

3. METHODOLOGY

- 3.1. This chapter sets out the approach adopted to defining and categorising existing green infrastructure and calculating deficiencies and needs in the context of existing and future populations, together with the approach employed for project prioritisation, implementation and management costings.

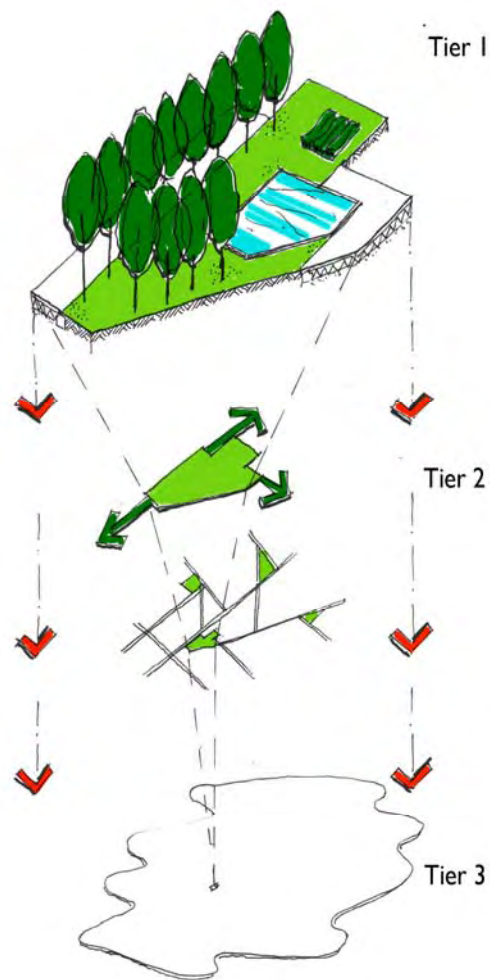
APPROACH – STUDY TIERS

- 3.2. A tiered approach has been devised for the study, both to take account of micro site needs and issues (and to tie in with EDAW’s work), and to consider the wider implications of Thetford’s growth on key environmental assets, together with the effects of pressures from adjoining areas of growth, such as the Cambridgeshire sub region and the Norwich Growth Point. At the most detailed level, this tiered approach considers in a spatial dimension the needs of the growth options sites (Tier 1), as a basis for justified Green Infrastructure principles and a costed implementation and management strategy. The tiered approach also allows for identification of strategic Green Infrastructure links and an holistic overview of Green Infrastructure provision and enhancement potential in and around Thetford (Tier 2 and 3), with reference to pressures from adjoining Sub Regions and Growth Points.
- 3.3. This tiered approach can be considered with reference to the table below and illustration overleaf.

Table 3.1:Outputs from each tier

Tier	Output
Tier 1: Thetford and its urban–rural fringe	<ul style="list-style-type: none"> • Review Open Space Audit and categorise/grade sites • Needs and deficiency analysis • GIS Map sites >0.5 hectares • Detailed opportunities for green infrastructure creation and enhancement • Implementation Strategy • Management Strategy • Principles for developers
Tier 2: The adjoining parishes (Barnham, Brettenham, Croxton, Elveden, Euston, Kilverstone)	<ul style="list-style-type: none"> • Review Open Space Audit and categorise/grade sites • Opportunities and constraints plan • Priorities for investment and management – strategic projects • Needs and deficiency analysis • GIS Map sites >0.5 hectares
Tier 3: Wider area, the Brecks	<ul style="list-style-type: none"> • Vision • Broad opportunities for green infrastructure creation and

Tier	Output
	enhancement <ul style="list-style-type: none"> • GIS datasets/audit + character layers • Identify strategic GI • Identify key sub-regional GI projects + broad cost bands • Potential to enhance linkages • Potential to relieve pressures • Identify pressures elsewhere, e.g. Cambridge sub region



Schematic illustration of the tiered approach

- 3.4. The above diagram illustrates how the masterplanning and design of greenspace, such as a pocket park, fits within a framework of linked greenspaces extending to the District and sub regional spatial scale. It demonstrates the holistic approach required by green infrastructure - a properly planned framework forming the setting for the design of new greenspace, as well as the enhancement of existing sites and links.

METHODOLOGY - STAGES

Inception

Inception Meeting

- 3.5. The project was initiated by an inception meeting with the steering group to define the study parameters.

Review of current policy and plans

- 3.6. A rapid desk based review was undertaken of current national, regional and local planning policy to understand the context for the Green Infrastructure Strategy, and this is set out in Chapter 2 of this report.

Initial Round Table Consultation

- 3.7. Early consultation was undertaken via a half day workshop (summary report at Appendix 2) to focus the direction and outputs of the study and to identify high priority projects for implementation.

Existing Green Infrastructure audit and environmental characterisation

Audit of open space and green infrastructure provision within Tier 1-3

- 3.8. A series of GIS maps of all sites over 0.5 hectare area was produced with reference to the draft Open Space Audit by Breckland Council. A list of the datasets used to create an integrated, comprehensive dataset is shown at Appendix 3.
- 3.9. The data within the Open Space Audit was used to categorise and grade the existing open space provision.
- 3.10. The wider study area (Tier 3) has enabled the identification of potential for multi functional Green Infrastructure green links and the type of Green Infrastructure that should be created at the strategic level.

Desk Based Environmental Characterisation

- 3.11. This built upon the extensive landscape characterisation work LUC have previously carried out within Breckland District²² to define the character of the environment within Tier 1 and 2 of the study area. For the purposes of this study characterisation was a desk based exercise including the following information:

²² Land Use Consultants *Breckland District Settlement Fringe Study – Landscape Assessment*, July 2007

- Landscape character;
 - Historic and cultural character (e.g. HLC, Scheduled Monuments, Listed Buildings, and conservation areas);
 - Ecology (e.g. BAP habitats, Ecological Network Mapping, Ecological Sites);
 - Socio-economic factors (e.g. population density and distribution, Index of Multiple Deprivation, priority ranking of regeneration areas, health deprivation ranking, mortality rates for circulatory diseases, IMD ranking of living environment);
 - Functional ecosystems character (e.g. flood plain, river systems and catchments);
 - Recreation and accessibility including linear links (e.g. public rights of way, publicly accessible open space).
- 3.12. In collating the evidence base data adequacy was reviewed and qualified where appropriate.

Green infrastructure deficiency and needs analysis

Deficiency Analysis

- 3.13. Building on the typology/function of open spaces identified within the Breckland Open Space Audit, this provision was evaluated against ANGSt standards to identify deficiency and therefore inform the needs analysis.
- 3.14. The mapping of deficiencies was considered primarily from human and access perspectives. Other studies such as the Water Cycle Study which may be relevant in respect of deficiency criteria have not yet been undertaken and as such have not been able to inform this study.
- 3.15. The deficiency analysis considers both the existing population and future populations (using the figures devised by EDAW in the evolution of the Thetford Growth Framework and Infrastructure Study) and their needs in terms of green infrastructure.

Needs Analysis

- 3.16. Green Infrastructure needs, including priorities for green infrastructure creation and opportunities for enhancement of existing provision, have been identified based on the deficiency analysis and locations of future growth. This involved analysis of the existing data and linking layers of information e.g. relationships between deficient areas of open space and social deprivation/health in order to prioritise needs.

Sensitivity analysis

Communication with EDAW

- 3.17. The Green Infrastructure Strategy evolved through consultation and communication with EDAW to ensure that it developed in parallel with their study and that the respective outputs of the two studies were mutually informative.

Sensitivity Analysis

- 3.18. Sensitivities of the two proposed growth option sites (Thetford North and Thetford South East) were identified to inform EDAW's work, drawing on LUC's earlier work with the Breckland District Landscape Character Assessment and the Settlement Fringe Landscape Assessment of the key market towns within Breckland District. In addition, sensitivity was considered from cultural and ecological parameters.
- 3.19. Sensitivities were confirmed through targeted field survey of key sites and elements, noting condition, potential pressures and key issues/opportunities.

Green Infrastructure Strategy

Green Infrastructure Vision and Functional Objectives

- 3.20. The deficiency and needs analysis have been used to focus the vision for Green Infrastructure in the study area, which sets out the priorities and opportunities for Green Infrastructure creation and enhancement including the small scale (Tier 1) components and linkages/access to the wider Brecks landscape and Thetford Forest within Tier 2 and 3. This vision should be used to inform future masterplanning of the growth options within Thetford and wider Green Infrastructure priorities as the Green Infrastructure network is implemented and existing provision enhanced.
- 3.21. The Green Infrastructure Vision has been underpinned by a Strategy which sets out a series of overarching concepts to guide Green Infrastructure planning, together with a series of functional objectives to be delivered by Green Infrastructure.

Proposed Green Infrastructure Network

- 3.22. Drawing on the evidence base, a long list of strategic (Tier 2 and 3) and local level (Tier 1) Green Infrastructure projects was drawn up, together with cost banding. The projects in the list were evaluated against the functional objectives in the Green Infrastructure Strategy, and prioritised according to need and the potential multi functional benefits they could offer.

Implementation Strategy

- 3.23. Options for appropriate funding sources were reviewed as part of the Implementation Strategy, including Section 106 agreements, roof taxes and public sector grant funding.
- 3.24. A 'long list' of larger scale projects which could be led by non developer organisations and key stakeholders (strategic links and connections between sites in Tier 3) was identified through stakeholder consultation and this was costed at a strategic level (broad costs/bands).
- 3.25. A series of deliverable high priority projects were identified for a phased Implementation Strategy, both for the growth options and in the town centre. Outline capital works costs estimates for these were prepared by a Quantity Surveyor.

Management Strategy

- 3.26. A review was undertaken of existing grounds maintenance and management costs and mechanisms for comparable works, together with a review of existing Breckland District Council commuted sums calculations, in order to determine appropriate rates and timescales for revenue budgets for the management and maintenance of growth options projects in the Implementation Strategy. This took account of development phasing and associated inflationary uplift and provided options for revenue costs and delivery of both Green Infrastructure and future maintenance.

Principles for Developers

- 3.27. From the overarching concepts and functional objectives underpinning the proposed Green Infrastructure projects a series of principles was devised. These set out the requirements on housing developers in terms of new Green Infrastructure provision, as well as ensuring that conservation and enhancement of existing environmental assets lies at the heart of any future development proposal. These principles have been informed by relevant technical and national standards and have been designed so that they can inform the Area Action Plan for Thetford and Green Infrastructure and Greenspace policy requirements for future residential allocations in Tier 1. The principles considered a range of micro scale issues related to landscape, townscape and sense of place, recreation and amenity, biodiversity and protection of existing environmental assets, in addition to sustainability and energy efficiency.

Stakeholder Consultation

Stakeholder Consultation Workshops

- 3.28. Extensive stakeholder consultation has been undertaken to ensure that the study and supporting Green Infrastructure Strategy meet local needs and address local views and concerns where appropriate. Consultation took the form of an initial Roundtable Workshop in May 2007, to validate the Environmental Characterisation and Audit, to focus the Green Infrastructure Vision and appropriate strategies, and to steer the outputs of the study. This was reinforced with telephone consultation with appropriate organisations. A second Stakeholder Consultation workshop was held in September 2007, to validate the Green Infrastructure Vision and Strategy. Summaries of the findings from the workshops can be found at Appendix 2.