



SUSTAIN ABILITY

14/15

King's Cross

02

SUSTAINABILITY POLICY
& FRAMEWORK

05

SUSTAINABILITY
AT KING'S CROSS

17

SUSTAINABILITY
FOCUS FOR 2014/2015

*copy written in green
italics are hyperlinks*

“King's Cross is a
model of constructive
conservation, that captures
the special quality of
London as it has grown
over the centuries”

English Heritage

King's Cross Central Limited Partnership
4 Stable Street
London
N1C 4AB

April 2014

01
**SUSTAIN
ABILITY
POLICY
& FRAME
WORK**

99%
OF THE DEVELOPMENT'S
HEAT DEMAND IS MET
FROM THE ON-SITE
ENERGY CENTRE



3,112
NUMBER OF SCHOOL
PUPILS ENGAGED
(2008 - 2013)



**OUR DEFINITION
OF SUSTAINABLE
DEVELOPMENT**

A development which brings lasting environmental, economic and social benefits to the project and to the wider community.

Furthermore, a sustainable development is delivered and managed with consideration for optimising the use of materials and resources.

This document sets out the King's Cross Partnership's vision for a sustainable King's Cross and our approach to achieving our goal.

Sustainability at King's Cross

King's Cross is one of the most significant regeneration opportunities in London - and the UK. The 67-acre site has a rich history, a unique setting, and is adjacent to the best connected transport hub in London. The environment being created at King's Cross will be a community for future generations. By 2020, 45,000 people will live, work and study here.

The scale and nature of the project presents a rare and exciting opportunity - and a great responsibility. In every sense, we are committed to delivering a development for London that is built on sustainable values.

Our vision

Our vision for King's Cross is to deliver a sustainable development for London - a lasting place for people and a community with a long-term future that supports changing patterns of social and economic behaviour.

Delivering the vision

This vision can only be realised by working in partnership with a wide range of stakeholders - investors, consultants, contractors, government agencies, local authorities, interest groups, charities, schools, businesses and residents themselves.

We invest much time and effort on building strong relationships and mutual understanding with our partners. The relationships are always based on openness and trust, and a desire to create shared value.

By working in partnership, we can identify issues, shape our responses and find better, smarter ways to do things. This forms the basis of our approach, and has been crucial to the success of the project to date.

Our guiding principles

These principles guide and underpin every aspect of the King's Cross development - from plan-making through to design, construction and management. From how we work with communities to how we look after our teams.

- 1. Consider the whole place**
We strive to make King's Cross work as a whole - physically, economically, environmentally and socially.
The "whole place" approach is about creating successful physical infrastructure, stimulating economic growth and promoting social value. These elements are critically related - and we need to consider all of them if we are to deliver a lasting, livable place.
- 2. Think long-term**
While the phasing of the development will always require consideration of short and medium term interests and needs, we have a responsibility to focus on long-term outcomes and not short-term gains.
Our goal is to create a place that delivers lasting benefits for the new and the existing community, businesses, residents and society as a whole.
- 3. Create shared value**
For King's Cross to be successful over time, we must create lasting value - for our partners, our customers, our employees, for the local community and for London.
We believe that these interests are not mutually exclusive, rather they are mutually dependent.
- 4. Ensure viability**
We believe that developing places sustainably, particularly by creating social and economic opportunities for local people, improves people's lives.
Moreover, by listening to people who are part of the place, we can tailor our programmes to ensure they address local need. This, in turn, is the key to achieving long-term viability.
- 5. Enable behavioural change**
The scale and nature of the project at King's Cross provides an opportunity to support more sustainable ways of living.
From the type of projects we choose, to how we plan, build and manage them, we can facilitate new norms - in consumption patterns, in how we move around, how we use energy and water, and in civic participation.

above **THE DEVELOPMENT**
On completion, 50 new buildings, 2,000 new homes, 20 new streets, 10 new public squares, 67 acres, and 45,000 people who live, work and study in the area

above **SCHOOLS PROJECTS**
Our schools program aims to engage local young people with the development project and ensure that they have the chance to benefit from all the investment that is going on here.

02 SUSTAINABILITY

02 SUSTAINABILITY

c. **9,000m²**
OF GREEN/BROWN ROOFS
DELIVERED OR PLANNED
ACROSS THE SITE



SUSTAINABILITY AT KING'S CROSS

This section summarises regeneration and environmental activities at King's Cross 2008 - 2013 and discusses lessons learnt so far.

From the very outset of planning the development, much work was done to explore the range of sustainability initiatives which could be implemented at King's Cross. This work is captured in *"Principles for a Human City"* of 2001; and in the *"Regeneration Strategy"* of 2004.

Our planning approvals achieved in (2007) include a set of legally binding commitments, drawn together in a Section 106 Agreement. Several of these obligations are technically and commercially challenging. Some are far-sighted, anticipating regulatory and technological innovation. Many are quantifiable, so performance can be measured.

While our focus has been on meeting our obligations, our philosophy is to always look to go further where it makes sense to do so; either because better outcomes can be achieved by investing more time and effort; or because commercial forces dictate that we reach a still higher benchmark.

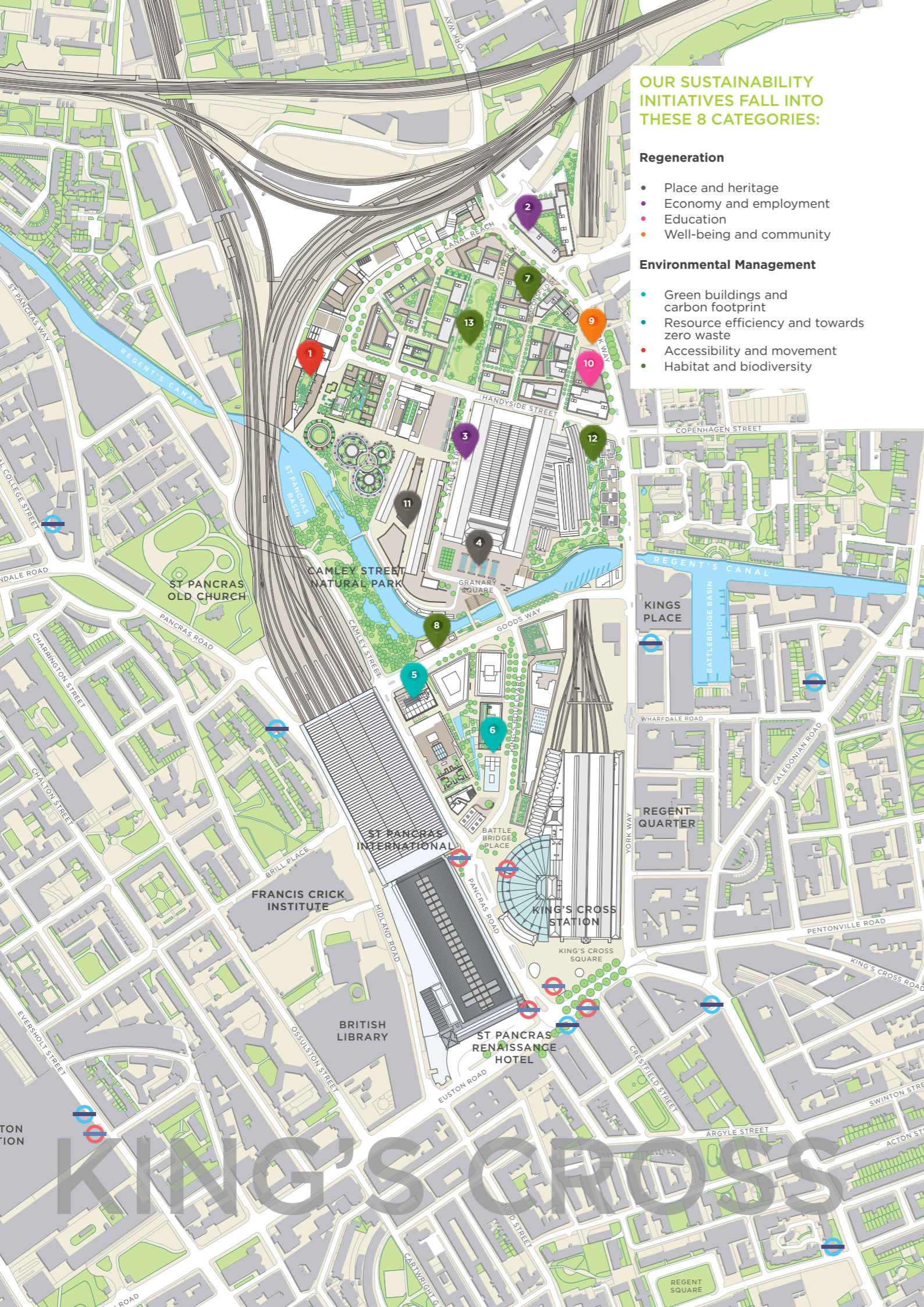
King's Cross is being developed in a series of phases. As each phase begins, planning obligations are triggered, requiring increased provision of facilities, services, programmes and monitoring.

During the first phase of development, we laid the foundation for an embedded regeneration and environmental management programme by delivering projects triggered early on and others which we thought it was of value to deliver ahead of time. We have also delivered a number of projects which go beyond our obligations in order to further explore what might work in the context of King's Cross.

With five years of development under our belts, we are now in a position to make a meaningful assessment of progress against our commitments; and to reflect on our experience so far. This will inform the next phase of development, when there will be an acceleration of projects triggered and an expansion in delivery of existing obligations as well as more opportunities to go above and beyond on the completed estate.

To date, we have in most cases met, and gone beyond the legal requirements - often ahead of schedule. In some areas however, we have been challenged, and the commitments have proved difficult to achieve. We discuss this in the "lessons learnt" section.

above **GREEN WALL**
Soil free hydroponics have been used to reclothe the bare walls of Goods Way



OUR SUSTAINABILITY INITIATIVES FALL INTO THESE 8 CATEGORIES:

Regeneration

- Place and heritage
- Economy and employment
- Education
- Well-being and community

Environmental Management

- Green buildings and carbon footprint
- Resource efficiency and towards zero waste
- Accessibility and movement
- Habitat and biodiversity

49,766m²
PUBLIC REALM DELIVERED

02 SUSTAINABILITY



SUSTAINABLE DEVELOPMENT INITIATIVES

Sustainability features at King's Cross:

- 1 The on-site *Energy Centre* – supplying 99% of the estate's heat demand
- 2 The *Construction Skills Centre* – 375 achievers to date – many of whom are going onto apprenticeships and jobs on-site
- 3 *KX Recruit* – a job matching service for local people and businesses
- 4 **Granary Square** – over 175,000 visitors (2012 to 2013)
- 5 *Camden Headquarters* – BREEAM Outstanding in design
- 6 *One and Two Pancras Square* – commercial office space both BREEAM Outstanding in design
- 7 c.9,000m² of **green/brown roofs** delivered or planned across the site
- 8 **Green wall and canal side planting** providing a haven for bees and other fauna
- 9 *Outdoor sports area* free for public use
- 10 *The Global Generation Skip Garden* – educating and connecting children and adults with sustainable business and lifestyles
- 11 *Heritage Buildings* – 10 of the 20 buildings and structures refurbished to date with a further three on site
- 12 *Handside Gardens* – play space for children and a green corridor from the canal to the northern part of the development (opened 2013)
- 13 **Cubitt Park** – one of the principal open spaces within King's Cross Central. Envisaged as a generous area of soft landscape, it will become an important amenity space within the site, Delivered in 2014.

above **PUBLIC SPACES, PEOPLE SPACES**
40% of the King's Cross development area is public realm

>175,000
VISITORS TO
GRANARY SQUARE
(2012 - 2013)



REGENERATION

Ensuring that the local community benefits from the investment at King's Cross is at the heart of the Partnership's approach to sustainable development. The Community and Regeneration Programme has been established to help improve the socio-economic opportunities available to those in the surrounding area and to make them accessible to local people.

As well as an improved environment, there is a range of housing available, job and training opportunities, programmes for schools, business initiatives, community projects and new public facilities. The programme has been developed, and is being delivered, in close collaboration with a range of stakeholders and partners. Some key highlights include:

The Construction Skills Centre

The Construction Skills Centre helps local people to access the jobs and opportunities created by the development. Over £2 million was invested in the Centre, which has been operating from a purpose-built facility since 2008.

The Centre provides training and helps young people gain qualifications, apprenticeships and job placements on the development. All King's Cross construction partners are signed up to support the project.

To date, 375 young people have gained a qualification, and there have been over 700 apprenticeship placements through the Centre.

The Global Generation Skip Garden

This inspirational project started as a mobile vegetable garden built in skips and has expanded into a community project which provides all kinds of opportunities for local youngsters. The project has engaged with over 3,000 young people since opening in 2009.

Through the medium of sustainability, young people have developed new skills and networks, learnt about construction, how to grow food as well as how to market and sell their produce. This project has helped to breakdown social stereotypes of all types - and helped build trust and social capital on the site.

King's Cross Schools Programme

The schools programme supports local primary and secondary schools with curriculum-based learning opportunities, work experience and careers advice.

The support can range from talks and field trips focusing on particular subject areas to more in-depth projects which have a longer time-frame and which are delivered in partnership with education specialists.

KX Recruit

This job matching service helps people living in Camden and Islington to find work at King's Cross and helps King's Cross-based employers to find the right candidates to fill their vacancies. The service launched officially in January 2014, and has already placed 20 local people in jobs across the estate.

King's Cross and St. Pancras Business Partnership (KXSP)

This network of local businesses works together to promote King's Cross as a vibrant and dynamic location within London.

The Partnership was instrumental in setting up KXSP in 2011. The goal is to maximise the potential of the area, improve the environment and to ensure that the wider area benefits from the investment being made in redevelopment.

above **OPEN SPACES**
Granary Square, with its 1080 fountains, is a busy London square and hosts a myriad of events throughout the year

375
ACHIEVERS FROM THE
CONSTRUCTION SKILLS
CENTRE - MANY OF
WHOM ARE GOING ONTO
APPRENTICESHIPS
AND JOBS ON-SITE



KEY REGENERATION
FIGURES (2008 - 2013)

Activity	Key Figures
Place and Heritage	
Affordable homes occupied	289
Number of buildings and structures to be restored and refurbished in 2013	3
Number of archaeological items logged	138
Number of arts projects at King's Cross since 2008	> 20
Public realm delivered	49,766m ²
Economy and Employment	
Construction Skills Centre NVQ achievers (September 2008 - December 2013)	277 Level I 98 Level II
Average number of apprentice placements on site monthly during 2013	28
Local apprentices on the construction site (monthly average 2013)	26 (3.1%)
Local employment on the construction site (monthly average 2013)	78 (7.9%)
Local employment within the King's Cross Estate Services team (as at December 2013)	40%
Employees placed by KX Recruit (September to December 2013)	30
King's Cross and St Pancras Business Partnership members to date	11
Education	
Number of further education students and staff on-site at University of the Arts, London	5,000
Number of child places within the King's Cross Nursery, Academy and Frank Barnes School for the Deaf with planning permission	481
Number of school pupils engaged 2008 - 2013	3,112
Children and young people involved with the Global Generation Skip Garden 2009 - 2013	2,864
Wellbeing and Community	
Number of people engaged in on-site enlivenment activities (2012 - 2013)	> 175,000
Number of visitors to the Varini viewing platform	> 114,000
Number of business volunteers at Global Generation Skip Garden (2012 - 2013)	734

above **CONSTRUCTION SKILLS CENTRE**
The CSC helps local people to access the jobs and opportunities created by the development. The Centre provides training and helps young people gain qualifications, apprenticeships and job placements on the development

79%
OF THE DEVELOPMENT
TOTAL POWER DEMAND
IS OFF-SET BY THE
CHP ENGINES



**ENVIRONMENTAL
MANAGEMENT**

King's Cross has extraordinary potential to be a sustainable development:

- From this central location, next to the largest transport interchange in the UK, sustainable travel is the obvious choice.
- The scale of development, and the fact that it was largely unserved prior to development, has provided a rare opportunity for planned infrastructure and utilities.
- The density, proposed massing of the buildings, and the standards to which they are being designed, built and refurbished are inherently sustainable.

In addition, with an estimated 45,000 people living, working and studying here by 2020, we are in a position to facilitate sustainable lifestyles and behaviours. We can work with residents and occupiers to help ensure sustainable occupation of the buildings, to provide for and encourage sustainable transport choices, as well as to establish a retail offer that supports a sustainable ethos.

Some key highlights for environmental management at King's Cross to date:

Carbon efficient energy provision

The focus for energy efficiency at King's Cross is a district-wide energy system – one of the largest of its kind in the UK. An on-site Energy Centre generates power and heat via Combined Heat and Power (CHP) engines. Each new building connects to the Energy Centre through the district heating network. This is a very efficient way to heat the buildings and it means that there will be no need for conventional boilers in the buildings themselves. The Centre provides close to 100% of the development's heat and hot water needs and around 80% of its electricity needs will be offset.

"Future-proof" infrastructure

The site-wide network of pipes, cables and fibre optics that has been installed at King's Cross has spare capacity designed from the outset. Every effort has been made to use adaptable and flexible technologies that will hold in the future.

BREEAM Achievements

The planning agreements require that all office buildings at King's Cross are designed to a BREEAM rating of "Very Good". In practice, the Partnership aims to achieve "Excellent" and "Outstanding" for all new buildings. One 'Outstanding' building has already been delivered; and two further 'Outstanding' buildings are expected to complete in 2014.

above **PINK ENGINE**
The first Jenbacher Gas Engine arrived in 2011 from Austria for installation within the Energy Centre

2,864
CHILDREN & YOUNG
PEOPLE INVOLVED
WITH THE GLOBAL
GENERATION
SKIP GARDEN
(2009-2013)



Green Buildings and Carbon Footprint

Commercial Buildings Sustainability Ratings – Building Research Establishment Environmental Assessment Method (BREEAM) – Delivered by King's Cross Central Partnership

COMPLETED	New / Refurbishment	BREEAM Rating	Scheme Year	Score (min. 55% req.)	EPC Rating
Gridiron - One Pancras Square	New	Outstanding	2008	89%	A (22)
University of Arts London	Refurbishment	Very Good	2008	59%	C (65)
Western Transit Shed	Refurbishment	Excellent	2008	79%	B (31)
IN CONSTRUCTION	New / Refurbishment	Design Phase BREEAM Rating	Year	Design Phase Score	Illustrative EPC
Two Pancras Square	New	Outstanding	2008	87%	A (22)
Five Pancras Square	New	Outstanding	2008	93%	A (22)
Stanley Building	Refurbishment	Excellent	2008	73%	B (36)
Plimsoll Building	New	Excellent	2011	72%	
Regeneration House	Refurbishment	Very Good	2011	65%	
T5	New	Excellent	2011	73%	
German Gymnasium	Refurbishment	Excellent	2011		

above **THE GLOBAL GENERATION SKIP GARDEN**
This inspirational project is doing amazing work with local young people. It started with a sustainable vegetable garden built in skips and has expanded into community project which provides all kinds of opportunities for local youngsters.

81%
 PROPORTION OF ESTATE
 WASTE DIVERTED
 FROM LANDFILL
 (2012-2013)



789
 NUMBER OF PUBLIC
 BICYCLES SPACES TO BE
 INSTALLED ON-SITE



Green Buildings and Carbon Footprint

Residential Buildings Sustainability Ratings - Code for Sustainable Homes (CfSH)

COMPLETED	CfSH Rating (Level 4 required)	Year Completed	Score
Saxon Court	Level 4	2012	75%
Rubicon Court	Level 4	2012	65%
ArtHouse	Level 4	2013	69%
IN CONSTRUCTION	Design Phase CfSH Rating	Scheduled Completion	Design Phase Score
Tapestry	Level 4	2014	71%
Plimsoll Building	Level 4	2014	
IN PLANNING			
Cubitt Park Residential (R5 S)	Level 4	2016	69%

Activity Information

Resource efficiency and towards zero waste

The percentage of heat and hot water to be provided by the on-site Combined Heat and Power Plant	99%
Photovoltaic capacity installed and planned at King's Cross 2008 - 2015 (set to save 104 tonnes of CO ₂ emissions)	200,000 kWh per year
Proportion of construction waste diverted from landfill 2008 - 2013	76%
Proportion of estate waste recycled landfill 2012 - 2013	81%

Accessibility and Movement

Number of public bicycles spaces to be installed on-site	789 (412 are available now)
Publication of updated Area Travel Plan	February 2014
Number of HGV drivers trained in cycle safety on site in 2013	25
Considerate Contractor Scheme % of projects achieving 80% or over	100%

Habitat and Biodiversity

Green wall installed in 2012	200m
Percentage of roof area completed or in development to be green or brown roofs	32%

above **SKIP GARDEN**
 The garden uses local materials - and in this case that means building materials. So the gardens have been planted in upcycled skips, and the polytunnel was created using spare water pipes, scaffold netting and planks from the site.

LESSONS LEARNT

“... flexibility is more possible in a culture of partnership working where there is an element of trust on both sides.”

above **CARING FOR CYCLISTS**
 The roads are calm and pedestrian - and cyclist-friendly, designed to keep car speeds down. And bicycle interchanges mean that bikes can be left, safe and secure.

01 Partnership is key

The importance of partnership and the early and ongoing involvement of a wide range of stakeholders cannot be overstated. It is crucial not only to the successful delivery of the project, but also in building support and creating a sense of ownership in the wider community. These relationships work best when built on openness and trust and with the common goal of creating shared value. Sometimes both sides have to compromise.

02 Flexibility is important

For a project such as King's Cross - with a development span that stretches over more than a decade - flexibility is key. It allows for changing or unforeseen circumstances and for experience gained along the way. As well as this, objectives and commitments defined at the outset of the project can become irrelevant, sub-optimal or even detrimental over time. Flexibility is more possible in a culture of partnership working where there is an element of trust on both sides.

Renewable energy technologies are an example of this. In 2006, when planning consent was granted, wind turbines were considered an appropriate renewable energy source. Technology has progressed since then, and flexibility with the London Borough of Camden has enabled the team to agree a more appropriate approach to efficiency and renewable energy through photovoltaics, Combined Heat and Power and superior building performance.

03 Be bold

Firmly embedding bold ideas from the outset ensures that they have a better chance of becoming reality - rather than being "nice-to-haves" which are eroded over time.

The King's Cross Public Arts Programme illustrate this. The programme was established in 2006 with a bold ambition, "to incorporate contemporary works of such high quality and innovation that King's Cross becomes an international destination for the arts."

The projects delivered since 2011 have indeed achieved this goal, attracting visitors from across London, the UK and from further afield; and receiving international media attention. The innovative approach to incorporating art into the landscape and built environment has helped to establish Kings Cross as a popular and dynamic destination and a hub for the arts.

>114,000
NUMBER OF VISITORS
TO THE VARINI VIEWING
PLATFORM



“... the latter phase of development will have increased environmental legislative requirements and we need to consider how we go further and drive progress in sustainable development.”

04 Targets should be informed by experience

While we have been successful in the delivery of the Construction Skills Centre and in providing education opportunities, achieving some of the precise construction employment and apprenticeship targets has been difficult.

This is due to a number of factors, including; a limited pool of applicants within the stipulated criteria (16-18 living within central impact zones of Camden and Islington), and the challenges of taking on young apprentices who have to gain certain construction experience to gain a qualification within current construction practices.

During 2014, we hope to negotiate with the local authorities to establish appropriate targets based on our experience to date. The focus will be on quality of training and opportunities rather than quantity. This continues to be an important area during the development phase of King's Cross.

05 Phasing requires careful consideration

As new areas of the development open to visitors, occupiers and residents, thought needs to be given to accessibility, to establishing a sense of place and community and to requirements and services in the short-term. This requires commitment and upfront investment from the developer.

Similarly, the later phases of development will have increased environmental legislative requirements and we need to consider how we can continue to go further than our commitments and drive progress in sustainable development.

above **ACROSS THE BUILDINGS**
The third instalment of RELAY, the dedicated, curated art programme at King's Cross by Swiss Artist Felice Varini

200m
OF GREEN WALLS
INSTALLED DURING 2012



“... the public space at King's Cross has become a valuable amenity – for the local community and for all of London.”

06 Call on specialist support when necessary

It has been important to recognise our role and our capabilities, and to call on specialist help in certain areas of the programme – to facilitate delivery, boost knowledge and help achieve targets.

For example, we know a lot about development processes but not much about the national curriculum. So working with an educational expert has helped frame our knowledge to have better impact when we work in schools and in delivering the King's Cross Academy

07 Public realm matters

People's perception of King's Cross is greatly influenced by their experience of the public realm. High-quality spaces that capitalise on the site's heritage and setting have been fundamental to creating a sense of place. Investing early in key spaces – such as Granary Square – has been vital in establishing King's Cross as a destination.

Moreover, the public space at King's Cross has become a valuable amenity – for the local community and for all of London. An inclusive approach to the management of the public realm and high levels of cleanliness and security has also been critical. This responds directly to issues raised ten years ago during consultation about the accessibility and standard of the public realm at King's Cross.

08 Early engagement is important to achieve BREEM targets

Achieving BREEM “Excellent” and “Outstanding” ratings requires engagement with BRE, and consideration early in the design process. This has been particularly important in the delivery of biodiversity and habitat objectives. Achieving green roof targets requires consideration at the estate level, not just at the individual building level.

above **GREEN WALLS & BROWN FIELD**
This rich industrial heritage is both respected and reused at King's Cross. More than 20 historic buildings and structures are being creatively refurbished and given new uses. This has led to King's Cross being named as “One of England's 20 Best Heritage-Led Developments” by English Heritage.

03 SUSTAINABILITY FOCUS FOR 2014/2015

03 SUSTAINABILITY FOCUS FOR 2014/2015



ENSURE LOCAL SCHOOL VISITS TAKE PLACE, AND CURRICULUM OPPORTUNITIES ARE DEVELOPED



During 2014/2015, the Partnership will continue to deliver and monitor the regeneration and environmental programmes at King's Cross. With buildings now occupied and the development increasingly accessible to the public, focus will be on embedding sustainable practices across our operational activities, facilitating sustainable occupation and engaging with visitors and local community to strive toward our vision of King's Cross as a sustainable place.

Regeneration Programmes for 2014/2015 include:

Place and heritage	<ul style="list-style-type: none"> Deliver the public arts programme, including employment of two curators, provide artwork within buildings and a major public art installation for summer 2014/2015
Economy and employment	<ul style="list-style-type: none"> Through the Construction Skills Centre, continue to deliver the Contractors Forum, employment meetings and develop a refreshed three-year support plan for apprenticeships & local employment with LB Camden Undertake an annual update of the Labour Market Model Deliver the KX Recruit local employment service
Education	<ul style="list-style-type: none"> Ensure local school visits take place, and curriculum opportunities are developed
Well-being and community	<ul style="list-style-type: none"> Establish an on-site resident activity pilot programme together with One Housing Group Engage with the London Wildlife Trust and Global Generation to establish site wide office occupier membership and activities Identify volunteering opportunities for residents and occupiers by piloting an on-site Business Volunteering Programme. Assess outcomes with LB Camden with a view to developing a wider programme and supporting website Continued support and development of the King's Cross and St Pancras Business Partnership Support and partnership work with Islington Giving and Team Cally

Environmental Management Programmes for 2014/15 include:

Green buildings and carbon footprint	<ul style="list-style-type: none"> Continue to deliver BREEAM and CfSH buildings Deliver timely and accurate reporting for investors and industry regulators Provide guidance to occupiers to achieve green building standards during fit-out Establish a post-occupancy programme to enhance occupier experience and facilitate the sustainable occupation and operation of buildings
Resource efficiency and towards zero waste	<ul style="list-style-type: none"> Establish regular environmental reporting and targets for key impact areas for all sites under Partnership management, through the Construction Environmental Management Programme Establish appropriate property management environmental reporting in preparation for CRC Energy Efficiency Scheme and allow for monitoring the delivery of sustainable design Achieve ISO14001 EMS certification for the King's Cross estate
Accessibility and movement	<ul style="list-style-type: none"> Deliver the Area Travel Plan - actions include supporting occupiers to prepare Workplace Travel Plans
Habitat and biodiversity	<ul style="list-style-type: none"> Undertake a review of biodiversity with London Wildlife Trust (L.W.T.) Share data on green and brown roof performance with L.W.T.

above **WORK EXPERIENCE**
We currently support a number of work experience placements for Camden and Islington pupils. In the future, we aim to expand this by working with partners on the King's Cross development.

