



Town Centre Securities PLC



Promoting Sustainable Design and Construction

Developing a Secure Future

Introduction

The concept of sustainable development is gaining increasing prominence in relation to building design. The buildings we design and build now will play an important role in securing a more sustainable future. Buildings play a fundamental role in society and there are environmental and social impacts associated with their design, construction and operation.

As a leading property development company Town Centre Securities PLC (TCS) has the opportunity to influence the development and redevelopment of buildings to develop a secure future. We are committed to furthering the aims of sustainable development through our development activity while maintaining commercial viability.



We believe this means designing and constructing buildings that are sympathetic to their local environment, meet the social needs of the local area, enhance the public realm and are designed to be as resource efficient as possible taking into account the whole building lifecycle.

We recognise that opportunities for incorporating sustainable design vary from building to building and depend on issues such as location, purpose and surrounding environment. We have therefore established a process to be followed for any design and construction project undertaken on behalf of TCS to ensure that:

- sustainable development issues are considered in a consistent way for each project undertaken by the Company;
- appropriate objectives and targets are set on a 'project by project' basis to further the aims of sustainable development;
- the process of incorporating sustainability issues into each project for construction and post-construction phases is monitored.
- monitoring of energy/water use during building occupancy (post completion).

Consultants and contractors working on behalf of TCS are required to follow this process and make reference to the Company's Environmental Policy and Biodiversity Policy.

This document provides an overview of the requirements of the process for consultants and contractors working with or aspiring to work with TCS. The process requires completion of a number of checklists and forms. These can all be obtained from the TCS web site at: www.tcs-plc.com. Summaries or overviews of these documents are provided here.

Document

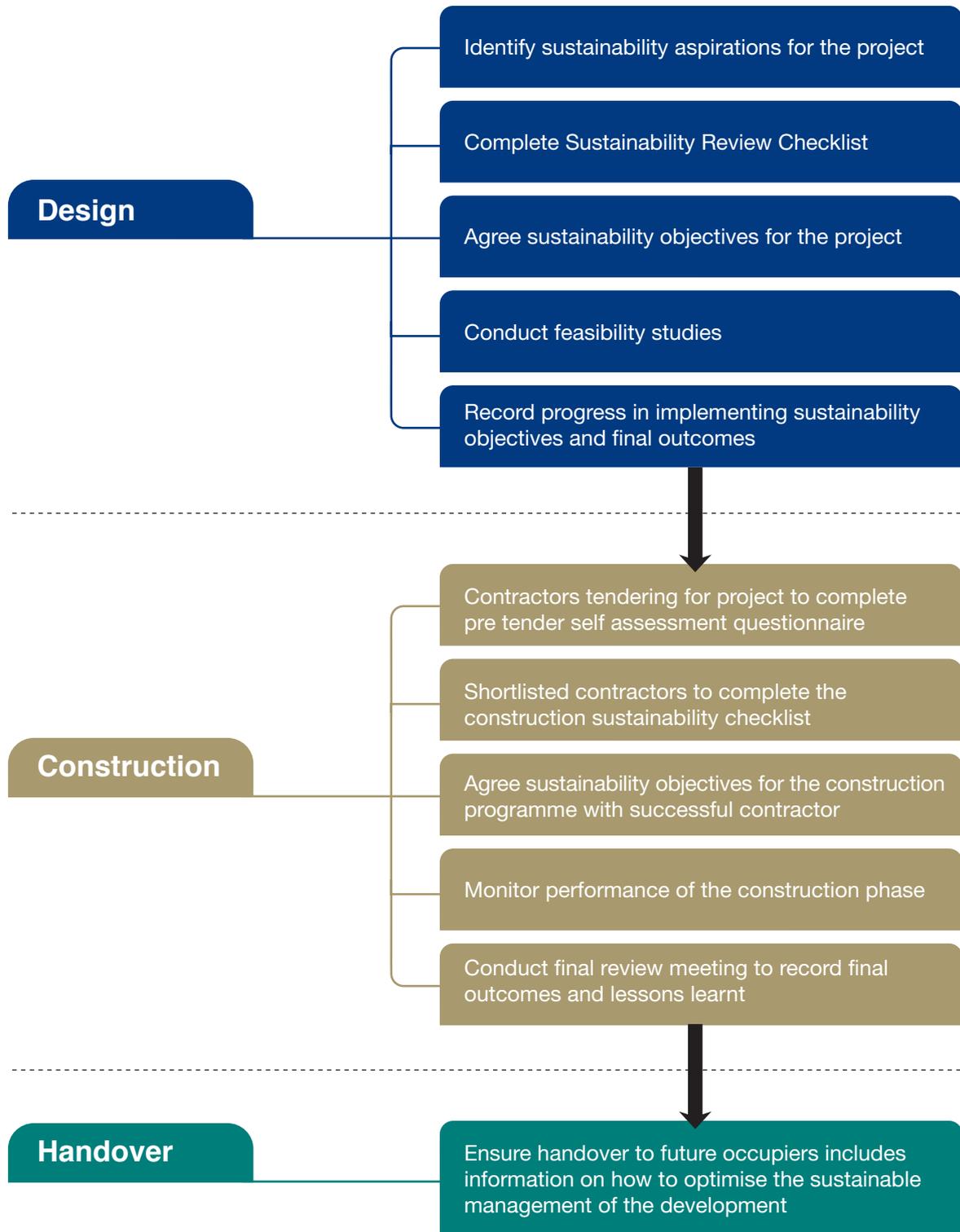
Sustainability Review Checklist
Sustainability Objectives - Design
Ethical and Environmental Self-Assessment Questionnaire
Construction Sustainability Checklist
Sustainability Objectives - Construction

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Overview of the Process



Design

The design phase of the project is the opportunity to explore the sustainability options in detail and to think through the opportunities and constraints associated with a particular project.



The following steps should be followed.

- Identify the sustainability aspirations for the project.
- Complete a sustainability checklist in relation to the proposed development.
- Agree sustainability objectives for the project.
- Undertake feasibility studies.
- Record final outcome.

Identify Sustainability Aspirations for the Project

At the start of the project TCS will work with the design team to identify appropriate sustainability aspirations for the project. These could be driven by a number of factors such as the opportunities associated with the development site, customer/end user requirements and would include aspirations for BREEAM or other appropriate environmental performance ratings. These will provide the overall framework for the building design.

Complete Sustainability Design Checklist

Once the high level aspirations have been identified the Sustainability Review Checklist should be completed (see examples of issues covered by the checklist in Appendix 1). This contains a list of all the sustainability issues that are likely to be associated with a new development. It requires the design team to consider how these issues relate to the project under consideration and to agree an appropriate approach to address these issues with TCS.

Agree Sustainability Objectives for the Project

Following completion of the Sustainability Review Checklist a series of sustainability objectives will be established for the project. An example of a Sustainability Objective Plan is shown in Appendix 2. These will be set out in such a way that progress in achieving each objective will be recorded as the project and scheme develops. It is recognised that at this stage further feasibility studies may be required to determine the costs or practicability of implementing or progressing with the selected options. The need for further feasibility studies will be recorded in the Sustainability Review Checklist.

Undertake Feasibility Study

During the detailed design phase the feasibility of the sustainability objectives identified at the start of the project will be established and the objectives will evolve in response to developments and findings.

Record Final Outcome

The process for considering sustainability during the design phase should be recorded through completion of the Sustainability Review Checklist and recording progress in achieving the sustainability objectives set at the beginning of the project.

Construction



The construction phase of a building has the potential to impact on the environment and surrounding area. We seek through our projects to ensure that the environmental impacts of the construction phase are minimised and that the construction process causes minimal disruption to those living and working in the surrounding area.

To achieve this we expect our contractors to have in place processes and procedures to manage their impacts and monitor performance. To demonstrate their ability

to do this we require our contractors to take the following steps.

- Complete a self assessment questionnaire prior to tendering to demonstrate how they manage ethical and environmental issues.
- Complete a construction checklist as part of the tendering process.
- Identify sustainability objectives and targets for the construction phase of the project.
- Monitor progress and report on progress formally i.e. in the site project progress meetings.

Self Assessment

Any contractor wishing to work with TCS is required to complete a self assessment ethical and environmental questionnaire. This can be found on the TCS web site at www.tcs-plc.com. This provides the contractor with the opportunity to demonstrate to TCS how they manage ethical and environmental issues within their own organisations and their supply chain.

Construction Checklist

Organisations selected to tender will then be required to complete a Sustainability Construction Checklist (see examples of issues covered by the checklist in Appendix 3) for the project as part of the tendering process. This checklist requires the contractor to set out how they will manage sustainability issues pertinent to the project under consideration during the construction phase.

Setting Objectives and Targets

For each construction project we will agree with the contractor selected project specific sustainability objectives and targets and associated performance indicators. Some examples of key performance indicators suitable for construction projects are presented in Appendix 4.

Monitor Progress

Once the project is underway the contractor will be required to monitor progress against the objectives and targets using the performance indicators agreed at the start of the project. The contractor will be expected to formally report progress on a regular basis to TCS. On completion of the project they will be expected to provide a comprehensive summary report presenting the project performance. A close out meeting will be held with the contractor to discuss lessons learned.

Handover

It is important that the impacts of a building are considered throughout its project lifecycle. Controlling the impacts from an operational building are as important if not more important than controlling impacts during the design and construction phases.

We therefore expect our consultants and contractors to work with us to ensure that future building owners and occupiers have available the necessary information to ensure that the building can be effectively managed in a sustainable manner.



The extent and scope of the documentation required at Practical Completion/handover stage will be agreed as part of the objectives for the project and ensuring their delivery will be part of the overall monitoring of the project.

Appendix 1

Summary of Issues Covered by Sustainability Review Checklist



Summary of Issues Covered by Sustainability Review Checklist

Site Locations and Surroundings

Biodiversity

- Is there sufficient knowledge of the biodiversity of the site?
- Has the Local Biodiversity Action Plan been consulted?
- How will the development impact on both local and wider biodiversity?
- Will a landscape or habitat strategy be required? The need to carry out an Ecological report and formal appointment of an ecologist to carry out detailed assessments to be considered.
- What opportunities are there to enhance flora/fauna/wildlife biodiversity on or around the development site?

Heritage

- Are there any heritage areas on or around the site that could be affected by the development?
- Will the presence of these areas impact on the development process?
- How can these features be enhanced through the site development?

Land Contamination

- Is there sufficient knowledge about the levels of any potential contamination at the site?
- Is the site subject to a remediation notice under the Contaminated Land Regulations?
- Is any adjoining land subject to a remediation notice under the Contaminated Land Regulations?
- If not, are there any other land contamination issues that need to be considered in developing the site?
- Are these issues likely to affect the design process?

Flooding

- Has consultation on potential flooding risks at the site been undertaken?
- Is there sufficient knowledge of the flooding risks at the site?
- Has sufficient account been taken of possible future flooding risks associated with global warming?
- How does the design aim to mitigate any flooding risks identified?

Regeneration and Local Economy

- Consultation with local community and stakeholders.
- Have local economic strategies been consulted?
- How can the development support the local economy e.g. will it enhance land values, encourage economic growth, support local employment?
- How can the development help to revitalise or renew the area?
- Can it support affordable housing?
- How can it reduce the need to travel by increasing connectivity and access?

Transport

- Is the development accessible by public transport?
- Has the provision of bus stops, pedestrian access and cyclists been considered?
- What will be the car parking policy and how will the design reflect this?
- Assess the potential for integrating/engaging in 'Car Clubs' and car share arrangements.
- Have routes for delivery vehicles been considered?
- Is there sufficient knowledge of their frequency and type?
- Complete green travel plan.

Summary of Issues Covered by Sustainability Review Checklist

Resource Consumption

Energy Management and Climate Change

- How will the CO₂ emissions from the building be reduced through design measures?
- Will the design aim to improve on the target CO₂ emission rates for these types of buildings as set out in Part L of the Building Regulations?
- What are the proposed limits for design air permeability?
- Have building management systems and appropriate use of sub-metering been considered?
- How will use of energy from lighting be minimised:
 - Natural lighting
 - Energy efficient lighting
 - Task based
 - Photosensors
 - Building orientation
- How will the use of energy from heating the building be minimised?
 - Passive heating and cooling
 - Building orientation
 - High efficiency equipment
 - Energy Supply (microgeneration)
- Have options for microgeneration/renewable energy been considered?
 - Micro wind
 - Passive solar
 - Photovoltaic
 - CHP
 - Ground source heat pumps
 - Biomass
- Could there be the opportunity for future retrofitting of any of the above if the economics change, has consideration been given to this?
- Could grants be sought?

Water Consumption

- What measures will be incorporated to minimise water consumption from the development?
- Have appropriate metering systems for water consumption been considered?
- Can rainwater harvesting or grey water reuse be incorporated into the design?
- Has the incorporation of sedum or green/brown roofs been considered?
- Has 'SUDS' been considered to deal with 'top water' disposal?

Materials Use

- How can the design seek to optimise use of materials?
- Have the maintenance requirements and durability of materials been considered?
- Have options for use of recycled or reused materials been considered?
- What will be the policy on materials specification?
 - Local sourcing
 - Materials from certified sources
 - Low impact materials
 - BREEAM rated materials
- No refrigerants

Summary of Issues Covered by Sustainability Review Checklist

Waste Management

- Have suitable provisions been made for the storage and recycling of waste?
- Have opportunities for in-situ recycling such as composting/crushing been considered?
- Have opportunities to minimise waste during construction been considered through lean design and whole life costing?
- Can the building be designed in such a way that materials can be easily reused in the future i.e. ease of deconstruction?

Impacts on the Surrounding Countryside

Landscape

- Has the surrounding hard and soft landscape character been considered in the design?
- Is there the potential to enhance local biodiversity?
- Has the future ongoing maintenance of any landscaped areas been considered?
- Are there any existing materials on site such as soils etc that can be reused as part of the landscape development?

Air Quality

- Have any off-site sources of air pollution been considered in the design?
- Are there any air pollution sources arising from the building?
- Has consideration been given to their location relative to sensitive receptors?

Noise

- Has screening of the development against external noise sources been considered?
- Has the design considered mitigation of noise from on-site sources such as road surfaces?
- Have potential noise levels in the internal environment been considered?

Preventing Intrusion from Lighting

- Has the layout of the site lighting considered intrusion or interference i.e. light pollution, both on site and to the surrounding area/buildings?

Protection of Water Resources

- Has the suitability of SUDs been considered?
- Have measures to protect from pollution any water bodies adjacent to or close to the site been considered?
- Can identified water features be enhanced in any way?

Summary of Issues Covered by Sustainability Review Checklist

User and Occupant Satisfaction

Access and Connectivity

- Is the site access integrated into adjacent areas?
- Does the development connect effectively with existing adjacent spaces and communities?
- How will the development support access to quality and safe living?
- Are all areas of the development accessible to physically impaired people and meeting or going beyond the requirements of the Disability Discrimination Act?
- Have the requirements of the physically impaired been considered in relation to development approaches, entrances, lighting and evacuation processes?

Amenities

- Is there potential for amenity conflict between the development and surrounding area?
- Can the development enhance local amenities?
- Will the development incorporate amenities that could be shared with the surrounding community?

Crime

- Have features to enhance security and minimise crime been considered?
- Is there an intention to pursue 'secure by design' accreditation?

Comfort Health and Well Being

- What features are in place to enhance the comfort and well being of building occupiers?
 - indoor air quality
 - local control over heating, lighting and ventilation
 - recreational facilities
 - green spaces
- Have the needs of different users been considered?
- Has the need to create equal opportunity in the workplace been considered?

Health and Safety

- Does the site layout and design optimise the safety of site users?
 - movement of vehicles
 - separating vehicles and pedestrians
 - markings
 - parking

Public Realm

- Have provisions been made for public access to the development?
- Have opportunities to improve the public realm in relation to the development been considered e.g. meeting points and opportunity for interaction?
- How does the development enhance the existing public realm?

Education

- How will users of the development be made aware of sustainable design features?
- How else can users be encouraged to behave more sustainably?

Summary of Issues Covered by Sustainability Review Checklist

Stakeholders

- Have relevant stakeholders been identified and appropriately consulted?
- Have the views of the local community to the proposed development been anticipated?
- What levels of community consultation are considered appropriate to the project?
- Are there ways in which the development can support community interaction? e.g. joint learning facilities, links to local amenities.

Appendix 2

Example:

Sustainability Objectives Plan



Example: Sustainability Objectives Plan

Sustainability Objective	Further work required to ensure the objective is feasible?	Cost Implications	Outcome	Comments
Example: <i>To use photovoltaic as energy source</i>	<i>Investigate cost benefits</i>	<i>Not cost effective</i>	<i>Not used a part of this development</i>	<i>Provide comments on the types of buildings for which might be appropriate</i>
<i>Incorporation of green roof</i>	<i>Investigate options and costs</i>	<i>No significant additional costs</i>	<i>Sedum roof installed</i>	<i>Comments on selection of contractor and reason for selecting type of roof chosen</i>

Appendix 3

Example Sustainability Construction Checklist



Example Sustainability Construction Checklist

Biodiversity

- Protection of important habitats or species
- Arrangements for reporting sightings or habitats of interest
- Management of shrub or tree clearance to minimise impact on birds nesting
- Management of noxious plants to avoid spreading

Heritage

- Protection of heritage areas
- Management of finds of archaeological interest

Contaminated Land

- Management of unexpected contamination
- Protection of workers
- Protection of the public
- Protection of local flood defences
- Protection of protected waterways to prevent unnecessary pollution

Lighting

- Prevention of local nuisance from light pollution
- Ensuring lighting does not interfere or conflict with adjacent road signs or signalling

Community

- Opportunity for use of local skills and labour
- Opportunity for local sourcing
- Potential impact of construction activities on local area
- Protection of access to local amenities during construction
- Opportunity for training on sustainable construction techniques
- Management of health and safety

Stakeholders

- Need to consult with local stakeholders during construction process
- Management of complaints and incidents
- Communication and training of construction workers
- Opportunities for involving/informing local communities
- Communication with relevant agencies during the construction process

Transport

- Promoting sustainable travel to the site for construction workers
- Potential for low environmental impact options for transport of construction materials e.g. canal or rail
- Management of works to reduce traffic movements
- Management and routing of vehicles arriving at the site

Example Sustainability Construction Checklist

Resource Consumption

- Options to minimise energy use during construction
- Options to reduce water use during construction
- Monitoring of resource consumption
- Monitoring carbon footprint

Waste Management

- Options to minimise waste arising
- Options to reuse waste
- Options for recycling
- Monitoring of waste arising and proportion recycled
- Duty of Care
- Storage and correct labelling of waste
- Methods of dealing with 'special' and/or 'contaminated' waste

Emission to Air

- Protection of sensitive receptors
- Control of direct emissions from plant
- Preventing unnecessary idling of plant, machinery or vehicles
- Management of dust, smoke or odours
- Monitoring of impacts

Noise and Vibration

- Noise reduction measures and screening
- Noise protection on equipment
- Protection of sensitive receptors
- Potential for use of mains energy
- Preventing unnecessary idling of plant, machinery or vehicles
- Monitoring of impacts

Protection of Water Resources

- Measures to protect water resources
- Management of discharges
- Permitting requirements
- Ensuring effective drainage
- Management of water from wheel wash facilities
- Management of wash out water
- Management and storage of potentially polluting substances
- Spill response plans
- Monitoring requirements e.g. quality of local water course

Materials

- Procurement of materials to reduce waste
- Opportunities to minimise packaging
- Use of recycled materials
- Careful storage of materials on-site to minimise waste

Appendix 4

Examples of Key Performance Indicators for Construction Projects

Examples of Key Performance Indicators for Construction Projects

- Percentage of secondary or recycled aggregate used in construction
- Percentage of timber used in construction from certified sources
- Average distance travelled per tonne of material from suppliers to site
- CO₂ released (in tonnes) from the construction activities*
- CO₂ released (in tonnes) from non construction projects
- Water consumption during construction activities
- Total volume of waste arising
- Percentage of waste landfilled**
- Percentage of waste recycled
- Percentage of waste reused
- Number of complaints
- Number of incidents
- Number of sustainability inspections
- Training and awareness

*These figures can be normalised per £ turnover arising from the construction activities for comparison between projects

** Waste management figures can also be normalised as tonnes of waste to landfill per £ turnover

Appendix 5

Environmental Policy Statement
Biodiversity Policy Statement

Environmental Policy Statement

TCS is committed to minimising the environmental impacts arising from our activities. This includes those impacts arising during the construction, refurbishment and ongoing management of our property portfolio.

We are committed to having in place a management structure that supports the implementation of this policy, which includes a Board Director responsible for environmental performance. We will set annual objectives and targets for environmental improvement and monitor progress in achieving them.

TCS is committed to:

- Complying with relevant codes of practice and regulatory requirements applicable to the company's activities.
- Preventing pollution and protecting the environment.
- Achieving continuous improvement in environmental performance with particular emphasis on the areas of energy consumption and waste management.
- Taking into account sustainability when designing new developments and undertaking refurbishments.
- Encouraging good environmental practice by our suppliers and contractors.
- Including a statement of our performance against this policy in the Annual Review and Accounts.

This policy will be communicated to our employees, suppliers, contractors and tenants and will be periodically reviewed and updated.

Edward Ziff
Chairman and Chief Executive

October 2006



Biodiversity Policy Statement

As a leading property management and development company Town Centre Securities plc recognises the importance of having in place strategies to conserve and promote biodiversity in areas affected by our activities. We are committed to conserving and enhancing biodiversity wherever possible during the construction, refurbishment and ongoing management of our property portfolio.

Through our biodiversity policy we will seek to:

- Ensure minimal loss of biodiversity on sites we occupy or develop.
- To maintain populations of any threatened or native species identified at any of our sites.
- To promote local native species in landscape design and horticultural management.
- To control the spread of introduced species.
- To take account of biodiversity in weed control and pest management strategies.

This we will achieve by:

- Ensuring a baseline ecological survey is completed at all sites proposed for development.
- Consulting Local Biodiversity Action Plans and local conservation groups and officers as part of this process.
- Seeking ways to protect and enhance any local biodiversity features identified in the design and development of the site.
- Ensuring appropriate habitat management plans are put in place for the on-going management of our sites.

This policy will be communicated to our employees, suppliers, contractors and tenants and will be periodically reviewed and updated.

Edward Ziff
Chairman and Chief Executive

October 2006

