- Transport & Accessibility
- Heritage
- Pollution
- Work, Employment & Economy
- Youth engagement & Community Infrastructure
- Cultural catalyst and Regeneration
- Economic Viability
- Governance

Example Objectives include:

Climate Change Mitigation

Reduce our contributions to climate change, and communicate the message of sustainable development widely to influence others' contributions to climate change.

Biodiversity, landscape and green infrastructure

Conserve and enhance biodiversity and ecologically valuable habitats and wildlife corridors.

Community Infrastructure & Youth Engagement

Build capacity at all levels within the local community (family, youth and elderly), create opportunities for the local community to engage in arts and capacity building, and contribute to local wellbeing and economic activity.

⁷ Derived from BS 8900:2006 "Guidance for managing sustainable development"

Cultural Catalyst & Regeneration

Be a catalyst for sustainable local regeneration and cultural/social value creation; promote the global cultural ecosystem by training and providing opportunities for arts and culture.

Economic Viability

Create a financial model that is self-sustaining and will ensure economic stability for the development and its activities.

Key Performance Indicators

Key Performance Indicators, or KPIs, provide the link between sustainability objectives and design performance. KPIs can be qualitative or quantitative, but in order for the Future Arcola SAF to be as robust as possible, quantitative indicators have been selected wherever possible. KPIs are relevant to different stages of the project (Specification, Performance, and Management) and applicable to different project phases (Planning/Site selection, Design, Construction and Operation).

The following KPIs have been developed for Future Arcola to measure sustainability performance against the Objectives, and are likely to evolve as the project develops. They have been developed by consolidating the KPIs from a number of existing best practice performance measurement tools including: BREEAM for Offices, LEED⁸ for Neighbourhood Development, GRI 3⁹ and BioRegional's One Planet Living Principles. In addition, bespoke KPIs were developed which reflect Future Arcola's aspirations to become a cultural catalyst for the area, as well as a hub of innovation for renewable technologies and a source of employment and education for all communities.

Example Key Performance Indicators, linked to example Objectives include:

Climate Change Mitigation

Proportion of gross floor area that is real-time metered with live displays for occupants
Proportion of energy used in buildings and infrastructure that is provided by renewable sources
Proportion of buildings with building-integrated renewable energy technologies
Proportion of buildings fitted to allow future installation of integrated renewable energy and decentralised low energy technologies

⁸ LEED: Leadership in Energy & Environmental Design (United States Green Building Council), <http://www.usgbc.org>

⁹ GRI: Global Reporting Initiative, <http://www.globalreporting.org>

Biodiversity, Landscape and Green Infrastructure

Proportion of development area that is subject to full ecological survey by a qualified ecologist
Proportion of sites identified as having ecological value that are retained <i>in situ</i> and enhanced
Loss of habitat of biodiversity value (including waterways and water bodies)
Area of development within 30 m of wetlands or water bodies
Gains in habitat of biodiversity value
Proportion of development area that is green space
Proportion of plant species used in landscaping that are native to the region
Area provided for wildlife corridors
Strategies, current actions, and future plans for managing impacts on biodiversity

Community Infrastructure & Youth Engagement

Number of activities organised that engage young people in the arts and sustainability
Number of activities organised that engage families in the arts and sustainability
Number of activities organised that engage the elderly in the arts and sustainability
Number of internships/volunteer placement
Breakdown of youth and community activity participants by gender, age group, minority group membership and other indicators of diversity

Cultural Catalyst & Regeneration

Number of press mentions of Arcola as a) a provider of high quality arts and cultural productions and b) a leader / catalyst of sustainability in the arts
Number of audience/building users from London Borough of Hackney
Number of audiences/building users from outside London Borough of Hackney

Economic Viability

Composition of income by type (including public funding, private donations, income from café/bar, business incubator infrastructure etc)
--

Conclusions

The new Arcola Theatre (project name “Future Arcola”), aspires to be not just a green theatre development, but also an enduring hub for community activity and training in Hackney; an educational resource for the public to learn more about renewable energy and resource use; an incubator for renewable energy start-ups and a cultural change agent for the local area and international audiences. These aspirations challenge current thinking in sustainable urban development in an exciting and radical way.

The Arcola team is using a Sustainability Appraisal Framework (“SAF”) to ensure that these sustainability aspirations are translated into robust design and technical strategies. This framework approach will allow the quantitative and qualitative monitoring of the new theatre’s sustainability performance and will support transparent and effective decision-making.

Next steps: Stage 2

The next steps of the Arcola Theatre Sustainability Appraisal Framework include reviewing and developing the Objectives and Key Performance Indicators and setting robust and challenging targets. Particularly for the operational phase, the SAF will promote a phased approach to achievement of sustainability targets, advocating a year of benchmarking data using the KPIs to form a baseline against which to set appropriate targets.