

DESIGN MIDLANDS in South Derbyshire

Shaping Streets Design Review

Strategic Site, Infinity Garden Village
STRA 1

DESIGN MIDLANDS

South Annex
Pera Business Park
Nottingham Road
Melton Mowbray
Leicestershire
LE13 0PB

1. Introduction

1.1 Infinity Garden Village is one of a number of possible land releases being considered under the emerging Local Plan for South Derbyshire District Council.

1.2 A Design Review (DMDR047) was undertaken in January 2025 to consider the potential of the site. This comprised a multi-disciplinary panel which included urban design, social structures, architecture, sustainability, ecology / biodiversity net gain, chartered surveyor / regeneration, landscape and transport / active travel. The Panel's aim was to help maximise the value associated with the development through good design, and considering potential value holistically, in terms of environmental, societal and economic benefits.

Movement and connectivity are a key issue with the comments raised summarised below:

- A high level framework / masterplan should set out the parameters and principles for the development supported by best practice examples / precedents.
- Strengthen links to the existing community by focusing on the lateral / east – west routes to connect the radial routes to ensure connections within and outside of the development are provided.
- Review the proposals for the A50 link route to ensure the route is integrated within the development and designed to support active travel in particular east – west connections.
- Pursue a development which prioritises pedestrians and cyclists first, and cars second from the outset including compact neighbourhoods, internalised movement etc.
- Provision of a truly mixed use development with employment sensitively integrated with the housing to support a range of work and life choices in particular Derby Infinity Park.

1.3 Shaping Streets Design Review is a design tool to support those designing and implementing new streets in delivering excellent places which includes supporting sustainable travel - walking, cycling and public transport rather than focusing on the needs of motorised traffic; regeneration of new streets in particular those which do not part of / within a development / outside of the red line boundary; regeneration of existing streets i.e. introducing cycle lanes etc.

The Shaping Streets Design Review builds on the aforementioned design review specifically the issues highlighted above and should be read in conjunction with the design review report.

The Panel comprised those who were involved with the previous design review to provide continuity and consistent advice and those with specialist knowledge / expertise as follows:

Juliet Bidgood	Architecture/Urban Design/Sustainability (Chair)
Fiona Heron	Landscape/POS
Martin Stockley	Transport/Active Travel
Andrew Cameron	Transport/Active Travel

1.4 Some opening questions from attendees were highlighted for the panel to reflect on:

- What does it feel like? What is the vision?
- What design principles are structuring the HE layout?
- Local routes and strategic routes - prioritise local routes and access to countryside?
- Drawing on the character of water and bridges / canal and river?
- Connectivity Deepdale Lane / Wragley Way?
- Consider how vulnerable users move across islands.
- Important connectivity links - make priority otherwise difficult to achieve modal shift.
- Need to see legible movement through site?
- House design support active travel – accessible storage for bikes?
- How connect to Derby Station?
- How existing routes upgraded - importance of blue and green infrastructure?
- Links to existing cycle routes [Cloud Trail](#) to Melbourne/Worthington and NC54 Mickleover.
- Detail design - adoption criteria?
- What materials/ maintenance friendly?
- Set standard for SuDS to be a case study for future developments.

2. The A50 Link Route & Connections

2.1 The proposals for the site include the A50 link route which runs from north (Infinity Park Derby) to the south (A50) through the site. The A50 link route has been developed in advance of Infinity Garden Village (IGV).

2.2 Concerns were expressed at the January design review on the design of the route which comprises four roundabouts which are an unnecessary highway intervention prioritising cars and impeding pedestrian and cycle movement and the potential of the route to divide / split the allocation resulting in poor connectivity between the east and west of the Garden Village especially for pedestrians and cyclists. While the need to get slow moving vehicles onto a higher speed route (A50) was appreciated, encouragement was given to undertaking a bolder approach which supports active travel.

2.3 The Panel understood the strategic objectives for the route; however, attention was drawn to the need for a set of clear design principles to ensure the route does not conflict with the place vision for the development and does not create severance for sustainable travel between the future communities in particular to the school. The recommendations made by the Panel are achievable within the parameters of the approved design and the requirements of the route i.e. accommodating HGV's.

2.4 Terminology - The importance of terminology was raised. 'The Link Route' focuses on highway function only and encouragement was given to provide a new name which reflects and reinforces its place and sustainable movement functions instead for example 'avenue' 'street' rather than 'route' etc.

2.5 Speed Limits – The link route has been designed as a 40mph route prioritising vehicles, this speed is detrimental to supporting pedestrian and cycle movement i.e. difficult to cross / navigate, limits opportunities to provide a strong and active frontage and will split the site allocation. The Panel recommended the speed of the route needs to be lowered to enable the above movement and placemaking functions to be achieved; lower speeds will also reduce hazards. The Panel recommended the speed of 40mph should be retained from the A50 to roundabout 1 as vehicles will be transitioning from a fast moving route onto the link route. From roundabout 1 onwards the speed limit should be 20mph. Lowering the speed limit will not impact capacity and enable more vehicles to move through the route.

2.6 The Roundabouts – The Panel previously highlighted concerns on the proposed roundabouts to the route which prioritise cars and impede pedestrian and cycle movement. Detailed comments on the roundabouts are provided below:

Roundabout 1 – The provision of a roundabout which has been designed to The Design Manual for Roads and Bridges (DMRB) was understood and considered appropriate in this location transitioning traffic from the A50 to the link route.

Roundabout 2 – The Panel recommended the roundabout be replaced with a crossing facility which is prioritises pedestrian and cycle movement in particular east – west connections, lowers vehicle speeds and positively forms part of the development. The Panel recommended exploring a non – signalised crossing facility designed as a landscape space (potentially with a raised table) which supports the movement of pedestrians, cyclists and vehicles through the space. The importance of creating a safe and attractive environment for pedestrian and cyclists was raised including making space for pedestrians. A non-signalised system is preferred as it will allow for the continuous movement of vehicles rather than vehicles queuing at traffic lights.

2.7 Creating a Street – The link route needs to be integrated within the development with an emphasis on place and sustainable movement. As stated above the speed limit will need to be lowered to 20mph requiring a coordinated approach from the design of the route itself, buildings and spaces which edge / bound the route and parking. The Panel recommended narrowing the carriageway which will help in lowering vehicle speeds and the visual prominence of the route. Ensuring a robust frontage to the route with housing and mixed uses fronting onto and overlooking the route – buildings should be slightly higher than the route (not lower as in the proposal) with parking to the frontage (for example end on parking) separated by wide / generous green verges with the footpath set back circa 6 metres. Parking will also assist in reducing vehicle speeds. The importance of houses fronting onto the east – west streets which connect with the link route was also raised. Peverell Avenue in Poundbury, Dorset and Baldock High Street, Hertfordshire were cited as a best practise examples.



Fig 1 – 4 Poundbury, Peverell Avenue (ACA)

2.8 The 40mph section – The section of link route from the A50 to roundabout 1 will be 40mph. The importance of this section positively contributing and supporting Active Travel was highlighted. The Panel recommended the provision of a footpath between the two roundabouts which is separate to the link route i.e. a generous tree planted verge separating the footpath and the link route.

2.9 Cycle Infrastructure - Cycle infrastructure will need to be designed to meet the requirements set out in LTN 1/20. The Panel highlighted the provision of a cycle lane adjacent to the link route would result in a wide street and recommended the provision of two movement grids with cycle infrastructure / lanes separate for example one street back rather than immediately adjacent to the Link Route. This approach will enable a tighter street design to be achieved for the Link Route and a better integrated cycle route

2.10 Tree Strategy – Trees are essential (not desirable) infrastructure to the design of the street trees also provide a wide range of functions from helping to deal with climate change by absorbing water / mitigating flood risk, providing shade in high temperatures; supporting biodiversity, assist in navigation / wayfinding, create a focal point, contribute to character / sense of place etc. The Panel recommended a Tree Strategy be provided to ensure a coordinated and strategic approach for the route. This should include clarification on the approach to tree planting for example formal within the hard landscape square and informal bleeding out from the space; tree planting which reference / reinforce character areas, trees which terminate a viewpoint etc.

2.11 School Travel – The importance of pupils travelling to school on foot or bike is key to achieving sustainable travel which will include crossing the link route. The Panel recommended work be undertaken in mapping the route/s to school for example what is the quickest way to get to school and what is the leisurely route to school.

3. Connecting the site to the south to villages (via green lanes) and the canal towpath

3.1 Connections to the south comprise **Stenson Road, Arleston Lane and Deepdale Lane**;

the latter two are country lanes. During the site visit the Panel walked along Arleston Lane and Sinfín Moor Lane. The route is used by a few vehicles and recreationally i.e. dogwalkers and cyclists. IGV will change the function and role of the above routes and work will need to be undertaken in providing a strategy for the existing routes. The Panel recommended a 'Monitor and Manage Approach' for Arleston Lane and Deepdale Lane, this includes collating information the routes for example accident statistics, existing vehicle numbers; setting out a strategy for how the routes will be used / their role as part of IGV and the character of the routes.

3.2 The Panel noted the character of **Arleston Lane** within the site

allocation is a country route whereas to the north it is a suburban / urban route bound by houses and community facilities including Sinfín Health Centre, Asda etc. The route will connect and provide opportunities for interaction between the new and existing communities.

The proposals for IGV will change the character of Arleston Lane and consideration needs to be given to;

- Where / when does it stop being a country lane?
- What and where are the destination points along the lane?
- Will it be a place where residents will walk, cycle and drive to access the canal, if so what facilities are available for example is a parking area needed?
- Could it form part of a walking and cycle circular route within the site for example a 5 - 10k running route?

4. Connecting to site to the north to employers and healthcare providers including Rolls Royce and Sinfon Health Centre

4.1 Integrating Employment Use - To ensure a truly sustainable development, Infinity Garden Village needs to be a place where people live and work – with places of work mixed with homes. The location of Infinity Park Derby within the site and Rolls Royce to the north of the site present a unique opportunity to create employment for the future which is sustainable, integrated and an attractive place to work - setting a benchmark for this type of use. Reference was made to Poundbury in Dorset and Nansledan in Cornwall which have been designed with employment interspersed throughout the development with one job per home and 1 in 3 people walking and cycling to work. The opportunity to re-imagine the approach to employment use was recommended with a framework which supports employment integrated with the development enabling a true mixed use scheme to be delivered. The above will also enable potential for the employment use to become an attractive place to work and will assist in internalising movement.

4.2 Creating Active Frontages - Building on the comment above made at the previous design review on the importance of pedestrian and cycle connections between the housing and the employment uses within Infinity Business Park.

Infinity Business Park on the whole comprises buildings set within individual plots bound by surface parking. This approach prioritises the car and creates barriers to access/difficulties for those walking and cycling. Attention was drawn to the existing pedestrian and cycle lane adjacent the industrial building / shed (Oregon Timber Frame) which is poorly surveyed bound by a building which is inward looking, set back and elevated from the lane.

Replicating this approach will result in a series of isolated buildings which do not connect with the street, each other and crucially the forthcoming residential development – the workforce. This will serve to discourage connectivity and in creating a 21st Century Garden Village.

In contrast to the car dominated ‘parcel’ approach, the Panel recommended setting out IGV design guidance for new business / industrial building an approach requiring buildings directly front onto and be accessed from the streets i.e. ‘active’ office element fronting onto the street, cycle parking to the frontage and car parking to the back.



Fig 5 & 6 Main Street, Nansledan – mixed uses including office space, retail and school (ACA)



Fig. 7&8 Chiswick Business Park (RSHP and West 8)

4.3 Cycling and Walking Networks - To encourage visitors to travel within IGV and adjacent employment sustainably, cycle and pedestrian routes must be direct, safe, attractive and well connected, forming part of a network of routes. The Panel recommended that opportunities for walking and cycling should act as a catalyst for change.

The existing pedestrian and cycle lane connecting Sinfin Moor Lane with Rolls Royce is poor. Work needs to be undertaken in exploring ideas to animate and activate the route for example could this route be lit? How could you improve the relationship of the existing building with the route etc.

4.4 Human Scaled Destinations - The commercial streets should be drawn and designed to appear and feel domestic / of human scale with the requirements / sizing up for the commercial units added to the design, rather than designing as a purely commercial street from the onset. This approach will result in streets which support Active Travel and integrate and form part of the overall development.

The Panel drew attention to the potential of the commercial area / business park as a destination for residents. Chiswick Business Park was cited as a best practise example which comprises an open space which hosts a number of events for the wider community and a destination within the wider area.

5. Links / enhancements to Green Wedges and a coordinated approach to creating attractive routes to and from the city via the Green Wedges.

5.1 Derby – Derby is to the north of the IGV. Connections to and from Derby are a key requirement for IGV. Information needs to be provided to understand existing connections for example how would you get to Derby from the site by bus and bike; what and where are the bottlenecks within the connections and how can the bottlenecks be addressed.

5.2 The Green Wedges - The Green Wedges are to the north of the site and within Derby City Council. Derby City Council are in the process of reviewing the Local Plan which will include a review of the green wedges.

The Panel drew attention to the importance of the Green Wedges and the need to ensure an approach with the Green wedges integrated / bleeding into and positively contributing to IGV, rather than considered as a buffer. The Panel recommended work be undertaken in developing a comprehensive understanding of the green wedges, this should include identifying, mapping and categorising the views and vistas from the green wedges; mapping the routes within the green wedges, where the routes connect to and from and how are the routes used:

- What are the recreational routes for dog walking etc. Which routes will be lit and which routes will not; what is the function/s of the spaces?
- What is the character of the green wedges – what makes the spaces special / unique to this site?
- What is the ecological value of the green wedges?
- How do they connect / contribute to the wider site for example how do they form and contribute to ecological corridors within the locality, home to specific flora and fauna etc.?

6. Water Management

6.1 Water Strategy - Effective surface water management (blue infrastructure) will be an important component in the successful development of the site. The Panel raised the importance of the water/drainage strategy in forming the blue/green infrastructure for the development, with a strong emphasis on 'place-making', maximising opportunities for biodiversity net gain (BNG) and creating a range of spaces with amenity value, as well as dealing with flood attenuation.

6.2 Existing Character of Waterways - The existing dykes / mini canals to Sinfin Moor Lane and Trent and Mersey Canal provide a sense of water within the site. The Panel recommended extending and linking to the existing water features which are important and special features characteristic of the site and should be celebrated and inform the approach to new blue infrastructure.

6.3 Climate Resilient SuDS - The Panel recommended a strategic, integrated and considered approach to water management should be undertaken with climate resilience as a key factor. This should include a range of SuDS for example linear SuDS potentially with bridges which references and reinforce the dykes and canal plus bridges within the site; formal and informal SuDS depending on location and character areas for example SuDS within public spaces; SuDS which provide opportunities for play / recreation, BNG; SuDS which work with the topography etc. (i.e. deliver on water quantity, water quality, amenity and biodiversity).

SuDS would also animate and add interest to the street and strengthen the street hierarchy for example within residential streets.

The Panel also referenced issues regarding flooding and the need to provide options to capture water across the site / as close as possible to where it falls for example within individual plots / blocks of housing. The aim should be to manage water run-off by starting upstream, at source (from house drainage) as well as providing SuDS.

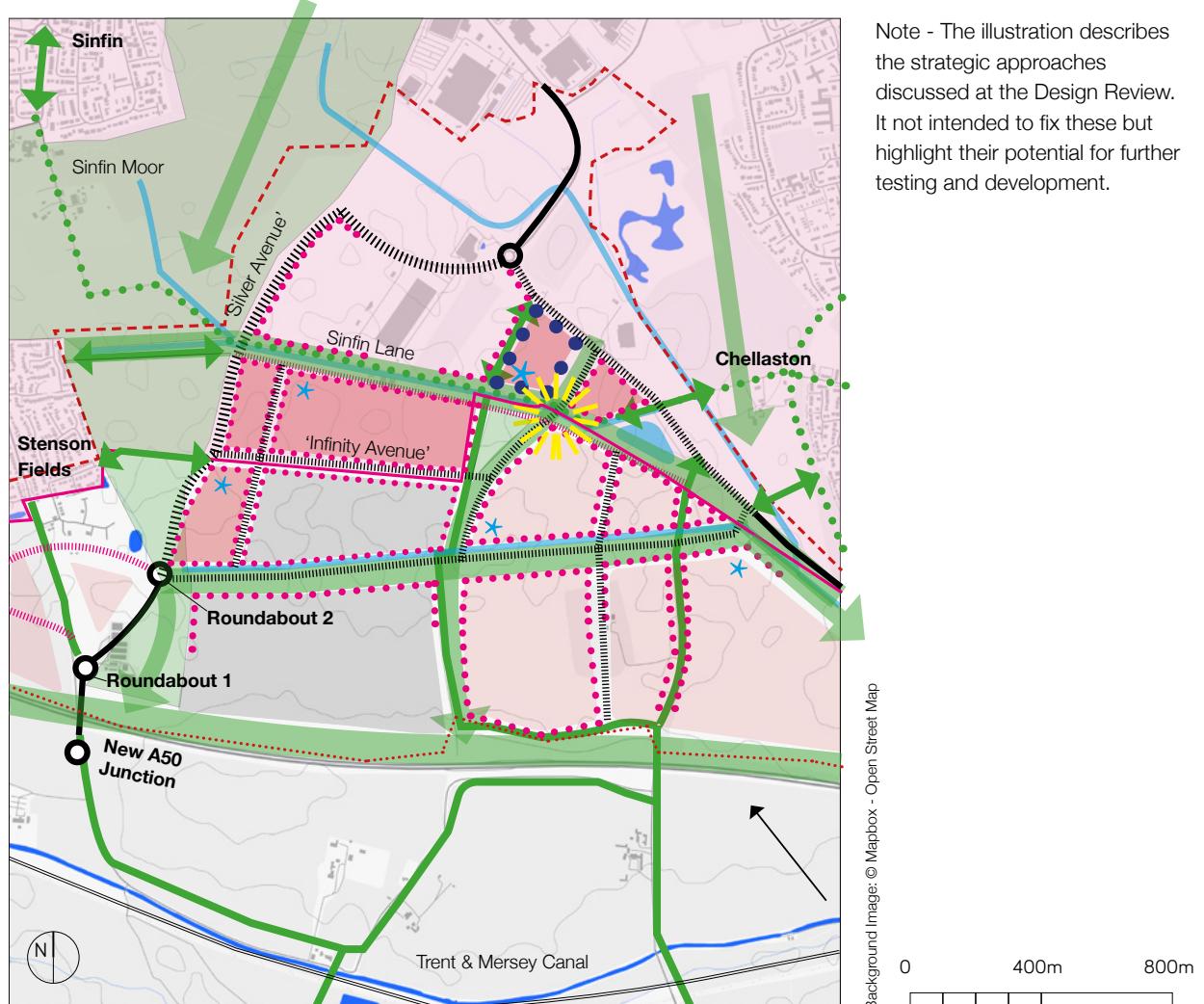
7. CONCLUSIONS

7.1 We appreciated the opportunity to provide further input on connections / movement for IGV.

- Develop an overarching design strategy and/or design code for streets and green and blue infrastructure across the IGV area.
- Revisit the proposals for the A50 by undertaking a design approach which focuses on the place and movement function of the route including designing out roundabouts and replacing with direct crossings as part of landscape square, lowering the speed limit to 20mph, with houses fronting the route, rethinking the approach to parking, a landscape strategy for the route etc.
- Separate cycle lane from the link route i.e. set one block back to enable a tighter route to be delivered.
- Renaming the A50 link route to refer to the place function i.e. avenue
- Develop a strategy for the existing routes specifically Arleston Lane which will be key in connecting new and existing residents
- Map existing routes to Derby including identifying bottlenecks and opportunities to improve the routes
- Review land use distribution generally aim to achieve more integrated land use frontages onto key connecting routes.
- Undertake a placemaking approach for the commercial uses or business park which needs to be integrated within the development from the design approach to the units, streets which are of human scale. Create landscaped places / spaces which are used by both the workers and the community.
- Ensure a strategic and placemaking to water including the provision of SuDs / Swales which reinforce the linear characteristics of water within the site, provide a range of water attenuation features which are in keeping with the character of the site / development etc. and design water attenuation to support ecology / biodiversity etc.
- Provide an in-depth understanding of the Green Wedges which should not be considered as buffers rather characterful spaces which positively contribute to the development.
- Make use / borrow from best practise examples / precedents.

STRA 1: Part of the Draft Derby Infinity Village, Mixed Use Allocation

Illustration broadly locating site features discussed in the Design Review.



Key

	Allocation Boundary		Existing / Proposed Roads
	Derby City		20 mph Multi-functional Streets
	Extending Green Wedges		Active Frontages
	Area Retained as Parkland		Existing Green Lanes/Active Travel
	Green Infrastructure		Existing Footpath / Cyclepath
	Blue Infrastructure		Improved Walking & Cycling Links
	Residential and Mixed Uses		Local Centres & Mobility Hubs
	Residential		Learning and Recreation
	Employment		Key corners to identify.