



Development
Framework

04

4.1/

Growth Scenarios

It is important to explore and appraise different ways of accommodating growth in order to understand what the most effective development balance might be. This is the first step to defining a Development Framework, and vital to the creation of a transparent and measured masterplan. Testing growth scenarios has helped ensure that the direction provided by collaboration with key stakeholders is built into the final proposals.

The strategic masterplan project has considered concepts of development and growth at a 'high level', and has tested different growth scenarios to describe the possible consequences of development taking place in various different locations (linked to different strategies and balance of priorities).

Four main scenarios were considered. These modify the original Option Area sites 1 - 6 to a greater or lesser degree.

Scenario 1 took the option areas as

defined through the SHLAA "on face value" and envisaged development to their full extent

Scenario 2 modified the option areas subject principally to constraints concerning landscape character and visual impact.

Scenario 3 considered the consequences of modifying the option areas in a way that avoided pressurising junction 40 of the M6 (and promoted the use of junction 41).

Scenario 4 considered the possibility of creating a 'new settlement'; a mixed use urban extension that clustered growth largely in one location.

This work not only helped to

identify the "what ifs..?" in terms of the different combinations and permutations of development sites, but has ultimately helped to create a spatial framework that can be flexible over time, because it has helped to reveal the potential for 'fallback' sites and alternatives. This has become an important part of the overall masterplan strategy and is important to help future monitoring, management and refinement of development priorities over the plan period.

The growth scenarios were tested through stakeholder consultation and strengths and weaknesses noted.

A summary of some of the main strengths and weaknesses of each scenario is provided here. A full report into the scenarios was produced as part of the strategic masterplan project.

Scenario 1

Scenario 1 limited the scope of development location and extent to the

option areas defined through SHLAA, and utilised the development area boundaries to their full extent.

Key strengths

This scenario is driven by a literal response to the outcomes of the Local Development Framework production process and in this regard would establish a development framework that had a clear 'chain of conformity' and unambiguous foundation.

Key weaknesses / drawbacks

One of the aims of the strategic masterplan is to place the existing option areas in the context of a wider understanding of growth and development impact – in particular infrastructure requirements and design opportunities. This scenario does not maximise potential to masterplan the sites as a collective 'whole' - one which would help to define infrastructure needs and respond to the qualities of place inherent in Penrith.

Scenario 2

Scenario 2 represents a literal response to significant issues regarding landscape character and visual impact,

combined with the historic growth patterns / spatial characteristics of Penrith which make it such a highly distinctive settlement.

The option areas were reshaped in response to; (a) the form of Penrith as an urban area moulded by its natural environment and; (b) the sensitive environment of the Eamont Valley – its natural habitats (including SSSI) and heritage assets / archaeology (including Brougham Castle).

Key strengths

A sensitive response to a key strength of the town – preserving a very special place where built form and natural environment are balanced.

Key weaknesses /drawbacks

Under this scenario the option area sites would be significantly reduced in size, and the resultant loss of capacity would compromise growth objectives expressed through the LDF. This would potentially cause difficulties not only in terms of conformity with the plan-making process (including for example conflict with evidence base documents such as the existing LVIA and the SHLAA), but

potentially dent confidence in the development market.

Scenario 3

Scenario 3 takes a literal response to current emerging issues and problems associated with Penrith's road network. Network congestion is inherent through three key characteristics which are likely to be exacerbated by the scale of development currently envisaged for Penrith; (i) the alignment of the A6 through the town centre, (ii) unsatisfactory and restricted access to the town's main employment areas, (iii) capacity of Jct 41 and A66. The main principle behind scenario 3 is to try and help alleviate wider traffic problems by maximising development / growth potential to the north, and restricting development to the east.

Key strengths

Under this scenario, development sites could help unlock not only existing traffic problems in Penrith, but could support provision of a new bridging point across the WCML. This could provide a

significant boost to the employment development market at Parcel 65 and Gillwily Industrial Estate.

Key weaknesses / drawbacks

This scenario would utilise land not previously considered through the LDF process. Pushing a significant volume of development north could potentially harm what is a sensitive location in terms of landscape, visual impact and environmental constraints, if not properly managed. The challenging topographic characteristics could lead to physical severance of sites, limiting connectivity and shared infrastructure

Scenario 4

Scenario 4 concentrated development opportunity to the east, driven by a rationale to create a “new settlement” type location - a critical mass of development that could create a genuine new neighbourhood inclusive of new social infrastructure provisions, services and facilities. This would link existing communities and facilities (e.g. Frenchfield sports centre and Beaconside school) and help address

existing weaknesses in social infrastructure and accessibility of services.

Key strengths

A significant opportunity in an attractive location that has genuine potential to create a new integrated neighbourhood.

Key weaknesses / drawbacks

This would require utilising land not currently being considered within the current LDF process. Land ownerships and appetite for development would need to be established. Impact on a significant Grade II Listed Building (Carleton Hill) could be problematic and the potential pressures and impacts on A686 and A66 remain to be verified through detailed assessment

4.2/

Spatial Framework

The spatial framework opposite illustrates the potential location and extent of development around Penrith, taking the form of urban extension. This spatial framework and the opportunities it describes are derived from the test of growth scenarios described at 4.1.

The spatial framework aims to describe the location and extent of sites that would maximise strengths and minimise weaknesses associated with urban extension development (as revealed by the growth scenarios exercise). It represents a hybrid of the different growth scenarios; bringing together the best aspects of all.

The spatial framework retains the essential aspects of the original Option Area sites insofar as it locates urban extension to the north and to the east.

To the east, the strategy is mainly influenced by the approach explored in

growth scenario 2. This moderates the extent of development in acknowledgement of the potentially detrimental impacts on local landscape and heritage assets. Urban extension sites here have been shaped to manage the visual impact of development.

The strategy to moderate development to the east also stems from issues relating to;

- a) Location and capacity of social infrastructure provision, and in particular a need to manage the pressures that new development will put on primary education.
- b) Pressures on the local highway network, and in particular the potential overburdening of the A66 / A6 roundabout and jct40 of the M6.

The proposed sites to the east largely modify previously identified Option Areas 4 and 5. However, the spatial framework identifies a site at Carleton Village - E4 - which was not previously included within the original Option Areas. This site has been identified through the strategic masterplan

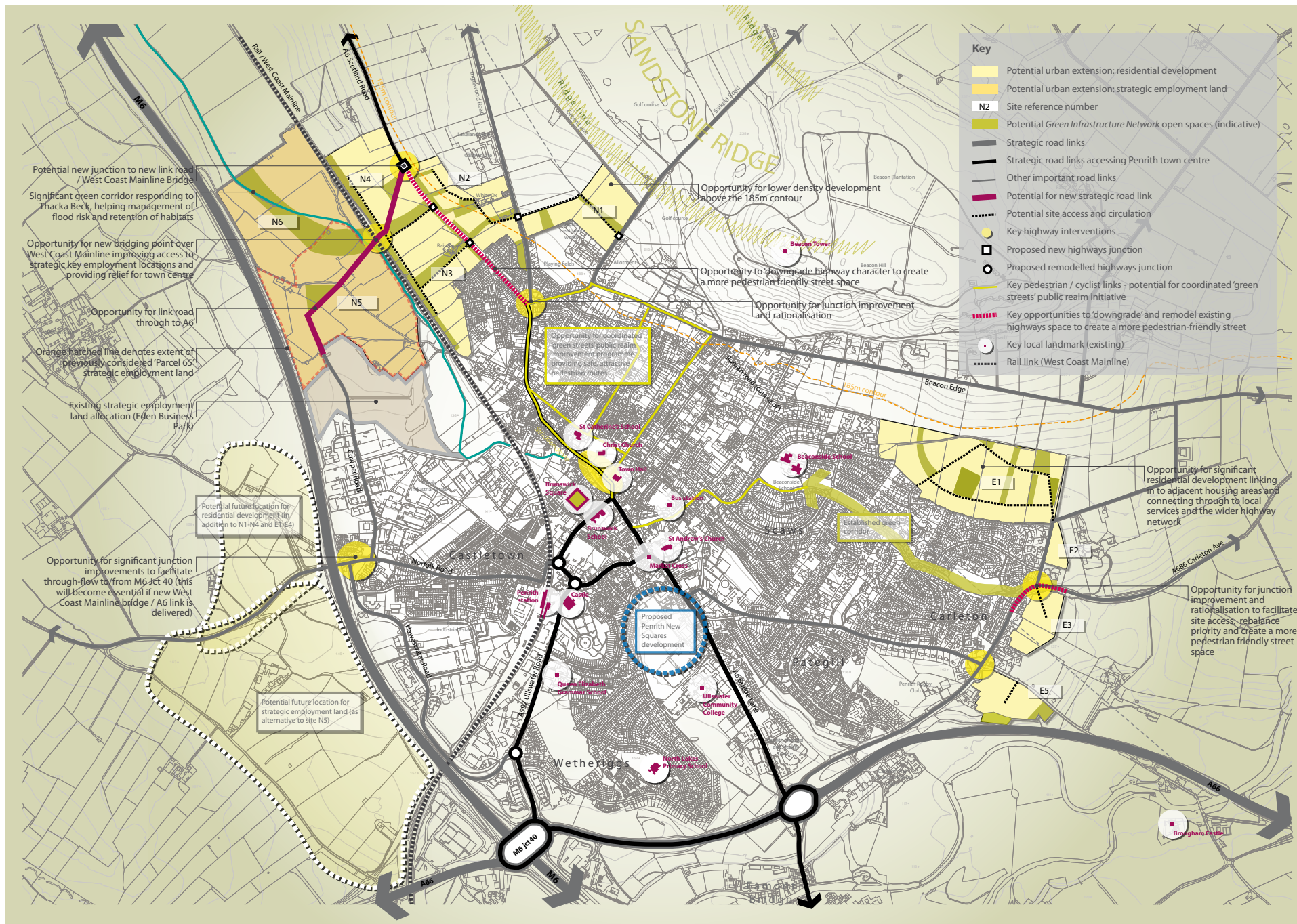
exercise as one with potential to be a positive residential development: one which would have limited visual impact whilst introducing the opportunity for non-residential development to the Carleton Avenue frontage. This would help to bolster the potential for Carleton Village to function as a small local service centre.

To the north, the strategy is mainly influenced by growth scenario 3, albeit with further modification to site boundaries. The approach is to maximise development capacity to the north, in acknowledgement of the potential to;

- a) Minimise the visual impact of development relative to sensitive issues of landscape character, i.e. the opportunity to locate extensive development on lower lying ground, avoiding compromising the Sandstone Ridge (Beacon Hill) and following the natural valley of Thacka Beck.
- b) Help promote and justify measures and initiatives to unlock existing traffic problems in Penrith by;

- i) Supporting the provision of a new road bridge over the WCML
 - ii) Promoting junction 41 of the M6 as a viable and logical choice for a large number of residents and businesses
- c) Help promote a joined up approach to residential and employment development by looking to complement and enable further extension of Gilwily Industrial Estate / Eden Business Park. The spatial framework illustrates potential to extend employment development north of the original Parcel 65 in order to provide the 30ha net strategic employment land requirement. This would however require acceptable mitigation of flood risk and habitat impact.

Right: Strategic Spatial Framework describing potential urban extension development around Penrith



N.B. Further detail for sites to the east and north is set out at section 4.3. A description of potential development capacity is set out at 4.4.

4.2.1/ Urban Form

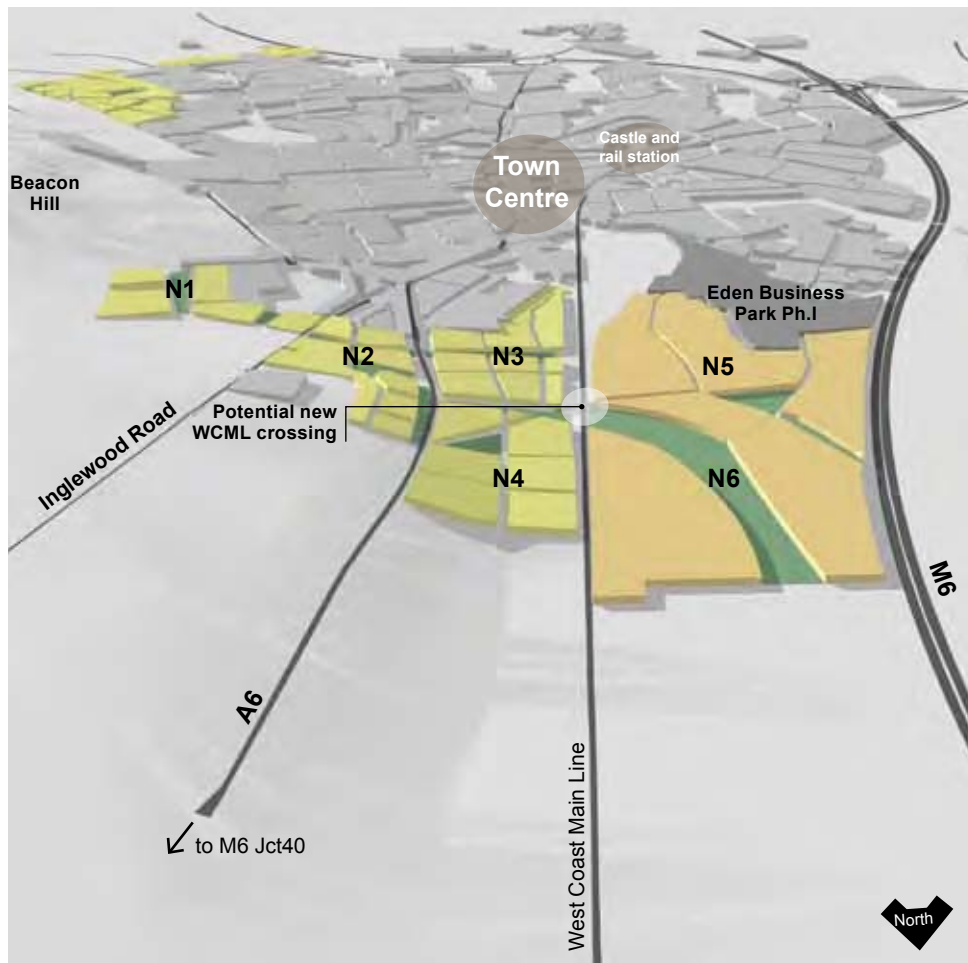
The implications of and relationships between development locations proposed by the spatial framework are further illustrated by the 3D model extract shown to the right. This provides an illustrative representation of how the location and extent of urban extension could be shaped in response to the urban form of Penrith, and how development sites could be planned and designed comprehensively - to be integrated with and complementary to one another.

These images show how open space could become an integral element of the urban extension locations: building up an integrated Green Infrastructure Network. This has been highly influential over the strategic masterplan and has shaped assumptions of development capacity. (see 4.4)

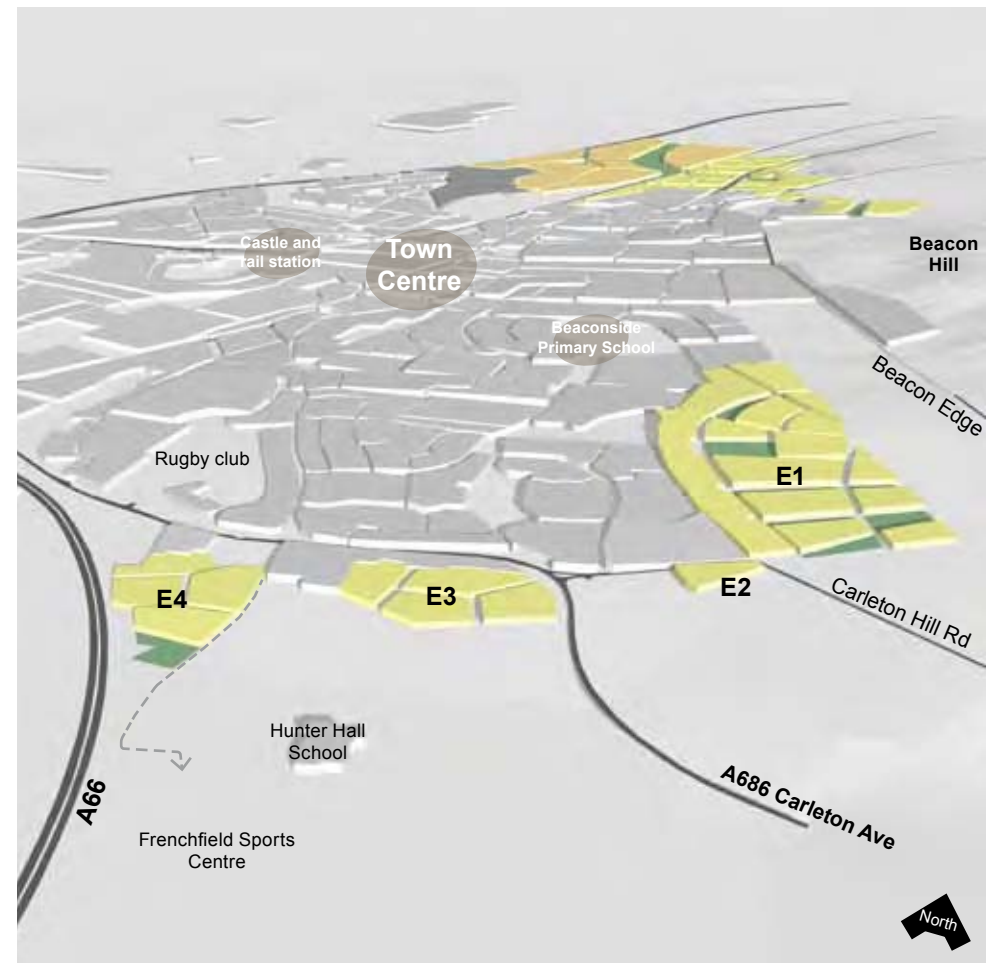
- Potential urban extension (residential)
- Potential urban extension (employment)
- Potential Green Infrastructure



Above: Illustration of potential extent and scale of urban extension development sites



Above: Illustration of the form and extent of urban extension sites to the north



Above: Illustration of form of urban extension sites to the east

4.2.3/ Flood Risk

The proposed urban extension sites are largely free from the risk of fluvial flood with the exception of sites N5 and N6. These sites (particularly N5) are affected by flood zone 3. Although the estimated capacity of these areas has been 'netted

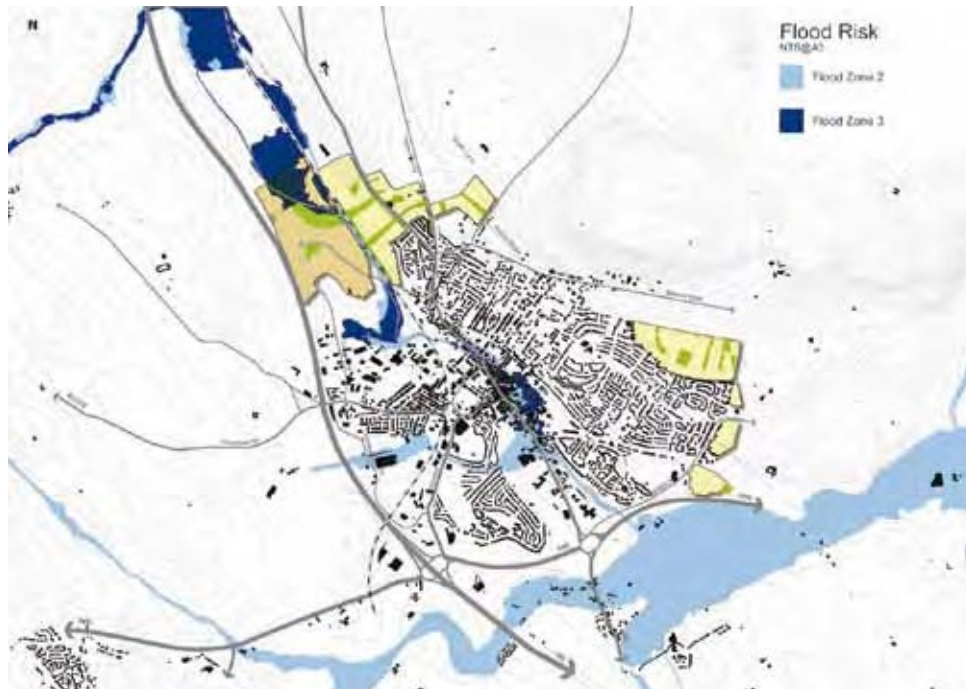
down' to account for provision of open space / flood areas, it is clear that the feasibility of their delivery will be contingent on a satisfactory flood mitigation scheme. All sites will need to be designed to manage surface water run off, sensitively and sustainably.

4.2.4/ Open space

Existing open spaces will be an important resource / asset for new residents and will form part of a wider Green Infrastructure Network. The diagram below illustrates the relative location of designated open / green

space and points to the opportunity for new development to enhance this provision and together create a legible Green Infrastructure Network.

This Green Infrastructure Network concept is described further at 4.4.



Above: Development and flood risk



Above: Development and open space

4.2.5/ Conservation of the built environment

The location of the urban extension sites do not directly affect Conservation Areas or the setting of the majority of Penrith's Listed Buildings. However, the principle of urban extension demands a

sensitive approach to design which seeks to maintain the integrity and quality of Penrith, in terms of building form, materials and details. The design of development within the urban extension sites should be informed by appreciation of Penrith's built heritage. The proposed development sites to the

east do have sensitive relationship with heritage assets within the Eamont Valley, such as Brougham Castle. Although the spatial framework seeks to help minimise potential impacts, the setting of these assets will need careful consideration at detailed level.



Above: Development and conservation of the built environment



View across the Eamont Valley

4.2.6/ Schools provision

It is clear that current capacity of education facilities in Penrith presents a constraint to any new development. Schools are full, and the scale of new development envisaged in and around Penrith will put significant pressure on Primary education provision in particular.

Working to the theoretical multiplier (provided by Cumbria County Council) of 2 new pupils per 10 new dwellings, development of 2600 new dwellings in Penrith - the target of the Local Development Framework - could give rise to about 520 new pupils entering the local education system, within the plan period to 2025. On the basis of capacity assumptions set out at section 4.3 of this report, urban extension sites could themselves give rise to between circa 310 - 414 new pupils.

Existing primary schools have no capacity to accommodate such an increase in pupil numbers.

The plan opposite illustrates potential

locations for provision of a new primary school - or schools - in locations that could be complementary to and integrated with the residential urban extension sites. These potential locations should be considered against the analysis of physical accessibility of existing Primary Schools (see section 2.0 for detail), which highlights in particular the poor accessibility of existing communities to the east to primary schools.

As illustrated in the plan opposite, there is clearly potential for schools to be provided both to the east and to the north as an integral part of the urban extension clusters proposed within the spatial framework. This could potentially be brought forward as part of small scale 'community hub' - i.e. locations for non-residential development (e.g. new healthcare provision, leisure facilities, community space, local retail and employment uses.

Option A

Option to occupy what could otherwise

North

be a potentially awkward residential site between existing housing and WCML. This would be located on lower lying ground and be readily accessible both by existing and proposed communities. This location could potentially integrate well with a potential community hub development adjacent to the A6.

Option B

Option to occupy location on Inglewood Road, providing a direct, existing point of access. This location could associate well with adjacent playing field, but location on higher ground at the top of steeply sloping land could pose barriers to accessibility for residents of development sites to the west (N2 - N4).

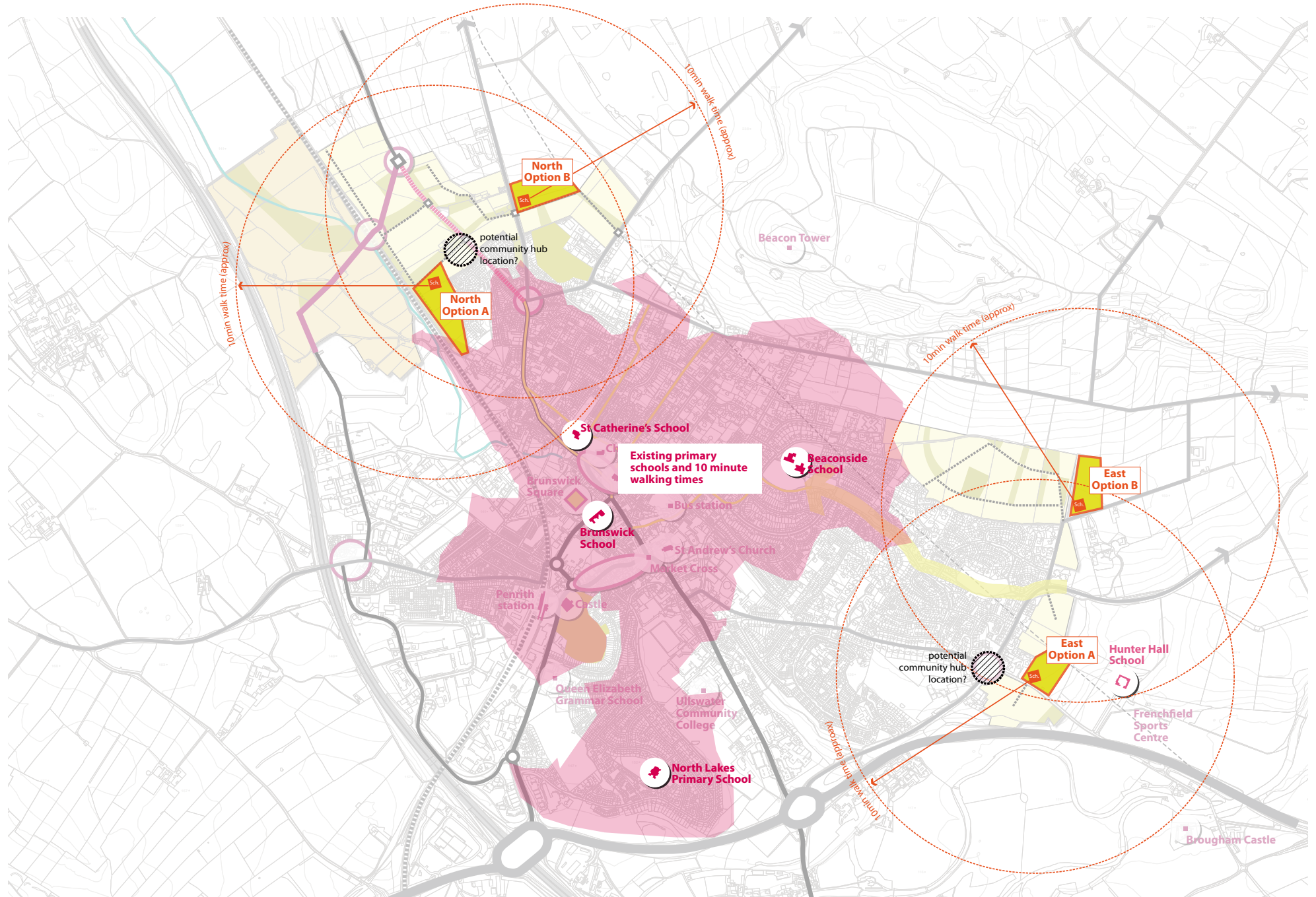
East

Option A

Option to provide a 'bridge' between development sites E3 and E4, at a convenient location accessed via Carleton Road. This location would integrate well with Frenchfield Sports Centre to the south east (and Hunter Hall School), in terms of shared facilities. This location could also bolster the role of Carleton Village as a key community hub, and stimulate further non-residential development on the Carleton Avenue frontage (at E4).

Option B

Option to occupy location adjacent to site E1 (within the boundary of Option Area 4 as originally identified). This would be directly associated with new development but would be less strongly linked to Carleton Village than option A.



Above: Potential options for new primary school locations, to be delivered as part of the programme of housing growth