

**EASTERN QUARRY
PLANNING BRIEF
SUPPLEMENTARY PLANNING GUIDANCE**

July 2002

Statement of Publicity

This Planning Brief has been the subject of formal public consultation (carried out between 14 March and 26 April 2002) and the views of interested parties have been taken into account in its preparation. A copy of the Cabinet/General Assembly of the Council report (dated 11 July and 22 July), which considered the responses received is available for inspection during office hours at the Civic Centre, Home Gardens, Dartford. This Planning Brief was adopted as Supplementary Planning Guidance by the Council on 24 July 2002.

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Figure 1 - Eastern Quarry: The Setting

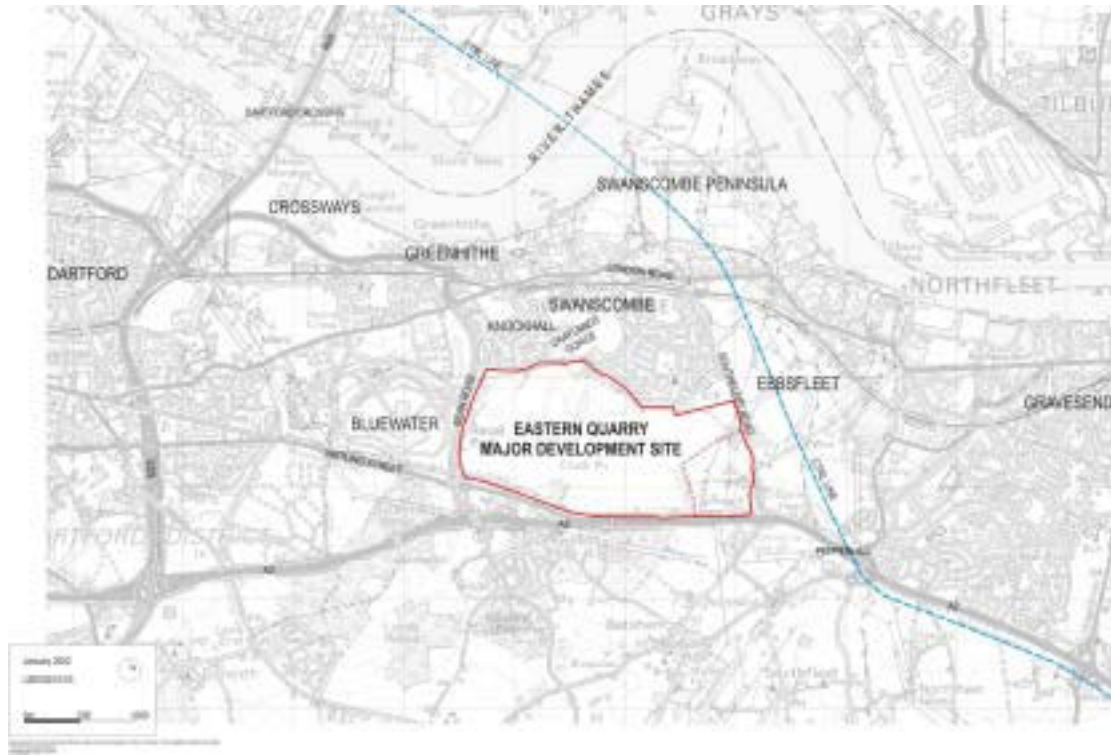
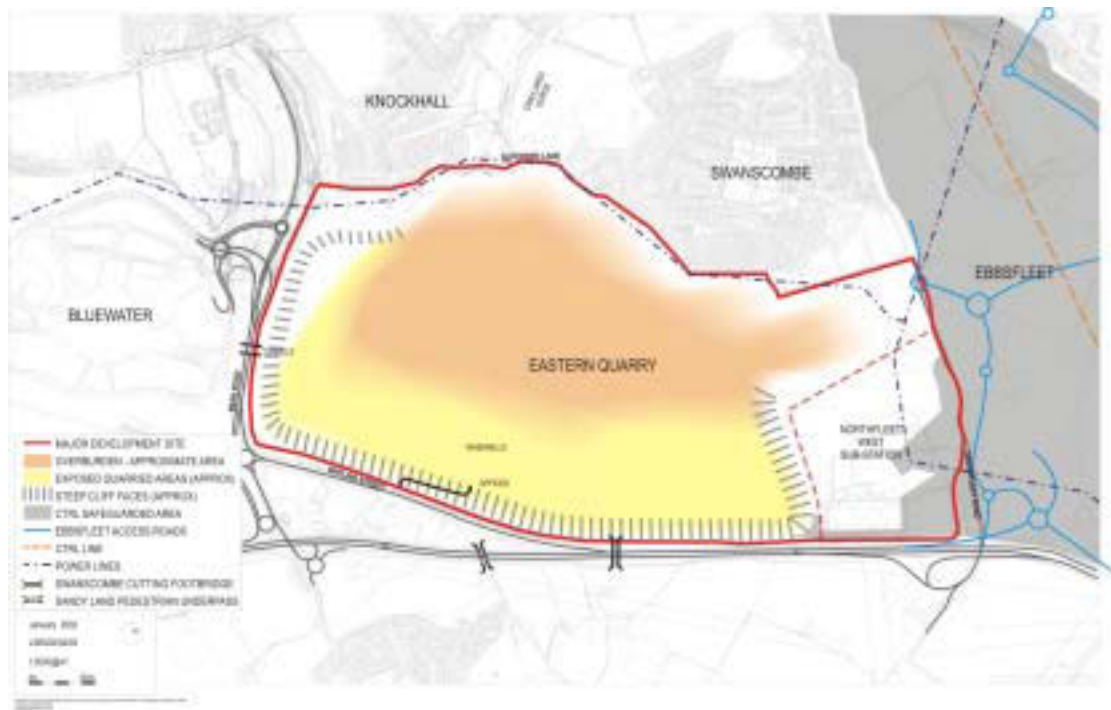


Figure 2 - Eastern Quarry: The Site



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1. INTRODUCTION

Purpose of the Planning Brief

1.1 The preparation of a planning brief is necessary to take the broad policy for the site set out in the Local Plan Review Second Deposit Draft forward to the next level of detail to provide a basis for planning applications and thereby realise the potential of this key opportunity. This supports the Government's aspirations for Thames Gateway, and its desire for overall environmental enhancement and the delivery of strategic development sites.

1.2 This brief is to be read in conjunction with the Local Plan Review Second Deposit Draft (Appendix 1 provides a list of the most relevant policies). The Local Plan Review Second Deposit Draft establishes the Council's policy approach to the redevelopment of Eastern Quarry. It is the purpose of this planning brief to add detail to these aspirations by identifying the planning and urban design principles and requirements for the redevelopment of the site.

1.3 This brief sets out the physical requirements that relate to the envisaged mixed use development including an estimated 7,250 dwellings at Eastern Quarry. In this way service providers can understand the implications for the provision and timing of the services and facilities for which they are responsible. The brief does not seek to apportion funding responsibilities between developers, service providers and other agencies that may be involved. This will be a matter for negotiation within the framework of the guidance set out in Chapters 8 and 16 of the Local Plan when specific development proposals are brought forward.

1.4 As the planning brief has been adopted by the Council as Supplementary Planning Guidance, it provides the parameters within which the master plan for the site can be prepared. The master plan will provide detailed interpretations of the issues covered in the brief and how they will be addressed in the eventual development. The planning brief will be used by the Council in its determination of subsequent planning applications, and by the developer(s) in the preparation of those applications. These will need to be accompanied by supporting information, including an Environmental Assessment and a Transport Assessment.

1.5 As context to the determination of the principles to be applied to the redevelopment of the site, consideration is first given in the brief (in Sections 2 and 3) to the site itself. Respectively, these two sections consider the site's features - some that act as constraints, others that provide opportunities - and existing planning policies that have a bearing upon the form, mix, disposition and quantity of future uses to be sought on the site. Section 4 provides the overall development requirements and guidelines for the site.

The Opportunity

1.6 Eastern Quarry provides a unique and exciting opportunity for creating a high quality new community with a strong sense of place for Kent Thameside. The gradual transition from a large hole in the ground to a compact urban village style of development should embrace best practice and innovation in terms of planning and design. Connecting the site to existing communities and delivering fundamental Kent Thameside objectives such as Fastrack and Green Grid can provide the opportunity for inspirational environmental regeneration.

1.7 Eastern Quarry is the largest potential development site in the Thames Gateway sub-region. The Government identified it as a 'key opportunity' for development in the South East and Kent County Council, in its Structure Plan, confirmed the principle of the re-use of the site as a major development location. Additionally, both the Kent Prospects and the Kent and Medway Economic Board's Action Plan act as context documents that support and promote the type of development envisaged for Eastern Quarry. In particular they promote: **Smart Development** by encouraging the provision of Broadband Technology; encouraging **Green Growth** that promotes sustainability through greater public transport use, innovation in design, reduced waste and increased recycling and nurturing **Quality Communities** by encouraging a range of housing types and tenures and the provision of open and green spaces and corridors. The Local Plan Review Second Deposit Draft identifies the site for a predominantly residential mixed use, public transport orientated development.

1.8 In November 2001 the Secretary of State approved proposals for a new cement works at Holborough in the Medway Valley, to be supplied with chalk from a nearby quarry. The new works will replace the existing Northfleet Works and Eastern Quarry. The prospect of a start on the redevelopment of the quarry within the next few years is now a reality.

2. THE SITE

History

2.1 A substantial portion of Eastern Quarry was originally quarried for clay, extraction commencing in about 1900. Chalk quarrying has taken place since the 1930s, starting in the north. Here, the overburden, largely comprising Thanet Sand, was first removed and taken off-site. This allowed the exposed chalk to then be quarried. The overburden in the south, again largely comprising Thanet Sand, was then removed and placed over much of the quarried area in the north. Some backfilled land has been treated for use for agriculture, mainly grazing. This is used as part of Alkerden Farm which lies along the northern edge of the site. Meanwhile, extraction of the exposed chalk in the south and at the western end has continued.

2.2 Planning controls upon the quarry were first introduced in 1952. Planning permission granted in this year allowed quarrying to a depth of +2.4m OD and other than a small area adjacent to Southfleet Road this has essentially all been quarried. A further permission granted in 1969 allowed deepening to -6.7m OD over much of the 1952 area and the remains of this tranche form the bulk of the remaining chalk reserves. In 1988, a third planning permission was granted for further deepening to -10m OD over the south east section of the quarry, and most of this has been exhausted. The chalk has to be dug dry. Groundwater is therefore pumped out of the quarry, to the River Thames, to enable this.

2.3 Blue Circle has a lease to continue quarrying until 2008 although it is expected that the company will cease quarrying before then, especially in the light of the Secretary of State's decision to approve the Holborough Works proposals.

Northfleet West Sub Station

2.4 Immediately to the south east of the quarry is the Northfleet West Sub Station. Many of the functions of the sub station are however in the process of being relocated to the modernised Northfleet East Sub Station at Pepperhill in Gravesham. The substation will be decommissioned during 2004/5. A small sub station is to remain on site, but the bulk of land currently occupied by the Northfleet West Sub Station will become available for redevelopment.

2.5 In anticipation of this, the Local Plan Review Second Deposit Draft includes Northfleet West Sub Station within the 'Eastern Quarry Major Development Site', along with the quarry itself. This reflects the interrelationship between the two sites and the need for them to be planned in an integrated way. The sub station site adds a further 40 hectares to the area available for redevelopment, resulting in an overall area for the Major Development Site of approximately 300 hectares.

Topography

2.6 On the quarry's southern and western edges (to Watling Street and Bean Road respectively), and along the northern edge at its western end (along Alkerden Lane), steep chalk cliffs rise from the quarry floor. Along the northern edge the undulating landform, created by the backfilling of Thanet Sand over worked chalk, runs up to the south side of Swanscombe. In the east, the landform rises from the quarry floor to meet Southfleet Road and the northern edge of the Northfleet West Sub Station site at grade. The south eastern edge of the quarry, adjoining the sub station site, comprises battered Thanet Sand slopes above a steep chalk face.

2.7 The effect of quarrying has been to produce a dramatic landscape, one that will provide an interesting setting for future development and which could be exploited in future designs and layouts. However, the variations in levels that produce the dramatic landscape, particularly along the southern and western edges, limit potential access points into the site. The steep southern cliff faces will also result in shadowing along the quarry floor immediately below thereby limiting, at these points, the potential for built development and impacting on the recreational and ecological possibilities.

Geotechnics and Hydrology

2.8 So far as is known, no waste materials have ever been deposited in the quarry, other than naturally occurring overburden, flint etc arising from the excavations themselves. Nevertheless, appropriate contamination land surveys will be required to establish the situation. This is especially important where residential development is envisaged. Should any contamination issues arise, remedial action will need to be identified and implemented prior to development taking place. This is in line with Policies NR20 and NR21 of the Local Plan Review Second Deposit Draft. Steep and near vertical cliff faces will also need to be surveyed to establish their long term stability and, where necessary management measures agreed.

2.9 Without the current de-watering of the quarry undertaken by Blue Circle, it is estimated that water levels would rise from their existing, artificially maintained level of between -7.5m and -10m OD to an average within the quarry of between +4m to +6m OD. To avoid pumping to control flooding within the new development areas of the quarry, gravity drainage will be required and final ground levels will have to be established above that of the new water table. Re-contoured ground levels must be established to protect not only built development from flooding but must also protect, water, waste water and other infrastructure serving the development from inundation.

2.10 Developing the eventual design will require close liaison with the Environment Agency on matters relating to the overall water environment, including any effects on adjoining areas. In order to reduce pressure on the depleted aquifers in the Darenth Valley, Thames Water are intending to extract water from a series of new boreholes around Bean and two existing boreholes at the North West and South East corners of the Quarry. The implication of this proposed extraction on water levels in the Quarry will need to be evaluated.

2.11 The rising water table does however bring with it opportunities to create water features alongside new development and areas of open space. A lake or lakes may be a positive way of using areas affected by shadowing, creating amenity and wildlife habitats, and

achieving sustainable drainage systems. The creation of amenity and wildlife habitats in these areas, however, will require careful attention to the ecological implications. Careful consideration must be given to siting, design, maintenance and legal responsibility of any new water features created.

Air Quality

2.12 Eastern Quarry is between two air quality monitoring stations at Ightham Cottages and the London Road / Bean Road roundabout. Both these monitoring stations have revealed high levels of NO₂ and particulates and as such, additional road traffic associated with development at Eastern Quarry could result in the National Air Quality Objectives being exceeded. Therefore it will be necessary to require an air quality impact assessment prior to determining any planning application.

Access

2.13 The main access to the quarry is off Watling Street, running down to the Blue Circle offices and washmills. Tunnels remain under Bean Road to the west, connecting the quarry to what was Western Quarry and is now occupied by Bluewater, although the tunnels, originally used as haul routes, are currently blocked off. In the north, the quarry is also connected via an old railway tunnel to Craylands Gorge which connects through to Swanscombe Peninsula. There is no vehicular access to the Gorge.

2.14 The sub station site is currently accessed off a single track, private road from Southfleet Road to the east of the site.

2.15 Significant improvements to access, including the creation of new access points, will therefore be required before new development can proceed.

Ecology and Archaeology

2.16 There are effectively no areas of natural or semi natural vegetation other than peripheral relics around the tops of the cliff faces. The great majority of the site comprises bare ground, landscape planting or pioneer species of low ecological merit. There are no statutory or non-statutory wildlife designations. Limited areas of ecological value may however be present and appropriate surveys will be required to establish the extent of any of these. These surveys should also explore locations where new environmental capital can be created as part of the regeneration of this site and wherever possible support targets contained in the Kent Biodiversity Action Plan.

2.17 The Alkerden Lane Pit Site of Nature Conservation Interest lies to the north of the site and it may be possible to encourage wildlife in the adjoining part of the site to provide a buffer around part of the SNCI.

2.18 Eastern Quarry lies in an area of considerable archaeological importance: internationally important Palaeolithic remains have been found almost immediately to the north of the development site at the Swanscombe Skull Site NNR, and significant archaeological remains from almost every period in history, including seven Scheduled Ancient Monuments, have been found in the Ebbsfleet valley to the east of Southfleet Road. Work at the Swan Valley Community School, immediately to the north of the application site has demonstrated that Pleistocene sands and gravels containing Palaeolithic artefacts and faunal remains, extend to the southern limit of the school site, and are therefore likely to continue into the application site. Numerous Roman remains are also known in the area adjacent to the development site, including the scheduled temple complex and small town at Springhead immediately to the south east of the site, a walled enclosure and road (which may also continue into the development site) at Swan Valley School, and Roman building material within the fabric of the Medieval church at Swanscombe. The remains of a 1950s Royal Observer Corps post has been recorded within the site itself.

2.19 Most of the Eastern Quarry development site has been quarried away but archaeological remains would be expected to survive around the perimeter of the site and, over quite extensive areas of the northern and eastern parts of the site. It is therefore quite likely, considering what is known of the surrounding area, that important archaeological remains of Palaeolithic or Roman date may be present at the site. The site is also likely to have industrial archaeological potential in relation to the chalk extraction and cement industry. Provision should be made for archaeological evaluation to be followed by preservation in situ, wherever possible, of important archaeological remains, and/or further archaeological investigation as appropriate. As a first step a comprehensive desk based archaeological assessment and walkover survey of the site should be undertaken to help determine areas in which archaeological remains may survive. The results of the assessment and field evaluation should be used to inform the preparation of the master plan.

Power Lines

2.20 From Northfleet West Sub Station, power lines run north across the eastern end of Eastern Quarry, some continuing northwards, via Ebbsfleet, towards the River Thames, whilst others head westward along the northern boundary of the quarry. Northfleet West Substation will be taken out of commission in 2004/5. The Lafarge line from Northfleet West will be decommissioned when and if the supply to the cement works is no longer required. Any lines which are decommissioned and which do not have any strategic value should be removed.

3. PLANNING POLICY CONTEXT

National Planning Policy

3.1 Three Planning Policy Guidance Notes (PPGs) that are particularly relevant to the redevelopment of Eastern Quarry are:

PPG1: General Policy and Principles (1997) which emphasises the concept of sustainable development as a means of securing higher living standards whilst protecting and enhancing the environment;

PPG3: Housing (2000) which places an emphasis on providing new housing - including the provision of affordable housing - on previously developed land, and which requires the more efficient use of developable land by increasing the density of development and reducing car parking standards; and

PPG13: Transport (2000) which promotes the integration of land use and transport planning, encourages more sustainable transport, gives priority to people over ease of traffic movement and seeks a reduction in the need to travel, the latter in part to be encouraged through mixed use development.

Regional Planning Policy

3.2 In 1994, the Government published *Regional Planning Guidance for the South East* (RPG9). This set out the Government's determination to redirect development pressures from the west of London to the east of the capital. Thames Gateway was earmarked as the 'main opportunity for growth' in the South East with the potential to 'accept significant levels of housing and employment development, alongside improvements in environmental quality' (para 2.4). Within Thames Gateway, Kent Thameside (the areas of Dartford and Gravesham north of the A2) was identified as one of two major growth points.

3.3 This strategy was re-confirmed in updated RPG9, published in 2000, and elevated from a regional to national priority (para 4.9). Amongst other things, this called for 'the opportunities presented by the area', including the availability of large potential development sites, to be 'maximised'.

Sub Regional Planning Policy

3.4 The development potential of Eastern Quarry was first formally acknowledged in *RPG9a: The Thames Gateway Planning Framework* (1995). In this, the site is described as a

'key opportunity' – the only site so described in the guidance – and one of regional significance. Eastern Quarry is envisaged as a high quality, compact mixed use development capable of complementing the major employment and retail centres of Ebbsfleet and Bluewater respectively. RPG9a also sees the Green Grid as a key structural element of policy for the Gateway and Eastern Quarry will form a strategic component of the Green Grid.

Kent Structure Plan Policy

3.5 The Government's vision for Eastern Quarry was subsequently reinforced in the Kent Structure Plan (1996) in which the site is allocated for 'a comprehensive mixed use development with an emphasis on housing provision, together with open space, schools, community facilities and employment land' to be 'integrated with an enhanced public transport and road network'. The importance of Eastern Quarry's potential was such that the Structure Plan put forward its only major alteration to the Metropolitan Green Belt by excluding Eastern Quarry from it.

Local Plan Policy

3.6 The Local Plan Review Second Deposit Draft defines the precise boundaries of the Eastern Quarry site and sets out in more detail the principles that are to guide the redevelopment of Eastern Quarry (Policy MDS 5). The following criteria are to be met:

- the creation of a mixed use, public transport orientated development in the form of a compact urban village, consisting predominantly of residential uses, together with the necessary community infrastructure and some commercial uses;
- the creation of a landform which will provide a suitable environment for a new compact urban village;
- a minimum of two thirds of the total gross developed floorspace to be for residential use;
- a substantial area of public open space, water-bodies and landscaping, comprising a minimum of 33% of the site area, to be incorporated in the Kent Thameside Green Grid;
- the provision of pedestrian and cycle network links to adjoining sites;
- one or more segregated east-west public transport routes as part of the Fastrack network between Ebbsfleet and Bluewater and Bean Road;
- a concentration of the highest densities in locations best served by public transport;

- integration of new development with the adjoining uses at Bluewater and proposed at Ebbsfleet, and with the communities of Swanscombe and Knockhall;
- provision of east-west routes integrated with the built form;
- the provision of local retail facilities that will not affect the viability or vitality of Dartford town centre or other centres; and
- the preservation and enhancement of any areas found to be of ecological or archaeological significance.

3.7 The Local Plan Review Second Deposit Draft contains estimates of total development capacity at Eastern Quarry*.

4. DEVELOPMENT REQUIREMENTS AND GUIDELINES

Role of Site within Kent Thameside

4.1 The above estimates of capacity illustrate the scale of the opportunity at Eastern Quarry. The ability of the site to absorb new development and thus relieve pressures elsewhere is considerable. But it is not only the site's capacity that makes it of such importance. Its location, immediately adjacent to Ebbsfleet to the east and Bluewater to the west, adds considerable significance to its role and potential.

4.2 A new international and domestic passenger station at Ebbsfleet on the Channel Tunnel Rail Link, which is to run through Kent Thameside, is due to open by 2007. The Government foresees Ebbsfleet as a 'major focus for growth in the South East'. To this end, planning permission has been granted (subject to a Section 106 agreement) for 789,500 sq m of mixed use, predominantly commercial development.

4.3 Employment led growth around the new station at Ebbsfleet is what sets regeneration in Kent Thameside apart from elsewhere. Major residential development at Eastern Quarry will complement this. The juxtaposition of Eastern Quarry and Ebbsfleet has the potential to produce a synergy in planning and environmental terms that is unparalleled in the Thames Gateway, probably in the South East and possibly in the country. It is, therefore, important that the commercial cores of both Ebbsfleet and Eastern Quarry are considered in an integrated, coordinated way and not as unrelated elements.

* Emerging figures indicate a capacity for approximately 7,250 residential units and up to 209,000 sq m of employment floorspace and 171,000 sq m of supporting retail, leisure and community uses. 1,350 residential units and 50,000 sq m of employment floorspace are anticipated to be developed by 2011.

4.4 Added to this is the proximity of Bluewater, the largest regional shopping and leisure centre in the country. The regeneration axis formed by Ebbsfleet-Eastern Quarry-Bluewater has unique and significant potential.

4.5 Eastern Quarry also has a vital role to play in the urban structure of Kent Thameside. Bluewater commenced trading in 1999. The first development in Ebbsfleet can be expected before the new station is opened, possibly as early as 2003. Eastern Quarry is the missing part of the jigsaw. Critically, it will be required to deliver segregated Fastrack public transport route(s), at the earliest possible stage to connect the heart of Kent Thameside, with Dartford Town Centre, Bluewater, Ebbsfleet and Gravesend Town Centre via Thames Way. It will also be required as early as possible for the construction of a route for general traffic between Ebbsfleet and Bean Road (next to Bluewater), the planning permission for the Ebbsfleet development limiting the amount that can be constructed there until such time as a route is in place. It may be necessary to vary these routes over time, as required by the need to alter land form or by the requirements of emerging development.

4.6 The Local Plan Review Second Deposit Draft, in detailing the quantity and type of development that is likely to make up Eastern Quarry in its final form, lays the foundations for the future role of Eastern Quarry, along with Ebbsfleet and Bluewater, as a central focus within Kent Thameside. It will however be many years before this role truly evolves – certainly beyond the end date of the current Local Plan Review of 2011. In the meantime, up to 2011, Eastern Quarry will have an important role in complementing the growth of Ebbsfleet, providing new, high quality housing in close proximity to Ebbsfleet where many new jobs will be created. It will also have a vital role in integrating both new and existing communities within the overall Kent Thameside urban structure, and, in itself, providing a suitable mix of uses to reinforce sustainable development. An overall vision for enhancing connectivity between new development in the Quarry and existing communities at Swanscombe, Knockhall, together with links further afield to both the countryside to the south and River Thames through Greenhithe to the north should form an important backdrop for opportunities at Eastern Quarry. It is within the context of both the short term and long term roles of Eastern Quarry that the guidance in this section of the brief should be considered.

Timing and Phasing

4.7 Maintaining momentum in the development of Kent Thameside needs Eastern Quarry to proceed as quickly as possible. The Local Plan Review Second Deposit Draft contains an early indication of possible phasing for anticipated development at Eastern Quarry. Further technical work has been undertaken and the table below gives an indication of the expected phasing of development at Eastern Quarry at this point in time.

Eastern Quarry Development*	Up to 2011	2011 - 2021	2021 +
Residential	1350 units	3500 units	2400 units
Employment**	50,000 sq m	123,000 sq m	36,000 sq m

* Figures in each phase are indicative only. ** Square metres are given in terms of gross external floorspace

4.8 The site is complex and development will take place over some years. Proposals must demonstrate that throughout the build out, and especially in the case of early phases of housing, a satisfactory quality of environment will be maintained. This includes both social and physical characteristics. In order to ensure the realisation of the overall goal of achieving an integrated, mixed use development here, an appropriate mix of residential and other uses should be achieved as the development progresses, as well as essential community and transport and environmental infrastructure being in place as it is needed, phase by phase.

4.9 The quarry covers a very large area – about one square mile. Quarrying operations by Blue Circle are expected to continue at the western end of the quarry until about 2006. At the quarry’s eastern end, on raised land that has been backfilled and on land that has never been utilised for quarrying, there is little, if any, awareness of extraction operations at the opposite end. It may be possible for development to be undertaken here in advance of the cessation of quarrying at the western end, but any proposals must illustrate to the Council that this is environmentally acceptable and workable. In particular, it will need to be demonstrated:

- that any new development occupied before the cessation of quarrying would be unaffected by the impact of that quarrying;
- that any new development occupied before the completion of earthworks would be unaffected by the impact of the earthworks (this applying to both earthworks that may be undertaken in the eastern part of the quarry in areas no longer required for chalk extraction and in the western part after quarrying has ceased); and
- that satisfactory arrangements can be made for access to the new development in advance of completion of the main transport routes into and through the quarry.

4.10 The relatively early development of the Northfleet West Sub Station part of the site may also be possible, and the Council would wish to see this proceed in tandem. The eastern end of the quarry represents a natural, initial build out point, from where development will proceed westwards into the quarry area and southwards onto the sub station site.

4.11 The appropriateness of early development on the sub station part of the site will be considered in the same manner as for the quarry area itself, with particular reference to the criteria detailed above.

4.12 Development proposals must include a site preparation strategy with clear overall plans for such matters as:

- cessation of quarrying
- removal of industrial plant
- re-grading of contours
- provision of drainage and lakes
- clear demonstration of the safety of the site in terms of the re-graded overburden, drainage ponds, chalk cliffs, old tunnels etc
- routes for utilities and subsequent access
- removal of decommissioned power lines
- conservation of any existing natural assets.

Landform

4.13 Before the construction of new buildings can begin, substantial earthworks will need to be undertaken to re-profile the quarry in order to produce appropriate development platforms. The earth working required will be an extensive, complex and costly exercise and is itself likely to be undertaken in phases, starting in the east of the quarry. This brief requires that ground stability be ensured and that groundwater modelling be undertaken, in conjunction with the Environment Agency, to arrive at the best solution.

4.14 Factors that should guide the re-profiling of the quarry are:

- the need to establish an optimum land formation that both creates an attractive environment and provides sufficient development platform area to accommodate the proposed quantum of development;
- the need to establish a land formation that facilitates, and along the northern rim retains, connections with adjacent communities, that allows new vehicular access points to be established into the quarry (particularly at the western and eastern ends where none exist at present) and that enables green areas within the site to be linked into the Green Grid where appropriate;
- the need to provide areas for strategic parks, lakes and green space as part of the site infrastructure;
- the need to ensure the landform maximises the integration of the quarry and the sub station site inasmuch as this is possible;

- the desirability of using landform to help establish visual richness and create distinct character areas within the quarry to which future residents, workers and visitors can relate;
- the desirability, wherever feasible, of minimising gradients in order to encourage walking and cycling;
- the need to create a land formation that allows for the early development of the eastern end of the quarry should such an approach prove environmentally acceptable; and
- the desirability of achieving a landform that does not require material to be imported to the site or for material to be removed.

4.15 All earth working will be subject to Environment Agency licensing regulations, ensuring that there is no unacceptable adverse impact on surrounding residential areas.

Built Form: Public Transport Orientated Development

4.16 The Local Plan Review Second Deposit Draft requires that Eastern Quarry be developed in the form of a high quality, compact, mixed use, urban village. Although there is no universal blueprint for the model urban village, Local Plan Review Second Deposit Draft's Development and Design chapter contains useful guidance on the two key themes of walkable neighbourhoods and public transport orientated development.

4.17 Fundamental to this concept is that as many people as possible should live (and/or work) as close as possible to public transport routes in order to encourage the provision and use of public transport. The services and facilities they require to meet their day to day needs should also be focused on public transport nodes and routes. Particular facets of this approach are:

Public Transport

Development should be most dense around Fastrack stops. Fastrack provision will therefore influence the way in which the overall pattern of development density is planned and vice versa. The aim is for public transport infrastructure and services to be planned for and integrated with the built development, in such a way that it becomes the preferred mode of travel within Kent Thameside, for both business and pleasure. Modern infrastructure must be used to facilitate fast, frequent services and respond to passenger needs and comfort. Segregation is a key tool in delivering this.

Good public transport provision must be provided from the earliest stages of development.

Walking Distances

The overall aim is for most development to be located “right on top” of public transport connections. Uses that are likely to generate or attract any significant number of trips should be within no more than 400 metres walking distance of a good, or potentially good, public transport service, less if uphill walking is involved. Employment, education and leisure uses that are particularly intensive should be located closer than this. Residential development should be located within convenient walking distances of community uses such as convenience shops, schools and recycling facilities.

Densities

Highest density development should be located as close as possible to public transport routes. Within 200 metres of a stop, a density of at least 90 dwellings per hectare will be expected to be achieved and at least 60 dwellings per hectare between 200 and 400 metres (with average density not to be below 30 dwellings per hectare beyond). Plot ratios for commercial developments should be at least 1:1 close to main public transport stops and 0.5:1 beyond the 200 metre mark.

Permeability

Permeability – that is, the extent to which an environment allows people access through it, either by means of footpath, cycleways, streets or landscaped areas – should be greatest for the pedestrian and cyclist in the vicinity of a public transport stop.

Priority for Non-Car Modes

Full consideration of the needs of pedestrians, cyclists and public transport over the car should be an integral part of the design process and solution.

Creation of Urban Space

To encourage walking, the street scene should be designed at a pedestrian scale, visual interest created and continuity of the pedestrian route maintained.

Parking Strategy

In its end form, the development should be served by very good public transport with limited parking provision in accordance with adopted maximum parking standards. In the early years, when public transport services are still being developed, less strict standards will be applied, although the emphasis will still be upon keeping parking

levels to a minimum. To this end, the Council will require a comprehensive Parking Strategy that will link provision of travel alternatives with parking levels.

Land Uses, Development Needs and General Locations

4.18 Within Eastern Quarry, higher density development should be focused upon the proposed Fastrack route between Ebbsfleet and Bluewater and, to a lesser extent, upon the routes of feeder services within the site connecting to Fastrack. Eastern Quarry will incorporate the **urban village concept**, and it is anticipated that several larger centres will in due course be required. It is not anticipated that these would attract people in from outside, but would serve locally generated needs. These should be located at nodes on the Fastrack route and function as a focus for social and economic activity. These would include a mix of community facilities and services together with employment compatible with residential development and high density residential. Those stops on the Fastrack route(s) that are not within the centres should also be a focus for higher density residential development.

4.19 Policy MDS 5 proposes that Eastern Quarry should contain a wide range of uses – primarily residential with supporting community, leisure, employment and retailing uses meeting local needs together with significant areas of public open space and water features. At least one third of the site area is to remain undeveloped. This will include Green Grid elements, natural areas – including the cliff faces, formal open spaces and water features. There is a requirement that at least two thirds of developable floorspace be in the form of residential development. The resulting mix must comply with the policies and standards contained in the Local Plan Review Second Deposit Draft. An intended mix, in the form of a land use budget, should accompany the master plan (although it is appreciated that revisions may occur to this over time as progress is made in the redevelopment of the quarry and sub-station).

4.20 The disposition of the main uses and their intensity will be largely driven by the approach to **public transport orientated development** as described above. **Mixed use development** will be required along the Fastrack route and particularly at the centres. Elsewhere, individual uses may be more likely to predominate (although still within a mixed use setting). It is important that wherever possible, an appropriate mix of residential and other uses should be sought at any point in time after initial development is underway.

4.21 **Substantial areas of open space** will be required within the site (see paragraphs 4.47 to 4.55 for further details) with appropriate links between them. It will be important to prepare a biodiversity action plan for the site to accompany the Masterplan. In addition, the greening of the residential environment itself should form a strong theme within the development, and in turn, contribute to local biodiversity. It is also anticipated that there is

potential for the use of open water features throughout the site. Large water bodies are most likely to be located in the south and/or at the western end of the quarry where currently pumped areas are below that of the River Thames. Positive management plans will need to be in place, for example to prevent excessive plant growth problems developing at certain times of the year. The resulting water bodies will likely be multi-functional in terms of visual amenity, local biodiversity, sustainable urban drainage and leisure and recreational potential.

4.22 Proposals should include a **community development and infrastructure strategy** to be submitted to the Council for approval. A key aspect of this will be the integration of the new communities at Eastern Quarry with existing, adjoining communities. To this end, development in the north of the site, adjacent to Swanscombe, is required to be physically integrated with the existing settlement, not to be isolated from it. Social and economic connections must also be explored in terms of access to employment and essential support services. Development proposals should include the consideration of a local labour scheme, as used to develop Bluewater, that utilises, and where necessary trains, local labour to help with the construction and implementation of the development. This could also include an element of self build that would help address issues associated with integrating new and existing communities.

4.23 As part of this exercise, liaison with the relevant service providers must be undertaken to ensure that key requirements are identified and phased for development at the appropriate time. This brief gives the Council the opportunity to highlight the nature and scale of community facilities which will likely be required to serve the needs of a development of approximately 7,250 units although this list is not exhaustive. The Local Plan Review Second Deposit Draft contains guidelines, which have been devised in conjunction with the relevant service providers, for assessing requirements. Readers of this brief are advised to consult the Local Planning Authority for further technical details relevant to these requirements. Assuming 7,250 residential units at Eastern Quarry yields the following requirements*:

- 6 x 2FE and 1 x 1FE Primary Schools, which must also incorporate adequate pre-school nursery provision;
- 1 x 6 FE Secondary School;
- 5 x Community Halls. A temporary community hall is necessary at the early stages of development to help enable a community to become established;
- 5 x Sports and Leisure Centres;
- 2 x Places of Worship;
- 2 x Health Centres (to provide General Practitioner, General Dental Practitioner and Community Health Care Services for the new development - Should GDP provision

* These requirements are based on a purely mathematical calculation for 7,250 units and do not take account of any surpluses or deficiencies in the area.

not be available 2 additional double surgeries for the Community Dental Service would therefore be required within this locality);

- 1 x Library or equivalent;
- 7 x Local Shopping Facilities;
- 2 x District Shopping Centres; and
- Social Services Facilities. Provision usually forms part of a joint facility located at for example schools or health centres.
 - One-stop drop-in office ideally attached to a health centre
 - Children's Services building or set of rooms for early intervention services. Must be independent of but attached to each primary school with separate entrance, kitchenette + toilets
 - Family Centre and Adolescent resource centre linked to secondary school
 - Day Centre for older people
- Adult Education Facilities
- Youth and Community Facilities

These requirements indicate the scale of needs, not the eventual form of delivery. The numbers of facilities are not fixed and should not preclude innovative approaches to the design and delivery of provision.

4.24 In principle, provision should be made on site. Alternative locations may be appropriate on adjacent sites if these can better serve the needs of the development. Community facilities should be located as much as possible within or near the centres. Provision can be made in the form of entirely new facilities, or upgrades to existing provision. New provision can also be co-located and/or integrated and this can bring sustainability benefits for example maximising opportunities for linked trips. This approach must be acceptable to the relevant service providers Temporary solutions involving phased or incremental provision may be appropriate in the early years of a development to ensure that facilities are provided concurrently with the residential development to which they relate.

4.25 Adequate provision of **affordable housing** is crucial for the success of Kent Thameside development. It is vital for the proper functioning of the local labour supply market as well as the creation of mixed communities. A Housing Needs Study for Dartford Borough was finalised in 2002 and the results fed into the Local Plan Review Second Deposit Draft. Readers of this brief are advised that the current affordable housing provision figure is 30%.

4.26 Affordable housing should be interpreted within the context of this site as meaning residential accommodation provided with a subsidy to ensure that the rent or sale price is set

and remains at a level that is genuinely affordable to local people whose income does not enable them to secure housing adequate for their needs through the open market.

4.27 Typically, at present, this will be social rented accommodation provided by a Registered Social Landlord (RSL) and will be allocated to existing tenants of the Council or Registered Social Landlords and those who are registered on the Council's "Common Housing Register". Social rented housing is defined as housing that is let at or below the Housing Corporation standard rent guidelines for the Borough

4.28 However, the Council also recognises that Shared Ownership and other sub market housing options, although beyond the means of many households, may help local labour markets operate effectively and still play a part in addressing identified needs. It is possible therefore that the proposals might include a small element of accommodation for those with 'intermediate' needs. In line with circular 6/98 where it is not proposed that an RSL approved by the Council will manage housing, the Council will expect to see measures in place that restrict occupancy to households who are genuinely in need, are affordable at both the outset and longer term and are safeguarded through planning agreement.

4.29 The size, tenure and mix of affordable homes, including any requirement for specialised housing to meet particular need groups, provided as part of a development proposal will be expected to reflect the local needs as identified by the Council in its annual Housing Strategy, taking account of any relevant guidance issued by government at the time. Potential developers are encouraged therefore to make early contact with the Housing Strategy team at the Council for the latest assessment of need.

4.30 The authority is keen to avoid high concentrations of affordable housing, particularly flatted accommodation, in one location and will expect the **affordable housing** provision to be both reasonably proportionate with the footprint of the residential development site as a whole and well related to the rest of the residential units. We believe this might be best achieved by arranging the affordable housing in clusters within other residential areas.

4.31 The Council is keen to improve the long-term "usability" of new homes. **Lifetime homes** include 12 basic features to ensure a new house or flat is suitable for all stages of its occupants' lives and is adaptable for use by people with disabilities. Essentially this means designing the house in such a way that it can be easily adapted with less disruption to occupants. Part M of the Building Regulations covers this issue but aims to achieve a "visitorability" standard rather than a lifetime home standard. Policy H21 and Appendix 6 of the Local Plan Review Second Deposit Draft sets out the design criteria which will be sought over and above that required by Part M. It is the Council's intention to seek an element of lifetime homes of 25% of general market housing and 25% of affordable housing.

4.32 The Council's expectation is for **existing power lines** running across development sites either to be removed or placed underground. This would reinforce environmental enhancement aspirations for Kent Thameside. Where this is not feasible, sensitive forms of development – typically housing, schools and places of higher education – will be required to be located at least 50 metres away from the power lines. Some recreation space may also be regarded as sensitive if the type or intensity of use poses safety issues.

Access and Circulation

Public Transport

4.33 The development of the site will require the provision of one or more **segregated public transport routes** between Bean Road and Bluewater to the west and Ebbsfleet to the east, as part of the Fastrack network. The Fastrack network is critical to the development and regeneration of Kent Thameside. It will provide the site with excellent links to major destinations within Kent Thameside, and speedy access to Ebbsfleet in particular from where Central London, as well as continental Europe, will be readily accessible. Careful attention will have to be paid to design, so that transport corridors do not sever communities either within Eastern Quarry, or between Eastern Quarry and elsewhere.

4.34 Development proposals must incorporate the provision of Fastrack infrastructure as an integral part of the development and secure the on-going, long term provision of appropriate services on this infrastructure. As part of the Fastrack network, provision is to be made for high quality stops and, where appropriate, interchanges. Real-time information must be provided at the stops. A detailed Fastrack specification will be provided to assist in the provision of this facility.

4.35 The concept of Fastrack is fundamental to the minimisation of traffic generation and to the built design philosophy for the site. The Council will require development proposals to provide a clear programme for the procurement and provision of Fastrack infrastructure and services across and within Eastern Quarry.

4.36 Provision should also be made for other bus services to serve the site, complementing the Fastrack network. The road layout should be designed to give priority to buses over cars.

Road Infrastructure

4.37 It is a requirement of the planning approval for the development of Ebbsfleet that an east-west route be provided across Eastern Quarry. The creation of new access points in the north west and at the eastern end of the site will allow for this. The Council does not wish to see this link provided as an isolated main route that could create a barrier (either through its design or use) within the new development or between the new development and existing communities at Swanscombe and Knockhall, or act as a short cut through the development. Rather, the Council wishes to see a series of routes across the quarry, as part of a **permeable grid**, integrated with the existing and new built form. These east-west routes should be designed to support local movement within Kent Thameside rather than serving any wider strategic role.

4.38 **New access points** into the site will be required for general traffic (as well as Fastrack). Primarily due to the topography, opportunities for these are limited. They are expected to be:

- in the north west of the site, connecting to the Bean Road roundabout, from where traffic can head north to Greenhithe, Crossways and the Dartford Crossing or south to the A2;
- in the west, where the re-opening of the tunnels may provide a Fastrack link to Bluewater;
- in the east of the site, linking to new roads that are to be constructed to service Ebbsfleet and which will provide access both to Ebbsfleet itself and to the A2; and
- also in the east, linking to the existing Southfleet Road and providing access to Swanscombe, but for local traffic and smaller vehicles only.

4.39 In the south, the existing access to the quarry off Watling Street should be retained, but in a way that does not encourage its use as a short cut for Ebbsfleet.

4.40 To the north, the potential for more direct linkages to Swanscombe should be explored. It is recognised, however, that the design of the residential area of Swanscombe abutting the site is such that no spurs have been provided, however there may be potential in the vicinity of Alkerden Lane. Opportunities for improving linkages may therefore be limited to those for pedestrians and cyclists, although a link for public transport services will be encouraged. The possibility of a general traffic link should only be pursued if it is shown to be acceptable both in the Transport Assessment and through local consultation.”

4.41 Proposals should include a **Transport Assessment** which must demonstrate the suitability of these access points together with any necessary off-site highway improvements. Any necessary transport improvements should be provided prior to development. Specific transport requirements are shown in Appendix 2.

Car Parking

4.42 To encourage the use of alternative modes, car parking should be kept to the minimum necessary. However, to reduce parking to an artificially low level before alternative means of travel are in place would simply produce excessive on-street parking. The proposals must include a **Parking Strategy** that links a reducing parking provision to the provision of alternative means of travel; in the early stages of development, it may be appropriate for example for some communal parking to be provided that might be removed later as better travel alternatives are made available. The Council's adopted maximum car parking standards will apply; parking provision should be lower than the maxima and increasingly so as other travel alternatives become available.

4.43 Proposals must be accompanied by **Travel Plans** as a means of encouraging less car use and, hence, the need for car parking. Initiatives such as "car clubs" which reduce the need for car ownership should be explored.

Walking and Cycling

4.44 **Pedestrian and cycle movements** will be an essential element of the new development. The ability to walk or cycle to the centres and to Fastrack and bus stops along convenient, safe, interesting and attractive routes will be particularly important.

4.45 The re-profiled quarry will inevitably produce some relatively steep gradients. Whilst this will add interest to the site, it is important that walking and cycling within the site are made as easy as possible, particularly along routes to the centres, community facilities and public transport stops.

4.46 New access ways into and out of the Quarry site (as described above) should contain safe dedicated routes for both pedestrians and cyclists.

Green Grid

4.47 The Thames Gateway Planning Framework (RPG9a) identifies the concept of a '**Green Grid**' which would join the main open areas with the frontage of the River Thames and link both existing communities and new development areas. The Green Grid is to raise

environmental quality, provide an attractive setting for new and existing development, accommodate leisure and recreational needs, provide movement corridors – especially for cycling and walking – and provide an ecological resource. Eastern Quarry is one of the key building blocks within the Green Grid network and the proposals must ensure that Green Grid provision and connectivity are fundamental to the overall design.

4.48 The Local Plan Review Second Deposit Draft's Policies MDS5, DD6 and DD7 require Green Grid elements from development at Eastern Quarry. The size of the site, its position between town and countryside, and its location at an important gateway to the area alongside important road corridors and on the Fastrack network, gives it strategic significance in terms of its potential contribution to the Green Grid. Its function within the Green Grid, in general terms, is primarily twofold. Firstly, with a substantial part of the site proposed for open space, it is an important resource in itself that can accommodate a wide variety of green spaces: semi-natural areas, possibly along the southern edge and as a buffer adjoining the Alkerden Lane Pit SNCI, large areas of public open space and more formal areas within the new development areas of the site. Although views out of and into the site are restricted, it is of such size as to create its own internal, and potentially, dramatic views and character. These opportunities should be exploited.

4.49 Secondly, Eastern Quarry has an important role to play in creating and enhancing north-south and east-west linkages within the wider Kent Thameside Green Grid. From Eastern Quarry, the Green Grid has the potential to extend, virtually uninterrupted, via Craylands Gorge to Swanscombe Peninsula and the riverside, crossing only one major road (A228 London Road). The re-profiling of the quarry and the arrangement of Green Grid links and spaces within the site should be undertaken to ensure that the connection to Craylands Gorge is maintained and enhanced. Movement to the south of Eastern Quarry into the Green Belt is severely hampered by the high chalk faces along much of the southern edge of the site and then by the A2. However, opportunities may exist to connect to both the Swanscombe Cutting footbridge over the A2 via the sub station site, and the Sandy Lane pedestrian underpass. North-south linkages should also exploit the opportunity to connect with Swanscombe and, via footpaths, to its existing open spaces, as well as enhancing links from Bean Road and Southfleet Road into the site.

4.50 Another important Green Grid related objective is to avoid the appearance of a continuous built-up development expanse. As such, the retention of a green wedge between the existing communities of Knockhall and Swanscombe and the new development in Eastern Quarry is both feasible and achievable. This would also help in spatially defining both the existing and new communities.

4.51 The Local Plan Review Second Deposit Draft also requires that an element of **community woodland** be incorporated within the Green Grid. Eastern Quarry is identified as one of six sites on the built up edge of Dartford where community woodland would act as a visual buffer between the urban area and countryside to the south. It would also help to reduce traffic noise within the site from the A2, as well as provide a recreational resource in itself.

4.52 East-west links and spaces should be put in place that enable one or more continuous connections from Ebbsfleet to Bluewater.

4.53 A number of important heritage sites, Swanscombe Skull site NNR, Craylands Gorge, Springhead Roman town and others within the wider Ebbsfleet valley, are located in the area adjacent to Eastern Quarry. Studies are about to be undertaken, within the framework of Green Grid, with the aim of improving management and interpretation of the archaeology and history of these particular sites and the wider area. The planning of Eastern Quarry, including transport and access links, should take into account the interpretation needs for heritage in the surrounding area, and the developer should also be asked to ensure that any surviving heritage features on, or adjacent to, the development site are enhanced as a result of the proposed development.

4.54 Any areas of significant ecological value that might be identified by surveys will be required to be incorporated in the Green Grid and/or other mitigating measures undertaken.

Open Space

4.55 The Local Plan Review Second Deposit Draft's Policy LRT12 sets standards for the provision of **open space** in new development. Assessing the requirements for an anticipated 7,250 units results in a requirement* of:

- 1 x Major Urban Park (incorporating neighbourhood and local play spaces);
- 7 x Local Park (incorporating neighbourhood and local play space);
- 15 x Neighbourhood play space (incorporating local play space);
- 36 x Local play spaces;
- 17 Playing fields; and
- 9 Allotment areas of 16 plots each

Design Principles and Themes

* These requirements are based on a purely mathematical calculation for 7,250 units. Some of the spaces will be capable of "nesting" within the larger spaces.

4.56 Eastern Quarry will play a vital role in the future urban structure of Kent Thameside. Development here will connect the heart of Kent Thameside between Dartford Town Centre and Bluewater to the west and Ebbsfleet and Gravesend Town centre to the east. It will be important to provide a comprehensive design vision and framework to accompany any Masterplan for the site. This should demonstrate how proposals at Eastern Quarry take account of the wider physical, community and functional context and how development can positively enhance this wider urban structure. **Connectivity** within and between communities, **linkage** through Fastrack and Green Grid and **high quality sustainable development** must form the cornerstones for designing future development. Beyond the requirements of Policy MDS5 which embraces mixed use, compact urban village, public transport orientated development, the Council does not wish to prescribe a particular design solution for the site. Instead, it will encourage **innovation** to achieve **design excellence**. To ensure that good design is achieved, a Design Statement will need to be submitted alongside the Masterplan. It is important that the opportunity be taken at this key location to reinforce the high standards that have been set at Bluewater, and the high standards that will be demanded of the Ebbsfleet development, to create a flagship location that will reverse any remaining negative perceptions of this area of Thames Gateway. It is also worth emphasising that the edges of the proposed site are relatively elevated - very visible - and there are long views to the northeast, east and south which should be taken into account in the overall design statement. **Public art** will have a key role to play in the design approach.

4.57 In seeking this, it is the Council's expectation that the development will:

- help set benchmark standards within Kent Thameside for sustainable development by encouraging resource conservation and re-use through such measures as, for example:
 - the minimisation of waste in the design and procurement stages of development;
 - the promotion of energy efficiency in the design and layout of new development;
 - the use of solar energy systems to limit the size of the power network;
 - the use of greywater and/or rain harvesting systems to limit the use of primary water resources;
 - the incorporation of sustainable urban drainage systems in order to address water environment issues in an integrated way; and
 - on site sewage disposal with consequent power generation.
- use innovative design, especially at key points and gateways and public spaces;

- incorporate high quality of life standards throughout the development for example noise attenuation measures where necessary, designs to plan out crime, air quality audits where necessary, up to date, planned cabling for IT and flexible spaces for multi-use (for example live/work units) and design which maximises accessibility and amenity for people with disabilities, especially in public areas.
- contain an attractive public realm throughout, including high quality, and well-proportioned open space in harmony with both natural and built environments with effective surveillance, together with positive management plans for its sustained maintenance;
- reinforce the route of Fastrack as the 'high street', along which the centres, higher density development and more intensive uses will be located;
- contribute to the creation and enhancement of Green Grid spaces and places and facilitate connectivity with surrounding communities;
- use public art and local materials to help encourage a sense of place;
- encourage a sense of place still further by utilising the scale of the site, the new landform and design of key buildings, to create neighbourhoods and clusters of individual identity;
- use the backdrop of the dramatic cliff faces for imaginative design solutions;
- foster the site's unique location on the edge of the countryside yet at the heart of a future, major urban location;
- incorporate high quality landscape design (and provide positive management plans for its upkeep thereafter);
- encourage nature conservation; and
- address the issue of gradient both within and between the site so that it does not form a barrier to achieving sustainable connectivity.

5. CONCLUSION

5.1 The development of Eastern Quarry will bring many opportunities: to existing local residents, who will benefit from the new facilities and new jobs that will be found there: to the new residents and workers within the site, who will enjoy a high quality, sustainable environment with excellent accessibility; and strategically, by realising a key opportunity within

Thames Gateway, without which the Government's wish to see Thames Gateway act as a counter-attraction to development to the west of London would be undermined.

5.2 It will however take some time before the full potential of Eastern Quarry is realised, perhaps 20 years. Mechanisms will need to be put in place as part of any future planning approval for the redevelopment of the site that are responsive to new ideas and concepts that will inevitably emerge in the later phases of the site's redevelopment: it is simply not possible to determine today precisely what will be appropriate in a decade or two decade's time. The guidance contained in this brief is however intended to provide a framework that will facilitate a leading-edge development.

5.3 Although the broad principles of this Supplementary Planning Guidance are expected to remain relevant for many years to come, the SPG will be kept under review and revised when necessary. In terms of next steps, it is expected that the developer will undertake and prepare in tandem, an environmental assessment and a Masterplan for the site which will set out the parameters for development and the overall vision and structural elements that will need to be fixed to guide future development in Eastern Quarry. It is quite possible that more detailed "part masterplans" will be needed to guide development as it becomes phased for delivery. The overall thematic strategies and action plans required by the brief may need to follow a similar pattern of preparation.

APPENDIX 1: POLICIES IN THE LOCAL PLAN REVIEW SECOND DEPOSIT DRAFT

This brief should be read in conjunction with the Dartford Borough Local Plan Review Second Deposit Draft. Policies of particular relevance to Eastern Quarry are:

Major Development Sites

MDS5 Eastern Quarry

Development and Design

DD1 Public Transport Orientated Development
 DD2 Mixed-Use Urban Villages
 DD4 Mixed-Use Development
 DD6 Green Grid and Development Sites
 DD7 Community Woodland in the Urban Fringe
 DD11 Development and Design General Criteria
 DD12 Access for the Less Mobile
 DD13 Security
 DD14 Public Art

Housing

H1 Housing Provision
 H1a Strategic Sites
 H8 Layout, Design and Density
 H10 Vehicles in Residential Development
 H16 Affordable Urban Housing
 H18 Payment in Lieu of Affordable Housing
 H19 Special Needs Accommodation
 H21 'Lifetime' Homes

Employment

E1 Provision of Employment Land
 E10 Amenity

Transport

T1 Fastrack
 T2 Channel Tunnel Rail Link
 T7 Transport Infrastructure and Services
 T8 Off Site Transport Measures
 T9 New Accesses
 T11 Vehicle Parking Requirements
 T13 Parking Strategy
 T14 Parking Layout
 T15 Cycle Parking
 T16 On Site Design and Transport Measures

- T17 Travel Plans
- T18 Transport Assessments

Retailing

- R1 Retail Development: Sequential Approach
- R4 District and Local Shopping Centres
- R5 Takeaway and Drive Through Restaurants

Community Facilities

- CF1 Community Facilities – Siting and Accessibility
- CF2 Utilities Infrastructure – Siting and Design
- CF3 New Development Requirements

Leisure, Recreation and Tourism

- LRT5 New Sports and Recreational Facilities
- LRT6 New Playing Fields
- LRT12 New Open Spaces
- LRT15 Public Rights of Way

Built Environment

- BE17 Overhead Power Lines

Natural Resources

- NR1 Sewerage and Drainage
- NR4 Surface and Groundwater Protection
- NR5 Water Resources
- NR8 Surface Water
- NR10 Air Quality: Minimisation of Pollutants
- NR13 Noise: Residential Development
- NR14 Noise: Non-Residential Noise-Sensitive Development
- NR15 Noise Impact
- NR16 Noise Assessments
- NR20 Contaminated Land
- NR21 Decontamination of Residential Sites
- NR22 Renewable Energy
- NR23 Energy Efficiency

Attention is also drawn to Section 1, The Future Strategy for Dartford, and in particular to sub-sections 1.8 (Recycled Land), 1.13 (Social and Community Facilities), 1.14 Green Grid, 1.16 (Future Strategic Patterns of Development) and 1.17 (Future Urban Structure), and Figures 3 (Urban Structure Diagram) and 4 (Green Grid Conceptual Diagram).

Appendix 2: Eastern Quarry Transport Requirements

Rail

Eastern Quarry is not directly served by rail. However, development in Eastern Quarry will need good links to:

- Ebbsfleet CTRL station (for both domestic and international journeys);
- Greenhithe NKL station (especially from the western half of Eastern Quarry); and
- Swanscombe NKL station (this may be a convenient station for people in the northern and eastern part of Eastern Quarry, although it is likely to have a lower frequency service than Greenhithe).

Development in Eastern Quarry will need good links to/from these railheads in the form of attractive pedestrian and cycle routes and by local public transport services.

Fastrack

The development of the site will require the provision of one or more segregated public transport routes between Bean Road and Bluewater to the west and Ebbsfleet to the east, as part of the Fastrack network. The Council will require development proposals to provide a clear programme for the procurement and provision of Fastrack infrastructure and services across Eastern Quarry.

The proposals must ensure the provision of the necessary Fastrack infrastructure as an integral part of the development. The proposals must also secure the provision of appropriate services on this infrastructure. As part of the Fastrack network, provision is to be made for high quality stops and, where appropriate, interchanges. Real-time information will be required at Fastrack stops. Fastrack stops should be sufficient in number to minimise walking distances, whilst not being so frequent as to have a negative effect on journey times.

Elsewhere within the site, provision should be made for on-road feeder bus services to the Fastrack network. The road layout should be designed to give priority to buses over cars.

Other Local Public Transport

Commitment will be needed to the provision of local bus routes to provide services to appropriate destinations. The developer, operators, the local planning authority and the local transport authority will need to consider together the potential routes that will be needed at each stage of development.

Particular links are needed to Greenhithe Station and, if at all possible, into Swanscombe. Other likely destinations will include Dartford, Crossways, Bluewater, Ebbsfleet and Swan Valley School.

With phased development in Eastern Quarry, local bus services may be appropriate to some parts of the development before a Fastrack route can be established.

Within the site, buses may not necessarily keep to Fastrack corridors. Suitable roads should be provided to enable some additional public transport penetration to parts of Eastern Quarry that Fastrack might not easily reach.

Main Traffic Routes and Access

Provision for east-west traffic is needed across the site both to serve Eastern Quarry's needs and those of development at Ebbsfleet. This route should be designed as an integral part of a permeable grid through Eastern Quarry and not be a cause of severance.

Key access points to Eastern Quarry by road are likely to include those from St Clements Way (Hedge Place Roundabout), Watling Street (existing quarry access) and Ebbsfleet. It is important that further assessment is given to the design of these and any other road accesses so that the traffic impact of the development can be minimised, especially in terms of impact on the existing communities, existing built development and existing road users.

The relationship with the A2 trunk road is of key importance and early liaison will be needed with the Highways Agency. Attention is drawn to the proposal to widen the A2 to dual 4 lanes in each direction. Traffic generated by Eastern Quarry has potential to affect ease of access to/from the A2 both at Bean interchange and via Watling Street.

The Transport Assessment should identify the need for improvements to off-site road infrastructure to deal with traffic generated by Eastern Quarry, in consultation with Kent County Council and the Highways Agency.

Local Roads and Streets

The overall form of development in Eastern Quarry should be of a "permeable grid" nature, but where walk, cycle and public transport routes are more direct than equivalent routes by car.

The design of roads within the development should indicate a clear hierarchy and the purpose for which that road is intended. Road geometry and the massing of buildings should be the prime determinant of traffic speeds rather than have "retro-fitting" of traffic calming devices. The incorporation of "Home Zones" should be explored at design stage.

There should be at least two east-west single carriageway through routes across the development that provide both a means of accessing into and out of Eastern Quarry but also as a means of other traffic to cross the area.

Traffic Reduction

A public transport-orientated development such as Eastern Quarry should provide other travel alternatives that seek to reduce car dependence. However, the car may well be the most suitable means of travel for some journeys. Initiatives such as Community Car Clubs can help to reduce the need for people to own cars, while still retaining their ability to have access to a car if they need one. Car Clubs are now gaining in popularity in different parts of the UK and are already well established in parts of mainland Europe.

Development proposals should include a thorough assessment of how car use can be minimised.

Pedestrian and Cycle Access

Good quality pedestrian and cycle routes are a vital component within an urban village to provide ease of access between where people live and the facilities they need. Similarly, such routes should also be provided to establish links with the surrounding new and existing communities. Attractive links will be needed to the west (Bluewater), north (Greenhithe, Knockhall and Swanscombe), east (Ebbsfleet) and south (across the A2 to the rural area beyond).

Appendix 3: Green Grid Guidance

The overall vision for the Thames Gateway's Green Grid represents a transformation of the present environment into a highly attractive and distinctive place in which to live, work or invest. Key to this is the provision of a framework of attractive open spaces, linked by a web of multi-functional green corridors. These connections will link existing communities with new development, the River Thames and the wider Kent countryside. Major development sites have a vital role in the development of the Grid as they will provide strategic Green Grid features as well as connections.

Paragraphs 4.47 to 4.54 highlight Green Grid issues with regard to development at Eastern Quarry. Preparation of the master plan for the site will need to establish the strategic position and role of the site in relation to its wider Green grid context, covering:

- The general landscape character of the surrounding area;
- The wildlife resource of the site and its vicinity – its full biodiversity context and any functional interrelationships;
- Strategic elements of the Green Grid in the vicinity of the site and key linkages;
- The position of the site in relation to "gateways" or strategic transportation corridors;
- Key views to be exploited;
- Key landscape elements which give the site a distinctive character or are typical of the wider landscape context;
- Designated areas or features of positive or negative landscape quality which require protection, enhancement or mitigation;
- The opportunities for wetland creation within areas of the site which will be flooded after ground remodelling;
- The opportunity to take advantage of the site's dramatic landform to create a distinctive and varied new landscape as a major resource and setting for new development, and to tie in with landform features in surrounding areas eg Craylands Gorge; and
- Community Woodland – Eastern Quarry is identified for its potential to incorporate a significant visual and functional buffer of community woodland between the development and the countryside beyond.

The collection of this information and initial design work will need to establish the specific Green Grid objectives for development at Eastern Quarry. The developer(s) needs to produce a clear statement of:

- Key strengths, weaknesses and opportunities for Green Grid development, taking into account local needs for access, open space and habitat provision and the strategic position of the site within the wider Grid;
- Specific Green grid objectives and aspirations for Eastern Quarry;

This in turn will lead to the production of 2 key elements of the master plan:

- A clear statement on how the development site should contribute to and integrate Green Grid objectives; and
- A contextual plan

The contextual plan should set out the range, disposition and function of Green grid components (ie spaces, connections and habitat) that are to be included within the site as part of the development proposals. It should describe:

- The range of Green Grid components to be provided and their intended function;
- The relative proportion of the site that will contribute to the Green Grid (including greenspaces, urban spaces, access and habitat corridors and structural landscape) as opposed to built development;
- The disposition of Green Grid components within the site and their connections with each other and other components beyond the site boundaries;
- A statement of the overall character and quality to be achieved for the Green Grid within the site as a whole;
- Descriptions of design themes / character for individual components of the Grid including greenspaces, hard landscape areas, boundaries, wildlife and access corridors etc
- An indication of the type and quality of materials and species to be used within the different components of the Grid and supporting material in the form of indicative lists, cross-sections or other illustrations or descriptions;
- Consideration of the opportunities for innovation in design and the provision of special features to create a distinctive sense of place.

A vital element of any Green Grid components is provision for their implementation and aftercare. The development proposals should set out how the Green Grid is to be implemented as part of the development, and the maintenance and management principles to be adopted. Typical considerations will include:

- phasing of implementation
- co-ordination of connections (levels/design details) with Green Grid components on adjoining sites, or linkages into and out of Eastern Quarry;
- details of the maintenance and management requirements for individual components of the Grid;
- details of the arrangements for high quality, long-term aftercare, the potential handover to successor bodies and funding mechanisms.

Further Reading

National Government Publications

- *The Thames Gateway Planning Framework – RPG9a – June 1995*
- *Regional Planning Guidance for the South East – RPG9 – March 2001*
- *By Design – Urban Design in the Planning System: Towards Better Practice – 2000*
- *Places, Streets and Movement - 1998*
- *Sustainable Settlements: A Guide for Planners, Designers and Developers - 1995*
- *PPG1 – General Policy and Principles - 1997*

Kent County Council Publications

- *Kent Structure Plan – 1996*
- *Kent Design - 2000*

Dartford Borough Council Publications

- *Dartford Borough Local Plan Review Deposit Draft – March 2000*
- *Dartford Borough Local Plan Review Second Deposit Draft – (date tbc)*
- *Eastern Quarry – Draft Planning Brief For Public Consultation – February 2002*

Kent Thameside Association Publications

- *Kent Thames-side – Looking To the Future (original) – Autumn 1995*
- *Looking to the Future (social + community aspects update) – March 1997*
- *Looking to an Integrated Future (transport update) – March 1999*

Economic Development Publications

- *Kent Prospects Economic Strategy 1996-2000*
- *Kent Prospects Update 2001 – Draft*
- (see www.kentprospects.org.uk)

- *Kent & Medway Economic Board's Action Plan*
- (see www.kmeb.org.uk)

- *Economic Development Strategy for Kent Thameside 2001-2006*
- (see www.kent-thameside.org.uk)

- *North Kent Area Investment Framework – April 2002*
- (see www.thamesgateway-kent.org.uk)