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Introduction
In early 2017, Carlisle City Council was successful in obtaining Garden Village status as part of the Government’s Garden Town and Villages programme for a 1,323ha site to the south of Carlisle. The project is now known as St Cuthbert’s Garden Village. Carlisle City Council have been active in the promotion of the project as an ambitious and exciting opportunity to develop a Garden Village which is future-proofed and forward thinking.

Arup has been commissioned to undertake the Stage 2 Masterplan Framework, which will build upon the work undertaken to date during Stage 1, which set the vision and concept. The Framework will inform and support the preparation of the St Cuthbert’s Garden Village Local Plan, which will provide the planning policies and site allocations. Its primary role will be as a planning instrument, guiding future detailed masterplans / design stages and serving as a material planning consideration to help de-risk and bring forward development proposals that will deliver against the vision and objectives for the Garden Village.

This report sets out three options. Each option builds on the following:

• St Cuthbert’s Concept and Vision document (Stage One Masterplan),
• Consultation responses to the Stage One Masterplan,
• Ongoing stakeholder engagement; and
• Technical evidence.

Carlisle City Council is consulting on these options. This will inform the selection and development of a preferred option for St. Cuthbert’s Garden Village.

St Cuthbert’s Garden Village must deliver on the overarching vision of providing “connected villages embedded in stunning healthy landscapes within the world-class setting of the Lake District National Park, the North Pennines Area of Outstanding Natural Beauty and Hadrian’s Wall World Heritage Site.

A cluster of distinct Garden Villages set in an attractive recreational, riverside and landscape setting will be well connected to Carlisle and the wider countryside.

St Cuthbert’s will actively promote healthy lifestyles providing integrated communities focused around high quality homes, locally distinctive spaces and inclusive facilities.

Innovation and technology will support attractive employment opportunities and exemplary low carbon living.”
The report is structured as follows:

- **Section 2** considers the **key context and findings** from the baseline report. This highlights the key considerations when developing the options, including the Concept and Vision document, Key Drivers and Principles, Strategic Context and the constraints and opportunities on the site.

- **Section 3** presents the **three options**: compact communities, connected communities and edge communities. Descriptions for each option include maps and illustrations, key place-making elements and strategies, landscape and open space plans, movement strategies, and indicative land use and infrastructure requirements.

- **Section 4** assesses each option against the vision statement, the principles and the key drivers. The section also includes a **SWOT analysis** for each option.

- **Section 5** summarises the **next steps** in the preparation and delivery of the masterplan framework.
Context and Baseline Key Findings
2.1 / Strategic Context

This is an exciting time for Carlisle: it is the key city of the Borderlands Inclusive Growth Deal, St Cuthbert’s Garden Village is the most ambitious Garden Village in the UK, £102m of funding for the Carlisle Southern Link Road (CLSR) has been announced as part of the Housing Infrastructure Fund to unlock development land for the Garden Village and Carlisle plays a key role in delivering Cumbria’s Local Industrial Strategy.

Carlisle City Council has ambitious plans to grow, outlined in its “Be Part of our Growing City” and “Help us Build our Growing City” prospectuses. Carlisle has good north-south connectivity on the M6 and the West Coast Main Line and its west-east connectivity towards the North East. Carlisle Lake District Airport has recently commenced flights to Belfast, Dublin and London Southend. It is the heart of the sub-region’s skills agenda being home to the University of Cumbria, as well as Carlisle College.

The Borderlands Inclusive Growth Deal announced in March 2019 focuses on the strategic themes of place, infrastructure, innovation and skills and green growth. The Borderlands is home to over 1 million people spread over 10% of the UK landmass. Carlisle is recognized as the beating heart of this area. The Borderlands economy has three main challenges: narrowing the productivity gap; increasing the working age population and delivering inclusive growth. Locally developed proposals to address these challenges focus on making improvements to transport, skills, place and regeneration, digital infrastructure, energy, business growth, rural innovation, culture and tourism.

The projects benefitting from the Borderlands Growth Deal, and of particular relevance to St Cuthbert’s Garden Village, include improvements to transport and digital connectivity and the Carlisle Station Gateway project which focuses on the economic regeneration of Carlisle city centre.

The Cumbria Local Industrial Strategy (LIS) was agreed by the Cumbria LEP board in March 2019. It has benefitted from input from a wide range of businesses, public sector and third sector partners and will replace the existing Cumbria LEP’s Strategic Economic Plan. The LIS introduces 5 strategic objectives under the overarching vision of Cumbria being “the place to live, work, visit and invest sustainably – where exceptional industry and innovation meets a breathtakingly beautiful and productive landscape”. The objectives are:

- Growing and using our talent pool
- Capitalising on our productivity, innovation and enterprise potential
- Exploiting underdeveloped economic opportunities to help get a better-balanced economy
- Ensuring that all of our residents contribute by sharing prosperity and opportunity
- Improving connectivity across the county.

The LIS highlights the potential for a significant fall in the available workforce over the next decade should the government’s population projections materialise, with a 20,000 shortfall in workforce to meet Cumbria’s existing job requirements. Consequently, this has been identified as one of Cumbria’s greatest challenges, given an already tight labour market. The LIS is explicit that Cumbria needs to build houses at a much greater rate to ensure a steady workforce can be attracted and retained, before further economic growth can be delivered. Carlisle is a critical contributor to the overall housing delivery across Cumbria and the wider Borderlands area and is required to play a key role in supporting substantial population and housing growth to meet strategic economic aspirations.

The CSLR is of strategic importance the Garden Village as well as for connectivity to/from the county. The CSLR will improve east-west connectivity to the south and provide important links to key employment sites in the north of the city, such as Kingmoor Park Enterprise Zone. There are opportunities to enhance active travel infrastructure between St Cuthbert’s Garden Village and the key employment destinations by connecting the CSLR, existing routes and the Carlisle Northern Development Route. The early delivery of the CSLR will be a catalyst for inward investment into the county, underpinning the ambitions outlined in the LIS and promoting Carlisle as a place to live, work and invest.

In 2019, Carlisle City Council declared a Climate Emergency. As part of this, all strategic decisions, budgets and approaches to planning decisions must shift to zero carbon by 2030. The declaration reinforces principles of smart and sustainable living, start with the park and healthy living specifically; sustainability and low carbon principles must be embedded into the design of all masterplan options.

The emerging masterplan for St Cuthbert’s Garden Village aligns closely with the objectives and priorities outlined within the LIS in its ambitions to attract residents that are of working age, promote innovation and improve connectivity (both digital and physical) for new and existing communities, adding to Carlisle’s overall and already strong offer as a great place to live and work.
The Concept and Vision work previously undertaken by Carlisle City Council established 9 guiding principles for the development of St Cuthbert’s Garden Village, all of which underpin the overarching vision:

The 9 principles are:

1. **Start with the park:** Deliver a landscape-led masterplan that harnesses the rivers, world class views and woodlands to create a network of unique, high quality, active landscapes and new destinations.

2. **Locally Distinctive:** Support locally distinctive in the design of buildings, streets and spaces to create memorable and unique places to live.

3. **Quality Homes and Lifetime Neighbourhoods:** Promote a mix of high quality homes in distinct and integrated lifetime neighbourhoods.

4. **Community Focussed:** Focus inclusive communities around a hierarchy of excellent facilities clustered around village centres.

5. **Innovative Employment:** Support a variety of entrepreneurial and creative employment and skills opportunities.

6. **Healthy Environments:** Promote health and well-being through accessible facilities and healthy lifestyles for all ages.

7. **Smart & Sustainable Living:** Support low carbon living through sustainable planning, transport and energy.

8. **Integrated Sustainable Transport:** Provide excellent sustainable connections and environments that make walking, cycling and public transport the most attractive method of getting from A to B, making the most of the opportunities presented by the Carlisle Southern Link Road.

9. **Exemplary Delivery & Stewardship:** Continue to positively engage a range of people and communities in design, delivery and stewardship.
2.3 / Key Drivers

In addition to the 9 principles, Carlisle City Council, through extensive consultation and engagement has identified five key drivers that must underpin and inform the future community of St Cuthbert’s. The five key drivers aim to maximise the potential for new and existing residents alike to benefit from the qualities and amenity of environments created by the Garden Village.

The key placemaking drivers are:

1. The creation of a healthy environment –
   building on Carlisle’s designation by the World Health Organisation as a World Healthy City, St Cuthbert’s must be a place that encourages and facilitates a healthy lifestyle. Walking and cycling, supportive neighbourhoods, planned educational facilities and a strong sense of community spirit can all improve health and wellbeing. Garden villages are attractive to anyone seeking a green and pleasant place to live and can help to reduce lifestyle-related illness. The Masterplan framework should draw on the TCPA guidance on Healthy Living Elements 1-6. ¹

2. Movement and Access
3. Open Spaces, play and recreation
4. Food environment
5. Buildings
6. Neighbourhood spaces and infrastructure
7. Local Economy

2. A community that makes full use of the fantastic landscape quality –
   delivering a comprehensive network of natural and public open spaces and places that are easily accessible and provide a wide range of activities for all.

3. A community that has a range of employment opportunities –
   linking into the wider employment offer of Carlisle creating opportunities for new sectors and innovation in employment. St Cuthbert’s will need to both assist in retaining the existing and attracting new working age population of Carlisle and be a place that attracts new employees.

4. A place that is well connected –
   within the new community, with Carlisle, and out to the surrounding countryside. Any frameworks should have a focus on walkable neighbourhoods, sustainable transport, active travel modes, and the future of different transport methods.

5. A place that is future proofed –
   St Cuthbert’s will be developed over a number of years and must be designed to accommodate new and emerging technologies around built form, transport, renewable energy, sustainable drainage, and various aspects of city operations and governance.

¹ https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=b6e27c46-3fc5-4d88-a59c-e172f797b8b3
2.4 / Stakeholder consultation to date

Development of the principles, key drivers and options has all been influenced by significant public consultation and stakeholder engagement. In summary, consultation and engagement to date has included:

- Public consultation on the scope and vision for the Garden Village
- Public consultation on the concept options
- Meetings with landowners
- Workshops with local Parish Councils
- Cross party Members’ advisory group
- Stakeholder workshops on employment, healthy living and low carbon
- Stakeholder workshops on green and blue infrastructure and stewardship
- Workshops with local primary school children and Carlisle College

Separate reports detailing the full extent of consultation undertaken to date, including the key outcomes, have been prepared by Carlisle City Council and are available at www.stcuthbertsgv.co.uk
Key Findings from the Baseline

Arup has undertaken a desk top review of baseline information relating to the potential area covered by St Cuthbert’s Garden Village in order to understand the characteristics of the study area which underpin the placemaking and spatial framework process.

The full baseline report, St Cuthbert’s Garden Village Stage 2 Masterplan Framework Baseline Report sets out the findings. To date, the baseline work has drawn primarily upon a review of evidence collected at Vision and Concept stage, supplemented by emerging evidence from the Carlisle Southern Link Road project and discussions with key stakeholders and statutory consultees. The key areas considered in the baseline report are:

- Planning and strategic context
- Topography
- Drainage and Flood risk
- Infrastructure
- Energy and Waste
- Ground conditions
- Air Quality
- Highway and Public Transport connectivity
- Active Travel
- Cultural Heritage
- Ecology
- Noise and vibration
- Landscape and Townscape
- Land Use
- Economy and Employment

Land with the highest development potential has been identified by analysing the baseline information to understand the opportunities and constraints. This developable land forms the basis for the options presented in this report. The assumptions around developability take into account the following factors:

- Proposed route of the CSLR;
- Steep land (land with slope gradient of over 10%);
- Moderately steep land (land with slope gradient of 5-10% (shown in yellow));
- Areas within flood risk zones 2 and 3;
- The high and medium pressure gas pipeline(s) and their associated safeguarded zones/ easements;
- Overhead power lines and their associated easements;
- Existing settlements and Carlisle Racecourse;
- Areas designated as Sites of Special Scientific Interest or Special Area for Conservation;
- Areas identified as at risk from Significant Observed Adverse Effect Level (SOAEL) of noise at night time; and
- Significant woodland areas.

The developable land does not take into account landownership, availability and viability; this is being looked at in parallel and will form part of the Options Assessment process. Additional constraints such as listed buildings or tree preservation orders will be used to shape the options on a finer grain, localised basis.

The options presented in this report are based on a balance between the basic spatial distribution of the Stage 1 Concept Framework and the developable land identified above. This exercise is the starting point for more detailed testing of sites and taking forward the Stage 1 concepts and principles.
Analysis of Walking and Cycling Distances
Options
To ensure the final St Cuthbert’s Garden Village Masterplan Framework is robust, it is essential to develop and test alternative spatial options. This section presents three options for the proposed Garden Village.

- Option 1: Compact Communities
- Option 2: Connected Communities
- Option 3: Edge Communities

All three options build upon the work done at Stage 1, including the vision and principles. The options are also consistent with the opportunities and constraints identified during the baseline assessment work conducted by Arup, and the initial comments expressed during previous consultation sessions, by the Project Steering Group and by various stakeholder organisations.

A memorable landscape setting is the starting point for the design concept of each option. This is consistent with a key principle identified in Stage 1, ‘Start with the Park’, and with the underlying aspiration of a garden community. Each option builds on the predominant landscape idea and quality with a complementary approach to built form, movement, land use, and open space quality.

The following information is provided for each of the three options:

- A description of the concept and key place-making elements and strategies

- An illustrative plan indicating the general structure and layout of development areas, employment uses, and community facilities

- A landscape and open space structure plan

- A set of movement diagrams showing the following within the site and to the surrounding areas:
  - Highway access locations
  - Primary vehicular routes
  - Cycle and pedestrian routes
  - Public transport concept

- Land use budget and schedule of unit numbers and other requirements

- Known on and off site infrastructure requirements
Option 1: Compact Communities

Option 2: Connected Communities

Option 3: Edge Communities
3.1 / Placemaking elements and strategies

Building on the 9 principles and the baseline work, the options are underpinned by a series of key place making elements relating to the following themes:

• Land Use
• Landscape
• Townscape
• Movement
• Infrastructure and drainage

The approach to each of these is described below and applies to all three options.

3.1.1 Land Use Strategy

Key design elements underpinning all options include:

• The general location of built settlements around Cummersdale, Carleton, Durdar, and Brisco, as outlined in the Stage 1 masterplan.

• Built form and development areas that work with the topography and hydrology of the site.

• The importance of the Caldew and Petteril river corridors for their visual and ecological amenity.

• The incorporation of the Greenway as a key amenity for the new community, which corresponds with the no-build corridor of the gas pipeline within the Garden Village site.

• The principle to sensitively integrate old and new communities while building in the Carlisle urban fringe and around the four existing villages – the type and extent of green buffer differs in each option.

• The accommodation of 10,325 homes consistent with the outcomes of the Stage 1 Masterplan.

• Employment opportunities not least those driven by improved access provided by the new CSLR (Link Road) and proximity to the M6 corridor.

The differences in the three options are expressed in their relationship to the surrounding landscape and in the spatial extent and location of built settlements within that landscape. While each option offers a distinct landscape approach, all three have been informed by the analysis and recommendations contained in three key documents:

• Cumbria Landscape Character Guidance and Toolkit
• St Cuthbert’s Garden Village Landscape and Townscape Appraisal, May 2017
• St Cuthbert’s Garden Village Landscape Sensitivity Study (Durdar & Brisco), October 2018
3.1.2 Landscape

Each of the three options embrace the principle of ‘Start with the Park’ as a fundamental approach to ensure that everyone in the new Garden Village would have access to a variety of green spaces. This network of green spaces would form a new type of ‘park’ integrated with the new development. The ‘park’ would be much more than aesthetic and recreational. It would use Green Infrastructure (GI) as a multifunctional and critical element, providing locally distinctive, healthy and sustainable environments, which delivers a multitude of social, economic and environmental benefits including:

- Recreation and leisure opportunities through provision of active as well as passive open space and associated facilities.
- Health and well-being improvements such as by promoting an active lifestyle, access to locally-grown food, and minimising impacts of air pollution and noise.
- Sustainable urban drainage (SUDs) benefits
- Increased biodiversity and ecology through design and future management of open space and landscape.
- Preservation of the productive and historic landscape character including integration and retention to the extent possible of hedgerows, field patterns, riparian vegetation, mature tree groves etc.
- Opportunities for active transport (walking and cycling) routes.
- Community focussed and employment/learning opportunities
- Resilience to climate change impacts through a variety of measures such as addressing flooding risk through land form design, support for renewable energy, and proposals for land use and management to support carbon sequestration.

‘Green infrastructure’ referred to in this section would include blue elements - river and hydrological systems and sustainable urban drainage that could be in the form of bio swales along streets, retention basins or simply permeable paving treatments.

Each of the three masterplan options includes integrated GI within a set of landscape typologies described below. The location and distribution of these landscape typologies varies for each option and responds to existing landscape features, site context, opportunities and constraints, and the proposed urban configuration.
1. **Linear riverside parks:**

the Caldew and Petteril river corridors, forming prominent and locally distinctive landscape features, with scattered woodland groupings and river valley topography. Corridors will be retained and enhanced with north-south cycle/pedestrian routes and trails connecting city to countryside and linking Upperby Park and other existing greenspaces in Carlisle, plus recreational areas with sports and walking and cycling facilities to encourage active and healthy lifestyles. Existing landscaping will be enhanced for amenity and biodiversity by further tree planting, new water meadows, and flood attenuation and wetland areas to reduce flood risk, better microclimate leading to desired conditions related to shade, sun, wind etc., reduce impacts of climate change, and providing key riverside views/vistas.

2. **Retained farmland and community allotments:**

formed from existing and enhanced farmland areas, with model agricultural farmsteads, market gardens, allotments, productive landscape for urban and community food production and possible farmers market. The rural landscape character is strengthened by retaining and improving existing hedgerows, individual mature trees, small woodland blocks, and through creating new orchards, to provide a sense of place, mature character and views. Pockets of rewilding areas and wildflower areas will be integrated to enhance biodiversity.

3. **St Cuthbert’s Greenway:**

an east-west central link connecting new settlements, primarily utilising land along the gas main. It incorporates water features and existing and enhanced brooks, streams and drainage channels, hedgerows and woodland blocks, to provide a setting for outdoor activities, safe interconnected cycle/pedestrian routes, bridleways, and long/short distance running routes. The greenway has the potential to loop into Carlisle along existing green corridors as well as connect with the walking and cycle connections provided as part of the CSLR (Link Road). Each option addresses the design of the greenway differently as shown in the illustrative plans.

4. **Green buffers:**

provided primarily along transport infrastructure such as the CSLR, the two railway corridors, the M6 and the Cummersdale industrial edge. Green buffers may incorporate gateway/entrance features to the CSLR, landscape mounding, mass trees/shrub planting for screening, and noise bunds. The landscape treatment along the CSLR will be coordinated with the proposed design along the road. The objective of the green screening is to help make the transition between built and open areas, filter pollution, support active transport, and help with flood protection and water storage.
5. Green street hierarchy:

Hierarchy of streets provides definition and identity to neighbourhoods. The options will contain a variety of routes from primary routes that include multi-modal transport to secondary and tertiary movement corridors. There is potential to incorporate locally distinctive characters for each settlement through street hierarchy, by aligning streets and roads along existing field patterns and through retaining hedgerows and mature trees to provide a mature setting. Secondary and tertiary routes reflect a denser, tight knitted village character and may include incidental seating areas, pedestrian priority areas and play streets, particularly around schools and local centres.

6. Green open space:

Located within easy access of clusters, to ensure all residents and workers have access to usable green space. It includes multifunctional spaces – village greens, natural parks, community gardens, pocket parks and play areas. It provides community focus, health and wellbeing, flood resilience, and biodiversity. It includes retention of existing hedgerows and mature hedgerow trees. Larger green spaces around existing floodable areas may be provided to create wetland features forming natural park areas.

7. Public realm and urban open space:

‘squares’/ civic spaces located around local centres, to provide community focus and character to garden villages. Built form can include green roofs, blue roofs, vertical green facades, SuDs and permeable paving to improve microclimate, biodiversity, reduce flood risk and pollution. Retain mature trees or groups of trees to create focal points to small clusters of housing.
3.1.3 Townscape

The St Cuthbert’s Garden Village Landscape and Townscape Appraisal (2017) includes a character assessment and a summary of the historic development of the five villages within the area, namely Cummersdale, Blackwell, Durdar, Brisco and Carleton. There are a number of buildings and structures in the area and surroundings that form positive and recognisable features on the skyline and in long views, helping with orientation and wayfinding and giving a strong sense of place. This includes the Stead McAlpin chimney, the racecourse grandstand and Denton Mill.

The townscape qualities identified in the Townscape Appraisal provide an important and valuable context to the development of the three masterplan options discussed in this section. The interface between existing and new neighbourhoods will need to be designed with sensitivity to ensure a harmonious relationship between the two. This includes consideration of built heritage, scale and massing of existing buildings and key views into and out of the city.

In order to achieve a sensitive interaction, attention must be paid to design and quality standards to ensure that early stages of development set a high standard as a precedent for the remainder of St Cuthbert’s. The masterplan will need to set the basis for these and they will be expanded in later stages through specific design guidance.
**Street profile 1 - urban character**

The street sections shown here represent an approach to the character and quality of streets within the garden village. In more urban streets, SUDs solutions will be more engineered while in less urban streets they will be integrated in the form of swales.

Accordia, Cambridge, UK
Street profile 2 - rural character

Green roof  Rain gardens  Sustainable Urban Drainage integrated in the street profiles

Active frontages to the street  SUDs integrated with natural solutions like swales

Accordia, Cambridge, UK
### 3.1.4 Movement Strategy

Whilst each of the three masterplan options has a different spatial layout there are a series of underlying principles that inform the movement strategy for the Garden Village. These are summarised below:

- The Garden Village should be designed around liveable neighbourhood principles to ensure walking and cycling are the easy and natural choice for short journeys within the village, e.g. to schools, shops etc. This means designing streets that are attractive, low speed, low traffic environments with good and safe crossings on busier roads;

- Cycling and walking infrastructure should be designed to be inclusive, ensuring people of all ages and abilities can safely walk and cycle.

- Alternatives to private car should be there from the outset and be attractive choices: this includes walking and cycling but also bus travel (walking and cycling routes to bus stops, cycle parking, bus shelters, real time information), bus priority, car clubs;

- A key focus will be the links between the site and existing transport hubs such as Carlisle Station and the City Centre itself, using safe and attractive cycling routes, which connect to these locations and other employment, retail and leisure destinations. Routes to community facilities within the Garden Village should be provided to ensure that these are accessible to the wider community;

- The strategy should maximise the opportunity that the complimentary active travel infrastructure associated with the CSLR can bring in terms of connecting the area with key employment destinations to the north of the City, linking into existing routes alongside the Carlisle Northern Development Route;

- The CSLR will play a key role in the wider connectivity between the masterplan area to Cumbria and its several key strategic employment destinations;

- Opportunities for enhancement of the existing highway network that are created by the relocation of existing traffic from the city centre and surrounding network onto the CSLR should be maximised to support the overall vision for the Garden Village and the aspirations of the wider city;

- Car parking and access must be effectively planned and managed from the outset e.g. to prevent issues prevalent across the country of congestion and pavement parking, which can cause an obstruction and inhibit the independence of many vulnerable people, especially older or disabled people with visual or mobility impairments;

- Designs should be fully cognisant of emerging transport trends and remain flexible enough to cater for changes in Ultra Low Emission Vehicle technology. As an example, it is vital that neighbourhoods are designed with provision for this technology now as to avoid undesirable outcomes associated with retrofitting e.g. ducting and spaces in carriageways earmarked for EV charging points to ensure they don’t take space from footways. Houses with garages/driveways should come with EV charging points as standard.

- People should be able to walk and cycle for both everyday journeys and for leisure. In addition to creating liveable neighbourhoods, high-quality, safe and attractive leisure routes should be provided. Where routes serve a dual purpose, they must be suitable for cycling year-round in all conditions.
Provides crossing to railway only, not across river
3.1.5 Infrastructure and Drainage Strategy

Utilities

A comprehensive review of the three masterplan options against utility infrastructure is reliant on the availability of asset records for each utility for the extent of the proposed development. Ongoing dialogue with utility providers will inform the development of the preferred option.

The comparison of the three masterplan options, based on the currently available utility information, should be considered for the most part as ‘neutral’. Furthermore, based on the findings of the baseline analysis the following elements are considered:

- Each masterplan option incorporates the HSE consultation zone (75m) either side of the NGN high pressure (Catton/ Cummersdale) main as an opportunity for an east-west greenway link.

- All three options propose development at Cummersdale, where there is a medium pressure main. As a preferred option is developed, discussions will be held to look at either diverting the main or accommodating this through design.

- All three options would also require a diversion to an Electricity Northwest 11kV overhead cable which runs diagonally across the field from the south of the race course on Durdar Road to a private property (postcode CA4 0RF) on Newbiggin Road.

- Similarly, an overhead diversion may be required to the 11kV cable running north-westerly through the centre of the proposed Carleton development area. At this stage, options 1 and 3 appear to have the greatest conflict with the cable. The diversion route for all three options is likely to be buried and routed within the same road network.

- The 33kV electricity overhead cable within the Cummersdale area, will also need accommodating/diverting for all three masterplan options.

- The United Utilities pumping stations will largely be unaffected by each masterplan option. Consideration will be required to accommodate the pumping stations and connecting mains when providing access to adjacent properties.

- The Aqiver radio masts transmit local and national radio. Due to the scheduled switch over to digital radio this has not been considered within the options assessment.

A comprehensive assessment of the proposed utility supplies for each option is dependent on the proposed development schedule and phasing for the masterplan option. In addition to the number of residential dwellings, this would also include defining the likely location, category and quantum of commercial developments in order to assess the load demands on utility supplies. As this information is yet to be determined, ability to supply and connection locations have not been identified by the statutory undertakers for the masterplan options at this stage.

Through close joint working with key stakeholders such as Cumbria County Council, the utilities provisions proposed within the link road will be discussed and will be used as a guide to development of the preferred option.

Based on initial discussions, it is suspected that a new electricity primary substation will be required to support the development of 10,325 homes. The 33kV power supply needed to establish the new substation is likely to be provided from the Carlisle Bulk Supply Point. This will require considerable off-site works and crossing of third-party land including the rail line.

Conversations with United Utilities are ongoing in order to understand the capacity and any required improvements to the water supply and sewerage treatment works, connection locations and pipes crossing the railway. United Utilities are also undertaking bespoke modelling to better understand the precise requirements for the Garden Village and any potential need for new treatment works and/or upgrades.
**Drainage and flooding**

Each of the masterplan options has been accommodated within developable areas which were set out by baseline analysis. This baseline analysis excluded all flood zone 2 and 3 areas and areas in which slope gradients exceed 20%. The three masterplans options also share a landscape typology of linear riverside parks, enhanced farmland, greenways, green buffers and a green streets hierarchy. Together this should allow for SuDS features, flood attenuation, overland flood routing and retention of existing drainage features to be key elements within the wider landscape within the masterplan options.

Surface water should be managed at the source and discharged in accordance with the surface water drainage hierarchy. Through preferred option development the objective is to ensure that discharge rates are managed, if not bettered, in order to ensure no flood risk elsewhere. The use of ‘at source SuDS’ has also been discussed with the County Council who have expressed a requirement for each development area to achieve a greenfield runoff restriction.
Existing Known Infrastructure and Utilities
Option 1 is most closely aligned with the Stage 1 Concept and Vision work in relation to its proposed recommendations and distribution of development. The concept masterplan for this option is defined by the two green river corridors and a generous green setback at the southern edge of Carlisle. These spaces between the built clusters provide a strong definition between built and open environments and highlight the unique landscape quality that gives the Carlisle area its identity.

Within this landscape setting sit three identifiable communities centred around Cummersdale, Carleton, and Durdar. The three communities will be designed to have a more urban / town character through a compact layout, a mix of uses including employment, and a concentration of higher density in selected locations such as the district centre in Durdar.

Each community will have an active centre with a mix of uses, but also a well-defined frontage towards the open fields and river corridors within which it sits, creating a clear sense of separation between built areas and the open landscape. The southern urban fringe area of Carlisle becomes a generous green buffer between existing neighbourhoods and the new Garden Village to the south. Development around Durdar, Cummersdale, and Carleton will be sensitive to the existing context while incorporating them into the wider development. The concentration and compact layout of development will result in built areas being primarily anchored around Durdar.

Key design features and placemaking drivers of Option 1 are:

- **Three compact communities** concentrated around Durdar, Cummersdale, and Carleton.
- **A more ‘urban’ character** within each community, setting them apart as distinct settlements within the surrounding rural landscape.
- **A central east-west greenway** through the new settlements designed for a variety of active outdoor uses and to accommodate the main east-west walking/cycling route. It is expected that the greenway will loop into Carlisle via existing walking routes and green corridors linking into existing landscape assets such as Upperby Park and river corridors.
- **An open space network** with green spaces of varying character from riverside parks to green buffers to retained farmland, allotments, and public spaces.
- **A district centre in Durdar** (heart of the new community) - dense, linear, and mixed-use with a number of smaller local centres including retail, community, employment, health and educational uses.
- **A mobility hub** in proximity to Durdar’s district centre to promote walking, cycling, public transport, car-share and a range of active and sustainable travel options.
- Three compact communities
- More ‘urban’ character forming distinct settlements within the surrounding rural landscape.
- Central east-west greenway connecting the new settlements for active outdoor uses,
- A district centre in Durdar - dense, linear, and mixed-use
3.2.1 Option 1: Area and Infrastructure Schedule

In the following table there is an estimation of the key figures of land take, housing, open areas and social infrastructure requirements. Further detail is provided in subsequent pages.

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<th>Option 1</th>
<th>Durdar</th>
<th>Carleton</th>
<th>Cummersdale</th>
<th>Brisco</th>
<th>Total</th>
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<tr>
<td><strong>Open Space</strong></td>
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<td></td>
</tr>
<tr>
<td>Sports pitches (ha)</td>
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<td></td>
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<td><strong>Schools</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary schools (equivalent)</td>
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<td>1no. 1FE /</td>
<td>1no. 1FE /</td>
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<td>6no.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6 to 2.0 ha</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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* Commercial is B1a use integrated as a part of mixed used development 90k sqm of employment space as noted in Stage 1 report will be provided in sites outside the area shown.
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<tr>
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<td>5000</td>
<td>-</td>
<td>25000</td>
</tr>
</tbody>
</table>

**Green and Blue Infrastructure**

**Open space**

Sports pitches and play areas
Option 1 provides 65 hectares of sports pitches and 34 hectares of play areas.

Sports facilities
Sports facility demand is calculated from the Sport England Active Places Power Sports Facility Calculator as:
- 4 lanes of a 25m swimming pool (estimated cost: £4.0m)
- 1-2 sports halls with 6 courts of sports hall space (£3.8m)
- 1-2 indoor bowling rinks (£590,000)
- 0.5 artificial grass pitches (£543-601k)

Additional demand has been initially estimated by Carlisle City Council as:
- 12no. Grass football pitches
- 10no. Children’s play areas, or equivalent
- 846ha. Amenity open space
- 1no. Cemetery

Discussion is ongoing with key stakeholders in order to establish the nature, size and location of required facilities.
### Social and Community Infrastructure

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| **Secondary schools** | 1no. 10 form entry school located at Durdar to serve the whole Garden Village (8.3 to 10.4 ha). |

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### Physical Infrastructure

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</tr>
</thead>
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<tr>
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<td>There will need to be consideration for any required diversions of existing medium pressure gas pipelines and overhead power lines in the development area. Ongoing discussions with stakeholders throughout the preferred options phase will establish the exact nature of these. There are continuing conversations and bespoke modelling with United Utilities in order to understand the anticipated works required to foul water and drainage networks.</td>
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<tr>
<th><strong>Movement and Access</strong></th>
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</thead>
<tbody>
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</tr>
<tr>
<td><strong>Active travel</strong></td>
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</tr>
</tbody>
</table>
3.2.2 Option 1: Landscape Strategy

Option 1 uses the two river corridors as the primary armature around which a compact form of development is set. The greenway forms the main east-west corridor tying the garden village with Carlisle with a ring of active walking and cycling routes and a diversity of outdoor programmes.

1. Linear riverside parks
2. Retained farmland
3. Greenways
4. Green buffers
5. Green streets (hierarchy)
   - Village greens / ‘natural’ parks
   - Neighbourhood / community / pocket parks
   - Urban open space
   - Built form
3.2.3 Option 1: Movement Strategy

The movement strategy for Option 1 is aligned with delivering a high concentration of development in and around Durdar alongside communities at Cummersdale and Carleton.

In this option, Durdar could act as a transport/mobility hub for the Garden Village. Due to the concentrated nature of the development within the core of the Garden Village under this option, a high proportion of trips to and from Durdar (and the mobility hub) could be undertaken by walking and cycling, reducing the car dependency of residents throughout the Garden Village.

Minimising the requirement for car-use within the development and reduced dependency on the car for residents could reduce the need for car parking within individual development plots or streets. Therefore, centralised parking (including electric vehicle (bike and car) charging) could be provided within 10-15 minute walking distance of the mobility hub. This could enable vehicle movements to be limited to a small number of routes and reduce the impacts of car parking at a street/building scale.

The mobility hub itself should include facilities to support the use of active travel modes such as cycle parking and maintenance facilities. The mobility hub could also include a public transport interchange and shared transport services (including bike and car rental). The provision of other transport modes and facilities within the mobility hub may also help to reduce the reliance on car use and promote lower levels of car ownership.

A key role of the mobility hub will be to act as a focal point for travel to and from the Garden Village, not only Durdar but also Cummersdale and Carleton, which are relatively remote from the primary centre in Durdar. The central east-west greenway will connect these communities into the mobility hub, which could support further multi-modal journeys. A shared walk/cycle route is proposed as part of the CSLR, which will complement the greenway and help to make cycling as an attractive option to travel between communities.

Vehicle access into the mobility hub from the south could be provided from one or more junctions onto the CSLR (i.e. one for the west and one for the east) via short and direct routes to minimise impact on pedestrian and cyclist movements between the CSLR and the rest of the Garden Village. The neighbourhood around the mobility hub will be designed with a ‘filtered neighbourhood’ approach; this means a network of streets that discourages through movements for cars but remains highly permeable for pedestrians and cyclists. This will reduce the adverse impacts of through traffic between the CSLR and the city centre and calm the neighbourhood streets, encouraging people to walk or cycle.

The above has focused primarily on the connections within the wider Garden Village but an important consideration is the connections between the Garden Village and Carlisle City Centre and Railway Station. The centralised nature of development under this option would potentially support the development of a single/primary sustainable travel corridor between the mobility hub and the city centre. This could include pedestrian and (potentially segregated) cycle provision along a single corridor providing a lightly-trafficked route. A public transport (bus) route could be provided along parallel corridors with bus priority measures (including bus gates) provided along these corridors to promote these modes of transport.

Providing the mobility hub would enable infrastructure to be more focussed upon a smaller number of high quality routes, such as routes between the CSLR and the Garden Village and the corridor between the Garden Village and the city centre.

Summary of the Movement Strategy

- To propose a mobility hub in the core of the development within Durdar which will facilitate both trips by walking/cycling/public transport within the Garden Village and also into key destinations such as Carlisle City Centre and Railway Station.
- To connect to the mobility hub from remote settlements such as Cummersdale and Carleton through the central east-west greenway and the CSLR
- To provide a high quality route between the SCGV mobility hub and the City Centre/Railway Station, which enable sustainable transport options including walking, cycling and public transport.
- The concentrated development and mobility hub allows focused infrastructure delivery on a small number of routes in comparison to other options which have a wider geography.
3.2.4 Option 1: Illustrative Sections

Gateway

This section illustrates the spatial character of the gateway to the site at the location shown below.

Communal courtyards containing a range of amenities including play spaces to support residents.
Green roofs to increase biodiversity and amenity.

Sustainable Urban Drainage features integrated into the design of the street.

Main entrance street as gateway to the Garden Village; active frontage / shops on streets with pavements and cycle routes incorporated.
Greenway

This section illustrates the spatial character of the greenway and how it is perceived as we access the site from the CSLR.

Public open space or communal courtyards containing a range of amenities including play spaces to support residents; green walls and rain gardens may also be incorporated.
Green roofs to increase biodiversity and amenity.

Spaces at the transition between built form and the active greenway zone will accommodate urban qualities such as active street frontages such as retail / cafes as well as more formal garden landscapes for walking and passive enjoyment.

Sustainable Urban Drainage elements will be integrated into the landscape and streets where possible.

In this option, the greenway will be a focus of activity and outdoor programmes including sports fields, playgrounds, and community facilities.

Building with an active frontage to the greenway.

Residential Retail/Facilities
Option 2 builds on the recommendations of the Stage 1 Masterplan and re-interprets the principle of ‘Starting with the Park’ as a strategic and fundamental principle for the overall layout of the Garden Village. This option disperses the settlement around Durdar into a series of smaller village clusters, nestled within the undulating landscape and north south green valleys that define the site. There are a number of benefits to such an approach, primarily the opportunity to bring the locally distinctive landscape quality right into the new Garden Village neighbourhoods.

The design of the open spaces and green network will be more informal. Elements like fields, woodland, hedgerows, attenuation ponds, swales, wildflower meadows, and seasonal streams will be integrated into the design, providing usable landscapes as well as generous green separation between built clusters. Such an approach allows maximising the natural capital benefits of the site as well as providing a variety of opportunities to achieve biodiversity net gain.

The challenge will be to design each village cluster to function as a cohesive community with amenities one can walk or cycle to, rather than as isolated housing enclaves. The network of village clusters will be connected to each other and to the wider surrounding areas by well-designed walking and cycling paths and accommodate a hierarchy of centres from local nodes to a bigger centrally-located district centre.

Key design features and placemaking drivers of Option 2 are:

- **Dispersed village clusters** set amidst a more natural and rural landscape.
- A landscape approach that highlights a series of north-south green fingers that follow the natural valleys, surface water flows, and low-lying topographies of the site.
- **A more ‘rural’ village-like character** within the built areas and in the design of the main village green and surrounding open spaces.
- **A softer built edge to the surrounding landscape** (e.g. back gardens, playgrounds, community parks) with ‘fronts’ towards internal streets and centres within the village clusters.
- **A series of local centres and nodes** (community, employment and educational uses) connected by clearly marked walking and cycling routes.
- An open space network with **green spaces of varying character** from riverside parks to green buffers to enhanced farmland, allotments, and public spaces. The greenway will be incorporated into the overall landscape strategy.
- **A variety of usable open spaces as well as green infrastructure features** (swales, ponds, meadows, wetlands) weaving through built settlements.
- Dispersed village clusters set within a more natural landscape.
- A more ‘rural’ village-like character.
- A softer built edge to the surrounding landscape.
- A series of local retail centres and key services connected by clearly marked walking and cycling routes.
- An open space network with green spaces of varying character and functions weaving through built settlements.
### 3.3.1 Option 2: Area and Infrastructure Schedule

In the following table there is an estimation of the key figures of land take, housing, open areas and social infrastructure requirements. Further detail is provided in subsequent pages.

<table>
<thead>
<tr>
<th></th>
<th>Option 2</th>
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<td></td>
</tr>
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<td>26.5</td>
<td>31</td>
<td>35.5</td>
<td>305</td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>(equivalent)</td>
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<td>1no. 1FE</td>
<td>1no. 1FE</td>
<td>Provided at Durdar</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>1.6 to 2.0 ha</td>
<td>0.9 to 1.1 ha</td>
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<td></td>
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**Green and Blue Infrastructure**

- Option 1 provides 65 hectares of sports pitches and 34 hectares of play areas.

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3.3.2 Option 2: Landscape Strategy

In Option 2 the landscape concept emphasises greater integration with the built form through the provision of green fingers between smaller built clusters. The greenway follows the landscape qualities of the green fingers with a more informal and natural treatment while also accommodating usable spaces and programming.

1. Linear riverside parks
2. Retained farmland
3. Greenways
4. Green buffers
5. Green streets (hierarchy)
   - Village greens / ‘natural’ parks
   - Neighbourhood / community / pocket parks
   - Urban open space
   - Built form
3.3.3 Option 2: Movement Strategy

The movement strategy for Option 2 is based upon a greater number of less densely developed clusters. As such, a key component of the movement strategy will be to connect the clusters through walking and cycling routes. The variety of usable open spaces and green infrastructure features would enable the delivery of a finer grain of walking and cycling network between clusters with a more ‘rural’ character. The shared footway/cycleway proposed as part of the CSLR will compliment this network and provide a further east-west connection between the clusters. Individual clusters would provide intermediate destinations with facilities for cycling and walking provided in these locations. It should be noted however that the end-to-end distance of the development would also be increased, reducing the attractiveness of walking and cycling.

The increased spread of development due to the lower densities could discourage the development of a primary centre that is located within easy walking and cycling distance of the development. However, the creation of village clusters serving individual communities may mean that a smaller range of essential services are provided within a closer walking distance.

Due to the expanse of the development, parking may need to be provided in a decentralised manner (i.e. on a building/plot basis) though opportunities to consider this at a community/cluster level may still exist. Given the wider spread of development, traffic movements are likely to be dispersed across a number of the existing road links. This dispersal of traffic could potentially reduce the pressure on individual links and subsequently create opportunities to deliver public transport (bus), walking and cycling enhancements along multiple corridors. This could potentially provide wider benefits to communities both within and without the Garden Village, particularly those more remote from the core. Additional traffic movements would be focussed onto existing radial routes with potential opportunities for promoting non-car modes created on the spaces between these.

The expanded area covered by development would mean that multiple sustainable travel corridors may be required which could mean that investment has to be spread across a wider area (with a resulting reduction in provision on any one corridor). The reduced density of development and the corresponding expansion of the developed area could make a mobility hub less viable as it could be too remote to serve the outer edges of the development and would not generate the critical mass required to support a full range of services.

As with Option 1, the adverse impacts of through traffic between the CSLR and the city centre should be minimised across the Garden Village. This could be achieved by prioritising the intra-cluster walking and cycling links as they cross the radial road corridors which the through traffic would use. However, the less dense and wider spread of development (in comparison to Option 1) could mean that traffic movements to and from the Garden Village would be dispersed across the wider highway network.

Summary of the Movement Strategy

- Connect the lower density clusters through more fine grain walking and cycling routes (in comparison to Option 1), by utilising open spaces and green infrastructure features with a more ‘rural’ character. These routes will be supplemented by the proposed walk/cycle route adjacent to the CSLR.
- To encourage short distance journeys to be undertaken by walk/cycle within the individual clusters by locating a small range of essential services within each cluster.
- Due to the expanse of development, parking may need to be provided on a plot by plot basis, which may assist in dispersing car trips in comparison to Option 1.
- Minimise the adverse impacts of through traffic between CSLR and the city centre within the Garden Village by prioritising the intra-cluster walking and cycling links over vehicular routes.
- Require investment to be spread across a wider area to develop multiple sustainable travel corridors in comparison to Option 1.
3.3.4 Option 2: Illustrative Sections

Gateway

This section illustrates the spatial character of the gateway to the site at the location shown below.

- Communal courtyards containing a range of amenities including play spaces to support residents
- Green roofs to increase biodiversity and amenity.
- Planted green area to provide separation between residential and the main entry road
Green roofs to increase biodiversity and amenity.

Sustainable Urban Drainage features integrated into the design of the street.

Main entrance street as gateway to the Garden Village; active frontage/shops on streets with pavements and cycle routes incorporated.
Greenway

This section illustrates the spatial character of the greenway and how it is perceived as we access the site from the CSLR.

Public open space or communal courtyards containing a range of amenities including play spaces to support residents; green walls and rain gardens may also be incorporated.

Sustainable Urban Drainage elements integrated into local street profiles and along public spaces adjacent to built clusters.
Green roofs to increase biodiversity and amenity.

Spaces at the transition between built form and the natural greenway may accommodate a range of public areas for play or quiet enjoyment.

Incorporation of a natural landscape quality along the greenway (and along the smaller north-south green valleys) with amenities for walking, cycling routes, and bridleways.
3.4 / **Option 3: Edge Communities**

Option 3 is based around the theme of agriculture, farming, and food growing. It is envisioned as a series of new neighbourhoods framing an expanse of productive agricultural land at the centre of the new community. Additional food growing opportunities can be created through orchards, community farms, and allotments along the edges of the retained farmland. While this option diverges slightly from the Stage 1 concept, it is consistent in terms of its emphasis on open space and locally distinctive landscape as a setting for new neighbourhoods.

This option also supports an increase in short rotation coppice, biomass or other woodland planting that could help mitigate against climate change and support renewable energy production, an opportunity noted in the Cumbria Landscape Character Guidance and Toolkit (2011). Garden village parks, squares, greens, and gardens may also offer opportunities for community or municipal food growing and edible landscapes. This may be accomplished through a mixture of retained farmland and new growing areas and would likely necessitate a management plan to be agreed between various public and private stakeholders.

The retention of the large central open farmland results in built areas being located to its north and south. The farmland and new biodiverse areas are seen as amenities for the new Garden Village neighbourhoods located along its edges. While some built areas are inevitably located within the Carlisle urban fringe, they follow the pattern of recently approved developments in the areas. New developments will contain shared amenities and softer green elements as transition features between existing neighbourhoods and will be built to a design and sustainability standard that the Garden Village aspires to.

Key urban design and landscape features and placemaking drivers of Option 3 are:

- **Three neighbourhoods** concentrated around Durdar, Cummersdale, and Carleton; in addition, some smaller ‘urban infill’ areas located in the Carlisle south urban fringe.

- **A mixed character** with a more urban quality and higher density in the Durdar (south) neighbourhood and lower density in the neighbourhoods closer to existing areas.

- **A landscape approach that is anchored around farming and food growing.**

- **The greenway** through the new settlement is integrated with the farmland and may be used for enhanced farming and growing opportunities including community allotments as well as recreational areas.

- A series of **interconnected local centres** with a distribution of community amenities that can be accessed by new as well as existing residents.

- **Movement and sustainable travel** (walking and cycling) achieved through a network (loop) connecting various neighbourhoods and radial connections out to the surroundings. Easements through the farmland for walkers and cyclists will be provided.
• Three neighbourhoods concentrated around Durdar, Cummersdale and Carleton.
• A mixed character with a more urban quality and higher density in Durdar.
• A landscape approach that is anchored around farming and food growing.
• Greenway as an element to enhanced farming and growing opportunities.
• A series of interconnected local centres.
Illustrative plan
Option 03 - Edge Communities
### 3.4.1 Option 3: Area and Infrastructure Schedule

In the following table there is an estimation of the key figures of land take, housing, open areas and social infrastructure requirements. Further detail is provided in subsequent pages.

<table>
<thead>
<tr>
<th></th>
<th>Option 3</th>
<th>Durdar</th>
<th>Urban Fringe</th>
<th>Carleton</th>
<th>Cummersdale</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Housing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land take (HA)</td>
<td></td>
<td>171</td>
<td>26.5</td>
<td>26.5</td>
<td>31</td>
<td>255</td>
</tr>
<tr>
<td>Density (DPH)</td>
<td></td>
<td>43</td>
<td>36</td>
<td>34</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Approx no. of units</td>
<td></td>
<td>7371</td>
<td>954</td>
<td>900</td>
<td>1100</td>
<td>10325</td>
</tr>
<tr>
<td>Commercial* (sqm)</td>
<td></td>
<td>10000</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>25000</td>
</tr>
<tr>
<td><strong>Open Space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Sports pitches</td>
<td></td>
<td></td>
<td></td>
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<td>78 hectares</td>
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<tr>
<td>Play area</td>
<td></td>
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<td><strong>Schools</strong></td>
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</tr>
<tr>
<td>Primary schools</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(equivalent)</td>
<td></td>
<td>4no. 2FE /</td>
<td>1no. 1FE /</td>
<td>1no. 1FE /</td>
<td>6no.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.6 to 2.0 ha</td>
<td>0.9 to 1.1 ha</td>
<td>0.9 to 1.1 ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1no. 10 FE /</td>
<td>8.3 to 10.4 hectares</td>
<td></td>
<td></td>
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</tbody>
</table>

*Commercial is B1a use integrated as a part of mixed used development 90k sqm of employment space as noted in Stage 1 report will be provided in sites outside the area shown*
### Housing

<table>
<thead>
<tr>
<th></th>
<th>Durdar</th>
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<th>Cummersdale</th>
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<td>10000</td>
<td>5000</td>
<td>5000</td>
<td>5000</td>
<td>25000</td>
</tr>
</tbody>
</table>

### Green and Blue Infrastructure

- **Option 3** provides 78 hectares of sports pitches and 41 hectares of play areas.

**Sports facilities**

- 4 lanes of a 25m swimming pool (estimated cost: £4.0m)
- 1-2 sports halls with 6 courts of sports hall space (£3.8m)
- 1-2 indoor bowling rinks (£590,000)
- 0.5 artificial grass pitches (£543-601k)

Additional demand has been initially estimated by Carlisle City Council as:

- 12no. Grass football pitches
- 10no. Children’s play areas, or equivalent
- 846ha. Amenity open space
- 1no. Cemetery

Discussion is ongoing with key stakeholders in order to establish the nature, size and location of required facilities.
## Social and Community Infrastructure

### Education
- **Primary schools**: The site requires the equivalent of 5 no. 2 form entry primary schools, however the geographical spread of housing generates a requirement for:
  - 4 no. 2 form entry school at Durdar (1.6 to 2.0 ha based on Department for Education guidance).
  - 1 no. 1 form entry school at Carleton - dependent on capacity at existing schools (0.9 to 1.1 ha).
  - 1 no. 1 form entry school at Cummersdale (0.9 to 1.1 ha).

Discussion is ongoing with Cumbria County Council in order to establish the size and location of primary schools.

### Secondary schools
- 1 no. 10 form entry school located at Durdar to serve the whole Garden Village (8.3 to 10.4 ha).

### Health
- **Primary care provision**: The Garden Village generates an estimated requirement of 12 additional GPs. Discussion is ongoing with key stakeholders in order to establish the size and location of primary care facilities.

### Other
- **Community centres**: There is a recognised desire for community centres associated with the site. Discussion is ongoing with key stakeholders in order to establish the nature and location of these facilities including research into what a future community hub includes.

- **Emergency Services**: It is proposed that an emergency services hub may be provided within a Community Hub. Discussion is ongoing with key stakeholders in order to establish requirements.

- **Extra care housing**: There is a projected demand for 389 additional extra care housing units by 2025 in the Carlisle Local Plan Area. Discussion is ongoing with key stakeholders to establish the level of provision at St Cuthbert’s.

## Physical Infrastructure

### Utilities and Drainage
- There will need to be consideration for any required diversions of existing medium pressure gas pipelines and overhead power lines in the development area. Ongoing discussions with stakeholders throughout the preferred options phase will establish the exact nature of these. There are continuing conversations and bespoke modelling with United Utilities in order to understand the anticipated works required to foul water and drainage networks.

### Public transport
- Improvements to bus connectivity between St Cuthbert’s and Carlisle city centre will be required in order to encourage high levels of public transport use between the proposed development and the city centre. The nature and location of these improvements will be determined at a later stage.

### Active travel
- Improvements to routes towards Carlisle Station, the city centre and existing employment and social infrastructure facilities are required to facilitate walking and cycling journeys. The nature and location of these improvements will be determined at a later stage.
3.4.2 Option 3: Landscape Strategy

Option 3 organises the built neighbourhoods around a wide and generous swathe of farmland at the heart of the garden village bringing a growing theme into the landscape idea of the new community. The greenway, which edges the farmland continues along the theme incorporating community allotments and orchards within it.

1. Linear Riverside Parks
2. Retained Farmland
3. Greenways
4. Green Buffers
5. Green Streets (Hierarchy)
   - Village Greens / ‘natural’ parks
   - Neighbourhood / Community / Pocket parks
   - Urban Open Space
   - Built Form
3.4.3 Option 3: Movement Strategy

Option 3 would involve an expansion of the Garden Village both to the north (i.e. into the existing urban area) and the south (i.e. to the edge of the CSLR). The movement strategy would respond to the radial nature of development along the existing road corridors with interventions focussed upon enhancing movement along these corridors between the north and south. A ‘business/behaviours as usual approach to travel’ is more likely to happen in this option, in comparison to Options 1 and 2, due to the dispersed nature of the development without a primary centre.

Creating links across the central open agricultural fields would be a challenge and may restrict the ability to reduce through traffic in some communities. Vehicular traffic accessing the northern parts of the Garden Village would need to travel through the southern sections along existing road corridors. Opportunities for new walking and cycling routes away from the highway links could also be considered.

Each of the settlements would be relatively remote from one another, presenting a challenge in terms of encouraging walking and cycling across the Garden Village. However, the opportunity to utilise the central east-west greenway could connect these communities and existing north-south green corridors.

The cycle route proposed as part of the CSLR scheme could also provide connection for cyclists between the east and west settlements although this would not serve the northern parts of the Garden Village. Given the scale of development proposed on any individual corridor, relatively modest enhancements to routes to the city centre and wider highway network would be delivered.

Summary of the Movement Strategy

• Due to the layout of the development under Option 3, the strategy would seek to enhance movement along the existing road corridors between the north and south in addition to east-west links.
• Vehicular access to the northern parts of the Garden Village would be required through the southern sections along existing road corridors, with opportunities for new walking and cycling routes away from the highway links.
• With the dispersed communities proposed under Option 3, a central east-west greenway, north-south green corridors and the infrastructure proposed with the CSLR are crucial to ensure connectivity by non-car modes. The distances associated with these journeys, and number of routes required are likely to provide a challenge in terms of delivery and effectiveness.
• Option 3 requires investment to be spread across a wider area to develop multiple sustainable travel corridors compared to Option 1 and 2.
3.4.4 Option 3: Illustrative Sections

Gateway

This section illustrates the spatial character of the gateway to the site at the location shown below.

Public open space or communal courtyards containing a range of amenities including play spaces to support residents; green walls and rain gardens may also be incorporated.

Green roofs to increase biodiversity and amenity.
Planted green area to provide separation between residential use and the main entry road

Sustainable Urban Drainage features integrated into the design of the street

Main entrance street as gateway to the Garden Village; active frontage / shops on streets with pavements and cycle routes incorporated

Green roof

Residential Retail/Facilities
**Greenway**

This section illustrates the spatial character of the greenway and how it is perceived as we access the site from the CSLR.

Public open space or communal courtyards containing a range of amenities including play spaces to support residents; green walls and rain gardens may also be incorporated.
Green roofs to increase biodiversity and amenity.

Community allotments and or small farms and orchards that extend the productive landscape of the retained farmland and invite local residents to get more involved in growing and small-scale farming.

Retained farmland and hedgerows at the heart of the Garden Village with potential to implement innovative land and soil management to support food production and carbon sequestration.

Spaces at the transition between built form and the greenway may accommodate a range of public areas for play or quiet enjoyment.
Assessing the options
4.1 / Testing against the St Cuthbert’s Vision Statement

The Stage One Vision and Concept Framework for St Cuthbert’s Garden Village established key drivers and principles as summarised in section 2, which were shaped and tested by extensive public and stakeholder engagement. In order to undertake a robust assessment of the options presented in this report, we have sought below to assess them against the following:

- The St. Cuthbert’s Vision Statement
- The St. Cuthbert’s Key Drivers
- The St. Cuthbert’s 9 guiding principles

The options have also been assessed in a SWOT analysis, which brings together the vision and guiding principles and the technical baseline work. The SWOT analysis also alludes to the performance of each option with respect to the key drivers identified in Stage 1.

The options will also be assessed concurrently to the public consultation by the appointed consultants undertaking the viability assessment, as well as the consultants appointed to undertake the sustainability appraisal and habitats regulation assessment.

All three options are broadly aligned with the Vision Statement, but they differ in two primary areas – first, in their approach to landscape and second, in their layout and distribution of built form and land use. The section below assesses the three options against the Vision Statement by noting their positive and negative characteristics with respect to their ability to deliver the overall vision.

“St Cuthbert’s will provide connected villages set in stunning healthy landscapes within the world class setting of the Lake District National Park, the North Pennines Area of Outstanding Natural Beauty and Hadrian’s Wall World Heritage Site.

A cluster of distinct garden villages set in an attractive recreational, riverside and landscape setting will be well connected to Carlisle and wider countryside. St Cuthbert’s will actively promote healthy lifestyles providing integrated communities focused around high quality homes, locally distinctive spaces and inclusive facilities. Innovation and technology will support attractive employment opportunities and exemplary low carbon living.”
### Option 1: Compact Communities

**Positives**

Option 1 is most closely aligned with the Stage 1 concept with three distinct clusters around Durdar/Brisco, Carleton, and Cummersdale. The density and compact pattern of Option 1 allows a generous open space around each cluster to be preserved. With a large portion of the development within walking and cycling distance to the main district centre, there is an opportunity to create a well-connected sustainable new community that supports living, working and leisure in healthy environments and communities.

**Negatives**

The dominance of Durdar as a new community, and the location of Cummersdale and Carleton across a dual barrier of river and rail may cause them to be perceived as apart from the heart of the new Garden Village. This is mitigated to a great extent by an emphasis on developing a walking and cycling route along the east-west greenway corridor and the proposed walking and cycling routes along the CSLR.

### Option 2: Connected Communities

**Positives**

The locally distinctive landscape setting is brought right into the heart of the new community allowing for the creation of a unique identity for St. Cuthbert’s based on leveraging the natural capital of the site. A careful orientation of the green valleys with the neighbourhoods could help frame the world class views from the site for daily enjoyment by residents. A careful attention to the design and delivery of a biodiverse and integrated landscape character can enable distinctive, healthy and sustainable neighbourhoods – a 21st century model for Garden communities.

**Negatives**

With its more dispersed setting, there may be a greater reliance on cars especially for residents of the smaller clusters; some smaller villages may struggle to provide amenities within their extents due to lack of critical mass. Smaller clusters may become ‘business as usual’ single-use developments.
### Option 3: Edge Communities

<table>
<thead>
<tr>
<th><strong>Positives</strong></th>
<th><strong>Negatives</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A large area of productive farming landscape forms the heart of the new community, preserving the essential rural character of the area. This landscape / land-use concept provides a distinctive character to the new community, offering a new model for growth on agricultural land with an emphasis on a holistic interpretation of health and wellbeing, inclusive of people as well as the planet.</td>
<td>The edge location of built clusters requires the use of land within the Carlisle urban fringe, potentially diluting the sense of cohesive identity for St. Cuthbert’s. The emphasis on farming and food growing implies that more sustainable forms of farming and land/soil management will need to be adopted and implemented to support the concept. This wider remit will require a more coordinated approach which may be challenging due to the fragmented privately-held land ownership.</td>
</tr>
</tbody>
</table>
### Options Assessment

#### 4.2.1 Testing against the Stage One 9 Guiding Principles

This section tests how the three options will perform against the 9 principles outlined in the Stage 1 Report. The descriptive assessment is summarised towards the end in the form of a Red-Amber-Green (RAG) performance rating of the three options against each principle.

<table>
<thead>
<tr>
<th><strong>Option 1:</strong> Compact Communities</th>
<th><strong>Option 2:</strong> Connected Communities</th>
<th><strong>Option 3:</strong> Edge Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Start with the park</strong></td>
<td><strong>2. Locally distinctive</strong></td>
<td></td>
</tr>
<tr>
<td>Option 1 approaches this principle by minimal land take (compact layout) and maximum retention of open space and farmland with the Carlisle urban fringe free of new development. All options include a strong emphasis on the greenway as an important central amenity connecting the three sub villages.</td>
<td>Option 2 weaves the unique Lowland landscape of the site into the development through its integration with a series of distinctive north south green valleys. This allows a robust distribution of green infrastructure throughout the site.</td>
<td>Option 3 is anchored by farming and food growing, a concept well aligned with the vision noted in the Cumbria Landscape Character Guidance (2011) of ‘conserving and enhancing the working landscape’ of the area as well as in the LUC Landscape and Townscape Appraisal (2017).</td>
</tr>
<tr>
<td>Option 1 and its compact land take has the greatest ability to preserve distinctive long views such as from Durdar Road looking south to the site. While all options have the potential to accommodate and respect local history and built form Option 1 will face some challenge in sensitive integration between old and new particularly within the higher density setting at Durdar.</td>
<td>Option 2 and its relationship to the undulating land form and hydrological flows of the site makes it a community with an identifiable local character. Each village cluster also can develop a cohesive identity of its own.</td>
<td>Option 3 brings a distinctive character to the new Garden Village by being rooted in the agricultural heritage, field patterns and landscape qualities of the Cumbrian Lowland area.</td>
</tr>
</tbody>
</table>
### 3. Quality homes, lifetime neighbourhoods

Option 1 provides a frame within which a range of high-quality homes for a variety of age groups can be delivered. The compact layout allows mixed-use walkable places to develop – a key ingredient of lifetime neighbourhoods. A variety of housing types will be delivered to accommodate a wide demographic spectrum from young families to the elderly. All options also have the opportunity to explore and deliver high quality new homes built to the highest sustainability standards including modern methods of construction (e.g modular).

Option 2 offers a series of village clusters within which design quality can be delivered. However, a more robust delivery strategy will be needed to ensure that smaller clusters contain day-to-day amenities and a mix of housing types. Special care will also need to be taken to ensure that smaller developments do not end up as mediocre quality single use developments.

Option 3 is also consistent with the aspiration for high-quality neighbourhoods and homes. As in Option 1 and 2, it will require a focused investment in the public realm and in providing varied housing types. The proposed infill development areas along the Carlisle edge offer the potential to build shared amenities for the benefit of both old and new neighbourhoods.

### 4. Community focused

A community focused neighbourhood is one where investment in facilities, spaces and programmes for residents are prioritised. Option 1 can achieve this goal with a distribution of community amenities combined with a more concentrated provision that is highly accessible within the district centre.

Option 2 will require a more fragmented provision of amenities to ensure that the smaller village communities have access to them. The amenities would also need to be integrated with the movement network to ensure easy access through sustainable and active modes.

Option 3 has the added potential of providing selected community amenities in conjunction with the infill parcels in a location accessible to existing communities in Carlisle.
### 5. Innovative employment opportunities

<table>
<thead>
<tr>
<th><strong>Option 1:</strong> Compact Communities</th>
<th><strong>Option 2:</strong> Connected Communities</th>
<th><strong>Option 3:</strong> Edge Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent digital infrastructure, mixed-use working places, and quality of life for a young workforce are key ingredients for innovative employment to thrive. Option 1 with its higher density town character is most conducive (among the three options) to integrating employment opportunities within its mixed-use centre. In addition, all options have the opportunity to benefit from the employment areas south of the CSLR as noted in Stage 1.</td>
<td>Option 2 with its ‘living in the landscape’ quality has the ability to attract and retain working age looking to combine innovation, entrepreneurship and quality of life. It can do so with the appropriate investment in digital infrastructure and provision of affordable co-working space. (e.g Ludgate Hub in rural Skibereen, Ireland)</td>
<td>Option 3, like Option 2 has the ability to provide the infrastructure for innovative employment in combination with living, working, and leisure spaces that attract and retain a young working population.</td>
</tr>
</tbody>
</table>

### 6. Healthy environments

<table>
<thead>
<tr>
<th><strong>Option 1:</strong> Compact Communities</th>
<th><strong>Option 2:</strong> Connected Communities</th>
<th><strong>Option 3:</strong> Edge Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1 combines an urban (town) setting with rural hinterlands to bring the best of both to the Garden Village. Combined with a sustainable transport strategy and active outdoor amenities, this option has the potential to promote a healthy lifestyle. All options also have the ability to deliver health outcomes through a focus on issues such as air quality, building user comfort, materials selection, green/blue infrastructure, and multi-age facilities. Option 1 offers the additional potential for accommodating regional health facilities at Durdar.</td>
<td>Option 2 with its village clusters set in the landscape has the potential to achieve a living environment that is truly integrated with the natural capital that surrounds it. See Option 1 for note on ability to deliver health outcomes.</td>
<td>Option 3 can help promote the health and wellbeing agenda through its focus on farming, food growing, and in its promotion of sustainable land management practices. See Option 1 for note on ability to deliver health outcomes.</td>
</tr>
</tbody>
</table>
### 7. Smart and sustainable living

**Option 1: Compact Communities**
Excellent digital infrastructure and a strategy to transition into efficient, low carbon resource consumption is essential for all options. Developing a digital strategy should be undertaken as a next step. Clear and ambitious sustainability targets should also be agreed and adopted. District heating may prove to be viable in Option 1 due to the density and critical mass at Durdar although the carbon reduction benefits of the strategy needs to be evaluated in the context of the growing decarbonisation of the UK grid.

**Option 2: Connected Communities**
See Option 1 re: opportunities and benefits of digital connectivity.

**Option 3: Edge Communities**
The benefits and viability of district heating are not readily apparent for Options 2 and 3 due to the more dispersed nature of the development.

### 8. Integrated sustainable transport

**Option 1** is most conducive to a sustainable and active transport strategy. It has the density and concentration to support public transport and a cycling and walking culture.

**Option 2** and its dispersed village cluster layout may work against the provision of viable public transport. However, it can still promote sustainable travel but will need to invest in a high-quality network of walking and cycle routes, and initiatives such as mobility-on-demand.

**Option 3**
The north-south separation of neighbourhoods is a challenge as it may be difficult to ensure safe connections through the farmland. The dispersed nature of development works against providing viable public transport.

### 9. Exemplary delivery and stewardship

**Option 1**
A robust delivery strategy is needed if any option is to be successful in realising the vision. The form of Option 1 lends itself to a planned development approach with stated outcomes that can be promoted and monitored by a designated authority over time. Under such a scenario, there is a good opportunity to develop and implement long term management and stewardship arrangements.

**Option 2**
Option 2, with its more fragmented ‘development parcels’ has the potential to be taken forward in the near-term by separate landowners but may pose a challenge on how the separate parcels would contribute to long-term Garden Village stewardship strategy.

**Option 3**
Option 3, with its identity tied to more sustainable ways of farming, soil, and land management will need a strong management regime that covers all aspects of the Garden Village – built and open.
Red-Amber-Green (RAG) rating of the three options with respect to the 9 principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>Option 1: Compact Communities</th>
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<th>Option 3: Edge Communities</th>
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<tbody>
<tr>
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<td>★</td>
<td>★</td>
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<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Healthy environments</td>
<td>★</td>
<td>★</td>
<td>★</td>
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<tr>
<td>Smart and sustainable living</td>
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<td>★</td>
<td>★</td>
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<tr>
<td>Integrated sustainable transport</td>
<td>★</td>
<td>★</td>
<td>★</td>
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<tr>
<td>Exemplary delivery and stewardship</td>
<td>★</td>
<td>★</td>
<td>★</td>
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</tbody>
</table>
4.2.2 Testing against the Key Drivers

This section tests how the three options will perform against the key drivers identified in the Stage 1 Report.

<table>
<thead>
<tr>
<th>Option 1: Compact Communities</th>
<th>Option 2: Connected Communities</th>
<th>Option 3: Edge Communities</th>
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</thead>
<tbody>
<tr>
<td><strong>Creating a healthy environment</strong></td>
<td>The walkable and compact pattern of the new community is an effective framework to deliver active communities and a range of health and wellbeing initiatives (for people and planet) at regional, site, and building level. The central greenway landscape is an opportunity to concentrate a range of outdoor activities and programs for the community.</td>
<td>The close integration of landscape and built form offers an exceptional setting in which healthy communities can thrive. Abundant opportunities for walking, cycling, and active and passive outdoor activities can be woven in close proximity and easy walking distance of new neighbourhoods.</td>
</tr>
<tr>
<td><strong>A community set within a stunning healthy landscape</strong></td>
<td>The two river corridors provide the armature for the landscape setting of the new community. A significant green separation from Carlisle will be preserved and field patterns and hedgerows retained where possible.</td>
<td>The stunning setting of the two river corridors will be further enhanced by the incorporation of more intimate north-south green valleys and surface water flows into the new village clusters.</td>
</tr>
</tbody>
</table>
### Option 1: Compact Communities

**A place of new employment**

The new ‘district centre’ around Durdar will accommodate a mix of uses including office and co-workspaces for small as well as established business. Industrial uses or those requiring intensive transport access (logistics) may be located in the periphery. This option (as well as 2 and 3) will be supported by employment use to the south of the CSLR as noted in Stage 1.

**A well-connected community**

The CSLR with its associated walking and cycling lanes is a major asset to improving connectivity to and within the Garden Village. This is true of all options.

The pattern of development in Option 1 with a primary cluster and main district centre is well placed to support public transport. More local and informal connections will also be provided.

### Option 2: Connected Communities

**A place of new employment**

Smaller work spaces or institutional uses (such as higher education / research) can be accommodated within the village clusters, although the scale of the opportunity will be less than that in Option 1.

**A well-connected community**

The dispersed pattern of village clusters provides some challenges in supporting the shift to public transport and active travel modes. These will have to be carefully integrated in and a network of safe and appealing walking and cycling routes designed to promote active and sustainable travel.

### Option 3: Edge Communities

**A place of new employment**

All options, including Option 3 can accommodate space for new employment uses. In all options, the growth in business will require a targeted effort by the relevant authorities.

**A well-connected community**

The ‘ring’ of clusters in proximity to the CSLR and Carlisle may promote a more ‘business-as-usual’ approach to connectivity and some challenge to connectivity within the Garden Village. This will have to be mitigated similar to Option 2.
A set of proposals that are future-proofed to create a 21st century community

<table>
<thead>
<tr>
<th>Option 1: Compact Communities</th>
<th>Option 2: Connected Communities</th>
<th>Option 3: Edge Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future proofing will be ensured though the following:</td>
<td>All options have the potential to accommodate future proofing. Broadly, denser, and more compact developments are able to support a wider range of future proofing strategies.</td>
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</tr>
<tr>
<td>• Creating an agile and flexible framework for development, recognising that the Garden Village will be delivered over a number of years</td>
<td>• Designing for a mix of uses and housing that supports a range of demographics from single people and young families to the elderly.</td>
<td>• Anticipating and providing for sustainable transport (including public transport, EVs and associated infrastructure)</td>
</tr>
<tr>
<td>• Designing for a mix of uses and housing that supports a range of demographics from single people and young families to the elderly.</td>
<td>• Accommodating flooding including future scenarios of extreme climate events</td>
<td>• Allowing for adoption of future technologies for energy, waste, water, telecoms and other utilities</td>
</tr>
<tr>
<td>• Anticipating and providing for sustainable transport (including public transport, EVs and associated infrastructure)</td>
<td>• Allowing for adoption of future technologies for energy, waste, water, telecoms and other utilities</td>
<td>• Designing to help achieve UK’s climate change targets</td>
</tr>
<tr>
<td>• Accommodating flooding including future scenarios of extreme climate events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.3 / SWOT Analysis

#### Option 1: Compact Communities

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Aligned with the Stage 1 concept masterplan and with the majority of stakeholder preferences expressed at previous public consultation events.</td>
<td></td>
</tr>
<tr>
<td>- Lowest land-take allowing maximum land to be retained as part of the river valley corridors and farmland</td>
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</tr>
<tr>
<td>- Density and compact layout supports sustainable transport and active travel and the creation of a walkable mixed-use community.</td>
<td></td>
</tr>
<tr>
<td>- More compact layout likely to minimise lengths of individual utility networks.</td>
<td></td>
</tr>
<tr>
<td>- Limited opportunity for innovative land management and carbon management / sequestration within landscape given the overall retention of existing open space and farmland.</td>
<td></td>
</tr>
<tr>
<td>- Higher-density urban layout may minimise the opportunity for at source, above ground green/blue SuDS features to be used to achieve the greenfield discharge rates at plot level.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>- The option has a critical mass to support a mixed-use district centre in Durdar, providing an opportunity to locate employment uses as well as other uses such as higher education.</td>
<td></td>
</tr>
<tr>
<td>- The dense and linear form of the centre could support a public transport route and provides an obvious location for a mobility hub to support transport mode changes as well as car and bike rentals.</td>
<td></td>
</tr>
<tr>
<td>- The density and compact layout allows more development with minimal early infrastructure investment.</td>
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<tr>
<td>- Ability to minimize utility demands resulting from sustainable design of denser urban buildings; potential to build using modern methods of construction (modular etc.)</td>
<td></td>
</tr>
<tr>
<td>- Missed opportunity to create a strongly-perceived park or garden setting within the development areas of the Garden Village.</td>
<td></td>
</tr>
<tr>
<td>- Uneven spread of development opportunity perceived by the Garden Village landowner community causing disincentives for collaboration.</td>
<td></td>
</tr>
<tr>
<td>- The market may not accept / be experienced in delivering the proposed densities of new development, which is in excess of typical business-as-usual developments in the area.</td>
<td></td>
</tr>
</tbody>
</table>
### Option 2: Connected Communities

#### Strengths

- Strong and compelling vision of a new community well integrated with the landscape at the overall, neighbourhood, street, and plot level.
- Well defined green infrastructure pathways through the site allow for overland flow and existing above ground drainage features to be accommodated.
- Lower densities enhance the opportunity for at source, above ground green/blue SuDS features to be used to achieve the greenfield discharge rates at plot level.
- Maximum potential for integrating natural capital benefits into the new community and achieving biodiversity net gain.

#### Weaknesses

- A less compact layout will require more investment in transport infrastructure to achieve sustainable and active travel outcomes.
- Dispersed village clusters may require the installation of several separate utility networks to service the site and may increase the lengths of utility networks required.

#### Opportunities

- With the right incentives to attract employment use and entrepreneurship, this option has the potential to be highly appealing to working age people and young families looking for professional opportunity as well as quality of life.
- Strongly aligned to take advantage of the natural capital of the site to the advantage of both the new community and the biodiversity within the landscape.
- A more dispersed development opportunity may incentivise collaboration among landowners.

#### Threats

- Village cluster developments may be taken forward as business-as-usual self-contained residential developments to suit the current market.
- Dispersed village clusters may fail to add up to a cohesive Garden Village without a central ‘development authority’ function to manage growth and monitor progress.
- Management of the natural capital within private development areas/plots will be challenging to regulate and monitor.
- Maximum overall land take among the three options, which presents a challenge relating to delivery and coordination.
Option 3: Edge Communities

**Strengths**
- Efficient use of land with Cummersdale, Carleton, and the Carlisle southern edge parcels potentially suitable for early phase development using existing physical and social infrastructure.
- Aside from the urban infill parcels, the remaining Garden Village is separated from Carlisle by a clear, locally-distinctive green swathe of farmland.
- A unique identity for the Garden Village (and potential area of innovation and employment growth) based on a growing interest in sustainable farming.

**Weaknesses**
- Higher densities and urban character of may minimise opportunity for at source, above ground green/blue SuDS features to be used to achieve greenfield discharge from each plot.
- Proximity of the northern clusters to Carlisle city centre and topography may minimise possibility of discharging surface water to the watercourses via gravity.
- Assumption that development as well as land / farm management can be influenced by the Garden Village governance structure.

**Opportunities**
- Urban infill parcels (in addition to plots in Cummersdale and Carleton) can be delivered early with minimal primary infrastructure investment.
- Opportunities for growth in sustainable farming, community participation in food growing, as well as carbon sequestration through sound land management.

**Threats**
- Urban infill parcels along Carlisle’s edge may not be perceived as part of the Garden Village.
- A working agricultural buffer may inhibit connections between Carlisle and the Garden Village.
- A risk of the Garden Village (around Durdar) with its primary proximity to the Link Road becoming a car-oriented, outward-commuting neighbourhood.
- The market may not accept / be experienced in delivering the proposed densities of new development, which in excess of typical business-as-usual developments in the area.
Next Steps
This Initial Options Report represents the completion of Stage 2a of the commission for the Framework Masterplan. The steps in developing the Framework Masterplan and the final St Cuthbert’s Garden Village Local Plan are summarised below:

**Start of Commission**

Develop a proportionate and robust baseline for the Framework Masterplan. The purpose of this is to understand the characteristics of the study area which underpins the placemaking and spatial framework process.

February 2019

**Stage 1: Baseline**

August 2019

We are here

**Initial Options Report**

2nd September 2019

**Public Consultation on Initial Options Report**

14th October 2019

Details of the consultation events and how to respond can be found at www.stcuthbertsgv.co.uk

**Stage 2b: Preferred Option development**

Late 2019

Following the close of the public consultation and a review of all feedback, a preferred option will be developed. The preferred option will also be informed by the Sustainability Appraisal and Habitat Regulations Assessment of the options. More detailed viability work and ongoing stakeholder engagement will also inform the preferred option. The preferred option may include elements from more than one of the options proposed in this report.
The preferred option will be developed into a more detailed masterplan. This will include place specific characteristics, supporting local identity and using contemporary design to create places for the future. The masterplan framework will illustrate: the general structure, size and disposition of development blocks; interface between new and existing settlements; how important views can be protected and enhanced; neighbourhood centres; community infrastructure; drainage strategies; transport and active travel networks; landscaping strategy; green and blue infrastructure network, including existing assets that need to be protected or enhanced (such as trees, hedgerows, watercourses); location of public realm areas; and integration and protection of heritage assets.

This will be supported by key outputs including a Sustainability Strategy, Green Infrastructure Framework, Movement and Access Strategy. The draft Masterplan will be subject to a further round of public consultation.

Stage 3:
Draft Masterplan Framework

Stage 4:
Final Masterplan Framework

The feedback from public consultation will be fed into the final Masterplan Framework, associated reports and advice will be given on relevant planning policies.

Following the production of the Final Masterplan, the St Cuthbert’s Garden Village Local Plan will be developed that will form part of the development plan for Carlisle district. This will set out the policies and allocations in order to deliver the masterplan. Supplementary planning documents may be issued for specific themes such as design quality and guidance to ensure that the principles and themes developed in the masterplan are embedded in the development of the Garden Village settlements.

Early 2020
Spring 2020
We shape a better world

ARUP