

## **ADDENDUM TO JSPA BACKGROUND PAPER No. 1**

### **ASSESSMENT OF SPECIFIC ALTERNATIVE LOCATIONS FOR URBAN EXTENSIONS TO THE PLYMOUTH PUA WITHIN DEVON**

**May 2003**



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### **1. Scope and Content**

1.1 This paper summarises the Joint Structure Plan Authorities' (JSPA) assessment of alternative options for the development of urban extensions to the Plymouth PUA within Devon. In doing so it focuses on a number of key strategic criteria and represents a more detailed comparison of specific development alternatives. The analysis builds on detailed work undertaken in preparing the Background Papers published in July 2002.

Appendix I : illustrates the extent of development constraints affecting the Plymouth PUA  
Appendix II : sets out a comparative summary of the assessments undertaken  
Appendix III : sets out the basis for the indicative assessment

### **2. Background**

2.1 In assessing development options as part of the Alteration the JSPAs were able to draw on a substantial amount of analysis and assessment undertaken for the preparation of the adopted Structure Plan – and the conclusions reached by the Panel following the previous EIP. This analysis has also been supplemented, since 1997, by more detailed work undertaken by both the District Councils and the Strategic Planning Authorities in developing specific proposals as set out in the Local Plans for East Devon and South Hams. This process has involved the assessment of specific options through a Local Plan Issues consultation process and detailed work undertaken in developing First Deposit versions of the Local Plans for the period to 2011.

2.2 Notwithstanding all of this existing and ongoing work, the JSPAs have been keen to undertake further assessment of all suggested development options as part of the Alteration process, so as to ensure that the reasoning behind their conclusions relating to the proposed development distribution in each area are clear. This paper therefore sets out a more focused assessment of broad development locations, undertaken in the context of the specific representations made on the Deposit Structure Plan.

2.3 The analysis of strategic constraints undertaken in preparing the Deposit version of the Structure Plan Alteration identified a number of absolute constraints, such as location within a National Park or AONB, and therefore precluded a limited number of areas close to the existing Plymouth PUA boundary from consideration as potential development locations.

2.4 A number of other locations, while not specifically precluded at this first stage, were also rejected on the basis of topography (suitability for development / physical isolation) or inaccessibility.

2.5 Remaining areas for consideration within Devon were identified north of the existing PUA (Woolwell / Tamerton area), east of Langage (Lee Mill area), north of Plympton (Boringdon area), east of Plympton (the Newnham area) and east of Plympton / Plymstock (Sherford area). These options broadly correspond to specific alternatives suggested by objectors to the Deposit Plan.

2.6 Background Paper No 1 published alongside the Deposit Plan in July 2002 (the Plymouth Sub Regional Study) set out the conclusions of the strategic assessment of these options and identified the Sherford area as the most sustainable option. This strategic conclusion was supported by additional assessments undertaken by South Hams District Council in respect of their Local Plan.

2.7 In the case of the Plymouth area, the additional analysis set out in this Paper has confirmed clear strategic advantages for the development of the Sherford area, shown as an urban extension on Diagram 6 of the '*Pre EIP Changes to the Deposit Structure Plan*' document, in terms of achieving the most sustainable development pattern.

### **3. Analysis of Strategic Constraints and Identification of Development Options**

- 3.1 The main constraints affecting the Plymouth PUA within Devon are illustrated in Appendix I.
- 3.2 It shows the extent of the Tamar/ Tavy and South Devon AONBs and the proximity of Dartmoor National Park. These have been regarded as absolute constraints to major development. There is also a limited degree of localised constraint related to flood risk.
- 3.3 The map also shows the extent of local landscape designations (AGLV) relating to the Plym Valley and the extensive areas of mineral working and mineral consultation areas as defined in the Devon Minerals Local Plan. The AGLV, while not a national designation, does reflect both landscape quality and topographical characteristics which might constrain development potential. Those areas of higher quality agricultural land to the north and east of the City are also defined.
- 3.4 In the context of the extent of absolute constraints, the map illustrates the remaining areas for consideration for strategic development close to the PUA :

#### North of the City

- A : the Tamerton area
- B : the Woolwell area

#### North / North East of Plympton

- C : the Boringdon area
- D : the Newnham area

#### East of the City

- E : the Plympton / Plymstock (Sherford) area
- F : the Lee Mill area

### **4. General Assessment set out in the JSPA Background Paper**

#### **4.1 North of the City**

*“There is potential to extend the city to the north west. However, the area is constrained to the north by the Tamar/Tavy Area of Outstanding Natural Beauty. In addition because of the topography, access would either be to the north, which is very poor, or from the west which is also restricted and would have major implications for the Tamerton Foliot Conservation Area and the road network within this part of the City.*

*There is also potential to extend the City to the north, forming an extension to the existing modern housing estate which lies in the South Hams, just outside the City boundary. However, the area is constrained to the north by Dartmoor National Park, and further development at this locality could have an adverse effect on views from the Park. None the less, development in this area could be seen as a rounding off the City to the north”.*

#### **4.2 North / North East of Plympton**

*“There is potential to extend the City to the north of Plympton. However, accessibility to this area is constrained by topography and the form of the existing urban development. There is also very limited potential for local employment provision.*

*This location may be considered sustainable in strategic transport terms, in that it is located relatively near to an existing employment area, offering the opportunity to reduce distances for work journey travel. However, the area has limited links to existing facilities and services, therefore its development would need to take the form of a self contained urban extension, connected to the city by an effective public transport network.”*

#### 4.3 East of the City

*“There is potential to extend the City to the east, beyond the potential mineral extraction area and the proposed new community. This area has the potential to capitalise on the proposed public transport improvements that will be required to service the new community, as well as being well related to current and future major employment areas at Langage. However, the further south one looks, the more remote the area becomes from the Langage employment site; and the further east one looks, the more remote the area becomes from the City Centre. It will also be important to avoid coalescence with existing settlements such as Ivybridge...”*

#### 4.4 The overall conclusion arising from the JSPA Plymouth Sub Regional Study was that :

*“the opportunities to accommodate any additional needs through planned urban extensions to the PUA are limited by extensive national environmental designations. These effectively limit strategic development options to the northern fringes and a corridor running east from Plymouth ...”*

*“In the period to 2016 ...the proposed new community in South Hams at Sherford is considered to offer the most sustainable location for an extension to the Plymouth PUA”.*

### **5. Assessment of Specific Development Locations**

5.1 The following sections of this paper set out the strategic conclusions reached by the JSPAs in respect of each of the specific development options identified as a result of the consultation processes undertaken.

#### **Assessment Criteria :**

5.2 The following strategic criteria have been used as the basis for assessing alternative locations for major strategic development.

- Landscape and other constraints
  - impact on the landscape – strategic and local
  - physical and other constraints – minerals, agricultural land, topography
- Effective links to the PUA
  - effective links to urban transport networks – pedestrian, cycling, car / bus
  - access to the strategic road and rail network
- Access to employment and other facilities – existing and planned
- Realising the potential for sustainable transport access and modal choice
- Delivering self containment and local facility provision
- Effective implementation and longer term development potential

5.3 These strategic criteria can be related to policies and proposals as set out in the draft Alteration version of the Structure Plan (as amended by the pre EIP Changes).

#### **Landscape and other constraints**

- Policy ST1** : Policy Criterion 2 protecting environmental assets  
**Policy ST8** : Policy Criteria 1, 2, 6 : landscape assimilation, agricultural land and minerals  
**Policy CO14** : Policy Conserving agricultural land  
**Policy CO16** : Development and noise  
**Policy MNI** : Conserving mineral deposits

#### **Effective links to the PUA and strategic transport networks**

- Policy ST1** : Policy Criterion 5 developing sustainable transport systems  
**Policy ST4** : Policy Capacity of existing infrastructure  
**Policy ST8** : Policy Criteria 3,4 and 5 relating to Plymouth, early road based public transport and access to the strategic road network  
**Policy TR2** : Reducing the need to travel and interaction with other land uses

- Policy TR7* : *Walking and cycling networks*  
*Policy TR10* : *Strategic Road Network*

**Accessing employment and other facilities**

- Policy ST1* : *Policy Criterion 3 meeting employment needs in accessible locations*  
*Proposal ST19* : *Access to strategic employment sites*  
*Policy TR2* : *Reducing the need to travel and interaction with other land uses*

**Delivering self containment and local facility provision**

- Policy ST1* : *Policy Criterion 3 meeting employment needs in accessible locations*  
*Policy ST3* : *Providing a range of local facilities*

**Realising the potential for sustainable transport access and modal choice**

- Policy ST1* : *Policy Criterion 5 developing sustainable transport systems*  
*Policy TR2* : *Reducing the need to travel and interaction with other land uses*  
*Policy TR7* : *Pedestrian and cycle networks*  
*Policy TR9* : *Major development in locations accessible to public transport*

**Effective implementation and longer term development potential**

- Policy ST5* : *Bulk of development at the PUAs*  
*Proposal ST8* : *Capability to develop beyond the current plan period*

5.4 Appendices II and III set out an indicative framework against which it is possible to measure the characteristics of each potential development location on a comparative basis. In doing so the criteria have been weighted in order to reflect whether they are considered to be critical or essential for the achievement of sustainable development (3), important for its achievement (2) or desirable (1).

**A : Tamerton area**

**Impact on the Landscape**

5.5 The area lies immediately to the south of and adjacent to the Tamar / Tavy AONB and is on prominent high ground. Although outside the AONB there is significant potential for development to impact upon its setting.

5.6 There are no local landscape designations affecting the area.

**Physical and other constraints**

5.7 The western part of the area is Grade 2 agricultural land, but there are no mineral consultation areas in the vicinity.

5.8 While the higher ground in the east of the area is relatively flat, the area slopes steeply at its southern and south western boundaries. The steep sided valley to the south and south west of the area limits the developable area and forms a major physical barrier between it and the northern fringe of the existing Plymouth PUA.

5.9 Substantial development in this area could also impact upon Tamerton Foliot – which is designated as a Conservation Area in the Plymouth Local Plan – either directly or in terms of its setting.

**Effective links to urban transport networks**

5.10 The Tamerton area is physically detached from the existing residential areas of the PUA, being separated from existing residential areas to the east by major employment development and from the south by a steep sided valley. The area could be accessed from the A386 but the only other link into the City is by way of a secondary, poor quality, route via Tamerton Foliot. This, together with the topographical characteristics of the area, make effective integration with the urban transport networks comparatively difficult in terms of public transport, pedestrian and cycle routing.

5.11 Public transport would also need to use the A386 corridor into the City. There is already a major congestion problem along this corridor – with consequent very limited scope for the introduction of public transport priority in the absence of major investment. Proposals to improve this road corridor will seek to

address existing capacity and public transport issues rather than generate new capacity required for any additional development.

### **Access to Strategic road and rail networks**

5.12 The area would access the strategic road network via the A386 which has significant existing capacity limitations. The A386 itself links into the A38 and access to the strategic routes out of the PUA to the east and west would therefore also be constrained by the congestion experienced on the A386. Any new development of a strategic scale to the north of the PUA would need to contribute towards significant investment in additional network capacity. In this context, the Plymouth Local Transport Plan 2001 – 2006 refers to the A386 corridor as one of the main “corridor problem” areas in the City, being congested to an extent that delays public transport [Plymouth LTP paragraph 3.3.1].

5.13 There would be no rail access to the area.

### **Accessing employment and other facilities**

5.14 The Tamerton area would be remote from City Centre employment but would be well related to the employment estates in the north of the PUA, such as Belliver and Roborough. The Estover employment area is also reasonably close, as is the proposed strategic employment development at the International Business Park, but access would again be via the A386.

5.15 Development in this location would however be remote from other existing community and retail facilities in the north of the PUA – and from those located in the City Centre.

### **Realising the potential for sustainable transport development and modal choice**

5.16 In view of the constraints on the A386 and the limited links into the existing City transport networks, it is considered that there is little scope for achieving high levels of non-car access from this area. There is no rail access and other public transport services are dependent upon the constraints to the A386 corridor being overcome. The scale of development possible in this area is also limited and, particularly given the area’s peripheral location relative to the remainder of the PUA, this will make it difficult for significant levels of public transport access to be viable. The area would therefore be likely to perform poorly in terms of meeting sustainable transport objectives.

### **Delivering self containment and local facility provision**

5.17 The scale of potential development that could be accommodated in the area – even setting aside the other constraints to development – would not be sufficient to create a critical mass necessary to support a significant level of local provision for education or other community / social facilities.

5.18 Although the area is accessible to existing employment opportunities in the north of the PUA, there would be limited scope to accommodate additional employment development within the area itself in addition to residential development.

5.19 Self containment would therefore be very limited with a consequent need for residents to travel for most of their needs.

### **Effective implementation and longer term development potential**

5.20 Any significant level of development in this area would only be able to proceed after the existing constraints on the A386 have been effectively addressed, and this would therefore preclude early implementation.

5.21 The effective capacity of the Tamerton area to accommodate residential / mixed development is severely limited by its inaccessibility, its isolated location and its sensitive landscape / topographical setting. The capacity of the area is also constrained by major physical / topographical barriers.

## **B : The Woolwell area**

### **Impact on the Landscape**

5.22 The area lies to the south of Dartmoor National Park and is on prominent high ground. Although outside of the Park itself, the site slopes towards the east / north east and there is therefore potential for development to impact significantly upon the setting of the Park – and this would be a major constraint on the scale of development achievable in this area.

5.23 The eastern fringes of the Woolwell area are adjacent to an area of landscape importance as reflected in the AGLV designation in the adopted Structure Plan and South Hams Local Plan.

### **Physical and other constraints**

5.24 The area is not affected by mineral consultation areas or higher grade agricultural land. The area slopes progressively down to the Plym Valley to the east and there is a secondary valley area to the north of the main hill top plateau forming the main part of the area.

### **Effective links to urban transport networks**

5.25 The Woolwell area could be accessed from the A386, although this has capacity limitations, and there is also some potential for it to link into the existing local urban transport networks serving the Roborough area and the existing Woolwell development.

5.26 Existing public transport services in the Woolwell area could be extended to serve additional residential development, but increased service provision would be constrained by the capacity limitations on the A386.

### **Access to Strategic road and rail networks**

5.27 The area would access the strategic road network via the A386 which has significant existing capacity limitations. The A386 itself links into the A38 and access to the strategic routes out of the PUA to the east and west would therefore also be constrained by the congestion experienced on the A386. Any new development of a strategic scale to the north of the PUA would be dependent upon additional network capacity – but it is not clear that such improved capacity can be achieved without major new investment, or how the constraints affecting the A386 corridor can be effectively addressed.

5.28 There would be no rail access to the area.

### **Accessing employment and other facilities**

5.29 The Woolwell area would be remote from City centre employment but would be well related to the employment estates in the north of the PUA, such as Belliver. The Estover employment area is also reasonably close, as is the proposed strategic employment development at the International Business Park.

5.30 The area would also be close to the existing district centre at Woolwell and additional development could help to support additional facilities.

### **Realising the potential for sustainable transport development and modal choice**

5.31 In view of the constraints on the A386 and the limited links into the existing City transport networks, it is considered that there is little scope for achieving high levels of non-car access from this area. There is no rail access and other public transport services are dependent upon the constraints to the A386 corridor being overcome. If this was the case, the scale of development possible in this area could support significant levels of public transport access.

5.32 In the absence of improvements being secured in this corridor, the area would be likely to perform relatively poorly in terms of meeting sustainable transport objectives

### **Delivering self containment and local facility provision**

5.33 In view of the capacity of the strategic road network (A386) there is very limited scope for future additional employment development to the north of the PUA although there could be physically suitable employment development sites within the area.

5.34 The Woolwell area would form a physical extension to the existing PUA, lying to the north east of the existing Woolwell development and having access to existing facilities. A reasonable level of self containment could therefore be achieved within the area with a consequent reduction in the need for residents to travel for some of their needs. In this context the area would not be able to achieve a critical mass which could support key facilities such as secondary education.

### **Effective implementation and longer term development potential**

5.35 While there is physical capacity for the Woolwell area to accommodate a significant scale of residential / mixed development, this capacity is severely constrained by its dependence on the congested A386 corridor. There would therefore be limited scope for early development in this area, and strategic development in the longer term would be similarly constrained unless the existing congestion on the A386 can be overcome to allow for accommodating both additional traffic and a major enhancement of public transport accessibility.

## **C : Boringdon area**

### **Impact on the Landscape**

5.36 The Boringdon area is some distance from the DNP boundary but would be visible from some parts of the National Park. The Boringdon area lies immediately to the south of an AGLV related to the Plym Valley.

5.37 The area consists of high ground, which is particularly prominent from within the existing PUA on its southern and western sides and it would therefore be an elevated site visually and physically detached from the existing PUA.

### **Physical and other constraints**

5.38 The western and extreme eastern parts of the area are Grade 3a agricultural land and there are also pipelines crossing the area related to the operation of the china clay works within Plympton. The area is constrained to the north by the deep wooded valley of the Plym and to the east by the Tory Brook valley.

### **Effective links to urban transport networks**

5.39 The Boringdon area would have to be accessed from the existing Plympton estates – at the eastern and western margins of the area. In both cases such access would be extremely difficult to achieve effectively, particularly for pedestrian and cycle access. Although close to the existing Plympton development much of the area would be detached from transport networks in the existing built up area (by a prominent ridge unsuitable for development in landscape terms).

### **Access to Strategic road and rail networks**

5.40 The Boringdon area is remote from the strategic road network, and access to the A38 to the east and south would involve the use of the existing suburban road network within the Plympton area. This network is not designed to accommodate significant additional through traffic.

5.41 There is physical potential to provide a new access route into the area from the west – through the provision of a prominent new road linking it to the Coypool area and the Marsh Mills junction on the A38. This route would represent a major investment and involve new road construction on steeply rising land on the western edge of the area. Even if technically feasible this access route would still need to overcome major capacity / junction design issues.

5.42 There is no rail access to the area.

### **Accessing employment and other facilities**

5.43 The Boringdon area is poorly related to the main existing and planned employment centres in the PUA, having no direct access except via Coypool and Marsh Mills. There are smaller scale employment opportunities within Plympton, but access is again constrained by capacity on the existing road network and the need to provide a new access route from the west.

5.44 Similarly there are existing facilities within Plympton which are relatively close to the Boringdon area but again access to these facilities is poor.

### **Realising the potential for sustainable transport development and modal choice**

5.45 In view of the topography of the area and the separation between the area and existing development, the potential for a high level of pedestrian and cycle access is limited. The restricted scope for road access similarly limits the potential for a high level of public transport penetration and usage from the area. The location is therefore likely to perform poorly in terms of meeting sustainable transport objectives.

### **Delivering self containment and local facility provision**

5.46 The scale of development likely to be feasible in the Boringdon area would not be sufficient to support a significant level of local provision for education or other community / social facilities.

5.47 The poor accessibility of the area precludes the provision of any significant element of local employment opportunity - even though some parts of the area could physically accommodate that form of development.

5.48 The potential degree of self containment possible in the area would therefore be limited with a consequent need for residents to travel some distance for most of their needs.

### **Effective implementation and longer term development potential**

5.49 While there may be physical capacity for the Boringdon area to accommodate a significant scale of residential development, the site has a finite capacity and clear physical boundaries constraining development in the longer term.. There are however major constraints to development relating to its poor links to existing development, its poor accessibility to employment and its local environmental impact. Early implementation would not be possible in that the major new access route into the area from the west would be necessary before any scale of development could be accommodated.

## **D : Newnham area**

### **Impact on the Landscape**

5.50 The Newnham area is relatively remote from the DNP boundary and is not visually prominent from within the Park. The eastern part of the area lies close to an AGLV as defined in the South Hams Local Plan. The area lies to the east of Plympton and is on rising ground which is prominent from within the PUA the west.

### **Physical and other constraints**

5.51 The area is constrained to the south by the main rail line, and to the west by the Tory Brook valley. It consists of sloping land with a limited area of more level ground forming a ridge running from east to west across the area. The southern margins of the area are much steeper and would be difficult to develop, service and access.

5.52 The developable area within the site would be constrained.

### **Effective links to urban transport networks**

5.53 The Newnham area would be accessed from the west via existing residential roads within Plympton. Access via the existing residential road network would be severely constrained without considerable improvement both within Plympton and to the rural network to the east – linking to the Langage area. This

would be costly and difficult to achieve. Although detached from the existing residential areas of the PUA, the Newnham area could link to existing urban, pedestrian and cycle routes.

#### **Access to Strategic road and rail networks**

5.54 Access from the Newnham area to the strategic road network could only be achieved via existing residential roads within Plympton or via the rural network to the east, crossing the Plymouth – Exeter rail line.

5.55 Although close to the rail line – there is no potential for station development in the vicinity.

#### **Accessing employment and other facilities**

5.56 The Newnham area would be close to the strategic employment site at Langage but direct access would be constrained by the main rail line. Access would need to be provided either via Plympton or via improved routes to the east of the area.

5.57 There are also existing employment opportunities and other facilities fairly close to the area within Plympton, but again these could only be accessed via the existing constrained Plympton local road network.

#### **Realising the potential for sustainable transport development and modal choice**

5.58 The Newnham area would provide opportunities for the promotion of pedestrian and cycle access, and could be served, to a limited extent, by an extension of the urban public transport network. The area could therefore achieve only a limited level of public transport penetration, and would perform relatively poorly in terms of meeting sustainable transport objectives.

#### **Delivering self containment and local facility provision**

5.59 There is limited scope for employment development within the Newnham area itself, because of its poor access and difficult topography.

5.60 The scale of development that could theoretically be accommodated in the area would not be sufficient to support a significant level of local provision for education or other community / social facilities.

5.61 Self-containment would therefore be extremely limited with a consequent need for residents to travel for most of their needs.

#### **Effective implementation and longer term development potential**

5.62 While there is physical capacity for the Newnham area to provide for a modest amount of development, difficult topography and access constraints further limit its capacity to accommodate major strategic development. The area would not have any longer term development potential.

### **E : Plympton / Plymstock (Sherford) area**

#### **Impact on the Landscape**

5.63 The Sherford area lies between the A38 to the north and the A379 to the south, extending eastwards within South Hams. The area slopes to the south and west from the ridgeline close to the A38 and consist of low hills and valleys. It is relatively self contained in visual terms.

5.64 The area is remote from national landscape areas – although the southern most part of the area is close to, but would not impact on, the South Devon AONB. No local landscape designations would be affected by development in the area.

#### **Physical and other constraints**

5.65 Part of the western periphery of the area consists of Grade 2 agricultural land.

5.66 This part of the area is also affected by both mineral working and consultation areas as defined in the Devon Minerals Local Plan. The weight attached to these constraints would need to be weighed against the strategic benefit of strategic residential / mixed development. The Joint Strategic Planning Authorities understand that the strategic importance of development in this area would outweigh the requirement to protect that part of the mineral resource within the Sherford Valley if it was the only constraint to development. That part of the mineral resource to the south west of the area (within the Sherford Valley) is of limited size and would not fall due for extraction within the next 250-400 years.

5.67 Although the area is affected by the high pressure gas main and electricity lines, these do not significantly constrain the overall development potential of the area and offer the potential for development to access these networks.

#### **Effective links to urban transport networks**

5.68 The developable part of the Sherford area is separate from both Plympton and Plymstock but has the potential to link these communities. Links into existing cycle and pedestrian networks would be limited – particularly to the north where the area is separated from existing development by the A38.

5.69 A second route between the area and Plympton runs to the north west of the area parallel to the A38 but this route has capacity constraints within Plympton itself. There is some potential to link into existing transport networks in Plymstock to the south west.

#### **Access to Strategic road and rail networks**

5.70 The Sherford area could be accessed from both the A38 and the A379 – both of which form part of the strategic road network. These routes suffer from a degree of congestion at peak times – the A38 at the Marsh Mills junction and the A379 at Laira Bridge. Accessibility to two routes within the strategic road network linking the area into the existing PUA has significant advantages in terms of the accommodation of additional traffic generation from potential new development.

5.71 The area would not have any direct rail access.

#### **Accessing employment and other facilities**

5.72 The Sherford area would be well related to the strategic employment area at Langage, but relatively remote from employment centres in the centre and north of the PUA. With regard to major education facilities, development in the area would support additional secondary education provision subject to the revision of existing catchment area boundaries.

5.73 Existing facilities exist both in Plympton and Plymstock and these would be relatively accessible from the Sherford area.

#### **Realising the potential for sustainable transport development and modal choice**

5.74 Although the A38 and A379 accommodate high levels of traffic there is potential for enhancing public transport priority on both of these routes. The A38 is a 6 lane road from the Deep Lane junction into the City which has the potential to accommodate a prioritised public transport link.

5.75 Both the A38 and A379 corridors provide the potential for both a circular public transport network and a linear public transport corridor approach - linking to the wider existing urban networks and enhancing their effectiveness. This area has also been assessed as having the potential to be served by high quality public transport systems, possibly including LRT, in that routing of such systems could link the Langage area into the City centre via Plymstock and the major redevelopment opportunity identified at the Blue Circle site within Plymouth.

5.76 The area would therefore be likely to perform well in terms of meeting sustainable transport objectives, and overall travel volumes associated with this location were lower than for the other development options tested (see Buchanan Study).

### **Delivering self containment and local facility provision**

5.77 The Sherford area would be able to support a scale of development that could achieve a high level of self-containment and a range of viable local facilities, employment and other services. The relatively unconstrained nature of the area indicates that such a scale of provision could be accommodated in this locality.

5.78 There is also scope for future significant and strategic additional employment development either at Langage or within the Sherford area itself.

### **Effective implementation and longer term development potential**

5.79 There is physical capacity for the Sherford area to accommodate a substantial scale of residential / mixed development in the period to 2016, but this would require the provision of significant infrastructure at an early stage of development. Given the provision of this infrastructure, there is physical capacity to accommodate significant additional development in the longer term.

5.80 Development in the Sherford area also has the potential to link with the major Blue Circle redevelopment within Plymouth in terms of supporting longer term public transport initiatives, funding major infrastructure and providing services and facilities.

### **F : Lee Mill area**

#### **Impact on the Landscape**

5.81 Much of the Lee Mill area is close to the National Park boundary. The land on the west side of the Yealm valley is prominent high ground, much of which would be highly visible from the National Park. Most of the land on the east side of the Yealm valley (excluding a section immediately adjacent to the Lee Mill Industrial Estate) is within an Area of Great Landscape Value.

5.82 The Lee Mill area lies between the existing PUA to the west and Ivybridge / Lee Mill employment area to the east. Major development in this area would therefore have considerable implications for reducing the separation of Ivybridge from the future PUA – and this would need to be seen in the context of Policy ST25 which requires that any new community development should not coalesce with existing settlements. If developed there would be a significant ribbon of development extending for approximately 9km east of the existing PUA up to the eastern boundary of Ivybridge.

5.83 Development would also impact upon the existing Lee Mill village.

#### **Physical and other constraints**

5.84 The Lee Mill area lies to the north of the A38 midway between Langage and Lee Mill / Ivybridge. The area is dissected by the floodplain of the Yealm valley with higher land to the east and west – and this could prejudice the achievement of a cohesive form of development in the eastern part of the area.

5.85 Although the area available for development is extensive there are therefore constraints, in terms of development form and cohesion, which could limit the ultimate development potential of the site.

#### **Effective links to urban transport networks**

5.86 The Lee Mill area is detached from the existing PUA and could not therefore be easily accessed through a direct extension to existing urban transport networks. To the west the area is also separated from the existing residential areas and their associated transport networks by the Langage strategic employment site. Links to the pedestrian and cycle networks would similarly be indirect and require significant investment to be effective.

5.87 Road transport would need to use the A38 to link with all destinations within the PUA and beyond with consequent implications for road capacity within that corridor. The area is bounded by the Plymouth – Exeter rail line and there would therefore be a theoretical potential to access some parts of the PUA using the heavy rail network.

5.88 The site would have the potential for close or direct access to both the Langage and Lee Mill employment areas.

#### **Access to Strategic road and rail networks**

5.89 The Lee Mill area could have direct access to the A38, subject to the provision of a major new junction, which forms a key part of the strategic road network within south west Devon. As a consequence, however, there would be a significant additional level of traffic reliant on the A38 and the main Marsh Mills junction in order to access the existing PUA.

5.90 The area is adjacent to the Plymouth – Exeter rail line and there is therefore potential for rail access – although the location for such access is restricted. There are questions about the frequency of service that could be achieved between this area and other destinations within the PUA given the existing levels of use on the line and the need to accommodate the operation of existing long distance and local train services. Any new station would also be at the northern edge of the area and could be costly to develop in view of local line gradients.

#### **Accessing employment and other facilities**

5.91 The Lee Mill area would be well related to the strategic employment area at Langage and the existing employment opportunities at Lee Mill, but it would be relatively remote from employment centres in the centre and north of the PUA. There is, however, scope for future significant and strategic additional employment development in the Langage area as envisaged in Proposal ST19.

5.92 The Lee Mill area would not be sufficiently close to existing facilities in Plymouth (ie Plympton) or in Ivybridge to enable those centres to meet the immediate needs of possible development in the area. In terms of secondary education, development in this area would involve more complex adjustment to existing catchment boundaries and would relate less well to existing provision and capacities than would be the case in the Sherford area.

#### **Realising the potential for sustainable transport development and modal choice**

5.93 The A38 corridor provides the potential for the development of a public transport corridor linking existing urban networks to Ivybridge via Lee Mill. If this can be provided, there is some scope for achieving fairly high levels of non-car access from this area. Because of its relative remoteness from the existing PUA, however, development within this area would generate a greater overall volume of travel need than other options (see the Buchanan Report).

5.94 The area would therefore have the potential to perform reasonably well in terms of meeting sustainable transport objectives – except in terms of pedestrian and cycle links. Such links will be limited in view of the remote location of the area from existing networks and destinations. The main constraint on delivery of high levels of public transport access is the capacity of the A38 to accommodate public transport priority / routing – unless a parallel high capacity public transport route can be provided.

5.95 The Plymouth Local Transport Plan 2001 to 2006 [Paragraph 5.4.5.1] refers to studies which indicate a possible LRT corridor linking the City Centre to Ivybridge via Plymstock. Such a route could access the Lee Mill area but would require a link from the A38 to the A379 / Laira area to be funded by development in addition to that section serving the Lee Mill area directly. The LTP implies that other options for LRT links from the Lee Mill area would be dependent upon shared use of the heavy rail network.

#### **Delivering self containment and local facility provision**

5.96 The Lee Mill area would not be sufficiently well related to either Plympton or Ivybridge to make those centres readily accessible and a high level of self-containment could therefore only be achieved within the area if it was to accommodate a scale of development capable of supporting a range of viable local facilities, employment and other services.

5.97 There is potential to accommodate some additional employment development within the area – related to the A38. If a sufficient scale of development can be accommodated in the area, a significant degree of self-containment may be achievable.

### **Effective implementation and longer term development potential**

5.98 Some development could take place in the south of the area close to the A38 with a limited level of infrastructure investment. However it is anticipated that development would need to be located in the north of the area, close to the main rail line and hence the National Park boundary, if rail access is to contribute to any significant level of public transport usage.

5.99 While there may be physical capacity for the Lee Mill area to accommodate a substantial scale of residential / mixed development in the period to 2016, in strategic terms there are critical factors, not least the landscape constraints and detachment from the existing PUA, which call into question the ability of the area to accommodate a sustainable form of development in the medium and longer term.

## **6. Assessment against strategic sustainable development criteria**

6.1 The assessment set out in **Appendix II** considers each development location against a common set of criteria. These criteria are weighted in accordance with the JSPAs assessment of the most important strategic factors to achieve the most sustainable location for growth. The criteria used are considered to reflect Structure Plan policy objectives, Regional Planning Guidance and Government policy as set out in PPG3 and PPG13. Appendix III sets out the basis for the specific assessment against each criteria.

6.2 The summary matrix in Appendix II illustrates that three of the locations assessed, **Tamerton, Boringdon and Newnham**, perform particularly poorly against the criteria and this is even more evident in respect of the most essential / critical criteria. The **Woolwell** area performs less poorly than these three locations but has major weaknesses in terms of the essential criteria – especially landscape, accessibility and self containment criteria.

6.3 Both the **Lee Mill** and **Sherford** locations perform significantly better than these first four locations, both in overall terms and against the essential / critical criteria. However there is a clear and decisive differentiation between the two areas in terms of their ability to achieve sustainable development, with **Sherford** performing better against both the overall and essential criteria.

## **7. Summary**

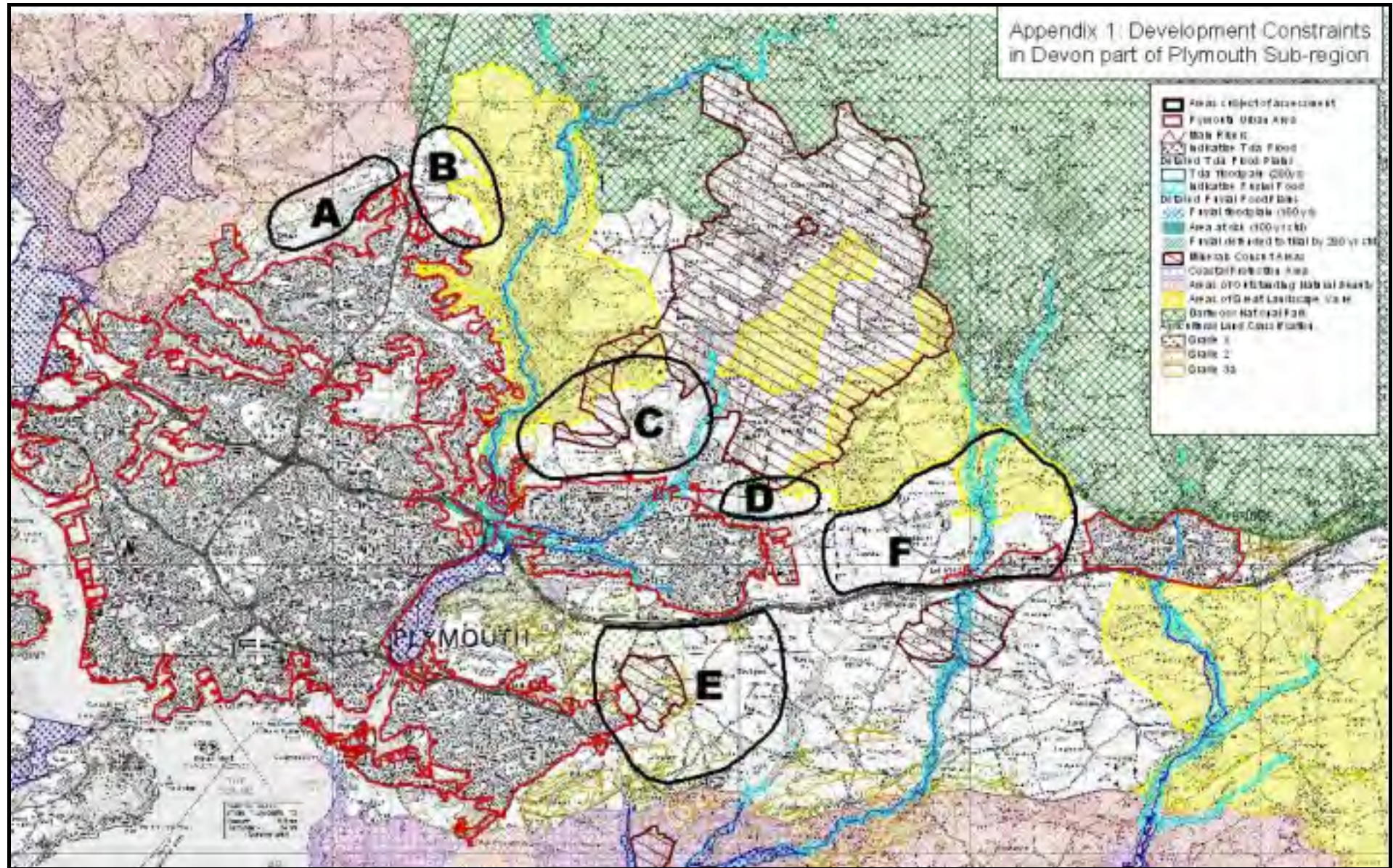
7.1 On the basis of this assessment it is concluded that **Tamerton, Boringdon and Newnham** areas do not offer scope for achieving sustainable development and should not be identified as potential locations for strategic development. Given their characteristics (their peripheral nature, the scale of development possible and their detachment from the existing urban area) a smaller scale of development in these locations would not be appropriate or viable.

7.2 At **Woolwell**, the scope for major development is severely constrained by its poor accessibility by car and public transport. A limited amount of development could be accommodated in this location but not on a strategic scale unless these access constraints can be effectively overcome.

7.3 At the **Lee Mill and Sherford** areas there is physical scope for major development which would be able to support its own facilities and offer significant local employment opportunity. While there could be some scope for rail access at Lee Mill, the Sherford area appears to have major advantages in terms of its lack of impact on the National Park, its closer proximity to the existing PUA and generally better relationship to existing settlements, its ability to take advantage of two separate strategic road network links to Plymouth and its lack of physical constraints - enabling it to accommodate a more sustainable form of development.

7.4 **The Sherford area is therefore considered to offer the most appropriate location for achieving sustainable strategic development at Plymouth, outside of the existing PUA, in the period to 2016.**

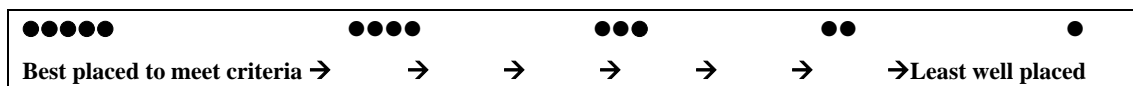
**Appendix 1: Extent of development constraints affecting the Plymouth PUA**



**Appendix II: Summary Matrix**

The following matrix summarises the outcome of the assessments set out above on a comparative basis. The basis of the matrix is set out in detail in Appendix III.

	Weight (1)	Tamerton area (A)	Woolwell area (B)	Boringdon area (C)	Newnham (D)	Sherford area (E)	Lee Mill (F)
Impact on strategic landscape	3	●	●	●●●	●●●●	●●●●●	●●
Impact on local landscape	1	●●●	●●●	●●	●●●●	●●●●●	●●
Agricultural land	1	●●●	●●●●	●●●●	●●●●	●●●●	●●●●
Mineral constraints	2	●●●●●	●●●●●	●●●●	●●●●	●●●	●●●●
Physical constraints	2	●●	●●●●	●●●●	●●	●●●●	●●
Development capacity	3	●	●●	●●	●	●●●●	●●●●
Urban pedestrian / cycle networks	2	●●	●●●●	●	●●●●	●●	●●
Access to urban road network	3	●●	●●	●	●●	●●●●	●●●
Access to strategic road network	2	●●	●●	●	●	●●●●	●●●●
Access to rail network	2	●	●	●	●	●	●●●
Public transport potential / overall travel	3	●●	●●●	●●	●●	●●●●	●●●
Innovative / dedicated public transport potential	1	●	●●	●	●	●●●●	●●●●
Access to local employment	3	●●●●●	●●●●	●●	●●●	●●●	●●●
Access to strategic employment	2	●●	●●	●●	●●●	●●●●	●●●●
Access to existing facilities	1	●●	●●●	●●	●●●	●●●	●●●
Local facility viability within area	3	●●	●●●	●●	●	●●●●	●●●●
Local employment potential within area	3	●	●●	●	●	●●●●	●●●●
Early implementation	2	●	●●	●	●●	●●	●●
Development potential beyond 2016	1	●	●●	●	●	●●●●	●●
Overall Weighted Assessment (1)		84	109	77	92	159	132
Essential / critical criteria (1)		42	54	39	42	96	72



(1) Weighting to achieving the most sustainable locations for growth - 3 : essential / critical, 2 : important, 1 : desirable

**Appendix III: Indicative assessment criteria**

Indicative assessment	5 ●●●●●	4 ●●●●	3 ●●●	2 ●●	1 ●	Indicators
Impact on strategic landscape	Whole area remote from national designation	Distant views from national designation	Visible from national designation area	Prominent from NP or AONB	Adjacent to national designation	distance prominence
Impact on “local” landscape	Remote from AGLV and no significant local landscape constraint / impact	Limited impact on nearby AGLV and / or limited conflict with local landscape objective	Adjacent to AGLV or part in conflict with local landscape objective	Part of area within AGLV or potential conflict with important local landscape objective	Major part of area within AGLV or major conflict with important local landscape objective	distance prominence area included impact on settlement
Agricultural land	No Grade 1 or 2	Grade 1 or 2 in places	Significant part Grade 1 or 2	Mostly Grade 1 or 2	All Grade 1 or 2	area included
Minerals constraints	No impact	Part of area close to local consultation area	Part of area close to / within locally significant consultation area	Part of area within or adjacent to significant consultation area of national significance	Major part of area within or adjacent to significant consultation area of national significance	distance area affected significance of mineral
Physical constraints to cohesive developable area	No physical constraints within area	Peripheral part of area detached by physical barrier – not suitable for development	Area sub divided by physical features – difficult to develop as a single area	Area dissected by physical features – would have to be developed in discrete parcels	Area severely affected by internal topographical constraints / flood plain etc	topography floodplains woodland
Development Capacity	>200 ha	150 – 200 ha	100 – 150 ha	50 – 100 ha	< 50 ha	area available for cohesive development
Urban cycle and pedestrian network links	Direct and unconstrained access to existing pedestrian / cycle networks	Direct but partially constrained access to existing pedestrian / cycle networks	Constrained access to existing pedestrian / cycle, networks	Limited access to existing pedestrian / cycle networks	Severely constrained or remote access to existing pedestrian / cycle networks	distance access points choice topography capacity

Indicative assessment	5 ●●●●●	4 ●●●●	3 ●●●	2 ●●	1 ●	Indicators
Access to the urban road network	Unconstrained multiple direct access to local network – no major investment necessary	Direct access possible and only minor capacity constraints - remedy likely to be viable	Access possible but some capacity constraint - remedy likely to be viable	Some access possible but capacity constraint - remedy viability questionable	Limited access possible and major capacity constraint - remedy viability prohibitive	distance choice capacity cost of remedy funding possible
Effective access to strategic road network	Unconstrained multiple direct access to strategic network – no major investment necessary	Direct access possible and only minor capacity constraints - remedy likely to be viable	Access possible but some capacity constraint - remedy likely to be viable	Some access possible but capacity constraint - remedy viability questionable	Limited access possible and major capacity constraint - remedy viability prohibitive	distance choice capacity cost of remedy development funding
Access to rail	Immediate rail access with possible station. Line potential and service viability good	Immediate rail access but station location and potential service levels constrained	Close to rail line access - may be constrained and / or potential service levels limited	Fairly remote from rail or access subject to major constraint / potential service levels very limited	Remote from rail network	proximity line capacity access possibility viability
Road based Public transport / overall travel	Multiple routes, circular and corridor potential, high frequency viability	Circular or corridor possible routes, potential, good service viability	Ready extension of existing networks, high service level and viability likely	Some potential links to existing networks but low frequency, marginal viability	Remote from existing networks. Poor frequency, questionable viability	access to existing network choice development viability indirect benefit overall travel volume
Innovative / dedicated PT access potential	Within main viable corridor – direct access and no physical barriers	Close to main viable corridor – indirect access but some physical barriers	Accessible to main viable corridor or within secondary	Some distance from main and secondary corridors	Remote from all potential routes / corridors	route viability accessibility corridor definition
Access to strategic employment opportunities	Immediate access to a choice of strategic sites	Close to one or more strategic sites	Accessible to a strategic employment site	Strategic sites at some distance	Remote from all sites	distance job choice accessibility
Access to other employment	Immediate access to a choice of job locations	Close to one or more sites	Accessible to an existing site	Existing sites at some distance	Remote from all sites	distance job choice accessibility

Indicative assessment	5 ●●●●●	4 ●●●●	3 ●●●	2 ●●	1 ●	Indicators
Access to existing facilities	Direct access to a wide range	Direct access to some existing	Some existing facilities nearby	Limited facilities at some distant	Remote from any existing	distance facility range
Viability of local facilities	Wide range of key facilities likely to be viable eg full range of education / retail centre / community facilities	Good range of viable facilities possible eg primary education/ retail centre / community facilities	Potential for some local facilities eg primary education / some retail provision / basic community facilities	Limited potential for very basic facilities eg local retail	Little or no potential for viable facilities	development scale
Potential for on site employment opportunities	Major site viable with good accessibility	Major site potential but limited accessibility	Local site viable with good accessibility	Local site possibility but limited in scale – poor accessibility	No suitable viable site	flat land accessibility
Potential for early implementation	Immediate substantive start possible – late infrastructure thresholds	Immediate start possible – but some early infrastructure thresholds	Early start possible on initial phase – dependent on some up front infrastructure	Significant up front investment necessary for even initial development – questions re timing and viability	Major up front investment necessary before any initial development – development unlikely to fund	constraints thresholds infrastructure
Potential beyond 2016	Scope for major further development beyond 2016 – assuming substantive contribution pre 2016	Scope for further development – but finite in scale with some thresholds and physical boundaries crossed	Some scope for incremental growth – but partially constrained and limited in scale	Physical scope but constrained by infrastructure / landscape barriers etc	None beyond immediate contribution pre 2016	constraints site capacity topography costs