

Emersons Green East development brief

Adopted 2006



A photograph of a modern, multi-story building with a glass and concrete facade. The building features large windows and balconies with glass railings. The image is slightly faded and serves as a background for the text.

"The overall aim is to meet the dwelling needs of South Gloucestershire for the period to 2011 in a manner which is consistent with the concept of sustainable development"

(South Gloucestershire Local Plan)

Acknowledgments

South Gloucestershire Council wishes to thank the main landowners at Emersons Green East for their co-operation in the preparation of this Brief.
The Council also wishes to thank David Lock Associates whom, on behalf of the main landowners, provided material for inclusion in the Brief.



List of figures	Page No.
Figure 1: The site and its immediate context	2
Figure 2: Sub-regional context	6
Figure 3: Concept Statement	10
Figure 4: The process leading to adoption of this brief as an SPD	12
Figure 5: Design checklist	15
Figure 6: Historic map	18
Figure 7: Constraints Plan	24
Figure 8: Emergent Land Use Structure	25
Figure 9: Framework Plan	33
Figure 10: Circus and new bridge link to District Centre	34
Figure 11: Public transport links with EGE	36
Figure 12: Primary walking and cycling routes within EGE	39
Figure 13: Public transport infrastructure within EGE	42
Figure 14: Public Open Space requirements for EGE	49
Figure 15: Social infrastructure at EGE	50
Figure 16: Character areas	72
Figure 17: Master planning process for EGE	82
Figure 18: Landscape Context	98
Figure 19: Evaluation of existing vegetation	102
Figure 20: Topography	104

Contents

Page no

Section one: Introduction

1.0	Introduction	3
2.0	Objectives of this brief	5
3.0	Policy context	7
4.0	Consultation	12
5.0	Using the brief	14

Section two: Physical Context

6.0	Local character appraisal	17
7.0	Site Assessment	23

Section three: Development Objectives & Concept

8.0	Development objectives	27
9.0	Framework plan	32
10.0	Urban development concept	34
11.0	Transport concept	36
12.0	Landscape and site assets concept	43
13.0	Open space and recreation concept	47
14.0	Social concept	50
15.0	Supporting strategies	55

Section four: Design Principles & Character Areas

16.0	Design principles	59
17.0	Character areas	72

Section five: Implementation

18.0	Implementation	82
19.0	Monitoring and review	93

References

20.0	Publications	95
------	--------------	----

Appendix: Site Analysis Data

97



Figure 1 - The Site and its immediate context

- 1.1 Emersons Green, on the northeastern edge of the Bristol conurbation, has been the focus of extensive development activity. A major residential scheme including some 2,800 new homes is nearing completion at Area A, to the west of the Avon Ring Road. And employment development is continuing apace at Area B, between the M4 motorway and the Ring Road. The proposed mixed-use urban extension at EGE will complete the wider Emersons Green development, and should be seen as an integral part of the same.
- 1.2 Emersons Green East (EGE) comprises some 177 hectares of land situated to the east of the Avon Ring Road. It was originally envisaged that Emersons Green East would be developed as a Science Park, with some land reserved for longer term employment needs. In order to make Emersons Green more sustainable and to achieve more balanced travel patterns in the area, the development plan now proposes a major mixed use scheme at Emersons Green East. The proposed scheme will include 2000 new homes with a full range of supporting community and leisure facilities, a 25 hectare Science Park and 20 hectares of mixed employment development. A further 30 hectares of land to include 15 hectares for a further 750 dwellings, will be safeguarded to meet development needs beyond 2011. The site is of regional significance in the South West and will have a high public profile because of its location adjacent to the M4 motorway.
- 1.3 This brief has been the subject of wide ranging public consultation, details of which are outlined within the document, including the process leading to adoption.
- 1.4 When adopted this Development Brief will be a Supplementary Planning Document to the South Gloucestershire Local Plan (SGLP).

South Gloucestershire Local Plan

- 2.1 In accordance with the provisions of the (SGLP) this development brief has been prepared by South Gloucestershire Council (SGC) working in close consultation with the main landowners at EGE. The main landowners comprise Gallagher Estates, Heron Land Developments, Quintain Estates and Development, Howsmoor Developments, Keelbold, and Higgins and Hitchings Trust. In preparing the brief the Council and the landowners have had regard to the relevant national planning guidance as set out in *Planning and Development Briefs: A Guide to Better Practice* (DETR 1998). SGC has also had regard to national best practice in terms of urban design and master planning, as set out in documents such as *By Design - urban design in the planning system; towards better practice* (CABE & DETR 2000).
- 2.2 SGC will seek to ensure that the main landowners identified above submit an application for outline planning permission to develop those parts of EGE that are not already covered by the extant consents, or safeguarded for development beyond the local plan period. In order to achieve high standards of design and to secure all the other development plan objectives for EGE, the Council will only grant outline planning permission subject to the provisions of this development brief (as adopted) and subject to a more detailed illustrative master plan document. The illustrative master plan document will be prepared by the developers and submitted to SGC as part of the application for outline planning permission.
- 2.3 SGC will not grant outline planning permission for the development of EGE, or any part thereof, until there is in place an agreed illustrative master plan document. The master plan document will include a phasing plan/strategy and will be inter-linked with a section 106 agreement. Moreover outline planning permission will only be granted subject to planning conditions, which will prevent the submission of any reserved matters applications until a detailed design code for the scheme and a detailed master plan (for the phase in question) have been submitted to and approved by SGC.

- 2.4 All subsequent applications for approval of reserved matters will then be expected to conform to the requirements of: this brief; the approved illustrative master plan document; the approved design code; and the approved detailed master plan (for the phase in question). Each reserved matters application will have to include a detailed design statement illustrating how the scheme proposals adhere to the requirements of the documents/plans described above. The scope and extent of such statements shall be proportionate with the nature of the scheme proposals in question. See part 18 of this brief for further details on implementation.
- 2.5 It should be noted that there is an extant consent in the area indicated as a 'Science Park' in the Concept Statement (fig 3), and in the Framework Plan (fig 9). The layout relating to the Science Park in figs 9, 12, 13 and 15 is indicative.

The brief has five specific objectives:

- 2.6
1. **To define core development objectives for EGE, and to refine and develop the design principles established through the concept statement process.**
 2. **To set out an indicative framework plan for the development, which together with the brief as a whole will inform the preparation of a more detailed illustrative master plan document.**
 3. **To promote innovation in residential, commercial and infrastructure design with a view to achieving more sustainable forms of development.**
 4. **To identify requirements for essential facilities and services, together with responsibility for their provision where practicable.**
 5. **To ensure the successful and consistent implementation of all design objectives by serving as a robust guide for development control decisions. The adopted development brief will, together with the approved illustrative master plan document, be the basis for determining planning applications and concluding associated legal agreements.**

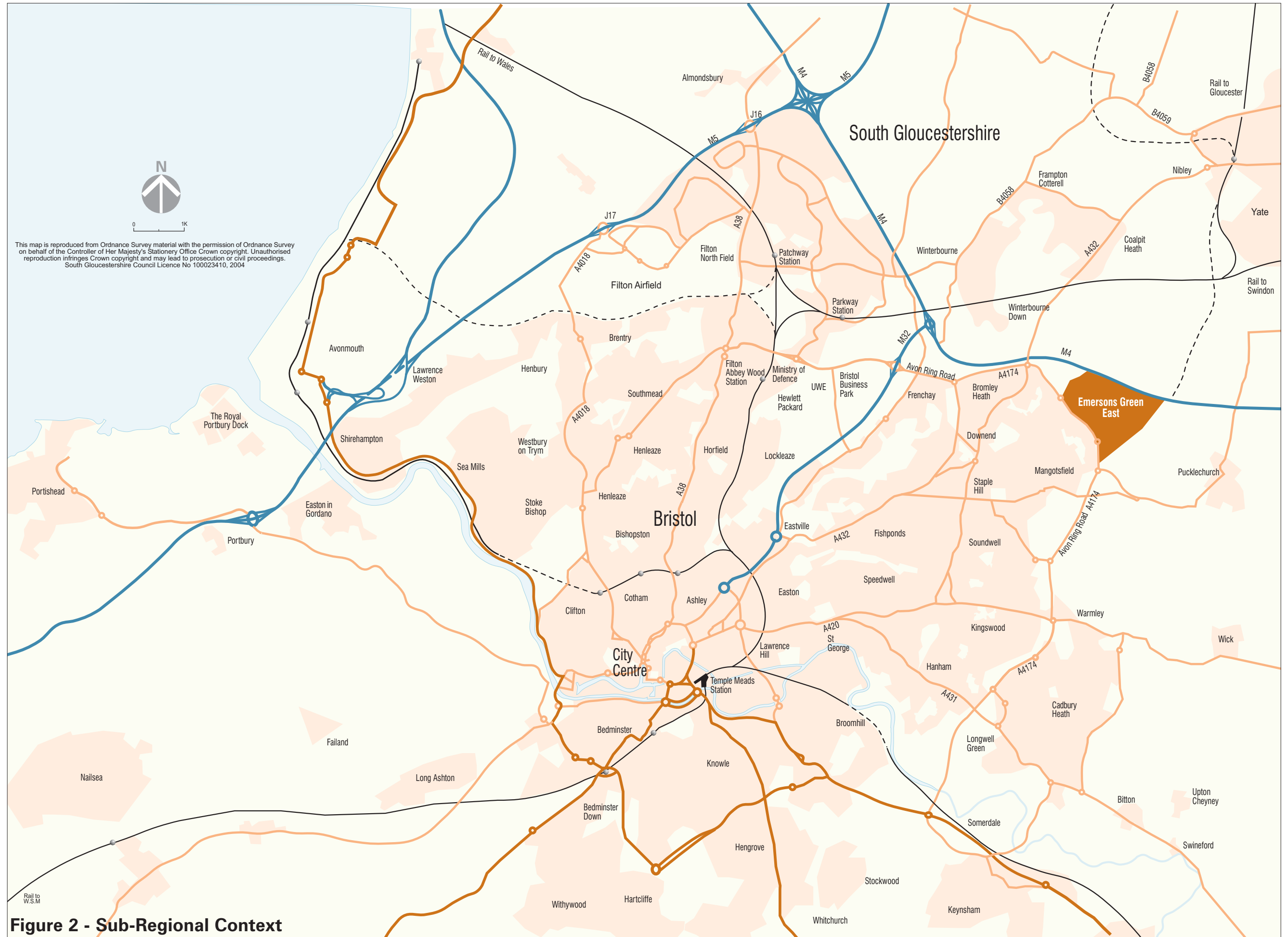


Figure 2 - Sub-Regional Context

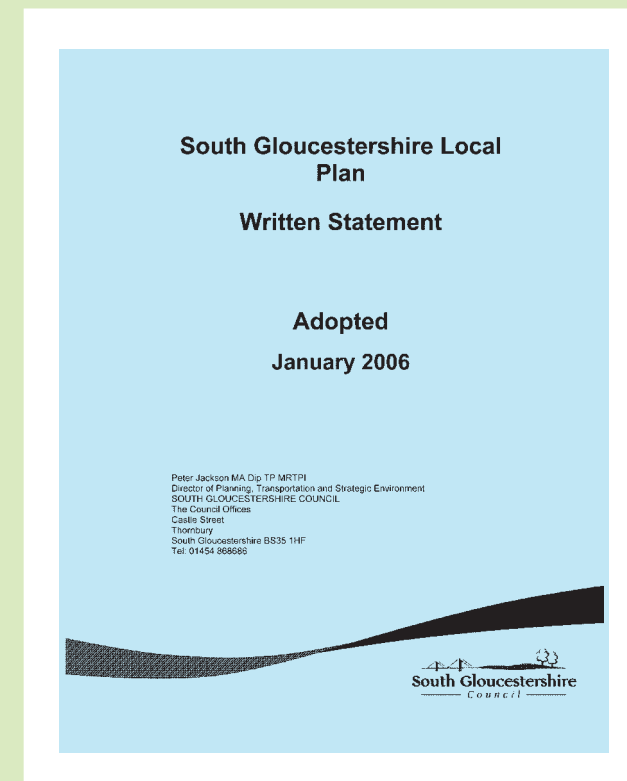
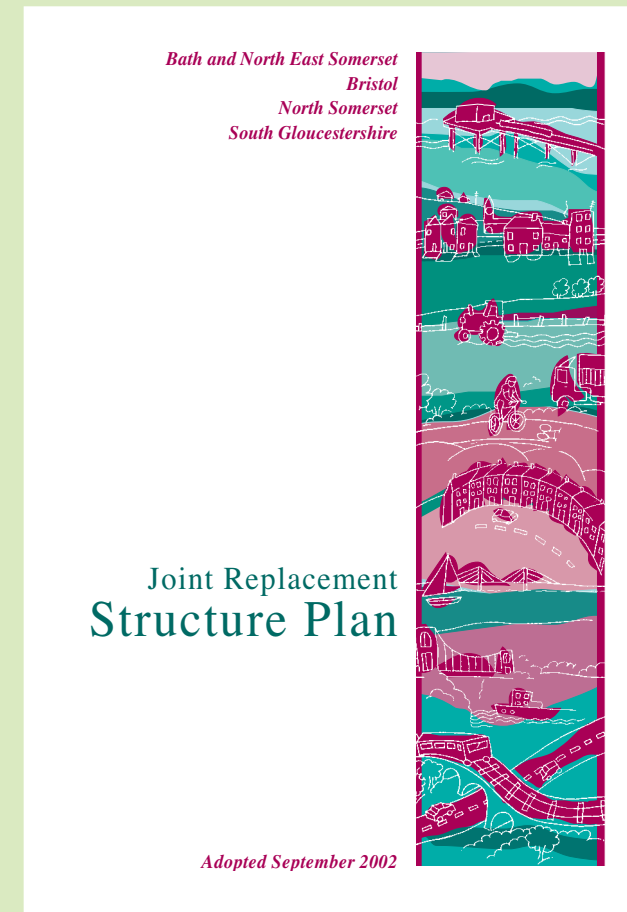
3.1 Emersons Green was first identified as a major mixed development location in the 1985 Avon County Structure Plan. The area, comprising some 400 hectares, was carried forward in two subsequent 1991 Local Plans (Kingswood Local Plan and Northavon Rural Areas Local Plan) where it was identified as a mixed use area comprising:

- **Area A: 3,250 (2,800 are now anticipated) dwellings, District Centre, primary schools and open space;**
- **Area B: 100,000 square metres of B1 (Business) uses, B2 (General Industry) uses and B8 (Distribution) uses;**
- **Area C: a 300,000 square metre Science Research Park; and**
- **Area D: long-term employment reserve.**

3.2 Local government reorganisation in 1996 saw the former Kingswood Borough and Northavon District Councils amalgamated to form South Gloucestershire Council. In 1998 the South Gloucestershire Local Plan - Consultation Draft reiterated the proposals for a Science Park on Area C and a long-term employment reserve on Area D, (both within the area of Emersons Green East), in accordance with the then emerging Structure Plan.

3.3 However, as a result of issues raised at the Examination in Public into the Deposit version of the Structure Plan, the Adopted Structure Plan now proposes a mixed use development at Emersons Green East (EGE)(which includes Areas C and D). The intention is to promote a mix of uses which:

- **will achieve a more sustainable pattern of development involving more balanced travel patterns in the area;**
- **acknowledge the existing commitment to a Science Park on part of the site;**
- **include more housing development and more provision for local employment opportunities; and**
- **no longer involve the construction of a new link from the Avon Ring Road to the M4 motorway (the M4 link).**



Policy 13 of the Adopted Joint Replacement Structure Plan sets out the strategic proposals for EGE:

At Emersons Green, on land east of the Avon Ring Road and south of Westerleigh Road/M4, provision will be made for a major mixed use development comprising a Science Park, other business and industrial uses to meet local employment needs, and residential development with associated facilities integrated into the wider Emersons Green residential development west of the Ring Road. The development will be planned on a comprehensive basis to integrate the different land uses and to maximise provision for public transport, walking and cycling.

The Science Park will:

- offer an attractive, high quality environment and accommodation for science, technology and research based uses, an academic innovation centre and other relevant facilities;
- be designed for and supported by public transport, pedestrian and cycle routes; and
- be on a scale that is compatible with the capacity of the transport network and does not undermine prospects for the regeneration of central and south Bristol and the achievement of a more balanced pattern of housing and employment uses at Weston-Super-Mare.

A significant area for other employment uses at Emersons Green will be provided in a way that:

- meets identified local needs and does not generate large volumes of traffic;
- provides good access for the movement of goods, minimises potential conflict between residential and business uses; and
- ensures accessibility to residential areas and local neighbourhood centres by public transport, cycling and walking.

Residential development at Emersons Green will include a mix of types, in a form and at densities which will:

- support the provision and accessibility of public transport;

- relate well to local facilities particularly those existing at Emerson's Green District Centre;
- maximise the potential for cycling and walking to employment and local facilities through the provision of safe routes; and
- enable the creation of useable and adaptable open spaces.

Provision will be made for a convenient public transport system within and to the Emersons Green developments by ensuring:

- good bus penetration and access, and provision for associated pedestrian movements, as an integrated part of the development strategy and subsequent detailed development proposals in accord with Policy 59;
- provision for enhanced bus movements including along the Yate-Bristol corridor through Emerson's Green, and routes between Emerson's Green, the North Fringe, and the Kingswood/East Bristol urban area on a defined orbital route structure;
- the safeguarding of lines on these corridors for possible future conversion to light rapid transit in accord with Policy 49;
- the creation of new bus priority measures on these corridors in accord with Policy 48 including the extension of existing measures on the Avon Ring Road;
- the provision of bus interchange and associated passenger facilities within the Emerson's Green development linked where appropriate to local multi modal interchanges;
- a reduction in the physical barrier created by the Avon Ring Road between the Emerson's Green developments by providing safe and easy access across the road at convenient points for buses and pedestrian and cycle movements; and
- limitations on private non residential parking in accord with Policy 59.

Policy M2 of the South Gloucestershire Local Plan (SGLP) accords with and expands upon Policy 13 of the Joint Replacement Structure Plan.

A major mixed use development is proposed on 177 ha of land at Emersons Green, east of the A4174 Avon Ring Road, as defined on the proposals map. The proposal will comprise:

- A) A Science Park comprising of approximately 25 ha suitable for science, high technology and research based uses and including an academic/innovation centre and other relevant ancillary facilities;
- B) Approximately 20 ha for B1 (Business) uses, B2 (General Industry) uses and small scale B8 (Distribution) uses to meet local employment needs;
- C) Approximately 40 ha for 2,000 dwellings in a mix of sizes and types (of which 1,200 are expected to be completed in the plan period);
- D) Approximately 8 ha will be reserved for the provision of a secondary school;
- E) Approximately 30 ha will remain safeguarded to meet development needs beyond the plan period (the likely mix of uses will comprise approximately: 15 ha for a further 750 dwellings, 5 Ha for employment uses, with the remainder provisionally identified for playing fields/formal public open space, nature conservation areas, balancing ponds and roads);
- F) The remainder of the site to be used for the provision of a range of local facilities including local shopping, health care, primary education and other community facilities, formal and informal open space, nature conservation areas, balancing ponds and roads.

Development will be planned on a comprehensive basis, designed and phased to ensure maximum practical integration between the different uses and provision of ancillary facilities and supporting infrastructure. In particular, provision will be made for:

A comprehensive network of safe and convenient footpath and cycleways linking all the uses and destinations beyond the site, with particular reference to the District Centre to the west of the Ring Road;

A high standard of bus penetration and significantly improved 'radial' services to east and central Bristol and Yate and orbital services linking to major employment destinations and transport interchanges in the North Fringe.

To this end developers will be expected to contribute towards the early provision of the comprehensive package of transportation measures set out at Figure 8.2 in scale and kind to the development.

The Policy requirement for a Supplementary Planning Document

- 3.4 In order to ensure that the development is planned on a comprehensive basis, and in order to achieve high standards of design, the emerging SGLP requires the preparation of a Supplementary Planning Document (SPD) for EGE. On the 2 January 2001 the Executive Member for Planning, Transportation and Strategic Environment approved a two-stage process for the preparation of Supplementary Planning Guidance for the major allocated sites (including EGE). The first stage of the process involved the preparation of a concept statement. The approved concept statement was then to form the basis for stage two, the preparation of a more detailed development brief. For the avoidance of doubt, where differences arise between the approved concept statement and this brief, the brief will take precedence in determination of planning applications.
- 3.5 In March 2001 SGC and the landowners jointly commissioned independent planning consultants. Their brief was to hold a consultation workshop involving a range of local stakeholders, and to then prepare a draft concept statement as a basis for wider public consultation. The day long workshop took place on the 3 May 2001 at a local venue. Some 50 stakeholders played an active part in the event, including representatives of:
- the main landowners;
 - local residents within EGE;
 - local councils;
 - community associations;
 - South Gloucestershire Council;
 - First Group (bus operators);
 - Sustrans;
 - The Ramblers Association;
 - Avon Wildlife Trust;
 - South Gloucestershire Primary Care Trust;
 - Mangotsfield Secondary School; and
 - Avon and Somerset Police.

- 3.6 The draft concept statement which emerged from the stakeholder workshop was submitted to the Council by the independent planning consultants in June 2001.
- 3.7 The Council then subjected the same to an extensive public consultation exercise between June and September 2001, including consultation with the Kings Forest Area Forum. Towards the end of 2001 the Council considered the responses to the public consultation exercise and produced a revised concept statement in March 2002. The revised concept statement was then subjected to a second round of public consultation, again including consultation with the Kings Forest Area Forum and the Area Committee. In the light of consultation responses the Council introduced a further series of modifications to the concept statement. On the 5 November 2002 the Executive Member for Planning, Transportation and Strategic Environment approved the same as a starting point for the preparation of a more detailed development brief.

Avon Ring Road/M4 Link

- 3.8 SGC has recently reviewed its position in respect of the previously proposed Avon Ring Road/M4 Link Road through EGE. At its annual meeting on the 21 May 2003 it was resolved that:

"This Council believes that the decision to withdraw support for the provision of an Avon Ring Road/M4 Link Road was premature. It considers that the transport objectives originally identified in favour of the M4 Link (notably reducing traffic volume west of the M4 Link on the A4174 and on the A420) are unlikely to be met as effectively by any other solution. Consequently Council welcomes the forthcoming review of the M4 Link in the Greater Bristol Transport Study and believes this will provide the opportunity for the case in favour of the M4 Link to be properly evaluated".

- 3.9 However the Greater Bristol Strategic Transport Study has now been published and the M4 link road scheme at Emersons Green does not form part of its recommended strategy.

Concept Statement - approved on 5th November 2002 as a starting point for the preparation of a more detailed Development Brief

Purpose of this concept statement

This concept statement seeks to illustrate, in broad terms, how the various elements of development set out in policy M3 of the South Gloucestershire Local Plan might be accommodated on the Emersons Green East site. The concept statement will form the basis of a comprehensive Development Brief, and the concept itself is flexible enough to allow a detailed design to evolve at that stage.

Section 106 requirements

In accordance with the provisions of Circular 1/97, the Council will expect the developers to enter into a Section 106 Agreement to ensure the provision of such infrastructure and facilities as are necessary to make the development acceptable in land use terms.

Sustainability Indicators

Resource Minimisation

- Mixed use development, to ensure residents have access to employment, retail and leisure facilities, without the need to travel.
- High density core to minimise land take and maximise viability of public transport and local facilities.
- Retention of existing woodland and hedgerow planting together with substantial new tree planting along the motorway boundary provides a local carbon sink and helps to offset emissions.
- The Council will promote layouts that enhance energy efficiency, in accordance with Policy D1 of the Local Plan.
- The Council will also promote energy efficient building designs, again in accordance with Policy D1 of the Local Plan.
- The Council will expect developers to adhere to the Council's emerging Supplementary Planning Guidance on waste audits.

Local Distinctiveness

- The Council will expect to see this development achieve the step-change in design quality, required by National Planning Guidance.
- A clear sense of place for individual areas of housing, linked by common themes in the design, layout and use of materials. A strong design framework for the layout of streets, squares and courtyards, defining the high density core and allowing peripheral housing to reduce in density towards the countryside edge.
- Higher density apartments and terraced houses grouped to enclose spaces, to provide secure communal gardens and car parking with high levels of casual supervision. Home Zone concept applied where appropriate.
- A clear, understandable structure to open space and planting, easily accessible for recreation, providing footpath and cycle links throughout the development and linking to existing open land and long distance routes.

Access and Integration

- Pedestrian, cyclists and public transport given priority over cars throughout the layout.

- Integration with Emersons Green West through a network of safe and attractive paths linking directly to the local facilities in the Emersons Green Centre. Existing bridleway network should also be protected and reinforced where possible.
- In particular, the Council will expect to see the development incorporate 'safe routes to school'. NB The concept statement makes provision for a new Primary School within the site, but the development would also be expected to provide the necessary additional Secondary School places 'off-site'. The council will also expect the development to provide safe routes to existing Secondary School sites in the area.

Opportunity and Equity

- Emphasis on non-car based access to local facilities and improved bus services to benefit all residents.
- Enhanced employment opportunities in the area.
- A substantial proportion of affordable housing and apartments to meet local housing needs in good quality accommodation. The affordable housing integrated into the wider development, close to facilities to enable access on foot, and with easy access to high quality open space for formal and informal recreation.
- The Council will expect the development to conform to the Council's Adopted Supplementary Planning Guidance on affordable housing.
- The development will include the necessary new local health care facilities.

Security

- The development should provide safe places for people to live, work and engage in leisure pursuits.
- The Council will expect the development to conform to the Council's Adopted Supplementary Planning Guidance on 'Personal Safety and Security of Property'.

Development Principles

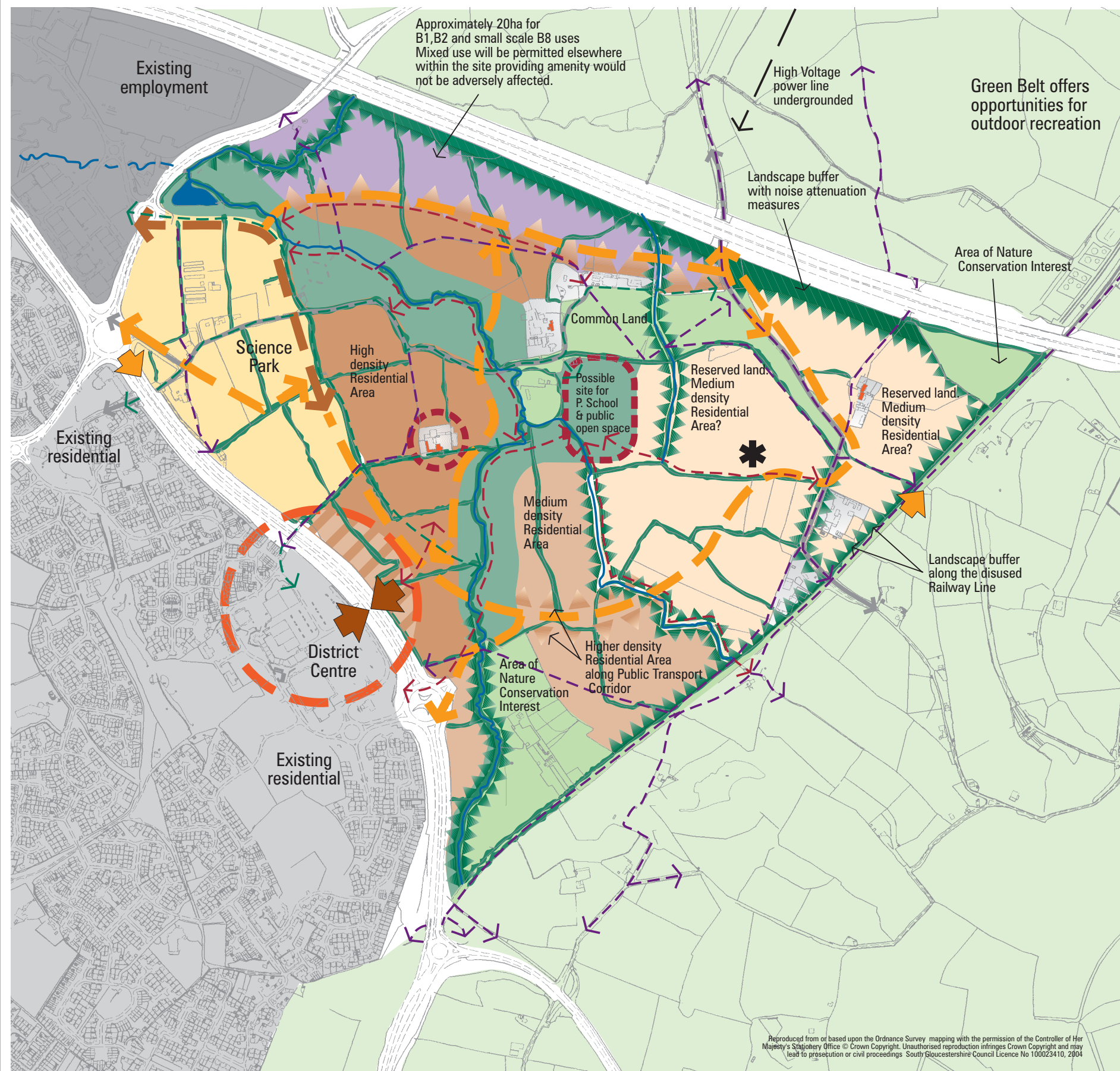
- This development is likely to generate car movements, which may at peak times exceed the capacity of the system. The onus will be on the developer to address this problem and identify mitigating measures to the satisfaction of the council. This may involve seeking to control egress from the development at appropriate times to 'protect' the adjoining primary route (Avon Ring Road). The development will have to ensure a high standard of bus penetration through the site, and significantly improved 'radial' services to east and central Bristol and Yate, and orbital services linking to major employment destinations and transport interchanges in the north fringe. A comprehensive TA will be required. High quality interchange required within the site.
- Existing woodland and hedges are protected, reinforced and extended to create a network of planting to subdivide the development and prevent it from appearing as a large single mass of new housing. Existing planting forms the basis of a new open space structure with a variety of spaces and recreational opportunities to meet the needs of all residents, especially those living in higher density apartments.

- The open space design ranges from formal playing fields to informal walks, kick around spaces and natural habitats towards the outer edges. New habitat areas may be designed to restrict access and avoid disturbance to wildlife.
- Direct and convenient paths for pedestrians take priority over vehicle routes: speeds restricted to 20 mph, varied surface materials and appropriate planting design to create streets as places. Close integration between housing, employment and other facilities within this development and in Emersons Green West, with the emphasis on pedestrian links, cycling and public transport.
- New footpaths and cycle ways create a network of non-vehicle routes through the development and into the surrounding areas. Walking and cycling to work and for recreation is encouraged, using these informal routes through the open space areas. A new primary school, in a central location on the open space network, has easy and safe access on foot and bicycle, and is convenient for possible future expansion of housing areas.
- A wide range of accommodation with an emphasis on affordable, smaller sized units, many with shared garden space, and with easy access to shops, community facilities and employment.
- Buildings should be designed to promote local distinctiveness and character.
- High density core area: four storey apartments and three storey town houses, with landmark buildings, tree-planting and distinctive surface and kerb treatment all adding to legibility and safety. This is an opportunity for innovative modern design, but building facades should be modelled with bays and balconies to avoid large unrelieved massing.
- Towards the edges of the development, the medium density housing areas are sub-divided by strategic planting based on existing woodland and hedges. Detailed designs should ensure that each 'hamlet' has its own character and identity.
- The bridge link between the two parts of Emersons Green is a critical element in integrating the community. The Council will promote the idea of a design competition for this element of the development.
- The listed building of Hallen Farm shall be retained and repaired as a focal building. It could be used as a community hall and/or arts centre capable of serving a variety of social needs. An extension for a new hall may be a contrasting modern design.
- Public art is expected at key locations throughout the development.
- Sites for business and/or leisure developments near the bridge link, provide opportunities for architectural excellence with imaginative design.
- Sites for B2 and B8 employment uses run parallel to the motorway, enabling large structures to help with noise reduction.
- Sustainable drainage scheme to be secured in accordance with Policy *L17A of the Local Plan, incorporating substantial areas of wetland habitat to improve the bio-diversity of the area.
- All existing listed buildings will be protected.

Figure 3 - Concept Statement

* Included in policies L17 & L18 Of the Adopted Local Plan

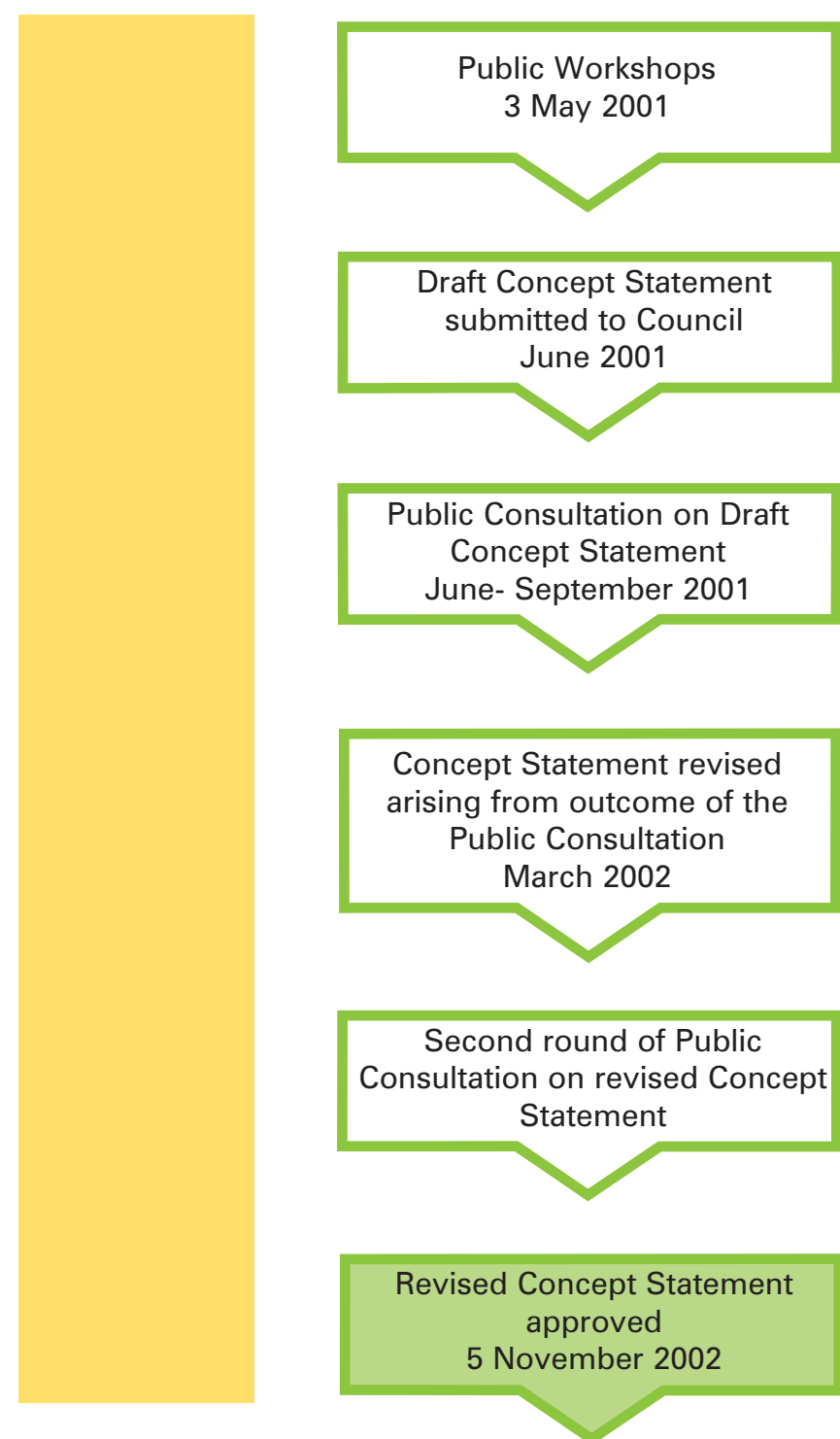
Concept Statement Plan



Legend

- Proposed Science Park. Approximately 25 hectares providing 80,000 square metres of science, high tech and research based employment uses.
- Approximately 20 hectares of employment land, for business, general industrial and small scale distribution uses.
- High density residential area. Urban form, with 3+ storey buildings providing a range of residential units.
- Medium density residential area, with 2+ storey buildings providing a range of residential units.
- Approximately 40 hectares of land would be safeguarded to meet development needs beyond the Local Plan period.
- Existing areas of ecological and/or amenity importance, which would remain undeveloped.
- New landscaping along the eastern and northern boundaries of the site, and within the site.
- Area where the Council will promote mixed-use development that is compatible with the aim of creating an enlarged District Centre including residential, business, retail and leisure use.
- Possible location for formal play space and a new Primary School site.
- Expanded District Centre, to serve Emersons Green West and East.
- Existing development, including listed buildings integrated within new development. Special regard shall be given to preserving the setting of all listed buildings.
- Existing brooks and ponds.
- The Folly Brook will become the spine of a continuous landscape corridor running through the site. This landscape corridor will incorporate sustainable drainage infrastructure, such as ponds, and substantial areas of wetland habitat to improve bio-diversity. It will also include new pedestrian/cycle routes.
- Existing vehicular routes through the site.
- Route of the approved section of the Science Park distributor road.
- Indicative routes of new public transport corridors designed to facilitate bus penetration of the site.
- The development shall incorporate a safeguarded route for LRT through the site, from the Ring Road to the disused railway line and serving the District Centre.
- Potential 'connections' between the proposed public transport corridor, and existing vehicular routes through the site remain to be resolved in the more detailed Development Brief.
- New 'feature' pedestrian crossing. This structure will link both parts of the expanded District Centre. The structure could be the subject of a design competition.
- Existing and proposed recreational routes for walking, cycling and horse riding (see Policy LC12 of the Local Plan).
- Proposed cycle/pedestrian routes (see Policy T5 of the Local Plan).
- New indicative cycle/pedestrian routes (not already proposed in the Local Plan).
- Existing High Voltage Electricity Line will be undergrounded.
- Visual focal point for the development at Hallen Hill.
- Potential new Secondary School location to be determined by Development Brief
- Existing Hedgerows

A. Process leading to approval of Concept Statement



B. Process leading to approval of Development Brief

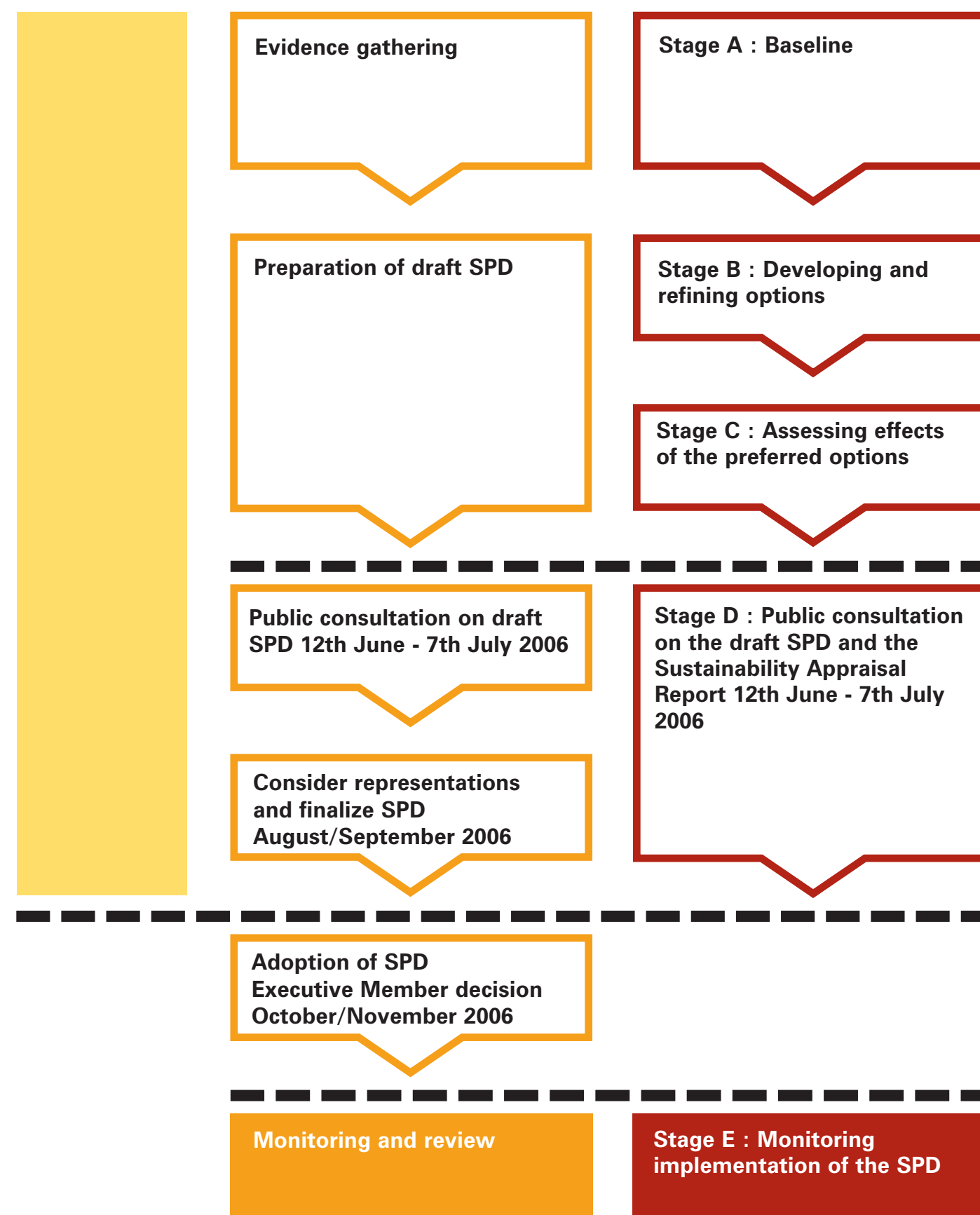







Figure 4 - The process leading to adoption of this brief as a Supplementary Planning Document (SPD)

Legend to Fig 4 Opposite

	Development brief stages already completed
	Sustainability Appraisal stages already completed
	Development brief stages still to be completed
	Sustainability Appraisal stages still to be completed
	Community involvement

Process Leading to adoption of SPD

The brief was subjected to a wide-ranging public consultation exercise and amended where necessary in the light of consultation replies. When adopted by SGC it will have the status of a Supplementary Planning Document (SPD).

As part of the public consultation exercise SGC sought the views of the following organisations and groups:

- The Government Office for the South West
- The South West Regional Development Agency
- Neighbouring local authorities
- The Highways Agency
- The Environment Agency
- English Nature
- English Heritage
- The Countryside Agency
- The Joint Strategic Planning and Transportation Unit
- Relevant statutory undertakers
- South Gloucestershire Chamber of Commerce
- The South Gloucestershire Primary Care Trust
- First Group
- Avon Wildlife Trust
- Sustrans
- The Ramblers
- Local Agenda 21 Group
- Executive and ward members of SGC
- Kings Forest Area Committee
- Local Councils
- Community Associations
- The wider community
- landowners

Fig 4 opposite illustrates the process leading to adoption and includes the preceding Concept Statement set out on page 9

- 5.1 This brief seeks to provide clear guidance on how EGE should be developed, if the scheme is to meet various requirements set out in national planning policy guidance and in the development plan. The brief is intended for use by all those involved in the development process.
- 5.2 In order to make the structure of the brief more legible the content has been divided into five sections. The first introductory section, sets out the context and planning policy applicable to this Brief. Section two establishes the physical context for development. The third sets out the overall development objectives and includes an indicative Framework Plan, which will inform the preparation of a more detailed illustrative master plan document. It also sets out the urban form, transport, landscape, open space and social concepts that underpin the development brief, together with the various supporting strategies. The fourth section sets out a series of specific design principles to be applied across the site. The fifth section deals with issues relating to implementation monitoring and review.
- 5.3 The various concepts, strategies and principles have been separated in this way in order to make the requirements of the brief as explicit as possible, and thus to make it easier to test the degree to which scheme proposals reflect those requirements. In reality, however, the concepts and principles set out in the brief are closely interrelated, and it is therefore important that users of the brief familiarize themselves with the document as a whole. In testing the degree to which scheme proposals reflect the requirements of the brief users should also refer to the Design Checklist at Figure 5.
- 5.4 This Design Checklist seeks to apply the key questions of the 'South Gloucestershire Design Checklist' to the Emersons Green East context. It aims to act as an aide memoir to all stakeholders who have an interest and will be involved in the development of EGE.
- 5.5 Applicants and their Agents must take the Checklist into account when designing their schemes and, as a matter of good practice, their answers to the questions should be included in the Design and Access Statement. It is expected that all questions will be answered positively. Council Officers and Members will ask the key questions to assess the design

assessment as a basis to decide whether the application is good enough to approve. Other stakeholders, such as Consultees and the local community, should also ask these questions when participating and being consulted in the design process

- 5.6 The Checklist is structured to consider strategic topics first, followed by more detailed topics and follows a rationale process by which a design may evolve. Each question is often interdependent on others. It is therefore important to regard the Checklist as a whole rather than 'cherry-pick' individual topics and questions

Q1. Design statement

Are the scheme proposals supported by a design statement, which sets out how the scheme proposals adhere to the requirements of this brief; the approved illustrative master plan document; the design code and the detailed master plan for the geographical phase in question?

Q2. Site analysis

Have the characteristics of the site in question (i.e. land form, vegetation, ecology, archaeology, listed buildings and public rights of way etc) been properly considered and taken into account in the design of the scheme?

Q3. Development form

Is the form of the proposed scheme (i.e. layout, landscape, density and mix, scale and appearance) consistent with the character area guidelines set out in this brief; the approved illustrative master plan document; the design code and the detailed master plan for the geographical phase in question?

Q4. Design quality

Will the scheme further the aim of creating an exemplar sustainable urban extension at EGE through its innate design quality, architecture and materials?

Q5. Transport

Have the scheme proposals been designed to support new public transport services at EGE?

Q6. Pedestrian/cyclist priority

Have the routes into and through the site been designed to provide a convenient, safe and attractive pedestrian and cycling environment, where pedestrians and cyclists are given priority over cars?

Q7. Open space

Do the scheme proposals include sufficient areas of open space, consistent with the open space concept set out in this brief?

Q8. Social wellbeing

Have the scheme proposals been designed to provide for the social needs of EGE residents in accordance with the social concept set out in this brief?

Q9. Water

Has the proposed development been designed to safeguard the availability and quality of water supplies, avoid flooding, and (where appropriate) create new water-related habitats?

Q10. Energy conservation

Have the scheme proposals been designed with energy conservation as a core objective?

Q11. Waste reduction

Have the scheme proposals been designed to reduce waste generation during the construction phase and to facilitate recycling throughout the lifetime of the development?

Q12. Perimeter blocks

Is the scheme layout consistent with the 'perimeter block development' approach required by this brief?

Q13. Animating the street

Are the proposed building forms and street frontages appropriate for this part of EGE, and will they ensure that the street is animated?

Q14. Place making

Have all the opportunities to use street width, junctions and crossroads to enhance 'place making' been exploited in the scheme proposals?

Q15. Roofscape

Has careful attention been paid to chimneys, roof heights and shapes, detailing and materials in order to create a varied and interesting roofscape?

Q16. Microclimate

Have the scheme proposals been designed to reduce winds speeds across the site, and to avoid unacceptable overshadowing of main habitable rooms and outdoor amenity space?

Q17. Orientation

Have the scheme proposals been designed to ensure that as many dwellings as possible (allowing for other urban design considerations) are orientated to take advantage of passive solar gain?

Q18. Adaptability

Do the building types proposed allow for easy adaptation and extension, and have the roofs in particular been designed to allow easy conversion to useable space?

Q19. Domestic storage space

Do the scheme proposals make adequate provision for the storage of bins, recyclable materials and bicycles?

Q20. Materials appearance

Have the construction materials been carefully selected and deployed to create areas within the development that will appear coherent and engender a sense of place, in accordance with the approved design code?

Q21. Materials: embodied energy

What measures have been taken to ensure that the embodied energy of the bulk materials used in the construction has been minimized?

Q22. Car parking

Have the scheme proposals been designed to ensure that the parked car does not dominate and detract from the appearance of the street scene?

Q23. Home Zones

Do the residential streets and courtyards incorporate (where appropriate) the key characteristics of Home Zones at EGE, as set out in this brief and in the approved design code?

Q24. Utilities in the street

Do the scheme proposals demonstrate how the provision of services across the development have been co-ordinated in accordance with the requirements set out in this brief?

Q25. Exterior lighting and street furniture

Have the opportunities to enrich the public realm, through the use of high quality exterior lighting and street furniture, been maximized?

Figure 5 - Design Checklist - testing the degree to which scheme proposals reflect the requirements of the brief

- 6.1 This part of the brief seeks to highlight the character of the built heritage in this part of the country.
- 6.2 The visual images of local character are presented under three headings:
- **Historic South Gloucestershire.**
 - **Historic West of England (urban environments).**
 - **Contemporary West of England.**
- 6.3 The images of historic built form are intended to illustrate the richness and quality of the built heritage of South Gloucestershire and the West of England. They are also intended to illustrate details and materials, which are characteristic of historic built form in this area.
- 6.4 The towns and villages of South Gloucestershire exhibit a timeless pattern of built form, which holds immense appeal for modern homeowners. In contrast, the planned Georgian areas of Clifton and Bath represent world class examples of high density, mixed-use development, and a highly civilized form of urban living, which equally has lost none of its attraction over the centuries. These town building achievements in the West of England should be a source of inspiration to the architects, landscape architects, urban designers and planners who will deliver high quality development at EGE.
- 6.5 It must be emphasized, however, that the brief is not promoting the slavish replication of the historic architectural forms or details illustrated here. There are various reasons why it would be impractical to do so, and even if it were practical to replicate faithfully historic buildings, a development comprised of replica buildings would lack authenticity. Instead this brief seeks to highlight the richness and quality of the historic built environment as a benchmark of quality. It aims to promote a fresh, modern interpretation of vernacular architecture, which will add a new dimension to the built heritage of the area.
- 6.6 The brief seeks to promote architecture that addresses current needs and priorities, not least the need to develop buildings that achieve high standards of environmental performance. The images of contemporary built form are intended to illustrate a range of precedents, from different parts of the west of England, resulting from a modern approach to architecture.

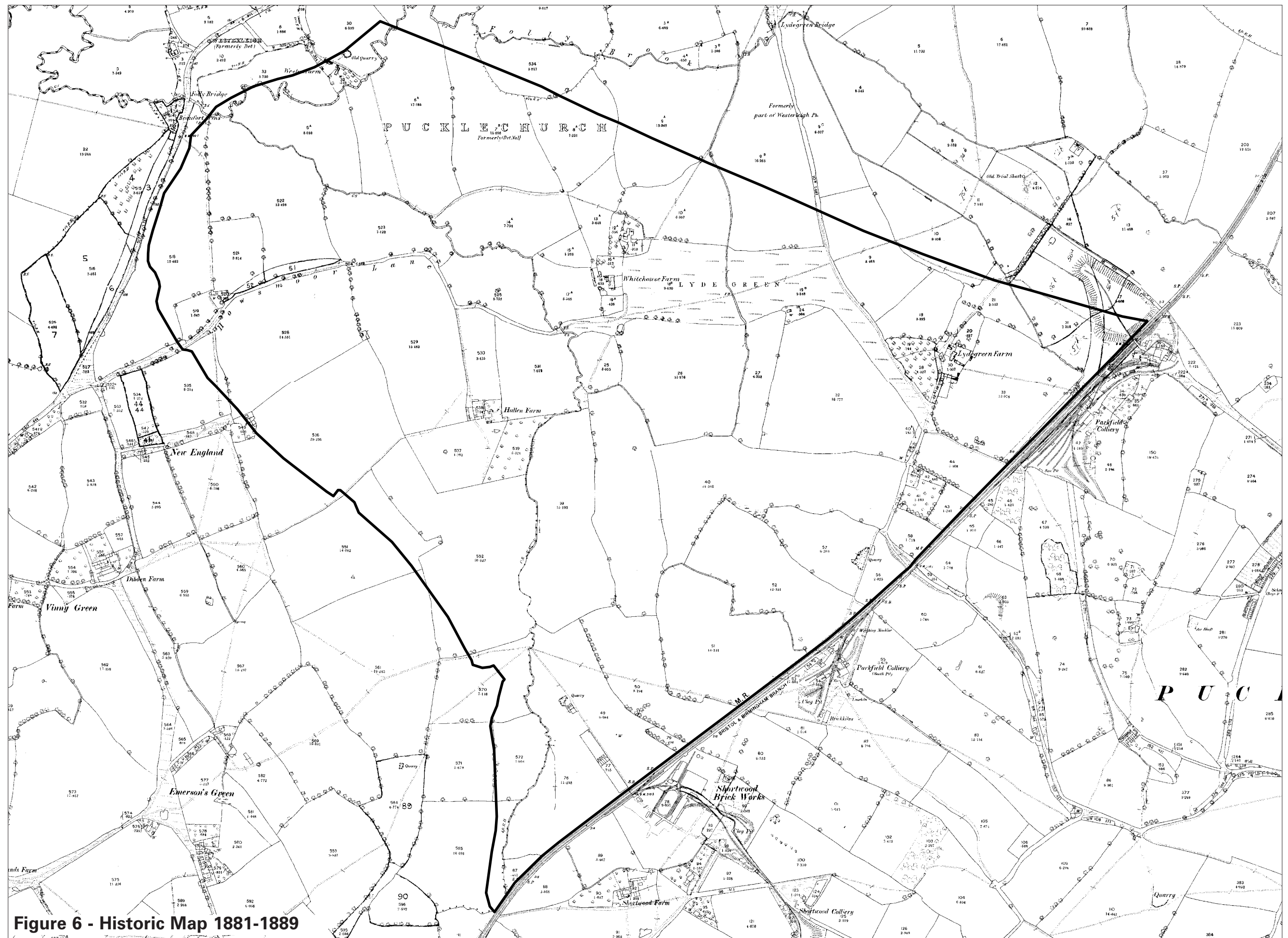
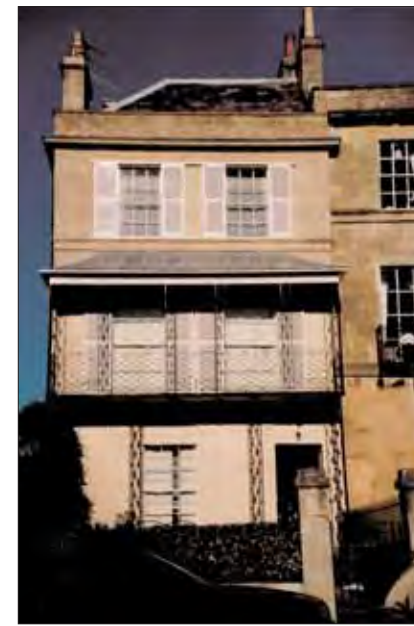


Figure 6 - Historic Map 1881-1889



Historic South Gloucestershire





Historic West of England





Contemporary West of England



7.1 A more detailed analysis of the physical characteristics of Emersons Green East site is set out in the Appendix to this Brief. This section provides a summary of that analysis, and a view of how the site's various constraints and opportunities impact on its potential land use development.

7.2 As may be deduced from Figure 3, the earlier 'Concept Statement' took cognisance of the key constraints and opportunities affecting the 177 hectare site, including:

- The presence of the M4 (and to a lesser extent Westerleigh Road and at grade sections of the Ring Road) as a source of noise and pollutants.
- The limited opportunity for site access, given the barrier of the M4 and the existing structure of the A 4174 Ring Road / Westerleigh Road, limiting potential points of vehicular access.
- Extant consents within the site, principally for a Science Park.
- Substantial 'Sites of Nature Conservation Interest' and areas of common land.
- The need to maintain the site's natural surface water drainage system

7.3 Following on from this initial assessment, the present Brief has made a more detailed analysis of the following physical site characteristics and the development requirement which arise from this:

- Landscape character
- Topography
- Significant vegetation
- Hedgerows
- Visual quality
- Ecology
- Listed buildings and historic landscape features
- Public rights of way
- Air quality
- Archaeology
- Noise
- Drainage
- Utility services and requirement

7.4 The above are set out in the Appendix, together with supporting photographs. For the most part, they confirm the earlier site constraints identified in the 'Concept Statement Plan'. As illustrated in Figure 7. 'Constraints Plan' overpage, they principally comprise:

- the M4 as both a barrier and as a source of noise and pollutants
- the importance of the Folly Brook tributary for surface water drainage of the site
- the significance of existing trees and hedgerows in a gentle undulating landscape
- the extent of Common land and Sites of Nature Conservation Interest
- the location of listed buildings and archaeological sites / features
- the location of Public Rights of Way and major utility services

7.5 If, against this analysis, account is then taken of the key land use requirements set out in Policy M2 of the South Gloucestershire Local Plan, an initial land use structure begins to emerge, whereby:

- Employment uses are spread out alongside the more intrusive parts of the M4 motorway, the Ring Road and Westerleigh Road.
- The Folly Brook, its tributary and ancillary drainage ponds, provide an informal recreational spine with links to Sites of Nature Conservation Interest, Common land and school sites with adjacent play areas.
- Higher density residential development is located to the east of the Folly Brook tributary with the benefit of the proposed pedestrian / cycle bridge link to the existing district centre, and ...
- Lower, medium density residential development located to the west of the Folly Brook tributary, with the benefit of flatter ground accommodating the more space extensive school sites

7.6 Key development requirements which arise from the site assessments include:

- undergrounding power lines (subject to technical feasibility)
- at least one new major sub station within the development area

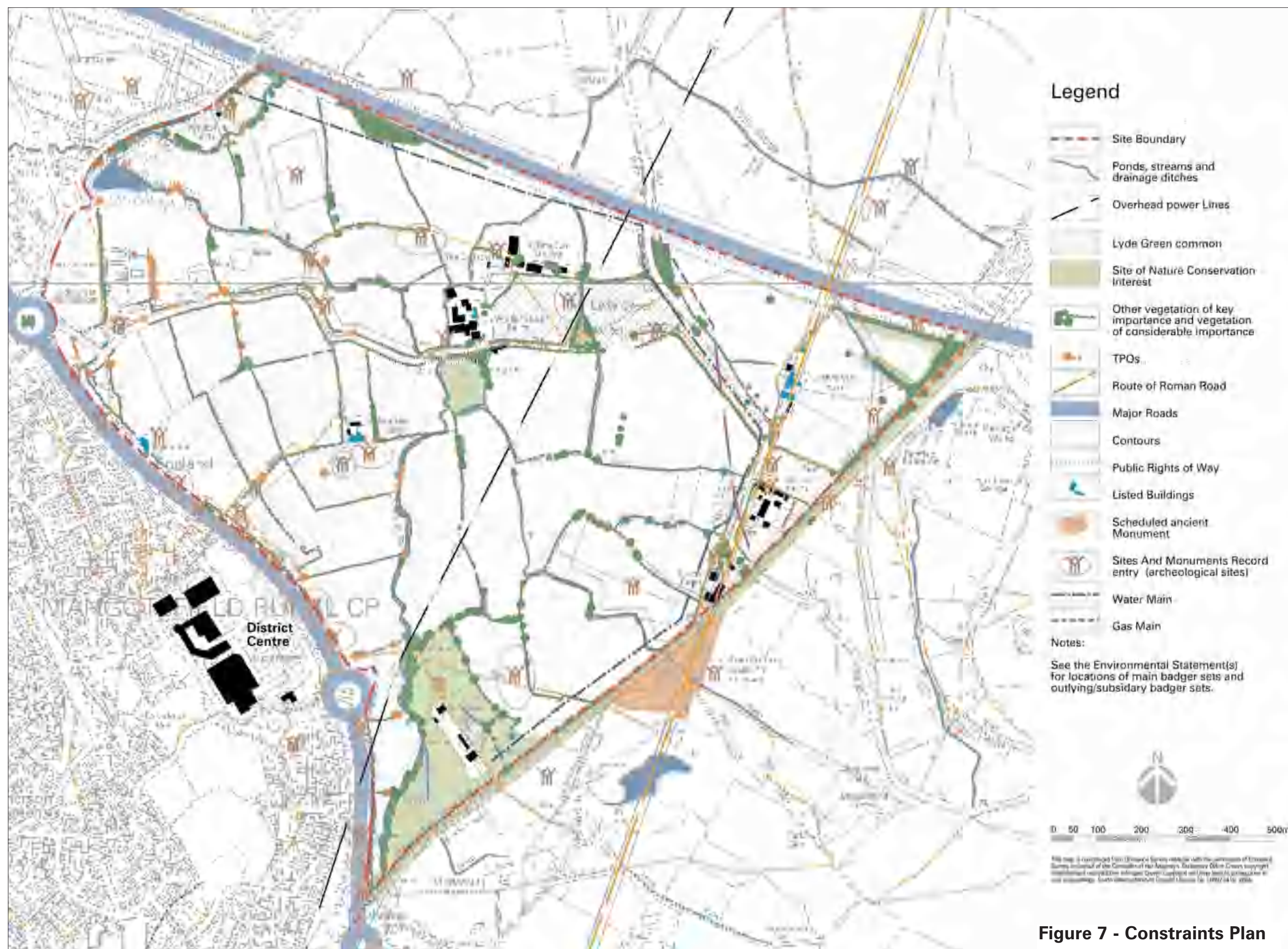


Figure 7 - Constraints Plan



Figure 8 - Emergent land use structure

- 8.1 EGE enjoys an outstanding location at the gateway to the West of England on the western section of the nationally significant M4 corridor. The Council is committed to working in close consultation with the landowners to produce a high quality contemporary development that is worthy of this prominent site. Moreover the Council will seek to ensure that the planning and design of this part of Emersons Green is shaped by the comprehensive and consistent application of the principles of sustainable development. The main influences in shaping the core development objectives for EGE are set out below.

Context for the core development objectives

8.2 Planning Policy Guidance Notes

- ODPM (2005) Planning Policy Statement 1: Delivering Sustainable Development. London, HMSO.
- DETR (2000) Planning Policy Guidance Note 3: Housing. London, HMSO.
- DETR (2001) Planning Policy Guidance Note 13: Transport. London, HMSO.

Agenda 21

- 8.3 The Council will seek to ensure that this development responds positively to the provisions of Agenda 21, particularly those chapters that relate to 'Support for Sustainable Settlements' and 'Promotion of Public Awareness.' This objective has particular implications for: urban form; transportation; landscaping and open space, social infrastructure; ecological standards; and design principles. All of these implications are set out in the Brief.
- 8.4 There are two underlying strands to the Council's strategy in terms of Agenda 21. The first is to utilise mandatory land use planning and Building Regulation controls to ensure that the development as a whole responds positively to Agenda 21. The second is to promote, in partnership with the landowners, exemplary projects within the site to raise public awareness of sustainable development issues.

The importance of urban design

- 8.5 The DETR publication '*By Design*' highlights the importance of urban design in the development process. It states that:

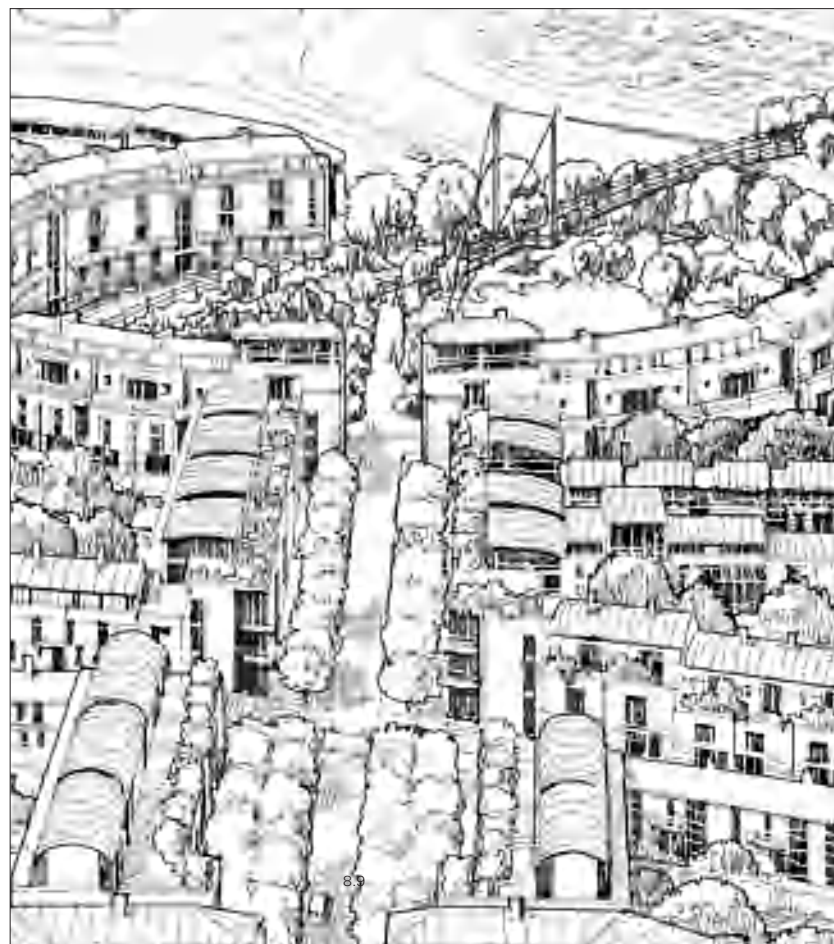
"Urban design is the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric, and the processes of ensuring successful villages, towns and cities."

- 8.6 It goes on to say that:

"Urban design is a key to creating sustainable development and the conditions for a flourishing economic life, for the prudent use of natural resources and for social progress. Good design can help create lively places with distinctive character; streets and public spaces that are safe, accessible, pleasant to use and human in scale; and places that inspire because of the imagination and sensitivity of their designers."

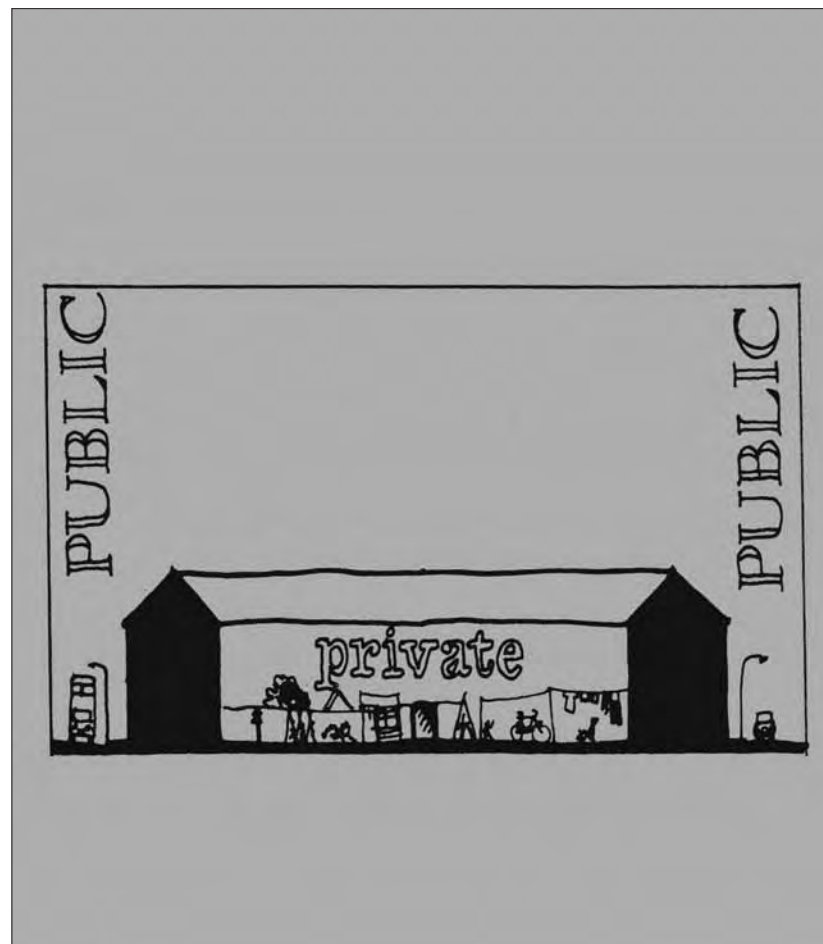
Defining the core development objectives

- 8.7 Urban design covers a very broad range of issues, and it is therefore necessary to define the core objectives which developers at EGE will be expected to meet. These core development objectives are intended to underpin the Brief and provide a foundation for the successful implementation of the development. They are applicable to the site in its entirety, and represent a holistic approach to the design of the overall scheme.
- 8.8 The objectives are drawn from tried and tested urban design methods that derive from the observation and analysis of existing, well-loved places. They are complex, mutually supporting and closely based on the guidance set out in '*By Design*'.
- 8.9 The core development objectives address:
- **character and form;**
 - **continuity and enclosure;**
 - **mixed-use;**
 - **robustness and adaptability;**
 - **sustainable construction;**
 - **quality and richness of the public realm;**
 - **legibility;**
 - **ease of movement;**
 - **traffic management; and**
 - **public transport**



Character and form

- 8.10 The character and form of EGE will reflect the best traditions of historic built form in South Gloucestershire and the West of England. Achieving local distinctiveness at EGE is a core development objective, and designers will be required to reinterpret local building traditions and use local materials to create a contemporary and sustainable urban extension.
- 8.11 Density is a key determinant of the character and form of the built environment. Achieving the minimum average net density set out in Policy M2 of the SGLP is critical in securing most of the core development objectives for EGE, including the desired character and form. Urban as opposed to suburban densities will be sought at EGE, although the average net density target clearly allows scope for varying densities across the site as a whole. The highest densities will be found in the central core and along the public transport routes, with lower densities being found at the eastern edges of the development, in order to ease the transition from town to countryside.



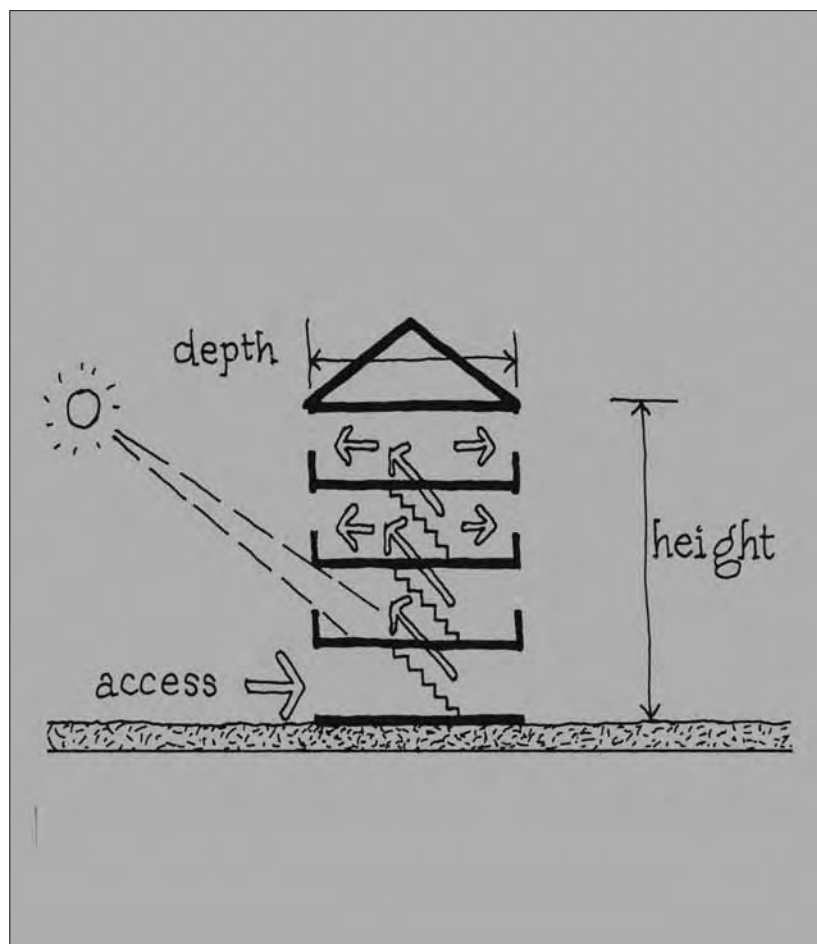
Continuity and enclosure

- 8.12 The distinction between public and private space will be clearly defined at EGE. In order to achieve this distinction in a way that is legible, buildings in both the residential and employment areas of the development will be arranged to follow a continuous building line around each street block, with most of the private space contained within. Applied consistently this public/private distinction leads to a type of layout that is commonly referred to as 'perimeter block development'. The pattern of perimeter blocks will define and enclose the public space of the street, square and park.
- 8.13 The perimeter block approach enables the creation of continuous street frontages with a minimum of gaps and blank walls between buildings, and it also results in a permeable layout. The consistent application of the perimeter block approach across EGE, with a view to creating a coherent and permeable built environment, is a core development objective.



Mixed-use

- 8.14 By Design describes how a mix of uses may be appropriate at a variety of scales: within a town; within a neighbourhood or street; or even in a particular building. At the macro scale the various components of the planned development (the Science Park, employment land, housing, and community uses, etc) will clearly make EGE a mixed-use development. The Brief, however, seeks to avoid the rigid 'zoning' of different uses to different parts of the site.
- 8.15 Small scale light industrial, office, retail and sociable uses will be encouraged across the residential areas, to create places with variety and choice. These uses could occur within buildings, stacked vertically (for example flats and offices above shops). The ground floor of buildings adjacent to the main nodes would be particularly suitable for small-scale retail and sociable uses. Encouraging mixed-use development across EGE, at the various scales described above, is a core development objective.



Robustness and adaptability

- 8.16 The most successful built environments are those that have proved robust enough to adapt to changing circumstances and demands. In order to have this quality of robustness the built environment at EGE needs to be adaptable at every scale.
- 8.17 The layout itself should be based on block sizes and a pattern of streets that allow flexibility in terms of the variety of uses that could be developed over time. Public spaces within the scheme should be designed to accommodate a variety of uses and activities.
- 8.18 Developers and designers should seek to ensure that the buildings they deliver at EGE are as robust as practicable, by giving careful consideration to characteristics such as height, depth and access, all of which influence how adaptable buildings are to new uses.
- 8.19 The most important factor affecting the robustness of housing is the amount of space that individual units provide. EGE should provide a range of house types offering choice in the amount of space provided. Where possible the design of housing should provide opportunities for future enlargement.



Sustainable construction

- 8.20 The Council will seek to ensure that the residential element of the scheme is tested against the Building Research Establishment (BRE) 'EcoHomes' assessment method. The EcoHomes rating rewards those developers who improve environmental performance through good design. Significant improvements in the environmental performance of new homes can be achieved simply and at minimal cost. EcoHomes considers the broad environmental concerns of climate change, resource use and impact on wildlife; it balances these against the need for a high quality of life and a safe and healthy internal environment. The issues addressed are grouped into the following seven categories:
- energy;
 - water;
 - pollution;
 - materials;
 - transport;
 - ecology and land; and
 - health and wellbeing.



- 8.21 The EcoHomes assessment method rates schemes as: 'Pass'; 'Good'; 'Very good'; and 'Excellent'. The Council's requirements with regard to the EGE site are set out in the Implementation Section page 90.
- 8.22 The Council will also seek to ensure that the principles of sustainable construction are applied to the design of offices and industrial units within EGE. The standards of assessment for different building types at EGE are set out in part 18 of this brief - 'Implementation'.



Quality and richness of the public realm

- 8.23 The streets, squares and parks at EGE will be the focus for community activity and social interaction. Streets and junctions will be designed as public spaces, rather than functional routes for vehicular traffic. They will be enclosed and overlooked by built form to impart a feeling of security for all users. Street trees will provide shelter for pedestrians and cyclists, as well as enhancing the appearance of the streetscene and minimizing the visual impact of on-street car parking.
- 8.24 Civic spaces, in the form of 'squares', will be provided at key nodes within the overall street network. These squares will be designed to accommodate a variety of informal outdoor activities.
- 8.25 The Folly Brook tributary corridor and Lyde Green Common will form part of the signature 'Y' shaped green space that will dominate EGE, providing informal open space and opportunities for recreational routes through the scheme. High quality playing fields and supporting infrastructure will also be provided to serve the needs of residents.
- 8.26 The provision of attractive and safe outdoor areas that display the highest standards of design in terms of materials, planting, street furniture, lighting and access is a core development objective.



Legibility

- 8.27 Application of these development objectives and of the design principles set out in part 16 of this brief, should create an urban environment at EGE which is easily understood. Successful towns are typically arranged around one or two primary streets lined by commercial uses, with smaller scale streets leading off into residential areas. Public buildings and other landmarks are located at key nodes. Places with this sort of hierarchy of streets, nodes and built form are easier to understand than large areas of uniform housing development.
- 8.28 Emulating this traditional approach to town planning is a key development objective. Specially designed buildings will mark important corners and formal groupings of buildings will enclose and define key public spaces. Developers and designers will be required to ensure that their scheme proposals play a positive role in improving legibility within EGE. In particular they will be required to identify and maximise opportunities for landmark buildings, vistas and focal points. The introduction of special or unusual features will be encouraged to add a further layer of legibility and to enrich the public realm.



Ease of movement

- 8.29 The 'street' is of the utmost importance in EGE. As well as providing places for interaction, each street will contribute to the creation of a comprehensive interconnected network. A finely branched network of footways and cycle tracks will compliment the street network. Together they will form a highly permeable grid of movement for pedestrians and cyclists, that always offers a choice of routes to facilitate efficient and direct journeys.
- 8.30 The network will be much less permeable for private cars, with selected streets closed to through traffic. The deployment of no through traffic streets will be carefully planned to ensure that journeys by private car through the development are slow and indirect. The 'internal' street network will be illustrated on the more detailed large-scale Master Plan which is to be prepared pursuant to this Brief. Those streets that are to be closed to through traffic will be clearly identified on the large-scale Master Plan.



Traffic management

- 8.31 Traffic management will be integral to the urban form at EGE, and will be achieved through a wide variety of means. Whilst cars will not, on the whole, be excluded (as they can contribute to the liveliness of the public realm), drivers will be required to behave in a manner that is conducive to a pedestrian/cyclist friendly environment.
- 8.32 The Framework plan depicts generally urban streets, as these tend to encourage lower vehicle speeds. Along the primary streets vehicle speeds will be restricted to 30mph and this will drop to 20mph and 10mph in secondary streets and Home Zone areas respectively.



Public transport

- 8.33 The integration of public transport, primarily new bus services, into the built environment and into the lifestyles of those living and working in EGE is a key development objective.
- 8.34 A bus service loop is incorporated into the Framework Plan to connect key locations and facilitate efficient public transport penetration of the development. All homes will be within 400 metres of a bus stop, and the loop will allow buses to circulate in each direction increasing frequency and convenience.
- 8.35 The provision of new high frequency, high quality bus services between Emersons's Green and main destinations, together with the provision of a high quality 'Multi-Modal Interchange' within EGE, is a key development objective.

The role of the Town Builder

- 8.36 The main landowners at EGE are keen to play an innovative role in the development process by acting as "Town Builders". Freehold control confers an immense benefit and influence, and will allow the Town Builders to exert significant control and influence over emerging schemes within the site, even before they reach the planning application stage. There is an opportunity for the Town Builders and SGC to work in partnership to ensure that successive phases of the scheme conform to the development brief and to the illustrative master plan document.
- 8.37 While the Council will rely primarily on the use of its statutory development control powers to ensure that subsequent planning applications conform to the requirements of this development brief and the associated framework plan, it recognises the benefits of working in co-operation with the Town Builders. SGC will therefore seek to work in partnership with the Town Builders to achieve the step change in quality required by PPSI and PPG3. In particular SGC will look to the Town Builders to pursue the following aspects of sustainable construction;

- ensuring that the development exploits, or has the ability to exploit renewable energy supplies and/or district heating systems;
- reducing energy consumption by promoting innovative building techniques and the use of energy efficient appliances across the development;
- promoting measures to reduce water consumption, 'harvest' rainfall and recycle grey water; and
- discouraging the use of materials that are harmful to human health.

- 8.38 These measures will complement the supporting strategies required by part 15 of this brief. And the requirements for sustainable construction set out in part18.

Framework Plan

- 9.1 The Framework Plan (Fig 9) takes account of the constraints and opportunities identified in section 7, Site assessment, and of the Emergent Land Use Structure (Fig 8)
- 9.2 Given this foundation, it provides an indicative layout of how the requirements of transport, landscape, open space and social facilities, (set out in subsequent sections of this chapter) may be accommodated within a block structure which meets the Brief's urban design objectives.



Figure 9 - Framework plan

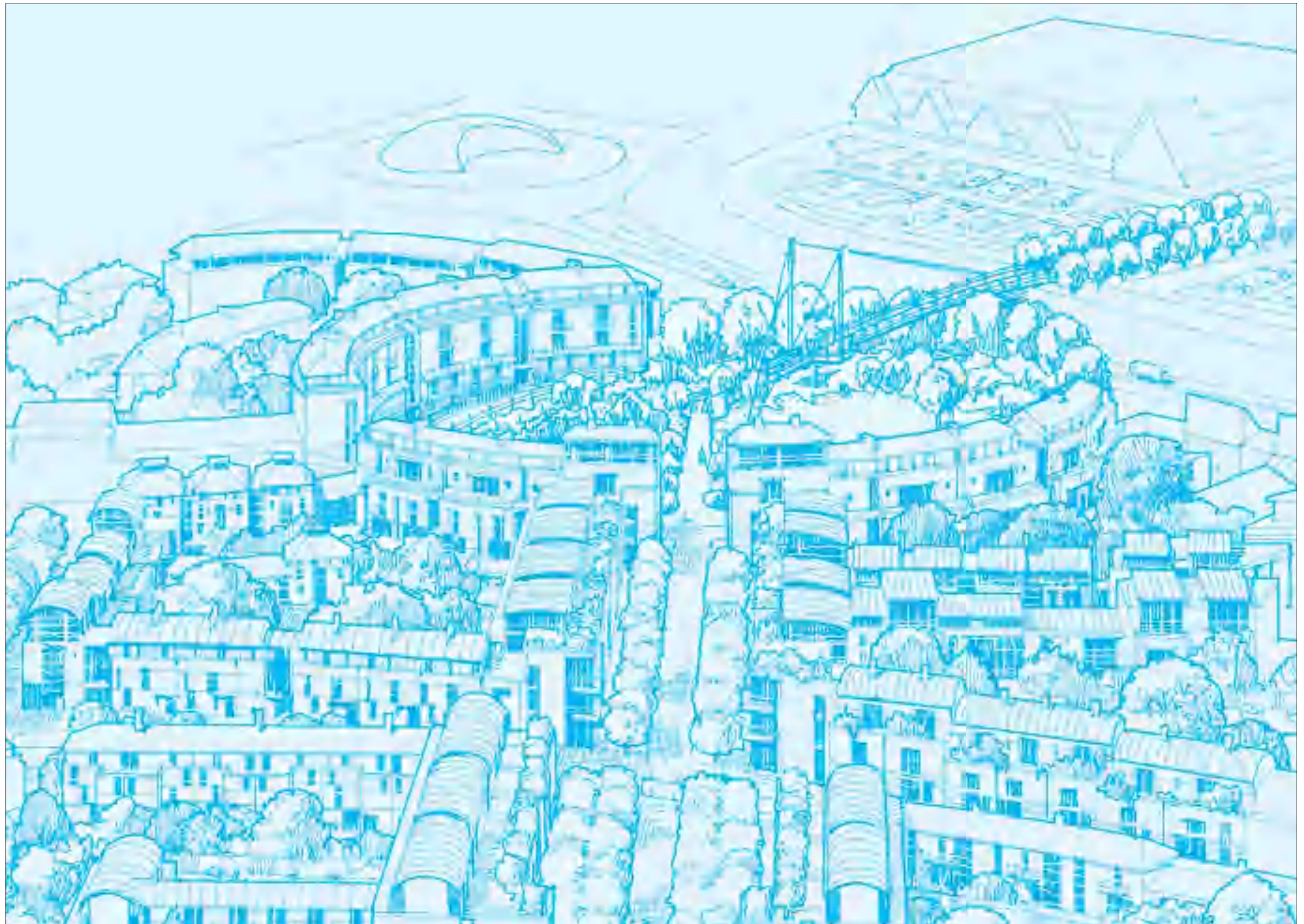


Figure 10 - Circus and new bridge link to the District Centre

- 10.1 The overall Urban Development Concept envisages a minimum average net density of 50 new homes per hectare, making EGE a relatively high density development for an edge of city location. This minimum density requirement respects the principle of efficient resource use and is considered necessary in order to create a new community that will support public transport and sustain locally accessible uses and services. Higher densities will not, however, be achieved at the expense of environmental quality. Developers will be required to innovate, and to place overriding priority on achieving the step-change in design quality demanded by PPS1 and PPG3.
- 10.2 EGE will characterize contemporary sustainable development. The central core of the scheme is conceived, in part, as a contemporary interpretation of the Georgian town planning of Clifton and Bath. In contrast the built form will become less dense towards the Green Belt edges of the site, where the pattern of development will reflect the less formal built environments of the historic market towns and villages of South Gloucestershire.
- 10.3 The central core is planned with a formal geometry, with an orthogonal system of interconnecting streets carefully laid across the landscape. The principal north-south axis or "High Street" terminates at its southern end in a formal public space which will provide the setting for a new pedestrian/cyclist bridge, linking EGE direct to the existing District Centre.
- 10.4 Non residential uses will be included within buildings fronting the key public spaces at either end of the High Street. These will include local shops and cafes.
- 10.5 The grid of streets intersect at key locations to form public squares, crescents or "places" (each with a varying size and geometry), incorporating "manicured" public open spaces, local pocket parks and including the requisite local play provision.
- 10.6 As a foil to the regular geometry of this Georgian style planning, three counter components are introduced into the indicative Framework Plan:
- protected open spaces and wildlife corridors are inter-connected to form a continuous and organically-shaped "linear park" which is all-pervading in the scheme;
 - development of the long term public transport loop within the site is conceived as a curvilinear street. High density development will front directly onto this busy, leafy street; and
 - the eastern sector of the plan is characterised by a less formal network of inter-connecting streets whose geometry reflects the 17th and 18th Century heritage of South Gloucestershire's principal urban centres
- 10.7 In terms of layout, geometry, scale, and the public realm, the urban development concept is derived from the heritage of South Gloucestershire and the world renowned, planned Georgian districts of the West of England. The development brief is, however, a platform for developing a thoroughly fresh and contemporary architecture to grace an historically inspired grain of streets and spaces. To reinforce the high quality vision, construction materials will be carefully considered and selected.
- 10.8 In addition to the specific mixed-use proposals for the High Street, the urban development concept encourages the horizontal and vertical mixing of uses across the site. Vertical mixing of uses will be promoted, in particular, along the public transport routes. Amenity and design issues (together with the extant outline planning permission for the Science Park) will, however, clearly result in the concentration of most of the main employment uses in certain parts of the site. The indicative framework plan recognizes this, and the detailed illustrative master plan document will also be designed accordingly. These concentrations of employment uses will contribute positively to the overall aim of creating a sustainable urban extension. They will do this by: providing employment opportunities within walking distance of the core; helping to make new public transport services more viable; and by helping to sustain uses and services that will make EGE a vital and vibrant place. SGC will expect to see the same step-change in design quality within these areas as it expects to see across the residential development, with contemporary architecture of the highest international standard.

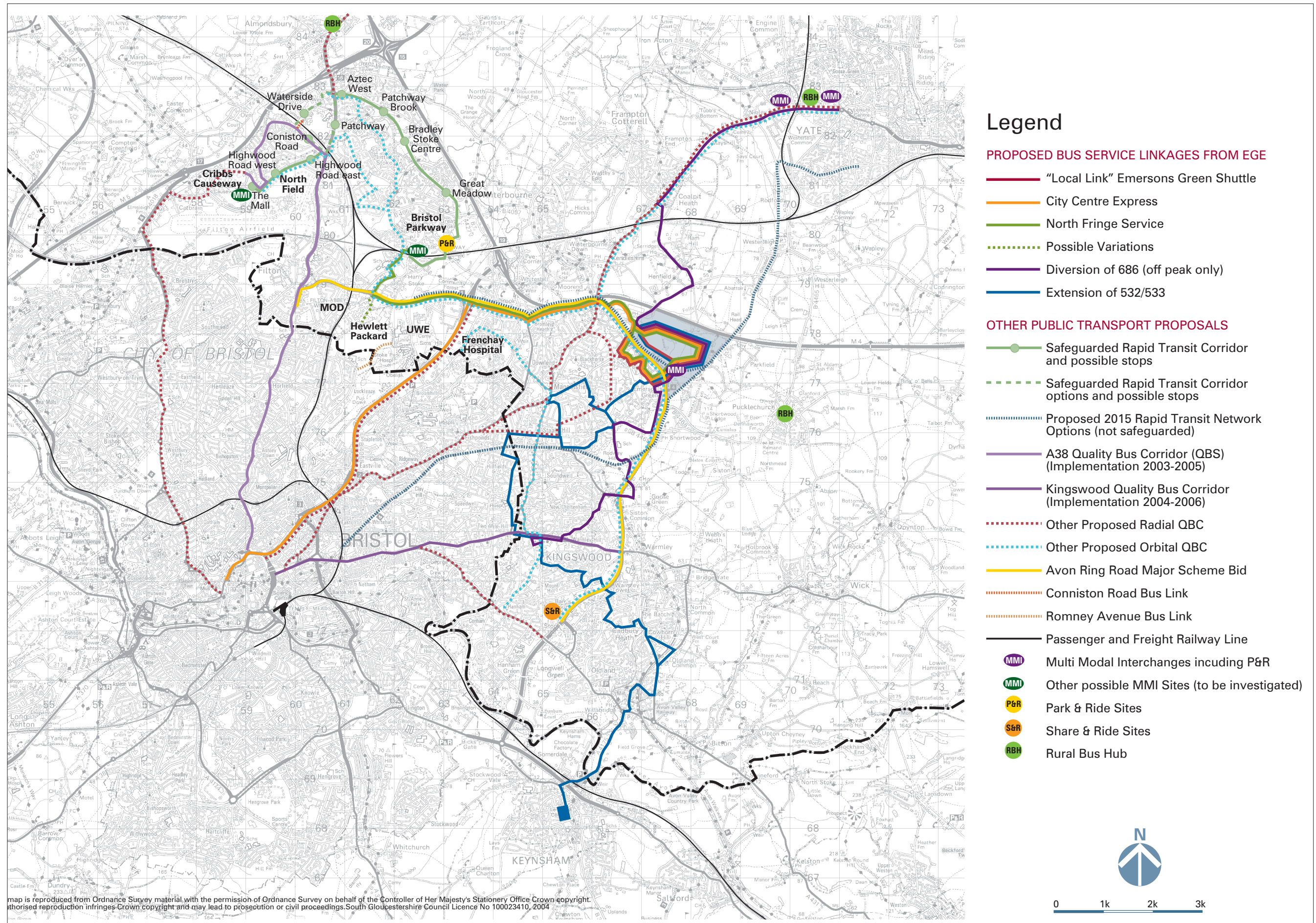


Figure 12 - Public transport links with EGE

11.1 Road transport is one of the major sources of air pollution, especially in urban areas. Moreover road transport is the third largest source by end user of carbon dioxide emissions in the UK, after industry and domestic users. The road transport sector was estimated to account for around 20% of the UK's carbon dioxide emissions in 1999. And as carbon dioxide emissions are directly proportional to the fuel consumption of a vehicle, traffic growth and the limited improvement in vehicle fuel efficiency over the last thirty years has meant that road transport has been one of the fastest growing sources of these emissions. Reducing emissions from car use is of paramount importance. In 1996, for example, cars were responsible some 63% of all carbon dioxide emissions from road transport (source: The environmental impacts of road vehicles in use – DETR, 1999).

11.2 SGC is therefore committed to facilitating a modal shift away from private car use and towards walking, cycling and public transport. The transport concept for EGE has been formulated to reflect this commitment and to develop principles established through the concept statement process. In particular it has been designed to complement the infrastructure and public transport service improvements secured through the Local Plan 'North Fringe Development Major Scheme (Transport measures)' and the Greater Bristol Bus Network Major Scheme Bid. It also complements SGC initiatives to reduce traffic congestion on the Avon Ring Road. Transportation issues will be considered in more detail in the Transportation Assessment submitted in support of the application(s) for outline planning permission.

11.3 The transport concept involves a combination of:

- **reducing the need for private car journeys by creating a compact mixed use development;**
- **controlling egress from the development at appropriate times to 'protect' the Avon Ring Road;**
- **pedestrians and cyclists given priority over cars within the layout of the development; and**
- **public transport orientated urban design.**

Reducing the need for private car journeys

11.4 As stated in the urban development concept, EGE will be a compact, mixed-use development, which in turn forms an integral part of the larger mixed-use development of Emersons Green. The mix of uses will provide residents with opportunities to access schools, shops, employment and leisure facilities without the need to travel by private car. SGC will also seek to ensure that EGE is a 'fully wired' community, with all homes connected to a high-speed broadband cable network that will facilitate and encourage a higher level of home-based working.

Controlling egress from the site

11.5 Traffic generated by the proposed development at EGE will have a significant impact on the existing highway system. If uncontrolled, private car movements to and from the site at peak times are likely to exceed the capacity of the system. The developers will be required to address this problem by introducing a range of measures to facilitate a modal shift away from car use. The developers will also be required to provide new signal controls at appropriate points of access to the site, in particular at the Westerleigh Road and The Rosary roundabouts.





A new bridge, for pedestrians and cyclists, will link EGE direct to the District Centre.



Throughout EGE the public realm will be designed to provide an attractive environment for pedestrians and cyclists

Pedestrian and cyclists given priority over cars

11.6 Throughout EGE the public realm will be designed and developed to provide an attractive environment for pedestrians and cyclists. Through careful design and the widespread application of Home Zone principles vehicular traffic speeds will be restrained, creating a sense of place and a sense of safety for people, that encourages movement by sustainable travel modes, particularly walking and cycling. Measures aimed at encouraging walking and cycling will include the following.

- The main distributor roads will be designed as streets with a large proportion of greenery. Grass verges with generous tree planting will separate pedestrians and cyclists from vehicles. Vehicle speeds on these roads will generally be restricted to 30 mph. Adjacent development will be designed to face the road to ensure high levels of natural surveillance, which will in turn impart a feeling of security.
- Residential streets will be designed in accordance with Home Zone principles. Vehicle speeds will be restricted to 20 mph (and 10 mph were possible). Again, the built form will be designed to overlook residential streets.
- In addition to the highly permeable street layout a finely-branched network of footways and cycleways will provide safe routes to schools, employment areas and bus stops, and additionally serve walkers who wish to pass through the area.
- Provision of a new pedestrian/cycle bridge over the Avon Ring Road, linking EGE directly to the Emersons Green District Centre.
- All pedestrian/cycle crossings over the Ring Road will either be grade separated or signal controlled.
- The street layout will be designed in such a way that it provides higher levels of permeability for pedestrians and cyclists than it does for cars.

Provision of a new pedestrian/cycle bridge over the Avon Ring Road

- 11.7 The approved EGE concept statement sets out SGC's requirement for a new 'feature' pedestrian crossing, to link EGE to the existing Emersons Green District Centre. The concept statement suggests that the bridge could be the subject of a design competition. The requirement for a new bridge emerged from the public consultation workshop, which preceded the preparation of the concept statement.
- 11.8 PPS6 makes it clear that a site will not be well connected to a centre where it is physically separated from it by a barrier such as a major road, and where there is no existing or proposed pedestrian route, which provides safe and convenient access to the centre (PPS6 Annex A p31).
- 11.9 SGC anticipates the provision of a new signal controlled 'at-grade' pedestrian crossing, adjacent to The Rosary roundabout. In terms of urban design, however, the quality of the route(s) available for pedestrians and cyclists should also be considered. A route (albeit a safe one) that requires pedestrians and cyclists to cross a busy dual carriageway is less satisfactory than a route which takes them across a well designed bridge, via pleasant and well designed civic spaces.
- 11.10 SGC therefore considers the provision of a new pedestrian/cycle bridge, linking EGE direct to the District Centre, should be designed to be as attractive and safe as possible. The provision of a new bridge is essential if the development is to satisfy the Policy 13 of the adopted Joint Structure Plan, Policy M2 of the SGLP and Concept Statement requirement for maximum practical integration between different uses. SGC will therefore require the development as a whole to meet the costs of providing the new bridge, as part of the first phase of the development.
- 11.11 The Council does not currently own or control all of the land on the District Centre side of the Avon Ring Road, which is likely to be required in order to construct a new bridge in the position shown on the framework plan. Given the benefits that a new bridge will bring, in terms of increased accessibility to the District Centre, the Council is confident that the landowners at the District Centre will co-operate with the developers at EGE in delivering the required bridge. If the co-operation of other landowners at the District Centre is not forthcoming, however, the Council will use its powers to compulsorily purchase the land required to facilitate construction of the new bridge.

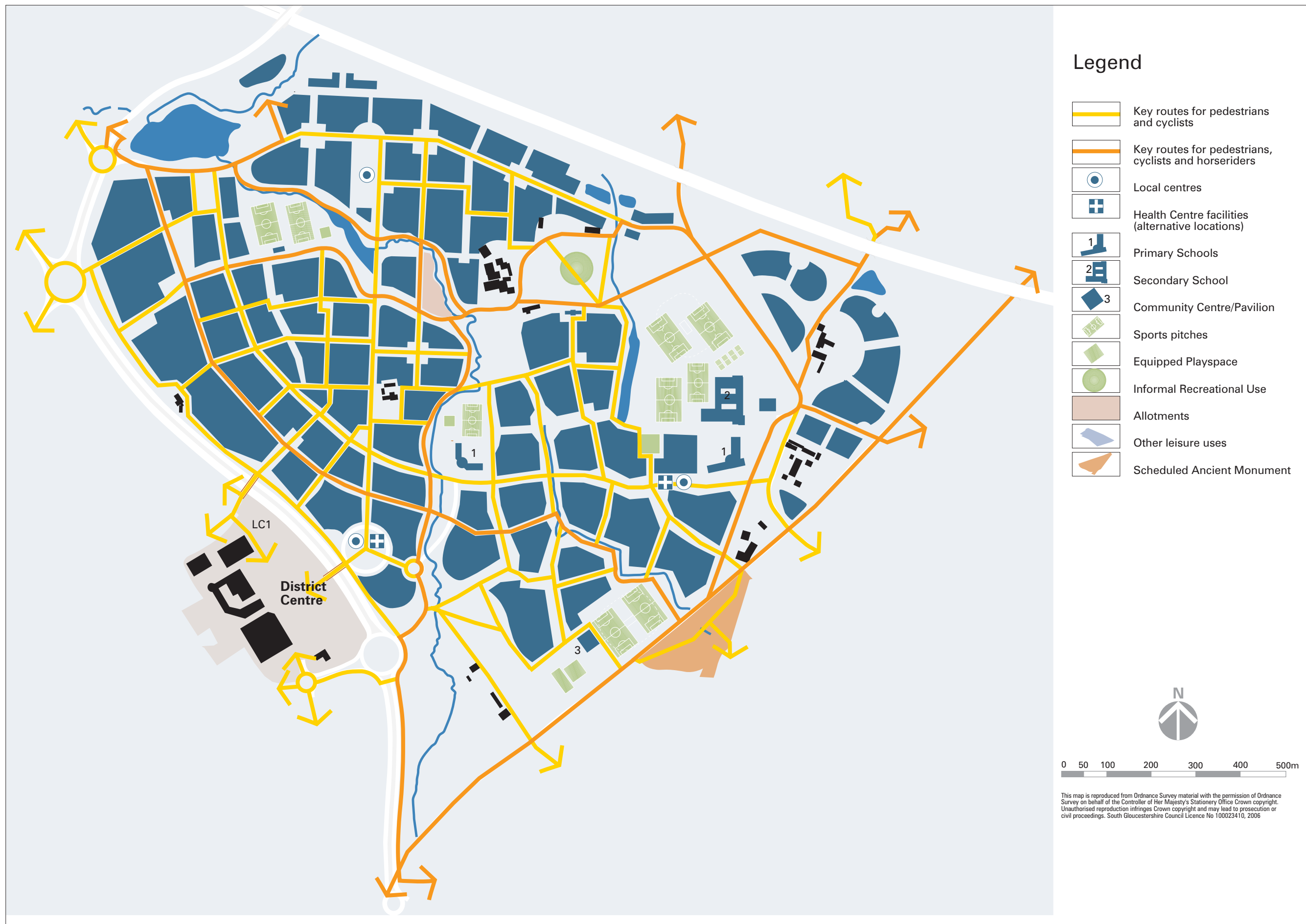


Figure 12- Primary walking and cycling routes within EGE

Public transport orientated urban design

- 11.12 Some journeys will have to be made by vehicle, so the transport concept also involves making public transport a viable and attractive alternative to the private car. This will require an integrated approach to the design of infrastructure and built form, and substantial financial support from the development as a whole to establish and pump-prime new public transport services.
- 11.13 A corridor adjacent to the Avon Ring Road has previously been reserved for a possible future mass transit system. A similar corridor will continue to be reserved at EGE. SGC and the other former Avon local authorities are preparing a Joint Local Transport Plan, which identifies mass transit as a key element in dealing with transport in the sub-region. The route from Emersons Green to Bristol City Centre and Harbourside is identified as a key Second Generation Public Transport route for bus mass transit.
- 11.14 Prior to a mass transit scheme being implemented, the development will rely on bus services. The routes for new and extended bus services will be designed to allow 'seamless' integration with a future mass transit scheme. A key element of the transport concept is the provision of high frequency, high quality bus services between EGE and main destinations. The Local Transport Plan has identified the Avon Ring Road as a Bus Partnership Corridor. This provides an excellent opportunity to develop high quality public transport linkages from EGE to the City Centre and the North Fringe.
- 11.15 The main and local distributor roads within EGE will be designed to serve as bus routes, and the layout will include bus priority and bus only sections to avoid congestion and any circuitous routing. Buses will be given priority at the signal controlled roundabouts and on the approaches to these from the development. Bus route implementation will be phased appropriately to ensure availability of services for the initial occupants of the area and to influence travel patterns from the outset.
- 11.16 The location of bus stops will be integrated with the network of pedestrian routes through the site to ensure that all homes are within 400 metres, with the majority being within 300 metres, of a bus stop. The highest densities of development will be concentrated along the bus routes and particularly around the bus stops.

- 11.17 Once the first phase of development has been occupied frequent bus services would penetrate EGE. These services would include:
- an Emersons Green 'midi-bus' service dedicated to local trips within EGE and Area A, serving the District Centre, the EGE Secondary School and possibly Mangotsfield Secondary School. The service could be branded and liveried with a 'Local-Link' identity;
 - a new radial express service from Bristol City routed along the M32 motorway and the Ring Road into EGE and returning via the District Centre and Area A; and
 - a new orbital express service around the North Fringe serving EGE, the District Centre and Areas A and B.

Local service

- 11.18 The new local service, or 'Local-Link', would connect with existing services 48 and 49 at the District Centre. It is expected that the local service would utilise a dedicated fleet of accessible 'midi-buses' to serve EGE and Area A, although other options for providing the Local-Link, such as community transport or transport on demand, will also be considered. This service would operate seven days per week at the same overall times as services 48 and 49. At present these services operate between 0500 and 2230 Monday to Friday, and 0645 to 2230 Saturday.
- 11.19 The Local-Link could also be used to provide services to the new EGE Secondary School and to Mangotsfield Secondary School.

New radial service

- 11.20 This would provide a peak period service with at least three arrivals in the City Centre and three departures in the evening peak. The reverse operations would provide a faster link between the City Centre and Emersons Green, providing enhanced public transport access to employment opportunities.

New orbital service

- 11.21 It is proposed to operate a Monday to Saturday peak period service between Emersons Green, Bristol Parkway and the employment zones in the North Fringe, including North Field and Cribbs Causeway. The requirement is for a high frequency service at peak periods. Subject to local requirements it would offer arrivals at Bristol Parkway from 0630 to 0930, and then 1630 to 1900. Departures from Parkway would be at 0700 to 0900, and then 1600 to 1900.

Additional services to improve links with Yate and East Bristol

- 11.22 Additional services that have been identified to improve links with Yate and East Bristol are as follows:
- possible extension of the existing 532 / 533 services into Emersons Green. This would provide a good link to East Bristol, including Kingswood and Keynsham. It would also provide the potential for interchange with the existing 341 / 342 services to Yate; and,
 - possible diversion of the 686 service to route through EGE to provide further links to Yate and Kingswood.
- 11.23 Measures will be put in place to encourage new residents to use these bus services. These measures will include:
- provision of bus season-ticket vouchers or similar incentives for new residents;
 - provision of real-time bus arrival information at bus stops within the development and potentially providing real-time timetables on the EGE Intranet (see part 18 of this brief);
 - establishing a quality bus partnership with the District Council and the bus operator to ensure high-quality reliable services.

Provision of a Multi-Modal Interchange (MMI)

- 11.24 SGC initiatives to reduce congestion on the Avon Ring Road include proposals for Multi-Modal Interchanges (MMIs) at Hunts Ground, Stoke Gifford; at Nibley, Yate; and at EGE. These interchanges, which would be served by new orbital and City Centre services, are intended to reduce the number of private car journeys around the Avon Ring Road (from east of the M32 to the North Fringe). The sub-text to Policy M2 of the SGLP makes it clear (at paragraph 8.96) that a high quality interchange between public transport and car, cycle and walk modes will be provided within EGE, to facilitate express commuting bus services into Bristol and the North Fringe. The development will be required to provide land and financial support for the provision of this high quality interchange within EGE.
- 11.25 The MMI will make an essential contribution to the overall modal transfer of commuter traffic using the Avon Ring Road. In doing so the MMI will help to mitigate the impact, on the surrounding highway network, of traffic generated by the EGE development. There will be no dedicated bus services provided for the MMI, since users of the facility will be able to take advantage of the new bus services described above. The MMI would in turn provide early commercial support for these services. Key requirements for the MMI are set out below:
- it will comprise at least 240 car parking spaces, preferably with scope for future expansion (if this proves necessary); and
 - it will be provided, ready for use, before the first 400 dwellings at EGE are occupied.
- 11.26 The MMI will be provided within the EGE development. In terms of its location within EGE the MMI will be situated;
- on the stage 1 bus loop (see Figure 13, Public Transport Infrastructure within EGE);
 - close to the Avon Ring Road and the Rosary Roundabout, to avoid drawing MMI traffic into the heart of EGE; and
 - close to the new bridge link from EGE to the District Centre.

- 11.27 The indicative framework plan, included within this brief, shows the MMI located immediately opposite the District Centre. The framework plan envisages that the car park for the MMI would be an underground facility. Above the underground car park buses would circulate around a public space, enclosed by a Circus, picking up passengers from at-grade shelters. Some of the buildings comprising the Circus would be designed to allow commercial uses at ground floor level, providing the opportunity for small convenience shops and cafes to become established. Users of the MMI would have ready access to any such facilities.

The Ring Road and its access junctions will be subject to an overall scheme of traffic management controls.

Restricting the provision of employee car parking within EGE

- 11.28 In order to encourage a further shift from private car to public transport use, SGC will seek to restrict the provision of employee parking at new employment developments within EGE, in accordance with Policy T8 of the SGLP. Where appropriate, the opportunity for shared parking should be realised, provided there are no unacceptable environmental or safety implications. Employers within EGE will also be required to implement Green Travel Plans with targets to minimise the amount of travel to work by private car.
- 11.29 The Science Park outline planning permission is subject to an approved master plan, which includes parking standards for that development. Similar requirements (including Travel Plans) will apply to all employment areas.

M4 Link Road scheme

- 11.30 The Greater Bristol Strategy Transport Study has now been published, and the M4 Link Road scheme at Emersons Green does not form part of its recommended strategy.



High quality public transport services are required to provide a viable and attractive alternative to the private car.



A Multi Modal Interchange (MMI), with underground car parking, will be located within EGE, opposite the District Centre.

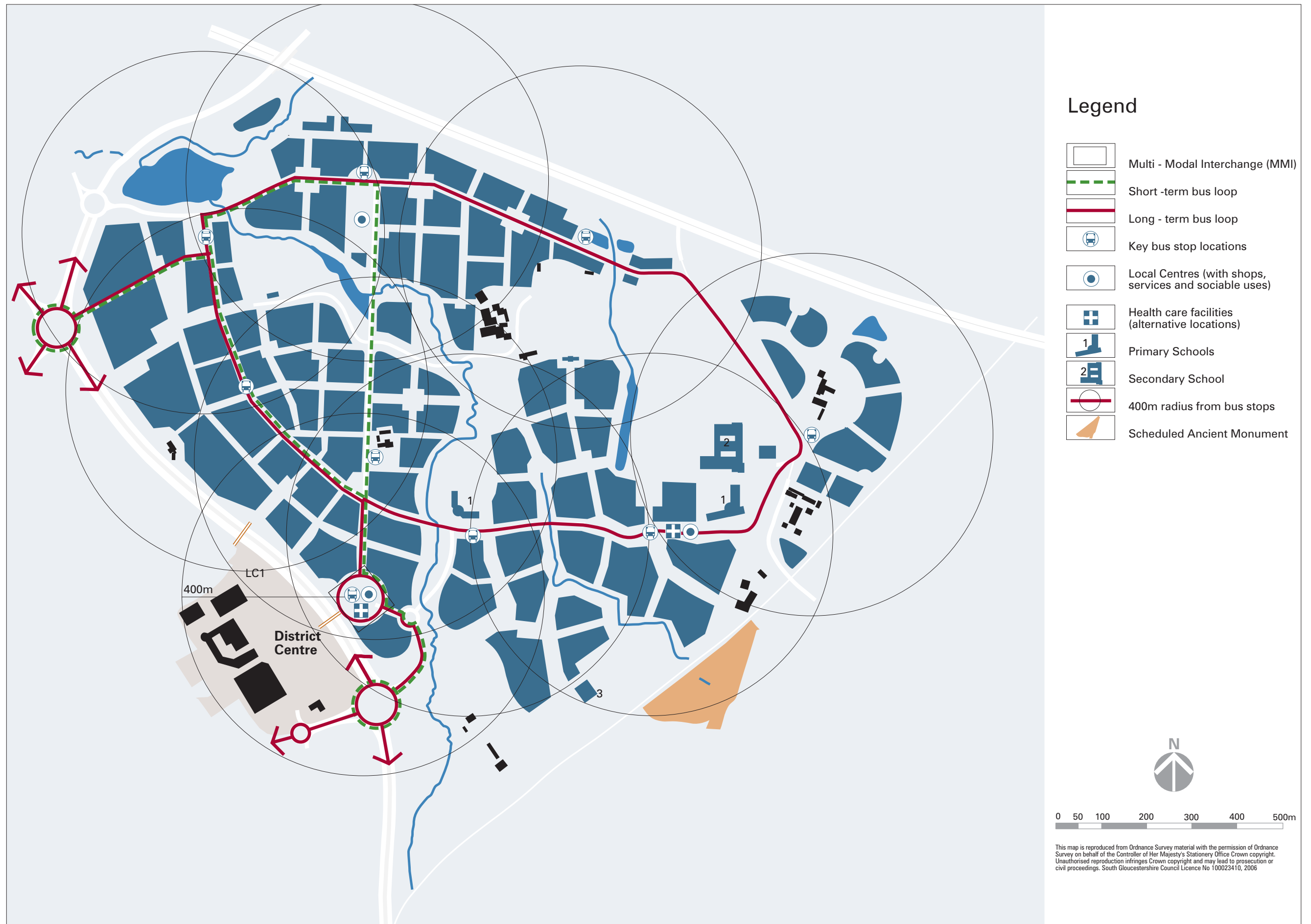
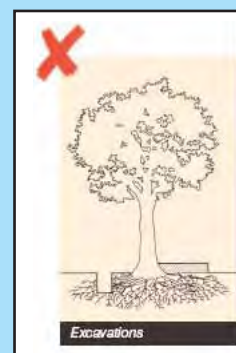
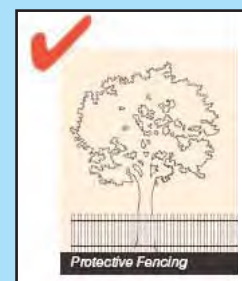


Figure 13 - Public transport infrastructure within EGE

- 12.1 SGC will seek to ensure that the planning and design of EGE is shaped by the comprehensive and consistent application of the principles of sustainable urban development. This objective clearly requires an integrated approach to urban form, landscape and open spaces.
- 12.2 The landscape concept seeks to ensure that those attributes and features of the landscape which make a significant contribution to the character or distinctiveness of the site are retained, and sympathetically integrated within the development. The landscape concept has three specific objectives.
- retain landscape and ecological features of key importance, including sites of Nature Conservation interest, and protect and enhance their intrinsic character and quality;
 - recycle important landscape/ecological features by creating new physical and visual relationships, for example, through complementary strategic planting and habitat management; and
 - sympathetically integrate these features into the context of the new development.
- 12.3 The landscape concept will also seek to meet the relevant design objectives set out in the Forest of Avon Plan, these include:
- to increase woodland cover and to improve the landscape structure with the new woodland establishment, reflecting local topography;
 - to create new woodland for recreational use;
 - to provide for countryside recreation, particularly bridleways and footpaths from urban areas into the countryside;
 - to improve the landscape setting of the M4; and
 - to increase the wildlife value of the area.
- 12.4 The Folly Brook tributary corridor will be retained to form a central greenway, and will be enhanced by new planting and management as wildlife habitat. This corridor will link to a hierarchy of parks, open spaces and greenways to provide a strong landscape framework. This framework would contrast and enhance the design of built areas to provide an attractive setting for the new development and its principal gateways, and a pleasant environment for pedestrians cyclists and horse riders. Achieving permeability throughout EGE will necessitate the construction of some crossing points within the Folly Brook corridor. The framework plan seeks to minimise the number of required crossing points. The design and construction of the crossing points will be carefully considered to ensure that the overall ecological value of the corridor is not undermined.
- 12.5 Significant landscape features such as listed buildings, the knolls associated with the Hallen Farm ridge, and Lyde Green Common will form focal points along key vistas and design axes within the development, contributing to its new identity and sense of place. Open space areas and infrastructure planting will be managed to ensure that the design objectives are achieved.



Significant Vegetation

- 12.6 Trees covered by Preservation Orders will be retained and protected, as will trees and hedgerows assessed as being of key landscape, historic and ecological importance as for example, vegetation along the Folly Brook Tributary. Where possible, this vegetation will be assimilated into the landscape structure of open spaces and greenways.
- 12.7 New strategic planting will be designed to reinforce the framework of existing vegetation, and to mitigate the loss of any mature trees and hedgerows, for example in high density development areas. Strategic planting will comprise tree and shrub species indigenous to the area to provide continuity between existing and proposed vegetation character. Species will be selected to optimise habitat creation and ecological diversity. Planting along the main roads and gateways to the site will include a proportion of ornamental species to ensure year round interest.
- 12.8 Where possible other trees and hedgerows will also be retained within the development. Where trees are to be retained developers will be expected to adhere to the guidance set out in SGC's Trees on Development Sites Supplementary Planning Guidance. Some hedgerows and mature trees may be lost, however, especially in the parts of the site that lie within the high density core. Retained hedgerows should not form garden boundaries and should be managed to maintain their value to wildlife, particularly breeding birds. New hedgerow planting can include staggered planting to create multi-aged hedgerows, which will be of greater benefit to wildlife. At the framework plan stage, it is difficult to define detailed proposals for hedgerow retention, and the focus is on defining larger areas of habitat that will benefit wildlife. The primary objectives of the retention of hedgerows within the proposed development are to:
- provide habitat for wildlife, particularly birds;
 - provide opportunities for movement of wildlife through and to areas beyond the site; and
 - integrate hedges with the landscape framework of the proposed development and increase visual amenity.
- 12.9 Preferred locations for retained hedgerows are in association with public footpaths, cycleways or areas of Public Open Space. Where hedgerows are retained sufficient space will be safeguarded to ensure that they can be maintained properly. The development framework provides for a core area of the site, principally comprising the corridor of the Folly Brook Tributary, Lyde Green Common, Rosary SNCI and the Valewood Field SNCI, to remain as open land. These areas will provide a continuous core area within which wildlife habitats representative of the site will be retained and opportunities provided for wildlife to move around the site. Outside this area other areas of importance for wildlife will also remain as open land. When development is planned in detail, preference will be given to retention of hedgerows or other areas of habitat which connect directly with the core area or to the other areas of importance for wildlife. Other hedgerows will be given lower priority for retention unless they connect with other hedgerows or areas of habitat that connect to the core area.
- 12.10 The quality and significance of a hedgerow, in terms of its condition and species diversity, its landscape significance and its importance in terms of the Hedgerows Regulations 1997, will be taken into account in deciding whether it should be retained. However, the primary considerations will be:
- the maintenance of a direct or indirect habitat connection to the core open area or other areas of importance for wildlife; and
 - the ability within the detailed development design for a particular hedgerow to be retained and managed in an appropriate location.
- 12.11 Where a hedgerow is identified as a priority for retention but it is in poor condition, and/or with poor species diversity, enhancement work will be undertaken, including:
- gapping up the hedgerow with suitable local species;
 - management to establish at least 1 hedgerow tree for every 50m length of hedgerow;
 - introduction of a management regime to facilitate use of the hedgerow by wildlife.

Visual quality

- 12.12 EGE will be designed to integrate with the surrounding countryside, particularly the Pucklechurch Ridge into its structure. Corridors along the M4 motorway and Avon Ring Road would be planted with strong belts of indigenous structure planting to filter existing views into the site. These planted areas could incorporate appropriate noise control measures. Glimpses of high quality buildings would be encouraged, where appropriate, to avoid the impression of 'green walls'.
- 12.13 Key landscape features such as listed buildings, knolls and the Folly Brook corridor would be given visual prominence within the development. Visual detractors such as the BBC transmission mast would be relocated off-site. The existing overhead power lines will be re-laid underground.

Listed buildings and historic landscape features

- 12.14 The listed buildings and the Common will be integrated with the new development layout to provide visual interest and historical context. Hallen Farm will be incorporated into the new development as a focal building. This will be achieved through repair, linked with new enabling development. The setting and amenity of the listed buildings will be protected and enhanced through the adoption of a sensitive layout and new strategic planting. Part of Lyde Green Common will be used for leisure purposes in the form of a cricket pitch.

Public Rights of Way

- 12.15 Existing public rights of way will be incorporated into the development largely within retained areas of open land, such as Lyde Green Common, or within new greenways. These will be supplemented with new walking, cycling and horseriding routes. Footpath PMR 8 will be retained as a key link across the Avon Ring Road.

Ecology

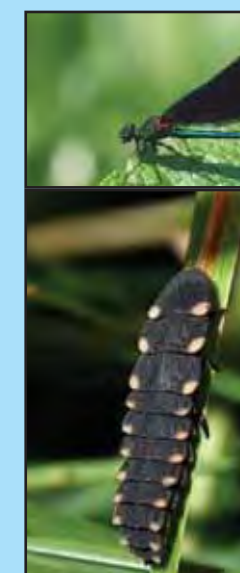
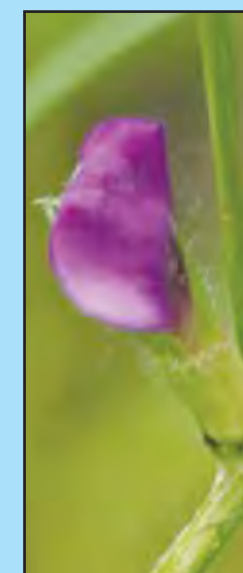
- 12.16 Developers at EGE will be required to respond positively to SGC's Biodiversity and the planning process SPG. The existing mosaic of habitats within the site offers various

opportunities for wildlife, and overall the site is of local nature conservation value. The following objectives have been identified for the retention of nature conservation value and the protection of biodiversity within the site:

- **The Rosary and Valewood SNCIs, together with Lyde Green Common and the Folly Brook Tributary, are of key importance in providing a continuous core area for the conservation and enhancement of wildlife habitat, within the overall development of Emersons Green East**
- **the integrity of the four SNCIs within the site will be maintained and enhanced by the creation of appropriate buffers zones;**
- **development fronting the tributary of the Folly Brook will be carefully handled to ensure that the wildlife value of the Brook corridor is not undermined;**
- **all necessary measures should be taken to protect both social groups of badgers and enable them to adapt to the development, and to provide opportunities for the retention of one or both groups, or their merging to form one large group;**
- **hedgerows and trees shall be retained where at all possible and included meaningfully within the proposed development; and,**
- **new habitats shall be included within the proposed development, such as reedbeds around new attenuation ponds, to increase the biodiversity of the site.**

- 12.17 The strategic approach will include the retention of the habitats which have been identified as being of the highest nature conservation value. These will be integrated into larger areas, which will form a core of open land running through the site. This will retain connectivity of habitats, allowing for movement of wildlife through and to areas beyond the site.

- 12.18 Land along the tributary of the Folly Brook will be retained and managed primarily for nature conservation. New woodland planting along the M4 will be connected to the larger area of open space at the west of the site, which will offer an effective and functional corridor for wildlife. Native, broad-leaved species, from a local provenance, will be used. As woodland matures, it will offer opportunities for wildlife, including birds, small mammals and badgers.





View of chimney stack, part of scheduled ancient monument, known as South Parkfield or Brandy Bottom colliery

Archaeology

- 12.19 Only a small part of the site has been the subject of a thorough archaeological evaluation. The extent and nature of surviving archaeological remains across most of the site is unknown. Therefore special care must be taken to prevent adverse impacts on unknown archaeological remains, the listed buildings and their settings and the adjacent scheduled ancient monument known as South Parkfield or Brandy Bottom colliery and its setting.
- 12.20 Development of the site might take between 10 and 15 years. Development will take place on a phased basis, within the context of an approved illustrative master plan document. A phased approach to archaeological assessment is not, however, considered acceptable because the archaeological constraints will need to be clarified before SGC can approve an illustrative master plan document.
- 12.21 An archaeological brief for evaluation of the site has been prepared by SGC. Developers will be required to submit a Project Design (or Method Statement) for the archaeological evaluation to SGC. The evaluation will combine a desktop study, field survey, geophysical survey, and trial trenching. The illustrative master plan will need to demonstrate that the proposed layout respects the settings of the listed buildings and scheduled ancient monuments within and adjacent to the site.

- 13.1 Significant areas of open space will be provided as part of the development. This will include public open space for formal and informal recreational use, as well as semi-public space in various forms across the development. Private open space will also be provided in the form of gardens and courtyards shared by a limited number of residents, for example, as part of a single residential block.
- 13.2 As with the other concepts set out in this brief, the open space concept has been shaped by the comprehensive and consistent application of the principles of sustainable urban development. The open space and playspace concept involves a hierarchical approach to meeting the various needs of residents. At the level of the residential block, private gardens and shared courtyards will provide spaces for neighbours to meet and for children to play. Home Zone streets, pocket parks and equipped areas for play will provide meeting places for young and old within each neighbourhood of the development. At the wider community level extensive areas of informal open space, together with formal sports facilities, will provide opportunities for exercise and social interaction. Avenues and squares will provide a variety of 'civic' spaces, engendering a sense of place.
- 13.3 Substantial areas of informal open space along either side of the of the Folly Brook tributary, together with Lyde Green Common form the signature 'Y' shaped structure that dominates EGE. Numerous constraints operate to create this particular pattern of open space provision.

Elements of open space and playspace

- 13.4 The open space and playspace concept includes the following elements:
- private gardens;
 - shared courtyards within residential blocks;
 - Home Zone streets and planned spaces at street junctions;
 - local and neighbourhood areas for play;
 - neighbourhood parks and gardens;
 - main avenues and squares;
 - private and semi-public landscaped spaces with employment areas;
 - strategic areas of informal Public Open Space;

- formal sports facilities (as part of the Public Open Space provision); and
- indoor leisure and recreational facilities.
- allotments

Public Open Space provision

- 13.5 Within the overall provision of open space described above, the development will be expected to meet specific requirements for the provision of formal and informal Public Open Space. These requirements, which derive from Policy LC8 of the SGLP, are set out in Figure 14. They include a range of recreational and sporting facilities which total 19.5 hectares, of which 16.2 hectares will be outdoor and children's playing space, as well as the necessary ancillary amenities such as pavilions, car parks and necessary attenuation. All open space should be publicly accessible and manageable. SGC will require the development to meet the costs of providing and subsequently maintaining the required Public Open Space facilities.
- 13.6 The precise location of the various elements of Public Open Space, identified in Figure 14, will be shown on the detailed illustrative master plan, which will be prepared by the developers. As a result of various on-site constraints, the illustrative master plan is likely to include more informal open space than the level required by Policy LC8.

Indoor leisure and recreational facilities

- 13.7 EGE will generate considerable demand for indoor leisure facilities. SGC will therefore seek to secure the provision of a sports hall of at least 680 sq.m together with a sports pavilion of 350 sq.m. There is an opportunity for these facilities to be combined with the required community meeting space in a multi use leisure/community complex. It might be necessary to provide additional sports pavilions with the formal sports pitches provided in other parts of EGE, depending on the proximity of pitches to available changing facilities



Open space at EGE will include formal sports provision, avenues and squares and semi-public landscaped spaces within employment areas.



Commercial leisure and recreation uses

- 13.8 In addition to the provision of public leisure facilities, SGC recognizes the opportunities that this mixed-use scheme presents to bring forward private leisure and recreational uses. SGC will seek to work in partnership with the landowners to bring forward the provision of such uses in appropriate locations within the site.
- 13.9 The approved EGE concept statement highlights the need for a new pedestrian and cycleway bridge from the District Centre to EGE. It also acknowledges the opportunities that such a link will present to bring forward new sociable uses within EGE, at the southeastern edge of the approved Science Park. Developing leisure and recreational uses in this location would not only complement the District Centre and the Science Park in terms of land use, but it would also serve to integrate EGE with the rest of Emersons Green.

Healthy Living

- 13.10 The provision of public open space and facilities for both formal and informal recreation which are well designed, well maintained, convenient and fit for purpose make a significant contribution to healthy living. The opportunities on site to increase the level of physical activity will improve the health and well being of the new community of Emersons Green East.

Provision of litter bins and dog bins

- 13.11 In October 2002 the Office of the Deputy Prime Minister published Living Places – Cleaner, Safer, Greener. Contained within that document are the results of a survey relating to the provision of public services, which was carried out by MORI in 2000. In answering the question “What would most improve the quality of life in this area?” respondents highlighted the following:
- cleaner streets, including rubbish and dog fouling;
 - reducing crime;
 - more activities for children and young people;
 - improve parks and open spaces; and
 - improving the street infrastructure including paving, lighting etc.
- 13.12 This survey clearly suggests that litter and dog fouling are serious issues for many people, and there is no reason to suggest that they will not be of concern to residents at EGE. SGC will therefore require the development to provide an appropriate number of litter bins and dog bins across EGE.
- 13.13 There is no guarantee that SGC will be in a position to fund the emptying of litter bins and dog bins on new developments in its area, particularly during the early life of those developments when Council Tax revenue is only just beginning to come on-stream. SGC will therefore also seek a financial contribution towards the costs of emptying the bins in the early years of the development.
- 13.14 See part 16 of this brief – ‘Design principles’ - for further guidance on the provision of exterior lighting and street furniture at EGE.

Type of provision	Minimum on site requirements	Area (sq.m)	Access	Location	Advice	Phased Provision	
Pitch Sports (including cricket)	Must provide a minimum of 4 senior football pitches, 3 junior football pitches and 1 rugby pitch Layout to allow for cricket outfield to overlap winter sports pitches Part of the joint public open space and community facility.	One senior football pitch 1.13ha + buffering One junior football pitch 0.45ha + buffering One rugby union pitch 1.26ha + buffering One cricket pitch 1.1ha (including overlap)	Near to cycleway, footpath & bus stop Access must be available for maintenance vehicles to enter site Provision for adequate car parking	About 15 to 20 minutes walking distance from home, (approximately 1000m.) At least 2 (football/rugby) pitches & 1 cricket pitch to be located with the multi use community/sports complex	The buffer zone will range from min. of 10m to max. of 30m, depending on design and layout Playing pitches must be built to comply with NPFA Club standard and maintained to IOG Basic Performance Quality Standard	N/A	See requirements
Sports Pavilion	Must provide appropriate ancillary facilities for outdoor formal sports. Facilities should include changing facilities, kitchen, bar & toilets	370 sq.m	As for 'pitch sports' above	Co-located with the multi use community/sports complex	Must be built to comply with the appropriate Sport England standards & guidelines of relevant sporting governing bodies	N/A	1
Equipped Sports Hall	Minimum size required to accommodate 4 badminton courts	680 sq.m. with minimum ceiling height of 9.5 m	Near to cycleway, footpath & bus stop. Provision for adequate car parking	Included in the multi use community/sports complex	To comply with appropriate Sport England standards & guidelines of relevant sporting governing bodies	N/A	1
Bowling Green	A minimum of 1 bowling green	One Bowling green 42m x 45m = 1890 sq.m	Near to cycleway, footpaths & bus stop Provision for adequate car parking	Co-located with the multi use community/sports complex	Can be backed on to rear gardens, pathways, parks and pavilion. Playing pitches to comply with NPFA Club standard and maintained to IOG Basic Performance Quality Standard	N/A	1
Tennis Courts	A minimum of 4 tennis courts	Total space 2694 sq.m + buffering	Near to cycleway, footpaths & bus stop	Could be located with other recreational provision	Adequate buffering if located near to residential properties. Courts must be built to comply with appropriate NPFA standard	N/A	4
MUGA	Comply with the Sport England specification.	Total space 2694 sq.m + buffering	Near to cycleway, footpaths & bus stop	Close proximity to BMX/Skateboard facility and teenage shelter	Adequate buffering similar to sports pitches if near to residential properties	N/A	1
BMX/Skateboard Facility	Optimum size 35m x 30m = 1050 sq.m + buffering	With buffering 0.855 ha	Near to cycleway, footpaths & bus stop	Close proximity to MUGA and teenage shelter	Recommended buffer zone of 60m from residential properties. Should allow for passive surveillance, for safety of users and the wider community.	N/A	1
Neighbourhood Equipped Play Area (NEAP)	At least one NEAP (1000 sq.m). Must meet the minimum requirements of the NPFA standard. Robust steel equipment should be provided. Comply with BSEN 1176 & 1177	3844 sq.m (with minimum of 30m buffer)	Near to cycleway, footpaths & bus stop Access must be available for appropriate maintenance vehicles to enter site	Within 15 minutes walking distance from home, (approximately 1000m.) Centrally located in the community. On route to Secondary School, but not too close to primary school & shops.	The buffer zone should be 1.5 times larger than the NPFA recommended standard, where located in a high density area. Should allow for passive surveillance, for safety of users and the wider community.	N/A	1
Local Equipped Play Area (LEAP)	LEAP to be closer to areas with high density housing. Must meet the minimum requirements of the NPFA standard. Robust steel equipment should be provided. Comply with BSEN 1176 & 1177	1800 sq.m (with 10m buffer)	Near to cycleway, footpaths & bus stop Access must be available for appropriate maintenance vehicles to enter site	One to be co-located with the multi use community building/pavilion. Within 5 minutes walking distance from home, (approximately 400m.) Must be on route or near to Primary School and shops, and within 400m of each, protected from major roads	The buffer zone to be 1.5 times larger than the NPFA recommended standard, where located in a high density residential area. Play areas for young and very young children in residential areas must allow for passive surveillance and supervision	N/A	2
Local Area for Play (LAP)	LAP to be provided in areas with medium/high density housing. Must meet the minimum requirements of the NPFA standard. Robust steel equipment should be provided. Comply with BSEN 1176 & 1177	900 (with 5m buffer)	Near to footpaths Access must be available for appropriate size maintenance vehicles to enter site	Within 1 minute walking distance from home, (approximately 100m.) Home Zone principle accepted Must be on safe route to Primary School Away and/or protected from major roads	Play areas for young and very young children in residential areas must allow for passive surveillance and supervision Ideally located near dwellings likely to be occupied by young families (children under 7 years old).	N/A	4
Non - Equipped Play Area	Should be located close to areas with high density housing. Should be large enough for children aged 8 & younger to safely play run about games. It can be part of the LEAP or LAP as long as it caters for the population within the medium to high density areas	Size between 1000 sq.m & 5000 sq.m Public Open Space quota is 0.45 Ha	Near to footpaths, cycle paths and/or residential road Access must be available for mowing machine to enter site	Between 1 to 5 minutes walking distance from home, (approximately 100m to 400m.)	The buffer zone to be 1.5 times larger than the NPFA recommended standard, where located in a high density area. Must have ball stop fencing or planting to prevent balls hitting private property.	N/A	6
Teenage Shelter	Located on an area of open space no smaller than 5000 sq.m		Near to cycleway, footpaths & bus stop	Close to BMX/Skateboard Facility and MUGA	Location must allow for passive surveillance for safety of users and the wider community. Construction should comply with BSEN1176 & PAS30	N/A	2
General Visual and Amenity Space	To be provided throughout the development in large or linear spaces, where each space is a minimum size of 1000 sq.m. Part of this requirement should include allotments	Minimum size of 1000 sq.m	Accessible from footpath, cycleway and residential roads. Vehicle access must be available for appropriate maintenance Car parking for 5 - 6 cars required with allotments	To be provided throughout the development utilising existing mature and semi-mature natural landscape features. Built to enhance both visual + wildlife amenities	The larger the area, the better, in order to avoid community conflict and maximise amenity value of quality space.	Throughout each phase of development	Development wide

Figure 14 - Public Open Space requirements EGE- based on the SGLP minimum target of 2750 dwellings

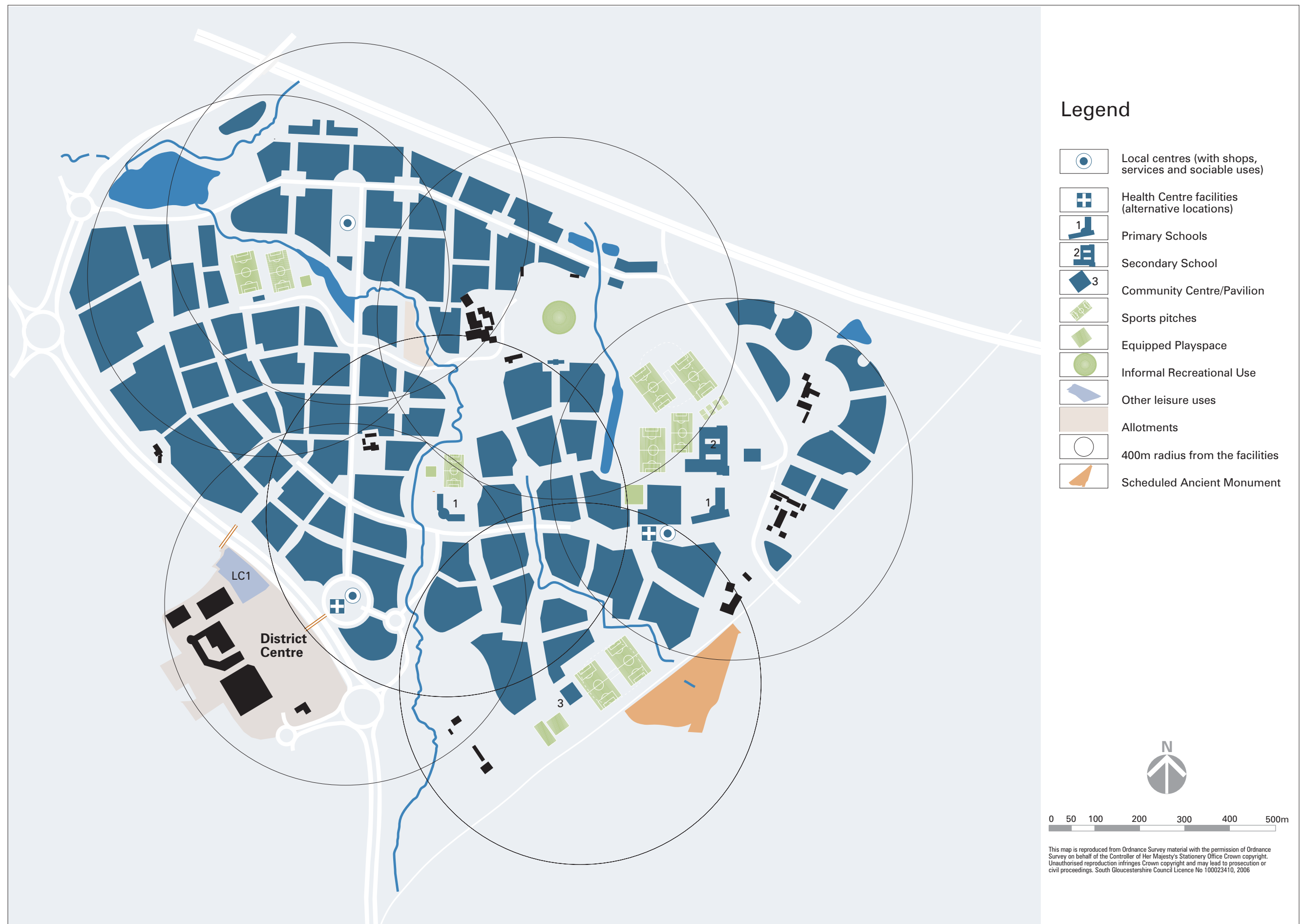


Figure 15 - Social infrastructure at EGE

14.1 In order to ensure that EGE is a sustainable urban extension it is critical that the development provides for the social needs of its residents. PPS1 makes it clear that “The Government is committed to developing strong, vibrant and sustainable communities and to promoting community cohesion in both urban and rural areas. This means meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunities for all citizens,” (paragraph 14 PPS1). It is clear from this advice that central Government regards the promotion of social cohesion and inclusion as a central tenet of land use planning.

14.2 PPG3 draws together issues of equity and sustainability in housing provision, and it reflects the thrust of the Governments revised Sustainable Development Strategy. The revised strategy places much greater emphasis on social cohesion as an objective of sustainable development. SGC is determined to ensure that EGE is planned and developed in a way that encourages social cohesion and minimizes the potential for social exclusion. The social concept seeks to ensure that the planning and development of EGE:

- **meets the full range of local housing needs, including 33.3% affordable units and extra care housing for elderly people;**
- **provides residents with access to the requisite education facilities locally;**
- **provides children and adults with access to the requisite social services;**
- **provides residents with access to essential health care facilities locally;**
- **includes an appropriate level of new indoor community meeting space; and**
- **provides additional library services locally.**
- **indicates location of three local centres, situated within comfortable walking distance of residential and employment areas, and containing a mix of retail and service uses forming part of the built fabric.**

Providing a range of dwelling sizes and types

14.3 In accordance with guidance set out in PPG3 SGC is seeking to create a mixed and inclusive community at EGE. To this end SGC will seek to ensure that each geographical phase of the development, and each of the character areas within the same, include a mix of dwelling size, type and affordability.

14.4 A recent housing needs survey below for the local area indicates the following mix.

- 1 bed dwellings 10%
- 2 bed dwellings 29%
- 3 bed dwellings 12%
- 4 bed dwellings 31%
- 2&3 bed dwellings to wheelchair standards 18%

Affordable housing

14.5 SGC will also seek to ensure that 33.3% of the new dwellings are ‘affordable housing’, and that these are provided on-site in accordance with the requirements of Policy H6 of the SGLP. The size and mix of the affordable dwellings will be based on the housing needs of the locality, as identified in the John Herington Housing Needs Survey (Final Report March 2004).

14.6 Affordable housing will be ‘pepper potted’ across the site in small clusters, in locations where residents will have convenient access to public transport. In the case of houses the clusters will be restricted to 10 units or less. A critical factor will be the external appearance of neighbourhoods, blocks and individual dwellings. Affordable housing should not be distinguishable from neighbouring open market housing. Tenure mixing (e.g. private, key worker, shared ownership and affordable rented) within individual perimeter blocks of housing will be encouraged. In addition, 10% of the provision ought to be designed to wheelchair standards.

14.7 In the case of flats or sheltered housing the appropriate size of the clusters shall be determined by SGC at the reserved

matters stage, having taken into account the type of housing involved and following consultation with those responsible for its long term management.

14.8 Estate management arrangements may be required to ensure an enduring first class environment across EGE. All residents, irrespective of tenure, should adhere to agreed estate management requirements. Registered Social Landlords (RSLs) will be expected to adopt this approach and enforce comparable estate management requirements, in addition to the tenancy conditions.

Extra care housing

14.9 EGE will be a development that offers a choice of housing and lifestyle to future residents, including older people. SGC recognises the need to reduce the admission of older people into hospital and to discourage moves into institutional forms of care. To this end SGC is seeking to facilitate the provision of accommodation that promotes independence and wellbeing. Extra care housing schemes provide this sort of accommodation. Moreover, extra care schemes can act as a community resource and a hub from which to provide services to the wider community.

14.10 SGC will require the development to provide an element of extra care housing, in order to foster a mixed and inclusive community at EGE. The aim is to secure a development that offers a choice of housing and lifestyle to future residents, including older people. In particular the Council is seeking to facilitate the provision of 50 homes for older people that are specifically designed to promote independence and well being. The schemes can be private sector accommodation for sale or for affordable housing for people of 55 years and above. The extra care housing shall be provided in addition to the 33.3% affordable housing element required by Policy H6.



The development will include a new community centre building for the residents of EGE



Open spaces and local centres should be designed to encourage social inter-action.

Education facilities

- 14.11 The development will be required to provide the sites, buildings, ground works and fixed furniture fittings for two new Primary Schools. These will be provided in appropriate locations within the development, at the convergence of footpaths and cycleways that provide safe routes to school. In order to meet the demand for new primary sector pupil places arising from the initial Policy M2 residential allocation (i.e. approximately 40 hectares for 2,000 dwellings) a 420-place Primary School and a 210-place Primary School are required.
- 14.12 As Policy M2 also makes provision for a further 750 new dwellings (i.e. in the area safeguarded for development needs beyond 2011) additional Primary School places will be required as that development comes forward. In order to cater for this anticipated extra demand for new Primary School places, both of the required Primary School sites must be large enough to accommodate a 420-place Primary School (NB. See also SGC's requirement, below, for new nursery facilities).
- 14.13 There are already pressures on secondary school places in the area and the additional need generated by the development of EGE will add to those pressures. SGC anticipates that the development of EGE, combined with existing pressures, will generate the need for a new secondary school; particularly taking into account future residential development within the 30 hectare reserve area. In recognition of this the brief identifies a suitable location for a new secondary school within EGE. In accordance with the requirements of Policy M2 of the SGLP, the required secondary school will be provided in phase with the site development.

Nursery facilities

- 14.14 As detailed in the 'Developers Guide' SGC has a duty to ensure that there is sufficient education provision to enable every three and four year old child to have access to a part-time nursery place. The developers will be required to ensure that sufficient nursery places are made available at EGE to fulfill this commitment. SGC's preferred approach is for the developers to enter into negotiations with a private nursery operator to secure the provision of a 0 to 5-year nursery facility at a suitable location within EGE. Alternatively SGC will require the development to make an appropriate financial contribution towards the costs of providing the required nursery facilities at one of the primary school sites. In this event the size of one of the required primary school sites will have to be increased to ensure sufficient space for the provision of a nursery.

Youth Services and Children's Social Services provision

- 14.15 Children's Social Services is an essential service provided by SGC. SGC anticipates that EGE will generate increased demand for both Children's Social Services and Youth Services provision. Although central Government funding will support the provision of Children's Social Services later in the life of the development, there will be a need for extra resources to meet the interim start-up costs associated with serving the population of EGE. The development will be required to make an appropriate financial contribution towards the costs of providing the required Children's Social Services and Youth Services in the early years of the development. This requirement is aimed at addressing practical issues arising out of the development: i.e. the wellbeing of children who will require support from Children's Social Services.

Adult Social Services

- 14.16 SGC anticipates that a proportion of the new population at EGE will require support from SGC's Social Services. The additional needs will be generated across all adult service user groups including: people with learning difficulties; people with mental illness; and elderly people. As already indicated, central Government regards the promotion of social cohesion and inclusion as a central tenet of land use planning. The development will be required to make an appropriate financial contribution towards the costs of providing the required Social Services in the early years of the development. Again this requirement is aimed at addressing practical issues arising out of the development: i.e. the wellbeing of adults who will require support from Social Services.

Essential healthcare facilities

- 14.17 SGC and the South Gloucestershire Primary Care Trust consider that the proposed development at EGE will result in a need for additional health facilities. SGC will therefore require the development to provide the required new healthcare facilities, in accordance with the provisions of Policies S1 and S2 of the SGLP.
- 14.18 SGC anticipates a Government direction regarding moving services into the community and plans for practice based commissioning.
- 14.19 The development will be required to provide a new building to incorporate a GP surgery, dental surgery, pharmacy and optometrist. The building will also provide space for additional facilities such as out patient appointments, health promotion activities and an enhanced range of services. The developers will be required to work in partnership with the South Gloucestershire Primary Care Trust to deliver this facility.
- 14.20 The required healthcare facility will be provided within EGE, at a location with ready access to public transport services. The framework plan shows the facility located within a local centre, close to the secondary school and one of the primary schools.

Community meeting space

- 14.21 SGC will seek to ensure that the development provides sufficient community meeting space to meet the needs of the future population of EGE. This should be provided in the form of a combined multi use community complex to be

located with a significant element of the required formal sports provision. The complex must accommodate a wide variety of activities, including indoor sports, ancillary facilities for outdoor sports and social activities which might include provision for multi-faith use and youth activities. The building should provide 680 sq.m for a four court sports hall with a minimum ceiling height of 9.5m with changing facilities, at least 400 sq.m for general community use and 370sq.m of pavilion floor space, including changing facilities for outdoor sports, toilets, kitchen and bar. The combined floorspace of 1,450 sq.m should be designed and built to permit sub division or opening up to allow flexible use of the space and shared use of some of the facilities, including the kitchen and bar. This should also ensure maximum use of all facilities and cost effective management.

- 14.22 SGC will seek to ensure that the requisite community meeting space is provided at an early stage in the development, to provide a focal point for community development:
- 14.23 Additional community meeting space shall also be provided in the form of:
- dedicated community meeting space within mixed-use buildings in different locations around EGE; and
 - meeting space within the secondary school and the primary schools, which can be made available for community use.
- 14.24 A shelter for teenagers, with convenient access to outdoor playspace, will also be required as part of the development. The Council will seek to ensure that this is provided on site, in conjunction with one or other of the formal open space clusters; or, on the LC1 site, in conjunction with at least one of the outdoor recreational facilities provided for this age group.
- 14.25 There is no proposal within the Development Brief to make provision for any religious buildings or site since such a building or site would be most likely to serve a much wider area than that of Emersons Green East, and when, in that wider area, there already exists a number of vacant religious buildings available for re-use.

Library services

- 14.26 SGC will also require the development to make an appropriate financial contribution towards The Emersons Green Library, which will serve the future population of EGE with library services.



Affordable housing will be designed to the same high standard as general needs housing - Iroko House, Haworth Tompkins Architects.



Schools will be among the most important landmark buildings at EGE. Their design should inspire teachers and pupils alike.

- 15.1 Delivery of the core development objectives and concepts will depend upon a package of supporting strategies to deal with issues such as drainage, air quality and noise. These supporting strategies shall form part of the more detailed illustrative master plan required by this brief. The approved strategies will be integral parts of any outline planning permission(s), and both SGC and the Town Builders will work to ensure their subsequent implementation.
- 15.2 In 'Sustainable communities in the South West - Building for the future', published earlier this year, the ODPM signalled the Government's intention to achieve a more sustainable and energy efficient approach to construction. The February 2003 white paper on energy 'Our energy future - creating a low carbon economy' (dti) proposed action to revise the Building Regulations, in order that the UK can achieve its targets in terms of reducing CO2 emissions. SGC is conscious of the fact that in the near future local authorities may well be equipped with new planning controls and Building Regulations, designed to achieve the Government's aspirations in terms of sustainable development. Clearly it will be some years before the residential element of EGE is implemented, and SGC is therefore keen to ensure that targets for energy and water conservation, as well as those for waste reduction at EGE are set well above the standards required by current statutory controls.
- 15.3 To this end SGC will seek to ensure that the landowners also produce supporting strategies designed to reduce energy and water consumption, and to reduce waste and encourage recycling. These strategies will be expected to exceed the requirements of existing SGC Supplementary Planning Guidance on SuDS and Waste Audits. SGC will seek to ensure that the landowners prepare these 'resource Minimisation' strategies as part of their response to Agenda 21, and to the Government's drive to achieve more sustainable new housing developments in the South West. These strategies will be designed to achieve a better EcoHomes rating for the development, and in this respect their value will be measurable. They will also be expected to identify specific opportunities for exemplar projects within the development, with a view to raising public awareness of sustainable development issues.

- 15.4 SGC will seek to ensure that any outline planning permission(s) are linked to supporting strategies for dealing with:

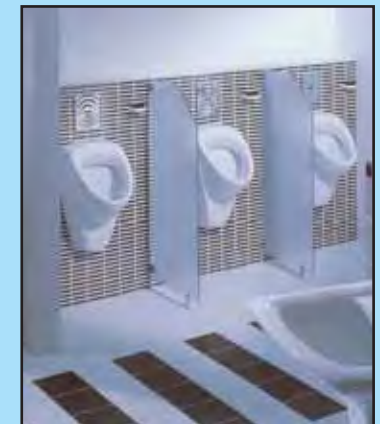
- **Drainage;**
- **Noise;**
- **Energy conservation;**
- **Air quality;**
- **Water conservation; and,**
- **Waste reduction.**

Surface Water drainage strategy

- 15.5 SGC will require all proposals for development at EGE to adhere to the provisions of the 'EGE Development Folly Brook Catchment Surface Water Drainage Strategy 2004'. This strategy, which has been approved by the Environment Agency, utilizes a series of surface water attenuation areas along the length of the Folly Brook and its tributaries. In addition, development proposals will have to meet the requirements of Policies L17 and L18 of the SGLP.
- 15.6 The construction of these water attenuation areas will be co-ordinated with the phasing of the development. The majority of the surface water run-off will then be positively drained into the designated attenuation areas, from where the overall rate of discharge into the adjacent watercourse can be regulated through a suitable weir control to prevent flooding.
- 15.7 With the benefit of the latest catchment flow data the overall strategy can be refined in order to ensure that sufficient storage is provided in each of the areas to prevent the adjacent development from flooding as a consequence of the 1 in 100 years storm event.
- 15.8 While the attenuation areas are designed to contain some permanent standing water, providing environments that are beneficial in terms of ecology, the majority will normally be dry.
- 15.9 SGC will also seek to ensure that opportunities to reduce the need for positive drainage (through the use of various Sustainable Drainage Systems) are exploited where possible, in line with the SGC's Sustainable Drainage Systems SPG.
- 15.10 Proposals for surface water drainage, (together with details for reserved matters), will need to be agreed with the SGC as part of the outline consent for the development of the area.



Buildings at EGE will be designed to minimise energy consumption.



Water consumption at EGE will be reduced through the specification and installation of water saving appliances



The waste reduction strategy will seek to reduce waste generation during construction and throughout the lifetime of the development

Foul Drainage Strategy

- 15.11 Before any development may begin, a foul drainage strategy must have been approved by the Wessex Water Authority, No construction will commence, until an adaptable foul sewer is available for use. All existing development which drains to septic tanks should be provided with main drainage spurs to facilitate foul drainage connections

Noise strategy

- 15.12 Careful land use planning is the primary means of mitigating the effects of road traffic noise from the M4 Motorway and the Avon Ring Road. Sensitive properties will be sited outside areas of PPG24 category NEC 'C'. Less noise-sensitive land uses, such as employment, may be sited closer to the major roads. Detailed layout and building design can also reduce the effects of noise, such as placing noise-sensitive rooms on facades facing away from the noise source, etc. Noise barriers can also be employed to provide additional protection where outdoor recreational areas cannot be adequately screened from noise sources by built form. Where such barriers are required their impact on the appearance of the scheme will be minimized through the use of appropriate planting.
- 15.13 SGC is particularly conscious of the need to ensure that noise-sensitive development in the northern parts of EGE is protected from day-time and night-time road traffic noise from the M4 Motorway. At this point in time SGC considers it likely that a noise barrier will be required along the boundary, or part thereof, of EGE with the M4 Motorway. SGC recognizes the benefits that such a barrier would bring, in terms of improving the quality of the environment in the northern parts of EGE. In considering the illustrative master plan document required by this brief SGC will therefore have special regard to the need for, and the environmental benefits of, a noise barrier along the boundary, or part thereof, of EGE with the M4 Motorway.

Energy Conservation Strategy

- 15.14 Energy itself is not what people want. They want the services it provides: comfort and warmth; hot water; and light. In order for EGE to be a more sustainable development it will need to exploit a variety of measures (e.g. energy efficient built forms, low energy fittings, passive solar gain, renewable and combined heat and power schemes) to provide these services with less harm to the environment. EGE should be designed with an explicit energy conservation strategy in mind, which works to reduce heat loss from buildings and to exploit opportunities for renewable energy use and/or combined heat and power systems. The energy conservation strategy for EGE should:

- **require the provision of energy efficient homes (NHER rating of 10 and SAP rating of 100). The strategy should emphasize the importance of quality workmanship in delivering more energy efficient homes, and put in place mechanisms which the Town Builders can use to promote high standards of workmanship across the development;**
- **encourage innovative construction techniques, where these will improve energy efficiency;**
- **make electricity savings through the initial specification of eco labelled white goods;**
- **seek to maximise day lighting and passive solar gain;**
- **plan for district heating systems;**
- **require the use of passive ventilation systems (particularly in employment buildings);**

- **promote the use of photovoltaic technology where appropriate;**
- **facilitate and support the implementation of exemplar energy efficient building projects within the overall development; and,**
- **seek to exploit the possibility of energy recovery from the adjacent land-fill site in connection with a building project within EGE, as part of an educational programme to raise awareness of energy conservation issues.**

- 15.15 *'Towards Low Carbon Housing Developments'*, a report prepared for SGC by the Centre for Sustainable Energy, provides an appropriate model for the required energy conservation strategy. The hierarchical approach to intervention adopted in that report shall also be applied to the water conservation and reduction strategies.
- 15.16 To distribute mains power, there will be a need to establish at least one new major substation within the development area, requiring a site of approximately 30m x 40m in area.

Air quality strategy

- 15.17 Sensitive site users, including residential development and schools, will be sited away from any areas of significant air pollution. This approach follows the Air Quality Management Regulations 2000. Less sensitive development, such as employment areas, may be sited closer to the M4 Motorway and the Avon Ring Road.

Water conservation strategy

15.18 The Drainage Strategy will seek to mitigate potential problems associated with surface water run-off, and where possible to increase infiltration into the ground. Addressing the issue of surface water will not, however, in itself make EGE sustainable in terms of its impact on this vital natural resource. Each year the demand for water rises as our standard of living improves. Wessex Water advise that we now use 70 per cent more water than we did 30 years ago, and it is estimated that the average person uses 160 litres of water every day. As a result the rate of domestic water consumption in the UK is becoming increasingly critical. In order to be a more sustainable development EGE will need to exploit a variety of measures to reduce water consumption. The water conservation strategy for EGE should:

- **seek to dramatically reduce water consumption across the development through the initial specification and installation of water saving appliances (NB. some observers estimate that by specifying readily available low water consuming appliances a saving of some 325 litres of water per household per day is achievable);**
- **actively promote the 'harvesting' of rainwater for use within buildings and in gardens;**
- **actively promote the installation of grey water recycling systems in employment buildings and in homes;**
- **initiate an extensive educational exercise across the development, aimed at raising consumer awareness of the importance of conserving water as a limited natural resource. This awareness raising exercise could include the commissioning of a 'Percent for Art' water feature, to be provided in conjunction with the required community building.**

Waste reduction strategy

15.19 New developments generate considerable amounts of waste material, both during the construction phase and throughout the lifetime of the buildings. Waste is generated from the packaging of many construction products, and the craft based industries of brickwork, plastering, carpentry and decorating, generate waste as a result of breakages and the cutting and mixing of materials on site. Where site levelling is perceived to be necessary, it can result in large quantities of soil being exported off the site as waste material. Once occupied new buildings continue to generate waste in the form of assorted rubbish, unwanted garden and DIY material, and of course sewage. In order to be more sustainable the development of EGE must include an explicit strategy to reduce waste generation and encourage recycling.

15.20 Policy 37 of the South Gloucestershire Minerals and Waste Local Plan requires developers to prepare and submit a waste audit, to demonstrate that they have given positive and imaginative consideration to reducing excavation and demolition waste in the design and construction of their schemes. SGC has also produced Waste Audits SPG which explains in more detail what is required of a waste audit. The waste reduction strategy for EGE will include a waste audit as required by Policy 37 (and as described by the Waste Audits SPG) but it should also:

- **Include a management plan (supplemental to the waste audit) to reduce waste generation during the construction phase. This plan would require developers and contractors to give the highest priority to low-waste building methods throughout the construction phase. Where waste is unavoidable developers / contractors would be required to sort materials for recycling. This management plan would be administered by the Town Builders and they would ensure that adherence to its provisions would be incumbent upon all developers at EGE;**
- **ensure the provision of space within all dwellings (or blocks of dwellings) for the storage of sorted material for recycling, and where appropriate space for home composting. The Town Builders and SGC would then work together to introduce systems for pre-sorted waste collection;**
- **ensure that all residents have convenient access to shared recyclables banks. These should be situated at well-lit and attractively designed sites. The locations of these site should be identified on the illustrative master plan for EGE;**
- **facilitate and support the implementation of innovative waste reduction projects within the development; and,**
- **include an education programme that aims to effect behavioural change amongst residents and employees at EGE, encouraging them to adopt a 'reduce, reuse and recycle' approach to waste.**

Perimeter Blocks

- 16.1 Perimeter block development, as described earlier in this brief, requires a design response that distinguishes between public and private space. This means that all buildings need at least two 'faces': a front onto public space, for entrances and most public activities, and a back where the most private activities can go on without compromising the 'publicness' of the public realm. Public areas should always be overlooked by the fronts of buildings, encouraging casual surveillance of the public realm. For this reason plots will never be placed where they back onto public spaces such as streets, parks or footways/cycle tracks, as this would compromise the publicness of the public realm and reduce security.
- 16.2 Perimeter blocks can work with any scale of development. Block sizes will vary, depending on a number of factors:
- the type of development (i.e. employment, housing or mixed-use);
 - the type of housing involved;
 - the parking standard to be applied; and,
 - whether or not private gardens are to be provided.
- 16.3 Perimeter blocks are capable of accommodating any house types (flats, terraced, semi-detached and detached) and it is possible for a mix of different house types and uses to occur within a single block. In residential areas block dimensions should be within the range 60 to 120m. The minimum dimension is established to ensure acceptable spatial standards. The maximum dimension has been set to ensure permeability by avoiding overly large urban blocks.

Block Interiors

- 16.4 The interiors of the blocks will add a special dimension to the urban environment. In residential areas the blocks will create opportunities to create high quality, private amenity space for the occupants of the block. Internal garden courts will remove cars from the street scene, without creating unattractive and/or insecure parking areas.
- 16.5 In the employment areas buildings should be laid out as a perimeter form enclosing generous and well landscaped courtyards incorporating car parking and external storage etc.

- 16.6 Block interiors should be designed with the following in mind:

- **Character** - the internal areas will have to accommodate a number of uses. Parking and garaging will be permitted, but must not dominate at the expense of amenity.
- **Landscape design** - will be of exceptional quality in both residential and employment blocks. In the residential blocks the landscape design should emphasize the garden element. Internal courtyards present opportunities to create multi-use spaces, enriching the enjoyment of residents. Courtyards will be secure places for children's play and they will create social spaces for residents.
- **Security** - in residential areas entry to internal courtyards will be limited to residents only. The design of any entrance ways should make it clear to non-residents that the courtyard is private. Entrance ways should be as small as possible, for example a narrow gap through the buildings with a first floor development above. Opportunities for casual surveillance of courtyards should be maximised.
- **Ownership** - to generate a sense of ownership and responsibility by the occupants, management schemes shall be put in place for the maintenance of garden courts.
- **Mixed-use** - where blocks contain uses that require access for service or visitor's vehicles, there may be a need to segregate a small section of the internal court to ensure security is retained. Generally, servicing should take place from the street to avoid breaching the block.
- **Refuse Storage and Recycling** - refuse storage space should be accommodated inside the rear of individual plots. Space should also be made available for occupants to store materials that have been sorted for recycling.



Perimeter blocks can work with any scale of development



In residential areas the blocks will create opportunities to create high quality, private amenity space - Iroko House.



Front doors onto streets should be positioned at regular close intervals.



Undulation can be an effective foil to the regularity of parallel built form.

Animating the Street

16.7 There is a strong relationship between the nature of the front façade of a building and the degree to which the street is animated and active. The frequency of entrances from buildings onto the street is of particular importance. Fenestration enlivens streets. The following measures will help to create active streets at EGE:

- buildings have their main public access from the street frontage (outbuildings, including garages, should not project forward of the main building line of a dwelling);
- integrated porches, front entrance steps, awnings and other entrance features are encouraged - these may protrude forward of the main front building line of the property provided they reflect the style and context of the building;
- wider pavement areas on the main streets fronting café's and restaurants, can be actively used for seating, tables and displays to enliven the street;
- doors onto streets should be positioned at regular close intervals to encourage on-street activity; and
- where boundary walls and fences are constructed to areas forward of the main front building line, they should not reduce the potential for interaction with the street or for casual surveillance.

16.8 Higher screen walls will be used where they are necessary to maintain enclosure in the public realm and protect amenity.

Place making

16.9 *'Places, Streets and Movement'* explains how in most housing developments during recent decades, layout design has focused too much on the movement and parking of vehicles at the expense of other considerations. At EGE this imbalance will be redressed, with 'place making' being the main consideration.

16.10 The framework plan defines the basic pattern of streets and blocks, and the brief as a whole establishes a broad spatial hierarchy. Detailed designs for different areas within EGE will be expected to develop this pattern into a sequence of attractive spaces defined by built form. There are various ways in which the built form can be articulated to achieve this objective.

- Fluctuation in street width helps to create the appearance of a sequence of spaces. In places the street narrows to define one space and widens again to reveal another.
- Undulation can be an effective foil to the regularity of parallel built form. Undulation in the built form is common in the planned Georgian areas of Bath and Clifton.
- Projection and recession in the building line makes it harder for the human eye to take in the street in a single glance, which in turn helps to avoid the street being viewed as primarily a traffic route.
- Changes in function and character between one place and another should be acknowledged by some form of signal in the built form.

Crossroads, junctions and corners

- 16.11 Crossroads and junctions facilitate movement and contribute to place making. They are key components in helping people to find their way around, particularly when they have distinguishing features such as notable buildings, landscaped spaces or interaction with a major route. The road layout at EGE places emphasis on the role of crossroads and junctions to improve safety. A permeable street layout will ensure a frequency of junctions and crossroads, which will assist in reducing traffic speed and driver caution. This approach is consistent with guidance contained in *'Design Bulletin 32'* and its supporting document *'Places, Streets and Movement'*. Junction dimensions and turning radii will be deliberately 'designed down' to encourage slower traffic movement.
- 16.12 The opportunity to use junctions and crossroads to enhance place making should be optimized throughout the development. All junctions are potential nodes, but they should not all be given equal significance. The appropriate degree of emphasis for each junction will depend on three main factors:
- **the functional roles of the streets forming the junctions. The more important the functional roles the greater the spatial emphasis required;**
 - **the activities in the adjacent buildings. Again the more publicly relevant these are the greater the spatial emphasis required; and**
 - **the expectations established by other nodes across the development.**
- 16.13 Buildings that occupy corner plots shall be designed to increase the legibility of crossroads and junctions. They shall be designed to have two public facades to ensure that they 'turn the corner' effectively.

Roofscape

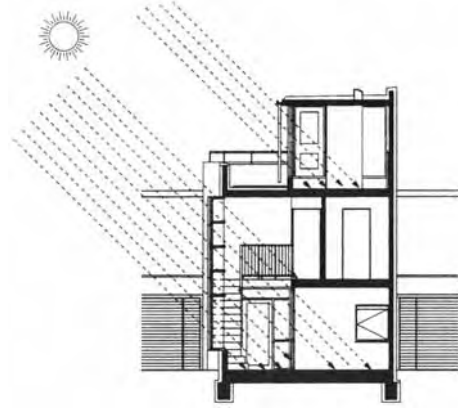
- 16.14 Varied and interesting roofscape is a key aspect of the built heritage of South Gloucestershire, and of the planned Georgian districts of the west of England. Creating a varied and interesting roofscape across a new development requires careful attention to roof heights, shapes, detailing and materials. Designers will be required to demonstrate, using three dimensional illustrative material, that their schemes would respect this tradition.
- 16.15 In the residential parts of the development the majority of roofs will be duo-pitched or radiused. In the case of the duo-pitched roofs, ridge lines should vary in height to avoid the creation of a monotonous roofscape. Where more contemporary building forms are proposed designers will be expected to demonstrate how the roofs will be articulated, again to avoid a monotonous roofscape.
- 16.16 Chimney stacks are an extremely important element of the built heritage of South Gloucestershire and their presence helps to create interesting roofscape. Chimneys can function as flues and/or as ventilation ducts. As flues they offer flexibility in the choice of heating fuel in the future, and as ventilation ducts they can be used to facilitate 'passive stack ventilation' systems, reducing the need for powered fans. False chimneys will not be permitted.
- 16.17 In the employment areas various roof types will be acceptable (e.g. flat, radiused, undulating and appropriately designed 'living roofs'). Roofs should present an irregular profile if generally viewed against the skyline, and roof projections (e.g. tanks, pipes, flues, plant and communication antennae, etc) shall be sensitively positioned and designed to make a positive contribution to the roofscape. In cases where this is not possible the projections shall be screened.



Buildings that occupy corner plots shall be designed to increase the legibility of crossroads and junctions.



Chimneys can function as flues and/or as ventilation ducts.



Section through low energy housing Julyan Wickham and A and H van Eyck and Partners

Locational differences in housing layout for solar gain - adapted from BRECSU General Information Report 27

Overshadowing can be a significant constraint in the case of high density development.



The indicative framework plan affords opportunities for many dwellings to take advantage of passive solar gain.

Microclimate: Reducing wind speeds

- 16.18 In putting together detailed proposals for different parts of the scheme, designers will be expected to give careful consideration to the microclimate of that part of the site (particularly wind speed and sunlight). The reduction of wind speeds can reduce heat loss from buildings, minimise the negative effects of driving rain and improve the amenity of open space. Overshadowing, the obstruction of sunlight by buildings, trees, structures and topography, is the main problem in terms of sunlight, and it can be a significant constraint in the case of high density development.
- 16.19 Designers will be expected to illustrate how their scheme proposals have been formulated to reduce wind speeds across the site, and to avoid unacceptable overshadowing of main habitable rooms and outdoor amenity space.

Orientation: Maximizing passive solar gain

- 16.20 Policy D1 of the SGLP states that development will only be permitted where good standards of site planning and design are achieved. In particular, proposals will be required to demonstrate that the design, density, orientation and location of buildings incorporate measures to achieve energy conservation.
- 16.21 The space heating requirements of individual dwellings can be reduced through the adoption of simple passive solar design measures. Maximizing passive solar gain depends on an integrated design approach that places the main habitable rooms and the majority of fenestration on the southerly side of the house, specifies high performance windows and includes sufficient thermal mass to store (and slowly release) solar heat gains.
- 16.22 The optimum orientation for maximising passive solar gain is within 30° of South, although within 45° is acceptable. The indicative framework plan affords opportunities for many dwellings to take advantage of passive solar gain. Designers will be expected to demonstrate how they have responded to these opportunities, and thereby contributed to the overall energy conservation strategy for EGE.
- 16.23 The provision of 'affordable warmth' is a major problem for households on low incomes. Direct links have been identified between low indoor temperatures and increased blood pressure. All homes at EGE should be designed to very high standards in terms of airtightness and insulation, to reduce heat loss. As many as possible should also be orientated and designed to maximize passive solar gain, thus reducing the cost of space heating.
- 16.24 In the case of employment buildings designers will be encouraged to take advantage of natural light, in order to reduce the need for energy consuming artificial light. Maximizing solar gain is not normally appropriate for office buildings, however, as excessive solar gain can result in a need for energy consuming air conditioning systems.

Adaptability

- 16.25 SGC will seek to ensure that the development includes a mix of dwelling size, type and affordability to meet the full range of housing need. Moreover, developers will be strongly encouraged to provide as many dwellings as possible that are capable of meeting resident's changing housing needs as they progress through various stages of their lives. Good design should provide opportunities for periodic upgrading to take advantage of technological innovation and internal spaces that can readily be adapted to meet the changing requirements of future occupants. In terms of individual buildings, designs that allow for easy adaptation and extension will be encouraged. Roofs in particular should be designed and constructed to allow easy conversion to useable space.

Home Working

- 16.26 As indicated earlier in this brief (at part 11.0 Transport Concept) EGE will be a 'fully wired' community, with all homes connected to a high-speed broadband cable network that will encourage a higher level of home-based working. In order to further this objective, developers will be strongly encouraged to provide a range of dwellings with integral workspace. The type of home-based working that can be carried on will require control through restrictive covenant, in order that activities involving extra parking, noise, fumes, external storage or refuse space are controlled.
- 16.27 Developers will also be encouraged to provide some workshop homes in the lower density eastern part of the site. Workshop homes, as pioneered by Essex County Council, are designed to facilitate small scale manufacturing enterprises, with a workshop on the ground floor and domestic accommodation on the first and second floors. Workshops would be a maximum of 40sq.m with hardstanding for a small commercial vehicle in addition to a garage. Plots for workshop homes will include a yard space of at least 15sq.m. And this will be screened from view by a 1,800 - 2,200mm high wall.



Building designs that allow for easy adaptation and extension will be encouraged



Developers will be required to demonstrate that their scheme proposals make adequate provision for domestic storage.



Building at EGE should be designed to provide healthy and comfortable indoor environments.

Space in and around buildings

The relationship between internal and external space

16.28 In formulating detailed scheme proposals for different parts of EGE designers will be required to demonstrate that they have given adequate consideration to the relationship between internal and external space. Large-scale (1:100) layout drawings, illustrating the relationship between internal and external space, should be submitted with all reserved matters applications. In order to be considered satisfactory scheme proposals should avoid the following characteristics:

- main habitable rooms lacking privacy;
- external spaces lacking natural surveillance;
- inadequate definition and treatment of threshold areas; and
- missed opportunities to exploit views and orientation

Creating healthy indoor environments

16.29 Individual buildings at EGE should be designed to provide healthy and comfortable indoor environments. Developers will be encouraged to ensure that when new buildings are handed over to their first occupants, the indoor environment is as healthy as possible, both in terms of the materials that have been used in the construction and fitting out of the building and in terms of ventilation.

Careful specification of materials

16.30 Modern materials can produce a wide range of effects that in extreme cases may be experienced by occupants as 'Sick Building Syndrome'. Sick Building Syndrome has been linked in part to the presence of a mix of pollutants, such as formaldehyde. Developers at EGE will be encouraged to specify the use of allergy free (in particular formaldehyde-free) construction materials.

Ensuring good ventilation

16.31 Good ventilation is necessary to prevent condensation and maintain healthy indoor environments. The use of Passive Stack Ventilation (PSV) and where practical heat recovery systems will be encouraged across EGE. The use of these low-energy extract systems have the twin benefits of improving the quality of the internal environment and saving energy

16.32 One in four urban children now suffer from asthma. The house dust mite is strongly linked with asthma. Ensuring good ventilation and minimising the breeding areas for house mites (such as fitted carpets) will result in healthier indoor environments.

Domestic storage space

Bins and Recycling

16.33 Developers will be required to demonstrate that their scheme proposals make adequate provision for the storage of bins in a way that does not undermine the external appearance of the development. The space provided for each dwelling should be large enough to accommodate two standard 'wheelie-bins'; i.e. one for waste and one for the storage of recyclable materials.

16.34 Developers will also be strongly encouraged to include design features in all homes that encourage recycling, such as multiple kitchen bins.

Storage Space for Bicycles

16.35 *'Better places to live'* highlights the fact that lack of storage space is often a deterrent to the use of bicycles as a means of transport. While the wide hallways of 19th Century houses can usually accommodate one or two bicycles, the tighter spaces of contemporary housing do not give occupiers this option. Developers will be required to demonstrate that their scheme proposals make adequate provision for secure cycle storage.

Construction materials

- 16.36 This part of the brief sets out the overall strategy in terms of construction materials. More detail on which materials will be considered appropriate in various parts of the site will be set out in the illustrative master plan document and in the design code.

Reducing embodied energy

- 16.37 Designers will be encouraged to select construction materials with low embodied energy, and those produced using renewable resources. High-energy materials may be considered acceptable where life cycle analysis indicates that their use is justified by their ability to extend the life of the building.
- 16.38 As a general rule of thumb, heavy materials (new or recycled) should be sourced locally. Non-local sourcing of lightweight materials may be appropriate where this is justified by technical advantages. (e.g. low energy, high performance Swedish windows). Further information can be obtained from *'The Green Guide to Specification'* (BRE 1999).

Buildings

- 16.39 The overall strategy involves the creation of a locally distinctive development at EGE, that respects the best of historic development in South Gloucestershire and the West of England. Generally a 'light' appearance is sought for walls, with the use of materials that reflect light well. Light coloured render, Stucco, Blue Lias limestone, Bath Stone and timber boarding, shall be used to achieve this objective in the residential parts of the development. Fully glazed curtain walling, smooth metal cladding, Bath Stone and Sandstone shall be used for walls in the employment areas. The predominant materials for roofs in the residential areas will be red clay tiles (pantile and double roman profiles). Welsh natural slates will also be used in places, as will stone tiles and high quality reconstructed stone tiles. In the employment areas slate grey coloured metal roofs will predominate.
- 16.40 The use of materials other than those described above will be considered where the buildings in question have been specifically designed as exemplars of sustainable construction. Construction materials will be carefully selected and deployed to create areas within the development that appear coherent and engender a sense of place. A well-mannered approach is required which delivers individual streets with the use of a limited palette of materials.



Generally a 'light' appearance is sought for walls, with the use of materials that reflect light well.



Groundscape

- 16.41 The creation of successful urban space is dependent upon the relationship between buildings, and also on the relationship between buildings and the floor or groundscape. The groundscape between buildings is one of the most powerful agents for creating a coherent and attractive urban environment.
- 16.42 As a general rule of thumb small paving units will be deployed in the more intimate spaces, such as Home Zones and enclosed pedestrian/cyclist routes through built areas. A more formal approach will be adopted for larger public spaces. Porous and infiltration paving systems will be deployed where this will reduce surface water run-off.
- 16.43 Overall the same well-mannered approach that is required for building materials will also be required for groundscape materials. The emphasis will be on using a limited palette of good quality materials in particular streets and spaces, to ensure that the groundscape helps to unify the built environment.
- 16.44 Applications for planning permission often fail to provide sufficient details of how the ground between buildings is to be treated. At EGE developers will be required to submit large scale layout drawings (together with details of the materials specified thereon) with their reserved matters applications, to demonstrate clearly how the groundscape has been designed to help unify the built environment.
- 16.45 The illustrative master plan document will describe and justify the proposed building and groundscape materials in much more detail. And the design code will set out rules for their use.

Exterior lighting and street furniture

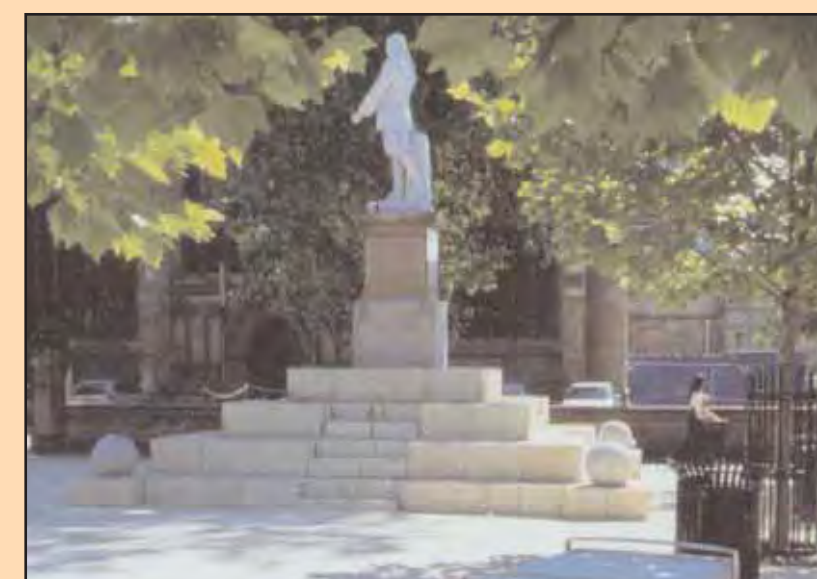
- 16.46 The visual richness of an area can be enhanced through the quality of materials and detailing in new buildings and groundscape. It can also be enhanced through the quality of exterior lighting schemes and other elements of street furniture. At EGE street furniture of the highest quality shall be deployed to enhance the visual richness of the scheme. Full details of exterior lighting and other elements of street furniture, proposed to be deployed in particular parts of the site, shall be submitted to the Council for approval with reserved matters applications.
- 16.47 In order to avoid clutter street lights will where possible be mounted on buildings. This approach will not only help to reduce the amount of clutter in the street, it will also ensure that the 'static' appearance of enclosed streets is not disturbed by continuous lines of street lights. In designing exterior lighting schemes for different parts of EGE developers and SGC will pay careful attention to scale, and will ensure that the selected light fittings are of suitable scale to the built environment. They will also be mindful of the need to be energy efficient.
- 16.48 Lighting levels across EGE will be gauged to suit the needs of the area in question and to avoid unnecessary light pollution. The overall aim will be to create a secure environment. Particular care will be taken to ensure that lighting along footpaths and cycle tracks is sufficient to engender a feeling of security amongst users.

Balconies

- 16.49 In the high density core of the development in particular facades will be modelled with balconies (and bays where appropriate) to avoid unrelieved massing. All balconies shall be useable and large enough to allow some form of 'sitting out'. Applied balconies that serve no useful purpose will not be permitted.

Public Art

- 16.50 This brief seeks to encourage good design in all aspects of the public realm at EGE. SGC will, however, also seek a specific contribution from developers towards the provision of 'Public Art'. In accordance with Policy LC13 of the SGLP, SGC will seek a contribution of up to one per cent of the total cost of the development for the commissioning and incorporation of art and craft works as an integral part of the development.
- 16.51 The illustrative master plan document shall include a Public Art strategy for EGE. The strategy will seek to ensure that works of art are provided in locations where they will enrich the public realm and help to create a distinctive development.





Parking within public squares



Garden court parking



Small parking courtyards



Mews parking



On street parking



On plot parking



Internalised courtyards



Underground parking

Car parking

- 16.52 With the exception of the Science Park, parking standards across EGE will be those set out in Policy T8 of the SGLP. At least nine different solutions will be deployed to accommodate parked cars at EGE.

Parking within public squares

- 16.53 Some parking will be accommodated within public squares. In the higher density parts of the site this will involve large urban courts, which could also provide suitable locations for community facilities such as children's play equipment.
- 16.54 Certain smaller public squares will also be designed to accommodate parked cars. Tree planting within these spaces will be designed to soften their appearance and reduce the visual impact of parked vehicles. These squares will be directly overlooked by buildings.

Garden court parking

- 16.55 Some parking will be provided within 'Garden Courts'. This solution will involve the provision of parking courts set within residential perimeter blocks, possibly also incorporating a Local Area for Play (LAP) and/or other community facilities (e.g. communal barbecue area).

Small parking courtyards

- 16.56 Some parking will be accommodated in small parking courtyards serving 5-8 dwellings set within a larger residential block. In order to maintain the street enclosure, access to such courtyards may be via obscure gates, or via a drive with over-sailing accommodation.

In the lower density, more informal parts of the scheme a 'rural' mews solution will be deployed where appropriate.

Mews court development

- 16.57 The formal Mews court solution, with a bank of garages occupying the ground floor (or integral garages) will be deployed in the higher density parts of the site.

Undercroft parking

- 16.58 Undercroft parking will be deployed in the higher density parts of the scheme. In these locations residential accommodation will be raised half a storey over the parking space. This solution allows integral garages to be incorporated, with detracting from the appearance of the streetscene.

On street parking

- 16.59 Certain streets within EGE will be designed to accommodate on street parking. Particular care will be taken, however, to ensure that on street parking does not prejudice the efficient operation of bus routes, or inconvenience cyclist and pedestrians. On street parking will also be restricted to a level where it does not dominate the appearance of the streetscene.

On plot parking

- 16.60 On plot parking will be deployed in the lower density parts of the scheme, where developers can demonstrate that it will not detract from the continuity and enclosure of the streetscene. Where on plot parking is provided it should, in the vast majority of cases, be situated at the rear of the plot. Parking spaces at the rear of the plot can then be used as extra private garden space when not required for parking. Garages must be free standing, and in the minority of cases where they are not located at the rear of the plot, they must be set back from the building line. Integral garages will only be acceptable in the following situations:

- mews Courts;
- undercroft parking; and,
- dwellings specially designed to provide surveillance with larger parking courts.

Internalised courtyards

- 16.61 Within the employment and mixed-use areas parking and servicing will be accommodated with internalised courtyards. Particular care will be taken to ensure that the quality of hard and soft landscaping within these courtyards serves to mitigate the negative visual impact of the parked cars.

Decked and underground car parking

- 16.62 In the higher density employment and mixed-use parts of the site, decked and underground parking will be acceptable. Where decked parking is deployed the exterior of the building shall be designed so as to conceal the parked cars within, and to complement the surrounding built environment.

Home Zones

- 16.63 The transport concept for EGE seeks to provide an attractive environment for pedestrians and cyclists. One of the key tenets of the transport concept involves the widespread application of Home Zone principles.
- 16.64 Home Zones are residential streets in which the road space is shared between drivers of motor vehicles and other road users, with the wider needs of residents in mind. The aim is to change the way that streets are used and to improve the quality of life in residential streets by making them places for people, not just for traffic. The layout of the street should emphasize this objective, so that motorists perceive that they should give informal priority to other road users. (DLTR).
- 16.65 Within Home Zones the street will be designed to reduce traffic speeds significantly (to below 20mph, and to around 10 mph were possible) and to ensure that cars do not dominate the public realm. Various techniques may be used to achieve these objectives including:
- **shared surfaces;**
 - **indirect routes for vehicular traffic;**
 - **areas of planting in the street;**
 - **careful use of surface materials;**
 - **features to encourage the use of the street, such as seating and play equipment; and**
 - **appropriate signs and 'gateways' to mark the limits of the area.**

Home Zones in the road hierarchy

- 16.66 Reducing traffic speeds to below 20mph will be achieved more effectively where there is a gradual reduction in the speed limit as vehicles approach at Home Zone. At EGE vehicle speeds on the main distributor roads will generally be restricted to 30mph, providing opportunities to create different kinds of Home Zones in both the high density core and the lower density edges of the residential area.
- 16.67 Home Zone streets should have traffic flows of no more than about 100 vehicles in the afternoon peak hour. This is usually the time of day when there is most potential for conflict between vehicles and people, including children playing in the street.

Key characteristics of Home Zone streets at EGE

- 16.68
- Home Zones at EGE will include streets, and courtyards.
 - Home Zones will be clearly marked at their entrances and exits with carefully designed 'gateway' features, to minimise the need for signage.
 - Home Zone spaces will be defined by buildings, planting and groundspace materials, rather than by conventional kerb edges and carriageways;
 - Dwellings that define the edges of a Home Zone will overlook the space.
 - Private space around dwellings that front onto a Home Zone space will be kept to a minimum, to ensure that there is a direct relationship between the dwellings and the Home Zone space.
 - Home Zone spaces shall include features to encourage social interaction such as communal seating areas and play equipment. These should be carefully sited to avoid any loss of residential amenity.
 - Some on street parking will be provided in Home Zones. Where on-street parking spaces are provided they will be clearly marked and arranged in such a way as to not inconvenience pedestrians and/or cyclists.
 - On street parking shall be limited to a level where parked cars will not dominate the appearance of the Home Zone in question. And those on street parking spaces that are provided will be carefully integrated between planting to minimise the visual impact of parked cars.
 - Opportunities for indiscriminate on street parking shall be minimised through the careful arrangement of planting and other features within the space.
 - The design of the Home Zone streets will require vehicles to negotiate sharp horizontal deflections in their route, around features such as planting, communal seating areas, parked cars and play equipment. And the through route for vehicles should be as narrow as is practicable, with a minimum width of 3m (NB: Home Zones must be designed to cater for occasional use by large vehicles and to provide access for emergency vehicles).



Building should overlook the street



Home zones should provide opportunities for social interaction and play



Planting should be used to minimise the visual impact of parked cars

Adoption and maintenance

- 16.69 Developers at EGE will be required to submit large scale layout drawings with their reserved matters applications, clearly indicating those areas that are to be adopted by SGC. Developers should consult the Council's planners and transportation engineers at an early stage in the design process to agree groundscaping materials and other specifications. See part 18 of this brief for further information.

Footways and cycle tracks

- 16.70 Throughout EGE the street network will be designed to provide an attractive environment for pedestrians and cyclists. The measures aimed at encouraging walking and cycling are set out in the transport concept. They include the provision of a finely branched network of footways and cycle tracks to complement the main street network and provide safe routes to schools, employment areas and bus stops.
- 16.71 Reserved matters applications will include large scale site layout drawings to illustrate, amongst other things, how the overall network of footways and cycle tracks will be continued through that part of the development.
- 16.72 Footways and cycle tracks will be positive, direct and barrier free. Dropped kerbs or raised crossings will be deployed where footways and cycle tracks intersect roads. The minimum widths of footways and cycle tracks at EGE will reflect best practice as set out in 'Places, Streets and Movement'.

Utilities in the street

- 16.73 At EGE developers will be required to play a co-ordinating role in planning the provision of services across their schemes to ensure that:

- **services laid underneath the street (or footways) do not damage the root systems of existing trees, or prevent the planting of new trees;**
- **where the scheme layout necessitates narrowing service corridors, the various services are bunched accordingly;**
- **essential equipment boxes such as telephone company and traffic signal control boxes are sited as unobtrusively as practicable; and**
- **that manhole and telecommunications covers in the street are carefully phased and located so as not to detract from the appearance of the groundscaping.**

- 16.74 The large scale layout drawings submitted by developers in support of their reserved matters applications shall include details of all service corridors. These drawings will be expected to demonstrate how the developers have co-ordinated the provision of services in accordance with the requirements set out above.

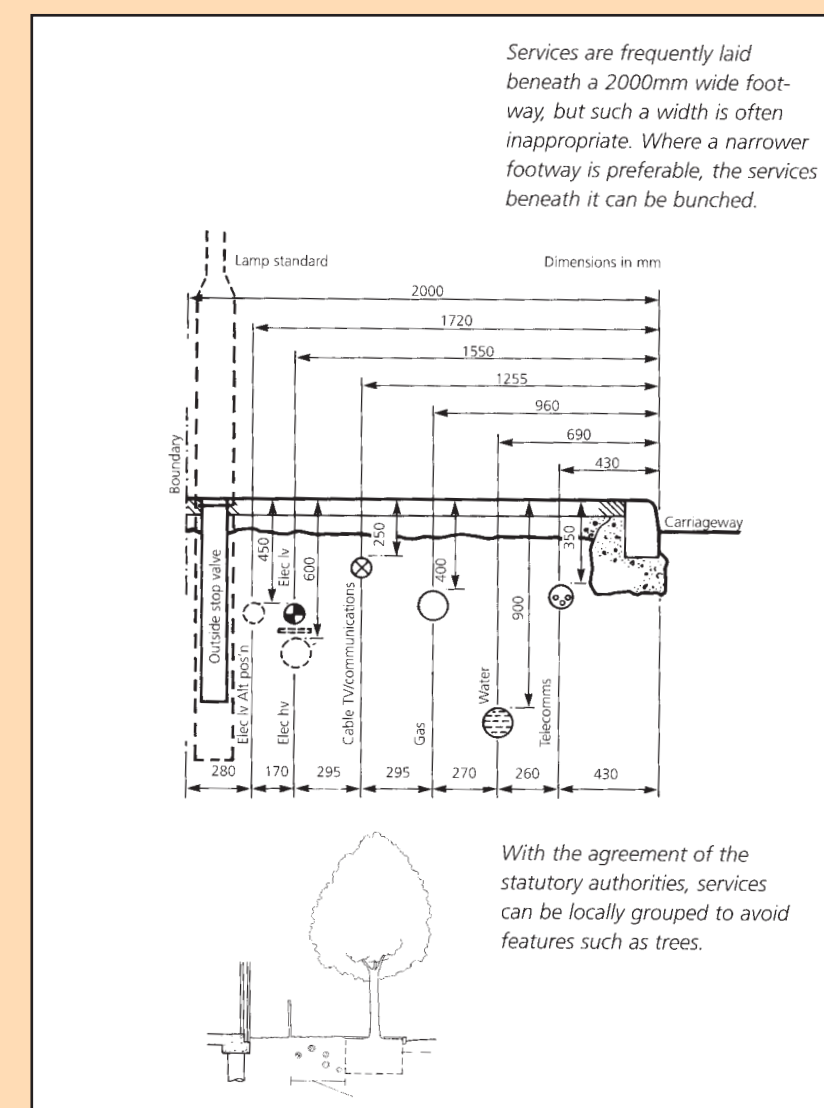
- 16.75 It should be noted that problems may arise with respect to the location of services in relation to nearby tree planting and building frontages. Such potential problems should be resolved at the Detail Master Plan stage.

Meter Cupboards

- 16.76 Meter cupboards will not be permitted to deface the front elevation of any building. Where meter cupboards are required they shall be located within porches, or at discreet locations in-ground. Remote reading will, however, be encouraged as the preferred option.



A finely branched network of footways and cycle tracks will provide a high level of permeability



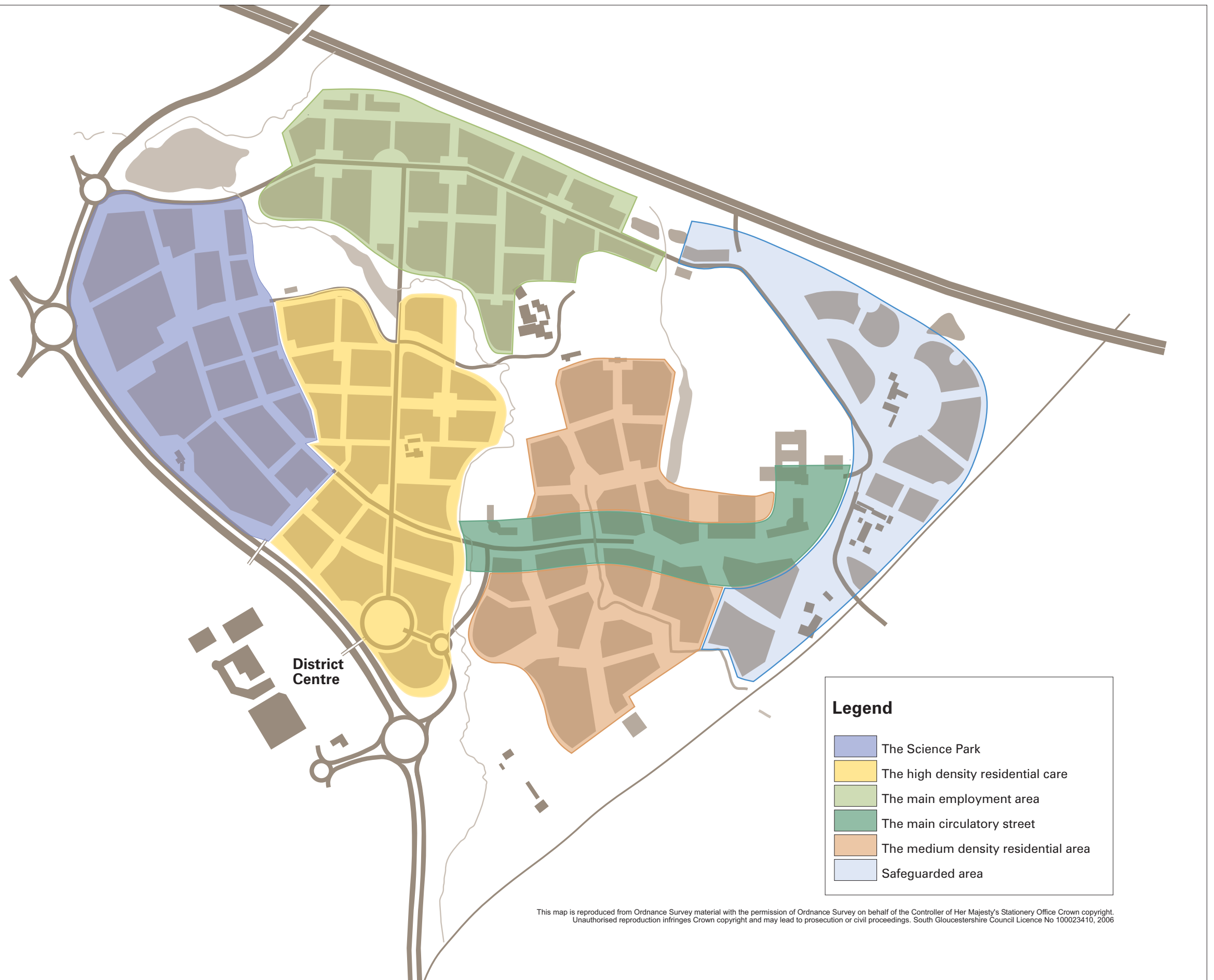


Figure 17 - Character Areas

- 17.1 The concept statement and the framework plan have generated a number of distinct character areas within EGE. After allowing for the safeguarded area these include:
- **The Science Park (which is covered by an extant outline planning permission).**
 - **The high density residential core.**
 - **The main employment area.**
 - **The main circulatory street.**
 - **The medium density residential area.**
- 17.2 These are not rigid neighbourhoods, but areas and streets that will have distinctive characters deriving from variations in urban form across EGE. These variations will help to make EGE a legible place.
- 17.3 It must be emphasized, however, that the intention is not to create areas with contrived or superficial characters that derive primarily from the external appearance of the built form. Rather the intention is to create a development where distinctive character areas emerge as a result of intrinsic variations in form: i.e. variations in layout, density, scale, landscaping and the appearance of buildings.
- 17.4 The character areas provide opportunities for detailed designs to:
- **explore a range of urban forms responsive to the location and character of the setting;**
 - **establish localized focal points to create areas of interest; and**
 - **promote legibility by creating a recognizable hierarchy of streets.**
- 17.5 The intention is to achieve an appropriate balance between variety in urban form and harmony in the appearance of the built form, particularly in terms of materials. This brief seeks to encourage creative designers to produce fresh, contemporary architecture for all of the building types that will be deployed across EGE.
- 17.6 This section of the brief provides an indication of how the character areas are likely to evolve during the master planning process.
- 17.7 It is anticipated that the form and extent of the different character areas will evolve during the preparation of the detailed illustrative master plan. The design code for EGE, which will be informed by the illustrative master plan, will set out in detail the mandatory requirements and development opportunities for each character area.

The Science Park



The Science Park

17.8 There is an extant outline planning permission for the development of a Science Park within EGE. This permission was granted in December 1999 and is subject to an associated section 106 agreement. The permission is also subject to an approved master plan, which was prepared by Hamilton Associates on behalf of the landowners in 1995. That master plan is currently under review.

17.9 SGC considers that the current review of the master plan presents an opportunity to:

1. **ensure that the Science Park is effectively integrated, in terms of linkages and design of the built form, with the rest of EGE. And with the high density residential core and main employment areas in particular.**
2. **ensure that the proposed layout of the Science Park is responsive to current best practice in terms of urban design.**

17.10 An updated master plan for the Science Park could be substituted for the approved master plan, by means of a variation to the extant outline planning permission. The associated section 106 agreement already makes provision for variation of the previously approved master plan. An updated master plan for the Science Park could also be incorporated within the detailed master plan document for EGE, which is required by this brief.

17.11 The following guidance set out reflects the content of the approved master plan for the Science Park.

General

17.12 The design and quality of the hard and soft landscaping, street furniture, signage, external finishes, materials and the appearance of the buildings will give the Science Park an easily recognisable identity. The high standard of design will set a benchmark for further employment development at EGE.

Built form

17.13 The approved master plan makes it clear that the quality of building design within the Science Park shall be of the highest international standard. Buildings should reflect the high technology character of the Science Park, with a preference for clean, sharp, modern lines, well-proportioned and articulate elevations. And an avoidance of pastiche.

Car parking

17.14 Car parking areas shall be designed and landscaped in such a way as to avoid the 'sea of cars' appearance. Decked car parking will be considered appropriate where it is properly integrated within the built form.

Boundary treatment

17.15 Buildings shall generally be set back from the back edge of the footway, creating nominal defensible space. The extent of the set back will depend on the height of the building in question and its relationship with the street.

The high density residential core

General

- 17.16 This area is planned on formal lines around public and semi-private squares and gardens. It will be a contemporary interpretation of the planned Georgian areas of the West of England. The geometry and layout is derived from classical town planning principles, whilst the built form should be realised in fresh, contemporary architecture. Storey heights of 4-5 storeys are proposed along the high street, between the circus and the employment area square. A level eaves line on opposite sides of the key public spaces will be rigorously enforced to ensure balance and symmetry. At key corners special articulation of the architectural form is required. Flexibility of design will encourage compatible non-residential uses, particularly on the ground floor. It is essential that the circus and squares along the high street, including their associated gardens, be conceived and designed in detail as integrated compositions.

Streets and spaces

- 17.17 This area will be a high density and compact neighbourhood, closely associated with the District Centre (via the new bridge link) and the Science Park. The formal grid of streets will be totally interconnected and permeable for pedestrians and cyclists. Conversely certain streets will be discontinuous for motor vehicles.
- 17.18 Small formal courts and mews will be deployed in this area to complement the grid of streets.

Building layout geometry

- 17.19 Detailed design should ensure that all streets have active frontages, enlivened by fenestration and front doors at regular intervals. Blank facades and integral garages should be avoided on all main street elevations.
- 17.20 In all cases building frontages will address the street in the time-honoured manner. Buildings in this area will either be positioned at the back edge of the footway, or be separated by a nominal area of defensible space of not more than 3-4 metres.
- 17.21 Special building forms will be deployed to turn corners. The detailed design of these corner-turning buildings will reflect the significance of the intersection in question within the street hierarchy.

Car parking

- 17.22 Six parking solutions are proposed for the high density core, to ensure that this area develops as a compact, 'walkable' neighbourhood. And one that is not visually dominated by parked cars.

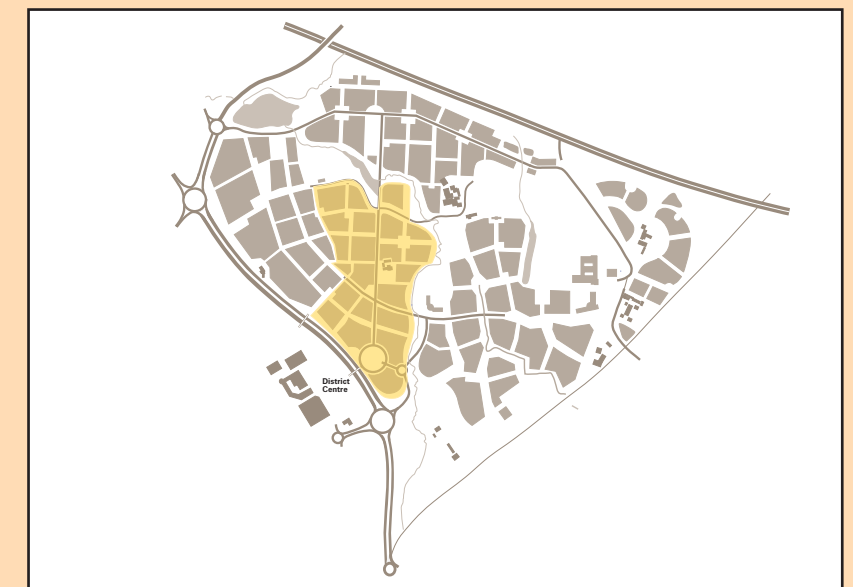
1. Underground and undercroft parking.
2. Small parking courtyards for 6-8 dwellings.
3. Larger garden courts.
4. Formal squares set to one side of the street incorporating a cluster of parking spaces under the canopies of trees.
5. Formal mews courts.
6. On-street parking in certain side streets.

Visitor parking should always be provided with the street scene, usually in parallel bays or simply on-street.

Boundary treatment

- 17.23 Two basic conditions are envisaged in the high density residential core:
- buildings situated on the back edge of footways in traditional style; and
 - a nominal area of defensible space (with either hard or soft landscaping) defined by metal railings.
- 17.24 These defined front areas will range from 3-5 metres in depth, depending on street typology. In order to create harmonious street scenes a well-mannered approach will be adopted to boundary treatment. Where metal railings are deployed, for example, the same product shall be used consistently on both sides of the street in question.

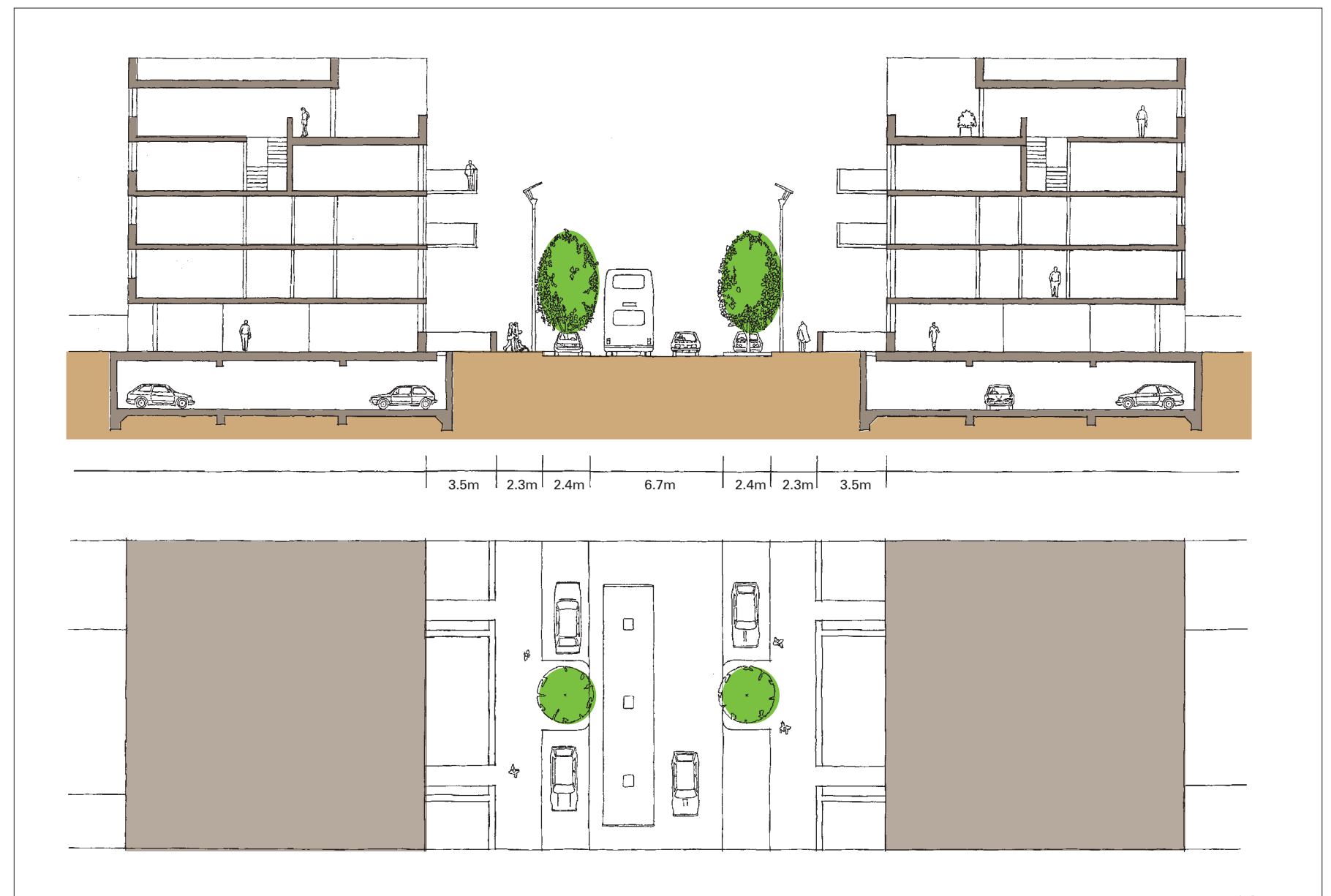
The high density residential core



The high density residential core



The design code for EGE will include detailed information on the design and layout of streets in each of the character areas. That information will include section and plan drawings for all street types.



Typical section through the High Street, in the high density residential core



The main employment area

General

- 17.25 The area will provide for a range of B1 (business), B2 (general industry) and small scale B8 (distribution) uses to meet employment needs. The fabric should be designed to provide for flexible use over its life cycle.
- 17.26 Like the high density residential core this area is planned on formal lines. The main focal point is a public square at the northern end of the high street. The other principal feature of the main employment area is the east-west public transport corridor, which forms part of the main circulatory street serving the entire development.

Streets and spaces

- 17.27 This area will be a high density and compact employment quarter. Again the formal grid of streets will be interconnected to create a highly permeable environment for pedestrians and cyclists. Some streets will be discontinuous for private cars.
- 17.28 The square and the associated garden at the intersection of the high street and the main circulatory route is the central public space within this area. Three smaller squares provide focal points along the east-west public transport corridor.

Building layout geometry

- 17.29 Detailed design should ensure that all streets have active frontages enlivened by fenestration. In all cases building frontages will directly address the street. Buildings will either be positioned at the back edge of a generously dimensioned footway, or be separated from the footway by a nominal area of defensible space. Again special building forms shall be developed to respond to corners and intersections. The main entrances to buildings should be planned at the street intersection position.

Car parking

- 17.30 The following parking solutions are proposed for the main employment area.
1. Underground parking.
 2. Decker parking (the exterior of the building shall be designed so as to conceal the parked cars within).
 3. Internalised courtyards.
 4. On-street visitor parking.

The main employment area





Section through the main circulatory Street

The main circulatory street

General

- 17.31 The main circulatory street serves the entire development and passes through all of the other character areas. And as a result the character of this street will vary along its length.

The circulatory street will be a relatively busy thoroughfare incorporating a 6.75 metre carriageway. It will serve as the main public transport loop, as well as providing a route for general traffic.

Built form

- 17.32 All buildings situated along this route will front onto the street. Building heights along the route will vary, from the high density to the medium density parts of the development, but in all cases they should be sufficient to achieve an appropriate street width to building height ratio. This is likely to entail residential buildings of at least 4 storeys and commercial buildings of at least 3 storeys in height.

The main circulatory street





The medium density residential area

General

17.33 This area will be developed along more relaxed informal lines than the central core. The principal hedgerows in this part of the site will be preserved as structuring features, which determine the shape of blocks and the alignment of the major streets. This strategy has a threefold impact:

- Principal hedgerows are retained as part of an interconnected network. Where possible hedgerows will be retained within the public domain. In all cases they will be retained in a manner that protects their ecological value as wildlife corridors.
- Retained hedgerows and hedgerow trees will provide a pleasant, softening effect in selected street scenes.
- The historic pattern of hedgerows becomes the prime determinant of the street pattern, providing a 'memory' of the rural history of the site.

17.34 In a number of locations existing and new ponds (SUDS) will be allied to the hedgerow and ditch network, providing attractive focal points in the public realm and havens for wildlife.

Streets and spaces

17.35 Streets will form part of a continuous interconnected network. There will be no culs-de-sac per se, although there will be occasional garden courts and/or rural mews.

17.36 Throughout this area Home Zone principles will be almost universally applied (see Home Zones in the Design Principles section). Streets will be designed, in the first instance, for cyclists and pedestrians. And the interconnected network of streets will provide a completely permeable route structure for local trips to facilities, schools and workplaces.

Building layout geometry

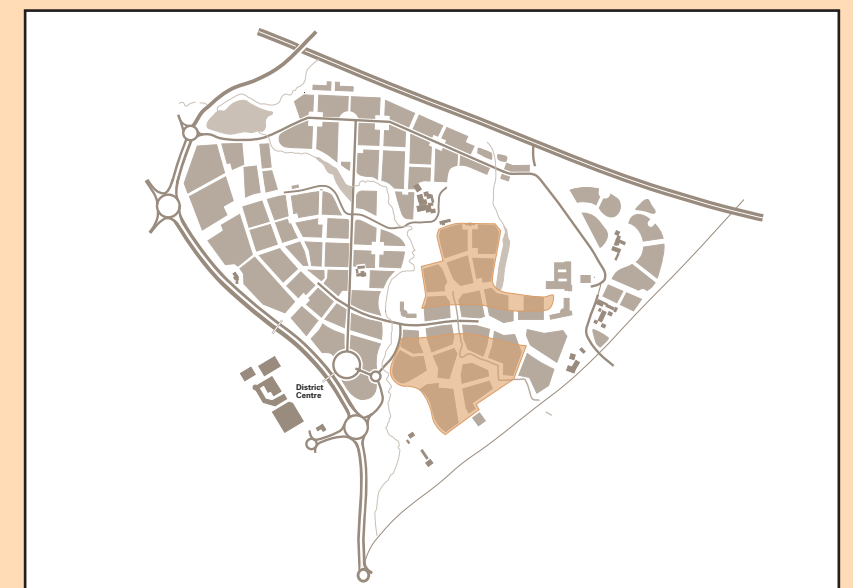
- 17.37 Detailed design should ensure that all streets have active frontages, enlivened by fenestration and front doors at regular intervals. The route structure and pattern of the Home Zone will be continuous and organic. It is important that building frontages complement and emphasise this pattern in a relaxed and informal way.

Car parking

- 17.38 Six parking solutions are proposed for the medium density residential area, to ensure that the majority of cars are stored away from the main street scene.
1. Garden courts.
 2. Small parking courtyards serving 5-6 dwellings and contained within a residential block.
 3. On-street parking within carefully landscaped Home Zones.
 4. Rural mews, developed at right angles to the main street/Home Zone.
 5. Informal parking set to one side of the street, incorporating a cluster of spaces under the canopies of trees.
 6. Hardstandings/garages set behind the building line. In the vast majority of cases on-plot parking will be situated at the rear of the plot and concealed behind solid timber gates.
- 17.39 Visitor parking will be provided in the street as illustrated.

Boundary treatment

- 17.40 Three general types of plot frontages are proposed for this area.
- Dwellings situated immediately adjacent to the edges of Home Zone spaces.
 - Small enclosed front gardens.
 - Front gardens with no significant boundary definition. These may be landscaped with a hard or soft treatment.
- 17.41 Streets in this area may employ one of these solutions, where homogeneity is sought, or a mix of solutions, where a more organic appearance is appropriate. In any street only one style of fencing should be used.
- 17.42 As the Home Zone concept is to be almost universally applied throughout the medium density residential area, the most common forms of plot frontage will be the first two described above.



Master Planning Process for Emersons Green East

Development brief adopted as an SPD. The brief provides guidance on how the site should be developed in line with the relevant SGLP policies. It sets out: the overall development objectives; requirements for supporting strategies; and design principles.

The illustrative master plan document will enable SGC to consider issues relating to design quality prior to granting outline planning permission, rather than leaving the principles of design (as well as the details) to subsequent reserved matters applications. It will also provide a template for the detail phasing plan. The illustrative master plan document will provide the context for assessing the detailed design code; and the detailed master plans for each geographical phase of the development.

EGE adopted concept statement and development brief.



Outline Planning Applications. Submitted



Illustrative master plan document Submitted
Includes: spatial illustrative master plan;
supporting strategies for resource Minimisation;
architectural concept (the basis for design code);
and detailed phasing plan

Section 106 agreement. Submitted
Inter-linked with detailed phasing plan to ensure that supporting infrastructure and facilities are delivered in phase with the development



Outline planning permission granted *

Outline planning permission granted subject to a timing condition, preventing the submission of any reserved matters applications until a detailed design code for the development and a detailed master plan for the first geographical phase have been approved by SGC.

The detailed master plan for the first phase will be subjected to a safety audit prior to approval by SGC.



Detailed design code for EGE. Submitted
Including sustainable construction



Detailed master plan for geographical phase 1. Submitted

Approval of detailed design code for EGE and detailed master plan for phase 1

This discharges the timing condition for phase 1, enabling the submission of a reserved matters applications for that phase.



Reserved matters applications for geographical phase 1. Submitted

Reserved matters applications for phase 1 approved

As phase 1 nears completion SGC will undertake a design audit to access whether the design code is proving effective. The design audit will inform a review of the approved design code. Any revisions that prove necessary will be introduced before the detailed master plan for phase 2 is approved by SGC.



Design audit of phase 1 informs a review of the design code.



Detailed master plan for geographical phase 2. Submitted



Approval of detailed master plans for each of the subsequent phases

This discharges the timing condition for each of these, again enabling the submission of reserved matters applications.



Reserved matters applications for geographical phase 2. Submitted

*NB. The outline planning permission and section 106 agreement will be drafted in such a way as to allow the illustrative masterplan to be amended/replaced by mutual agreement without the need for a new planning permission

Figure 17 - Master planning process for EGE

18.1 SGC is committed to working in close consultation with the landowners at EGE to deliver a high quality contemporary development that is worthy of this prominent site. Moreover SGC will seek to ensure that the planning and design of EGE is shaped by the consistent application of the principles of sustainable development. Policy M2 of the SGLP states that “Development will be planned on a comprehensive basis, designed and phased to ensure maximum practical integration between the different uses and provision of ancillary facilities and supporting infrastructure”. The approved concept statement and this brief further amplify SGC’s aspirations for the EGE development.

18.2 This part of the brief sets out how SGC proposes to ensure that the development is planned on a comprehensive basis. It also sets out how SGC proposes to promote and protect design quality at every stage in the development process, from the granting of outline planning permission through to the implementation of reserved matters approvals. SGC’s master planning requirements are illustrated in Figure 17.

Outline planning permission

18.3 SGC originally anticipated that the main landowners would submit one application for outline planning permission to develop those parts of EGE that are not already covered by the extant Science Park consents, or reserved for development beyond the Local Plan period (i.e. 2011). Instead three applications for outline planning permission, for different parts of the site, have been submitted and are currently under consideration. SGC’s preferred approach is to replace the three current applications with one, comprehensive application for outline planning permission.

18.4 In the event that the various applicants are not prepared to co-operate in submitting a single outline application, and in the event of SGC accepting this, the various applicants will need to have agreed with SGC a single illustrative master plan document, covering the site in its entirety.

The illustrative master plan document

18.5 This brief includes a diagrammatic framework plan, which builds upon the approved EGE concept statement. In order to be effective in shaping subsequent reserved matters applications, however, that framework plan and the other provisions of the brief must be translated into a much more detailed illustrative master plan document for the site as a whole. The developers will prepare the illustrative master plan document and it will form an integral part of the application(s) for outline planning permission.

18.6 The master plan document should describe and illustrate how the development objectives and design principles set out in this brief and in the approved concept statement will be implemented across the site. Specifically it should illustrate the proposed layout and massing of built form.

18.7 The purpose of the illustrative master plan document is not, however, to prescribe a final design or to pre-determine reserved matters such as siting. Rather it is required to provide a comprehensive framework against which subsequent detailed master plans (for particular phases of the scheme) and applications for reserved matters approval will be tested. The illustrative master plan document will also form the basis for design coding. Requiring the preparation of an illustrative master plan document, prior to the determination of the outline application(s), will enable SGC to address issues of design quality from the outset of the decision-making process, rather than leaving the principles of design (as well as the details) to subsequent reserved matters applications.

18.8 The illustrative master plan document will also provide a spatial template on which to show the various phases of the development. Moreover it will provide the opportunity to illustrate where and when key elements of supporting infrastructure will be provided. This phasing information will be inter-linked with the section 106 agreement(s) to ensure that supporting infrastructure is delivered in phase with the development. These matters go to the principle of development and shall be resolved at the outline application(s) stage.

18.9 The illustrative master plan will be a multi colour document. It will include the following elements.

- **A detailed two-dimensional spatial master plan showing the structure and grain of the layout and establishing locations (albeit subject to refinement at the reserved matters stage) for infrastructure and facilities required by the development brief.**
- **A three-dimensional vision showing the massing of the development.**
- **An architectural concept to accompany the three-dimensional vision, which will subsequently provide the basis for design coding.**
- **Supporting strategies to ensure the prudent use of resources and the establishment of a sustainable new community.**
- **Illustrative details of how existing site assets, such as significant vegetation and listed buildings are to be protected and sensitively integrated into the proposed development.**
- **Illustrative details of new structural planting showing how this will relate to the proposed network of streets, squares and open spaces.**
- **Implementation information illustrating, for example, how utilities will be accommodated without undermining the proposals for new structural planting.**
- **A detailed phasing plan, showing the various phases of the development and how each of these will be implemented, which will be inter-linked with the section 106 agreement(s), to ensure that the required infrastructure and supporting facilities are delivered in phase with the development.**

18.10 While the illustrative master plan document will cover the whole 77 hectare site, it is anticipated that, within respect to the (post 2011) safeguarded area, there will, at the appropriate time, be submitted a revised ‘illustrative master plan’ for that area only, to take account of likely changes and conditions then applicable. This latter document will then form part of a revised outline planning application for that area.



Examples of two-dimensional illustrative master plans



The two-dimensional spatial master plan

18.11 As indicated overpage the illustrative master plan document will include a detailed two-dimensional spatial master plan. This two dimensional master plan will be produced at a scale of 1:2500, and will show, as a minimum, the following:

- The immediate site context, including the District centre, Area A and the motorway corridor.
- All trees and hedgerows proposed for retention, together with associated soft areas.
- New structural planting (highlighted in a different shade of green).
- All buildings proposed on site, shown with indicative footprints (although not roof forms). These will include all housing (indicating detached, semi-detached or terraced forms). The plan will also show the orientation of frontages. And an impression of building height will be given by the application of shading to buildings.
- Listed buildings will be highlighted.
- The format of the public realm, distinguishing between hard and soft areas and showing major footways/cycleways (e.g. along the main street); also the location and form of public squares.
- The general format of front and rear gardens (where these are proposed).
- The general disposition of car parking provision (e.g. indicative parking courts or on-plot parking).
- School set-down area (within the curtilage).
- Watercourses (retained and new) and sustainable drainage provision.
- Segregated footpaths/cycleways (e.g. along the linear wildlife corridors).
- The location and laying out of all Category 1 public open space (youth and adult sports pitches).
- The location and general format of all Category 2 public open space (equipped play area).
- Locations for unequipped play area.
- Indicative areas within the school sites for all-weather sports provision.
- The position of pavilion(s) and car parking to serve the Category 1 areas.

The architectural concept

18.12 PPS1 makes it clear that *“In planning for the achievement of high quality and inclusive design, planning authorities should have regard to good practice set out in **By Design - Urban design in the planning system: towards better practice...**” and to “... **By Design - better places to live...**”* The latter describes how PPG3 lays down a clear challenge both to house builders and to local authorities to take design seriously. *“Good design is not an extra that can be ignored, it is central to creating more attractive living environments and central to delivering sustainable developments...”* Moreover the companion guide also makes it clear that *“Many new housing developments fall short of what can be expected from the new approach set out in PPG3. There has been a growing gap between the exemplars of best practice and the standards achieved in the majority of cases.”* This point is evidenced by CABE Housing Audits. Policy D1 of the SGLP is aimed at achieving good design in new developments. It states that development will only be permitted where good standards of site planning and design are achieved.

18.13 SGC takes the view that standard building types, which are used throughout the Country and have no particular affinity to South Gloucestershire, do not meet the requirements of Policy D1 of the SGLP. This view has been endorsed by the First Secretary of State in a recent appeal decision in respect of proposed residential development at Siston Hill, Kingswood, South Gloucestershire (Appeal references: APP/P0119/A/04/1164604 and APP/P0119/A/04/1164605).

18.14 SGC anticipates that external appearance and design will be reserved matters. Nonetheless SGC considers that it is necessary for the illustrative master plan document to include an architectural concept. The approved concept statement requires that buildings at EGE be designed to promote local distinctiveness and character. The concept statement and the framework plan have identified a number of distinct character areas within EGE. As indicated earlier in the brief these are not rigid neighbourhoods, but areas and streets that will have distinctive characters deriving from variations in urban form across EGE. These variations will help to make EGE a legible place. While different parts of the site will have their own sense of place, they should be linked together by common themes in terms of design. The architectural concept is required to establish and illustrate a unifying design philosophy for the site as a whole. That philosophy will be articulated in more detail in a design code, which the developers will prepare post the granting of outline planning permission(s).

18.15 The architectural concept will address the following objectives.

- **To develop an overarching and locally distinctive architectural concept for EGE , which responds positively to the principles of sustainable construction;**
- **To develop a broad elevational hierarchy that responds to the emerging spatial master plan and complements the hierarchy of spaces established by the same;**
- **To develop in broad terms a common elevational language and to highlight potential areas of focus within the elevational compositions, with a view to linking the various character areas visually;**
- **To develop a simple palette of materials, which would support the overall concept of a locally distinctive and sustainable architectural approach; and**
- **To examine how the subtle use of different materials and colours could create a clear sense of place for individual areas within the overall scheme.**



Perspective views of proposed new housing at Newhall Farm, Harlow, Proctor Matthews Architects

Who will prepare the illustrative master plan document?

- 18.16 The illustrative master plan document will be prepared, on behalf of the developers, by a professional practice (or practices) with appropriate expertise in urban design, architecture and landscape architecture. And with a proven track record of preparing master plans for mixed-use sites of this size and complexity.

Who will review the illustrative master plan document before it is approved by SGC?

- 18.17 A team of officers, led by SGC's project manager, and including town planners; urban designers; landscape architects; ecologists; engineers and representatives from the relevant service departments; will review the first draft(s) of the proposed master plan document. Once SGC officers and the developers have reached agreement on a consultation draft of the master plan document, SGC will subject the same to public consultation as an integral part of the outline planning application(s).
- 18.18 The consultation draft master plan document will also be reviewed by:
- SGC's Conservation Area and Design Advisory Panel; and
 - CABE's design review committee; or
 - The South West Design Review Panel.
- 18.19 The draft master plan, together with consultation responses and the findings of the reviews described above, will be presented to SGC's Development Control East Committee. And the Development Control East Committee will determine whether the draft master plan should be approved by SGC.

What status will the approved illustrative master plan document have?

- 18.20 Assuming SGC's Development Control Committee eventually considers the proposed illustrative master plan document acceptable, it will be approved as an integral part of the outline planning permission(s). Appropriate planning conditions will be attached to the outline planning permission(s) to ensure that subsequent reserved matters submissions adhere to the approved illustrative master plan document.

Independent Development Appraisal

- 18.21 Circular 05/2005 states (at paragraph B10) that "In some instances, perhaps arising from different regional or site-specific circumstances, it may not be feasible for the proposed development to meet all the requirements set out in local, regional and national planning policies and still be economically viable. In such cases, and where the development is needed to meet the aims of the development plan, it is for the local authority and other public sector agencies to decide what is to be the balance of contributions made by the developers and by the public sector infrastructure providers in its area supported, for example, by local or central taxation."
- 18.22 Bearing this guidance in mind SGC proposes to commission an Independent Development Appraisal of EGE as part of the process of negotiating planning obligations with the developers. The Development Appraisal would have the following objectives:
1. to ensure that the contributions package, that would be made available to SGC under the terms of the section 106 agreement(s), would be sufficient to cover the costs of providing such infrastructure and facilities as are necessary to make the development as a whole acceptable in land use terms;
 2. to provide SGC with an informed negotiating position, and with a model which would permit the input of varied assumptions, to facilitate a robust negotiating process;
 3. to ensure that the contributions package would cover only those elements, which could not be funded from other sources; and
 4. to facilitate positive engagement between SGC and the developers to ensure, for example, that the sequence of contributions can be planned in a way that allows the delivery of high quality facilities in phase with the development.

Planning obligations

- 18.23 In accordance with the provisions of Circular No.05 /2005: Planning Obligations, SGC will require the developers and other relevant parties to enter into a section 106 agreement (or agreements) to ensure the provision of such infrastructure and facilities as are necessary to make the development acceptable in land use planning terms. Outline planning permission(s) will only be granted subject to the terms of such an agreement (or agreements).

Public obligations for the site (section 106 agreements)

- 18.24 As already indicated SGC's preferred approach is to replace the three current applications with one, comprehensive application for outline planning permission. This would enable SGC, the developers and other relevant parties to conclude a comprehensive section 106 agreement covering the site in its entirety.
- 18.25 In the event that the various applicants are not prepared to co-operate in submitting a single outline application, SGC will require a mechanism to achieve comprehensive development for the entire site. It will be necessary for earlier developments to forward fund, through a planning obligation, the contribution, and/or where necessary, provision of all of the required strategic infrastructure and supporting facilities for the whole site as set out in the Development Brief. Such forward funding and/or provision would be reimbursed, on a pro-rotas basis by later developers. The Council's role as banker in such reimbursements would be limited to agreeing to use "all reasonable endeavours" to obtain retrospective payments from later developers. The planning obligations would ensure that the various elements of infrastructure and supporting facilities are delivered in phase with the development, as required by Policy M2 of the SGLP.

Details of the section 106 agreement(s)

- 18.26 The Council in formulating its Section 106 requirements, will have considered the whole of the allocated 177 hectare site, including the safeguarded development area
- 18.27 The precise details of the framework and of the associated section 106 agreement(s) will be a matter for negotiation between SGC, the developers and other relevant parties. It is, however, anticipated that the following elements will need to be incorporated in the framework and delivered through the associated section 106 agreement(s).
- Provision of new and improved highway infrastructure.
 - Provision and maintenance of an MMI within EGE.
 - Provision and maintenance of new footbridge over the Avon Ring Road.
 - Provision of traffic management initiatives.
 - Provision of new and improved public transport infrastructure.
 - Provision of revenue support for new public transport services.
 - Provision of initiatives to minimise private car use (e.g. appointment of a transport co-ordinator, establishment of an EGE travel plan group, and measures to encourage car sharing).
 - Provision of required education facilities.
 - Provision of health care facilities.
 - Provision of affordable housing.
 - Provision and maintenance of formal and informal Public Open Space.
 - Provision of multi use community complex of at least 1450sq.m, including sports hall, pavilion and community meeting space, together with parking.

- Provision of a financial contribution towards existing library services.
- Provision of a financial contribution for Public Art.
- Provision of allotment area and ancillary services.
- Contribution towards Garden of Remembrance. (Cemetery)
- Enhanced standards of environmental performance for new buildings (i.e. meeting specified EcoHomes and BREEAM assessment standards).
- Establishment of an EGE design review panel.
- Provision of a financial contribution towards off-site Community Forest initiatives.
- Provision of a financial contribution towards the costs of providing additional adult social services.
- Provision of a financial contribution towards the costs of providing additional youth services.
- Provision of a financial contribution towards the costs of providing additional children's social services.
- Provision of extra-care housing.
- Provision of nursery facilities.
- Provision of a financial contribution towards the costs of appointing a community development officer for EGE.
- Provision of a financial contribution towards the maintenance of water attenuation bodies and structures.
- Provision for conserving and enhancing sites of Nature Conservation Interest within the EGE development area.

Phasing

Phasing plan

- 18.28 The illustrative master plan document will include a detailed phasing plan showing the various geographical phases of the development and how each of these will be implemented on a phase by phase basis.
- 18.29 In accordance with the provisions of Policy M2 of the SGLP, the full range of supporting infrastructure (including education, community and leisure facilities) will be provided in phase with the development. In order to secure this objective, the phasing plan will be inter-linked with the section 106 agreement(s) and with any over-arching framework agreement.
- 18.30 The provision of new bus services in particular will be carefully phased, to ensure that residents are offered travel choice at the earliest opportunity.
- 18.31 The phasing plan will identify a schedule of infrastructure and facilities, including all elements of common infrastructure, which are required in order to implement the master plan. It will also identify the stages within the development process at which these elements of infrastructure will be provided, as well as detailing how the costs of providing them will be met.
- 18.32 The schedule will also highlight a list of 'exempt infrastructure works'; i.e. works that are required in the very early stages in order to prepare the site for development. SGC will accept the submission of reserved matters applications for these 'exempt infrastructure works' in advance of approving the design code and the detailed master plan for the first phase of the development. The developers will therefore be required to demonstrate that:
- none of the 'exempt infrastructure works' would undermine the urban design objectives of this brief, or those of the illustrative master plan document; and
 - that the submission of reserved matters applications for these works, prior to the approval of a design code and a detailed master plan for the first phase, is necessary in order to avoid unacceptable delays in the development process.
- 18.33 The phasing plan will be devised to ensure the delivery of a holistic design solution based upon the completion of key 'places', and on the provision of viable development parcels.

Phasing and implementation planning conditions

- 18.34 The outline planning permission(s) will include a series of planning conditions dealing with the geographical phasing and implementation of the scheme. These conditions will require:
1. The scheme to be implemented on a phase by phase basis, in accordance with the detailed geographical phasing plan approved as part of the illustrative master plan document.
 2. The approval, by SGC, of a detailed design code for the site as a whole, prior to the submission of any reserved matters applications (with the exception of reserved matters applications for 'exempt infrastructure works').
 3. The approval, by SGC, of a detailed master plan for the first phase of the scheme, prior to the submission of any reserved matters applications for development within the phase one area (again with the exception of reserved matters applications for 'exempt infrastructure works').
 4. The approval, by SGC, of detailed master plans for each subsequent geographical phase of the scheme, prior to the submission of any reserved matters applications for development within the area of the phase in question (again with the exception of reserved matters applications for 'exempt infrastructure works').

Design code and detailed master plans

Design code document

- 18.35 No reserved matters applications, other than applications relating to 'exempt infrastructure works', shall be submitted until a detailed design code for the whole scheme has been submitted to and approved by SGC. The design code will be a document, which sets out rules for urban design and architecture at EGE. The design code is required to ensure that the aspirations for design quality, set out in this brief and in the approved illustrative master plan document, are realized in the final scheme. The design code will have formal status in the subsequent planning of EGE, as it will be prepared and approved pursuant to a planning condition attached to the outline planning permission(s). A review of the approved design code will be carried out, as the first phase of the development is nearing completion (see Part 19 of this brief).
- 18.36 Proposals for development within EGE will only be permitted if they meet the relevant requirements of the approved design code. Where alternative approaches are sought, the developers will be required to demonstrate to SGC, that such proposals would exceed the aspirations for design quality set out in this brief and in the approved illustrative master plan document. This qualification is intended to ensure that the approved design code does not preclude one-off exceptional design solutions, which will be considered on their individual merits.
- 18.37 The content of the design code must be informed by national best practice and take account of relevant CABE research and guidance. In particular the design code must:
- be well structured, coherent and succinct;
 - deal with urban design and architecture;
 - establish the rules and requirements for development and for the consideration of planning applications at EGE;
 - explain the relationship between the approved illustrative master plan document, including the architectural strategy contained therein, and the rules and requirements set out in the code; and
 - provide a set of definite rules and instructions, rather than general guidance or advice.

Detailed master plan for each geographical phase of the scheme

18.38 No reserved matters applications, other than applications relating to 'exempt infrastructure works', shall be submitted for development in the first geographical phase of the scheme until a detailed master plan for that phase has been submitted to and approved by SGC. And the same requirement will apply to all subsequent geographical phases.

18.39 Each of the detailed master plans will be a multi coloured drawing, produced at a scale of 1:500. They will be based on the same specification as the illustrative master plan, but provide a greater level of detail in terms of:

- the arrangement of street blocks, plots and their buildings;
- the arrangements for block interiors;
- density and mix;
- the format of the public realm, including all routes and spaces;
- massing;
- the context within which existing landscape features are to be retained;
- the context of proposed structural planting; and
- ground levels.

18.40 In particular the detailed master plans shall include sufficient detail to enable SGC to properly assess whether the proposed arrangements will meet all of the relevant statutory standards and SGLP requirements (e.g. parking standards).

Who will prepare the design code and the detailed master plans?

18.41 The design code will be prepared, on behalf of the developers, by a professional practice (or practices) with appropriate expertise in urban design, architecture and landscape architecture, and with a proven track record of preparing design codes for mixed-use sites of this size and complexity.

18.42 The detailed master plans will also be prepared, on behalf of the developers, by a professional practice (or practices) with appropriate expertise in urban design, architecture and landscape architecture.

Who will review the design code and the detailed master plans before they are approved by SGC?

18.43 A project team of SGC officers including town planners; urban designers; landscape architects; ecologists and engineers will review the first draft(s) of the proposed design code. The draft design code will also be reviewed by:

- **SGC's Conservation Area and Design Advisory Panel; and**
- **The South West Design Review Panel.**

18.44 Once the design code document is considered acceptable by the SGC project team, and has been endorsed by both the Conservation Area and Design Advisory Panel and The South West Design Review Panel, it will be approved by the Director of PT&SE.

18.45 The SGC project team will also review the detailed master plans submitted for each geographical phase of the development. These will also be reviewed by either:

- **SGC's Conservation Area and Design Advisory Panel; or**
- **An EGE Design Review Panel (see section 19 of this brief).**

18.46 Once a detailed master plan is considered acceptable by the SGC project team, and has been endorsed by either the Conservation Area and Design Advisory Panel or an EGE design review panel, it will be approved by the Director of PT&SE.



Sustainable construction

18.47 In order to ensure that buildings at EGE achieve enhanced standards of environmental performance, the following assessment schemes will be applied to the four building types listed. It must be emphasized that these are minimum standards. The Council will expect all developers to demonstrate how their scheme proposals respond to the requirement to achieve enhanced standards of environmental performance. 'Excellent' is the target standard for all building types at EGE.

Assessment schemes

	<i>Rating Scheme</i>	<i>Minimum standard for development at EGE</i>
Residential	EcoHomes	Very good
Offices	BREEAM for offices	Very good
Industrial	BREEAM 5/93	Very good
Retail	BREEAM Retail 2005	Very good

Reserved matters applications

18.48 Reserved matters applications for 'exempt infrastructure works' will have to include a supporting statement, which refers back to the phasing plan contained within the illustrative master plan document. The statement will be expected to set out how the proposals meet the stipulations set out earlier in this section of the brief (under 'Phasing plan').

18.49 All other reserved matters applications will have to include a design statement, indicating how the scheme proposals adhere to the requirements of this development brief; the approved illustrative master plan document; the design code and the detailed master plan for the geographical phase in question. The scope and extent of individual design statements will depend on the nature of the scheme proposals in question, but in every case the design statement shall confirm how the scheme proposals adhere to the approved design code.

Management and maintenance of public spaces

18.50 Arrangements for the management and maintenance of public spaces at EGE, including areas of formal and informal open space, will be confirmed in the section 106 agreement(s). Two possible solutions are set out below.

1. Public spaces will be completed by the developers and then offered for adoption by SGC. In this scenario SGC will require the developers to provide appropriate financial contributions to cover subsequent management and maintenance costs.
2. Public spaces will be completed by the developers and then transferred to an EGE Management Trust, which will implement an approved landscaping scheme and manage the spaces in perpetuity. In this scenario the developers will be required to meet the costs associated with establishing the Management Trust. The developers will also be required to demonstrate to SGC how future funding of the Trust will be secured, to ensure that it will have sufficient resources to manage and maintain all of the public spaces at EGE in perpetuity. Trustees will include a majority representation from the local community.

Management and maintenance of garden (parking) courts and streets designed in accordance with Home Zone principles

18.51 Arrangements for the future management and maintenance of courtyard parking areas and streets designed in accordance with Home Zone principles will also be confirmed in the section 106 agreement(s). Two possible solutions are set out below.

1. These places will be completed by the developers and then offered for adoption by SGC. In this scenario SGC will require the developers to provide appropriate financial contributions to cover subsequent management and maintenance costs.
2. These places will be completed by the developers to the same standards that would apply were they to be offered for adoption. Instead of being offered for adoption, however, they will be held, jointly, by the properties they serve. In this scenario the developers will be responsible for establishing a system of 'Commonhold' for these places. And they will meet all of the costs associated with establishing such a system. Moreover they will be required to demonstrate to SGC how Commonholds would be funded and managed, to ensure that the places in question are maintained properly in perpetuity.

Social development

- 18.52 SGC will require the provision of community meeting space (in line with the Social Concept set out in Section 14 of this Brief) at an early stage in the development. The early provision of community meeting space will facilitate the establishment of playgroups/residents groups etc.
- 18.53 EGE will be a wholly 'wired community' with an Intranet, based initially in one of the meeting spaces and thereafter in a High Street 'Intranet Café'. The integration of web cams, CCTV and the Intranet will enhance the prospects for social inclusion and personal security in EGE. The developers will be required to meet the costs of establishing the EGE Intranet and the Intranet Café.

Community consultation

- 18.54 The Kings Forest Area Forum offers a platform for consultation with the existing Emersons Green community, and the developers will be expected to work closely with SGC to keep the community informed about progress at EGE via the Area Forum. In the longer term the Area Forum will provide opportunities for any EGE Management Trust to liaise with SGC, local councils and existing Community Associations with an interest in Emersons Green.

Community development officer

- 18.55 SGC's experience from Bradley Stoke and Emersons Green Area A suggests that major developments generate a wide range of complications and issues, which can affect both new and existing residents and businesses in the vicinity of the site. This is particularly the case during the build-out period. Implementation of the proposed EGE development is likely to cause significant disruption in the wider area, particularly in the early years of the build-out period.
- 18.56 SGC will therefore require the developers to meet the costs associated with appointing a dedicated EGE Community Development Officer. This post is considered necessary to ensure the successful integration of the development within Emersons Green and to ensure the establishment of a sustainable community. The post holder will liaise with the Council, the developer(s) and the community (new and existing) to identify and help resolve problems as the development proceeds.
- 18.57 The need for a Community Development Officer arises as a direct result of the proposed development. SGC therefore considers that it is entirely reasonable for the development to bear the cost of appointing a Community Development Officer for a limited period (i.e. the anticipated build out period).

- 19.1 In preparing this development brief SGC has taken into account national and strategic planning policy and the outcomes of extensive consultation with the community. SGC's intention is now to proceed with implementation of the brief as adopted.
- 19.2 SGC is determined to promote and protect design quality at every stage in the development process. To this end the brief requires ongoing monitoring and review to ensure that the design aspirations for EGE, which are set out in the approved concept statement and in this brief, are realized. SGC will also monitor progress in terms of the delivery of key development objectives and their continued relevance in the context of any changes to the wider policy context.
- 19.3 If it appears that changes to the brief are required these will normally be identified through SGC's Annual Monitoring Report. Minor changes will be highlighted on SGC's Web site. Any substantial change in circumstances may require modification of the SPD in accordance with Part 5 of the Planning and Compulsory (Local Development) (England) Regulations 2004.

EGE Design Review Panel

- 19.4 SGC will seek to co-operate with the developers in establishing an EGE Design Review Panel. SGC will seek a financial contribution, from the development as a whole, to fund the Design Review Panel. In the event that the developers are not prepared to support this initiative SGC will establish an 'in-house' EGE Design Review Panel, comprised of the project team of officers and the Conservation and Design Advisory Panel.
- 19.5 Arrangements will be made for the Design Review Panel to convene on a regular basis to review reserved matters applications, before they are presented to SGC's Development Control West Committee. Reserved matters applications will be reviewed within the context of this brief; the approved illustrative master plan document; the approved design code; and the detailed master plan for the phase in question. Design comments issued by the Panel will be included and addressed within the Development Control case officer's report to Committee.

Design audit of the first phase of the development

- 19.6 SGC will undertake a design audit of the first phase of the development as it nears completion. The audit will be carried out by the project team of officers, in liaison with the EGE Design Review Panel and elected members. The audit will, in particular, consider whether the approved design code is proving effective in securing the required design quality at EGE. In terms of methodology it will be based on CABE's housing audits. The outcomes of this audit will be reported to SGC's Development Control West Committee.

Review of the approved design code

- 19.7 The section 106 agreement(s) will require a review of the approved design code to be undertaken by SGC's Development Control Committee before the second phase of the development commences. The section 106 agreement(s) will also require the outcomes of this review to be addressed by the developers, and any necessary revisions made to the design code, before any reserved matters applications are submitted for the second phase of the development. The outcomes from the design audit of the first phase of the development will inform the Development Control Committee's review of the approved design code.

Publications

20.1 The publications, which have influenced the development brief include:

- Barton, H. Davies, G. and Guise, R. (1995) *'Sustainable Settlement: A Guide for Planners, Designers and Developers'*. Luton, LGMB/UWE.
- Bentley, I. Alcock, A. Murrain, P. McGlynn S. and Smith, G. (1985) *'Responsive Environments: A Manual for Designers'*. Oxford, Architectural Press.
- DETR (1998) *'Places, Streets and Movement: A companion guide to Design Bulletin 32, Residential Roads and Footpaths'*. London, HMSO.
- DETR (1998) *'Planning for Sustainable Development: Towards Better Practice'*. London, HMSO.
- DETR (2000) Our Towns and Cities: *'The Future - Delivering an Urban Renaissance'*. London, HMSO.
- DETR & CABLE (2000) By Design: *'Urban Design in the Planning Process - Towards Better Practice'*. London, Thomas Telford Publishing.
- DTLR & CABLE (2001) By Design: *'Better places to live: A companion guide to PPG3'*. London, Thomas Telford Publishing.
- Edwards, B. and Turrent, D. (eds) (2000) *'Sustainable Housing: Principles and Practice'*. London, E&FN Spon.
- IHIE (2002) Home Zone: *'Design Guidelines'*. Essex, HQ Design & Print.
- ODPM (2003) *'Sustainable communities in the South West - Building for the future'*. London, ODPM.
- ODPM & DfT (2003) *'Better Streets, Better Places: Delivering Sustainable Residential Environments: PPG3 and Highway Adoption'*. London, HMSO.
- The Prince's Foundation (2000) *'Sustainable Urban Extensions: Planned through Design'*. London, The Prince's Foundation.
- ODPM/Home Office (2003) *'Safer Places -The Planning System and Crime Prevention'*

Context

- A.1 This appendix is supplementary, and forms part of Section 7, Site Assessment, in the main text.
- A.2 EGE is a complex site and development must both respect and interpret that complexity of physical form and history. The most significant factors that must be considered are analysed in this section of the brief.

Land Ownership

- A.3 The development brief for EGE has been prepared in close consultation with the main landowners comprising Gallagher Estates, Heron Land Developments, Quintain Estates & Development, Howsmoor and Keelbold, and Higgins and Hitchins Trust. Together these landowners control the majority of the site and can deliver the requirements of Policy M2 of the SGLP. The landowners have access to both the Westerleigh Road roundabout and the Rosary roundabout on the Ring Road. As a consequence, there are no land ownership issues which would prevent the implementation of the SGLP proposals for EGE.

Landscape Character

- A.4 In terms of wider landscape context EGE is located within Countryside Agency Character Area 118 - Bristol, Avon Valleys and Ridges. It lies within a basin occupying low-lying ground between the Pucklechurch and the Severn Ridges, which are identified as typical landscape features of this character area.
- A.5 EGE also lies within an area defined as 'The Cotswold Edge' in the Forest of Avon Plan, which was approved by the Government in 1995. A revised Forest of Avon Plan was published in 2002, and the Council has resolved to support the revised plan as a basis for the future implementation of the Forest of Avon landscape design strategy. Supplementary Guidance is being prepared to provide more detail on the implementation of this strategy.
- A.6 In the context of the South Gloucestershire Landscape Character Assessment EGE lies within Landscape Character Area 12 - Westerleigh Vale and Oldland Ridge. This character area extends from the A431 in the south, to the Bristol to London railway line in the north. The area is characterised by a gentle to rolling landscape, which in the area of EGE is contained to the east by Pucklechurch Ridge and to the west by the urban fringe. It also features a diverse vegetative structure of overgrown and clipped

hedgerows with variable tree cover that is often associated with older settlement and common land.

- A.7 The current land use within EGE is predominantly agricultural, with dispersed and small scale settlement. The higher land around Hallen Farm forms a local landmark which is of high landscape value within EGE. The higher land around Whitehouse Farm and Lyde Green Common also forms a significant local landmark. The Folly Brook tributary, with its riverside vegetation, forms a distinctive linear feature across the site and represents an area of high quality landscape. The existing overhead power lines detract considerably from the appearance of the site.

Significant Vegetation

- A.8 The site largely comprises rough pasture and grazed land with some arable fields bordered by hedgerows. Significant vegetation includes the groups of mature trees and scrub along the Folly Brook and its tributaries; a limited number of individual trees in some of the fields; a small wooded copse adjacent to the motorway; and vegetation cover associated with the Rosary and the cycle path on the dismantled railway. A number of trees are covered by Tree Preservation Orders.
- A.9 Significant vegetation on the site has been ranked into three categories of importance. These are:
1. key importance - where a tree, tree group or hedgerow forms a principal landscape feature, is visually prominent, and/or intrinsic to an area of ecological/landscape designation;
 2. considerable importance - where a tree, tree group or hedgerow significantly contributes to the ecology and character of the site, pattern of field vegetation, and/or screening of views; and
 3. some importance - comprising reasonable quality trees or hedgerows that form part of the general vegetation pattern.

Hedgerows

- A.10 There are a number of significant hedgerows on the site. Most occur in the northern part of the site or are located in the centre west and centre of the site. These hedgerows are mainly intact and species rich, typically including mature oak, crack willow and ash, in addition to hawthorn, blackthorn, elder, holly, willow species, field maple and dog-rose, suggesting that the hedgerows may be of a

considerable age. This is supported by old maps which show that certain hedgerows were established by the 18th century. The ground flora is comprised of typical hedgerow flora, including scrambling bramble, nettles, ivy, cock's-foot, Yorkshire fog, bush vetch, cleavers and bittersweet. A number of the hedgerows will meet the wildlife and/or historical importance criteria for hedgerows as set out in the Hedgerow Regulations 1997.

Visual Quality

- A.11 The site is visually enclosed between the foot of the Pucklechurch Ridge, the eastern urban fringe and the M4 motorway embankment. The Pucklechurch Ridge forms a dominant feature in the landscape, to the east of the site. The most significant views into the site are from the elevated section of the M4 motorway, and from Pucklechurch Ridge. There are more intermittent views from Westerleigh Road, A4174 Avon Ring Road and the dismantled railway cycle path. A combination of landform, vegetation cover and road structures limit other potential views, particularly into the western margin of the site.

Ecology

- A.12 The habitats present within the site reflect its primarily agricultural use, with large fields enclosed by hedgerows. Other habitats include a tributary of the Folly Brook, Lyde Green Common, a disused colliery spoil tip, areas of species rich grassland and small ponds. There are no nature reserves, Sites of Special Scientific Interest or other statutory nature conservation designations within the site area. No red data book species have been recorded from the site. There are four Sites of Nature Conservation Importance (SNCI) within the site as designated by Avon County Council:

Spoil Tip at Lyde Green Farm (Avon County Site No. 67/16);

Valewood Field (ACS No. 67/58);

Lyde Green Common (ACS No. 67/14);

The Rosary (ACS No.67/15).

- A.13 There are two adjacent SNCIs:

Disused railway - Shortwood Farm to Lyde Green Farm (ACS No. 67/43);

Folly Brook - downstream of Area C from the Folly pub to the M4 (ACS No. 67/57)

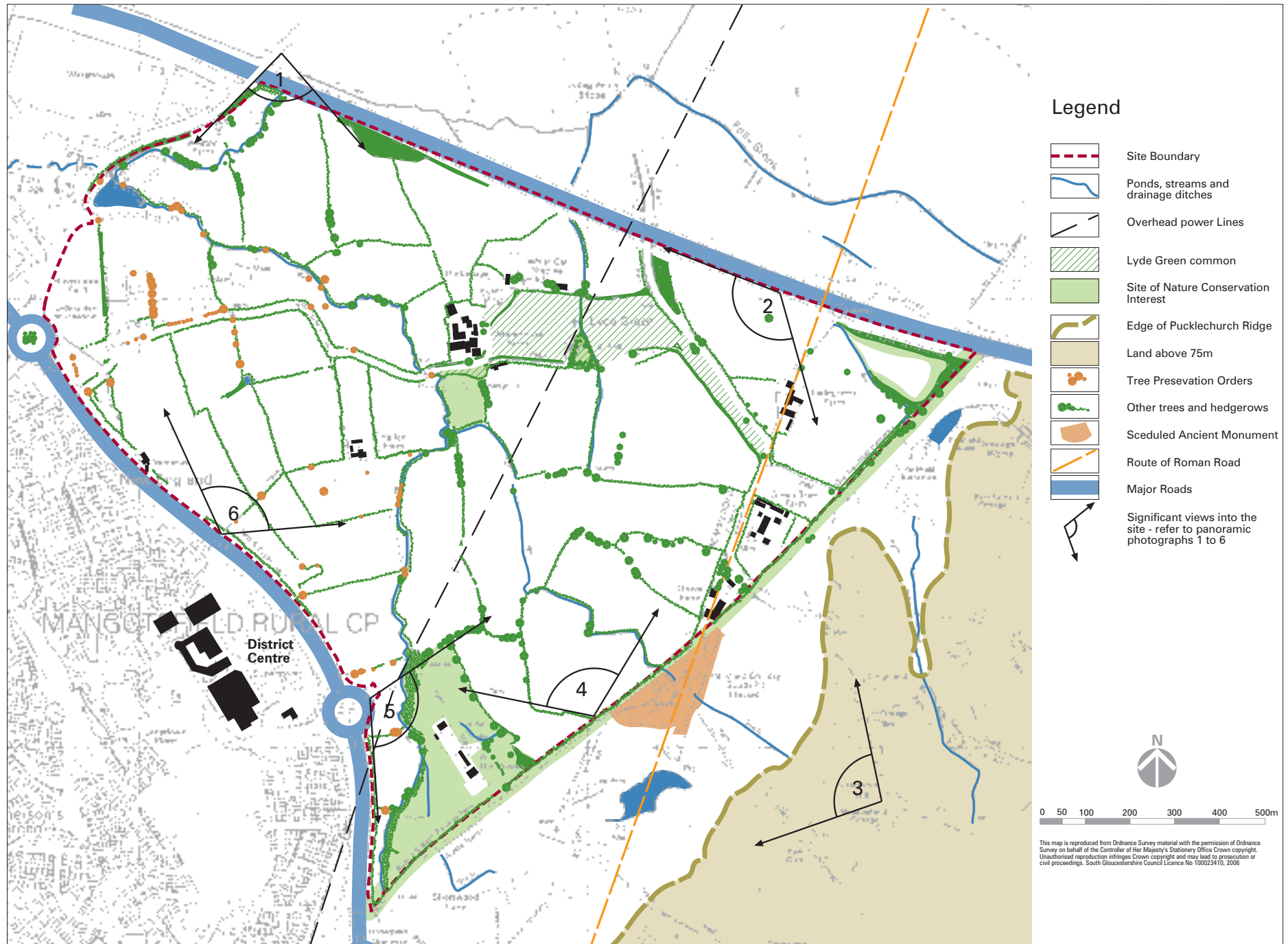
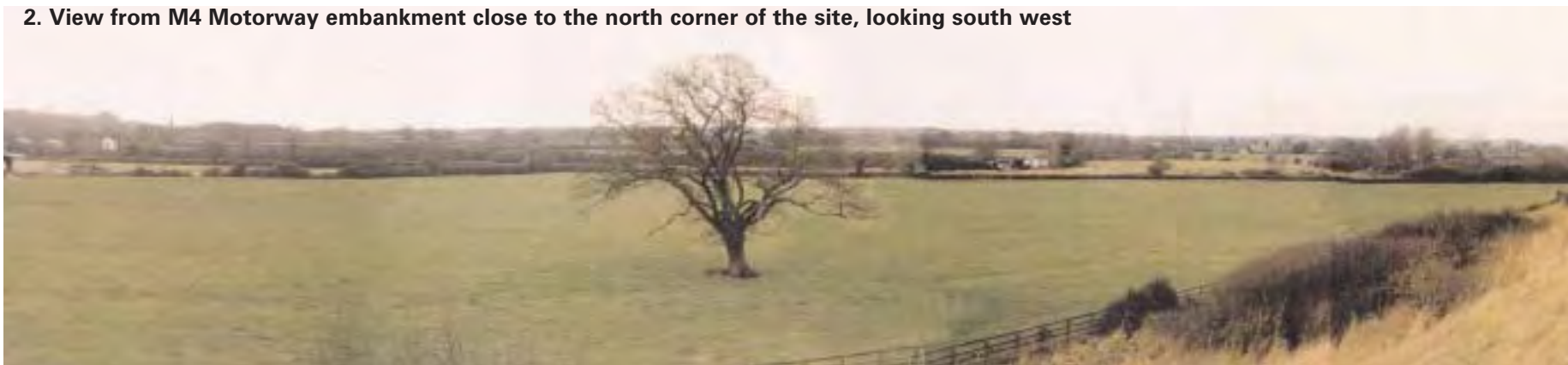


Figure 19 - Landscape Context

1. View from Westerleigh Road overbridge, looking south east



2. View from M4 Motorway embankment close to the north corner of the site, looking south west



3. View from Public Footpath on Coxgrove Hill looking north west from Pucklechurch Ridge



4. View from Public Footpath No LPU 36 adjacent to the dismantled railway cyclepath, looking north west



5. View from the bridge over the Avon Ring Road roundabout, looking east



6. View from the bridge over the Avon Ring Road, looking north east



Ecology. - (continued)

- A.14 There are two social groups of badgers within the site. No bat roosts have been identified within the site, but the site is used occasionally for foraging by bats, mainly pipistrelles and noctules. The habitats on the site - grassland, hedgerows and scrub have been identified as offering breeding and foraging opportunities for a range of bird species. A tributary of the Folly Brook runs through the site. The tributary channel is small and heavily shaded by mature trees and scrub which line the banks of the tributary.
- A.15 The following detailed surveys have been undertaken.
1. Phase 1 Habitat Survey (1999, 2001 and 2002, Wardell Armstrong);
 2. Survey (February 1995, updated 1999 - The Badger Consultancy);
 3. Confidential report on badgers, which forms part of the Environmental Statement 2004;
 4. Bat Survey (October 1996, J. Jane, updated in March 2000, David Clarke);
 5. River Corridor Survey of the Folly Brook Tributary (November 1995, updated as part of Phase 1 Survey in 1999);
 6. Winter Bird Survey (April 1996, Dr. Chris Mason of the University of Essex);
 7. Spring Bird Survey (April 1996, Dr. Chris Mason of the University of Essex);
 8. Fungal Survey of Area C (November and December 1995, Wardell Armstrong); and
 9. Small Mammal Survey (August 1996, The Badger Consultancy).

Listed Buildings & Historic Landscape Features

- A.16 There are five Grade II listed buildings within the site; these are:
- Whitehouse Farm, early C17, two and a half storeys;
 - Lyde Green Farm, C16 origin reconstructed late C17, two and a half storeys;
 - Barn at Lyde Green Farm, late C17;

Newlands Farm, central portion late C17, one and a half storeys; and

Hallen Farm, 1680's style 'L'-plan, two storeys, substantially damaged by recent vandalism.

- A.17 Lyde Green Common is an area of Registered Common Land, and is recorded on the first edition Ordnance Survey map. The northern and southern hedgerows along Lyde Green Common are well developed, indicating that they are of considerable age. In the eastern field of the Common, several subcircular wet depressions with longer vegetation are visible, that may be associated with earlier mining or grazing activity. No trace remains of the repaired bridges, noted on the map of 1792, and the brook which divides the two fields of the Common which is now crossed lower down.

Archaeology

- A.18 An assessment of the archaeological sensitivity of the site has been made through desk-based research and a walkover inspection of the site. Information reviewed included archaeological records, aerial photographs, historic mapping, published material and unpublished documents. There are no scheduled monuments within the site, although the scheduled disused Brandy Bottom (Parkfield South) Colliery adjoins the site to the east. As indicated earlier there are five Grade II listed buildings within the site.
- A.19 There is little evidence of prehistoric occupation at the site. There is evidence of Roman settlement and the line of a Roman road crosses the site, however, the majority of known sites relate to medieval and later settlement and industrial activity. Adjacent to the site is the location of a middle Saxon smelting furnace, which is unscheduled but of possible national importance. The overall indication is that the area has archaeological potential, with continuous settlement or farming probably since the post-Roman period and possibly earlier. Similarly, while the field layout would appear to be of post-medieval formation, some elements, e.g. tracks, predate this. There are 8 potential key issues relating to archaeology and cultural heritage:

- The setting of Brandy Bottom Colliery scheduled monument;
- the five listed buildings at the site;
- the presence of earthworks of unknown origin;
- surviving elements of former landscapes;

- potential remains of post-Roman and medieval settlement;
- remains of post-medieval settlement;
- evidence of early industries; and
- potential buried remains of prehistoric and Roman date.

Public Rights Of Way

- A.20 A network of existing public rights of way crosses the site to provide good links to the surrounding settlement and countryside areas, including a number of footpaths which converge at Lyde Green Common. Footpath PMR 8 crosses the A4174 Avon Ring Road by an over bridge, to link with the recently constructed district centre at Emersons Green. Two other footpaths cross the Ring Road at grade, one just north of the Rosary roundabout and another half way between the Westerleigh Road roundabout and the over bridge. The over bridge and the Rosary roundabout crossing points are linked by a footpath which runs parallel to the eastern edge of the Ring Road.

Air Quality

- A.21 Local Authorities are required by the National Air Quality Strategy (NAQS), under Part IV of the Environment Act 1995, to review and assess air quality in their area. If analysis undertaken for the final assessment (Stage 3) identify areas where the air quality is unlikely to meet the objectives prescribed in the Air Quality Regulations (England) 2000, then these areas are declared "Air Quality Management Areas" (AQMA's).
- A.22 In November 2001, under the South Gloucestershire Air Quality Management Area Order 2001, South Gloucestershire Council declared land within 110m either side of the M4 as an Air Quality Management Area. The site is bordered to the north by the M4 and to the south west by the Avon Ring Road dual carriageway. The main source of air pollution which has the potential to affect the site is traffic on the M4 and Ring Road.

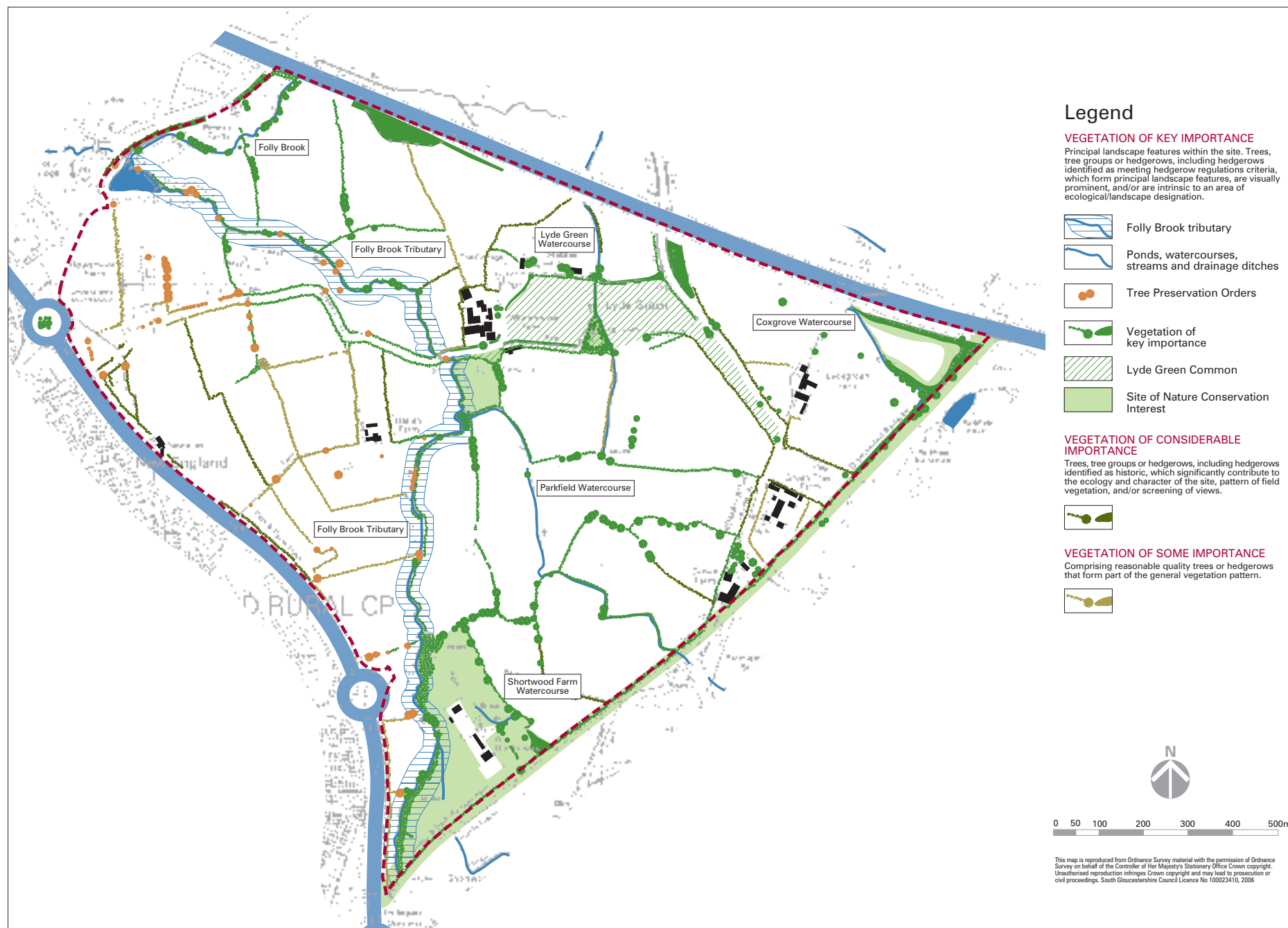


Figure 20 - Evaluation of existing vegetation

Air Quality -(continued)

- A.23 The air quality at the site has been modelled based on road traffic flows in accordance with the guidance outlined in the Design Manual for Roads and Bridges (DMRB). This document provides procedures for estimating the concentration of carbon monoxide, butadiene, nitrogen oxides and particulate matter of road traffic emissions and the results can then be compared with the objectives of the Air Quality Regulations (England) 2000.
- A.24 The results of the preliminary air quality assessment based on traffic flow data for 1999 indicate that in 1999 there was a strip of approximately 65m adjacent to the M4 motorway where the air quality objective for annual mean nitrogen dioxide level is not met. The results of assessment for future years 2005 and 2017 indicate that there will in those years be an area of between 45 and 50m wide along the M4 which is predicted to have concentrations of nitrogen dioxide which exceed the council's Air Quality Objective on an annual basis. The assessment predicts that other pollutants considered would not exceed specified levels.

Noise

- A.25 There are currently few significant sources of noise on the site. The M4 motorway to the north and the Avon Ring Road dual carriageway to the south west are the principal external sources of noise. Noise monitoring has been undertaken and the results considered in relation to Planning Policy Guidance (PPG) 24 Planning and Noise 1994. PPG 24 defines noise exposure categories and their suitability for sensitive development such as residential properties. The results of the noise surveys have shown that some parts of the site adjacent to both the M4 and Avon Ring Road are within Noise Exposure Category C but that the majority of the site falls within NEC 'A' during the daytime and NEC 'B' during the night. Prediction of future noise emissions from the M4 and Ring Road, based on future traffic flows shows that the traffic noise affecting the site will not alter significantly.

Drainage

- A.26 The River Frome catchment is subject to urban development pressures that threaten to increase the risk of flooding, particularly at Eastville in Bristol, through which the river passes in culverts of limited capacity.
- A.27 Between 1990 and 1993 Halcrow undertook the River Frome Catchment Study to establish the consequences of future development and to suggest options to mitigate the potential flood risks. This study included the Folly Brook which is a tributary of the River Frome.
- A.28 In 1999 Parkman developed the conclusions of the Halcrow report to deal with the proposed development at Emerson's Green. The RIBAMAN computer software was utilised to model the Folly Brook and its tributaries. This modelling aimed to demonstrate that for the 1 in 100 years storm event, an attenuation system could be designed that maintained or improved the flood risk status quo for the Folly Brook which would result in no adverse effect downstream or particularly at Eastville, the critical section of the River Frome.
- A.29 In 2001 the Environment Agency commissioned an update to the original 1993 model, utilising the latest software and flood estimation data which would allow further analysis of the flow characteristics for the Folly Brook adjacent to the proposed development. Using the results of this latest analysis, Halcrow have undertaken a full reassessment and have agreed with the Environment Agency the principles by which the surface water attenuation strategy will allow the overall development of EGE without any detrimental affects on the downstream catchment. These are set out in the EGE Development Folly Brook Catchment Surface Water Drainage Strategy 2004.

Foul Drainage

- A.30 The foul drainage system was designed at the outset to serve the whole 400 hectares which comprises the Emerson's Green Development Area.
- A.31 At present, the existing trunk main network has been extended with the sewer system being constructed through the adjacent Area B development to a point west of the proposed Westerleigh Road access. It has been designed to a fully adoptable standard with sufficient capacity to accommodate the full development flows now anticipated from EGE.

Utility Services

- A.32 Discussions have taken place with each of the major utility companies in order to determine the extent of constraining influence caused by the existing strategic trunk mains crossing parts of the proposed development. All existing route corridors are currently protected by formal "Deeds of Easement" which safeguard all present network supplies.
- A.33 The diversion of parts or all of the routes for both the water and gas trunk mains are to be fully considered in respect of the potential development areas that may be affected in order that a more beneficial arrangement can be provided. The existing major overhead electricity power lines will be removed in lieu of a designated underground cable network subject to technical feasibility. The undergrounding of all lesser voltage overhead supply lines that currently affect the development area will be arranged on a phased basis to coincide with the provision of the general infrastructure works programme. To distribute mains power Western Power Distribution have confirmed there will be a need for at least one new major sub-station within the development area, requiring a site of approximately 30m x 40m in area.
- A.34 Water and gas supply mains currently exist along the adjacent A4174 Ring Road with capacity for the early phases of development. Discussions are to be progressed for the reinforcement of both systems to secure supplies for all later phases. Similarly discussions are taking place for the overall reinforcement of the existing local electricity network to provide both a designated supply for the development and a general updating of the current system to ensure its future continuity.

Clay working at Shortwood Claypit

- A.35 To the south east of the site, there are proposals for continued clay working at Shortwood Claypit and for the restoration of the void through landfill. Whilst it is not considered that these proposals will prejudice the development of EGE, the scheme proposals for EGE and for minerals and waste development at Shortwood Claypit should phase development so as to facilitate the early release of both areas of land with minimal adverse impact.

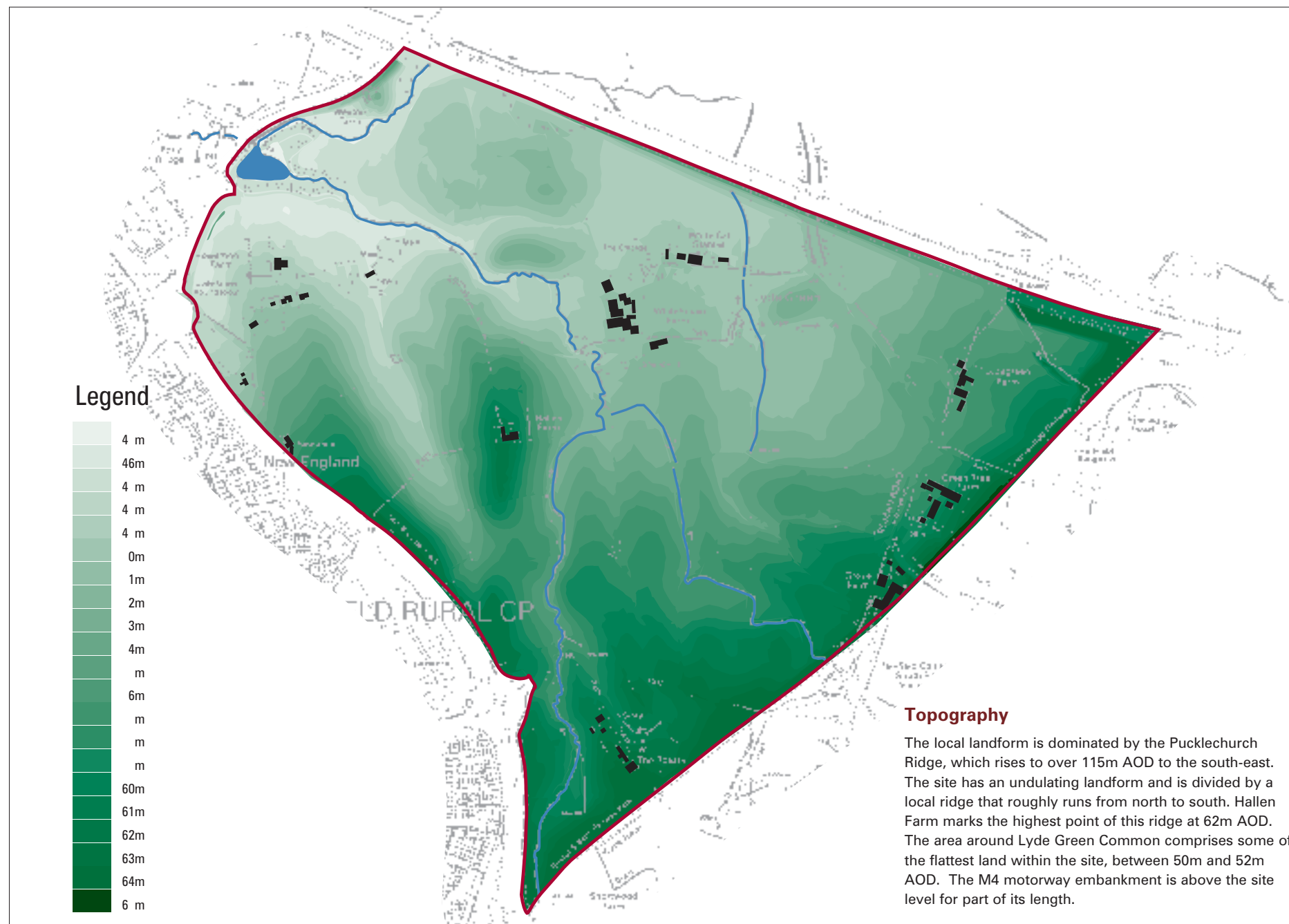


Figure 21 - Topography