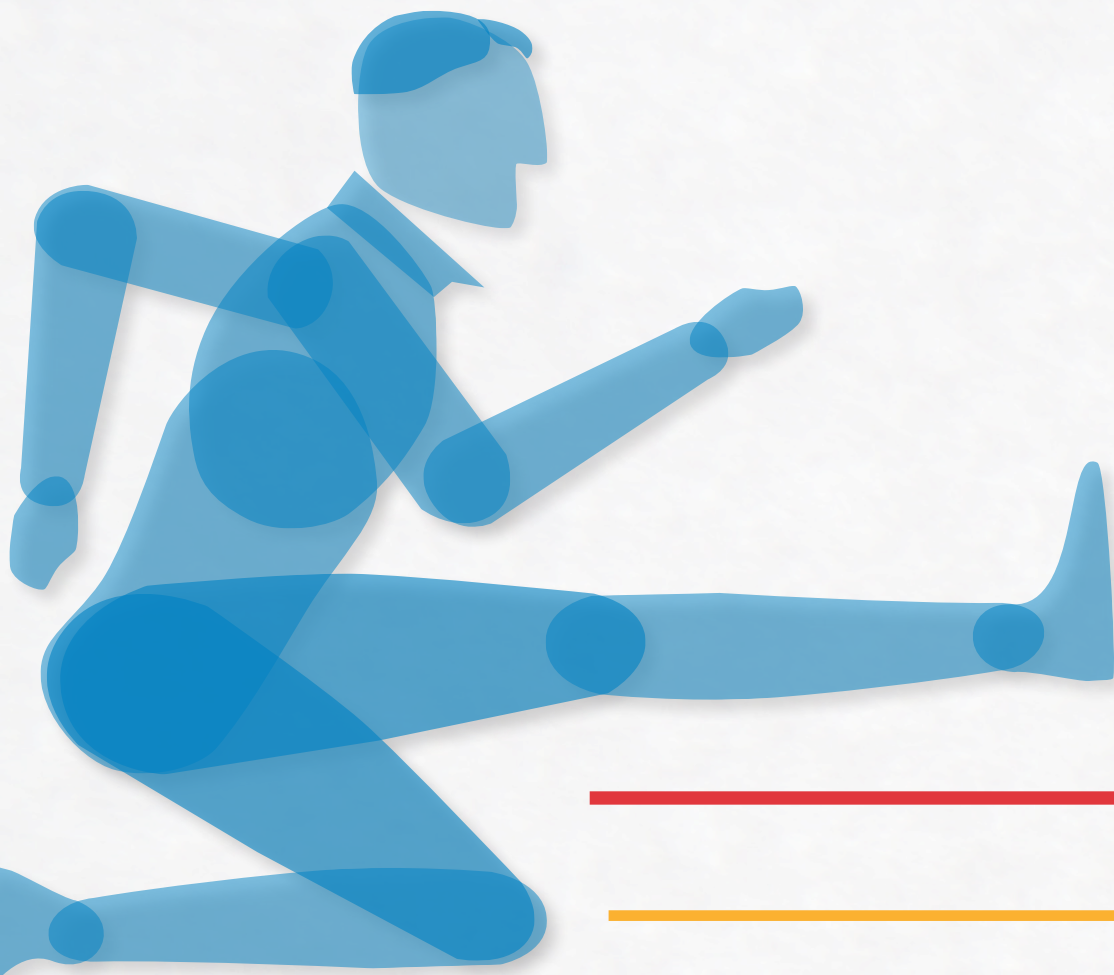




Glasgow 2014 Commonwealth Games Sustainability Plan

November 2010

Content



Introduction and background	3
Background to the 2014 Commonwealth Games	4
Sustainable Development	6
Legacy	8
Strategic Environmental Assessment (SEA)	9
Sustainable Event Management BS 8901	10
Improving Health	11
Community Benefits	15
Climate Change	18
Waste	21
Transport	23
Biodiversity and Open Space	25
Sustainable Infrastructure	29
Games Time Sustainability	32
Appendix A: Glasgow 2014 Ltd. Env & Sus Policy	33
Appendix B: Sustainability Report Card	37



Introduction and Background

The 2014 Commonwealth Games represents the largest sporting event ever to be held in Glasgow, indeed in Scotland – both in terms of competitors and complexity of its multi-sport nature. We believe that this provides a perfect opportunity to put into practice the principles and approaches of environmentally sustainable development.

provision of transport and energy in a cost-effective manner that reduces impacts to the environment. In this way, the Games can be a vehicle to demonstrate the interdependency of people and the environment that supports us.

We are committed to responsible environmental and sustainability standards through the Games' planning and delivery lifecycle. We

“..the Games can be a vehicle to demonstrate the interdependency of people and environment”

Sustainable development embraces economic prosperity, social equity and environmental integrity, and the Games can demonstrate the practical application of sustainability in the provision of infrastructure, operations and management of the public domain.

As a major international event, the Games provides an opportunity to demonstrate practical approaches to everyday issues, such as waste management, water stewardship,

will maximise our contribution to sustainable development by working collaboratively with our Games Partners, Stakeholders and Advocates to align and promote the Games delivery obligations and ambitions through measurable outcomes that represent new environmental and sustainability benchmarks and benefits for the Commonwealth Games, Glasgow and the whole of Scotland.



Background to the Glasgow 2014 Commonwealth Games

The Commonwealth Games is coming to Glasgow in 2014. Our vision is:

“...to stage an outstanding, athlete-centred and sport-focused Games of world-class competition that will be celebrated across the Commonwealth, generate enormous pride in Glasgow and Scotland and leave a lasting legacy”.¹

The Games will be held during the summer of 2014. These are the 20th Games and there will be 17 sports taking place over 11 days of competition hosted by the city of Glasgow. Approximately 6,500 athletes and officials will take part in the Games with a total of over 1 million spectator tickets going on sale. The Glasgow 2014 Commonwealth Games will include a minimum of four Para-Sports, with approximately 350 para-athletes competing.

The 2014 Commonwealth Games will be staged at 20 competition venues spread over 14 sites.

There will be three main venue clusters within the city. These three clusters will stage the entire sports programme with the exception of shooting, diving and the triathlon which will be held at Satellite venues. Venues are subject to change as plans progress. The venues will be located at the following locations:

- Athletes' Village, Dalmarnock
- Cathkin Braes Country Park
- Celtic Park
- Ibrox Stadium
- NISA and Sir Chris Hoy Velodrome
- Scotstoun Leisure Centre
- SECC Precinct
- Tollcross Park Leisure Centre
- Glasgow Green
- Hampden Park
- Kelvingrove
- Strathclyde Country Park, North Lanarkshire
- Royal Commonwealth Pool, Edinburgh
- Barry Buddon Shooting Centre, Angus



¹ Glasgow 2014 Ltd, Environmental and Sustainability Policy:
<http://www.glasgow2014.com/assets/0c204d0f-7270-4c7d-8994-a19585aeffe4.pdf>

To date, some three years of planning and preparatory work have gone into ensuring that this vision will be realised on the day itself and beyond through the Games legacy. A number of plans, programmes and strategies have been developed setting out the various objectives, policies, actions and projects that will come together, over the next four years, to support the delivery of an outstanding Games in 2014.

“..our current thinking on Games related sustainability issues under eight main themes”

This Sustainability Plan outlines our current thinking on Games related sustainability issues under eight main themes. It includes our overarching objectives for each theme and also the various actions, policies and projects that will help to ensure their delivery. Where relevant, case studies have been highlighted to provide an idea of how we are approaching sustainability issues under each theme. The eight themes are as follows:

1. Improving health
2. Community benefits
3. Low carbon and tackling climate change
4. Low waste games
5. Transport
6. Biodiversity and open spaces
7. Sustainable infrastructure
8. Games-time sustainability

As the event itself draws nearer, we anticipate making several revisions to this first version of the Sustainability Plan, likely on a yearly basis. The Games are still some three and a half years away and many things may change during this period, not least the policy, good-practice and technology that supports sustainable development. Our approach aims to ensure that any emerging good-practice can be incorporated into our sustainability planning, at appropriate decision-making junctures, as and when information becomes available.



Sustainable development

The term 'Sustainable Development' was first defined by the World Environment and Development Committee as:

'...development which meets the needs of the current generation without undermining the ability of future generations to meet their own needs'. Brundtland (1987).

It can also be explained as seeking to achieve a balance between the social, economic and environmental aspects of each decision that we make. To live sustainably, we have to think carefully about the impacts of our choices to ensure that we minimise the harm and maximise the benefits in all of these areas, both now and in the future.

Our commitment to sustainable development was first highlighted in the Glasgow City Council framework document 'Developing the Sustainable City' and was Glasgow's initial contribution to the Local Agenda 21 programme. The importance of sustainability was emphasised by the Local Government in Scotland Act 2003 which set out a duty on local authorities to 'discharge its duties under

this section in a way which contributes to the achievement of sustainable development'.

In order to make a firm international stance on the need for increased global sustainability and to assist implementing actions to help Glasgow move towards sustainable forms of development, Glasgow City Council signed the Aalborg Commitments in 2005. These are a set of ten sustainable development commitments which have helped us to prioritise the changes we must make to become a more sustainable city. These commitments also underpinned our Bid for the 2014 Commonwealth Games and will form the basis of preparation and development of this Sustainability Plan.

The Aalborg Commitments cover a wide variety of sustainability issues including the use of resources, health, transport, planning, social equity and justice. As a signatory, Glasgow City Council shares best practice and regularly provides information on our targets and progress to the European Sustainable Cities & Towns Campaign.

Our commitment to sustainability is communicated through the Sustainable

Glasgow Initiative, which has been developed by Glasgow City Council in partnership with the University of Strathclyde, Scottish Power, Scottish and Southern Energy and Scottish Enterprise. Through implementing the recommendations in the Initiative, and using them at the forefront of our thinking before, during and after we host the Commonwealth Games, we aim to make Glasgow one of Europe's most sustainable cities by 2020.

Our aim is to improve the lifestyles and opportunities for Glasgow's people and businesses, enhance Glasgow's image as a leader in sustainable urban living, and to deliver this in a way that is compatible with the development of a vibrant and growing City. We are aiming to make a tangible contribution to tackling climate change through reducing our carbon emissions by 30% within 10 years, to maximise the use of sustainable energy resources, and minimise our adverse impacts on the environment.

It is clear that we have many challenges to meet, and we will need to think in new ways and use new methods to deliver a Commonwealth

Games that is not only the best it can be, but is also the most sustainable it can be. The following information tells you how we intend to make this happen.

Sustainable development is not just concerned with environmental issues; there are three pillars of sustainable development, 'environmental, social and economic'.

We have identified seven key sustainability themes, (along with Glasgow 2014 Ltd, Games-time policy) areas in which we feel we can achieve the most impact. These are:

Improving Health

To use the Games as a catalyst to inspire people throughout Glasgow and across Scotland to take up sport and develop active, healthy and sustainable lifestyles.

Community Benefits

To host an inclusive Games by promoting access, celebrating diversity and facilitating the economic and social regeneration of the East End and surrounding communities.

Climate Change

To provide a platform for demonstrating long-term solutions in terms of energy and water resource management, infrastructure development, transport and carbon impact mitigation and adaptation. We aim to minimise the carbon footprint of the Games and legacy development, notably by minimising embodied impacts and optimising energy efficiency, energy demand and use of low carbon and renewable energy sources. This will include innovative approaches such as the Scottish Government Saltire Fellowships.

Waste

To act as an exemplar for new waste management in Glasgow, and to demonstrate exemplary resource management practices. We will minimise waste at source, divert construction waste wherever feasible and 80% Games-time waste away from landfill, and promote the waste hierarchy of Reduce, Reuse, Recycle to facilitate long-term individual behavioural change.

Transport

To provide a low carbon transport system for the Games; and to leave a positive legacy in

terms of a continued shift towards sustainable modes of transport including public transport, walking and cycling following the Games. There is also the unique policy of "no spectator parking" at the venues for all events.

Biodiversity

To enhance the ecology of the River Clyde walkway and banks and its surroundings in the East End, and other Glasgow venues, and to encourage the sport sector generally to contribute to nature conservation and bring people closer to nature.

Sustainable infrastructure

To use the Games as a catalyst for sustainable design by introducing features such as SuDS, low water usage e.g. water metering, low energy design and sustainable materials e.g. ETFE.

Games-time sustainability

Glasgow 2014 Ltd is responsible for hosting an "athlete centred, sport focused" Games and this includes Games-time sustainability. As a result, they have devised their own Sustainability Policy and this clearly dovetails with this Plan.

In addition to balancing social, economic and environmental objectives, intergenerational equity – meeting our needs without compromising those of future generations, is a central concept of sustainable development.

In Games planning terms, intergenerational equity is synonymous with Games legacy and is a crucial objective that runs through all eight themes of our Sustainability Plan.

In essence, our approach has been to remove or minimise the Games' potential negative sustainability impacts, whether that be emissions of additional greenhouse gases from construction or ensuring that the benefits of regeneration are distributed in a fair and equitable manner, whilst ensuring that the Games delivers the broadest range of socio-economic and environmental improvements and opportunities in the years to come.

Our approach to Games planning and the studies and assessment processes undertaken along the way (e.g. the Strategic Environmental Assessment (SEA), Health Impact Assessment

etc) has focused on Games legacy by taking a long term view of sustainability impacts. All Games related projects and actions have been developed with legacy in mind to support as strong a legacy as possible. This is reflected in our Sustainability Plan and important legacy

“...maximise the Games' potential positive impact.”

actions and projects have been highlighted under each of the eight sustainability themes. Glasgow will feel the impact of this legacy through:

- Regeneration of run down areas
- Redevelopment of empty and degraded sites
- New employment opportunities for local people
- Improved leisure and recreational facilities
- Better public transport
- More attractive public open spaces, particularly in areas that are currently run down
- Wide ranging environmental enhancements

Our approach to sustainable Games legacy is outlined in 'A Games Legacy for Glasgow – the Glasgow 2014 Legacy Framework'. This framework outlines our objectives, actions and outcomes for sustainable Games legacy under six themes:

- A prosperous Glasgow
- An active Glasgow
- An international Glasgow
- A greener Glasgow
- An accessible Glasgow
- An inclusive Glasgow

The themes and issues addressed in the Sustainability Plan have been aligned to those in the Legacy Framework in support of a strong Games legacy across all sustainability issues.

Strategic Environmental Assessment (SEA)

Central to our approach to environment and sustainability is the Glasgow 2014 Commonwealth Games Strategic Environmental Assessment (SEA) which has been undertaken to provide help and guidance during the planning stages of the Games. An SEA helps to ensure that environmental considerations are taken on board in the development of plan, programme and strategy initiatives. For the first time in any Commonwealth Games, an SEA based approach has been used to bring together a full and detailed evidence based strategy for dealing with environmental problems and issues and capitalising on environmental opportunities.

In more specific terms, the SEA aims to ensure that the Games' potential significant effects on the environment are identified, described, evaluated and taken into account before its various actions, policies and projects are implemented on the ground. This in turn should ensure that the Games support a high level of environmental protection and enhancement, contributing to sustainable development.

An important aspect of SEA is public consultation.

This helps to ensure that the public and other key stakeholders including three statutory SEA Consultation Authorities² have an early and effective opportunity to participate in public policy, strategy and planning decision-making.

This includes consultation on the potential environmental issues raised by the plan, policy or strategy in question. In line with relevant legislation, it is our intention to respond to all consultees setting out how we have acted on pertinent issues raised during the consultation exercise.

The Commonwealth Games represent not only the largest sporting event ever held in Scotland, but also one of the most complex programmes of development ever undertaken within Glasgow. The SEA has considered all stages of the Games' development – from pre-games planning and design right through to the legacy. The SEA has brought together a comprehensive strategy for dealing with environmental issues, informing environmental planning considerations across all Games related plans and strategies including this Sustainability Plan.

Whilst the Games will contribute to a broad range

of benefits across social, economic, regeneration and environmental objectives, there is also potential for adverse environmental effects. Where possible, the SEA has made recommendations for alternative approaches that avoid adverse effects outright or mitigation recommendations that help to reduce effects to an acceptable level. In this sense, the SEA provides an invaluable source of information helping decision-makers, the public and other stakeholders to balance sustainability conflicts and, where possible, identify 'win-win' outcomes.

The SEA has played a crucial role informing the development of this Sustainability Plan, particularly with respect to the environmental issues addressed such as climate change mitigation and adaptation and biodiversity. The significant environmental effects identified through the SEA process have helped to prioritise and refine Sustainability Plan actions and the SEA recommendations have identified additional opportunities for environmental enhancement and protection.

2 Statutory SEA Consultation Authorities in Scotland are the Scottish Environment Protection Agency (SEPA), Scottish Natural Heritage (SNH) and Historic Scotland.

Sustainable Event Management – BS 8901

BS 8901 is the new British Standard which has been developed specifically for the events industry (by London 2012) with a purpose of helping the event industry to operate in a more sustainable manner. The standard defines the requirements for a sustainability event management system to ensure an enduring and balanced approach to economic activity, environmental responsibility and social progress relating to events.

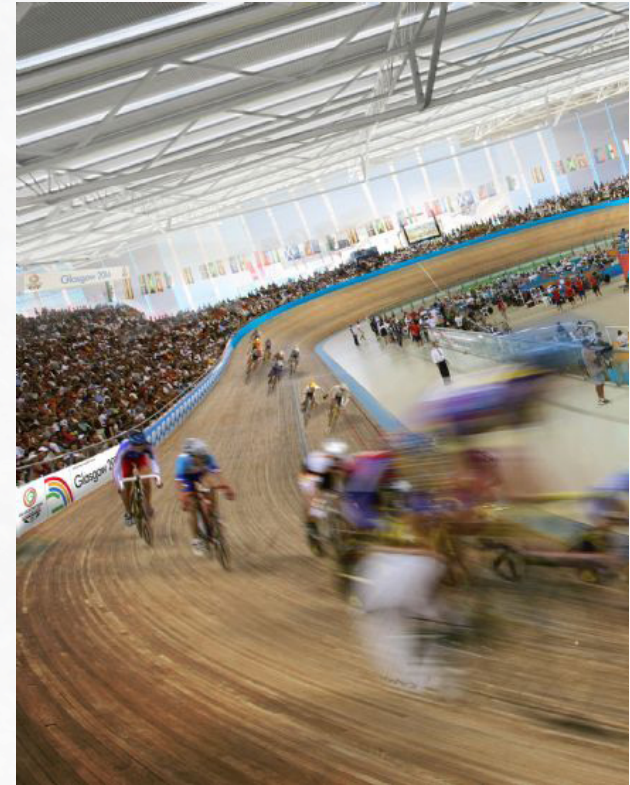
It requires organisations to identify and understand the effects that their activities have on the environment, on society and on the economy both within the organisation and the wider economy; and put measures in place to minimise the negative effects.

BS 8901 shares many of the common management principles of other management system standards such as ISO 9001 (Quality Management), ISO 14001 (Environmental Management) and BS OHSAS 18001 (Health and Safety Management) including the Plan-Do-Check-Act approach.

The key requirements of BS 8901 include:

- Sustainability policy
- Issue identification and evaluation
- Stakeholder identification and engagement
- Objectives, targets and plans
- Performance against principles of sustainable development
- Operational controls
- Competence and training
- Supply chain management
- Communication
- Monitoring and measurement
- Corrective and preventive action
- Management system audits
- Management review

Glasgow 2014 will look to implement all phases of BS 8901 for the Games. Our close relationship with London 2012 will be used to allow the partners to see how the standard works in practice.



“an enduring and balanced approach to economic activity, environmental responsibility and social progress .”

Improving Health

Many Glaswegians experience worse general health than the average Scot. In particular, heart attack and stroke related deaths are significantly higher than the Scottish average. Susceptibility to these diseases can, in part at least, be linked to exercise and healthy lifestyles. Also, limited access to attractive outdoor leisure opportunities may be a key barrier to outdoor leisure and recreation in some parts of the City.

Glasgow has a fantastic greenspace resource including many sites that could be developed to improve their value for outdoor leisure and recreation and a range of other issues such as wildlife conservation and sustainable drainage. Also, many of these more under-developed sites are in parts of the City where people experience poorer health. In particular, certain parts of Glasgow's east end have a large volume of empty and rundown land. Many greenspace sites in the area are of limited use as a recreational resource and add little landscape or biodiversity value.

Many of Glasgow's communities are concerned

with the quality of their environment. People's main concerns are related to litter and access to children's play areas. Residents of the City's east end and from parts of the south side have concerns with the attractiveness of local buildings and, more generally, the lack of a quiet and peaceful environment to live in. There are also a number of important opportunities across Glasgow whereby the development and improvement of woodland sites could contribute to social and health benefits.³

Walking and cycling routes in Glasgow provide good access to and from the city centre along continuous features such as the Clyde and Kelvin rivers. However, access within and between community areas and these types of continuous route can be quite limited. This may be a barrier to outdoor leisure and recreation and/ or the use of walking and cycling for certain journeys such as commutes.

The Glasgow 2014 Commonwealth Games raises a key opportunity to challenge the City's poor health record and contribute to a legacy



of improved health for residents. This can be delivered not least through the inspirational impact of the event itself but also through the legacy of improved sports facilities. Crucially, access improvements including better footpaths, cycle routes and greenspace can help to remove both the physical and psychological barriers to outdoor leisure and recreation and contribute to improved health.

³ 2014 Commonwealth Games Health Impact Assessment Report – adapted from Ch3 Health & Wellbeing, What Matters?: <http://www.glasgow.gov.uk/NR/rdonlyres/13B2AA3B-B065-4006-A2B8-23E0847485B4/0/CWGHIAFullReport.pdf>

Improving health the strategy

The overarching objectives for improving health are shown in the box adjacent. Our approach is to support improved health and well-being through the promotion of healthy living and lifestyle choices, taking advantage of new sports and leisure facilities in Glasgow. As an important part of the strategy, we will also promote the use of active travel choices, making the most of new and improved walking and cycling routes throughout Glasgow.

In particular, improvements to the Clyde walkway will greatly improve access between the East and West ends and the City centre, providing a healthy and sustainable alternative to the private car for a range of journeys including commutes and shopping trips.

Improving health overarching objectives

- To ensure that the Games promotes a legacy of healthy living by encouraging uptake of sport and healthy lifestyle choices
- To improve the health and well-being of the population
- To promote healthy living and lifestyles

Improving health sub-objectives

Improving health sub-objectives take a more detailed look at health issues and their causes.

In particular, our approach considers issues around diet and the relationship between certain environmental factors (such as air quality, soil contamination and the provision of and access to outdoor leisure and recreation opportunities) and health. Games related activities raise a number of important opportunities for addressing these issues as outlined in the 'Delivering the strategy' section.

“Our approach is to support improved health and well being.”

- Promote the use of venues prior to the Games commencing to encourage uptake of sport and healthy living
- Use Glasgow 2014 Ltd's website and a range of other media as appropriate to encourage public engagement with the Games
- Encourage the availability of healthy foods and snacks during Games-time
- Encourage the development of green travel networks between venues
- Promote environmental conditions which improve health

Improving health – delivering the strategy, actions and outcomes

A broad range of actions are currently being considered to support the delivery of our improving health objectives. These include:

- Promote pre-Games venue use in schools and further and higher education institutions
 - Consider financial incentives to promote pre-Games venue use
 - Ensure that local communities are aware of new and/ or improved facilities and the opportunities these will raise for public leisure and recreational activities
 - Monitor the number of hits to the Organising Committee's website as a proxy for public engagement with the Games
 - Add links to the Organising Committee's website from Glasgow City Council and Scottish Government websites
 - Encourage Games-time catering vendors to use organic and locally sourced food and drink
 - Use the Organising Committee's website to provide information on healthy food choices
- in line with the Scottish Government's food strategy
- Provide procurement advice for Games-time catering vendors on the promotion of healthy choices and use of organic and locally sourced products
 - Development of a food strategy/food forum in conjunction with Food Standards Agency (Scotland)
 - Develop a green travel plan highlighting existing and potential routes
 - Adopt and implement potential green routes including the provision of adequate promotion and signage
 - Ensure that venues and other Games related facilities have adequate provision for securing bikes to promote the use of active travel
 - Advertise sustainable modes and routes (including active travel modes) that can be used to access venues and other Games related facilities. This should be done on the relevant Glasgow City Council pages and also at the facility itself e.g. on notice boards etc
- Consider how careful use of additional signage and/ or other awareness raising activities may encourage increased use of major green travel routes such as the Clyde and Kelvin walkways
 - Ensure that temporary traffic management measures during construction projects are designed to minimise traffic congestion
 - Ensure that where possible, temporary traffic management measures are deployed during non-peak times
 - Identify Games related opportunities for 'joining-up gaps' in Glasgow's walking and cycling route provision, improving access and promoting increased uptake of outdoor leisure and recreation

Improving health – case studies

Commonwealth Games Health Impact Assessment (HIA)

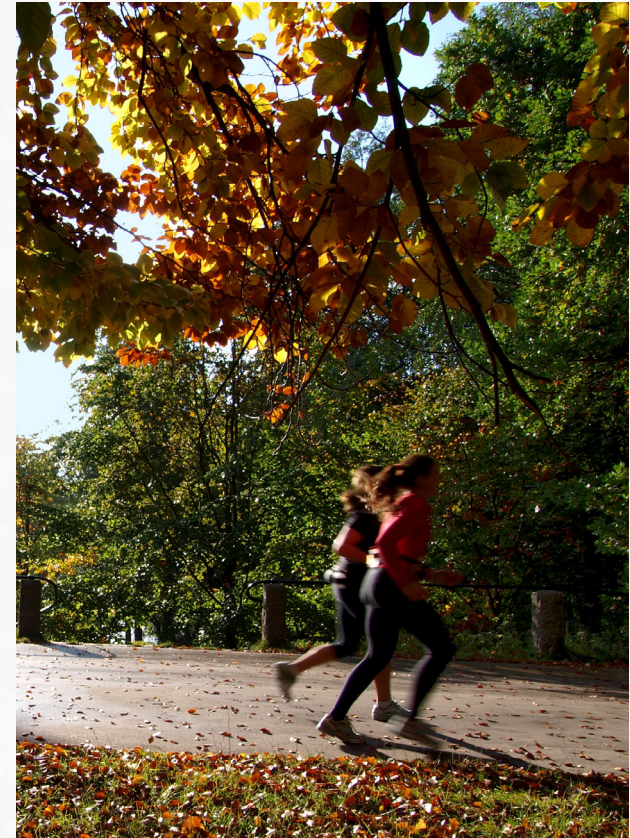
The Health Impact Assessment⁴ (HIA) outlines positive and negative health impacts that may arise as a result of Glasgow hosting the Commonwealth Games. Whilst the HIA addresses the health of the city as a whole, it has a particular focus on ensuring that existing inequalities related to race, gender, disability, sexuality and economic status do not widen as a result of the Games. The HIA proposes a range of actions that are sensitive to the differing needs of Glasgow's population and aimed at improving the Games' overall health benefits.

The HIA brought together over 3,000 members of Glasgow's communities through stakeholder workshops, capturing a broad range of opinions. By trying to address residents' health and well-being concerns, recommendations have been made that directly address the issues identified, helping to promote a healthier, active lifestyle for everyone as a legacy of the Games.

Active travel – improving Glasgow's walking and cycling infrastructure

Glasgow is currently going through a period of change with respect to active travel and walking and cycling route provision. Current projects and programmes such as the Scottish Government funded 'Smarter Choices, Smarter Places' project in the East End⁵, in conjunction with access improvement projects proposed under the Games framework, will help to create an attractive walking and cycling environment, encouraging residents to use active travel modes and participate in outdoor leisure and recreation activities. In turn, this should support health improvements across Glasgow's communities.

Glasgow's 'Smarter Choices, Smarter Places' project includes a travel behaviour change campaign. This aims to raise awareness amongst residents of East End communities including Parkhead, Dalmarnock and Bridgeton about the potential health benefits of active travel choices. These types of project will



provide an important physical and socio-economic legacy through improved active travel infrastructure, better access and, all being well, a shift in public perceptions when it comes to active travel.

4 2014 Commonwealth Games Health Impact Assessment Report: <http://www.glasgow.gov.uk/NR/rdonlyres/13B2AA3B-B065-4006-A2B8-23E0847485B4/0/CWGHIAPFullReport.pdf>
5 Smarter Choices Smarter Places – Glasgow East End on the Move: <http://www.glasgow.gov.uk/en/Residents/GettingAround/SmarterChoices/>

Community benefits

Glasgow is currently experiencing unprecedented investment in the physical regeneration of the City with over £4billion of investment either recently completed, underway or in the pipeline. The volume of construction underway has picked up significantly as Commonwealth Games venues begin to come alive. It is clear, therefore, that Glasgow will continue to provide much of the workload of the Scottish construction sector, across all sectors of the property industry, for the foreseeable future.

The combined effect of the investments for the Games, as well as other major projects including the Clyde Gateway and developments in the south west of the City, offer the chance to take a huge transformational step in our progress through the introduction of a targeted approach to securing community benefit within the procurement process.

Our challenge is to use Games infrastructure and investment to achieve sustainable change. Unlike other past major regeneration projects, our people rather than places must be the

principal beneficiaries from the 2014 Games.

We have the opportunity to make all our citizens, especially those in the most deprived communities, wealthier, healthier, safer and more equal.

While there are other areas of community benefit to address, health improvement, crime reduction, regeneration of residential and leisure facilities, increased education and skill attainment etc, long-term sustainable community benefit will come primarily through increased access to economic opportunities for Glasgow's citizens and businesses, and the opportunities that brings to each for increased choice and personal development.



Community Benefits overarching objectives

- To ensure that the Games strategy, process and form provide venues with community buy-in and engagement and supports a sustainable community
- To nurture and harness the enthusiasm of the people of Glasgow and Scotland through engagement

Community benefits – delivering the strategy, actions and outcomes

A broad range of actions are currently being considered to support the delivery of our community benefits. These include:

- Undertake a social impact assessment to examine the impact of the Games Village and other venues on the existing community
- Ensure that local community groups are consulted
- Consider opportunities for employing local people in new venues and other Games related facilities
- Undertake a stakeholder analysis to identify key groups and how each will be approached/ communicated with
- Consult communities on the needs and aspirations of their locality at the conception stage for the Games Village and other venues
- Develop a communication campaign to provide information on the impact of the Games Village and other venues
- Provide communities with information on how they get involved and influence the development of the Games Village and other venues
- Use a web portal service to advertise Games related opportunities
- Develop a procurement policy that promotes the use of local companies whilst adhering to European Procurement Laws
- Target individuals that would not normally consider volunteering, including those that face particular barriers to volunteering
- Raise awareness in the public and private sectors about the value of having volunteers in the work environment
- Build on existing volunteering frameworks to help develop standards supporting higher quality volunteer management in the public, private and voluntary sectors
- Development of educational programmes to encourage awareness, interest and involvement in the Commonwealth as well as sport and physical activity
- Active promotion of international education in educational establishments
- Encouraging community participation amongst children and young people at a local level, through informal and formal curricula
- Raise awareness of the Commonwealth and Commonwealth Games in all of Glasgow's educational establishments and further develop sustainable links and partnerships in other Commonwealth countries

Community benefits - case studies

Securing community benefits from major projects

Glasgow City Council (GCC) recognise that major infrastructure investments give Glasgow the opportunity to make all of its citizens – especially those in the most deprived communities - wealthier, healthier, safer and more equal. The Commonwealth Games is a particularly significant project in this regard, raising opportunities for communities to gain huge benefits from the various projects that are either underway or in the pipeline over the next few years. GCC has recently revised its approach to procurement for major projects⁶. The approach aims to increase opportunities for Glasgow residents by securing employment, business start-up and business growth opportunities as a result of new development.

If well managed, this revised approach to procurement can help to kick-start socio-economic regeneration in some of Glasgow's most deprived communities. In the run-up to the Commonwealth Games, areas such as Parkhead, Dalmarnock and Castlemilk will see

major project development. Through proper management, these will result in a substantial legacy, not just of improved infrastructure and new venues, but also of an improved socio-economic environment.

Commonwealth community forests project

The Forestry Commission Scotland (FCS) led Commonwealth Community Forests project⁷ will work with a network of existing woodland areas in Easterhouse, Drumchapel and Cathkin Braes/ Castlemilk. The project's aims are to help develop social cohesion and solidarity, enhance participation, contribute to increased life expectancy and help to create a more sustainable and equitable Scotland. The FCS and their partners will deliver these aims through a dynamic programme of activities across the lifetime of the Games – before, during and after. Activities will include orienteering, forest schools, sculpture trails, tree stories and woodland workouts involving participants from a range of communities from across Glasgow.

“The development of Commonwealth Games related community environment projects”

Through greater participation in the development and use of woodland, those involved will be able to engage more with their local woodland area, adding to a greater sense of both personal and community ownership. Also, developing the woodland, through better trails and improved management for example, will help to improve Glasgow's green network resource, contributing to more outdoor leisure and recreation opportunities and supporting biodiversity objectives.

⁶ Glasgow City Council's policy on securing community benefit from major projects: <http://www.glasgow.gov.uk/en/News/Archives/2008/June/community-benefits.htm>

⁷ On your marks, get set, go: a Games Legacy for Scotland: <http://www.scotland.gov.uk/Resource/Doc/282459/0085406.pdf>

Climate Change

Climate change prediction for the west of Scotland indicate that over the coming years there will be an increase in summer and winter rainfall, as well as a likely increase in extreme weather events such as very heavy rainfall and storms. These local impacts of climate change are likely to increase the burden on our already stretched drainage systems and could therefore increase flood risk in some areas.

Climate Change – the strategy

Glasgow City Council is working to address this, and our drainage infrastructure is in the process of being updated as part of the Metropolitan Glasgow Strategic Drainage Plan that will help ensure that we are prepared for the likely local impacts of climate change over the coming years. This will include improved surface water management to prevent the waste water system from being overwhelmed by diverting it into green corridors, such as flood plains or storage areas, until a storm passes.

Our ultimate aim is to minimise the overall carbon footprint of the Games, both before,

during and after the event. We will do this by working to reduce embodied impacts and optimising energy efficiency, energy demand and through the use of low carbon and renewable energy sourced. We will also be using low emission vehicles during the Games and establish Low Emission Zones around Games venues.

On a design and build level we are promoting and using sustainable design and construction methods. A good example is the National Indoor Sports Arena (NISA) and Sir Chris Hoy Velodrome which have been designed to minimise their impact on the environment as well as to withstand the effects of climate change. The buildings and their surrounding landscaping include Sustainable Urban Drainage Systems to alleviate any potential flood risk; passive designs to ensure energy usage is reduced; and through the use of water efficiency methods.

Climate Change overarching objectives

- To update and improve Glasgow's drainage systems; and reduce the risk of flooding in the City
- To reduce the carbon footprint of the Games, before, during and after the event
- To design and build sustainable buildings that can withstand the local impacts of climate change
- To support the aspirations of the Sustainable Glasgow Initiative

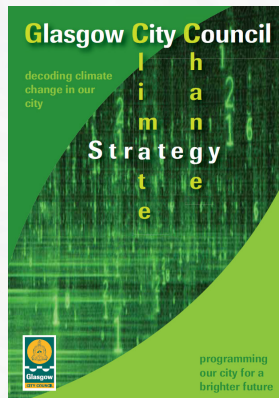
Climate Change sub objectives

- Mitigate climate change impacts that could affect the Games
- To encourage the development of highly energy-efficient low carbon developments through the use of on site renewables and carbon offset schemes.

Climate change – delivering the strategy, actions and outcomes

A broad range of actions are currently being considered to support the delivery of our climate change objectives. These include:

- The potential use of ground pump heat sources at the Scottish National Arena
- Athletes' Village being constructed under strict environmental guidelines and will be scored by BREEAM
- Creation of Low Emission Zones around Games' venues
- Use of low-emission transport fleet during Games-time



GCC's Climate Change Action Plan

As Scotland's largest local authority, Glasgow City Council (GCC) has an important responsibility to address climate change issues.

In response, the Council have developed Glasgow's first Climate Change Strategy and Action Plan⁸. The strategy has three overarching agendas: 1) mitigation – addressing the causes of climate change by helping to reduce emissions of greenhouse gases; 2) adaptation – addressing the effects of climate change by ensuring that the City can adapt to the local impacts of future climate changes; and 3) raising public awareness of climate change and what can be done to help combat it.

The strategy and actions will be reviewed and revised on an annual basis to take account of changes in UK and Scottish Government climate change policy. One of the main drivers influencing GCC's future climate change policy will be the 2009 Climate Change (Scotland) Act's 'public body climate change duty' provisions. When they enter into force in early

Climate Change case studies

2011, these provisions will require many public bodies, including Local Authorities, to carry out their duties in a manner 'best calculated' to deliver the Act's emissions reductions targets and statutory climate change adaptation measures.

The local impacts of likely future climate changes and the provisions of the Scottish Climate Change Act will have wide ranging implications for Glasgow residents and the way that GCC does its work. In response, our Climate Change Strategy and Action Plan outlines how the Council's existing strategies and initiatives can help to reduce the City's greenhouse gas emissions as well as helping us to adapt to likely future climate changes that are now largely unavoidable. Also, the strategy highlights our ambitious plans for the future which will ensure we are in a good position to continue cutting our emissions, adapting to local climate change impacts and carrying out our duties under the Climate Change (Scotland) Act.

⁸ Glasgow City Council's Climate Change Strategy and Action Plan: <http://www.glasgow.gov.uk/NR/rdonlyres/92548BD3-F972-458E-B06D-F007A9C0BC96/0/climatechangestrategy.pdf>

Climate Change - case studies

The Commonwealth Games provides a real opportunity to raise awareness around many of the issues highlighted in the Climate Change Strategy and Action Plan. We are committed to seeking innovative ways in which the carbon footprint of the Games can be minimised, optimising energy efficiency and reducing demand as well as maximising the use of low carbon and renewable energy. The Games' media coverage will allow us to communicate many of the most important messages to as wide an audience as possible, supporting our awareness raising objectives and providing people with information about the risks, opportunities and solutions to climate change.

Sustainable Drainage Provision

GCC, in partnership with the Scottish Environment Protection Agency (SEPA) and Scottish Water, are planning a modern drainage infrastructure network for Glasgow's East End⁹. Our approach aims to take surface water run-off from rainfall out of the normal combined drainage system, freeing up capacity for new development in the area and supporting our

socio-economic regeneration objectives. The surface water would be redirected to a regional Sustainable Urban Drainage (SuDS) System in which surface water run-off from roads, car parks and developments is carried to a series of SuDS ponds throughout the area.

This type of drainage system is an important part of our approach to both climate change adaptation and mitigation. In particular, better drainage will help us to manage the

likely overall increases in summer and winter rainfall as well as increases in 'extreme weather events' such as very heavy rainfall. By creating additional habitats and greenspaces, SuDS schemes can help species and ecosystems adapt to climate changes by extending the range of linked habitats found in Glasgow as well as contributing to attractive places for leisure and recreation.

⁹ Glasgow City Council's East End Local Development Strategy, Changing Places: Changing Lives: http://www.glasgow.gov.uk/en/YourCouncil/PolicyPlanning_Strategy/ServiceDepartments/Development_Regeneration/eelds.htm



Waste

The majority of our generated waste is currently disposed of in landfill sites. Annually this waste amounts to around 310,000 tonnes of household and commercial waste. The waste was dealt with by the City's four transfer stations at Polmadie, Dawsholm, Easter Queenslie and Shieldhall, and the City's active landfill site at Cathkin in South Lanarkshire. The Cathkin site has planning consent to receive active waste until 2013.

We are committed to reducing all kinds of waste before, during and after the Games – ranging from the obvious waste produced during Games-time such as food and drink packaging; through to waste created during the construction activities associated with the Games development.

For waste that would otherwise head to landfill we are aiming to reduce this by 80% during the Games, and will continue to work towards reducing waste to landfill further after the event. This will not be an easy task but we are aiming to ensure that we achieve this target through the

improvement of our recycling facilities; through sensible procurement strategies; and through the continued improvement of educational material relating to recycling with more and improved recycling areas within and around Games venues.

The priority areas for action on waste will include designing and building Games venues using recycled and reclaimed materials where possible as well as designing them to operate in a manner that is as waste-efficient as possible. By minimising waste during venue construction, operation and removal of temporary and permanent facilities; and using public education and outreach activity to promote low-waste lifestyles.

Waste overarching objectives

- To put in place a waste strategy that has targets for monitoring
- To minimise waste during construction
- To encourage the use of recycled materials in construction
- To give the public and providers good recycling facilities during the Games
- To ensure the sensible disposal of materials after the Games and avoid their removal to landfill
- Promote sustainability, by reducing waste, and the energy and resources invested in producing it, and minimising landfill and associated environmental issues

Waste delivering the strategy, actions and outcomes

We will develop a comprehensive Waste Strategy for the Games that will set out how we will manage waste before, during and after the Games. This will ensure that a robust waste management strategy is adopted that will promote the waste hierarchy of reduce, reuse and recycle of all materials.

Waste - case study

The Athletes' Village¹⁰

The approach to the design and build of the Athletes' Village is vital to achieving the environmental principles underpinning Glasgow's ambitions for a lasting sustainable legacy from Glasgow 2014. Representing the biggest build project for Glasgow 2014, the Athletes' Village is a key exemplar project for sustainable design and a low carbon Games, as the project is required to meet, and where possible, exceed all Glasgow City Council and Scottish Government requirements.

Glasgow 2014 is being used as an exemplar to demonstrate what can be achieved in dealing with waste streams in a sustainable way. The planning process (2009 - 2014) is ensuring that waste minimisation and recycling are being considered and implemented to allow the target of 80% Games waste to be diverted from landfill.

¹⁰ Glasgow 2014 Legacy Framework (p.53): <http://www.glasgow.gov.uk/NR/rdon-lyres/A65EB7BF-63E9-4AEE-928F-1187990B29FD/0/GLASGOWSLEGACYFRAME-WORKdigitalversion.pdf>



Transport

Glasgow is well served by extensive road, rail and air networks; as well as having excellent foot and cycle paths across the City. The road network is well connected to the rest of the Scotland and the rest of Great Britain; trains run regularly between Glasgow and Scotland's major settlements; as well as to the north, middle and south of England. We are well connected to the Scottish islands, Ireland and Europe by boat; and our local airports are connected to the global air network.

Our path network is widely used by pedestrians and cyclists; many of the routes are off-road and there is also an ongoing programme of further developing and connecting the City's paths to ensure that by 2014 we have an extensive and connected path network.

We are developing key transport projects, integral to the Games, the aim of which is to provide a more efficient, safer and effective transport system. Central to this is our sustainable transport system for the Games, which includes a dedicated Games Route

Network, studies into low emission fleets, and the development of Low Emission Zones around venues and the Athletes' Village.

Sustainability has been an integral part of the transport strategy from the beginning of the planning process. This is reflected in the following deliverables: there will be no facilities provided for spectator's cars, aiming to convey all spectators to the Games by public transport, walking and cycling; providing access to public transport within Glasgow to all spectators, workforce and Games Family; maximising the use of existing transport infrastructure to fulfil the transport strategy and promoting active travel initiatives.



Transport the strategy

The transport strategic objectives are defined as follows:

- Deliver safe, secure, reliable and accessible transport for the Games family
- Provide fast, frequent, friendly and simple-to-use transport for spectators
- Keep Glasgow moving during the Games

Transport overarching objective

- To provide a low carbon transport system for the Games
- Leave a positive legacy in terms of a continued shift towards sustainable modes of transport including public transport, walking and cycling following the Games
- Provide a Games transport system that offers value for money

Transport – delivering the strategy, actions and outcomes

A broad range of actions are currently being considered to support the delivery of our transport strategy. These include:

- Development and use of the Games Route Network.
- Improvements to roads and road infrastructure along the Games Route Network
- Implementation of our Core Paths Plan
- Development and maintenance of the Connect2/ Smarter Choices, Smarter Places initiatives

“Assessment of the Transport Strategic Plan as part of the SEA”

¹¹ Glasgow 2014 Commonwealth Games: Transport Strategic Plan – First Draft: <http://www.glasgow2014.com/assets/5ea91d92-ef81-4992-8c2d-2587d3ac36d0.pdf>

¹² Version 1 of the Glasgow 2014 Transport Strategic Plan: <http://www.glasgow2014.com/assets/5ea91d92-ef81-4992-8c2d-2587d3ac36d0.pdf>

Transport - case study

Glasgow 2014 Transport Strategic Plan¹¹

Throughout the Games period, transport will play a crucial role for those enjoying the spectacle of the Games as well as those working and competing at it. The Glasgow 2014 Transport Strategic Plan¹² outlines the likely transport requirements of each group as well as the public transport solution that Glasgow will be able to provide in 2014.

Special transport provisions will be developed for competitors, officials and other team members (the ‘Games Family’) to ensure safe, secure, reliable and accessible transport.

A special Games Route Network will be designated for this purpose along with a range of traffic management measures that will keep Games Family transport moving whilst minimising disruption to the rest of the City.

Post Games, most of the Games Route Network will be transformed into priority bus lanes, providing a sustainable transport legacy. Permanent improvements will include new bus

shelters, improved information and signage along the route, improved public safety through additional CCTV, smoother flow of traffic following evaluation and changes to traffic light phasing and reduced pressure on “pinch point” junctions.

These transport infrastructure improvements will contribute to a more sustainable future for Glasgow which will be achieved by promoting and improving sustainable transport modes like public transport, walking and cycling but also through improved traffic flow, helping to lower emissions of air pollutants that can contribute to poor air quality.

No spectator parking at venues

There will be no provision for spectator parking at any of the Games venues. This is in order to reduce the volume of vehicles in Glasgow, and to free up space around the venues. Spectators will be able to take advantage of park and ride facilities that will cater for both able bodied and disabled spectators.

Biodiversity and open space

Glasgow has an extensive green network covering nearly a quarter of the City, and has the largest amount of open space per head of population among Europe's cities. Green network sites are multifunctional – effective sites should be able to support a range of different objectives from biodiversity protection and enhancement to sustainable drainage, access and outdoor leisure and recreation.

“..effective sites should be able to support a range of different objectives”

It is the habitat network component of green network however, that is particularly important for biodiversity. Green network sites include woodland, rivers, streams, canals, lochs, ponds and parks as well as those areas that might not immediately be considered to be valuable habitats such as motorway and railway corridors and vacant and derelict land.

We are committed to protecting and enhancing biodiversity and natural habitats within Glasgow wherever we can. Currently, protection is afforded to a large number of places due to the high quality of their natural environment and landscape including Sites of Special Scientific Interest, Local Nature Reserves and Sites of Special Landscape Importance.

Green network is to do with more than just wildlife conservation though. There is a good deal of political will for green network improvements to play a really important role in the East End's regeneration, in particular around the Athletes' Village as outlined in the South Dalmarnock Masterplan. In particular, aspirations for a diverse green network include sustainable approaches to the East End's

drainage needs, better access to the river for nearby communities and improved wildlife conservation.

The Commonwealth Games will provide us with an ideal opportunity not only to protect and enhance our existing habitats and open spaces, but also to work towards creating new habitats and connecting them to the City's existing habitat network. Games-related development has created an important opportunity to help enhance and develop our green network. This can include the creation of new habitats or the improvement of existing ones. Ultimately this can lead to real benefits for wildlife as plant and animal species will have a greater chance of survival when they are part of a wider network of habitats.

Biodiversity and open space the strategy

The overarching objectives for biodiversity and open space are shown in the box adjacent. Our overall approach focuses on ensuring that Games related development and environmental enhancement projects help to protect and enhance Glasgow's biodiversity, taking into account the sensitivity of the natural environment but also the opportunities it raises. In particular, improvements to the Clyde Walkway along with other environmental enhancement projects such as the Forestry Commission Scotland's Commonwealth Arboretum and the proposals for habitat creation at the Cathkin Braes mountain bike development will contribute towards the enhancement and expansion of Glasgow's habitat network, helping to improve the City's land and aquatic environment.

Biodiversity and open space - overarching objective

- To protect and enhance biodiversity, flora and fauna
- To improve the ecological value of venues and support the viability of species by linking populations and habitats
- Promote the development, enhancement and restoration of a multifunctional green network and open spaces

Biodiversity and open space - sub-objectives

Biodiversity and open space sub-objectives take a more detailed look at both strategic and site specific habitat network enhancement issues. In particular, our approach considers the importance of identifying enhancement opportunities for a range of habitats over and above those addressed in the City's Local Biodiversity Action Plan (LBAP) and/ or those already protected through natural heritage designations. This should help to ensure that, where appropriate, the Games can contribute to landscape scale habitat and green network improvements. Related sub-objectives address the more practical matters associated with delivering this kind of change from a site specific level upwards.

- Conserve, enhance and restore the quality and extent of key habitats including those defined in the Glasgow LBAP
- To improve and strengthen the ecological value of key Games sites including existing habitats found on site
- To increase the number of trees at key Games sites for wildlife, amenity and pollution purposes where possible
- To ensure that there is no risk of watercourse pollution as a result of Games related developments
- Reduce the threat of invasive non-native species, especially to riparian habitats

Biodiversity and open space - delivering the strategy, actions and outcomes



“The development of Commonwealth Games related community environment projects”

A broad range of actions are currently being considered to support the delivery of our biodiversity and open space objectives. These include:

- Using engineering solutions that enhance and protect the natural environment
- The development of Commonwealth Games related community environment projects
- Use of the GCV Green Network's Integrated Habitat Network (IHN) model to inform habitat creation projects i.e. in relation to location, size and composition of any newly created habitat
- Undertaking fresh survey work on site to support the identification and development of optimal habitat creation strategies
- Ensuring that any additional habitat management measures deployed are focused on the needs and priorities of valued habitats that are currently found on site
- Increasing valued habitats at key Games sites - either by area or in terms of increased ecological value

- Developing landscape, biodiversity and cultural heritage strategies detailing measures for the enhancement of ecological value
- Identifying options for creating additional ecological features on site e.g. woodland
- Ensuring that venue development increases the number of trees on site

Where Games development projects have potential to cause water pollution and/ or adversely affect water quality of Glasgow's water bodies:

- Consulting SEPA to ensure that proposed mitigation and treatment measures follow good-practice
- Ensuring that contractors comply with relevant legislation and guidelines to minimise potential issues associated with contaminated run-off
- Approaching site configuration (e.g. with respect to car park size and location) so as to minimise risks of diffuse source water pollution from areas of hard standing

Biodiversity and open space - case studies

Clyde Gateway Green Network Strategy

The Clyde Gateway project takes in an area of Glasgow and South Lanarkshire totalling 3.3 square miles. The Green Network Strategy¹³ aims to improve the way in which residents of the area connect with the landscape and environment as well as enhancing biodiversity by encouraging considerate use of the environment, linking up habitats throughout the Gateway area and extending the amount of greenspace available for recreation and other outdoor leisure activities.

Green Network development in the Clyde Gateway area will contribute to wide ranging physical improvements and provide an attractive context for the area's substantial programme of new built development. Most importantly, it will help to improve quality of life and opportunities for local residents by enhancing the area's attractiveness as a place to invest, locate and recruit. The improved network will help to 'green' transport routes and options by making walking and cycling a safer and more attractive choice.

Commonwealth Arboretum

The Commonwealth Arboretum¹⁴ will radically alter the appearance of a sizeable empty and run-down site on the south bank of the Clyde, opposite the forthcoming Athletes' Village. It will provide an attractive, publicly accessible greenspace for the people of Glasgow and neighbouring communities in South Lanarkshire. The Arboretum will exhibit a range of tree species and will be a major asset for environmental education around such issues as conservation, ecology and climate change. The project is designed to enhance public awareness of and access to Scotland's internationally recognised heritage tree collection.

The Arboretum will also provide the local area with a valuable centre for outdoor recreation and activity, contributing to improved quality of life for residents. It will also help to conserve and improve the area's biodiversity by forming an important and high quality addition to the wider Glasgow and Clyde Valley Green Network, extending the range and complexity of

the area's habitat network and helping to bring people closer to the environment.

2014 Clyde Walkway Pilot Project (CWPP)

In order to connect the Athletes' Village with the Clyde Walkway, and in order to guide the future enhancement, conservation and promotion of the Clyde as a whole, Glasgow City Council, using grant money from the Forestry Commission Scotland, are undertaking the 2014 Clyde Walkway Pilot Project. The project will provide a detailed and actionable Management Plan for a stretch of the Clyde that includes the Athletes' Village and the Cuningar Loop; and will also comprise a strategic assessment of the current and likely future management requirements of the Clyde within the City boundaries.

¹³ Clyde Gateway Green Network Strategy: http://gcvgreennetwork.gov.uk/component/option,com_studies/pid,8/view/project/
¹⁴ Glasgow 2014 Commonwealth Games Community Engagement, Local Public Events: <http://www.glasgowcpg.org.uk/NR/rdonlyres/834D283E-E995-49FD-97D0-C45CF76021BA/0/Glasgow2014CommonwealthGames.pdf>

Sustainable infrastructure

Glasgow's built environment is already undergoing rapid transformation, and with the new developments and improvements to existing facilities planned for the Games there will be a lot of visible change in the City over the next four years. The construction industry has a significant role to play in helping the City reduce its ecological footprint and become more sustainable. All the Games-related developments have been designed and planned with environmental and sustainability considerations at their core.

Adoption of sustainable construction principles will assist us in enhancing biodiversity, reducing the amount of waste sent to landfill, limiting basic resource use, maximising the re-use and recycling of natural resources, reducing emissions of greenhouse gases and ensuring that environmental and socially responsible procurement choices bring benefits locally and nationally.

Memorandum of Understanding

To help further in meeting our aspirations for sustainable development, we have signed an unprecedented and unique agreement to work together with the London 2012 Olympics to maximise the benefits of hosting major sporting events. This agreement has set out how both Organising Committees will jointly benefit from Scotland and England hosting the Olympic Games and the Commonwealth Games within two years of each other. As part of the Memorandum of Understanding, Glasgow 2014 personnel will be involved in London 2012 Observer Programmes, so they can gain first hand experience of working on a major sports event; and following the closure of London 2012, a wide variety of hardware, software and equipment that will need to be disposed of in the most cost effective way possible will be available – at this point Glasgow 2014 will enter into discussions with the London 2012 Organising Committee to purchase fit-for-Games equipment.



“Memorandum of Understanding signed with London 2012”

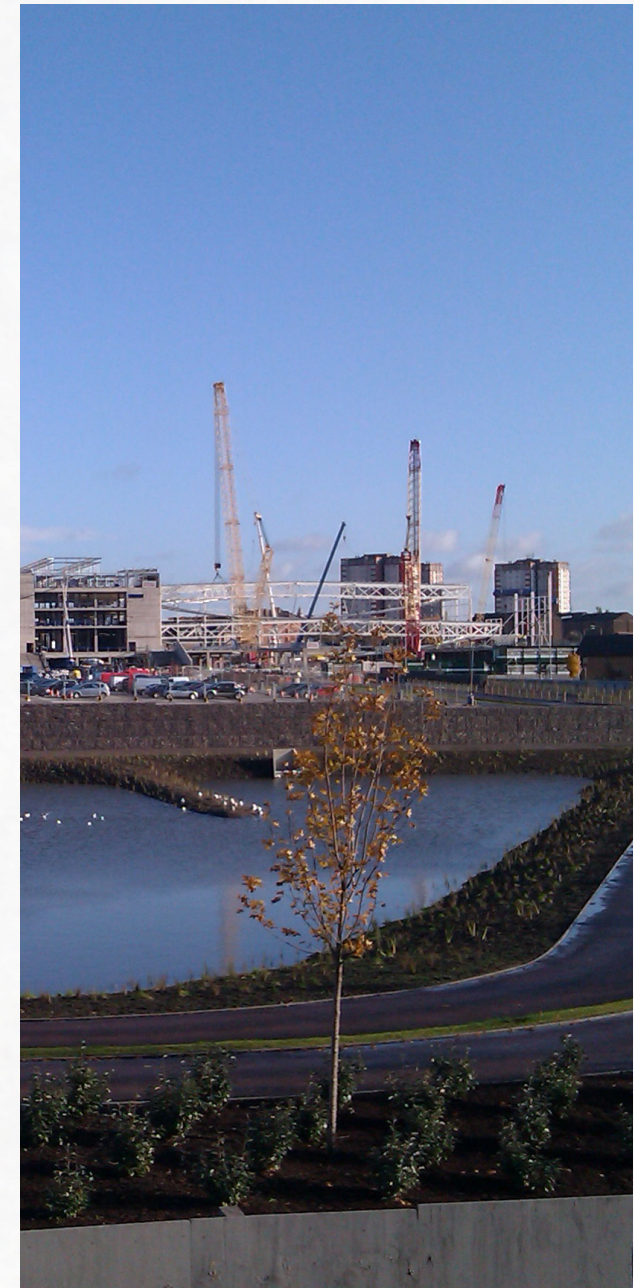
Sustainable Infrastructure overarching objectives

- To stage a Games with responsible environmental and sustainability standards that set new benchmarks
- To ensure that new venue buildings are developed to best practice standards
- To promote best practice in specification of construction materials
- To reduce the environmental impacts from construction operatives transport during the construction phase

Sustainable Infrastructure - delivering the strategy, actions and outcomes

A broad range of actions are currently being considered to support the delivery of our sustainable infrastructure objectives. These include:

- SuDS will form part of all new Commonwealth Games-related developments
- SEA to guide the design of all Commonwealth Games-related infrastructure
- BRE Environmental Toolkit to guide the development of all Commonwealth Games-related infrastructure



Sustainable Infrastructure - case studies

Sustainable Glasgow Initiative

The Sustainable Glasgow Initiative¹⁵ aims to make Glasgow one of Europe's most sustainable cities within 10 years. Glasgow currently emits around four million tonnes of CO₂ per annum, much of which is linked to our energy use. Glasgow's emissions constitute around 8% of Scotland's total carbon emissions. Long-term trends indicate that this will increase unless action is taken now. The Initiative aims to make a tangible contribution through a reduction in carbon emissions by 30% within 10 years. One of the main proposals for achieving this target is the identification and development of technological solutions for maximising sustainable energy use such as district wide combined heat and power programmes.

Also, the initiative has other aims including the attraction of investment through new partnership working, development of sustainable investment and business models, development of an energy masterplan for the city and, crucially, the integration of the Sustainable Glasgow Initiative's ideas and principles across all public policy affecting the City.

Gartloch Gartcosh Green Network Strategy

Although not in Glasgow, the Gartloch Gartcosh Green Network Strategy¹⁶ project provides a good exemplar of how ambitious plans for green infrastructure have the potential to support a wide range of objectives. One of the primary aims of the Gartloch project is to create a wetland park of national significance. This would help to improve links with the area's wider green network - improving the local environment through biodiversity and landscape improvements but also establishing the area as an attractive place to live. It is anticipated that this would have the added benefit of encouraging tourism, recreation and investment in the area.

The project aims to support sustainable community growth by creating links between new, proposed and existing communities and providing residents with jobs and volunteering opportunities. Additionally it aims to improve footpaths, bridlepaths and cycle routes - encouraging and facilitating outdoor recreation

“Sustainability is at the heart of planning for the Games and will reflect Scotland's ambitious environmental targets.”

and leisure and supporting improved health and well-being of local residents.

Sustainable new buildings

New buildings will have different aspects and uses, however due to the commitments of the Candidate City file and also to meet Scottish legislation, they will be built to a highly sustainable standard. This includes ground source heat pumps and the use of ETFE¹⁷ at the new Scottish National Arena.

15 Sustainable Glasgow Initiative: <http://www.sustainableglasgow.org.uk/Pages/Home.aspx>

16 Gartloch Gartcosh Green Network Strategy: http://gcvgreennetwork.gov.uk/component/option,com_studies/pid,10/view/project/

17 ethylene tetrafluoroethylene, a transparent polymer used instead of glass that transmits more light, insulates better, costs less to install and is 1/100th the weight of glass).

Games time sustainability

In delivering the Games, protecting and enhancing our biodiversity and landscape for future generations is a vital responsibility. It is reflected in the high environmental standards set out in our Bid for delivering the games, and is in our plans for developing an enduring legacy extending across Scotland both before and after 2014.

We will assist Glasgow 2014 to introduce a wide range of initiatives and technologies during the Games, ranging from sustainable procurement strategies; efficient energy use and waste management; and sustainable transport strategies to move Games Family and spectators to and around the City.

Glasgow 2014 will look to develop many strategies and policies with regards to Games-time sustainability including food, waste and cleaning. These will be key to ensuring that sustainability is at the core of the 11 days of sporting events.

As these strategies are developed as the Games come closer we will be promoting them through



*“protecting and enhancing
our biodiversity and
landscape for future
generations is a vital
responsibility.”*

the updated versions of this Sustainability Plan.

For the eight themes in this plan, Glasgow City Council and Glasgow 2014 Ltd plan to use a report card to update stakeholders, interested parties and members of the public. The objectives for this report have been obtained from the plans and programmes including the Candidate City File and the SEA. Two examples have been provided in this plan for improving health and climate change (Appendix B). These documents will be modified and updated throughout the coming years.

To acknowledge the importance of sustainability for the 2014 Games, one of the first policies published by the Organising Committee was the Environmental and Sustainability Policy (Appendix A).

All strategies in this Plan have been developed with Glasgow 2014 and are aligned with their Environmental and Sustainability Policy which can be read in full in Appendix A of this Sustainability Plan.

Appendix A: Glasgow 2014 Ltd.

Environmental and sustainability policy

Policy Statement

The Glasgow 2014 Organising Committee (Glasgow 2014) is committed to responsible environmental and sustainability standards through its planning and delivery lifecycle. It seeks to maximise its contribution to sustainable development by working collaboratively with Games Partners, Stakeholders and Advocates to align and promote the Games delivery obligations and ambitions through measurable outcomes that represent new Environmental and Sustainability benchmarks and benefits for the Commonwealth Games, the City of Glasgow and Scotland.

Alignment with Glasgow 2014's mission, vision and objectives

Glasgow 2014's vision is to stage outstanding, athlete-centred and sport focused Games of world class competition; Games that will be celebrated across the Commonwealth, generate enormous pride in Glasgow and Scotland, and leave a lasting legacy.

The mission to realise this vision adopted by Glasgow 2014 is to organise and deliver the 2014 Commonwealth Games in a manner consistent with the aspirations of the Glasgow bid and the contractual obligations of the Host City Contract, on time and on budget.

As a consequence of this mission, Glasgow 2014 obligation is to stage a Games with responsible environmental and sustainability standards that set new benchmarks; which

- minimise impact on the environment and, where possible, seek opportunities that will enhance the environment;
- create a new generation of sporting enthusiasts in Glasgow, Scotland and throughout the Commonwealth; and
- stimulate a positive social and economic impact from infrastructure development activities of the Games.

Glasgow 2014 will deliver these aspirations by approaching its delivery activity with a focus on sustainable development, specifically taking into account socio-cultural, economic and environmental considerations when and wherever possible.

By adopting this approach Glasgow 2014 recognises that there are various opportunities to:

- mitigate the Games impact on climate change;
- provide a true sport celebration that is inclusive and accessible;
- promote healthy living;
- provide an atmosphere that will enable the athletes competing at the Games to perform at their highest potential; and

- deliver the foundation for Glasgow City and Scotland to have sustainable Legacies.

Alignment with Glasgow City Council's, Scottish Government's & Commonwealth Games Scotland's aspirations

Through the Environmental and Sustainability policy, Glasgow 2014, Ltd. is actively working with and aligning its activities with the aspirations of its Games Partners, namely those of the Glasgow City Council as outlined in its 'Glasgow 2014 Sustainability Policy' and those of the Scottish Government and Commonwealth Games Scotland to host a Commonwealth Games that deliver a sustainable legacy as committed to in the Glasgow 2014 Commonwealth Games Candidate City File. The policy is also underpinned by and in support of the principles outlined in the Climate Change (Scotland) Act (2009).

By aligning the policy with those of our Games Partners, Glasgow 2014 aims to support them in achieving their collective objectives:

- To ensure infrastructure is in place to deliver

an enjoyable experience for athletes and visitors that minimises the overall impact on the environment;

- To promote Scotland as a healthy sporting nation and inspire new generations of athletes;
- To seek to ensure appropriate implementation of Environmental and Sustainability principles into permanent venue designs;
- To create an Environment and Sustainability Benchmarking Framework that can be used by future Commonwealth Games Organising Committees;
- To influence the transformation and regeneration of Glasgow's East End, whilst retaining both a sustainable and healthy living focus as a legacy for future generations; and
- To demonstrate Scotland as an attractive environment to conduct business and a friendly welcoming place that will encourage repeat visitors.

Management approach

Glasgow 2014 will implement models of best practice in event management as set out in

the British Standard for a Sustainable Event Management System: BS8901 and cascade the responsibility for executing its ambitions outlined in the Environmental and Sustainability policy throughout the organisation.

Measurement Areas

Glasgow 2014 will measure its Environmental and Sustainability effectiveness leading-up to and during the Games in five (5) thematic areas:

Environment – Glasgow 2014 working with its Games Partners will measure the influence of the Glasgow City Council's 'Strategic Environmental Assessment Plan' on Games readiness and delivery. The Assessment Plan aims to ensure that green spaces for sporting activities are fit for purpose. Furthermore, Glasgow 2014 will ensure that air quality is monitored and addressed where and when needed to benefit athletes performances and safety and a positive Games visitor experience.

Climate Change – Glasgow 2014 working with its Games Partners will measure their ability to impact climate change by providing the Games as a platform to demonstrate and deliver best practice in the following areas:

- implementing demand side energy management by utilisation of low carbon and renewable energy sources;
- ensuring that best water resource management practice is adopted throughout the Games;
- ensuring a robust waste management strategy is adopted throughout the Games promoting the waste hierarchy of “reduce, reuse and recycle” of all materials;
- ensuring responsible resourcing practices are adopted where practical and where best impact can be made; and
- encouraging use of sustainable transport during the Games.

Inclusion – Glasgow 2014 working with its Games Partners will measure their contribution to the physical, economic and social regeneration of Glasgow and wider Scottish communities in:

Supporting the provision, design and delivery of infrastructure that will create training (education/ learning) and employment opportunities; Establishing procurement processes that enable opportunities for broader supply chain engagement;

Supporting the provision, design and delivery of new facilities that will be utilised for community benefit as part of the wider Games Partner legacy commitments and improved access for all.

Healthy Living – Glasgow 2014 working with its Games Partners will measure their campaigns to inspire a new generation of people from Glasgow and Scotland to be fit, practise sport and adopt healthy lifestyle by utilising new facilities and services provided as a result of the Games. This may include the use of safe and accessible green spaces; uptake of sports; promote lifestyle changes; improve air quality by introducing low emission vehicles into available public transport fleets, create green networks that will accrue as a result of the Games and other initiatives.

Games Experience – Glasgow 2014 working with

its Games partners will measure socio-cultural and economic perceptions and tangible effects of hosting the Games on the people of Glasgow and Scotland as well as on visitors from abroad (e.g. athletes, officials, dignitaries, guests, fans). A series of contextually appropriate socio-cultural and economic indicators will be developed and monitored in this regard.

Management of delivery

Glasgow 2014 in collaboration with its Games Partners will deliver the above objectives by executing a comprehensive management plan that cascades through all levels of the Games delivery. The following actions have been initially identified and will be further developed:

Glasgow 2014 will fully integrate the above principles into all facets of its operational activities and design measurement and reporting tools to ensure accountability and control leading up to and during the Games;

Glasgow 2014 will establish and manage a list of key performance indicators throughout the Games delivery lifecycle;

Glasgow 2014 will collaborate with its Games

Partners to track and monitor Environmental and Sustainability risks and opportunities related to the Games;

Glasgow 2014 will actively develop and manage partnerships with a diverse range of stakeholder groups from communities, NGO's (e.g. UNEP, etc.), and businesses to engage and promote healthy living and wider community social benefits of sport as well as spread the 'Glasgow 2014' brand where appropriate and possible;

Glasgow 2014 will actively monitor current Environmental and Sustainability regulations (European, British and Scottish) and anticipate future regulatory changes to ensure the Games conform and are exemplary in 2014;

Glasgow 2014 will deliver a series of Commonwealth Games Environmental and Sustainability benchmarks by executing Environment and Sustainability 'models of best practice' (e.g. Key Performance Indicator measurement and by achieving the British Standard for a Sustainable Event Management System: BS 8901);

Glasgow 2014 will develop sustainable procurement policy guidelines for purchase of

goods, services and sponsorship to ensure fair selection and opportunities for all. By making this undertaking, Glasgow 2014 has the opportunity to promote the importance of sustainable, ethical and socially aware resourcing; and Glasgow 2014 will ensure that regular independent assessments are conducted to measure its effectiveness to meeting the principles stated within this policy document.

Communications strategy and reporting

Glasgow 2014 recognises the importance of having a coordinated communications strategy surrounding environmental issues and sustainability with its Games Partners. It is critical that such a strategy ensures a complementary approach to achieving the immediate goals of the Glasgow 2014 Commonwealth Games and the long-term aspirations of the City of Glasgow and Scotland.

Glasgow 2014, will report on Games related progress annually by publishing a 'Glasgow 2014 Sustainability and Environment Report'. The format of such a report will be determined as part

of the wider Glasgow 2014 reporting strategy.

The report will focus on each of the themes within the Candidate File, where performance benchmarks will be set. Within Glasgow 2014 staff will be identified and assigned as theme champions in order to ensure the established performance indicators are tracked and monitored for achieving best practice. The outputs will be measured for progress in 2010, 2011, 2012, 2013 and 2014 in order to provide an 'overall score' in delivery lifecycle of the Glasgow 2014 Commonwealth Games.

Signed:



John Scott, Chief Executive
Glasgow 2014 Limited

Appendix B: Sustainability Report Card

Improving Health

Background information/ baseline summary	Strategy					Legacy		Case studies and best practice	
	Overarching/ generic objectives	Objectives	Games driven actions	Relevant provisions from Glasgow 2014 Sustainability Policy	Related actions from other PPS	Targets	Output measures/ indicators	Aspirational policies and actions	Case studies
Glasgow, along with population centres throughout the UK, faces a broad range of challenges in relation to improving the health of its residents.	To ensure that the Games promotes a legacy of healthy living by encouraging uptake of sport and healthy lifestyle choices. To improve the health and well being of the population	Promote the use of venues prior to the Games commencing to encourage uptake of sport and healthy living (BRE Framework)	Promote pre-games venue use in schools and further and higher education institutions. Consider financial incentives to promote pre-games venue use Ensure that local communities are aware of new and/ or improved facilities.	Encourage activity and more healthy lifestyles Promote participation in sport			GCC Legacy Framework: Increase in the number of active participants within the community club programme Increase in the number of new junior members of sports clubs CG Strategic Framework: Increased opportunities to promote active participation in sport		Commonwealth Games Health Impact Assessment (HIA)
Health is influenced by a range of external factors including social, environmental and economic issues.		Use the OC's website to encourage public engagement with the Games (BRE Framework - consider adaptation to make it wider than just Games-time)	Monitor the number of hits to the OC's website as a proxy for public engagement with the Games Add links to the OC's website from Glasgow City Council and Scottish Government websites	Encourage activity and more healthy lifestyles Promote participation in sport			GCC Legacy Framework: A network of signed routes for pedestrians and cyclists in Glasgow An increased proportion of trips made by walking and cycling in Glasgow Increase in the distances people walk and cycle		Active travel – improving Glasgow's walking and cycling infrastructure

Climate Change

Background information/ baseline summary	Strategy					Legacy		Case studies and best practice	
	Overarching/ generic objectives	Objectives	Games driven actions	Relevant provisions from Glasgow 2014 Sustainability Policy	Related actions from other PPS	Targets	Output measures/ indicators	Aspirational policies and actions	Case studies
Climate change is an important global issue with short and long-term local effects. In Scotland, flood risk, water resources, agriculture, tourism and health may all be affected. All of these factors may be of economic, social and environmental concern.	To ensure that new developments are appropriately adapted to the impacts of present and future climate change and to minimise their own impact on greenhouse gases, flooding, heat gain, water resources and water quality.	Mitigate climate change impacts that could affect the Games	The use of ground source heat pumps at the Scottish National Arena. Athletes' Village being constructed under strict environmental guidelines and will be scored by BREEAM. Creation of Low Emission Zones around Games' venues. Use of low-emission fleet during Games-time	Mitigate the Games impact on climate change.		GCC Legacy Framework Improve transport connectivity across the city	Reduced journey times at peak periods across and through Glasgow Reduction in traffic along the local road network adjacent to the new M74 Reduction in Road accidents Improved and increased transport access to the heart of the Clyde Gateway area	Use of microrenewable energy sources on all new developments within Glasgow	Glasgow City Council Climate Change Action Plan
		To encourage the development of energy-efficient low carbon developments through the use of on site renewables and carbon offset schemes.		Implementing demand side energy management by utilisation of low carbon and renewable energy sources;		GCC Legacy Framework Provide a sustainable network of travel	Modal shift to more sustainable and more active, healthier modes of travel. Improved air quality in Glasgow. Increased number of cyclists and walkers in city Health improvements of residents of the city		Sustainable Drainage Provision