



Design & Access Statement

Rev A February 2007



futurefoundations



Waterman Burrow Crocker
In association with

Faulks Perry Culley & Rech

WALSALL, WOLVERHAMPTON,
SOUTH STAFFORDSHIRE
REGENERATION ZONE

1.1 INTRODUCTION

This Design & Access Statement accompanies the Outline Planning Application made by Advantage West Midlands for the development of the Bilston Urban Village, Wolverhampton, as a mixed use development.

1.2 PURPOSE

The purpose is to outline the broad design principles which will ensure that the development provides :

A high quality sustainable environment which accommodates a balanced mix of homes, employment and community facilities.

An urban realm which draws upon the best examples of contemporary urban design to create an appealing place to live, work and play.

A layout which maximises accessibility for all in the widest sense, ranging from walking and cycling at a local level to a choice of high quality public transport for longer journeys.

A Masterplan which protects and enhances townscape character, visual amenity and bio-diversity within the site, replacing dereliction with new green infrastructure.

1.3 Using a best practice design approach, a series of key guiding principles are established addressing the following:

Response to Context (the relationship of the development to its site and setting relative to Bilston, the existing settlement pattern, and the surrounding townscape).

Urban structure (the quantum of development, the mix of uses and their layout, with specific attention paid to accessibility. The framework of streets and spaces and their connectivity).

Urban grain (the pattern, density, scale, height and appearance of the proposal, focusing on local distinctiveness and the combined effect of building arrangements in relation to streets and spaces).

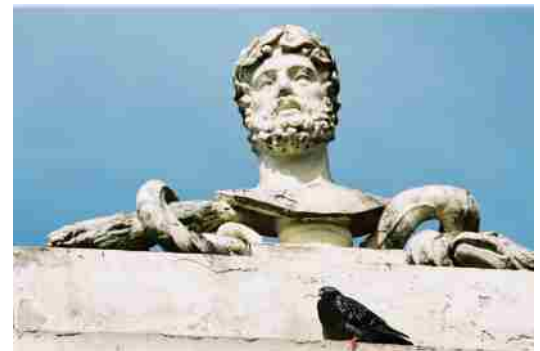


Location Plan (NTS)

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Bilston Town Centre



Bilston Town Centre

2.1 EXISTING SITUATION

The proposed Bilston Urban Village is situated to the south of Bilston Town Centre, which is located approximately 4km south east of Wolverhampton. The site has good transport links being located adjacent to the Black Country Route (A463) and Midland Metro Line 1 and within walking distance of Bilston Town Centre. The site comprises approximately 43Ha of previously developed land, much of which is characterised by derelict land.



Bilston Town Hall built in the 1800's.

2.2 HISTORY

There are several entries for Bilston in Domesday book and in medieval times. Mining developed in the 17th and 18th century as did the manufacturing of pig-iron. After Telford improved the canal, new factories and mines were developed but the town of Bilston was in decline after 1860.



Bilston Post Office (date unknown)

2.3 The site of the urban village was used previously for iron stone mining and iron manufacturing, leaving slag and spoil heaps. The filling associated with the iron works has transformed the original valley landform into plateaus and ridges which are still evident. The Bilston Brook which once ran along the valley through the site, is now culverted and located several metres below the surface.

2.4 Below the ironstone, coal seams were mined from the 18th century leaving numerous mineshafts which have only recently been capped and grouted..

2.5 Following the closure of the mines, the site has been the location for the GKN and Metabrasives factories, but these too were closed by 2001 and much of the site has become derelict since then.

2.6 The large scrap metal yard (now undergoing remediation) is the remaining remnant of the industrial use of the site within the eastern section of the site. Parts of the site are now used for informal recreation and the western portion has partially regenerated into a series of rough grass areas interspersed with immature woodland scrub.



Map from 1832 - shows unculverted Bilston Brook

2.7 Much of the area exhibits characteristics frequently associated with derelict brownfield land such as a disjointed topography, an absence of maintenance and flytipping, with a subsequent detrimental effect on the surrounding neighbourhoods.

2.8 POTENTIAL FOR REDEVELOPMENT

The presence of this large brownfield site close to an urban centre provides an excellent opportunity to accommodate a sustainable mixed use development.

2.9 Bilston has a wide range of community facilities including schools and other educational establishments. It has a thriving town centre with a popular market and has a diverse cultural heritage.

2.10 In terms of local accessibility, the site is closely related to Bilston Town Centre, and there is good scope for level, easily usable connections to Bilston High Street, by foot, cycle, and public transport. Internally, accessibility for the less able can be readily addressed.

2.11 Proximity to the potentially attractive corridor of the Bradley Arm of the Birmingham Main Line Canal affords the opportunity to enhance green links and access for both the existing settlement and new residents. Ladymoor Pool also provides strong potential for green links to the south of the site. Bilston High School Sports facilities can be revitalised and enhanced in order to cater for the requirements of the wider community.



Potential for Redevelopment: Aerial view showing Scrap Yards and existing derelict land

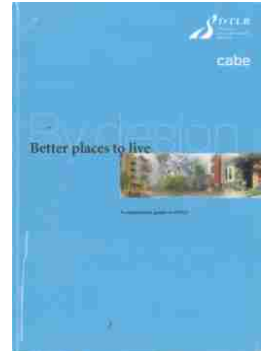
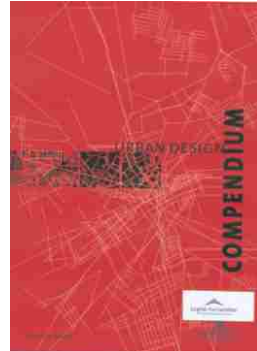


Bilston Town Centre: Close proximity and enhancement of links to the site will provide usable connections



Ladymoor Pool: This has the potential to link into a wildlife corridor and provide recreational uses

- 3.1 Planning Policy Statement 1 (PPS1-Delivering Sustainable Development) sets out the Government's principles on sustainable development.
- 3.2 Good design is essential in order to promote sustainable development, improve the quality of the existing environment, attract business and investment, and reinforce a sense of place.
- 3.3 The importance of good design is a recurring theme within Planning Policy Guidance 3 (PPG3-Housing). "By design; Better places to live" (2001-A companion guide to PPG3), explores the principles of good quality urban design and the approach of placemaking.
- 3.4 The proposed development will address the following "By design" objectives, establishing;



Character- A place with its own identity, which builds upon good examples of locally distinctive design.

Continuity and Enclosure - A place where public and private spaces are clearly distinguished, to include a green infrastructure framework.

Quality of the Public Realm -A place with attractive, enduring and successful outdoor areas that have a clear purpose.

Ease of Movement- A place with a clearly defined hierarchy of routes.

Legibility- A place that has a strong image and a layout which is easy to understand.

Adaptability- A place that provides flexibility.

Diversity - A place with variety and choice in terms of housing, employment and leisure opportunities.



Local Character



Public Realm

4.1 THE ILLUSTRATIVE MASTERPLAN

The development proposals have evolved through an iterative design process, informed by an extensive site survey, repeated public consultation and assessment of planning requirements. This has resulted in an Illustrative Masterplan which seeks to *minimise* adverse environmental impacts whilst *maximising* social, economic and sustainability benefits.

4.2 The purpose of the Illustrative Masterplan is to demonstrate how development could come forward, indicating the general character of the urban structure, street layout, plot arrangement and green infrastructure framework.



Proposed development streetscene



Illustrative masterplan

4.3

QUANTUM OF DEVELOPMENT & MIX OF USES

In summary the Masterplan provides for a fully sustainable mixed use development, encompassing the following elements;

Housing - up to 1040 dwellings (18 ha)

A mix of house types from apartments and townhouses to detached and semi- detached, with 25% affordable housing. A net density of 55 /ha will be achieved, in accordance with PPG3.

Employment- (3.48 ha plus mixed use)

16,900 m2 (B1,(a),(b), (c)), employment, start up workshops & offices. Located in two key gateway areas of the proposed development which will provide easy access, and benefit from the existing transport routes of the Metro Line and Black Country Route.

Bilston Leisure Centre (1.52 ha)

5,600 sq m leisure facilities in close proximity to Bilston Town Centre and Bilston High School . Together with the proposed community facilities, this will form part of the gateway link from Bilston Town Centre to the proposed development, and will also have a strong connection to the proposed shared use sports pitch facilities.

Community Facilities (1.05ha)

4,500 sq m local healthcare centre in close proximity to Bilston Town Centre, together with other appropriate community uses.

Retail Facilities

2,260 sq m retail facilities. 1,160 sq m will be located along the High Street Link within Bilston Town Centre. The remaining 1,100 sq m will have a central location within the proposed urban village, providing surveillance and active frontage along the neighbourhood park The intention is to improve links to the existing facilities within Bilston Town Centre rather than to recreate a new local centre that would detract from the existing High Street. It will serve only local "top up" needs.

Formal Sport Provision (3.05 ha)

The existing Bilston High School sportsground will be refurbished and enhanced with upgraded pitches, upgraded



Typical image of housing



Typical image of employment



Proposed playing fields

tennis courts, and a new play area. It will be re-orientated to provide a link from the School to the Leisure Centre and Community Facilities.

Bilston High School

Improved access points and links to new pedestrian and cycle footpaths will be created, with a strong direct connection to the adjacent leisure and health facilities. Changes in land form will improve surveillance of the playing fields and provide opportunities for new school buildings. An integrated community core will be created.

Children’s Equipped Play Area & Casual Informal Play space, and Greenways

A central play area within the neighbourhood park will be designed to meet recognised standards and in response to Wolverhampton City Council’s management requirements.

Neighbourhood Park (7.98 ha)

The central spine Neighbourhood Park will provide informal recreation such as seating areas and grass areas to play informal games, or performance areas for local outdoor events will be available to the wider community.

Nature Reserve & Habitat Creation

Existing areas of wildlife interest including the newt pond and trees adjacent to the canal corridor as the basis of the green infrastructure framework can be retained and enhanced with improved public access. New habitat / wildlife areas will be included within the neighbourhood park to create a diverse landscape and provide educational opportunities for Bilston High School.

Allotments (0.50 ha)

These will form part of the neighbourhood park and will provide opportunities for local residents to grow their own produce. The allotments will also have educational uses for the nearby Bilston High School.



Potential new school buildings



Typical image of new play areas



Proposed new neighbourhood park



Typical image of nature conservation areas

THE SEVEN KEY DESIGN PRINCIPLES FOR THE MASTERPLAN

The design of the masterplan has been influenced by the latest best practice guidance emerging from government and respected agencies. i.e. focuses on the following key principles.

- 5.1 Provide a high quality environment that is sustainable, safe and attractive .
- 5.2 Create an enduring public realm incorporating best practice principles drawn from “By design”, “Secured by Design“ and “Safer Places”.
- 5.3 Respect the best examples of local character and identity, specifically from Bilston, in terms of layout, scale, form, massing, materials and details.
- 5.4 Adopt a placemaking approach to the design, with a legible hierarchy of interconnecting streets and spaces.
- 5.5 Promote the use of public transport, cycling and walking and recognise the needs of those with impaired mobility.
- 5.6 Provide a green infrastructure framework that seeks to enhance townscape character, biodiversity, amenity and recreational benefits.
- 5.7 Promoting sustainability in its widest sense, reducing energy consumption throughout the natural and built environment.



Creating a sense of place - enduring public realm



Building types-sustainable construction design example



Promoting the use of Public Transport



Local Character

FRAMEWORK OF STREETS AND SPACES AND THEIR CONNECTIVITY

The hierarchy of streets, the size and arrangement of development blocks and open spaces is an interrelated design discipline which seeks to meet the following standards:

- 6.1 Maximise connectivity to the existing settlement and wider area,
- 6.2 Utilise a local street pattern which forms a basis for the development blocks (Urban grain) which in turn creates a well connected functional layout of routes and desire lines.
- 6.3 Design a street pattern which reflects local morphology and placemaking character, with a typical main thoroughfare feeding a hierarchy of descending routes. These follow a progression of street and carriageway widths, plot sizes, building types and relationship to the street.
- 6.4 Provide a choice of integrated routes for all. A clear, easy to use network of footpaths and streets connecting to existing and proposed community facilities along logical, direct desire lines.
- 6.5 Promote ready accessibility for the whole community, bearing in mind the needs of parents with young children and those with impaired mobility
- 6.6 Encourage the control of vehicle speeds and movement by urban design, exploring local examples such as restricted forward visibility, narrow street widths, frequent connections, changes in direction and tight junction radii.



Footpaths and highways



Access for all



Urban structure



Street and frontage design example

6.7 **STREET TYPES**

To provide good legibility across the development a hierarchy of street types and pedestrian routes will be established. This follows local and best practice placemaking, where the settlement pattern is generally defined by a main thoroughfare. Secondary streets connect with this route, descending to minor streets, lanes and greenways.

6.8 Three street types are identified for the development :

Central Spine Green Boulevard

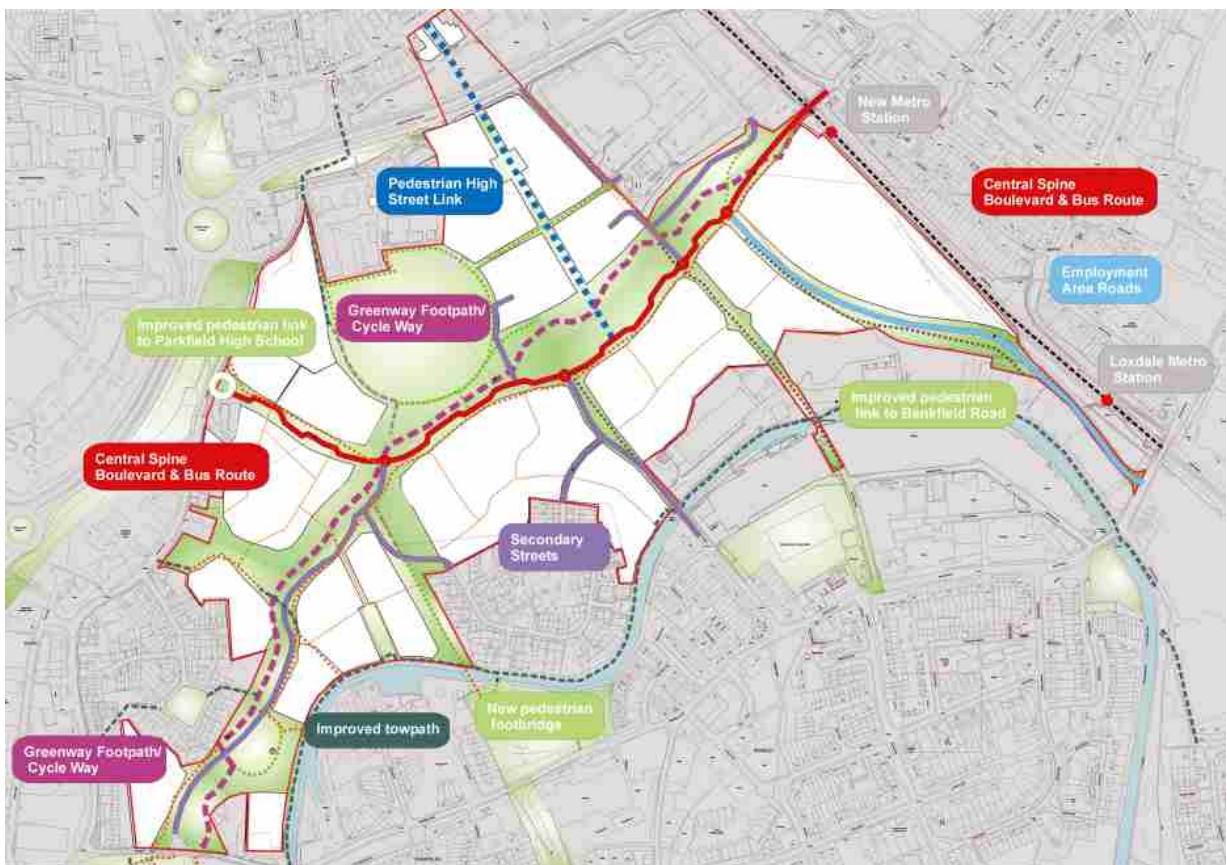
- **Secondary Streets**
- **Lanes & Courtyards**

In addition, the following key footpath links have been identified:

- **Pedestrian High Street Link**
- **Central Greenway**
- **Canal Towpath**
- **Southern Connections**



Central Spine Boulevard fronting the neighbourhood park



Street & Footpath Hierarchy

6.9 CENTRAL SPINE GREEN BOULEVARD

This will link through the site from West to East off a new junction on Coseley Road to the existing alignment of Brook Street. An additional boulevard will link a new access at Highfields Road to the Central Spine.

6.10 The Green Boulevard will form a gently curving route adjacent to the Neighbourhood Park and will incorporate footpaths and on-street parking. A segregated pedestrian / cycle route will follow the alignment of the road within the green spine, which also contains a swale for surface water drainage.

6.11 Entrances will include attractive gateway features and traffic calming measures will be used to enforce speed limits and provide a safe street environment. Bus stops will be provided at appropriate locations along these roads.

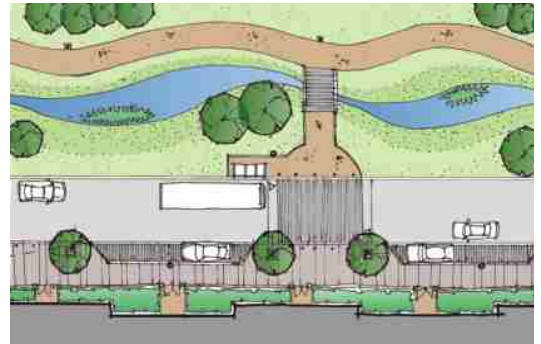
6.12 Enclosure

To provide strong enclosure, dwellings should be designed with a typically continuous building line of linked dwellings, buildings and frontages. A meandering alignment punctuated by local incidents, choice of routes and changes of direction will help to control speeds.

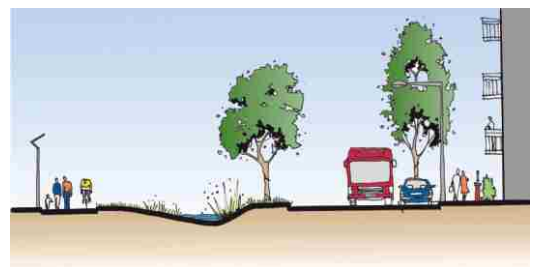
6.13 The street width itself should be restricted as much as possible to maintain enclosure. This should be achieved by the use of a limited set back of the building line from the footway and carriageway. Well defined boundary treatment should be used across the development to clearly distinguish private and public space.

6.14 A deeper set back of the building line should be used to establish key landmark spaces, for example at intersections with other streets. These spaces will be able to accommodate on-street parking, landmark buildings street trees and townscape features.

Buildings could be up to four storeys in height, affording good overlooking and passive surveillance.



Proposed detail for Central Spine Boulevard



Proposed Section Through Central Spine Boulevard



Central Spine Boulevard design example



Central Spine Boulevard sketch

6.15 SECONDARY STREETS

Secondary routes off the Green Boulevard providing connections and circulation into the development blocks. These routes through mixed-use and residential areas will consist of carriageways with on-street parking, wide footpaths and landscape strips including tree lined avenues to create a boulevard setting.

6.16 Traffic calming measure will be used to enforce the speed limit and to give pedestrian priority in designated areas.

6.17 Enclosure

Streets should typically be narrower in width than the Central Boulevard. A largely continuous frontage should still be maintained by a mix of dwellings and frontage / side details. Occasional 'gable' ends should face the street.

6.18 Buildings could be up to three storeys in height with a mix of linked buildings/dwellings, semi detached and detached properties. Three storey dwellings should be selectively used within the street, to form landmark features that turn corners or terminate a view.

LANES & COURTYARDS

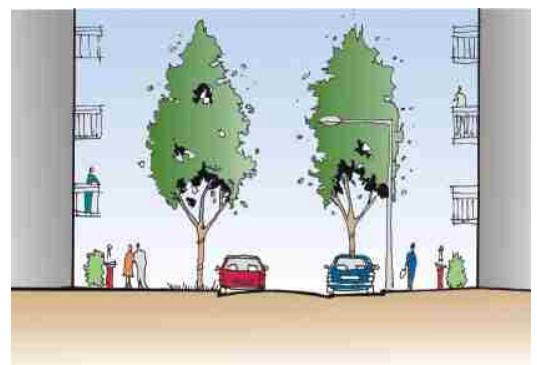
6.19 These are the finer grain routes generally located towards the edges of the development blocks. Typically they should serve intimate arrangements of courtyards or mews, created by clusters of buildings and dwellings.

6.20 The carriageway should have a reduced width shared surface for vehicles, pedestrians and cyclists, providing the opportunity for Home Zones.

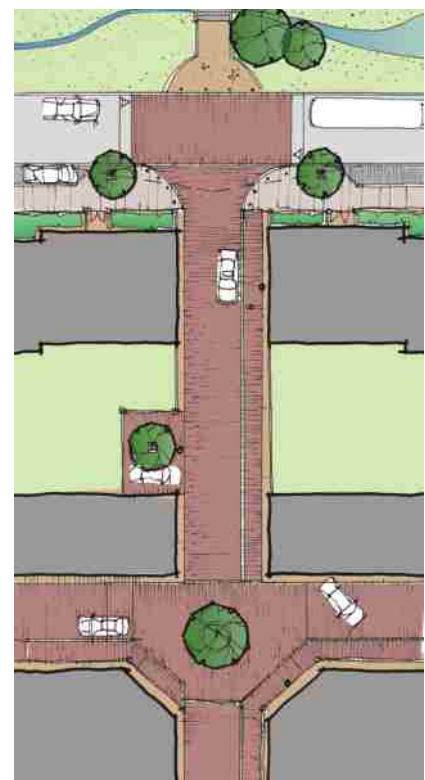
6.21 A greater proportion of semi detached and detached buildings/dwellings could be used with deeper plots and larger garden sizes.



Street frontage design example



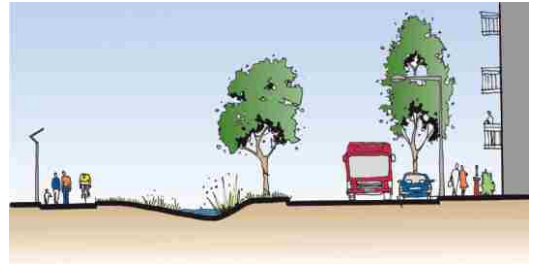
Typical street section



Typical Lane/Mews plan

6.24 GREENWAYS

In addition to footways running alongside the carriageways, a series of dedicated footway-cycleway routes will be established. These will run through green swathes of informal space, providing safe, direct routes through the development, connecting to the wider existing network. In particular there will be a central greenway that runs along the central green spine adjacent to the proposed swale. Crossings points over the swales will link footpaths to the central boulevard and the development. Changes in paving materials will identify key areas such as bus stops and crossing points. The greenways will have active frontages and will be well lit to provide surveillance at all times of the day.



Greenway running alongside central spine adjacent to the proposed swale. Crossings points over the swales will link footpaths to the central boulevard and the development.

6.25 CANAL TOWPATH

A canal enhancement strategy has been developed to revitalise the existing canal, and highlight potential areas for improvement, reinforcing links into the wider canal network. The canal towpath will be upgraded, with improved surveillance provided by buildings fronting onto the towpath, and potential new canal basins.



Proposed pedestrian footbridge across canal

6.26 SOUTHERN CONNECTIONS

The existing historic links between Highfields, Bradley and Bilston, along Dudley Street and Bankfield Road provide major pedestrian and cycle route into Bilston and to the supermarket. These will be retained and enhanced at the canal crossing points to provide gateway arrival points into the urban village.



Secondary footpaths

6.27 The existing footpath to Carder Crescent will be re-routed, but will still allow safe and direct access to Bilston High School. A new footbridge link is proposed that will cross the canal and link to the open space adjacent to Highfields.

6.28 The footpath/cycle link to Bilston High School will be a major footway to and from the school and it is important that the route is well lit, safe and overlooked. Buildings will front onto the open space, to provide surveillance.

The existing links to Broadmoor Lane & Broadmoor Lane Estate will be re-aligned, and improved.



Potential pedestrian gateway at Bankfields Bridge

6.29 HIGH STREET LINK

The Site is currently isolated from the Town Centre. The development will create a new, direct pedestrian boulevard that will form a strong North-South axis connecting the High Street with the Urban Village. This boulevard must achieve the following aims:

- The boulevard should have a strong focal gateway area on the High Street, to draw pedestrians through to the urban village. The connection should be through safe overlooked active frontage spaces, rather than backs of shops and remote car parks.
- The crossing of the Black Country Route should be in a direct line with pedestrian priority movement, and should visually link both sides of the road.
- The development adjoining the road within Bilston Urban Village (Plot A) should encourage strong pedestrian movement and vistas into the site. It is suggested that within Plot A, the proposed leisure centre and healthcare centre could form two sides to a Gateway Boulevard and Plaza.
- All Development should front onto the link, to allow surveillance and active frontages.
- The gateway link should connect into the proposed central green spine within the Urban Village that will be formed on the line of the former Bilston Brook.



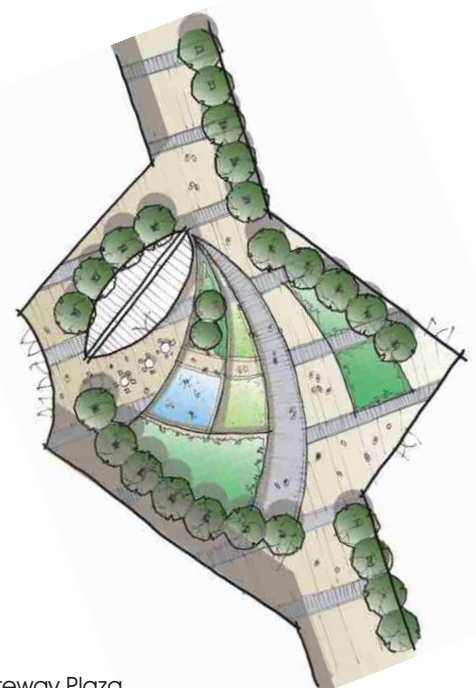
Development north of Black Country Route



Artist impression of existing High Street and new mixed-use proposals

6.30 The contours south of the Black Country Way descend into the site and provide the potential for a long vista through the proposed development. The link should take advantage of this, and could focus on a significant water feature within this green spine. Water could also play a strong theme within the boulevard, with fountains and rills providing a formal link to the more natural water bodies within the green spine.

6.31 The boulevard and vista should provide the spine between the High Street and the urban village, and the materials and their use should reflect its status as a key route



Gateway Plaza

6.32 STREET JUNCTIONS/CONNECTIONS

Vehicular dominated layouts will be avoided. Street connections and the arrangement of the development blocks will be designed together. Dwellings and buildings will be designed to either wrap around the corner, be offset from the kerb line to create a deflected junction, or to frame a connecting street.



Tight junctions and corners-design example

6.33 Careful detailed design can successfully accommodate large refuse, emergency and service vehicles without compromising an efficient compact layout.

CALMING TRAFFIC

6.34 The development will have a vehicular design speed of up to 20 mph. The careful integration of vehicles, pedestrians and cyclists is important in order to generate safe movement for all. Control of movement will be guided by the design and layout of streets and development blocks and not, for example by retro fitted calming, such as speed humps.



Change in Materials example

6.35 A best practice example is to design streets by 'tracking', whereby the arrangement of perimeter development blocks have priority with the carriageway 'plotted' through the resulting spaces.



Limited visibility example

6.37 A number of themes will be utilised in order to slow vehicular speed including; the use of projecting buildings; changes in surface, frequent changes of direction and connecting routes, tight corners, restricted forward visibility, intermittent on-street parking, street trees and furniture.



Change in direction example

6.40 PARKING

Storage of vehicles is critical in terms of street character and the quality of the place. A series of 'parking' solutions is proposed based on the following criteria;

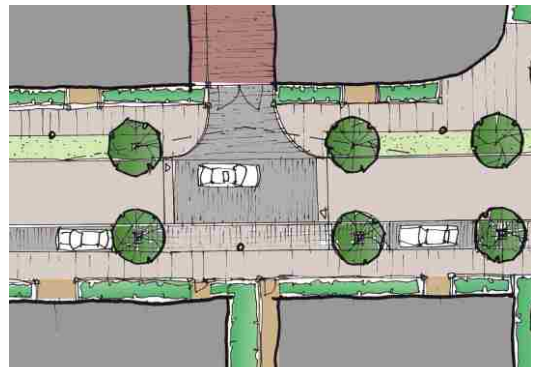
- Avoiding the dominance of vehicles within the street scene.
- Highway safety.
- Security and high natural surveillance.
- Mobility of users (getting in and out of cars).



On-Street parking design example

6.41 ON - STREET PARKING

Some on - street parking should be provided. This should be carefully located within the street layout, to positively assist in traffic calming and provide activity within the street. Owners should be able to readily access and view their vehicles. The use of street trees within a wide footway should be considered to help define parking areas and to soften the view of parked vehicles.



On-Street parking design example

6.42 COURTYARD PARKING

Internal parking within development blocks, served via through routes to a courtyard, is a standard best practice principle for higher density areas. This reinforces pedestrian and vehicular connectivity to nearby streets.



Courtyard design example

6.43 The design of these spaces should have regard to; plot and building arrangement, enclosure, privacy, security, safety, frontage - side details and surface treatment. Entrances to courtyards should be through the building line, achieved by the use of simple narrow "cartways".

6.44 Courtyards should be overlooked, with some dwellings actively facing the space to provide increased security and surveillance. Cars should be located in parking bays or linked garages. The use of studios or live - work units above garages should be explored during the detailed design.



Secure Courtyard design example

6.45 PUBLIC TRANSPORT

The provision of public transport services will be based upon achievement of standards in excess of minimum policy guidelines.

6.46 Bus stops shall be a maximum of 200 metres apart. The position of bus stops shall take into account the routes and frequency of services, and buses to the same destinations shall generally share the same bus stop.

6.47 Provision for disabled bus passengers and wheelchair users will be made in the design of facilities. Research indicates that bus usage by disabled users diminishes where bus stops are located at distances greater than 200 metres apart. Therefore this frequency of stop should be adopted in all areas where disabled user access is required. It will be especially important in residential and employment areas.

6.48 ADDITIONAL METRO FACILITIES

Within the infrastructure development for Bilston Urban Village there is potential to provide either improved or additional facilities to access the Metro line.

6.49 Current options under consideration comprise:

- Provision of a new Metro station in the vicinity of Brook Street, providing direct access from Bilston Urban Village.
- Relocation of the existing station at Loxdale Road, to a more northerly location, providing direct access from Bilston Urban Village.
- Provision of additional pedestrian facilities to link from an access point in Bilston Urban Village, in the vicinity of Brook Street, to the existing Bilston Metro Station. This could comprise linear walkways alongside the existing Metro tracks.

A new station on the Midland Metro line between the existing stations at Bilston Central and Loxdale Road is the preferred option.



Potential Public Transport Route Option
(Refer to Public Transport Strategy for details)



Bus Services



Existing Metroline

7.1 **URBAN GRAIN**

7.2 These are the following Masterplan principles to guide the urban grain, scale, height and massing;

Reflect the best examples of local distinctiveness in and around Bilston in terms of layout, three dimensional form and materials, but avoiding pastiche buildings and placemaking.

Selective use of contemporary innovative designs and arrangements respecting local character

Create a well considered three dimensional mass to define the public realm (streets and spaces).

Define development blocks with a typically continuous building line of dwellings, buildings, walls and frontage details to establish an active frontage and strong street enclosure.

Devise a well considered plot arrangement based upon local best practice elements of plot size, depth, and orientation in relationship to the street and block.

Create an overall layout which complements and enhances the landscape and townscape character of the locality.



Bilston Town Hall



Building frontage -design example



Sustainable energy and construction -design example

7.3 DEVELOPMENT BLOCK DESIGN

To maintain good legibility and permeability the block arrangement should follow a 'distorted' grid approach subdivided by a choice of interconnecting streets and pathways. This will create a human scale and finer pedestrian grain.

7.4 There are no definitive best practice dimensions for development block size or form. A preferred approach is the closed block, with public frontages and secure rear private gardens.

7.5 BLOCK CHARACTER

The arrangement of buildings within the block is defined largely by their plan form, height, and scale.

7.6 Best practice advocates that a mix of both wide and narrow frontage plan forms should be used. Wide frontage buildings will allow for a greater opportunity of variation along the street, whilst narrow frontage approach will establish a run of linked dwellings and continuous frontages.

7.7 PLOT SIZE AND ARRANGEMENT

Depending on density requirements best practice guidance is for individual plot depths to be as small and as narrow as practicable. This uses land efficiently and provides a greater number of buildings within the street, increasing activity and surveillance. Front gardens and or private frontages tend to be limited in size, being deeper in lower density areas.

7.8 CORNER PLOT ARRANGEMENTS

How streets interconnect or blocks change direction are critical components of the place. Local and best practice examples follow the principle of a continuous built frontage 'wrapping' around a corner. This provides a positive definition to the street and avoids 'weak' ill defined edges. In addition, this provides opportunities for landmark buildings that terminate or help frame views along the street.



High Density Block Arrangement example



Narrow frontage example



High Density Street frontage example

7.9 **LANDMARK FEATURES**

Landmark features or points of focus allow users to orientate themselves, creating an easily navigable and distinctive environment. Appropriate incidents include public squares, pocket parks, prominent buildings, street trees, public art, and smaller items such as street furniture. Bilston High Street already has many examples of this successful approach.

7.10

VIEWS

The composition of views and vistas adds character to the place, and helps to reinforce a legible environment. The street and block will provide a varied sequence of connecting views (short or long), which lead or draw the eye from one feature to another. The development will also include subtle variations in building line and scale, height and mass to add visual interest along the street.

7.11

SCALE AND HEIGHT

Buildings will range from 1- 4 storeys in height. Taller buildings will be located along central spine and mixed-use areas. The number of storeys reduces as the development progresses away from the central areas towards the boundary of the site.

7.12

Buildings should be designed to have a variation in their height from ground to ridge or eaves heights. The arrangement of buildings within a plot and subtle changes in height will create a varied roofline across the development.

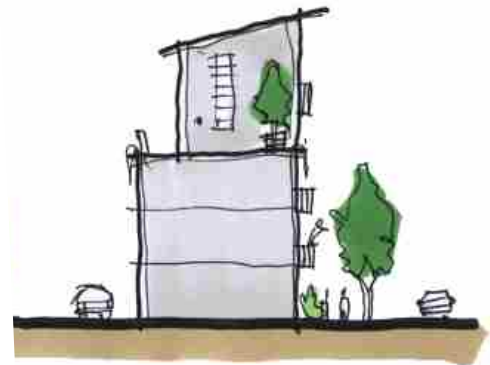
7.13

During detailed design consideration should be given to the impact of height and overall mass on neighbouring plots.

7.14

HOUSING MIX

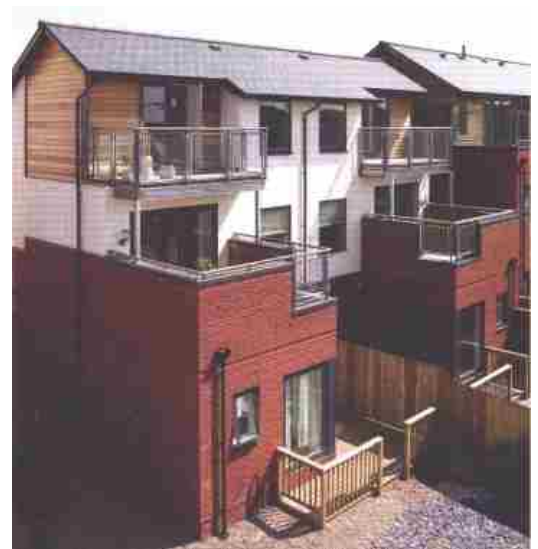
The development will comprise a variety of dwelling types and sizes offering a broad range of accommodation. These will range from single bed apartments to 5 bedroom units. The development will deliver up to 25% of affordable housing. Sheltered accommodation for the retired community will be provided. Internal accommodation will consider opportunities for workshops and home offices, either within the dwelling or above the garage.



Landmark Corner Plot



Scale and height design example



Housing Mix example

DENSITY

- 7.15 Higher densities will be located within the core of the development, extending along the central spine boulevard. This will be achieved by linked buildings, narrow frontages and through route courtyards . This spine of development optimises public transport access.
- 7.16 Lower density arrangements will occur towards the edges with deeper and wider plots and a greater proportion of detached buildings.
- 7.17 A net residential area of 18.0 ha will achieve a development site density of 55 dwellings per hectare across the site.



Typical image of high density housing



Density reduces away from central park

SUSTAINABLE CONSTRUCTION, ENERGY AND WASTE MANAGEMENT

- 7.18 Sustainable construction methods and energy efficiency will be incorporated in the detailed design stage to encourage a high standard of build and construction. BREEAM “Very Good” ratings will be achieved.

- 7.19 Best practice sustainability will be incorporated within the development, which will include sustainable drainage measures. Buildings will seek to be resource and energy efficient in operation.

- 7.20 Building design principles should explore the use of locally sourced or recycled building materials and aggregates, off site prefabrication of building elements, efficient heating systems, control of water demand and use, and optimum plot orientation for solar gain.

- 7.21 The detailed plot design should seek to minimise water and waste use and provide suitable facilities for recycling.



Sustainable construction and materials
-design example

7.22 GREEN INFRASTRUCTURE & LANDSCAPE DESIGN

A quality landscape is essential to provide the structure and form to the urban grain. Green infrastructure includes the framework of structural woodland planting, open spaces, parks, and the design of squares and streets. The following are the major components of the green infrastructure:

7.23 Neighbourhood Park

The Neighbourhood Park will form a significant area of public open space for both Bilston and the surrounding area. The design of the park will include a mix of habitats ranging from structural broadleaved woodland, areas of open grassland of varying management regimes, waterbodies and wetland areas, and intermittent specimen tree planting. New footway routes will provide good connections within Bilston. The Park will provide major benefits for biodiversity, as well as establishing an educational and recreational resource for the community as a whole.



Typical image of water feature



7.24 Canal Corridor & Nature Conservation

In addition to forming an important recreational corridor, vegetation on either side of the canal can help to create valuable wildlife corridors and provide habitats for a variety of species. Marginal planting can protect the canal bank by dissipating wash from passing boats and can also help to improve water quality. The reed fringes on both sides of the canal provide a habitat for birds, fish and insects and will be retained

7.25 The neighbourhood park will form an important wildlife corridor and will link into the strategic network. Existing key features of importance such as the existing newt pond will be retained and enhanced. There is a proven demand for allotments, and these will be an important component of the

7.26 Sports Pitches

The existing Bilston High School sports area will be improved and upgraded with new high quality adult and junior sports pitches. Depending on local demand and detailed design, the sports pitches could accommodate football, rugby, hockey or cricket use .

7.27 Play Areas

A central Children’s Equipped Play space will be located adjacent to the sports pitches. There is good scope to provide a multi-use games area and skate park facilities for older age groups.

7.28 Maintenance

Using focused large areas of green space rather than multiple isolated plots will ease management and maintenance issues and allow for the planting of large trees. Street trees will be used across the development, carefully located to act as reference points, providing identity to streets and blocks. However, care will be taken to accommodate the full growth potential without causing long term management issues. Buildings and dwellings will actively face all areas of public space, to provide a well surveyed and secure environment. “Back alleys”, hidden access ways and unsupervised rear garden approaches will be designed out in order to minimise opportunities for anti-social behaviour. The management regime and policing will be agreed in advance with Wolverhampton in order to ensure its successful establishment and appropriate long term after use.



Typical image of sports field



Typical image of nature conservation area



Typical image of play area

7.29 **BILSTON HIGH SCHOOL**

The existing school will become an important anchor for Bilston Urban Village. It has potential to be expanded and upgraded progressively to accommodate children from the development. The school will benefit significantly from the provision of a new access and car park, together with the improvements to the playing fields and the adjacent new leisure centre. It will have direct access to the Neighbourhood Park. Safety and security will be key issues for the masterplan as well as its relationship with the adjacent streets and development blocks.



Typical image of new school buildings

7.30 **LEISURE CENTRE**

Refer to Appendix A for site plan, sections and images for Leisure Centre Proposals.

7.31 **EMPLOYMENT**

Small scale offices and workshops will be a component of the development. This will include a variety of employment spaces, ranging from serviced start up offices to design studios and research and development facilities. A number of live-work units are also proposed, providing the opportunity for local business initiation, growth and expansion.



Typical image of employment

7.32 The employment areas will follow the design principles established by the development in terms of urban structure and grain. The opportunity may arise for contemporary architectural themes to create a vibrant workplace environment.

7.33 **MATERIALS AND STREET FURNITURE - DETAILING THE PLACE**

The detailed elements of surfacing, street furniture, and private/ public boundary treatments have a considerable impact on the quality of the place. Small, often incidental features contribute positively to the character of the environment



Contemporary bollard

7.34 Wherever possible, the development will reflect local character in terms of materials and detailing. However, contemporary street furniture can relate well to traditional paving materials. To avoid visual clutter a co-ordinated approach should be implemented for house /building types, boundary treatments, surfaces and street furniture. This will help to establish a 'sense of place' and reinforce character.



Contemporary lighting

8.1 **Energy Efficiency and Sustainability**

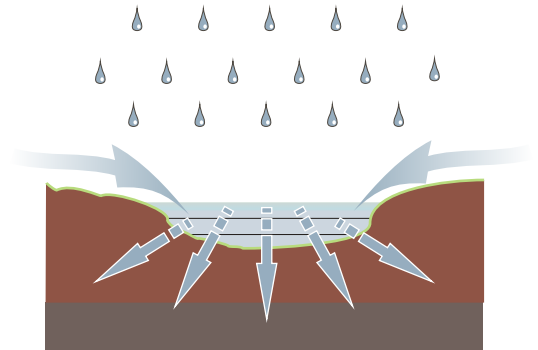
Energy efficiency and sustainability will be key features of building design. New buildings must be designed to a minimum BREEAM standard of 'very good' and consider sustainability factors throughout the design. Particular attention should be paid to achieving high standards of;

- Day lighting
- Energy saving control gear
- Ventilation
- Heating and cooling
- Geothermal heat pumps
- Hot water supplies
- Cold water supplies
- Rainwater harvesting

8.2 **Surface Water Drainage**

Bilston Urban Village, will champion the principles of sustainable development. To achieve these principles, an alternative approach to the more conventional methods of drainage design and implementation will be adopted. These approaches are more commonly referred to as Sustainable Urban Drainage systems (SUDs) and they attempt to replicate natural drainage, dealing with surface water run off at source

The area is currently drained by the culverted Bilston Brook which runs through the middle of the BUV site from Highfields Road in the south west to Brook Street in the north east. A network of shallow drainage ditches, (swales) wetlands and pools will follow the historic course of the book providing an accessible resource for both wildlife and amenity purposes. Safety will be key consideration, with gently shelving sides and fringing reed beds to minimise possible hazards.



Infiltration



Typical image of swale